### The Egyptian Competitiveness Report 2003-2004

#### The Egyptian National Competitiveness Council

At the Egyptian National Competitiveness Council, leaders from business, academia, labor and government collaborate to increase awareness of competitiveness and its economic implications for industry.

#### **Mission Statement**

The mission of the Egyptian National Competitiveness Council is to spur efforts to improve the competitiveness of Egypt and to incite the public opinion and the business sector to give priority to such efforts in all domains.

#### Hint

This report has been prepared before undertaking the latest economic decisions which are supposed to enhance the growth of the Egyptian economy. Some of such decisions have been recommended in this report. Hence, we are waiting for their positive impact on the Egyptian economy.

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# Assessing Egypt's Competitiveness

#### Youssef Boutros-Ghali Minister of Finance, Egypt

This is Egypt's first competitiveness report—an initiative of the Egyptian National Competitiveness Council. It complements other initiatives around the world. Since 1979, the World Economic Forum has published the Global Competitiveness Report. A number of industrialized and Asian countries publish their competitiveness reports and recently a neighboring Arab country, Jordan, has joined the group.

Interest in competitiveness increased during the last decade when traditional theories of comparative advantage did not offer a panacea for growth. The new concept of competitive advantage developed by Porter argues that increasing competitiveness is the result of a complex interaction among a number of factors that include globalization, technology, and competition. The mix of strong institutions and supportive economic polices helps to create an environment that enables businesses to innovate and hence increase their international competitiveness.

The objective of this report is to foster better understanding of the factors that affect the competitiveness of the Egyptian economy. In this way, the report should assist stakeholdersall government and business sector alikein our effort to enhance the competitiveness of Egypt in the global economy. The report identifies the key issues which need to be addressed. Particular attention is devoted to the challenges that the Egyptian economy continues to face and the potential for strengthening institutions and improving the business environment. While the government can certainly play an important role through continued streamlining of red tape, simplifying company formation, and improving the regulatory environment others must play their parts. A government business sector partnership is crucial in order to bring about a genuine cultural change to reinvigorate the competitiveness of the Egyptian economy.

This report, in addition to providing a clear view of the status of competitiveness in the Egyptian economy, represents a crucial turning point in Egyptian governance. It is the first time that the business sector has provided a critical opinion regarding the Egyptian economy and its workings. It is the first time that the business community measures our performance against globally recognized criteria, using a uniform methodology acknowledged the world over. Such a stance is an unmistakable sign that the Egyptian economy and its main operators have come of age and have recognized that an open economy begins with a mind that is open to global parameters.

This report enriches our knowledge of ourselves and will make the policies of liberalization that we advocate that much easier to implement.

#### Youssef Boutros-Ghali Minister of Finance, Egypt

Cairo, September 2004

# Raising Egypt's Competitiveness: The First Competitiveness Report

#### Mahmoud Mohieldin Minister of Investment, Egypt

Egypt has undertaken significant steps since the 1990's to establish a marketbased, outward-oriented economy and has become a more open and secure market for trading partners. However, Egypt's international competitiveness needs to be reinvigorated. In recent years, growth rates have slowed down and Egypt's rankings on competitiveness have slipped relative to other countries. This does not mean the economy is incapable of fast growth. On the contrary, Egypt has demonstrated a number of rapid growth episodes at different periods of time. Some of the most rapid growth rates occurred during the import substitution period in the 1960's. In the late 1970's and throughout most of the 1980's large public expenditure programs and surges in foreign borrowing were also associated with fast growth. In the early to mid-1990's macroeconomic stabilization and structural reforms helped realize another period of high growth rates. Yet all of these episodes were temporary phases, as the Egyptian economy has not yet established the conditions for rapid and sustained growth. The report attempts to analyze conditions deemed necessary to enhance Egyptian economy's competitiveness relative to other countries.

In the past, competitiveness was measured by how aggressive a country's exports were. Measuring a countries competitiveness had always been a debatable issue, however, recently, it was agreed to be measured by a wide set of indicators most significant of which are those based on surveys of perceptions of executive of reforms such as effective

asset management approach and private sector participation, the deregulation of the incentive and regulatory frameworks, exchange rate flexibility, the extent to which the business environment can lure foreign investment, the sophistication of know-how, the strength of the financial system, and the strength of human capital through investments in education, health and other social services.

These indicators provide wide coverage and a common international yard-stick against which to measure the performance of each country. The report then measures the competitive strengths and weaknesses of the country based on these indicators as further elaborated in the context, using internationally renowned benchmarks of competitiveness. This provides a benchmark of national competitiveness versus other nations across uniform indicators.

Upon reviewing the report – we need to ring some alarm bells for most indicators, as Egypt's ranking has gradually declined over the past few years relative to other countries.

Here, an important question rises: does this steady decline in competitiveness, suggest a worsening trend? If so, then are there learning objectives from this kind of report?

First, we learn that countries that investments do not find appealing automatically repel investors, meaning that the increasing gap between Egypt and other countries merits attention and prompt action from the government.

Second, consensus on business environment issues must be reached in order to be able to take the necessary remedial actions for the removal of key regulatory and institutional bottlenecks to competitiveness, the promotion of foreign investment, and the strengthening of institutions supporting the private sector.

Third, a private-public partnership that seeks effective ways of facilitating private-public policy dialogue and increasing private sector participation in key business environment policy reforms must be created.

The strengthening of Egypt's competitiveness is a long term process. Hence the sustainability of the Egyptian National Competitiveness Council (ENCC), and accordingly this report, must be ensured. The Council must be able to continue to track and analyze key indicators of performance to gauge the global competitiveness of the Egyptian economy. Concise findings should be presented in a continuous stream of reports for policymakers and the business sector to enable the identification of problem areas in the economy or shed light on important trends. Once problems and trends are identified, progress in areas directly affecting the determinants of Egypt's competitiveness can be monitored, and the necessary changes that will enhance competitiveness can be implemented. The result will be a better understanding of the drivers of economic growth, competitiveness and prosperity.

Mahmoud Mohieldin Minister of Investment, Egypt

Cairo, September 2004

# International Competitiveness and Economic Prosperity in Egypt

#### Rachid Mohamed Rachid Minister of Foreign Trade & Industry, Egypt

This competitiveness report, the first to be presented by the Egyptian National Competitiveness Council (ENCC), comes at an opportune moment in Egypt's development process. As the country continues to liberalize its economy and integrate further into the global market-place, there is a need now more than ever to reinforce the competitiveness of its industries and enterprises to meet the challenges and seize the opportunities of increased globalization and regional integration.

This report follows in the footsteps of similar efforts by industrialized and developing nations alike to present a detailed analysis of key factors affecting the future growth and prosperity of the country. In both structure and form, the report follows the approach adopted by the World Economic Forum in producing its annual Global Competitiveness Report. The ENCC report includes a discussion of the role of the Council, methodologies and definitions; an assessment of the Egyptian economy; as well as viable recommendations for future reform. The objective is to benchmark progress and serve as the basis on which improvements in all areas of the economy can be undertaken.

Over the last few decades, the concept of competitiveness has increasingly become a central issue worldwide. This concept—the optimal combination of legal, policy and institutional factors takes root in the common understandings of competition as the foundation of an efficient market system. However, for competition to exist and a country to be considered 'competitive', a number of prerequisites need to be met, including free market entry and exit; freedom of trade and contract; an efficient legal and monetary system; protection from restrictive business practices (RBP); existence of technical, economic and creative human resources; and, above all, transparency. Where these preconditions are satisfied, competition can work effectively to ensure both distributive and allocative resource efficiency. Coupled with such dynamic functions as innovation and technological progress, Egypt will be better situated to reinforce development and progress. Finally, competition achieves the social functions of fair and free access for all market participants, encourages entrepreneurship, broadens consumer choice and generates job opportunities in line with national development goals.

Like in many countries, competitiveness serves as an engine for future growth and as a key to survival in an increasingly competitive and rapidly changing world. Instrumental in this respect is the need to for Egypt to identify the new global rules for business, and place emphasis on quality, flexibility, design, reliability, accessibility, and networking. Also, we must create a society that highly values competitiveness and the optimal combination of technology, managerial entrepreneurship, employee skills, and business organization. However, putting all the elements of our competitiveness strategy in place requires collective action by all actors of the society, including the business community, government, and civil society.

Finally, there is no doubt that the assessment and findings of this pioneering report are a significant step on the road to sustainable growth and increased productivity. It is through laudable efforts like these that Egypt will be able to achieve progress and raise the standards of living for all Egyptians.

Minister of Foreign Trade & Industry

August 2004

Rachid Mohamed Rachid Minister of Foreign Trade & Industry, Egypt

Cairo, September 2004

**Executive Summary** 

## The Egyptian Competitiveness Report

With growing globalization, competitiveemerged ness has as a crucial gauge/barometer of measuring the performance of a national economy, and thus defining its relative strength vis-àvis other economies. Since the publication of the first Global Competitiveness Report in 1979, attempts have been made to rank countries according to specific criteria that define their competitive edge. Egypt has been among the few countries to be included since the beginning of this initiative. Over time, it appears that while Egypt scores high in terms of some factors, on the whole its competitiveness profile has been on the retreat. This report is born out of the necessity to raise domestic awareness of Egypt's competitive position by shedding light on how the country fairs using aggregated global benchmarks for relative competitiveness.

The results of the Executive Opinion Survey implemented by the World Economic Forum indicate that the most problematic factors for doing business in Egypt—that negatively affected competitiveness—were related to the country level environment. Hence, as the first report on Egypt's competitiveness, it is devoted to a discussion about competitiveness by focusing on the macrolevel of the economy, one of three levels of competitiveness introduced in Chapter 2.

Competitiveness at the macro-level is significant for both policy makers and business community, particularly within the context of a dynamic external and knowledge-based environment that is increasingly determined by rapid

deepening of globalization and swift moving technological advancements.

Within the framework of the mandate and objectives of the Egyptian National Competitiveness Council (ENCC), this report has four distinct objectives:

First, to monitor Egypt's competitiveness status via detailed benchmarking analysis with a peer group of developing countries within and outside the Middle East and North Africa region.

Second, to assess ongoing progress in areas directly affecting the determinants of competitiveness at the macro level.

Third, to establish a working partnership aimed at furthering the dialogue between the business community and the government on how to increase competitiveness at the country level, through developing a joint strategy aimed at enabling the business sector to take full advantage of the rapidly changing international parameters of competitiveness.

Fourth, the report is the first of a series of reports that will be of interest to research focusing on analyzing the factors that determine Egypt's competitiveness at the macro, sectoral and firm levels.

The report builds on Porters' approach to competitiveness that highlights four inter-related factors that are crucial for creating a competitive business environment; these are (i) the quality of factor or input conditions, (ii) the context for firm strategy and rivalry, (iii) the quality of demand conditions, and (iv) the extent and presence of related supporting industries. The usefulness of this approach is that these factors can be directly affected by domestic policymaking, albeit at varying degrees.

Therefore, the government's role as a key provider of public services such as education, health, and infrastructure, and as the regulator of economic activity and the allocation of natural resources places special importance on its policy directives in light of their impact on the aforementioned input conditions. The government's role also encompasses the creation of a legislative and institutional environment that is suitable for attracting investment, institution of competition policy, intellectual property rights laws, as well as consumer protection mechanisms; all critical elements for creating the 'right' context for firm rivalry. Local and foreign demand side conditions can also be directly influenced by various macroeconomic and trade policy tools. Finally, the extent and presence of related supporting industries is primarily the product of a country's industrial policy if aimed at tackling supply side constraints and encourage the formation of industrial clusters/agglomerates, especially in economic sectors with promising potential.

It is clear that governments' influences on determinant factors for competitiveness, manifested in economic policies, directly affect the degree of competitiveness of an economy. A detailed assessment of policy indicators as well as suggested courses of action is presented below. However, to provide a conceptual framework for the analysis, the definition of competitiveness is first discussed.

Being an evolving concept, the term 'competitiveness' cannot be statically defined. The concept itself has undergone changes along with the changing conditions of global trade relations and the parallel mutation of global industrial structures and organization. However, there seems to be a growing consensus on some operational definitions of competitiveness at the macro, industry, and firm levels.

At the *macro* level, competitiveness is defined as a country's ability to provide high quality life to its people measured by the capacity for wealth creation through enhancing productivity and fostering innovation. International institutions have developed various indices to gauge and benchmark country-level competitiveness such as the Growth Competitiveness Index and the Business Competitiveness Index (both released by the World Economic Forum), and also the Network Readiness Index which measures the degree of preparedness to participate and benefit from information and communication technology developments.

At the *industry* level, competitiveness is manifested in the industry's ability to organize itself in a way that will increase value added in the supply chain. As for the *micro* (firm) level, competitiveness depends partly on the firm's ability to maximize customer and shareholder value, and partly on its ability to act and react to the changes in the surrounding competitive environment.

In Porter's approach to analyzing the stages of economic development, the Egyptian economy is considered to be in a transition phase, moving from a factor-driven economy to an investment-driven economy. However, several factors have impeded the conclusion of a successful transition.

The stabilization component of the Economic Reform and Structural Adjustment Program (ERSAP) of the 1990s has succeeded in triggering high growth rates during the first half of the decade; however, the external shocks that hit the economy starting 1997 have demonstrated that the resilience of the Egyptian economy could be bolstered if the structural adjustment components of the program had been successfully completed. Furthermore, the slow pace of structural adjustment is now throw-

ing its shadows on the sustainability of macroeconomic stabilization.

Despite improvements in Egypt's external balance as well as maintaining a favorable external debt position, a number of developments pose eminent threats to the stabilization achieved in the 1990s, and also are likely to affect future growth prospects. These developments are manifested in a continued slowdown in economic growth because of low domestic savings and investment rates, increasing inflation, a deteriorating fiscal situation as a result of increased budget deficits and alarmingly high domestic debt levels, and a stalled privatization program.

With regard to trade and openness indicators, comparative statistics indicate that the pace at which Egypt is being integrated in the world economy is modest compared to its peer group. The contribution of exports of goods and services to GDP is low compared to Egypt's peer group of developing nations. Moreover, merchandise exports are still dominated by oil and oil-related products which renders the economy vulnerable to recurring balance of payments pressures due to oil price volatility.

On another front, Egypt remains far from its potential capability in attracting global Foreign Direct Investment (FDI). Share of FDI in the Egypt's GDP is dismal and most FDI inflows are concentrated in the energy sector. FDI inflows to other promising sectors have been inhibited by constraints in the domestic business environment as well as recent concerns about the exchange rate and the unfavorable fiscal situation. Although the private sector remains the major player in the economy -as it generates more than threequarters of economic activity, recent statistics indicate a retreat in private sector investment due to several factors constraining business activity.

As for infrastructure developments, Egypt has achieved some milestones in the development of its infrastructure especially in power generation and telecommunications. Areas in need of further improvements include the transportation infrastructure and the digital infrastructure which is a cornerstone in building a modern competitive economy.

In the education sector, serious reform is key to bridging the widening quality gap between outputs of the education system and labor market demand. It is about time to do away with short-term panacea and piecemeal solutions, and construct a clear-cut vision for scaling up the status of education as a means to building competitiveness.

With regard to the regulatory and business environment, it can be fairly stated that the government has been heavyhanded in regulating business activity. This had a negative impact on the business environment on various levels. Inefficient bureaucracy, arbitrary decision-making, an extremely slow litigation process and the absence of specialized commercial laws are but a few aspects of the uninviting business environment that currently exists in Egypt. The tax system and customs regulations also rank high on the list of constraints impeding business activity. Access to finance has recently emerged as one of the most critical factors curbing private sector investment. Finally, the delay in the passage of certain laws (competition law, consumer protection law, new tax law) coupled with the ineffectiveness of some new laws (due to delays in passage of executive regulations) have acted as negative signals about the government's commitment to supporting a private-sector-led economy.

Nevertheless, through analyzing the developments in the detailed components of the Executive Opinion Survey undertaken annually by the World Economic Forum, it generally appears that there has been an improvement in Egypt dur-

ing 2003 in technology diffusion and innovation (albeit at slower rates compared to other developing countries),.

On the other hand, the competitiveness of the Egyptian economy has declined in relation to aggregate country performance indicators, the macroeconomic environment, general infrastructure, public institutions (contracts, laws, and corruption), domestic competition, company operations and strategy, and the environment.

One component which has shown mixed results is the extent of developing industrial/sectoral clusters, while lack of previous data on human resources (education, health, and labor) does not permit drawing conclusions on whether there has been an improvement or deterioration in Egypt's competitiveness in this aspect.

In the Growth Competitiveness Index (GCI), Egypt is positioned among the second-tier countries ranking 58 out of 102 countries while ranking on the technology sub-index at 68, Compared to regional peer countries, Egypt outperforms Morocco, Turkey and Algeria, while it ranks lower than Israel, Jordan and Tunisia. The analysis shows that to raise Egypt's GCI, there is need for an improvement in the macroeconomic environment, the quality of public institutions, and the pace of technological development.

In the Business Competitiveness Index (BCI), which is composed of two sub-indices (company operations & strategy and quality of the national business environment), Egypt also ranks 58 out of 102 countries. In this case, Egypt is outperformed by all countries in the region that were included in the survey except for Algeria. This indicates the Egypt's regional competitiveness with regard to the domestic business environment is worse than its growth potential.

The main conclusions that emerge from this report can be summarized as follows: The relatively successful nomic stabilization achieved during the 1990s is currently being undermined by a deteriorating fiscal situation coupled with accelerating inflation. Compounding the situation is the significant increase in unemployment, slow structural reforms, and a halted privatization program. Domestic and national savings rates are still considerably lower than other developing countries, posing a serious challenge to Egypt's ability to achieve the rate of growth necessary to accommodate a fast-growing labor force and to reduce current unemployment levels.

Slower growth rates coupled with continuing unfavorable demographic trends have resulted in some double-digit levels of unemployment. It is also worth noting that some exogenous factors raise concerns about the growth outlook, the most notable of which is the unstable regional security situation. However, some domestic factors are seen as more detrimental. Uncertainty about economic policy outcomes coupled with severe constraints to the business environment continues to negatively affect investment decisions.

There is an eminent need for policy measures to increase exports of good and services and attract higher FDI inflows. In addition, the slow pace of structural and institutional reforms has negatively affected macroeconomic outcomes. Despite recent improvements in the external sector (resulting primarily from the exchange rate devaluation, in addition to the slowdown in economic activity which curbed import demand), there is a notable deterioration in the fiscal situation.

Egypt compares unfavorably to its peer group on most of the indicators of trade competitiveness and FDI openness. Tax and tariff reforms are of pivotal importance to the reduction of business transaction costs, which continue to be considerably higher in Egypt relative to peer group countries. Moreover, they have created an inherent anti-export bias. An effective route to reducing business transaction costs should also opt for reforming the judicial system and reducing government bureaucracy.

On the basis on the findings of the report, a number of opportunities can be identified that could, if grasped, enhance the competitiveness of the Egyptian economy. These are mainly:

- Adopting a holistic approach towards building competitiveness that includes the vision of all stakeholders and puts knowledge and innovation as a core objective.
- 2. Encouraging the government, the private sector, and the civil society to introduce sound practices in order to maintain transparency and good governance.
- 3. Streamlining and harmonizing domestic regulation with international standards in order to improve the domestic business environment. Immediate action is needed to reduce red tape, facilitate new business registration and land acquisition, as well as improve commercial dispute resolution and bankruptcy procedures.
- Proceeding with the implementation of market-oriented exchange rate policies is tantamount to boosting domestic and foreign investor confidence as well as increasing export competitiveness.
- 5. Striking a coherent fiscal/monetary/trade policy mix with the objectives of sustaining macroeconomic stability, deepening financial market and fiscal reform, and also endorsing a reduction in real interest rates to spur investment.
- 6. Continuing the trade liberalization drive through reforming the incentive system and in parallel

- tackle behind-the-border barriers to increase export competitiveness.
- 7. Improving Egypt's ability to attract FDI via targeted efforts aiming at regulatory reform, removing FDI impediments, and the creation of an independent authority for FDI promotion and servicing investor demands.
- 8. Furthering the implementation of structural reforms with emphasis on financial sector reform (including banking, insurance, pension systems, and the capital market) as well as activating the privatization program.
- Improving ICT readiness and innovation capabilities via a twopronged strategy aiming at enhancing technology diffusion and R&D promotion, and in parallel address needs for educational reform.
- 10. Developing an integrated methodology for the evaluation and management of industry growth and competitiveness, based on which, policy measures could be devised to encourage industry clusters and vertical integration.
- 11. Supporting the establishment of a Competitiveness Observatory to collect and analyze data on the drivers of Egypt's competitiveness performance.

The ENCC report presents the beginning of an endeavor and by no means an end. Work will continue to sharpen the concept of competitiveness within the specific situation of Egypt, develop the relevant indicators and analyze the factors that influence competitiveness. The major objective remains the same: to support the policy maker towards identifying the points of weakness in order to remedy them, and the points of strengths in order to enhance them.

Introduction

### A Step Forward: Egypt's National Competitiveness Council

The challenges Egypt and its people face today are like no others in their history. Egypt, as the country with the largest population of all countries in the Arab region, is experiencing these challenges with exceptional severity. It is, at the same time, at the forefront of those countries actively in search of solutions to issues that are in fact of global relevance.

The United Nations singled these issues out as the most pressing ones to humanity at the turn of the 21st Century. They also gave concrete steps for their solution in their 2000 "Millennium" Goals". The biggest challenges lie ahead in low national GDP per capita, high unemployment and the impacts of globalization on the national economy, culture and social development. The attainment of these goals is of special importance to the Middle East. It determines its ability to tackle its most elementary problem successfully: that of how the future global competitiveness of Egypt can be attained - and sustained.

It has become clear from several renowned reports that have recently dealt with human development in the region, that a holistic approach is needed. To achieve economic prosperity, new jobs and higher living standards, the countries of the Arab world need to develop a genuine Arab identity integrating culture, values and ethics and use them to raise their competitiveness to an international levels.

#### Competitiveness

Competitiveness remains a concept that is not well understood, despite widespread acceptance of its importance. The most intuitive definition of competitiveness is a country's share of world markets for its products. A more thorough definition, however, measures competitiveness with regard to actual productivity. Productivity allows a nation to sustain a continued rise in wages, a strong currency, and attractive returns on investments — and through them, a high living standard.

Thus, the goal of making a country more competitive is to raise its productivity, not simply its exports in absolute quantities. The entire economy's productivity is of integral significance for living standards, not just monetary value of commodities or services actually traded.

Competitiveness is the result of sustained – and sustainable – development in:

The public sector, providing for legal and social development.

The private sector, encompassing the whole range of activities contributing to economic growth and progress.

Civil society, the sector of civic or non-governmental engagement that has become increasingly important for cultural development since the 1990's.

These three elements need to work together in a concerted, structured manner to bring about a competitiveness that lasts.

#### **Ranking Competitiveness**

Competitiveness rankings and indicators used in them have been identified, researched, compiled and discussed by a multitude of reports in the recent past. Among them are the "Global Competitiveness Report (GCR)", the "Information Communication Technology Report (ICT)", the "Arab Human Development Report (AHDR)", and the "Egypt Human Development Report (EHDR)".

The "Global Competitiveness Report", on which this inaugural "Egypt Competitiveness Report" is based and to which it provides more insight on a national basis, combines two major indices to establish a global ranking in competitiveness:

The "Growth Competitiveness Index (GCI)": the GCI largely relies on the review of a "macroeconomic environment index", a "public index" and a "technology index". It reflects the future, long-term abilities regarding competitiveness, e.g. on a macroeconomic level.

The "Business Competitiveness Index (BCI)": the BCI is determined by a combination of the "company operation and strategy index" and the "quality of the national business environment index". It reflects the short-term, momentary capabilities enabling businesses to be competitive.

# The Egyptian National Competitiveness Council

This first "Egypt Competitiveness Report" builds on these means to determine what competitiveness is. The "Egypt National Competitiveness Council" has been founded to leverage the tool of these reports to advance the actual competitiveness of the country and,

thus, its private business sector, its entrepreneurs and people in general.

In the "Egypt National Competitiveness Council, leaders from the business sector, academe, the workforce and government institutions collaborate to raise awareness of the significance of the issue of competitiveness of the Arab world and specifically Egypt and its economic implications for the economy.

The mission of the "Egypt National Competitiveness Council" is to improve the competitiveness of Egypt, encourage public participation in developing the issue and the business sector to lend its utmost attention to efforts aimed at furthering the field.

Specifically, its objectives are to:

Identify Egypt's rank in competitiveness on a regional and international level through review and compilation of data from relevant reports released by national and international organizations, such as the World Economic Forum, the World Bank, the IMF, UNDP, ECES, CEFRS and others.

Release periodical reports on Egypt's rank in competitiveness with attention to a multitude of aspects on sustainable and holistic development of a national scale.

Communicate and cooperate with all relevant stakeholders in society to raise awareness on related issues and their relevance to Egypt's development. The Council aims to address stakeholders from government, the private sector and civil society on an equal basis.

*Promote* the practice to consistently use available periodical reports as references by various

stakeholders when assessing Egypt's performance in issues of sustainable development.

*Initiate and promote* competitiveness studies aimed at specific sectors.

Help identify emerging issues of national relevance, based on custom data gathered, set priorities for reform and sustainable development in Egypt.

#### A Step Forward

This is the inaugural "Egypt Competitiveness Report (ECR)". It shall form the basis for the future activities of the "Egypt National Competitiveness Council". It shall also provide the Council with an adequate means of publication of its findings. We the authors wish it a large and engaging audience, strong interest in its recommendations by the public and a spirit to stimulate lasting dialogue to the benefit of Egypt and its people.

Lastly, the authors would like to thank the United Nations Development Programme (UNDP) and the World Economic Forum (WEF) for their kind permission to use their documents and research in the preparations of this report.

#### Chapter 1

## Defining and Measuring Competitiveness

Several definitions for competitiveness are common today:

- 1. Competitiveness is the degree to which a nation can, under free trade and fair market conditions, produce goods and services which meet the test of international markets, while simultaneously maintaining and expanding the real incomes of its people over the long-term (OECD).
- 2. Competitiveness should be seen as a basic means to raise the standard of living, provide jobs to the unemployed and eradicate poverty, Competitiveness Advisory Group, (Ciampi Group). "Enhancing European Competitiveness". (Second Report to the President of the Commission, the Prime Ministers and the Heads of State. December 1995.)
- 3. The ability to produce goods and services that meet the test of international markets while citizens earn a standard of living that is both rising and sustainable over the long run. (The First Report to the President and Congress, 1992 US Competitiveness Policy Council.)
- 4. Supporting the ability of companies, industries, regions, nations or supranational regions to generate, while being and remaining exposed to international competition, relatively high factor income and factor employment levels. (OECD, 1996. Industrial Competitiveness: Benchmarking Business Environments in the Global Economy.)
- 5. Definitions of Competitiveness in the "Global Competitiveness Report":

- Definition 1. Competitiveness is the ability to achieve rapid growth in GDP per person over long periods.
- Definition 2. Competitiveness is having a high level of GDP per person today. Since you can only achieve higher GDP by growing, these two definitions are basically the same thing, however the focus of one is static and the other dynamic.
- National competitiveness refers to a country's ability to create, produce, distribute and/or service products in international trade while earning rising returns on its resources. (Scott, B. R. and Lodge, G. C. pg. 3, "US Competitiveness in the World Economy" (1985)).
- 7. A nation's competitiveness is the degree to which it can, under free and fair market conditions, produce goods and services that meet the test of international markets while simultaneously expanding the real incomes of its citizens. Competitiveness at the national level is based on superior productivity performance.
- 8. According to Porter, 2003, the only meaningful concept of competitiveness at the national level is national productivity (Global Competitiveness Report 2003-2004).

For consistency and the acknowledgement of the wide acceptance of the form by Porter used in the GCR, the Egyptian Competitiveness Report relies on this definition.

When addressing competitiveness at country level, the definition needs to pay attention to the manifold levels of the country's economy: the macro, intermediate and micro levels. In this chapter, we will explore the different factors that affect competitiveness on each of these three levels, in order to develop characterizations with operational value that can be used to measure the degree by which a country is competitive.

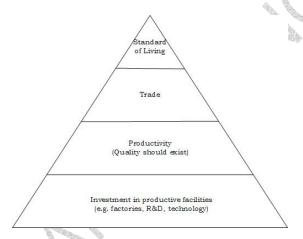
First, we need to identify the indicators and factors affecting competitiveness.

#### **Indicators of Competitiveness**

The US Council on Competitiveness has identified four indicators that taken together form the competitiveness pyramid presented in figure 1. These indicators are: *Investment, Productivity, Trade*, and *Standard of living*.

Investment represents the base of the pyramid. It is the fundamental building block of current and future economic activity. Competitiveness is built on investments in technology, factories, equipment, infrastructure and people.

Productivity reflects the efficiency with which goods and services are produced. It is largely determined by investments in productive facilities, quality and performance of workforces, technological innovation and the effectiveness with which the factors of production are employed.



**Figure 1** Competitiveness Pyramid Source: US Council on Productivity

Moving up the competitiveness pyramid, trade connects production to markets. As trade becomes increasingly global, operations become more complex. Exports are dependent on national productivity and the level of investments in products and processes of production.

Finally, a high standard of living forms the peak of the competitiveness pyramid, as it is the ultimate objective of a free market economy. Measuring the standard of living means to assess the wealth generated by a country. Such wealth is passed on to citizens and is reflected in their standard of living and quality of life.

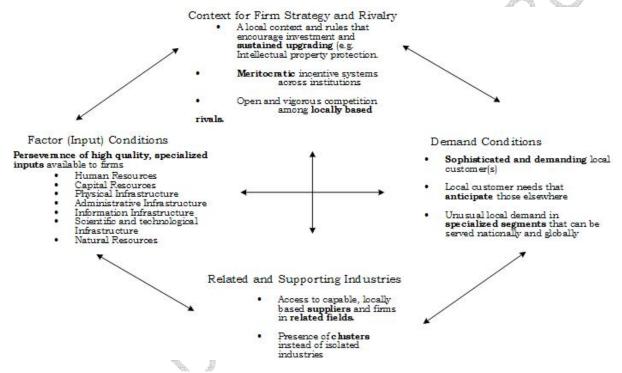
# Relationship between Productivity and Competitiveness

To establish a simplified definition and means of measurement for competitiveness, an intuitive approach is to identify competitiveness in terms of share of world markets for the products or services produced. This definition, however, fails to capture the causes of competitiveness and the tools needed to manage its growth. A more suitable approach is to directly assess the causes of competitiveness, which can be determined by examining the concept of productivity and its growth.

Productivity means the effectiveness and **Figure 3** Context for Firm Strategy and Rivalry the efficiency with which an organization or a country transforms resources employed on the input-side into produced goods and services on the output-side in a specified period of time. Mathematically, productivity is calculated by the ratio of the output produced to the resources used (input) to produce this output.

which in turn adds to the creation of wealth resulting in an advancement of the standard of living.

Wealth creation is performed at the microeconomic level of the society, the firm level, and is dependent on two interrelated main areas. (1) The sophistication with which domestic companies or foreign subsidiaries operating in the country operate, and (2) the quality of the microeco-



**Figure 2** Context for Firm Strategy and Rivalry Source: Porter, 1990

$$Productivity = \frac{Output}{Input}$$

Output encompasses all the products produced and services delivered expressed in real monetary terms over a period of time. By considering the total output generated by a country, the focus shifts from the structure of ownership, whether it is domestic or foreign, towards the creation of an economic environment that fosters growth of both local and foreign operations in service in the country.

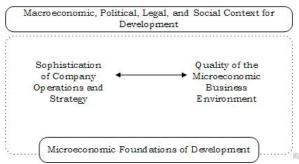
The creation of such an environment for doing business helps to increase company operations within national boundaries, nomic business environment in which they operate.

The sophistication of the company's operations and strategy shapes the competitive environment at the nation. As companies upgrade operational strategies, their foci change from tapping foreign distribution channels towards the building of channels of their own. This results in an increasing national value creation, again resulting in an increase in the generation of wealth on a national level. As this development is achieved, companies move from competition based on the exploitation of inexpensive input factors towards the creation of high-quality, specialized

products that offer consumers superior added value.

This change in strategies of operation will be achieved through an improvement in the quality of the microeconomic business environment. The creation and the growth of such an environment for business is based on four interrelated factors (Porter, 200\*).

The Quality of Factor or Input conditions.



**Figure 3** Determinants of productivity and productivity growth

Source: World Economic Forum, 2003

- 2. The Context for firm strategy and rivalry
- 3. The Quality of the Demand Conditions
- 4. The Extent and Presence of Related supportive industries

The quality of the factor conditions depends on a variety of issues that include the availability of qualified human resources, of active financial markets providing firms with necessary capital resources, of a reliable, modern information infrastructure and of the scientific and technological infrastructure allowing for a business environment that fosters and sustains innovation.

The second factor, the context for firm strategy and rivalry, captures to what extent competition exists and how it is managed. To increase productivity, firm strategies should be focused towards the development of their human resources by offering incentives geared towards the unleashing of the intellectual capital of their employees. Moreover, the building of innovative capacities within the firms will in turn help grow innovation at the industry level. Such industry growth will lead to the improvement of overall national productivity and competitiveness.

Corporate strategies should encourage the presence of local rivalries. This in turn will develop a competitive environment that will foster innovation as the main catalyst for productivity growth. This in turn supports the building of capacity for industry growth and competitiveness.

On the demand side, competitive markets enjoy a sophisticated customer base able demand and afford high-quality products. The consumption of highly specialized products necessitates customers enjoying a superior level of consumable income as well as the social and cultural background to develop demand for them. To achieve this level of customer sophistication, the society as a whole has to develop beyond the mere coverage of basic needs to one where innovation and self-realization are primary factors for growth.

Finally, the competitiveness of a nation supports the positive development of the value chain created within national boundaries. This requires the establishment of supportive industries on the side of suppliers, research centers and other innovation-driven institutions.

This leads to the foundational definition of productivity of a nation as its ability to provide a positive business environment that supports industry and strong growth within a country. Furthermore, the management of productivity and its growth is a comprehensive process requiring the cooperation of all relevant entities within the economy, ranging from governments, industries, financial institutions, educational institution to consumers as well.

#### **Competitiveness Defined**

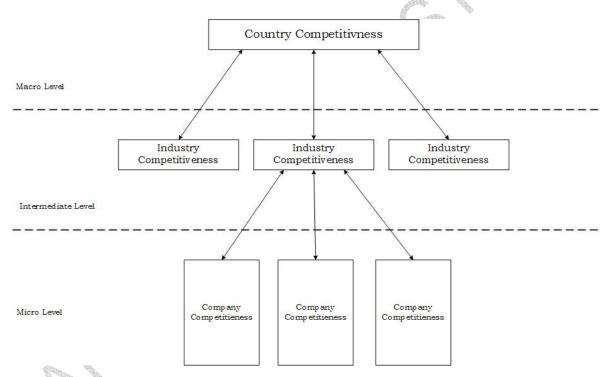
Following this description of productivity and its effects on competitiveness, we can now develop a comprehensive definition for competitiveness. Its framework is presented in figure 4. As depicted here, a competitive country will host competitive industries. Each of these competitive industries will consist of several competitive firms working together towards the advancement of competitiveness on a national level.

Beginning on the macro or country level, competitiveness is defined as the country's ability to provide high quality of life to its

positive development of the value chain based on the country's ability to support innovative industries.

Furthermore, the creation of this positive business environment is the result of proactive cooperation between businesses and governments towards the increase of the wealth generated in a country and the overall growth of national prosperity.

On the intermediate level or that of the industries, competitiveness is determined by their ability to grow through increasing its value added activities in the economy. The concept of added value is defined as the difference between the value of output and the cost of input used to produce this output (Kay, 1993). The increase of the



**Figure 4** Competitiveness on the Country Level Source: Askar, 2004

people. The quality of life is measured in the country's ability to generate wealth to the benefit of its constituents through providing them with a positive environment enables wealth-creation by means of improvement of productivity and innovation.

The positive business environment created in a competitive economy encourages the

value added depends on how well the industry is developed in terms of the availability and sophistication of suppliers, needed intellectual capital to support the industry's capacity for innovation, and required supportive activities that together help the industry grow.

Competitiveness at the industry level is defined as the industry's ability to organ-

ize itself in a way that will positively impact the value added chain created. A competitive industry is an industry that grows through innovation and is developed as to that it has access to high-quality suppliers providing necessary input factors that support industry growth.

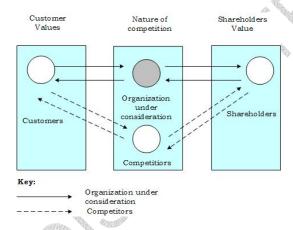
At the micro or enterprise level, competitiveness is in need of a more detailed definition as it must account for the capacities of an organization and its provision of products and services in relation to its competitors. Three main assumptions build the foundation for this definition (Feurer, 1994). These assumptions are:

- With regard to the existence of any organization, there should be a demand for its products or services.
- The ultimate goal of an organization is to make a profit satisfying its shareholders and achieving continuous growth to fulfill the interests of other stakeholders, such as employees and the communities the organization operates in and serves.
- Competition arises when several organizations strive to make a profit by satisfying the same demand.

Building on these assumptions, a framework for defining competitiveness can be developed that is based on customer values, shareholders values, and the ability of an organization to act and react and the sustainability of the competitive advantage. The conceptual framework is presented in figure 5 (Feurer, 1994).

The framework suggests that there is a constant feedback between customers, the organization under consideration and its competitors, as well as the shareholders. This creates a dynamic environment that is constantly changing due to changes in customer and shareholder values, and the capacities of the competi-

tors. This change is primarily driven by innovation as it directly affects the attributes of the products and services offered to customers, as well as the provision of value added to shareholders in the form of growth opportunities and the improve-

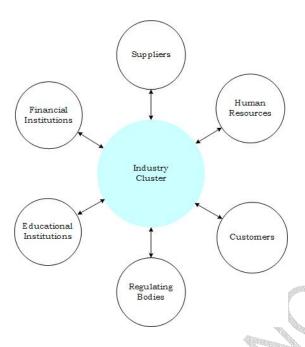


**Figure 5** Conceptual Framework for Defining Competitiveness at the Company Level Source Feurer, 1996

ment of their return on investments. Based on this analogy, we can now define competitiveness at the enterprise level as a relative concept rather than absolute. It depends on the customer values, shareholder values financial strength of the company which determines the company's ability to act and react with the changing competitive environment that is affected by the potential of people and technology in the implementation of the necessary strategic changes. Competitiveness can be sustained if only an appropriate balance is maintained between these conflicting factors.

#### **Tools for Improving Competitiveness**

The process of improving and enhancing competitiveness requires the support and cooperation of all parties in the economy. This includes governments, who set poli-



**Figure 6** An industry cluster Source: Askar, 2004

cies, financial institutions, schools, research and development institutions and other supportive agencies.

At the government level, governments need to take on the new role of directing public investments towards the goal of upgrading national structural and information technology infrastructure. Government policies need to support market growth in the form of supporting competition and creating a business environment that aids the work of domestic and foreign companies operating in the country. Furconsumer protection laws thermore. should be developed to provide consumers with high-quality products, as well as to open local markets for competition so consumers can be provided with adequate opportunities of choice. Lastly, governments need to help companies and industries with investments in innovative capacities that will be the main catalyst for growth through proper investment support laws and policies.

On the industry level, the formation of industry clusters is a key tool to enhance competitiveness. Clusters as presented in figure 6 below are formed at the industry level by industry producers, and their supporters including suppliers, customers, financial and educational institutions, regulating bodies and human resources. The formation of industry clusters has three main advantages:

- 1. Clusters increase the productivity of participating enterprises by providing them with access to specialized suppliers, employees, sources for information and training in a more effective ways.
- 2. Clusters increase the capacity for innovation and growth by providing opportunities for innovation.
- 3. Clusters stimulate and enable new business formation supporting and expanding them.

#### **Measuring Competitiveness**

As competitiveness becomes an important catalyst for survival in the global economy, countries and organizations alike are concerned about how they can measure their competitiveness. Based on the definitions achieved in the previous sections, various means need to be developed in order to properly measure competitiveness at each level.

At the macro level, competitiveness is defined in terms of a country's ability to generate wealth and offer its citizen a high standard of living and support business growth. When considering national wealth, the gross domestic product (GDP) offers a good means of measurement. However, it fails to determine how this wealth was generated by the society and how well it has been distributed. Furthermore, GDP does not provide insight

on quality of life and how business growth is facilitated.

Several indices have been established to measure competitiveness in a country and how growth is sustained to enhance it. Of these indices, the Growth Competitiveness Index (GCI), the Business Growth Index (BGI), and the Network Readiness Index (NRI) are the most relevant.

Growth Competitiveness Index, GCI

The GCI has been developed by Jeffery Sachs and John McArthur and is presented as part of the *World Economic Forum Global Competitiveness Report*. The GCI is built on three main pillars:

- Macroeconomic Environment
- Quality of Public Institutions
- Technology

Index

The first pillar deals with the macroeconomic stability of the economy. The macroeconomic index provides insights on how growth can be achieved by providing a stable macroeconomic environment that supports business development. The macroeconomic measures include the government deficits, public spending, taxation, soundness of the banking system, and the government ability to meet its financial obligations in forms of payments on public loans.

The second pillar deals with the quality of public institutions in the country. Such institutions include the protection of the judicial system, the enforcement of government regulations and provision of services, and the protection of contracts.

The third pillar deals with technology, as it plays an ever increasing role in stimulating economic growth. The extent of technology diffusion determines the degree at which the economy can grow through innovation.

Business Competitiveness Index, BCI

The Business Competitiveness Index (BCI) has been developed by Michael Porter of Harvard University. Similar to the GCI, the Business Competitiveness Index is calculated on the basis of the Executive

Subindexes

Market Environment

Environment

Political and Regulatory Environment

Infrastructure Environment

Individual Read iness

Read iness

Business Read iness

Government Readiness

Individual Usage

Business Usage

Government Usage

Component Indexes

**Figure 7** The Networked Readiness Index Source: Kirkman, 2003

Opinion Survey, administered by the World Economic Forum. Since 2000, the results of the BCI have been continuously presented in *The Global Competitiveness Report.* 

The Business Competitive Index is built on the examination of two interrelated fields: (1) the sophistication domestic companies and foreign subsidiaries employ while operating in a country, and (2) the quality of the national microeconomic business environment.

#### Networked Readiness Index, NRI

The Network Readiness Index (NRI) is defined as a country's degree of preparedness to participate in and benefit from developments in the information and communication technology (ICT) field. The NRI is produced cooperatively by INSEAD, the World Bank (*infodev*) and the World Economic Forum.

The NRI relies on three main component indices: Environment, Readiness, and Usage (figure 7).

The environment component index measures the degree of conduciveness of the environment a country provides for the development and use of ICT. The environment component index is based on three sub-indices, market sub-index, political/regulatory sub-index and infrastructure sub-index.

The readiness component index measures the capability of the prinipal agents of an economy to leverage the potential of ICT. The readiness component index is based on three sub-indices, each one assessing the readiness of the nation to utilize and leverage ICT. These sub-indices are *Individual Readiness*, *Business Readiness*, and *Government Readiness*.

The third component index measures the extent of ICT-usage by the principal stakeholders of the NRI framework: individuals, businesses and governments. The usage component index is built on three sub indexes, *Individual Usage*, *Business Usage*, and *Government Usage*.

Chapter 2

# The State of Competitiveness of The Egyptian Economy

This chapter is divided into three sections. Section one illustrates the stages of competitive development, as theoretically defined. Section Two discusses the competitiveness of the Egyptian economy at the country level. It provides an overview of the economy with particular emphasis on performance indicators in five aspects. The section concludes that Egypt's economic performance has been weakening over the past few years, risking compromising competitiveness. These findings are reinforced by the results of Section Three. In Section 3, the performance of the economy is quantified by introducing eleven measures of competitiveness identified by the World Economic Forum. Egypt's ranking relative to other countries with respect to these factors is analyzed. The chapter moves on to provide an assessment of current competitiveness rankings on three indices, namely the Growth Index, the Business and Competitiveness Index and the Networked Competitiveness Index. An analysis of Egypt's slipping rankings and mixed performance on scores assigned to factors on the indices indicates that competitiveness has been declining relative to other countries. Section Three ends with a discussion of prospects for improving Egypt's competitiveness and some concluding remarks.

#### **Objectives of the Report**

In chapter 1 we introduced three levels of competitiveness: the macro or country level, the sectoral or industry level, and the micro or firm level. The results of the Executive Opinion Survey implemented by the World Economic Forum indicate that the most problematic factors for doing business in Egypt—that negatively affected competitiveness—were related to the country level environment. (See Annex, Table B.1.) Hence this first report is devoted to a discussion about competitiveness by focusing on the macro-level of the economy.

A second reason that the current report is concerned with the country or macro-level of the economy is that this is the framework or institutional setting within which the micro-levels operate. The institutional setting could be conducive to firm productivity, which then feeds into national productivity, national competitiveness and long run growth, or could have the opposite effect.

Competitiveness at the country level is thus relevant for two key players in the Egyptian economy: policy makers and the business community. Competitiveness is particularly significant at the macro-level within the context of a dynamic external and knowledge-based environment that is increasingly determined by rapid deepening of globalization and swift moving technological advancements.

The objectives of this report are (i) to monitor Egypt's competitiveness status via detailed benchmarking analysis with a peer group of developing countries within and outside the Middle East and North Africa region; (ii) to assess ongoing progress in areas directly affecting the determinants of competitiveness at the macro level; (iii) to establish a working partnership that furthers the dialogue between the business community and the government on how to increase competitiveness at the country level, through developing a joint strategy aimed at enabling the business sector to take full advantage of the rapidly changing international parameters of competitiveness; (iv) the report is the first of a series of reports that will be of interest to research focusing on analyzing the factors that determine Egypt's competitiveness at the macro, sectoral and firm levels.

# The Stages of Competitive Development

There are three distinctive stages that shape the competitive development of a national economy: (i) factor-driven economy; (ii) investment-driven economy, and (iii) innovation-driven economy.

As national competitiveness progresses, the mode through which competitiveness is formed changes. During the first stage basic factors conditions, such as labor cost and unprocessed natural resources, represent the dominant sources of competitive advantage.

As the country develops, the economy moves from being factor-driven towards being investment-driven. At the investment stage, efficiency in production of standard goods and services becomes the dominant source of competitive advantage. At this stage, investments in infrastructure, the creation of a friendly business environment, the provision of attractive investment incentives and better access to capital allow major improvements in productivity and enhancement of competitiveness.

Further progress moves the economy towards becoming innovation driven, where the ability to produce and deliver innovative products and services, using the most advanced and efficient production methods, becomes the dominant source of competitive advantage. At this level, the national business environment is characterized by the overall strengths of all significant sectors, together with the presence of well-organized and highly developed clusters.

When comparing the current state of the Egyptian economy with the stages of competitive development, Egypt is in the process of progressing from a factor-driven economy towards an investment-driven economy. The following section discusses why Egypt has not successfully implemented this transition.

#### Overview of the Egyptian Economy

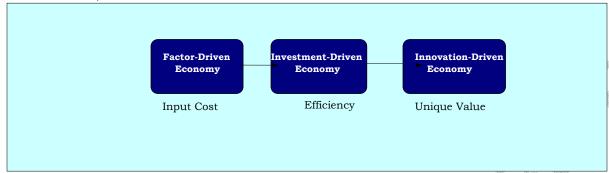
A low-middle-income country, Egypt has the essential foundations for a robust economy. Between 1997 and 2003 the economy unwaveringly showed economic resilience in the face of a number of exogenous factors: (i) the South East Asian crisis of 1997 and the slow recovery of the world economy; (ii) the temporary decline of tourism during 1997/98 following the Luxor incident; (iii) the drop in international oil prices facing Egypt's oil exports in 1998; (iv) global slowdown followed by the September 11, 2001 events; and (v) the Afghanistan war as well as the recent and continuing turmoil in Iraq.

Egypt has delivered on many fronts but faces many challenges going forward. Stable international reserves, growing exports, current account and balance of payments surpluses, and a manageable external debt position are all positive steps achieved successfully. The challenges ahead include: a mounting domestic debt, accelerating inflation, high unemployment, a rising budget deficit, declining GDP per capita, a discouraging incentive environment for exports, declining private sector participation, a fragile banking sector, negligible foreign direct investment, slow privatization, a business environment that could be more conducive to investment, and an education system that does not cater to the needs of the business sector.

To assess the competitiveness of the E-gyptian economy, we will only focus on five aspects that relate to international competitiveness:

- I. Macroeconomic Growth and Stability
- II. Exports
- III. Foreign Direct Investment, Technology Transfer and Private Sector Development
- IV. Infrastructure and Education

Source GCR, 2003



V. Regulatory and Business Environment

#### Macroeconomic Growth and Stability

Macroeconomic stability has until recently been the strongest pillar of the Egyptian economy; the pursuit of overall sound macroeconomic policies has helped contain the impact of unfavourable external circumstances to a great extent. International reserves cover more than 12 months of imports and 8 times the stock of short-term debt in June 2003. The current account continues to witness, for the second year in a row, a surplus that reached almost US\$2 billion. The overall balance saw a turnaround to a surplus of US\$546 million in June 2003 compared to a deficit of US\$456.4 million a year earlier.

On a more specific note, Egypt's oil balance shifted back into the black with net proceeds of US\$ 880 million for the fiscal year ending June 2003. This was due to increased government efforts to substitute oil for gas as well as high international oil prices. During that year, Egypt produced an average of about 620,000 bbl/d of crude oil, down sharply from its peak of 922,000 bbl/d in 1996. Declining production levels and low oil prices at the end of the 1990s pressured Egypt's oil balance into the red, as it became a net importer of oil. However, due to major recent discoveries, natural gas is likely to be the primary growth engine of Egypt's energy

sector in the foreseeable future and the government is encouraging the use of natural gas as a substitute for oil. With proven gas reserves of 62 trillion cubic feet (TCF) (1.1 percent of world total) and probable reserves at around 120 TCF, Egypt is expected to take a leading position on the world production scene. Between 1999 and 2003, production of natural gas more than doubled to 3.3 billion cubic feet per day (bcf/d) and is expected to rise to around 5 bcf/d by 2007. Natural gas exports to Jordan have already commenced, with the probable future extension of the pipeline to Syria. Turkey, Lebanon and possibly Cyprus. Two other export projects are expected to kick off by the end of 2004 and September 2005 respectively, while other Majors have expressed interest in Egypt's Liquefied Natural Gas (LNG). Gas exports are expected to fetch around US\$ 4 billion by the end of 2006, substantially increasing the country's foreign currency receipts and offering the government a new source of finance (Egypt Brief Country Analysis, February 2004).

Furthermore, Egypt's external debt position is sustainable. Although both, foreign debt service as a percent of current account receipts and total external debt relative to GDP increased to 9.8 percent and 35.6 percent respectively, the external debt and debt service positions are still considered comfortable by international standards (Moody's, 2003). Government debt is 58.2 percent of GDP.

Many challenges remain, however. Inflation has become a growing concern fol-

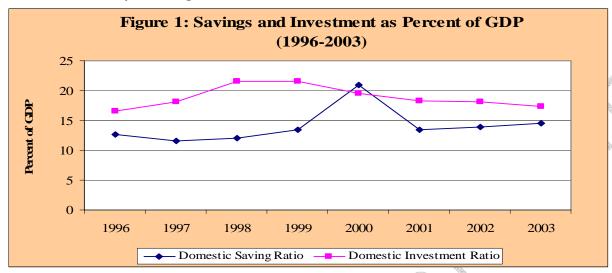
lowing the announcement of the full domestic convertibility of the Egyptian pound in January 2003. As measured by the consumer price index (CPI), the inflation rate almost doubled from 2.9 percent to 5.5 percent by December 2003. The CPI basket contains many subsidized commodities and an alternative measure of inflation—the wholesale price index (WPI)—was more than 20 percent in January 2004 (Monthly Economic Digest, p. 30). In confronting this challenge, the Government continued to have substantial control over the exchange market, and a dual market now persists. Additionally, an increasing subsidies burden is worsening an already tightly stretched budget. The rigidity of foreign exchange management has necessitated high local currency interest rates. This has deterred local investment and proved costly to the budget and to highly leveraged Egyptian companies.

Economic growth remains the biggest concern. GDP growth rates, sluggish at some 3.2 percent between 2001 and 2003, are projected by the IMF to increase to about 3.7 percent for the year ending June 2004 (likely to be fuelled by government consumption in the form of

wages, subsidies and infrastructure development). The prospects for GDP per capita growth rates are daunting, however. Current GDP growth rates cannot keep pace with the growing population, making it difficult to generate sufficient income employment for the expanding labour force. GDP per capita has declined from US\$ 1,550 in 2000 to US\$1,036 in 2003 (IFS, 2004). Official rates of unemployment have increased to 9.9 percent, while unofficial estimates quote double-digit rates.

Egypt continues to confront low levels of gross domestic and national savings (GDS, GNS), and hence low investment rates. Domestic and national savings as a percentage of GDP were 14.5 percent and 17.8 percent respectively in June 2003. Egypt compares rather poorly with other developing countries as indicated in Tables B.2 and B.3. (See Annex.) Data available for 2000 and 2001 show that, with the exception of Jordan, Egypt's GDS as a percent of GDP was 13.4 percent compared to Mexico's low rate of 18.4 percent and China's high rate of 40 percent. GNS rates fare no better; Egypt is outperformed by all countries in the sample group.

Source: Ministry of Foreign Trade, 2004



On a slightly more positive note, Egypt managed in recent years to narrow down the savings-investment gap (Figure 1). However, this was achieved by bringing down investment, not by raising savings. In order to accelerate GDP growth and create sufficient employment opportunities, the level of productive investment must be increased. Factors restraining the rapid increase of private sector investment must also be addressed. On a parallel front, Egypt must improve the level of domestic savings and increase the competitiveness of its production (World Bank, 1999). Higher levels domestic savings would serve to reduce reliance on foreign savings.

In 2003, three sovereign rating agencies, Standard and Poor's, Moody's and Fitch added to the alarm bells a high budget deficit, a rising public debt burden, exchange rate inflexibility, and a slow pace of economic reforms.

The budget deficit continued its upward trend, to reach 6.1 percent during 2002/2003, and is projected to rise to 6.9 percent by June 2004. Looking at the revenue side of the budget's equation, the government extended the sales tax to what is essentially a full Value Added Tax. However many plans to overhaul the taxation system are still in the pipeline. Among these is the urgent need to shift from the imposition of retroactive and ar-

bitrary taxes to a documented, well understood and clear taxation system. It is imperative to put in place a proficient tax administration and collection system to make up for anticipated falling customs duties and tariffs following full integration into several international trade agreements. A reduction of both the personal and corporate tax rate to 30 percent form 40 percent is on its way and should help prevent tax evasion.

Although Government Debt is 58 percent of GDP. Domestic Public Debt (Government, NIB and economic authorities' debts inclusive) remains problematic at 84.7 percent of GDP (Quarterly Economic Digest). The exchange rate system is in need of improvement. A series of devaluations since 2000 were not sufficient to fully restore confidence in the Egyptian pound. The emergence of a dual exchange rate since the late nineties reflects a number of capital control measures imposed by the government to mitigate the vulnerability of the exchange rate to the external environment. It also signifies the difficulties faced by the government in implementing market-oriented exchange rate policies. The new exchange rate system that was announced in January 2003 served to enhance exports and improve the economy's ability to adjust to external shocks. However, the new system has fallen short of expectations and the benefits of a free float have not been fully realized. Many structural rigidities persist in the exchange market. On a positive note some highly skilled candidates have recently been appointed to form a currency team (of researchers, econometricians and traders) at the Central Bank of Egypt to manage the currency. In addition, a self-regulatory inter-bank market for foreign exchange is in the process of being established. It will provide improved market rules and structures, thus giving rise to an exchange rate that is market determined.

Important structural reforms have also been delayed. A few examples include the privatization initiative that needs to gain momentum, and the issuance of a decree to establish a primary dealer system that was never implemented. Despite the passage of the mortgage law and its executive regulations in 2001, the market has not witnessed any mortgage products yet.

Other long awaited laws have not been enacted, and the executive regulations of a number of laws, issued back in 2002, have not been passed. These issues will be discussed in greater detail in the following pages.

#### II. Exports

Higher and sustainable growth rates are imperative in order to reduce poverty and generate job opportunities for the young and growing labour force. Greater openness to trade and a friendlier investment and business environment led by exports and the private sector are critical to achieve the required rates of growth. On the trade front, exports of goods and services as a percent of GDP have increased by 11 percentage points between 1998 and 2003, from 16.2 percent to 27 percent, following significant exchange rate depreciation. (Calculated from MOFT's Quarterly Digest, 2004). Nevertheless these levels are meagre compared to peer countries. In 2002, exports of goods and services of Chile, China, Indonesia, Jordan, Malaysia, Mexico, Tunisia and Turkey ranged from a low of 28.6 percent to as high as 114 percent of GDP. (See Annex, Table B.4.)

The performance of Egypt's merchandize exports compares even more poorly. Egypt's merchandize exports have increased from 6.1 percent of GDP in 1998 to 11.9 percent in 2003. In 2002, exports of goods were 8.7 percent of GDP compared to China's low performance at 26.3 percent and Malaysia's high of 98.4 percent. (Annex, Table B.5.)

Although non-oil merchandise exports have gone up from 4 percent of GDP in 1998 to 7.3 percent in 2003 (calculated from MOFT's Quarterly Digest), available comparative data again show Egypt at a disadvantage relative to other peer developing countries. (Annex, Table B.6.)

A further breakdown of the data does not work in Egypt's favour either. The share of non-oil exports in total merchandise exports has dropped from 66 percent in 1998 to 61.5 percent in 2003 (calculated from MOFT's Quarterly Digest, 2004). Although Egypt's exports are not dominated by oil, the rising share of oil in total exports does not bode well for economic growth. Oil exporting countries characterized by a dominant share of oil in their exports tend to realize weaker growth rates than other non-oil exporting developing countries (World Economic Outlook, 2003). Sustained diversification of the narrow and volatile export base would be crucial to reduce the vulnerability of the economy to balance of payments pressure (Moody's, 2003).

# III. Foreign Direct Investment, Technology Transfer and Private Sector Development

Foreign Direct Investment has also been weak compared to other developing economies. FDI has progressively declined from US\$1,104 millions in 1998 to a mere US\$700.6 million in 2003, or 1.02 percent of GDP. Peer countries record much higher levels. In 2002, Egypt re-

corded 0.5 percent of GDP compared to 0.6 percent for Turkey (the lowest in the sample) and China's high of 4 percent (Annex, Table B.7.) Attracting sufficient foreign direct investment to stimulate growth is proving challenging given the deterioration of the regional political environment.

Moreover most of the miniscule FDI inflows are directed at the capital intensive oil and gas sector. Depressed FDI is in part due to concerns about exchange rate policy and public finances (Moody's, 2003), but is in large part also due to the business environment. Greater openness to foreign direct investment is crucial in order to serve as a channel to facilitate technology diffusion and positive technology spillovers, contributing to sustainable economic growth and competitiveness (World Bank, 2004).

The participation of the private sector in economic activity is in no better shape. At present, the share of the private sector in GDP has declined from 76 percent in June 2000 to 73 percent in June 2003, while public sector consumption has increased from 11.3 percent of GDP to 12.5 percent (Quarterly Digest, 2004). The role of the state in the economy needs to be narrowed through expediting privatization, streamlining of processes, removal of red tape and implementing tax and tariff reforms.

Following the incorporation of the Egyptian Electricity Holding Company, (EEHC) in July 2000, plans were considered to split the company's generation, transmission and distribution assets. Those assets would then have been sold to private investors, however, those plans never materialized. Needless to say that the burial of these plans had their negative effect on Egypt's stock market, which witnessed the last true Initial Public Offering of Vodafone in December 2003 following Orascom Telecommunications Company in July 2000. (Later participation of private investors in the sale of listed companies was in the form of partial and/or full buyouts either by a quasi-government entity or a foreign player). The sale of a substantial stake of a major public utility

company or of one of the four state owned commercial banks would help restore investors' confidence of the government's serious commitment to further liberalization and its subsequent interest in attracting foreign funds and know-how. Privatization plans are currently believed to be on hold given the state companies' high debt burden to commercial banks in addition to the social cost of layoffs, given already high unemployment rates.

#### IV. Infrastructure and Education

Egypt achieved some milestone steps with regards to infrastructure development. Examples are improvements in the reliability of power generation, in telecommunications and in the roads connecting the country, although more could be done.

Infrastructure is no longer only defined in terms of roads, bridges, water, sewage networks or communication system. Current definitions of infrastructure extend to include human infrastructure as well as financial aspects of the banking system, the stock market and information networks (Ministry of Economy 1998). This section will deal with the human infrastructure and the banking system.

Egypt has one of the highest schools enrolment ratios and has moderate to high expenditure on education (Human Development Report 2003). Yet the Egyptian education system needs major overhaul in order to be able to provide the skills required by entrepreneurs. Current education curricula are not fostering the types of skills that are in greatest demand by the market. The current situation implies the existence of potential virtuous growth cycles and suggests that education reform, coupled with trade reform, will translate into increased productivity levels.

The banking sector is still suffering the consequences of rapid and miscalculated credit expansion to private individuals in the second half of the 1990s. Without either properly assessing the borrowers' inadequate expertise in the field for which

the funds are borrowed (as with the real estate boom) or their repayment prospects, commercial banks' recorded an officially estimated 22 percent of non performing loans (MOFT's Quarterly Digest). The present high interest rate environment is only worsening the problem resulting in some businessmen fleeing the country, while others are in jail. On a positive note, heads of public sectors banks and boards have been replaced by younger professionals of international experience who resorted to opening negotiations for loans settlement that are taking place to the present date.

As for the stock market, it has undergone a series of regulatory developments with a view to increasing its efficacy and has to a great extent won investors' confidence. Enhancing corporate governance practices and introducing Ethical Professional Standards were among the most important regulatory evolutions in 2003 and 2004. Additionally, the Egyptian Stock Market intends to establish a "Compensation Fund" that covers potential settlement losses arising from default by capital market participants (Quarterly Digest, 2004).

The market revived in 2003 and in early 2004 after experiencing a continuous decline since 2000. In US\$ terms, the MSCI Egypt Index in 2003 was the seventh best performer among emerging markets, rising 81 percent and significantly outperforming the MSCI EMF Index which had recorded a 52 percent performance.(In US\$ terms the HFI gained 63 percent). In local terms, the market performed even better after the 33 percent devaluation against the US\$, whereas most emerging market currencies appreciated vis-à-vis the US\$.

The rally in 2003 was driven by many factors namely: (i) devaluation; (ii) a perceived bottoming of the economic recession which began in 1999; (iii) loosening up of monetary policy; (iv) positive corporate earnings results; (v) global and emerging markets rebounding performance; (vi), and (vii) inflows of funds from both institutional foreign and Gulf-based investors. Large cap-stocks dominated the

rally and gains were concentrated in a small number of large capitalization stocks, especially Orascom Telecom and Orascom Construction Industries. Additionally, the average traded daily volume and traded EGP value for the HFI constituents rose by 114 percent and 135 percent y-o-y respectively.

Between January and May 2004 the MSCI Egypt Index recorded a 19 percent increase compared to 2.6 percent for the MSCI EMF Index. This positive performance was due to the same 2003 drivers. The out-performance of the small caps is quite marked, marking a significant reversal from the pattern seen in 2003. Record-low short-term interest rates stimulated global liquidity and led to both a global and emerging markets' increased liquidity, part of which flew to Egypt's market. Additionally, the market's positive performance has been largely driven by retail buying interest relative to both local and foreign institutional investors. Most of the best performing stocks were cyclical, mostly dominated by cement, as cement stocks were either in an earnings recovery phase or because of acquisition rumors; followed by Madinet Nasr for Housing and Development, after a sharp fall in absolute price; and banks, namely Misr International Bank and Egyptian American Bank, which have emanated from very low valuations and currently perceived as recovery stories. Positive news of increasing tourism arrivals was the main driver to Orascom Hotel Holdings' best performance between January and May 2004. Media stock's positive performance is to a large extent driven by news, rumors and Dubai market approaching listing. Furthermore, telecom stocks were great beneficiaries during the first 5 months of 2004 due to the outperformance of global and emerging markets' telecom stocks. Year-on-year comparison, on a year to date basis ending May 2004, the average traded daily volume and traded EGP value for the HFI constituents rose by 71 percent and 102 percent respectively.

Will the Egyptian market's positive performance continue for the rest of the year and further in to the future? This remains a function of global and emerging markets' equity performance, global liquidity as well as the pace of economic and structural reforms.

# V. Regulatory and Business Environment

The regulatory environment is characterized by slow dispute settlement, and many delays in passing either laws or their executive regulations.

Regarding dispute settlement, court cases can take up to 10 years and, when settled, enforcement is not guaranteed.

The delay in passing the executive regulations of several laws is a serious issue. Three examples are the Export Promotion Law No. 155/2002; the Copyright, Patents, Trademarks and Botanical sections of the IPR Law No. 82/2002; and the Central Bank, the Banking System and Monetary Policy Law No. 88/2003. The Banking Law is expected to lead to adequately capitalized banks, staffed with highly efficient and trained personnel, offering an array of sophisticated banking products.

Similarly, the passage of new tax, customs and anti-trust laws are still awaited. Furthermore, although the Mortgage Law and its executive regulations have been passed in 2001, the market has not witnessed a single mortgage product. This is due to the complicated registration procedures (of underlying collateral), as well as a slow judicial system (in case of foreclosures), hindering financial institutions from actually implementing the law and depriving the capital markets from the creation of a secondary market for the mobilization of effectively illiquid assets.

With respect to the business environment, tariff rates are at 27 percent on average, customs are arbitrary and represent the biggest obstacle to imports and many cost distortions occur. A study by ECES (2001) concluded that high levels of protection, transaction costs in dealing with customs and tax administration were among the variables that impaired Egypt's

competitiveness and created an antiexport bias. The study compared the rates of return on equity and assets for two identical producers except that one is an exporter and the other produces for the domestic market. The domestic producer realized higher rates of return because there was a bias in the incentive system that favoured production for the domestic market over exports.

The study then proceeded to compare tariffs and sales tax imposed on intermediate imports and capital goods in Egypt and in other developing countries. Egypt's statistics were consistently higher than those of competitors. Interest rates and corporate profit taxes were also higher. This is not withstanding other costs that were not addressed in the study such as customs, tax administration and the cost of port services, warehouses and local means of transport. The paper concluded that the incentive structure does not support Egyptian exporters compared to their competitors in other developing countries, and creates an anti-export bias.

In addition to the desired tariff and tax reforms, "behind the border trade reforms" are direly needed. "Behind the border trade reforms" are defined as reforms to facilitate trade; to reduce trade transaction costs, simplify inspection and testing procedures, streamline the regulatory policies that impede competition, restrict trade and investment, and create not only significant barriers to entry but also high costs of business support services. These reforms matter for the ability of firms to benefit from trade liberalization and increase their competitiveness. Trade facilitation also reduces the potential for corruption (Essawy & Ghoneim, 2004). Current "behind the border trade barriers" are creating an anti-trade and investment bias, even though traditional trade liberalization is being pursued. Reduction in trade costs can sometimes be as important as reducing either tariffs or taxes and market access abroad may be more critical to maximizing the positive impact on poverty reduction. "Behind the border reform issues" must be addressed in parallel to traditional trade reforms (World Bank, 2004).

Other cost distortions include the requirement to convert 75 percent of export earnings to Egyptian pounds at the official exchange rate—a restriction not conducive to export growth. Foreign currency shortages deprive firms from imported inputs including capital goods. High interest rates and the budget deficit continue to crowd out the private sector.

The inability to access low cost finance can greatly deter investment. There were high hopes that after the successful inauguration of Egypt's first sovereign bond and the benchmark it would set, commercial banks as well as corporations would be able to pave their way to the international capital markets for their financing needs. However, after Egypt's downgrade to below investment grade, such chances vanished. Corporate finance needs are only met by Egyptian banks offering very limited medium and long term financing at the ongoing high interest rates.

Finally, lengthy investment procedures and the absence of an effective one-stop shop for foreign investment registration have redirected FDI flows to other friend-lier countries.

#### C. An Assessment of Egypt's Current Competitiveness Ranking

#### **Executive Opinion Survey**

The Executive Opinion Survey is administered annually by the World Economic Forum and its worldwide partner institutions to asses the state of global competitiveness. The survey measures global competitiveness in terms of eleven factors. These factors are

- 1. Aggregate Country Performance Indicators.
- 2. Macroeconomic Environment
- 3. Technology Innovation and Diffusion.
- 4. Human Resources; Education, Health and Labour.

- 5. General Infrastructure.
- 6. Public Institutions: Contracts and Laws.
- 7. Public Institutions: Corruption.
- 8. Domestic Competition.
- 9. Cluster Development.
- 10. Company Operations and Strategy.
- 11. Environment.

The results of the 2001 and 2003 executive opinion survey for Egypt for aggregate country performance indicators are presented in the following 11 tables. Data for previous years are not available for this report. Please note that for all 11 tables, variables are numbered only when available for the year.

# Aggregate Country Performance Indicators

From Table C.1 we notice deterioration in total GDP in dollar terms between 2001 and 2003, likely due to the impact of exchange rate depreciation. There is an accompanying deterioration in rank, from 36th to 39th over the two periods of comparison. GDP per capita (PPP), however, slightly improved by less than 3 per cent. It remains to be seen how accelerating inflation rates of 20 per cent (as measured by the WPI, see Section B above) in 2003/2004, will adversely affect this indicator next year. In addition, the economy will need to grow at faster rates to absorb rising unemployment and the growing labour force.

#### **Macroeconomic Environment**

We note from Table C.2 that where comparative data are available, only three indicators improved in terms of rank and value of score assigned, namely: recession expectations, extent of distortive govern-

ment subsidies, and the real exchange rate. The improvement of recession indicators shows that the Egyptian economy is in the process of recovery, as discussed in Section B (Overview of the Macroeconomic Environment). The improvement in the subsidies indicator indicates that the government has not increased the number of goods subject to price controls. (It remains to be seen whether this indicator will worsen next year as the government might try to mitigate inflationary pressures due to exchange rate depreciation with price controls.) The improvement in the real exchange rate reflects the substantial depreciation of the pound over the past two years.

For the majority of the indicators in the table, Egypt's rankings and scores assigned to the various indicators are consistently worse. The largest changes are experienced in the financial sector and national savings. The ranking of the soundness of Egyptian banks has declined from 45 in 2001 to 88 in 2003. We see a similarly sharp decline for the national saving rate. Other big ranking losses were experienced in access to funds, be they loans or local access to equity markets. When there has been a slight improvement in value (venture capital availability and access to credit), the slide in ranking was still significant, indicating that other countries are outperforming Egypt. These results are compatible with the analysis of the state of the Egyptian economy in section B. Inadequate access to equity financing and venture capital hinders new investments as demonstrated in the competitiveness pyramid presented in Chapter 1.

Another important area where both rank and score have worsened is in the country's overall credit ratings. Through implementation of sound macroeconomic policies, fiscal and monetary, the government needs to address this deterioration as it poses an important obstacle to restoring credibility in the economy, reducing foreign borrowing costs and attracting foreign direct investments.

# Technology, Diffusion and Innovation

Table C.3 presents the technology innovation and diffusion factor at the country level. Technology plays an important role in determining the competitiveness of a country as it determines how the country will be able to increase its productivity so that it can compete in the global markets, and offers sophisticated products or services that have a higher value added.

Rankings and scores have improved in several areas. Technology sophistication shows an improvement of 6 ranks as Egypt moves from the 58th rank in 2001 to the 52nd in 2003. Other improvements are noted in the areas of subsidies and tax credits for firm-level research and development; company spending on research and development; government procurement of advanced technology products; and internet access in schools.

Improvements in value, but not in ranking, are noted in cellular telephones usage, inernet users, internet hosts, telephone lines and personal computers. This indicates that although substantial absolute progress is evident in these areas, Egypt is under-reforming relative to other countries.

On the other hand, FDI and technology transfer, government prioritization of ICT, and government success in ICT promotion have all slipped in terms of ranking and score.

# Human Resources; Education, Health and Labour

Table C. 4 summarizes the data for the fourth factor which measures human resources development, effectiveness of the education system, the quality of the healthcare system and the availability of qualified labor.

Comparison data for previous years are not available except for the brain drain indicator, which has worsened in terms of rank and score. The loss of intellectual and brain talents to other countries could be a potential problem if the trend persists in the coming years.

In the absence of data for previous years it is difficult to determine Egypt's performance with respect to the other indicators. However, the worst relative rankings seem to be in the area of women's rights especially with regards to maternity employment. Although this appears odd, other low rankings concern the impact of tuberculosis and malaria on business. Weak rankings are also observed in indicators relating to the education system.

#### **General Infrastructure**

Table C.5 presents the data for general infrastructure. Where comparative figures are available, they indicate a decline in performance (rank and score) across the board — the worst being those for railroad infrastructure development and postal efficiency.

## Public Institutions; Contracts and Laws

Table C.6 illustrates the state of public institutions, focusing on the performance of the judicial system in the areas of contracts and laws.

Where comparison indicators are available over the years, they show consistent and significant deterioration in rank and score in all aspects related to the business environment. Of particular interest are judicial independence, property rights and government bureaucratic red tape, which are the worst of these three variables, ranked at 95.

As for the variables where comparison is not available, we note that the worst in ascending order are efficiency of legal framework, transparency of government policymaking and freedom of press (ranked at 90).

### **Public Institutions; Corruption**

Where comparison is possible over the years, the data available (Table C.7) show a steady weakening in all indicators relating to corruption in terms of rank and score. In particular, irregular payments in tax collection and in loan application seem to represent the greatest problem. On a positive note, business costs of corruption have to a great extent improved.

Irregular payments in public utilities was ranked 84th, the worst rank in all the indicators.

On the other hand, business costs of corruption improved from 58th rank to 40th rank. Other strong ranks for which no previous data are available include prevalence of illegal political donations and to some extent policy consequences of legal political donations and money laundering indicators.

### **Domestic Competition**

Comparison data for the state of domestic competition are available for four of the variables only, all of which show a marked deterioration, with the exception of the "extent of locally based competitors" which was stable. For the rest of the variables, ranking varied extensively from 17 (extent of market dominance) to as high as 69 (sophistication of local buyers' products and processes). (See Table C.8.)

### **Cluster Development**

Table C.9 on the state of cluster development shows mixed performance. Six out of ten variables, particularly those related to the "cluster variable" show an impressive improvement.

Other variables, the rankings of which have deteriorated, maintained the same mean score value. Values of other scores improved, yet their ranks still slid. This indicates that despite evident progress in, Egypt is being outperformed by its competitors.

### **Company Operations and Strategy**

Table C.10 on Company Operations and Strategy shows a steep decline in the rankings of the majority of indicators. The worsening of the two indicators relating to management signals that Egypt needs to focus on upgrading managerial skills and on hiring professional management for companies. Willingness to delegate authority has also fallen—another signal of poor management skills that do not foster the development and empowerment of middle and lower level management.

Marketing indicators also show significant weakening reflecting companies' inability to access foreign markets.

In 2003 four new indicators—restrictions on foreign ownership and ethical behaviour of firms—are weakly ranked at 70 and 62 respectively on the global competitiveness index. The former reflects an anti-FDI bias, while the latter reflects weak enforcement of the rule of law. Similarly, corporate governance indicators as reflected in availability of company financial information and strength of auditing and accounting standards are also feebly ranked at 50 and 68 respectively.

Marked positive ranking changes are evident however for "the nature of competitive advantage" which improved from 65 in 2001 to 33 in 2003; and for "the degree of customer orientation" which also improved from 64 in 2001 to 37 in 2003. Further improvements relate to branding, innovation and production processes reflect increased awareness for product differentiation and market niches.

### Environment

Table C.11 on the environment points to a deterioration in most aspects.

The only improvement was a marginal two-rank improvement in air pollution regulations between 2001 and 2003.

The most striking deterioration is in effects of compliance on business, which slid in rank from 12 to 60. This could weak enforcement of regulations pertaining to the environment.

The visible worsening in all remaining variables marks the issue of the environment as a front burning issue that requires urgent attention. In many of these indicators, the mean value of the variables has either slightly improved or was stable, but the loss in rank indicates that Egypt is being left behind many countries who are taking big strides towards addressing environment concerns.

### Competitiveness Indices<sup>1</sup>

After presenting the executive opinion survey results, we now move to present Egypt's rankings on the three competitiveness indices identified in Chapter 1. Egypt was evaluated using some 17 different indices to measure competitiveness. We selected the first two of the following three indices to base the current report on, as the data they provide is made available by the World Economic Forum and the World Bank, and enable the comparison with the majority of countries.

- Growth Competitiveness Index
- Business Competitiveness Index
- Networked Readiness Index

The Growth Competitiveness Index (GCI) and the Business Competitiveness Index (BCI) are calculated from the data collected by the Executive Opinion Survey.

<sup>&</sup>lt;sup>1</sup> Please note that the number of countries surveyed in 2003 increased from 80 to 102. The countries added are mainly from the developing world, especially Africa.

The methodology used for calculating each of these indices is presented in Appendices 1 and 2.

### 1. Growth Competitiveness Index (GCI)

The GCI measures the potential for the economy to sustain economic growth. The index consists of three main sub indices: the Macroeconomic Environment Index, the Public Institutions Index, and the Technology Index. The 2003 rankings for these indices are presented in table C.12. Table C. 13 presents a comparison of the 2003 GCI with the 2000, 2001 and 2002 indices.

### Analysis of the GCI data

As presented in Tables C. 12 and 13, Egypt ranked in 2003 58th out of 102 countries with respect to growth competitiveness. Furthermore, on the Macroeconomic Index, Egypt ranks 56th. On the

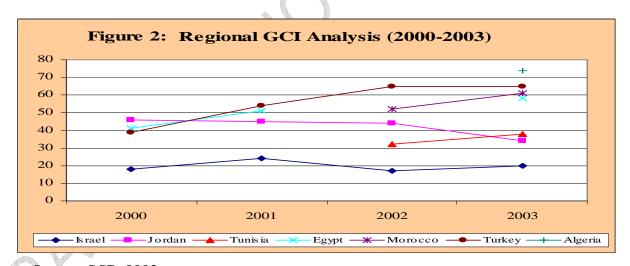
Egypt. In other terms, Egyptian competitiveness ranking is considered to be below the world average.

On the CGI index peer developing countries have overtaken Egypt. These include, naming only a few, Chile (28), Malaysia (29), Jordan (34), Botswana (36), Tunisia (38), South Africa (42), China (44), Mexico (47), and Namibia (52).

Egypt's rankings on the Macroeconomic Environment (Table C. 12) and Public Institution Indices (Table C. 13) are similar (56). Egypt is outperformed by the same set of countries

Egypt's ranking on the Technology Index is lower by nearly 10 ranks (68). This indicates that Egypt has to work on improving its technology ranking as technology plays an important role in shaping future competitiveness.

The overall ranking of Egypt needs to be improved and this will require a collaborative effort among all concerned parties, be it governmental and non-governmental



Source: GCR, 2003

Public Institution Index, Egypt ranked 57th. On the Technology Index, Egypt's rank is 68th.

Based on these results, Egypt is considered to be among the second tier countries as far as competitiveness is considered. Ranking 58<sup>th</sup> country out of 102 indicates that more than 50 percent of the countries have scored higher ranks than

institutions, entrepreneurs, as well as educational institutions.

# Regional Comparison of Egyptian Competitiveness

The relative ranking of Egypt on the GCI is presented in Table C.14. Egypt is out-

performed by many developing countries such as Chile, Thailand, Jordan, Botswana, Tunisia, China, Mexico, Namibia, Brazil, Gambia, India and Peru.

Egypt's ranking compared to regional peer countries is highlighted in Table C.15.

# 2. The Business Competitiveness Index (BCI)

The BCI measures business competitiveness and consists of two main subindices: Company Operations and Strategy, and Quality of the National Business Environment. The rankings for the BCI for 2003 are presented in Table C.16. Table C.18 presents BCI rankings for the period 1998 to 2003.

In Table C.15, comparisons are made with respect to only the Middle East North Africa region (MENA) comprised of Israel, Jordan, Egypt, Tunisia, Morocco and Algeria. Comparison is justified, in view of those countries' proximity geographically, culturally (with the exception of Israel), historically (exposed to colonization, with the exception of Israel), and exposure to the same geopolitical conditions. The last two elements greatly contribute to similar economic environments.

Table C.15 shows that Egypt ranks 4th out of the 7 countries. This signals that Egypt's competitiveness is weak relative to these countries. Moreover, when comparing the relative ranking over time, Egypt's rank has consistently deteriorated over the years. Regional leadership is maintained by Israel, followed by Jordan which has demonstrated excellent advancement in the GCI as presented by the data.

Table C.18 (BCI) shows that in one year Egypt's position witnessed a sharp drop from 40<sup>th</sup> rank to 58<sup>th</sup>.

We make the following observations about regional competitiveness from Table C.17:

- 1. On a relative basis, Egypt's overall ranking in the Macro-Economic Environment Index, Egypt is the worst.
- 2. With regards to Macro-Economic Stability, Jordan is the most successful given its commitment to an IMF 5-year Economic Reform Program the second year in a row now. It is obvious that both Israel and Egypt are very negatively exposed to the current geopolitical conditions (Egypt's exposure is worse being considered an Arab country perceived geographically close to the American-Iraqi conflict.
- 3. The overall ranking for Egypt on the *Public Institutions Index* reflects the wide-spread state culture of bureaucracy and red-tape that reflected very negatively on the perception of government effectiveness and its impact on the business environment. Such a public sector culture can also be observed where the *Government Waste Index* is concerned.

Please note the gap between the Israel-Jordan camp and the Egypt-Morocco-Algeria camp where the *Technology Index* is concerned. Needless to say Egypt's low ranking has a negative effect on per capita income and the standard of living.

#### 3. Networked Readiness Index

The third index we used for measuring the state of Egyptian competitiveness is the Networked Readiness Index (NRI). The overall NRI data are presented in Table C.21. The breakdown of the NRI into Environment and Usage Component Indices is presented in Tables C.22 and C.23.

### Analysis of NRI Data

Table C.21 reveals that Egypt ranks 65<sup>th</sup> out of 102 countries on the NRI Index,

placing Egypt among the third tier of nations, i.e., the nations at the low end of technology readiness. Egypt is outperformed by all industrialized countries, all Asian countries, many Latin American countries, East European countries and all Middle Eastern countries with the exception of Algeria. Countries behind Egypt are mostly African, and a few Asian and Latin American countries.

Technology is an important ingredient for the development of efficiency in production processes. As a low-tech economy, Egypt will find it difficult to progress from a factor based to an investment based economy.

Moving to the NRI components, Tables C.22 and C.23 demonstrate that Egypt's performance improved on the Environment and Usage Components indices—almost indiscernibly—to the 60<sup>th</sup> and 63<sup>rd</sup> ranks respectively. From Table C.24 (Readiness Component Index) we find that Egypt is again outperformed by most peer developing countries.

Each of the three component indices of the NRI is made up of several sub-indices as presented in Chapter 1. Egypt's rankings on each of the sub-indices are presented in Table C.25 which reveals that the Environment Components hold the highest ranking, with Market Environment at the top (49th rank).

The Readiness Components Index has the worst rankings, with government readiness positioned at the bottom. Business readiness has the highest of these rankings, indicating that businesses are relatively more advanced than governments or individuals. This in turn signals the need to enhance individual readiness through overhauling of education and training to foster creativity and initiative rather than rote learning.

At the usage level, the top rank goes to the government while businesses and individuals lag far behind.

### Regional Comparison of Egyptian NRI Competitiveness

Regional data for the NRI index are provided in Table C.26.

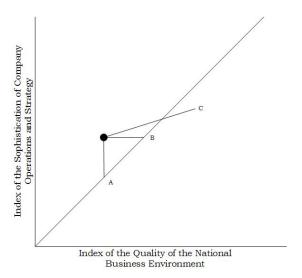
Overall regional leadership is attained by Israel. Egypt is outperformed by all countries in the sample except Algeria.

# D. Prospects for Increasing Egypt's Competitiveness

Although Egypt's competitiveness rankings have been deteriorating over the past years, Egypt still has the upside potential of catching up with peer developing countries and regaining its rightful ranking.

We note from Table C.10 that Egypt ranks 55<sup>th</sup> on the Quality of Company Operations and Strategy sub index, while it ranks 68<sup>th</sup> on the Quality of the Business Environment. This indicates that the sophistication of companies operating in Egypt is higher than the quality of the Egyptian business environment. Graphically (Figure 3), the current Egyptian competitiveness position lies above the 45 degree line that represents equal indices of company operations and quality of business environment.

Any variation from the 45 degree line represents a point of dynamic disequilibrium. Above the line—the Egyptian case—presents a situation where the degree of company operations is higher than the quality of the business environment. For companies to grow, they can only grow outside the country. This leads to a



**Figure 3** Index of the Quality of the National Business Environment

Source: Askar, 2004

situation where businesses leave the country, lowering the degree of operational sophistication, hence lowering the country's overall business competitiveness.

On the other hand if the competitiveness position is below the 45 degree line, this indicates a situation where the quality of business environment is higher than the degree of company sophistication. This environment provides room for companies operating in the country to increase the sophistication of their operations as well as attract companies from other countries to operate in this country. This will in turn increase investments in the country, foreign or domestic, which will lead to improvement in the country's competitiveness.

When reflecting on the Egyptian situation, three different scenarios can take place as presented in Figure 3.

If no improvements in the quality of the business environment are made to match the degree of sophistication of company operations, companies operating in Egypt—whether domestic or foreign—will shift their operations outside the country, while reducing the degree of sophistication they operate with in Egypt. This will then move the competitiveness position to

position A, which indicates a loss in overall competitiveness.

The second scenario, point B, is achieved through improving the quality of the business environment until it matches the degree of company sophistication. This scenario will let companies operating in Egypt maintain their level of sophistication, but will not provide room for increasing operational sophistication and initiation of new investments.

The third scenario leads to point C, where the quality of business environment is increased to a level higher than the degree of the company sophistication. As Egypt attracts more businesses, it creates an environment for increasing company sophistication and for attracting foreign companies to operate in Egypt, hence increasing foreign direct investments in Egypt. The key to improving competitiveness is to implement policies that make the third scenario possible. Towards this end, a number of recommendations are proposed in Chapter 3.

### E. Concluding Remarks

This chapter has dealt with three issues. First we discussed the stages of competitive development, as theoretically defined. Second, we provided an overview of the economy with particular emphasis on performance indicators in five aspects, namely: (i) macroeconomic growth and stability; (ii) exports; (iii) foreign direct investment, technology transfer and private sector development; (iv) infrastructure and education; and (v) the regulatory and business environment.

An assessment of the first aspect of the Egyptian economy—macroeconomic growth and stability—shows that macroeconomic stability was the strongest pillar of the Egyptian economy and the pursuit of overall sound macroeconomic policies helped contain the impact of a number of unfavourable external circumstances. However, the impact of the soundness of monetary policy is evident only in high international reserves, current and overall

balance surpluses, and a favourable and sustainable external debt position.

Overall reforms have slackened as witnessed by several indicators including an inconsistent mix of monetary and fiscal policies. Domestic government and public debts have been mounting; and the budget deficit is on the rise — exacerbated by an increasing wage bill and inefficient tax administration and collection system. At the same time, official and unofficial rates of unemployment are increasing rapidly.

The situation is compounded by accelerating inflation rates, an inflexible exchange rate system that requires maintaining relatively high interest rates that hinder economic growth.

Furthermore, an inter-bank foreign exchange market, as well as a primary dealer system for bonds, both promised for a couple of years, have not been implemented, adding to the mal-functioning of the foreign exchange market.

Economic growth, as manifested in a declining GDP per capita, remains the biggest challenge given a growing population, an expanding labor force, and low levels of gross domestic and national savings.

The second aspect of the economy relating to exports has seen some improvement but faces many challenges. Many foreign trade impediments persist, accompanied by a slow pace of trade liberalization. A friendlier investment and business environment led by exports and the private sector is critical to achieving the rates of growth required to reduce poverty and generate sufficient job opportunities. Exports have come a long way; nevertheless their performance is weak when compared to peer countries.

The third aspect shows that the business environment is not conducive to foreign direct investment, technology transfer or the participation of the private sector in economic activity. FDI has also been meagre compared to other developing economies. Depressed FDI is in part due to concerns about exchange rate policy and public finances, but is largely due to the current business environment. The

participation of the private sector in economic activity has declined from 76 percent of GDP in June 2000 to 73 percent in June 2003. High interest rates and the budget deficit continue to crowd out the private sector.

The fourth variable, infrastructure and education, shows that Egypt has achieved important milestone steps with regards to infrastructure development. However, red tape, and a large bureaucracy remain challenges that need to be tackled.

The definition of infrastructure includes human infrastructure as well as financial aspects of the banking system, the stock market and information networks (Ministry of Economy 1998). The current education system does not cater to the skills demanded by the market. The Egyptian education system needs a major overhaul in order to be able to provide the skills required by entrepreneurs. The banking sector still suffers from the consequences of the rapid and miscalculated credit expansion that took place in the second half of the 1990s (much of which had been extended for political and private favouritism).

Our discussion of the fifth aspect indicates an unfriendly and inefficient regulatory environment that is not conducive to business development. The section points out that there have been unwarranted delays in enacting important new laws such as the new tax, customs and antitrust laws and in issuing the executive regulations of a number of laws.

Furthermore, the current incentive system, encompassing high tariffs and other cost distortions is creating bias in the economy such that production for the domestic market is favoured at the expense of exporting. "Behind the border trade reforms" (trade facilitation, trade transaction costs, and product standards) are equally important in order to enable firms to benefit from trade liberalization and increase their competitiveness. Trade facilitation also reduces the potential for corruption. Current "behind the border trade barriers" are creating an anti-trade and investment bias, even though tradi-

tional trade liberalization is being pursued.

As a conclusion, it emerges very clearly that the business environment in Egypt does not only hamper business activity and private sector expansion - important pieces of the growth and development puzzle - but more seriously embodies risks of fast declining competitiveness.

These findings are reinforced by the results of Section Three in which the performance of the economy is quantified by introducing Egypt's ranking relative to other countries with respect to eleven factors. An assessment of current competitiveness rankings on three competitiveness indices, namely the Growth Index, the Business and Competitiveness Index and the Networked Competitiveness Index shows that Egypt's rankings are slipping. Egypt's ranking in the majority of competitiveness indicators has weakened, reflecting in many instances an absolute decline in competitiveness. At best, when Egypt has maintained or witnessed an increase in the value of an assigned score, its ranking still declined as other countries overtook it by achieving higher scores, indicating that overall competitiveness has been declining relative to other countries.

In other words, although economic policy reforms have come a long way since the early nineties, the data presented in this chapter suggest that Egypt could be under-reforming relative to other countries. Many of the reforms that Egypt will need to accelerate are dictated by a dynamic global economy with which Egypt has to continuously align its policies.

In conclusion, economic reforms must regain their momentum, otherwise peer developing countries will continue their leaps and bounds, leaving Egypt far behind. If Egypt does not keep pace with international developments, it risks becoming marginalized from the globalization process.

Finally, the following questions arise: are future prospects for increasing Egypt's competitiveness promising? Are there windows of opportunity that can be reopened to increase competitiveness? This is what we will discuss in the next chapter.

### Chapter 3

# The Road Ahead: The New Government-Business Sector Working Partnership for Increasing Competitiveness

Despite our findings that Egypt's competitiveness is weakening, the picture painted for Egypt in the previous chapter is not bleak. Egypt has potential to improve its competitiveness. This is because strong macroeconomic policies have distanced the country from crises experienced in the mid to late nineties in Latin America and South Asia, and more recently in Argentina in 2002.

Competitiveness is the final outcome of a combination of complex "drivers of change" (Asian Development Outlook, 2003). Re-establishing the competitiveness of the Egyptian economy requires the expedited implementation of wideranging economic, financial, regulatory and institutional reforms, in order to drive a friendlier business environment, raise investment rates and propel higher rates of growth.

On the basis of the findings of Chapter 2, we will discuss here some of the opportunities that could, if grasped, enhance the competitiveness of the Egyptian economy. Factors that have contributed to declining competitiveness over the past few years are actually potential opportunities to harvest substantial returns.

The needed adjustments stem from an internal awareness of needs, are well recognized by leading policy makers and executing bodies in Egypt, and are work in progress. In absolute terms, many reforms have been implemented. However we saw in the last chapter that absolute progress was not enough. Egypt's

ranking has slipped on various competitiveness indices relative to other countries. This can only indicate that there is a need to accelerate the pace of the necessary reforms, otherwise Egypt risks becoming marginalized from the globalization process. A lesson learnt from Egypt's long reform experience is that a strong and prompt policy response is crucial for strengthening the economic and investment environment, as well as competitiveness.

The following section identifies windows of opportunity that can be re-opened, with a view to accelerating tomorrow's gains into today's competitiveness.

### Windows of Opportunity

These opportunities are by no means comprehensive. They also represent work in progress that needs to be expedited. Accelerated implementation will serve to support private sector development and competitiveness, with the objective of promoting sustainable growth and development.

# I. A Holistic Vision: Basis for Lasting Competitiveness

Egypt has many pressing challenges. Two important dimensions are socioeconomic stability and human development. A well rounded remedial and forward looking strategy needs to be institutionalized. It needs to reflect a full understanding of the multiple aspects of the challenges ahead. A successful and sustainable strategy should be a first step that aims at the establishment of solid socioeconomic frameworks that would pave the way for a knowledge based society. Such a society would be the underlying bed-rock for the innovative-driven economy-the most advanced developmental stage. All players in the society would need to join forces to achieve that goal.

### II. National Campaign for Good Governance: Continue Steps to Insure Greater Government and Corporate Transparency.

Good governance, including transparency, is the seed for sound operation practices for all players and at all levels of the economy, be they country, industry or firm. Sound governance practices would set the foundation for a friendlier business environment characterized by ethical business practices, standardization, clarity and simplicity. This resultant environment would serve to entice investment flows and thus higher growth rates.

As described in Chapter 2, Transparency International ranked Egypt 70th in terms of the degree to which corruption is perceived by public officials.

Government, private sector and civil society need to introduce sound practices in both policymaking and business conduct, in order to build the ground for a culture of good governance and ethical business practices.

## III. Improving the Regulatory Environment

The role of the regulatory framework and institutions needs to be enhanced.

- 1. The current regulatory environment needs to be streamlined and red tape needs to be cut, in order to be in tune with international practices.
- 2. Measures to further improve the investment climate, particularly the speedy establishment of the new one-stop shop for foreign investment registration, must be expedited.
- 3. The establishment of solid institutions would further reinforce regulatory reform. Additional reforms include improving commercial dispute resolution and bankruptcy procedures.

Regulations on land use require special attention. Policy makers need to actively encourage private sector businesses to investment in new urban communities.

Law 59/1979 regulates property use in these urban communities (sale, purchase, land use, building rights etc.). It prescribes investors to deal with the presidencies of cities for any transactions regarding their properties in which case investors are obliged to pay a percentage of up to 25% of the original price of the land in fees. Usually, additional usage restrictions apply to the land, e.g. concerning buildings, even if dedicated to expanding existing businesses.

- 1. Policy makers are encouraged to remove all monetary obstacles pertaining to all transactions related to land dedicated to use by an investor.
- 2. They are also strongly encouraged to remove all restrictions regarding the use of land by an investor, namely all limitations related to the percentage of land usable for building on.

# IV. Ensuring prompt and transparent foreign exchange availability to businesses and individuals

This would require the continued and accelerated implementation of market-oriented exchange rate policies. Towards this end, the promised inter-bank foreign exchange market needs to be established. A well functioning forex market will enable the monetary authorities to gradually loosen up monetary policy. As interest rates decline, business activity will pick up, spurring economic growth. Additionally, the following benefits would accrue:

- 1. Efficient allocation of resources;
- 2. A leap-jump increase in the competitiveness of exports;
- 3. Restored investors' confidence in the stability of the value of the Egyptian Pound. Enhanced confidence would provide the required platform for increased investment and capital formation rate leading to a higher GDP growth rate.
- 4. Increased investments would promote spending in R & D, which would reflect in fostering innovation and creativity, two important propellers towards the "innovative driven" economy. Increased investments would also bring IT investments and foreign know how.

# V. Enhance coherence, governance, consistency and stability in the domestic monetary/fiscal/trade mix

- 1. Striking a balanced monetary/fiscal policies mix would serve to contain the budget deficit, reduce interest rates, encourage private sector investments, enhance productivity, economic growth and ultimately competitiveness.
- 2. Establishing the right mixes of monetary/exchange rate policy would be mutually reinforcing in a virtuous circle. It would help (i) Reduce interest rates thus spurring growth, addressing inflation issues, and reducing the government debt burden. Deepen domestic financial markets by establishing and implement a regulatory/supervisory system for new financing tools. These include (a) derivative instruments (options and futures) asset-backed products (mortgage instruments); and (b) implementing the primary dealers decree (issued in 2002), in order to build a balancedmaturity Treasury yield curve of

- market determined interest rates. The yield curve would act as a benchmark to corporate issuances of bonds, lowering financing costs and thus facilitating domestic investors' access to finance either through intermediary as commercial banks or through direct access to capital markets. The vield curve would also make it more effective for the central bank to manage short term interest rates through open market operations using government securities than to make direct loans to the government, (iii) Establish credibility in the economy, thus reducing international financing cost, and improving access to international capital and financial markets. Increased confidence in the Egyptian economy would serve to mobilize foreign direct investment and other private investment flows for development.
- 3. Notwithstanding a balanced mix of policies, the government budget requires restructuring. An excessive government budget deficit has led to a high interest rate environment that crowded out the private sector. A correctly instigated fiscal policy would suggest:
  - a. Addressing the growing size of the budget deficit including a review of government expenditures. A performance-based budget needs to be put in place, while government expenditure should efficiently target socially tied venues such as subsidies. Public expenditure on wages should be rationalized and more spending should be channeled towards value added activities as education and infrastructure.
  - b. Improving tax collection and administration procedures through implementing the

tax reforms that ensure the transparency and fairness of the taxation system, and reduce the number of tax evaders. The streamlining of tax collection/administration procedures would also facilitate and expedite tax collection efforts.

### VI. Continued and accelerated implementation of Trade Liberalization Policies

Comprehensive tariffs and customs reforms include:

- 1. Reforming the incentive system by reducing tariffs, eliminating surcharges and lowering taxes would yield almost immediate benefits to competitiveness.
- 2. Implementing "behind the borders trade reforms" such as reforming customs; reducing trade transaction costs; facilitating inspection and testing procedures: and streamlining regulatory policies that impede competition, and restrict trade and investment are no less important. However, the benefits to competitiveness would accrue in the Since long-term longer term. remedies tend to be complex, this calls for the immediate adoption of a comprehensive action plan.

Benefits from trade liberalization include: (i) greater than before domestic producers' exposure to competition, directly translating into more efficient productivity; increased investments in capital formation, R & D and technology enhancing firms' ability to compete; (iii) rising exports share of GDP ultimately boosting growth rates and generating employment opportunities. (iv) Higher consumer welfare interms of reduced prices and enhanced product quality; (v) larger foreign currency earnings.

### VII. Implement Solid Regulatory Frameworks Proactively to Attract Foreign Direct Investment (FDI)

A solid government policy on how best to attract foreign direct investment (FDI) should be devised. A vision for its role and contribution to the national economic development framework should be proactively communicated and widely discussed among stakeholders. Steps towards the framework should include:

- 1. Articulate and advocate national policy on FDI among social partners and civil society as well as investors in order to create a better awareness and consensus on the aims of policy.
- Establish an Investment Promotion Agency (IPA) and determine the objectives and the legislative and governance structures of the agency.
- Inculcate within the IPA a professional management and service culture, result-oriented ethos and innovative marketing approach in order to compete successfully in attracting new investment.
- 4. Define strategic policy options and set out the corporate strategy and marketing plan for the IPA to build competitive strength and achieve policy options.
- 5. Decide on incentives policy and ensure objective and regular evaluation of costs and benefits.
- 6. Undertake a comprehensive review of skills available versus skills required by investors. Develop and implement policies to address identified gaps.
- 7. Ensure the provision of essential infrastructure needed by indus-

try: industrial estates, modern factory and office buildings, utilities, effluent treatment, drainage, telecommunications (including broadband) and different modes of transport.

- 8. Identify administrative barriers to FDI and establish a program clearly assigning responsibilities and target dates to remove such obstacles.
- 9. Promote FDI by undertaking a comprehensive and professional marketing program aimed at new and existing investors and by transforming the IPA into a credible and competent partner.
- 10. Facilitate investment and service new and existing investors at all stages of the investment cycle, from start-up through to postinvestment and new expansion stages.
- 11. Encourage greater integration of foreign business into the economy and the establishment of foreign investment in the country.

The agencies that have established reporting mechanisms to the country's highest-level policy makers or the private sector have been systematically more efficient at attracting FDI. Such institutional links are crucial because they contribute to strengthen the government's commitment as well as reinforce the agency's credibility and visibility in the business community.

# VIII. Rapid Implementation of Structural Adjustments

Longer term reforms include banking sector transformation; government assets restructuring and privatization; as well as stock market reforms.

### 1. Banking sector transformation

Policy makers have already taken several progressive steps for the reform of the banking sector, the most important being promoting young and internationally experienced bankers to senior executive positions. Such a step would bring with it the installation of up to date banking systems and internal control and audit procedures; the adoption of state of the art banking dealings; and the creation of more sophisticated banking products in addition to the plain-vanilla lending and borrowing ones. However, further progress on the above mentioned initiatives, such as the implementation of the provisions of the new banking law is still needed.

Once comprehensively achieved, the following benefits would accrue:

- (i) Reduction of non-performing loans and improved bank profitability;
- (ii) Channeling resources to value added and profit-making economic activities thus directly contributing to GDP growth;
- (iii) Increasing investors' confidence in the effectiveness and reliability of the banking sector (through reduced bank failures) resulting in increased savings and investments, thus reducing the savings-investments gap.

# 2. Mobilize domestic savings for investment, economic growth and development

For Egypt to accelerate its GDP growth (a re-requisite for enhanced competitiveness), the level of productive investments must be increased. Towards this end, Egypt can either rely on exogenous financing or on the country's build-up of domestic savings—the preferred op-

tion for financing domestic investments. As previously highlighted in chapter 2, Egypt's savings-investments gap only recently narrowed down through a reduction in investment levels not through an augmentation in savings. This was at the expense of economic growth.

The positive correlation between achieving a sustainable growth rate and an increase in the level of domestic savings makes us devote the coming section on outlining three main venues on how to mobilize domestic savings, namely (a) privatization; (b) reform of the insurance and pension schemes; (c) capital market development; and (d) boosting exports.

#### a. Privatization

Transferring government assets to the private sector is a straightforward sale of those assets. The government should re-invigorate its privatization plan once the internal macro-economic environment improves.

Benefits of reinvigorated privatization:

- (i) Relieving the government from managing state-owned institutions and redirecting its focus to its original role of a facilitator and problem solver.
- (ii) The management of stateowned institutions requires
  the possession of both management skills and expertise
  in different fields, which the
  government does not fully
  possess. Relinquishing such
  a task to the private sector is
  to the benefit of those managed entities, directly translating into improved efficiency and productivity.
- (iii) Assets sales represent direct transfers that support the government's budget. Proceeds can be used to retire public sector debt, and thus reduce interest cost and raise public savings.

## 3. Prospects for a strengthened stock market

Emerging markets trade at a valuation discount relative to developed market equities despite better growth prospects. Until recently global growth was expected to be strong. These prospects have been down-toned, however, with the recent rise in US interest rates. This in turn is likely to negatively affect developed equity markets performance, global liquidity and hence funds' inflows into the Egyptian market.

With the positive turnaround in the current account balance, the stock market's short-term prospects look positive. On the other hand, given the current exchange rate/interest rate mix within the current exchange rate system, there are risks that domestic interest rates will rise. This could in turn increase financing costs and harm the profitability of the majority of listed domestic oriented firms, already highly leveraged. The balance between prospects for improving economic fundamentals and reduced leveraged corporate earnings will determine stock market prices.

On a positive outlook, listed corporations trade at relatively low current valuations and show prospects for continued improving earnings' prospects. As prospects for the economy improve with accelerated reforms, companies' profitability could be increased.

### b. Pension market and insurance reform

Limited long-term saving instruments such as pension and insurance funds have been under-developed for a number of decades. This under-development reflected two main problems: the dominance of the public sector in contractual savings, as the largest pension funds and insurance companies (in terms of premiums and assets) are state dominated; and the government intervening upper hand in the choice of investment venues with regards to the pension and insurance investment port-

folios. These two problems are self reinforcing as they mandated funds' concentration in public sector banks' deposits and government securities, earning modest returns; and contributed to the rigidities of the financial system, and under-development of long-term saving instruments and of the capital market. In this context, private savings could therefore be boosted by:

- 1. Ending government intervention in portfolio allocations;
- 2. Encouraging the development of more flexible and competitive long-term saving instruments and institutions.
- 3. Long-term private savings could be boosted by pension schemes reform, and insurance industry reform

Egypt's level of saving is likely to be boosted by its demographic trends. The rising share of working age population and the declining share of child dependency are continuing to contribute to an increase in the level of savings. This demographic trend is likely to increase the operating surplus of the Social Insurance System affording Egypt a realistic opportunity to implement the much needed pension reforms now (World Bank, 1999). These reforms include (World Bank, 1997):

- (i) Eliminate the special access of the National Investment Bank (NIB) to the Social Insurance System (SIS) funds and establish or subcontract an investment management capability.
- (ii) Raise the normal retirement age and raise the early retirement age.
- (iii) Adjust pension benefits for inflation rather than awaiting legislative action.

- (iv) Review contribution rates after taking into account: NIB's inability to access SIS's funds, less generous retirement provisions and inflation adjustment.
- (v) Encourage pension fund to diversify their investments.
- (vi) Instigate a three pillar pension system consisting of: (a) a fully funded mandatory defined benefit public pillar that insures workers' earnings up to a certain level; (b) a mandatory defined contribution private pillar that insures workers' wages above a certain level. Evidence from other countries shows that generous pay-as-you-go state pensions tend to depress household saving, and that a mandatory saving scheme is most likely to increase household saving; and (c) a pure voluntary scheme that could supplement the first two pillars.

Issued insurance laws shifted the industry's regulatory focus from a supervisory one to a monitoring one. Complementing such an initiative, a second generation of **insurance reforms** should include:

- 1. Promote the formation of sound contractual saving institutions. The life insurance industry tends to favor the formation of long-term financial assets over fixed assets such as real estate, therefore enabling households and private corporations to borrow long-term. This may indirectly contribute to increased private savings;
- 2. Include all state-owned insurance companies in the privatization program;
- 3. Focus on disclosure requirements to the public on prices

and commissions to complement the liberalization of product prices and commissions.

### c. Capital market development

Efforts at enhancing liquidity should be maintained via:

- 1. Continued development of contractual savings institutions;
- 2. Increased supply of securities via privatization and greater private issuers' confidence in the transparency and improved regulatory system of the market.

### d. Boosting exports

An export drive is a means by which Egypt can boost national savings. First, entry into the international arena requires firms to be globally competitive and to use resources more efficiently, thus cutting down on the need for external resources. Furthermore, since domestic saving is the difference between investment and the current account deficit; the smaller the latter, the greater is domestic saving. To achieve this goal, the following is required:

- 1. Adopt export-led industrial policies instead of import-substitution policies.
- 2. Reduce exports' overdependence on primary goods which are vulnerable to market conditions and international pricing. This reinforces the need for supporting policies to encourage production of tradables which may require major overhauling of industrial and manufacturing bases. Additionally, such an export focus shift would allow Egypt to become an active international trade player as non-oil exports is the area of fastest growth in world trade.

3. Determine and develop key policies and institutions which could help to expand exports and create an export mentality. Examples include: (i) finalizing deeper regional and multilateral trade partnership agreements; opening trade to nonpartnership countries: (iii) adopting and following: trade market-friendly disciplines: regulatory mechanisms; tariffs gradual reduction and subsequent removal; non-tariff barriers removal and overhead business costs' reduction; (iv) creating incentives in the areas of trade facilitation, quality control and products' standardization; (v) continue improving trade logistics and transportation; (vi) continue simplifying customs procedures; and (vii) continue forging buyer-seller links.

# IX. Improving ICT Readiness and Promoting R&D and Innovation

Technology diffusion and education reform are essential ingredients for the creation of a knowledge-based and innovative society which should in turn move the Egyptian economy from a factor-driven one to an innovative-driven one.

# 1. Technology Diffusion and R & D promotion

ICT readiness, R&D and innovation are three pillars of economic growth. The forces of rapid technological innovation are putting a pressure on industries and companies to redefine their approach to business. Hi-tech products are now more in demand than traditional goods (Nugent, 2004). Unless Egypt catches up, it risks compromising the competitiveness of its exports.

Thus a competitive knowledge based society would be enhanced in the long run by these three drivers. This is because other determinants of competitiveness such as the macroeconomic environment can run into diminishing returns once they have reached a certain level of optimization.

This would require enhancing the infrastructure necessary for technological advancement and promoting a technology and automation culture through increased mechanization, computerization and internet usage.

The constant interaction between scientific and education institutions on the one hand, and between these institutions and the labor market on the other hand, would promote increased R & D spending (as Egypt's current spending levels on R & D are almost nonexistent). Increased spending would foster creativity, innovation, and technological sophistication and ICT development. Providing technical and financial assistance to empower human capital as well as the necessary framework for professional accreditation would induce increased R & D spending and increased creativity and innovation attained levels.

Once implemented increased efficiency and effectiveness of both the human and machinery capital is achieved, directly contributing to competitiveness rise.

### 2. Education reform

A review of the current education system at all levels requires adopting modern international systems, promoting creativity and innovation rather than rote learning.

Inventiveness, entrepreneurial thinking and a personal spirit of innovativeness and curiosity need be nurtured as early as possible through education. Societal value of knowledge must be maximized by furthering higher-order skills like perseverance, diligence, problem-solving skills or teamwork abilities.

The ways of how knowledge is taught has to comply with globally established

standards. By doing so they form the basis for innovation to flourish and develop into usable products easily and quickly. International compliance of schooling and higher education programs will also encourage youth of all ages to go abroad temporarily, learn about international relations and cultural, economic or societal issues of global concern.

Of equal importance is teachers' training on how to stimulate students thinking process for creativity and innovation development. Only if innovative training programs are available to general educators, school teachers or university lecturers can innovativeness be expected to spread lastingly among pupils and students.

The reform of the education system would (i) match labor skills to the needs of the job market, thus reducing unemployment rates; (ii) provide local firms with skilled labor on an equal level playing field as their international peers, thus reducing their need for expensive expatriates. This will help reduce firms' expenses hence increasing their profitability.

### X. Industry Competitiveness

There is a need to develop an integrated methodology for the evaluation and management of industry growth and competitiveness. This would be achieved through encouraging industry clusters and developing comprehensive industry assessment models. The latter can be used in cross industry analysis as well as cross country industry competitiveness assessments.

# XI. Establishing Egypt's Competitiveness Observatory

Efforts should be concerted to support the establishment of an Observatory to work as a competitiveness catalyst. It would collect and analyze data on Egypt's competitiveness performance and the drivers of that performance.

The Competitiveness Observatory would assist local partner organizations within the country to resolve developmental challenges which address the issue of competitiveness. In doing so, it would directly and proactively support the work of the Egyptian National Competitiveness Council (ENCC).

It would specifically

- Continue the process of in-depth analysis of innovation and innovation processes in different industrial sectors
- 2. Examine sectorally based technological trends and the take-up of new technologies
- 3. Examine the processes of networking and cluster development as a key element of innovation, e.g. by
- Mapping out existing clusters and their nature
- Examining how new clusters might form, e.g. by spin-out or by gradual evolution
- Examining how new and sustainable cluster development might best be supported by the innovation providers including the higher education sector
- Relating cluster development to inward investment actions taking best practice examples

The Observatory would work as an independent entity. It would, however, report directly to the highest national political authorities, specifically the Prime Minister, to shorten ways between practice and policy making as much as possible. Political will and credibility are determinants for the success of the proposed body. Annex

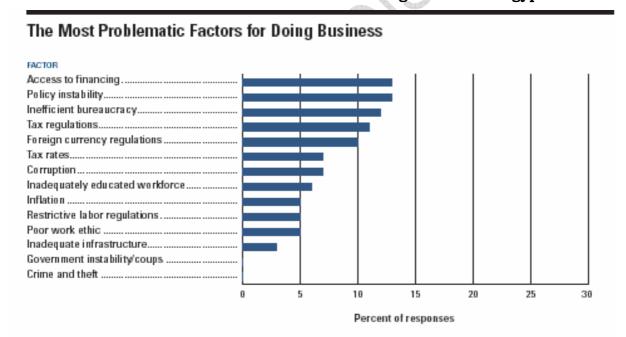
### **Technical Notes**

### **Tables**

Chapter 2: The State of Competitiveness of the Egyptian Economy

Source: World Economic Forum, Executive Opinion Survey (2003) (if not stated otherwise) Blank cell indicates variable was not included in the Executive Opinion Survey for that year

Table B.1: The Most Problematic Factors for Doing Business in Egypt



Note: From a list of 14 factors, respondents were asked to select the five most problematic for doing business in their country and to rank them between 1 (most problematic) and 5. The bars in the figure show the responses weighted according to their rankings.

Source: World Economic Forum, Executive Opinion Survey (2003)

Table B.2: Share of Gross Domestic Savings in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2000 | 2001 |
|-------------------|------|------|
| Chile             | 23.4 | 22.7 |
| China             | 38.8 | 40.3 |
| Egypt*            | 13.0 | 13.3 |
| Indonesia         | 25.2 | 25.6 |
| Jordan            | 0.4  | 1.0  |
| Malaysia          | n.a. | n.a. |
| Mexico            | 21.5 | 18.3 |
| Tunisia           | 23.9 | 23.4 |

Source: World Development Indicators, 2002

Table B.3: Share of Gross National Savings in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2000 | 2001 |
|-------------------|------|------|
| Chile             | 21.0 | 19.6 |
| China             | 38.0 | 39.4 |
| Egypt*            | 17.7 | 17.9 |
| Indonesia         | 19.2 | 22.7 |
| Jordan            | 26.0 | 24.4 |
| Malaysia          | n.a. | n.a. |
| Mexico            | 20.2 | 17.7 |
| Tunisia           | 23.6 | 23.4 |
| Turkey            | 21.9 | 20.7 |

Source: World Development Indicators

Table B.4: Share of Exports of Goods & Services in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2002  | 2003 |
|-------------------|-------|------|
| Chile             | 34.6  | 31.1 |
| China             | 29.5  | n.a. |
| Egypt*            | 20.4  | 27.1 |
| Indonesia         | 36.6  | n.a. |
| Jordan**          | 46.0  | n.a. |
| Malaysia          | 114.1 | n.a. |
| Mexico            | 28.6  | 29.6 |
| Tunisia           | 42.6  | n.a. |
| Turkey            | 32.7  | n.a. |

Calculated from IMF International Finance Statistics, 2004

<sup>\*</sup>Ministry of Planning, CAPMAS

<sup>\*</sup>Ministry of Planning, CAPMAS

<sup>\*</sup>Central Bank of Egypt

<sup>\*\*</sup>World Development Indicators, 2002

Table B.5: Share of Merchandize Exports in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2002 | 2003 |
|-------------------|------|------|
| Chile             | 27.9 | 25.3 |
| China             | 26.3 | n.a. |
| Egypt*            | 8.7  | 11.9 |
| Indonesia         | 32.9 | n.a. |
| Jordan            | n.a. | n.a. |
| Malaysia          | 98.4 | n.a. |
| Mexico            | 26.5 | n,a. |
| Tunisia           | 30.5 | n.a. |
| Turkey            | 24.0 | n.a. |

Calculated from IMF International Finance Statistics, 2004

Table B.6: Share of Non-Oil Merchandize Exports in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2000 |
|-------------------|------|
| Chile             | 24.9 |
| China             | 22.3 |
| Egypt*            | 4.2  |
| Indonesia         | 30.2 |
| Jordan            | 22.7 |
| Malaysia          | n.a. |
| Mexico            | 26.2 |
| Tunisia           | 26.4 |
| Turkey            | 13.0 |

Calculated from World Development Indicators, 2002

Table B.7: Share of FDI in Market Price GDP: Egypt and Other Developing Countries

| In percent of GDP | 2002 | 2003 |
|-------------------|------|------|
| Chile             | 2.9  | 3.6  |
| China             | 4.0  | n.a. |
| Egypt*            | 0.5  | 1.0  |
| Indonesia         | 0.1  | n.a. |
| Jordan##          | 0.6  | n.a. |
| Malaysia          | 3.4  | n.a. |
| Mexico            | 2.4  | 1.8  |
| Tunisia           | 3.5  | n.a. |
| Turkey            | 0.6  | n.a. |

Calculated from IMF International Finance Statistics, 2004

<sup>\*</sup> Central Bank of Egypt

<sup>\*</sup>Central Bank of Egypt

<sup>\*</sup> Central Bank of Egypt

<sup>\*\*</sup>World Development Indicators, 2002

Table C.1: Aggregate Country Performance Indicators for 2001 and 2003

| Nur  | nber |  | 2001 | 2001 Data |         | B Data | C    | Changes |
|------|------|--|------|-----------|---------|--------|------|---------|
| 2001 | 2003 | Variable Description   | Rank | Value     | Rank    | Value  | Rank | Value   |
| 1.01 | 1.01 | Total GDP, 2002  | 36   | 96.05     | 39      | 85.55  | (3)  | -11%    |
| 1.02 | 1.02 | Total population, 2002   | 14   | 68.5      | 15      | 70.3   | (1)  | 3%      |
| 1.03 | 1.03 | GDP per capita (PPP), 2002   | 64   | 3,602     | 73      | 3,701  | (9)  | 3%      |
| 1.05 | 1.04 | Change in GDP per capita relative to the United States, 1995 to 2002 | 64   | 0.11      | 39      | 0.11   | 25   | 0%      |
| 1.04 |      | Real growth in GDP per capita, 1999 to 2000                          | 37   | 3.2       |         |        |      |         |
| 1.06 |      | GDP per capita relative to the United States, 1992                   | 64   | 0.1       |         |        |      |         |
| 1.07 |      | Change in GDP per capita relative to the United States, 1992 to 2000 | 28   | 0.21      |         | 7      |      |         |
| 1.08 |      | Unemployment rate, 2000  | 52   | 11.8      | 185.000 | . 100  |      |         |
| 1.09 |      | Employment to population ratio, 2000                                 | 68   | 25.7      |         | 4      |      |         |
|      |      | Average  | 47   | C         | 42      |        | 3    | -1%     |

Source: Unless otherwise indicated, Tables C.1 through C.26 are from the Global Competitiveness Report, 2003

Table C.2: Macroeconomic Indicators for 2001 and 2003

| Nun  | nber |   | 2001 | Data  | 2003 | Data  | (    | Changes |
|------|------|---|------|-------|------|-------|------|---------|
| 2001 | 2003 | Variable Description                      | Rank | Value | Rank | Value | Rank | Value   |
| 2.01 | 2.01 | Recession Expectations                    | 64   | 3.4   | 61   | 3.5   | 3    | 3%      |
|      | 2.02 | Business costs of terrorism               |      |       | 89   | 3.8   |      |         |
| 2.22 | 2.03 | Extent of Distortive Government Subsidies | 50   | 3.3   | 40   | 3.6   | 10   | 9%      |
|      | 2.04 | Extent of Distortive Government interven- |      |       | 61   | 3.5   | 4    |         |
| 2.07 | 2.05 | tion Financial Market Sophistication      | 54   | 3.3   | 62   | 3.4   | (8)  | 3%      |
| 2.02 | 2.06 | Soundness of Banks                        | 45   | 4.8   | 88   | 4     | (43) | -17%    |
| 2.08 | 2.07 | Ease of Access to Loans                   | 16   | 4.2   | 48   | 3.3   | (32) | -21%    |
| 2.09 | 2.08 | Venture Capital Availability              | 34   | 3.2   | 44   | 3.3   | (10) | 3%      |
| 2.03 | 2.09 | Access to Credit                          | 67   | 3.1   | 78   | 3.6   | (11) | 16%     |
|      | 2.1  | Government intervention in corporate      |      |       | 66   | 3.9   |      |         |
| 2.16 | 2.11 | investment<br>Local Equity Market Access  | 27   | 5.8   | 66   | 4.4   | (39) | -24%    |
| 2.10 | 2.12 | Regulation of securities exchanges        |      | 5.0   | 78   | 4.2   | (03) | 2170    |
|      | 2.13 | Effectiveness of bankruptcy law           |      |       | 67   | 3.9   |      |         |
| 2.18 | 2.14 | Hidden Trade Barriers                     | 60   | 3.7   | 76   | 3.7   | (16) | 0%      |
|      | 2.15 | Agricultural policy costs                 | -    |       | 40   | 3.8   | ()   |         |
|      | 2.16 | Cost of importing foreign equipment       |      |       | 90   | 3.8   |      |         |
| 2.23 | 2.17 | Country Credit Rating, 2003               | 43   | 47.5  | 53   | 43.8  | (10) | -8%     |
| 2.24 | 2.18 | Government Surplus/Deficit, 2002          | 58   | -3.8  | 73   | -5.9  | (15) | 55%     |
| 2.26 | 2.19 | National Savings Rate, 2002               | 31   | 23.1  | 73   | 17.2  | (42) | -26%    |
| 2.28 | 2.20 | Inflation, 2002                           | 28   | 2.8   | 40   | 2.5   | (12) | -11%    |
| 2.29 | 2.21 | Real Exchange Rate, 2002                  | 71   | 84.7  | 61   | 120.6 | 10   | 42%     |
| 2.30 | 2.22 | Interest Rate Spread, 2002                | 20   | 3.7   | 35   | 4.5   | (15) | 22%     |
| 2.04 |      | Exchange Rate and Exports                 | 55   | 3.6   |      |       |      |         |
| 2.05 |      | Expected Exchange Rate Volatility         | 71   | 2.8   |      |       |      |         |
| 2.06 |      | Exchange Rate Premium                     | 65   | 1.82  |      |       |      |         |
| 2.10 |      | Access to Foreign Capital Markets         | 29   | 6.3   |      |       |      |         |
| 2.11 |      | Foreign Access to Local Capital Markets   | 12   | 6.8   |      |       |      |         |
| 2.12 | Alia | Perceived Interest Rate Gap               | 28   | 3.7   |      |       |      |         |
| 2.13 | V    | Entry into Banking Industry               | 40   | 4.5   |      |       |      |         |
| 2.14 |      | Financial Regulation and Supervision      | 52   | 4.1   |      |       |      |         |
| 2.15 |      | Access to Bond Markets                    | 47   | 3.5   |      |       |      |         |
| 2.17 | 1002 | Sources of Investment Finance             | 6    | 4.3   |      |       |      |         |
| 2.19 |      | Permits to Export                         | 22   | 2     |      |       |      |         |
| 2.20 |      | Composition of Public Spending            | 27   | 3.9   |      |       |      |         |

(cont'd)

Table C.2: Macroeconomic Indicators for 2001 and 2003

| Nur  | nber |                                 | 2001 | 2001 Data 2003 Data |      |       | Changes  |       |
|------|------|---------------------------------|------|---------------------|------|-------|----------|-------|
| 2001 | 2003 | Variable Description            | Rank | Value               | Rank | Value | Rank     | Value |
| 2.21 |      | Social Transfer Recipients      | 21   | 2.8                 |      |       |          |       |
| 2.25 |      | Government Expenditure, 2000    | 32   | 31.5                |      |       |          |       |
| 2.27 |      | Investment Rate, 2000           | 43   | 21                  |      |       | 4        | A A   |
| 2.31 |      | Average Tariff Rate (%), 2001   | 73   | 18.9                |      |       |          |       |
| 2.32 |      | Corporate Income Tax Rate, 2001 | 69   | 40                  |      | -     | 4        | 7     |
| 2.33 |      | Value Added Tax Rate            | 12   | 10                  |      |       | O. VOLUM | Anto  |
|      |      | Average                         |      |                     |      |       |          |       |

Table C.3: Technology Innovation and Diffusion

| Nu   | mber |   | 2001 | Data  | 200  | 2003 Data |      | anges |
|------|------|---|------|-------|------|-----------|------|-------|
| 2001 | 2003 | Variable Description  | Rank | Value | Rank | Value     | Rank | Value |
| 3.01 | 3.01 | Technological Sophistication  | 58   | 3.2   | 52   | 3.6       | 6    | 13%   |
| 3.03 | 3.02 | Firm-Level Technology Absorption  | 68   | 3.9   | 71   | 4.5       | (3)  | 15%   |
| 3.04 | 3.03 | FDI and Technology Transfer   | 26   | 5.3   | 57   | 4.7       | (31) | -11%  |
|      | 3.04 | Prevalence of foreign technology licensing                              |      |       | 64   | 4.5       |      |       |
| 3.05 | 3.05 | Quality of Scientific Research Institutions                             | 45   | 4.3   | 60   | 3.8       | (15) | -12%  |
| 3.06 | 3.06 | Company Spending on Research and De-                                    | 72   | 2.5   | 52   | 3.3       | 20   | 32%   |
| 3.07 | 3.07 | velopment Subsides and tax credits for Firm-level                       | 68   | 2.2   | 45   | 3.2       | 23   | 45%   |
| 3.09 | 3.08 | Research and Development University / Industry Research Collabora- tion | 56   | 3.3   | 54   | 3.2       | 2    | -3%   |
| 3.10 | 3.09 | Government Procurement of Advanced<br>Technology Products               | 51   | 3.6   | 48   | 3.7       | 3    | 3%    |
| 3.11 | 3.10 | Availability of Scientists and Engineers                                | 27   | 5.6   |      |           |      |       |
|      | 3.11 | Availability of mobile or cellular telephones                           |      | 1     | 79   | 5.3       |      |       |
| 4.03 | 3.12 | Internet access in schools  | 62   | 2.3   | 42   | 3.9       | 20   | 70%   |
| 4.07 | 3.13 | Quality of competition in the ISP sector                                | 36   | 5.2   | 33   | 4.7       | 3    | -10%  |
| 4.08 | 3.14 | Government prioritization of ICT  | 7    | 5.6   | 42   | 4.6       | (35) | -18%  |
| 4.09 | 3.15 | Government success in ICT promotion                                     | 6    | 5.3   | 35   | 4         | (29) | -25%  |
| 4.11 | 3.16 | Laws relating to ICT  | 56   | 3.1   | 63   | 3.4       | (7)  | 10%   |
| 3.16 | 3.17 | Utility Patents, 2002   | 57   | 0.1   | 64   | 0.07      | (7)  | -30%  |
| 3.19 | 3.18 | Tertiary Enrolment  | 52   | 20.2  | 37   | 39        | 15   | 93%   |
| 4.13 | 3.19 | Cellular telephones, 2002   | 67   | 2.1   | 74   | 6.85      | (7)  | 226%  |
| 4.14 | 3.2  | Internet users, 2002  | 61   | 70.9  | 74   | 228.51    | (13) | 222%  |
| 4.15 | 3.21 | Internet hosts, 2002  | 69   | 0.4   | 86   | 0.47      | (17) | 18%   |
| 4.16 | 3.22 | Telephone lines, 2002   | 61   | 8.6   | 61   | 11.32     | 0    | 32%   |
| 4.17 | 3.23 | Personal computers,2002   | 64   | 1.2   | 74   | 1.71      | (10) | 43%   |
| 3.02 |      | Firm-Level Innovation   | 61   | 4.8   |      |           |      |       |
| 3.08 | 4    | Tax Credits for Firm-Level R and D                                      | 63   | 2.3   |      |           |      |       |
| 3.13 |      | Women in the Economy  | 31   | 4.8   |      |           |      |       |
| 3.14 |      | Minorities in the Economy   | 6    | 5.5   |      |           |      |       |
| 3.15 |      | Research and Development Spending                                       | 50   | 0.22  |      |           |      |       |
| 3.18 | A    | Secondary Enrolment   | 31   | 67.5  |      |           |      |       |
| 3.2  |      | Years of Schooling  | 50   | 5.5   |      |           |      |       |
| 3.21 |      | Mathematics Achievement   |      | N/A   |      |           |      |       |
| 3.22 |      | Science of Achievement  |      | N/A   |      |           |      |       |
| 3.23 |      | Skill-Based Exports   | 67   | 1.2   |      |           |      |       |
|      |      | Average   |      |       |      |           | (3)  | 0     |

Table C.4: Human Resources; Education, Health and Labor

| Nur  | nber |  | 2001 | Data  | 2003 | Data  | Cha  | inges |
|------|------|--|------|-------|------|-------|------|-------|
| 2001 | 2003 | Variable Description                   | Rank | Value | Rank | Value | Rank | Value |
|      | 4.01 | Quality of educational System          |      |       | 67   | 3     |      |       |
|      | 4.02 | Quality of public schools              |      |       | 62   | 3.2   |      |       |
|      | 4.03 | Quality of math and science education  |      |       | 66   | 3.6   | - 4  | 4 1   |
|      | 4.04 | Disparity in health care quality       |      |       | 51   | 2.7   |      |       |
|      | 4.05 | Business impact of Malaria             |      |       | 70   | 5.6   |      | 1     |
|      | 4.06 | Business impact of tuberculosis        |      |       | 71   | 5.2   |      |       |
|      | 4.07 | Business impact of HIV / AIDS          |      |       | 52   | 5.3   | V    |       |
|      | 4.08 | Impact of HIV / AIDS on FDI            |      |       | 50   | 6.2   |      |       |
| 3.12 | 4.09 | Brain Drain                            | 36   | 4     | 54   | 3.3   | (18) | -18%  |
|      | 4.1  | Maternity leave legislation            |      |       | 59   | 5     |      |       |
|      | 4.11 | Maternity laws' impact on hiring women |      | 4     | 72   | 4.8   |      |       |
|      |      | Average                                |      | C     | 61   | 4     |      |       |

**Table C.5: General Infrastructure** 

| Nun  | nber |  | 2001 | Data  | 2003 | Data  | Cha  | nges  |
|------|------|--|------|-------|------|-------|------|-------|
| 2001 | 2003 | Variable Description                               | Rank | Value | Rank | Value | Rank | Value |
| 5.01 | 5.01 | Overall Infrastructure Quality                     | 35   | 4.2   | 43   | 3.9   | (8)  | -7%   |
| 5.05 | 5.02 | Railroad Infrastructure Development                | 24   | 4.5   | 46   | 3.3   | (22) | -27%  |
| 5.06 | 5.03 | Port Infrastructure Quality                        | 35   | 4.4   | 49   | 3.9   | (14) | -11%  |
| 5.07 | 5.04 | Air Transport Infrastructure Quality               | 50   | 4.6   | 66   | 4     | (16) | -13%  |
|      | 5.05 | Quality of electricity supply                      |      |       | 56   | 4.4   |      |       |
| 5.08 | 5.06 | Telephone Infrastructure Quality                   | 48   | 5.5   | 64   | 5.1   | (16) | -7%   |
| 5.1  | 5.07 | Postal Efficiency                                  | 28   | 7     | 50   | 4.4   | (22) | -37%  |
| 5.02 |      | Tap Water Safety                                   | 38   | 5.7   |      |       |      |       |
| 5.03 | A .  | Industrial Water Availability                      | 35   | 6     |      |       |      |       |
| 5.04 |      | Road Infrastructure Quality                        | 27   | 4.9   |      |       |      |       |
| 5.09 |      | Quality of Competition in Transportation<br>Sector | 52   | 3.8   |      |       |      |       |
| 5.11 |      | Electricity Prices                                 | 19   | 4.6   |      |       |      |       |
| 5.12 |      | Quality of Public Schools                          | 51   | 3.2   |      |       |      |       |
| 5.13 |      | Difference in Quality of Schools                   | 54   | 2.1   |      |       |      |       |
| 5.14 |      | Difference in Quality of Healthcare                | 48   | 2.3   |      |       |      |       |
| 5.15 |      | Public Health Agencies                             | 37   | 5.3   |      |       |      |       |

Table C.6: Public Institutions; Contracts and Laws

| Nu   | mber |  | 2001 | Data  | 2003 | Data  | Cha  | nges  |
|------|------|--|------|-------|------|-------|------|-------|
| 2001 | 2003 | Variable Description                                   | Rank | Value | Rank | Value | Rank | Value |
| 6.01 | 6.01 | Judicial Independence                                  | 27   | 5.2   | 59   | 3.7   | (32) | -29%  |
|      | 6.02 | Efficiency of legal framework                          |      |       | 62   | 3.4   |      |       |
| 6.02 | 6.03 | Property Rights  | 28   | 5.6   | 58   | 4.4   | (30) | -21%  |
| 6.03 | 6.04 | Intellectual Property Protection                       | 34   | 4.1   | 44   | 3.7   | (10) | -10%  |
|      | 6.05 | Freedom of press                                       |      |       | 90   | 3.8   | P A  |       |
| 6.08 | 6.06 | Burden of Regulation                                   | 68   | 2.5   | 49   | 2.8   | 19   | 12%   |
|      | 6.07 | Transparency of government policymaking                |      |       | 79   | 3.4   |      |       |
| 6.04 | 6.08 | Favoritism in Decisions of Government<br>Officials     | 25   | 3.8   | 26   | 3.8   | (1)  | 0%    |
| 6.10 | 6.09 | Extent of Bureaucratic Red Tape                        | 75   | 3.9   | 95   | 3.5   | (20) | -10%  |
|      | 6.10 | Effectiveness of Law making bodies                     |      |       | 40   | 3.7   |      |       |
|      | 6.11 | Efficiency of the tax system                           |      |       | 57   | 3     |      |       |
|      | 6.12 | Centralization of economic policymaking                |      |       | 44   | 3     |      |       |
|      | 6.13 | Reliability of police services                         |      | 1     | 42   | 4.5   |      |       |
|      | 6.14 | Business costs of crime & violence                     |      |       | 44   | 4.7   |      |       |
|      | 6.15 | Government effectiveness in reducing poverty           |      |       | 48   | 3.8   |      |       |
|      | 6.16 | Government effectiveness in reducing income inequality |      |       | 44   | 3.6   |      |       |
| 6.12 | 6.17 | Organized Crime  | 16   | 6     | 45   | 5.1   | (29) | -15%  |
| 6.14 | 6.18 | Informal sector  | 43   | 3.5   | 55   | 4.2   | (12) | 20%   |
| 6.05 |      | Government Commitments                                 | 37   | 4.9   |      |       |      |       |
| 6.06 |      | Competence of Public Officials                         | 56   | 2.3   |      |       |      |       |
| 6.07 |      | Cost of Institutional Change                           | 41   | 4.5   |      |       |      |       |
| 6.09 |      | Minimum Wage Enforcement                               | 68   | 4     |      |       |      |       |
| 6.11 |      | Tax Evasion  | 37   | 3.1   |      |       |      |       |
| 6.13 |      | Unreported Profits & wages                             | 39   | 2.2   |      |       |      |       |

Table C.7: Public Institutions; Corruption

| Nur  | nber |  | 2001 | Data  | 2003 | Data  | Cha  | inges |
|------|------|--|------|-------|------|-------|------|-------|
| 2001 | 2003 | Variable Description   | Rank | Value | Rank | Value | Rank | Value |
| 7.01 | 7.01 | Irregular Payments in Exports & Imports                      | 52   | 3.9   | 54   | 4.4   | (2)  | 13%   |
|      | 7.02 | Irregular Payments in public utilities                       |      |       | 84   | 3.8   |      |       |
| 7.03 | 7.03 | Irregular Payments in Tax Collection                         | 36   | 5.1   | 66   | 4.2   | (30) | -18%  |
| 7.04 | 7.04 | Irregular Payments in Public Contracts                       | 31   | 4.4   | 35   | 4.5   | (4)  | 2%    |
| 7.05 | 7.05 | Irregular Payments in loan application                       | 41   | 4.9   | 68   | 4.4   | (27) | -10%  |
|      | 7.06 | Irregular Payments in government policymaking                |      |       | 44   | 4.3   | 40   | 23    |
|      | 7.07 | Irregular Payments in judicial decisions                     |      |       | 43   | 4.8   |      |       |
|      | 7.08 | Diversion of public Funds                                    |      |       | 39   | 3.9   |      |       |
| 7.06 | 7.09 | Business Costs of Corruption                                 | 58   | 3.8   | 40   | 4     | 18   | 5%    |
| 7.07 | 7.10 | Public Trust of Politicians                                  | 25   | 3.3   | 41   | 2.9   | (16) | -12%  |
|      | 7.11 | Prevalence of illegal political donations                    |      |       | 27   | 4.2   |      |       |
|      | 7.12 | Policy consequences of legal political donations             |      |       | 41   | 3.9   |      |       |
|      | 7.13 | Pervasiveness of money Laundering through banks              |      |       | 43   | 4.9   |      |       |
|      | 7.14 | Pervasiveness of money Laundering through non-banks channels |      |       | 39   | 4.3   |      |       |
| 7.02 |      | Irregular Payments in Government Procurement                 | 63   | 4.1   |      |       |      |       |

**Table C.8: Domestic Competition** 

| Nur  | nber |   | 2001 | Data  | 2003 | Data  | Chai | nges  |
|------|------|---|------|-------|------|-------|------|-------|
| 2001 | 2003 | Variable Description                                    | Rank | Value | Rank | Value | Rank | Value |
| 8.01 | 8.01 | Intensity of Local Competition                          | 25   | 5.4   | 67   | 4.4   | (42) | -19%  |
| 8.02 | 8.02 | Extent of Locally Based Competitors                     | 55   | 4     | 55   | 4.1   | 0    | 2%    |
|      | 8.03 | Extent of market dominance                              |      |       | 17   | 3.5   |      |       |
|      | 8.04 | Sophistication of local buyers products and processes   |      |       | 69   | 4     |      |       |
| 8.04 | 8.05 | Administrative Burden for Start-Ups                     | 33   | 4.5   | 61   | 3.7   | (28) | -18%  |
| 8.07 | 8.06 | Effectiveness of Anti-Trust Policy                      | 57   | 3.4   | 58   | 3.6   | (1)  | 6%    |
|      | 8.07 | Prevalence of mergers and acquisitions                  |      |       | 29   | 4.2   |      |       |
| 1    | 8.08 | Private-sector employment of women                      |      |       | 62   | 4.4   |      |       |
|      | 8.09 | Wage equality of women in the work-<br>place            |      |       | 40   | 4.8   |      |       |
|      | 8.10 | Regional disparities in quality of business environment |      |       | 38   | 3.6   |      |       |
| 8.03 |      | Entry into Local Markets                                | 24   | 5.5   |      |       |      |       |
| 8.05 |      | Permits to Start a Firm                                 | 5    | 3     |      |       |      |       |
| 8.06 |      | Days to Start a Firm                                    | 54   | 60    |      |       |      |       |

RAPIT TO NOT DISTRIBUTE

**Table C.9: Cluster Development** 

| Numbe | er   | Variable Description   | 2001 | Data  | 2003 I | Data  | Char | nges  |
|-------|------|--|------|-------|--------|-------|------|-------|
| 2001  | 2003 | · · · · · · · · · · · · · · · · · · ·                          | Rank | Value | Rank   | Value | Rank | Value |
| 9.01  | 9.01 | Buyer Sophistication   | 63   | 3.3   | 71     | 3.3   | (8)  | 0%    |
| 9.02  | 9.02 | Local Supplier Quantity  | 65   | 4.5   | 67     | 4.4   | (2)  | -2%   |
| 9.03  | 9.03 | Local Supplier Quality   | 73   | 3.3   | 60     | 4     | 13   | 21%   |
| 9.04  | 9.04 | Presence of Demanding Regulatory Standards                     | 54   | 3.9   | 54     | 3.9   | 0    | 0%    |
| 9.05  | 9.05 | Decentralization of Corporate Activity                         | 55   | 3.4   | 47     | 3.9   | 8    | 15%   |
| 9.06  | 9.06 | State of Cluster Development                                   | 75   | 2.2   | 26     | 3.9   | 49   | 77%   |
| 9.07  | 9.07 | Extent of Collaboration among clusters                         | 52   | 3.6   | 33     | 4     | 19   | 11%   |
| 9.08  | 9.08 | Local Availability of Components & parts                       | 69   | 2.6   | 24     | 3.9   | 45   | 50%   |
| 9.09  | 9.09 | Local Availability of Process Machinery                        | 44   | 2.7   | 29     | 3.3   | 15   | 22%   |
| 9.10  | 9.10 | Local Availability of Specialized Research & Training Services | 55   | 3.9   | 58     | 3.9   | (3)  | 0%    |
| 9.11  |      | Local Availability of Information Technology<br>Services       | 63   | 4.1   |        |       |      |       |
|       |      | Average  |      | A OFF |        |       | 14   | 0     |

Table C.10: Company Operations and Strategy

| Number |       |  | 2001 | Data  | 2003 | Data  | Cha  | nges  |
|--------|-------|--|------|-------|------|-------|------|-------|
| 2001   | 2003  | Variable Description                           | Rank | Value | Rank | Value | Rank | Value |
| 10.01  | 10.01 | Nature of Competitive Advantage                | 65   | 2.5   | 33   | 3.5   | 32   | 40%   |
| 10.02  | 10.02 | Value Chain Presence                           | 32   | 4     | 33   | 4.1   | (1)  | 2%    |
| 10.03  | 10.03 | Extent of Branding                             | 46   | 3.7   | 40   | 3.5   | 6    | -5%   |
| 10.04  | 10.04 | Capacity for Innovation                        | 48   | 3.3   | 44   | 3.4   | 4    | 3%    |
|        | 10.05 | Ethical behavior of firms                      |      |       | 62   | 4     |      |       |
| 10.06  | 10.06 | Production Process Sophistication              | 46   | 4.3   | 44   | 3.8   | 2    | -12%  |
| 10.07  | 10.07 | Extent of Marketing                            | 57   | 3.9   | 65   | 3.8   | (8)  | -3%   |
| 10.08  | 10.08 | Degree of Customer Orientation                 | 64   | 4.1   | 37   | 4.8   | 27   | 17%   |
| 10.09  | 10.09 | Control of International Distribution          | 32   | 4.2   | 29   | 4.2   | 3    | 0%    |
| 10.10  | 10.10 | Extent of Regional Sales                       | 39   | 5.2   | 71   | 3.7   | (32) | -29%  |
| 10.11  | 10.11 | Breadth of International Markets               | 36   | 4.1   | 57   | 3.4   | (21) | -17%  |
| 10.12  | 10.12 | Extent of Staff Training                       | 45   | 3.8   | 66   | 3.4   | (21) | -11%  |
| 10.13  | 10.13 | Willingness to Delegate Authority              | 41   | 3.8   | 61   | 3.3   | (20) | -13%  |
| 10.14  | 10.14 | Extent of Incentive Compensation               | 22   | 4.8   | 65   | 3.5   | (43) | -27%  |
| 10.15  | 10.15 | Reliance on Professional Management            | 38   | 4.7   | 70   | 4.1   | (32) | -13%  |
| 10.16  | 10.16 | Quality of Management Schools                  | 55   | 3.8   | 75   | 3.5   | (20) | -8%   |
| 10.17  | 10.17 | Efficacy of Corporate Boards                   | 52   | 3.7   | 56   | 4.3   | (4)  | 16%   |
| 10.19  | 10.18 | Hiring and Firing Practices                    | 57   | 2.8   | 45   | 3.7   | 12   | 32%   |
|        | 10.19 | Flexibility of wage determination              |      |       | 42   | 5.2   |      |       |
| 10.21  | 10.20 | Cooperation in Labor-Employer Relations        | 19   | 5.1   | 49   | 4.3   | (30) | -16%  |
| 10.23  | 10.21 | Pay and Productivity                           | 48   | 3.8   | 49   | 3.9   | (1)  | 3%    |
|        | 10.22 | Charitable causes involvement                  |      |       | 43   | 4.9   |      |       |
|        | 10.23 | Company promotion of volunteerism              |      |       | 47   | 3.2   |      |       |
|        | 10.24 | Protection of minority shareholders' interests |      | _     | 43   | 4.6   |      |       |
|        | 10.25 | Availability of company financial information  |      |       | 50   | 4.6   |      |       |
|        | 10.26 | Foreign ownership restrictions                 |      |       | 70   | 4.7   |      |       |
|        | 10.27 | Strength of auditing and accounting standards  |      |       | 68   | 4.5   |      |       |
| 10.05  |       | Uniqueness of Product Designs                  | 49   | 3.7   |      |       |      |       |
| 10.18  |       | Internet Effects on Business                   | 61   | 3.3   |      |       |      |       |
| 10.20  |       | Employment Rules                               | 40   | 3.4   |      |       |      |       |
| 10.22  |       | Union Contributions to Productivity            | 25   | 4.2   |      |       |      |       |

Table C.11: Environment

| Numbe | er    |   | 2001 | Data  | 2003 | Data  | Cha  | nges  |
|-------|-------|---|------|-------|------|-------|------|-------|
| 2001  | 2003  | Variable Description                                | Rank | Value | Rank | Value | Rank | Value |
| 11.01 | 11.01 | Air Pollution Regulations                           | 57   | 2.9   | 55   | 3.3   | 2    | 14%   |
| 11.02 | 11.02 | Water Pollution Regulations                         | 47   | 3.7   | 54   | 3.5   | (7)  | -5%   |
| 11.03 | 11.03 | Toxic Waste Disposal Regulations                    | 41   | 3.8   | 54   | 3.5   | (13) | -8%   |
| 11.04 | 11.04 | Chemical Waste Regulations                          | 43   | 3.8   | 61   | 3.3   | (18) | -13%  |
| 11.06 | 11.05 | Stringency of Environmental Regulations             | 41   | 4     | 53   | 3.7   | (12) | -8%   |
|       | 11.06 | Compliance with environmental regulations           |      |       | 49   | 3.5   |      |       |
| 11.09 | 11.07 | Compliance with International Agreements            | 38   | 4.4   | 66   | 3.9   | (28) | -11%  |
| 11.10 | 11.08 | Clarity and Stability of Regulations                | 21   | 4.8   | 67   | 3.7   | (46) | -23%  |
| 11.11 | 11.09 | Flexibility of Regulations                          | 10   | 4.5   | 63   | 3.7   | (53) | -18%  |
| 11.12 | 11.10 | Consistency of Regulation Enforcement               | 39   | 3.8   | 60   | 3.6   | (21) | -5%   |
| 11.13 | 11.11 | Effects of Compliance on Business                   | 12   | 5     | 60   | 4.3   | (48) | -14%  |
| 11.14 | 11.12 | Political Context of Environmental Gains            | 66   | 3.4   | 84   | 3.7   | (18) | 9%    |
| 11.15 | 11.13 | Prevalence of Environmental Management Systems      | 28   | 3.7   | 43   | 3.7   | (15) | 0%    |
| 11.05 |       | Regulation of Genetically Modified Organisms (GMOs) | 32   | 3.8   |      |       |      |       |
| 11.07 |       | Subsides for Energy or Materials                    | 56   | 4     |      |       |      |       |
| 11.08 |       | Leadership of Environmental Policy                  | 45   | 3.3   |      |       |      |       |
|       |       | Average   |      |       |      |       | (23) | 0     |

Table C.12: Growth Competitiveness Index Components for 2003

| Country             | Rank      | Country            | Rank |
|---------------------|-----------|--------------------|------|
| Finland             | 1         | Bulgaria           | 64   |
| United States       | 2         | Turkey             | 65   |
| Sweden              | 3         | Philippines        | 66   |
| Denmark             | 4         | Jamaica            | 67   |
| Taiwan              | 5         | Sri Lanka          | 68   |
| Singapore           | 6         | Tanzania           | 69   |
| Switzerland         | 7         | Russian Federation | 70   |
| Iceland             | 8         | Ghana              | 7:   |
| Norway              | 9         | Indonesia          | 72   |
| Australia           | 10        | Pakistan           | 73   |
| Japan               | 11        | Algeria            | 74   |
| Netherlands         | 12        | Romania            | 75   |
| Germany             | 13        | Malawi             | 76   |
| New Zealand         | 14        | Serbia             | 77   |
| United Kingdom      | 15        | Argentina          | 78   |
| Canada              | 16        | Senegal            | 79   |
| Austria             | 17        | Uganda             | 80   |
| Korea               | 18        | Macedonia          | 81   |
| Malta               | 19        | Venezuela          | 82   |
| Israel              | 20        | Kenya              | 83   |
| Luxembourg          | 21        | Ukraine            | 84   |
| Estonia             | 22        | Bolivia            | 85   |
| Spain               | 23        | Ecuador            | 86   |
| Hong Kong           | 24        | Nigeria            | 87   |
| Portugal            | 25        | Zambia             | 88   |
| France              | 26        | Guatemala          | 89   |
| Belgium             | 27        | Nicaragua          | 90   |
| Chile               | 28        | Cameroon           | 9:   |
| Malaysia            | 29        | Ethiopia           | 92   |
| Ireland             | 30        | Mozambique         | 93   |
| Slovenia            | 31        | Honduras           | 94   |
| Thailand            | 32        | Paraguay           | 95   |
| Hungary             | 33        | Madagascar         | 96   |
| Jordan              | 34        | Zimbabwe           | 97   |
| Greece              | 35        | Bangladesh         | 98   |
| Botswana<br>Latvia  | 36_<br>37 | Mali               | 100  |
| Tunisia             | 38        | Angola<br>Chad     | 100  |
| Czech Republic      | 39        | Haiti              | 102  |
|                     |           | Haiti              | 102  |
| Lithuania           | 40        |                    |      |
| Italy               | 42        | 4                  |      |
| South Africa        | 42        | *                  |      |
| Slovak Republic     | 43        |                    |      |
| China<br>Poland     | 44        |                    | 1    |
| Mauritius           | 45        |                    |      |
| Mexico              | 47        |                    |      |
| El Salvador         | 48        | A 10               |      |
| Trinidad and Tobago | 49        |                    |      |
| Uruguay             | 50        |                    |      |
| Costa Rica          | 51        |                    |      |
| Namibia             | 52        |                    |      |
| Croatia             | 53        |                    |      |
| Brazil              | 54        |                    |      |
| Gambia              | 55        | <i>→</i>           |      |
| India               | 56        | 45.                |      |
| Peru                | 57        |                    |      |
| Egypt               | 58        |                    |      |
| Panama              | 59        |                    |      |
| Vietnam             | 60        |                    |      |
| Morocco             | 61        |                    |      |
| Dominican Republic  | 62        |                    |      |
|                     |           |                    |      |

| Country                   | Rank     |
|---------------------------|----------|
| Singapore                 | 1        |
| Finland                   | 2        |
| Luxembourg                | 3        |
| Norway                    | 4        |
| Denmark                   | 5        |
| Switzerland               | 6        |
| Australia                 | 7        |
| Sweden                    | 8        |
| Netherlands               | 9        |
| Austria                   | 10       |
| Canada<br>United Kingdom  | 12       |
| New Zealand               | 13       |
| United States             | 14       |
| Hong Kong                 | 15       |
| celand                    | 16       |
| Spain                     | 17       |
| Γaiwan                    | 18       |
| Belgium                   | 19       |
| France                    | 20       |
| Germany                   | 21       |
| Ireland                   | 22       |
| Korea                     | 23       |
| Japan                     | 24       |
| China                     | 25       |
| Thailand                  | 26       |
| Malaysia                  | 27       |
| taly<br>Malta             | 28<br>29 |
| Maita<br>Botswana         | 30       |
| Portugal                  | 31       |
| Punisia                   | 32       |
| Greece                    | 33       |
| Estonia                   | 34       |
| Chile                     | 35       |
| Latvia                    | 36       |
| Slovenia                  | 37       |
| Hungary                   | 38       |
| Czech Republic            | 39       |
| South Africa              | 40       |
| Lithuania                 | 41       |
| Jordan                    | 42       |
| Morocco                   | 43       |
| srael                     | 44       |
| Vietnam                   | 45       |
| Gambia                    | 46       |
| Frinidad and Tobago       | 47       |
| El Salvador               | 48<br>49 |
| Poland<br>Slovak Republic | 50       |
| Algeria                   | 51       |
| ndia                      | 52       |
| Namibia                   | 53       |
| Mexico                    | 54       |
| Croatia                   | 55       |
| Egypt                     | 56       |
| Mauritius                 | 57       |
| Peru                      | 58       |
| Panama                    | 59       |
| Philippines               | 60       |
| Russian Federation        | 61       |
|                           |          |
| Pakistan<br>Costa Rica    | 62<br>63 |

| Country            | Rank |
|--------------------|------|
| Indonesia          | 64   |
| Sri Lanka          | 65   |
| Colombia           | 66   |
| Senegal            | 67   |
| Ghana              | 68   |
| Dominican Republic | 69   |
| Ukraine            | 70   |
| Uganda             | 71   |
| Bangladesh         | 72   |
| Bulgaria           | 73   |
| Nigeria            | 74   |
| Brazil             | 75   |
| Tanzania           | 76   |
| Kenya              | 77   |
| Cameroon           | 78   |
| Madagascar         | 79   |
| Macedonia          | 80   |
| Romania            | 81   |
| Turkey             | 82   |
| Bolivia            | 83   |
| Ethiopia           | 84   |
| Guatemala          | 85   |
| Jamaica            | 86   |
| Serbia             | 87   |
| Honduras           | 88   |
| Uruguay            | 89   |
| Ecuador            | 90   |
| Mali               | 91   |
| Paraguay           | 92   |
| Argentina          | 93   |
| Venezuela          | 94   |
| Mozambique         | 95   |
| Chad               | 96   |
| Zambia             | 97   |
| Malawi             | 98   |
| Haiti              | 99   |
| Nicaragua          | 100  |
| Angola             | 101  |
| Zimbabwe           | 102  |

Table C.13: Growth Competitiveness Index Components for 2003

| Country         Rank           Denmark         1           Finland         2           Iceland         3           Australia         4           New Zealand         5           Singapore         6           Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         3                         | Public Institution | ons Index |
|---|--------------------|-----------|
| Denmark         1           Finland         2           Iceland         3           Australia         4           New Zealand         5           Singapore         6           Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32<                         |                    |           |
| Iceland         3           Australia         4           New Zealand         5           Singapore         6           Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia                                  |                    |           |
| Iceland   | Finland            | 2         |
| New Zealand         5           Singapore         6           Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         3                         |                    | 3         |
| Singapore         6           Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37<                         | Australia          | 4         |
| Sweden         7           Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malaysia         34<                         | New Zealand        |           |
| Switzerland         8           Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39 </td <td></td> <td>-</td> |                    | -         |
| Germany         9           Hong Kong         10           Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40<                         |                    |           |
| Hong Kong   |                    |           |
| Netherlands         11           United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42<                         |                    |           |
| United Kingdom         12           Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43                         |                    |           |
| Luxemburg         13           Austria         14           Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malaysia         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44 <td></td> <td></td>        |                    |           |
| Austria 14 Israel 15 Norway 16 United States 17 Malta 18 Chile 19 Jordan 20 Taiwan 21 Portugal 22 France 23 Canada 24 Ireland 25 Botswana 26 Belgium 27 Estonia 28 Uruguay 29 Japan 30 Spain 31 Tunisia 32 Hungary 33 Malaysia 34 Slovenia 35 Korea 36 Thailand 37 Malawi 38 Gambia 39 El Salvador 40 Lithuania 41 Greece 42 South Africa 43 Mauritius 44 Latvia 45 Italy 46 Czech Republic 47 Namibia 48 Costa Rica 49 Mexico 50 Slovak Republic 51 China 52 Brazil 53 Peru 54 India 55 Trinidad and Tobago 56 Egypt 57 Poland 58 Tanzania 59 Colombia 60 Vietnam 61 Bulgaria 62   |                    |           |
| Israel         15           Norway         16           United States         17           Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malaysia         34           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46                                 |                    |           |
| Norway  |                    |           |
| Malta         18           Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49 <td>Norway</td> <td></td>   | Norway             |           |
| Chile         19           Jordan         20           Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malaysia         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50<                         | United States      | 17        |
| Jordan         20           Taiwan         21           Portugal         22           Prance         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic                             |                    |           |
| Taiwan         21           Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China                              |                    |           |
| Portugal         22           France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         55           Brazil                              |                    |           |
| France         23           Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru                                  |                    |           |
| Canada         24           Ireland         25           Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         5                         |                    |           |
| Ireland   25  |                    |           |
| Botswana         26           Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt                        |                    |           |
| Belgium         27           Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland                          |                    |           |
| Estonia         28           Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania                         |                    |           |
| Uruguay         29           Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia                        |                    |           |
| Japan         30           Spain         31           Tunisia         32           Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam                        |                    |           |
| Tunisia 32 Hungary 33 Malaysia 34 Slovenia 35 Korea 36 Thailand 37 Malawi 38 Gambia 39 El Salvador 40 Lithuania 41 Greece 42 South Africa 43 Mauritius 44 Latvia 45 Italy 46 Czech Republic 47 Namibia 48 Costa Rica 49 Mexico 50 Slovak Republic 51 China 52 Brazil 53 Peru 54 India 55 Trinidad and Tobago 56 Egypt 57 Poland 58 Tanzania 59 Colombia 60 Vietnam 61 Bulgaria 62   |                    | 30        |
| Hungary         33           Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  | Spain              | 31        |
| Malaysia         34           Slovenia         35           Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Slovenia   35   Korea   36   Korea   36   Thailand   37   Malawi   38   Gambia   39   El Salvador   40   Lithuania   41   Greece   42   South Africa   43   Mauritius   44   Latvia   45   Italy   46   Czech Republic   47   Namibia   48   Costa Rica   49   Mexico   50   Slovak Republic   51   China   52   Brazil   53   Peru   54   India   55   Trinidad and Tobago   56   Egypt   57   Poland   58   Tanzania   59   Colombia   60   Vietnam   61   Bulgaria   62  |                    |           |
| Korea         36           Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Thailand         37           Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Malawi         38           Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Gambia         39           El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| El Salvador         40           Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Lithuania         41           Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Greece         42           South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| South Africa         43           Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Mauritius         44           Latvia         45           Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Italy         46           Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    | 44        |
| Czech Republic         47           Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  | Latvia             | 45        |
| Namibia         48           Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Costa Rica         49           Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Mexico         50           Slovak Republic         51           China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Slovak Republic   51  |                    |           |
| China         52           Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Brazil         53           Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| Peru         54           India         55           Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62   |                    |           |
| India 55 Trinidad and Tobago 56 Egypt 57 Poland 58 Tanzania 59 Colombia 60 Vietnam 61 Bulgaria 62   |                    |           |
| Trinidad and Tobago         56           Egypt         57           Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Egypt 57 Poland 58 Tanzania 59 Colombia 60 Vietnam 61 Bulgaria 62   |                    |           |
| Poland         58           Tanzania         59           Colombia         60           Vietnam         61           Bulgaria         62  |                    |           |
| Colombia60Vietnam61Bulgaria62   | Poland             |           |
| Vietnam 61<br>Bulgaria 62   |                    |           |
| Bulgaria 62   |                    |           |
|   |                    |           |
| rurkey 63   |                    |           |
| (cont'd)  | Turkey             |           |

| Country            | Rank |
|--------------------|------|
| Dominican Republic | 64   |
| Ghana              | 65   |
| Algeria            | 66   |
| Croatia            | 67   |
| Morocco            | 68   |
| Zambia             | 69   |
| Jamaica            | 70   |
| Panama             | 71   |
| Sri Lanka          | 72   |
| Ethiopia           | 73   |
| Pakistan           | 74   |
| Senegal            | 75   |
| Indonesia          | 76   |
| Serbia             | 77   |
| Nicaragua          | 78   |
| Bolivia            | 79   |
| Ecuador            | 80   |
| Russian Federation | 81   |
| Mozambique         | 82   |
| Mali               | 83   |
| Uganda             | 84   |
| Philippines        | 85   |
| Romania            | 86   |
| Guatemala          | 87   |
| Argentina          | 88   |
| Venezuela          | 89   |
| Zimbabwe           | 90   |
| Angola             | 91   |
| Kenya              | 92   |
| Macedonia          | 93   |
| Ukraine            | 94   |
| Cameroon           | 95   |
| Madagascar         | 96   |
| Paraguay           | 97   |
| Nigeria            | 98   |
| Honduras           | 99   |
| Bangladesh         | 100  |
| Chad               | 101  |
| Haiti              | 102  |
|                    | A,   |

| Country         Rank           United States         1           Finland         2           Taiwan         3           Sweden         4           Japan         5           Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile  | Technology Ind | ex              |
|---|----------------|-----------------|
| Finland         2           Taiwan         3           Sweden         4           Japan         5           Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic <td< th=""><th></th><th></th></td<>               |                |                 |
| Taiwan         3           Sweden         4           Japan         5           Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland <td< th=""><th>United States</th><th>1</th></td<> | United States  | 1               |
| Sweden         4           Japan         5           Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         38           Brazil <t< td=""><td>Finland</td><td>2</td></t<>        | Finland        | 2               |
| Japan         5           Korea         6           Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Austria         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         3   | Taiwan         | 3               |
| Korea         6           Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Harail         36           Hong Kong         37           Ireland         38           Thailand  | Sweden         |                 |
| Switzerland         7           Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland <td></td> <td></td>                  |                |                 |
| Denmark         8           Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand  |                |                 |
| Israel         9           Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Harail         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia </td <td></td> <td></td>           |                |                 |
| Estonia         10           Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croat                                  |                |                 |
| Canada         11           Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxem                                  |                |                 |
| Singapore         12           Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argent                                  |                |                 |
| Norway         13           Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slowak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy                                  |                |                 |
| Germany         14           Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Ithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argenti                                  |                |                 |
| Iceland         15           United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Harazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Cos                                  |                |                 |
| United Kingdom         16           Malta         17           Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slowak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           T                                  |                |                 |
| Malta         17           Netherlands         18           Netherlands         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Ithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47  |                |                 |
| Netherlands         18           Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48  |                |                 |
| Australia         19           Malaysia         20           Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Trailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           <                              |                |                 |
| Malaysia         20           Czech Republic         21           Portugal         22           Portugal         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uru                                  |                |                 |
| Czech Republic         21           Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           D                                  |                |                 |
| Portugal         22           New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slowak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           <                              |                |                 |
| New Zealand         23           Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53 <t< td=""><td></td><td></td></t<>         |                |                 |
| Slovenia         24           Spain         25           Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Rom                                  |                |                 |
| Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56 <t< td=""><td></td><td></td></t<>         |                |                 |
| Latvia         26           Austria         27           France         28           Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Joland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56 <t< td=""><td></td><td>25</td></t<>       |                | 25              |
| Austria 27 France 28 Belgium 29 Greece 30 Chile 31 Hungary 32 Slovak Republic 33 Poland 34 Brazil 35 Lithuania 36 Hong Kong 37 Ireland 38 Thailand 39 South Africa 40 Croatia 41 Luxemburg 42 Mexico 43 Italy 44 Argentina 45 Costa Rica 46 Trinidad and Tobago 47 Jordan 48 Mauritius 49 Panama 50 Uruguay 51 Dominican Republic 52 Jamaica 53 Turkey 54 Romania 55 Venezuela 58 Rotswana 59 Colombia 60 Peru 61 Namibia 62 Bulgaria 63  |                | 26              |
| Belgium         29           Greece         30           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59                                      | Austria        |                 |
| Greece         30           Chile         31           Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59  | France         | 28              |
| Chile         31           Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61                                       |                |                 |
| Hungary         32           Slovak Republic         33           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62                                     |                |                 |
| Slovak Republic         33           Poland         34           Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Phillippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62                                     |                |                 |
| Poland         34           Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Brazil         35           Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Lithuania         36           Hong Kong         37           Ireland         38           Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Hong Kong   |                |                 |
| Ireland     38       Thailand     39       South Africa     40       Croatia     41       Luxemburg     42       Mexico     43       Italy     44       Argentina     45       Costa Rica     46       Trinidad and Tobago     47       Jordan     48       Mauritius     49       Panama     50       Uruguay     51       Dominican Republic     52       Jamaica     53       Turkey     54       Romania     55       Philippines     56       Tunisia     57       Venezuela     58       Botswana     59       Colombia     60       Peru     61       Namibia     62       Bulgaria     63   |                |                 |
| Thailand         39           South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| South Africa         40           Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Croatia         41           Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Luxemburg         42           Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Mexico         43           Italy         44           Argentina         45           Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Italy         44           Argentina         45           Costa Rica         46           Crinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Argentina     45       Costa Rica     46       Trinidad and Tobago     47       Jordan     48       Mauritius     49       Panama     50       Uruguay     51       Dominican Republic     52       Jamaica     53       Turkey     54       Romania     55       Philippines     56       Tunisia     57       Venezuela     58       Botswana     59       Colombia     60       Peru     61       Namibia     62       Bulgaria     63   |                |                 |
| Costa Rica         46           Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Trinidad and Tobago         47           Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Jordan         48           Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Mauritius         49           Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Panama         50           Uruguay         51           Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                | 50              |
| Dominican Republic         52           Jamaica         53           Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                |                 |
| Jamaica     53       Turkey     54       Romania     55       Philippines     56       Tunisia     57       Venezuela     58       Botswana     59       Colombia     60       Peru     61       Namibia     62       Bulgaria     63   |                | 52              |
| Turkey         54           Romania         55           Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                | 53              |
| Philippines         56           Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   |                | 54              |
| Tunisia         57           Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63  |                |                 |
| Tunisia     57       Venezuela     58       Botswana     59       Colombia     60       Peru     61       Namibia     62       Bulgaria     63  | Philippines    |                 |
| Venezuela         58           Botswana         59           Colombia         60           Peru         61           Namibia         62           Bulgaria         63   | Tunisia        |                 |
| Colombia60Peru61Namibia62Bulgaria63   | Venezuela      |                 |
| Peru 61<br>Namibia 62<br>Bulgaria 63  |                |                 |
| Namibia 62<br>Bulgaria 63   |                |                 |
| Bulgaria 63   |                |                 |
|   |                |                 |
|   | Bulgaria       | 63<br>(cont'd.) |

| Country            | Rank |
|--------------------|------|
|                    |      |
| India              | 64   |
| China              | 65   |
| Serbia             | 66   |
| El Salvador        | 67   |
| Egypt              | 68   |
| Russian Federation | 69   |
| Macedonia          | 70   |
| Morocco            | 71   |
| Sri Lanka          | 72   |
| Vietnam            | 73   |
| Kenya              | 74   |
| Zimbabwe           | 75   |
| Ecuador            | 76   |
| Uganda             | 77   |
| Indonesia          | 78   |
| Guatemala          | 79   |
| Gambia             | 80   |
| Tanzania           | 81   |
| Nigeria            | 82   |
| Pakistan           | 83   |
| Ukraine            | 84   |
| Nicaragua          | 85   |
| Ghana              | 86   |
| Honduras           | 87   |
| Bolivia            | 88   |
| Senegal            | 89   |
| Zambia             | 90   |
| Paraguay           | 91   |
| Mozambique         | 92   |
| Cameroon           | 93   |
| Malawi             | 94   |
| Bangladesh         | 95   |
| Algeria            | 96   |
| Madagascar         | 97   |
| Angola             | 98   |
| Mali               | 99   |
| Ethiopia           | 100  |
| Haiti              | 101  |
| Chad               | 102  |

Table C.1 4: GCI Comparison for the Years 2000, 2001, 2002 and 2003

|                        | GCI Ranking for the Years |         |          |          |
|------------------------|---------------------------|---------|----------|----------|
|                        | 2000                      | 2001    | 2002     | 2003     |
| Country                | Rank                      | Rank    | Rank     | Rank     |
| Finland                | 5                         | 1       | 1        | 1        |
| United States          | 1                         | 2       | 2        | 2        |
| Sweden                 | 12                        | 9       | 3        | 3        |
| Denmark                | 13                        | 14      | 4        | 4        |
| Taiwan                 | 10                        | 7       | 6        | 5        |
| Singapore              | 2                         | 4       | 7        | 6        |
| Switzerland            | 9                         | 15      | 5        | 7        |
| Iceland                | 23                        | 16      | 12       | 8        |
| Norway                 | 15                        | 6       | 8        | 9        |
| Australia              | 11                        | 5       | 10       | 10       |
| Japan                  | 20                        | 21      | 16       | 11       |
| Netherlands            | 3<br>14                   | 8<br>17 | 13<br>14 | 12<br>13 |
| Germany<br>New Zealand | 19                        | 10      | 15       | 13       |
| United Kingdom         | 8                         | 12      | 11       | 15       |
| Canada                 | 6                         | 3       | 9        | 16       |
| Austria                | 17                        | 18      | 18       | 17       |
| Korea                  | 28                        | 23      | 25       | 18       |
| Malta                  |                           |         |          | 19       |
| Israel                 | 18                        | 24      | 17       | 20       |
| Luxembourg             |                           |         |          | 21       |
| Estonia                |                           | 29      | 27       | 22       |
| Spain                  | 26                        | 22      | 20       | 23       |
| Hong Kong SAR          | 7                         | 13      | 22       | 24       |
| Portugal               | 22                        | 25      | 19       | 25       |
| France                 | 21                        | 20      | 28       | 26       |
| Belgium                | 16                        | 19      | 21       | 27       |
| Chile                  | 27                        | 27      | 24       | 28       |
| Malaysia               | 24                        | 30      | 30       | 29       |
| Ireland                | 4                         | 11      | 23       | 30       |
| Slovenia               |                           | 31      | 26       | 31       |
| Thailand               | 30                        | 33      | 37       | 32       |
| Hungary                | 25                        | 28      | 29       | 33       |
| Jordan                 | 46                        | 45      | 44       | 34       |
| Greece                 | 33                        | 36      | 31<br>35 | 35<br>36 |
| Botswana<br>Latvia     |                           | 47      | 43       | 37       |
| Tunisia                |                           | 7/      | 32       | 38       |
| Czech Republic         | 31                        | 37      | 36       | 39       |
| Lithuania              | - 51                      | 43      | 39       | 40       |
| Italy                  | 29                        | 26      | 33       | 40       |
| South Africa           | 32                        | 34      | 34       | 42       |
| Slovak Republic        | 38                        | 40      | 46       | 43       |
| China                  | 40                        | 39      | 38       | 44       |
| Poland                 | 34                        | 41      | 50       | 45       |
| Mauritius              | 35                        | 32      | 41       | 46       |
| Mexico                 | 42                        | 42      | 53       | 47       |
| El Salvador            | 49                        | 58      | 60       | 48       |
| Trinidad and Tobago    |                           | 38      | 42       | 49       |
| Uruguay                |                           | 46      | 40       | 50       |
| Costa Rica             | 37                        | 35      | 49       | 51       |
| Namibia                |                           |         | 47       | 52       |
| Croatia                |                           |         | 48       | 53       |
| Brazil                 | 45                        | 44      | 45       | 54       |
| Gambia                 |                           |         |          | 55       |
| India                  | 48                        | 57      | 54       | 56       |
| Peru                   | 47                        | 55      | 55       | 57       |
| Egypt                  | 41                        | 51      |          | 58       |
| Panama                 |                           | 53      | 51       | 59       |
| Vietnam                | 52                        | 60      | 62       | 60       |
| Morocco                |                           | ==0     | 52       | 61       |
| Dominican Republic     | F 1                       | 50      | 56       | 62       |
| Colombia               | 51                        | 65      | 61       | 63       |

|                | 2000   | 2001 | 2002 | 2003 |
|----------------|--|------|------|------|
| Country        | Rank   | Rank | Rank |      |
| Bulgaria       | 57   | 59   | 58   | 64   |
| Turkey         | 39   | 54   | 65   | 65   |
| Philippines    | 36   | 48   | 63   | 66   |
| Jamaica        |  | 52   | 57   | 67   |
| Sri Lanka      |  | 61   | 59   | 68   |
| Tanzania       |  |      |      | 69   |
| Russia         | 54   | 63   | 66   | 70   |
| Ghana          |  |      |      | 71   |
| Indonesia      | 43   | 64   | 69   | 72   |
| Pakistan       |  |      |      | 73   |
| Algeria        |  |      |      | 74   |
| Romania        |  | 56   | 67   | 75   |
| Malawi         |  | # K  |      | 76   |
| Serbia         |  |      |      | 77   |
| Argentina      | 44   | 49   | 64   | 78   |
| Senegal        |  |      |      | 79   |
| Uganda         | THE STATE OF THE S |      |      | 80   |
| Macedonia, FYR |  |      |      | 81   |
| Venezuela      | 53   | 62   | 68   | 82   |
| Kenya          |  |      |      | 83   |
| Ukraine        | 56   | 69   | 74   | 84   |
| Bolivia        | 50   | 67   | 71   | 85   |
| Ecuador        | 58   | 68   | 73   | 86   |
| Nigeria        |  | 74   | 72   | 87   |
| Zambia         |  |      |      | 88   |
| Guatemala      |  | 66   | 75   | 89   |
| Nicaragua      |  | 73   | 70   | 90   |
| Cameroon       |  |      |      | 91   |
| Ethiopia       |  |      |      | 92   |
| Mozambique     |  |      |      | 93   |
| Honduras       |  | 70   | 78   | 94   |
| Paraguay       |  | 72   | 76   | 95   |
| Madagascar     |  |      |      | 96   |
| Zimbabwe       | 55   | 75   | 79   | 97   |
| Bangladesh     |  | 71   | 77   | 98   |
| Mali           |  |      |      | 99   |
| Angola         |  |      |      | 100  |
| Chad           |  |      |      | 101  |
| Haiti          |  |      | 80   | 102  |

Table C.15: Comparison of GCI among Middle East Countries

| Country | 2000 | 2001 | 2002 | 2003 |
|---------|------|------|------|------|
| Israel  | 18   | 24   | 17   | 20   |
| Jordan  | 46   | 45   | 44   | 34   |
| Tunisia |      |      | 32   | 38   |
| Egypt   | 41   | 51   |      | 58   |
| Morocco |      |      | 52   | 61   |
| Turkey  | 39   | 54   | 65   | 65   |
| Algeria |      |      |      | 74   |

Source: Compiled from GCR tables by ENCC's Technical Committee.

Table C.16: The Business Competitiveness Index rankings for 2003

| Finland United States Sweden Denmark | 1<br>2<br>3<br>4<br>5 | 4<br>2<br>3<br>7 | 1 2 5 | 15<br>2 | 25,859 |
|--------------------------------------|-----------------------|------------------|-------|---------|--------|
| Sweden                               | 3                     | 3                |       | 2       | 05.150 |
|                                      | 4                     |                  | 5     |         | 35,158 |
| Denmark                              |                       | 7                | 0     | 19      | 25,315 |
|                                      | 5                     |                  | 3     | 3       | 29,975 |
| Germany                              |                       | 1                | 9     | 12      | 26,324 |
| United Kingdom                       | 6                     | 8                | 6     | 16      | 25,672 |
| Switzerland                          | 7                     | 5                | 8     | 7       | 28,359 |
| Singapore                            | 8                     | 12               | 4     | 21      | 23,393 |
| Netherlands                          | 9                     | 10               | 11    | 10      | 28,359 |
| France                               | 10                    | 9                | 14    | 14      | 26,151 |
| Australia                            | 11                    | 18               | 7     | 8       | 27,756 |
| Canada                               | 12                    | 14               | 10    | 5       | 28,699 |
| Japan                                | 13                    | 6                | 20    | 17      | 25,650 |
| Iceland                              | 14                    | 15               | 12    | 4       | 29,614 |
| Belgium                              | 15                    | 11               | 17    | 11      | 26,695 |
| Taiwan                               | 16                    | 16               | 16    | 29      | 23,420 |
| Austria                              | 17                    | 13               | 18    | 6       | 28,611 |
| New Zealand                          | 18                    | 23               | 13    | 23      | 20,455 |
| Hong Kong SAR                        | 19                    | 22               | 15    | 13      | 26235  |
| Israel                               | 20                    | 20               | 19    | 24      | 19,382 |
| Ireland                              | 21                    | 17               | 22    | 9       | 27,642 |
| Norway                               | 22                    | 21               | 21    | 1       | 36,047 |
| Korea                                | 23                    | 19               | 25    | 29      | 16,465 |
| Italy                                | 24                    | 24               | 23    | 18      | 25,570 |
| Spain                                | 25                    | 25               | 26    | 22      | 20,697 |
| Malaysia                             | 26                    | 2                | 24    | 44      | 8,922  |
| South Africa                         | 27                    | 28               | 28    | 38      | 10,132 |
| Estonia                              | 28                    | 36               | 27    | 34      | 11,712 |
| Latvia                               | 29                    | 29               | 31    | 43      | 8,965  |
| Slovenia                             | 30                    | 27               | 34    | 27      | 17,748 |
| Thailand                             | 31                    | 31               | 32    | 51      | 6,788  |
| Chile                                | 32                    | 34               | 30    | 41      | 9,561  |
| Tunisia                              | 33                    | 38               | 29    | 52      | 6,579  |
| Brazil                               | 34                    | 30               | 39    | 49      | 7,516  |

(cont'd)

Table C. 16: The Business Competitiveness Index rankings for 2003

| Country             | BCI<br>ranking<br>2003 | Company<br>operations<br>and strategy<br>ranking,<br>2003 | Quality of<br>the national<br>business<br>environment<br>ranking, 2003 | 2002<br>GDP<br>per capita<br>rank | 2002<br>GDP per<br>capita<br>(PPP)<br>adjusted |
|---------------------|------------------------|---|--|-----------------------------------|--|
| Czech Republic      | 35                     | 33  | 38   | 30                                | 15,148   |
| Portugal            | 36                     | 46  | 33   | 26                                | 17,808   |
| India               | 37                     | 40  | 36   | 77                                | 2571   |
| Hungary             | 38                     | 45  | 37   | 31                                | 13,129   |
| Greece              | 39                     | 39  | 40   | 25                                | 18,184   |
| Lithuania           | 40                     | 41  | 41   | 39                                | 10,015   |
| Jordan              | 41                     | 59  | 35   | 67                                | 4,106  |
| Malta               | 42                     | 47  | 42   | 28                                | 17,344   |
| Slovak Republic     | 43                     | 44  | 43   | 32                                | 12,426   |
| Mauritius           | 45                     | 35  | 46   | 36                                | 10,530   |
| Costa Rica          | 45                     | 32  | 47   | 46                                | 8,740  |
| China               | 46                     | 42  | 44   | 65                                | 4,475  |
| Poland              | 47                     | 43  | 45   | 37                                | 10,187   |
| Mexico              | 48                     | 37  | 51   | 45                                | 8,707  |
| Morocco             | 49                     | 49  | 49   | 71                                | 3,767  |
| Vietnam             | 50                     | 53  | 48   | 81                                | 2,240  |
| Colombia            | 51                     | 50  | 54   | 58                                | 6,068  |
| Turkey              | 52                     | 51  | 55   | 57                                | 6,176  |
| Trinidad and Tobago | 53                     | 54  | 53   | 42                                | 9,114  |
| Botswana            | 54                     | 67  | 50   | 47                                | 8,244  |
| Namibia             | 55                     | 64  | 52   | 53                                | 6410   |
| Jamaica             | 56                     | 56  | 56   | 70                                | 3,774  |
| Sri Lanka           | 57                     | 52  | 59   | 73                                | 3,447  |
| Egypt               | 58                     | 55  | 62   | 72                                | 3,701  |
| Panama              | 59                     | 60  | 60   | 59                                | 5,972  |
| Indonesia           | 60                     | 62  | 61   | 76                                | 3,138  |
| Dominican Republic  | 61                     | 57  | 63   | 56                                | 6,197  |
| Croatia             | 62                     | 65  | 58   | 40                                | 9,967  |
| Ghana               | 63                     | 66  | 57   | 83                                | 2,050  |
| El Salvador         | 64                     | 58  | 65   | 64                                | 4,675  |
| Philippines         | 65                     | 48  | 74   | 68                                | 4,021  |
| Russian Federation  | 66                     | 69  | 64   | 48                                | 7,926  |
| Kenya               | 67                     | 6   | 72   | 94                                | 992  |
| Tanzania            | 68                     | 68  | 67   | 101                               | 557  |

Table C. 16: The Business Competitiveness Index rankings for 2003

| Country    | BCI<br>ranking<br>2003 | Company<br>operations<br>and strategy<br>ranking,<br>2003 |        | Quality of<br>the national<br>business<br>environment<br>ranking, 2003 | 2002<br>GDP<br>per capita<br>rank | 2002<br>GDP per<br>capita<br>(PPP)<br>adjusted |
|------------|------------------------|---|--------|--|-----------------------------------|--|
| Argentina  | 69                     |   | 63     | 73   | 35                                | 10,594   |
| Gambia     | 70                     |   | 80     | 66   | 87                                | 1,723  |
| Uruguay    | 71                     |   | 77     | 68   | 33                                | 12,118   |
| Malawi     | 72                     |   | 71     | 76   | 100                               | 586  |
| Ukraine    | 73                     |   | 72     | 77   | A 94                              | 4,714  |
| Uganda     | 74                     |   | 78     | 69   |                                   | 1,354  |
| Pakistan   | 75                     |   | 81     | 70   | A Allana                          | 2,014  |
| Romania    | 76                     |   | 84     | 71   | 4000                              | 6,326  |
| Bulgaria   | 77                     |   | 85     | 75   |                                   | 6,909  |
| Zimbabwe   | 78                     |   | 70     | 81   | 85                                | 1,993  |
| Serbia     | 79                     |   | 75     | 79   |                                   | 6909   |
| Nigeria    | 80                     |   | 73     | 80   |                                   | 851  |
| Peru       | 81                     | 4   | 83     | 78   |                                   | 4,924  |
| Macedonia  | 82                     |   | 79     | 83   | 55                                | 6,262  |
| Cameroon   | 83                     |   | 86     | 82   |                                   | 1,712  |
| Zambia     | 84                     |   | 82     | 85   |                                   | 806  |
| Venezuela  | 85                     |   | 74     | 87   |                                   | 5,226  |
| Guatemala  | 86                     | is, **-continuous, viros.                                 | 76     | 88   |                                   | 3,927  |
| Senegal    | 87                     | 4   | 94     | 84   |                                   | 1,535  |
| Algeria    | 88                     |   | 93     | 86   |                                   | 5,536  |
| Ecuador    | 89                     |   | 87     | 92   |                                   | 3,357  |
| Madagascar | 90                     |   | 88     | 90   |                                   | 735  |
| Bangladesh | 91                     |   | 91     | 91   |                                   | 1,736  |
| Mali       | 92                     |   | 98     | 89   |                                   | 878  |
| Mozambique | 93                     | _   | 90     | 95   |                                   | 1,237  |
| Nicaragua  | 94                     |   | 92     | 93   |                                   | 2,510  |
| Honduras   | 95                     | _   | <br>89 | 96   |                                   | 2,520  |
| Ethiopia   | 96                     |   | 96     | 94   |                                   | 724  |
| Paraguay   | 97                     |   | 95     | 98   |                                   | 4,419  |
| Bolivia    | 98                     |   | 97     | 97   |                                   | 2,360  |
| Chad       | 99                     |   | 99     | 99   |                                   | 1,008  |
| Haiti      | 100                    |   | 01     | 100  |                                   | 1,578  |
| Angola     | 101                    |   | 00     | 101  |                                   | 2,053  |

|                                     | Israel | Jordan | Egypt | Tunisia | Morocco | Algeria |
|-------------------------------------|--------|--------|-------|---------|---------|---------|
|                                     | 2003   | 2003   | 2003  | 2003    | 2003    | 2003    |
| <b>Growth Competitiveness Index</b> | 20     | 34     | 58    | 38      | 61      | 74      |
| Macro Eco Sub Index                 | 44     | 42     | 56    | 32      | 43      | 51      |
| Macro Eco Stability                 | 77     | 39     | 63    |         | 37      | 5       |
| Hard Data                           | 67     | 32     | 59    |         | 38      | 3       |
| Survey Data                         | 97     | 41     | 74    |         | 28      | 51      |
| Governemnt Waste                    | 19     | 18     | 45    |         | 44      | 67      |
| Credit Rating                       | 39     | 59     | 53    |         | 50      | 68      |
| Public Institutions Sub index       | 15     | 20     | 57    | 32      | 68      | 66      |
| Law &Contracts                      | 19     | 15     | 47    |         | 55      | 59      |
| Corporations                        | 14     | 33     | 67    |         | 85      | 72      |
| Technology Sub index                | 9      | 48     | 68    | 57      | 71      | 96      |
| Innovative                          | 6      | 47     | 39    |         | 71      | 74      |
| Hard Data                           | 7      | 52     | 37    |         | 74      | 68      |
| Survey Data                         | 5      | 51     | 56    |         | 49      | 88      |
| ICT                                 | 21     | 46     | 69    |         | 71      | 91      |
| Hard Data                           | 21     | 57     | 76    |         | 75      | 85      |
| Survey Data                         | 16     | 25     | 40    |         | 66      | 96      |
| Technology Transfer                 |        | 28     | 44    |         | 40      | 76      |

Table C.20: MENA Rankings

| 1 4510 0.2                                   | 0. 11121 | 111 114111 | 111150 |      |       |      |         |      |         |      |         |      |
|--|----------|------------|--------|------|-------|------|---------|------|---------|------|---------|------|
|  | Isr      | ael        | Jordan |      | Egypt |      | Tunisia |      | Morocco |      | Algeria |      |
|  | 2002     | 2003       | 2002   | 2003 | 2002  | 2003 | 2002    | 2003 | 2002    | 2003 | 2002    | 2003 |
| Business Competitiveness Index               | 18       | 20         | 53     | 41   | NA    | 58   | 32      | 33   | 48      | 49   | NA      | 88   |
| Company & Operations Strategy                | 2        | 0          | 5      | 9    | 5     | 66   | 3       | 8    | 4       | 9    | 9       | 3    |
| Quality of the National Business Environment | 1        | 9          | 3      | 5    | 6     | 52   | 2       | 9    | 4       | 9    | 8       | 66   |

Table C.18: BCI comparison for the years 1998-2003

## Business Competitiveness Index Ranking for the year

|                | Dusiness | ompetitivene | ,00 111 <b>410</b> 11 11411 | ming for the | , cui |      |
|----------------|----------|--------------|-----------------------------|--------------|-------|------|
| Country        | 1998     | 1999         | 2000                        | 2001         | 2002  | 2003 |
| Finland        | 2        | 2            | 1                           | 1            | 2     | 1    |
| United States  | 1        | 1            | 2                           | 2            | 1     | 2    |
| Sweden         | 7        | 4            | 7                           | 6            | 6     | 3    |
| Denmark        | 8        | 7            | 6                           | 8            | 8     | 4    |
| Germany        | 4        | 6            | 3                           | 4            | 4     | 5    |
| United Kingdom | 5        | 10           | 8                           | 7            | 3     | 6    |
| Switzerland    | 9        | 5            | 5                           | 5            | 5     | 7    |
| Singapore      | 10       | 12           | 9                           | 9            | 9     | 8    |
| Netherlands    | 3        | 3            | 4                           | 3            | 7     | 9    |
| France         | 11       | 9            | 15                          | 13           | 15    | 10   |
| Australia      | 15       | 13           | 10                          | 14           | 14    | 11   |
| Canada         | 6        | 8            | 11                          | 12           | 10    | 12   |
| Japan          | 18       | 14           | 14                          | 10           | 11    | 13   |
| Iceland        | 24       | 22           | 17                          | 16           | 17    | 14   |
| Belgium        | 19       | 15           | 12                          | 15           | 13    | 15   |
| Taiwan         | 20       | 19           | 21                          | 21           | 16    | 16   |
| Austria        | 16       | 11           | 13                          | 11           | 12    | 17   |
| New Zealand    | 17       | 16           | 19                          | 20           | 22    | 18   |
| Hong Kong SAR  | 12       | 21           | 16                          | 18           | 19    | 19   |
| Israel         | 21       | 20           | 18                          | 17           | 18    | 20   |
| Ireland        | 13       | 17           | 22                          | 22           | 20    | 21   |
| Norway         | 14       | 18           | 20                          | 19           | 21    | 22   |
| Korea          | 28       | 28           | 27                          | 26           | 23    | 23   |
| Italy          | 26       | 25           | 24                          | 23           | 24    | 24   |
| Spain          | 22       | 23           | 23                          | 24           | 25    | 25   |
| Malaysia       | 27       | 27           | 30                          | 37           | 26    | 26   |
| South Africa   | 25       | 26           | 25                          | 25           | 29    | 27   |
| Estonia        |          |              |                             | 28           | 30    | 28   |
| Latvia         |          |              |                             | 41           | 45    | 29   |
| Slovenia       |          |              |                             | 32           | 27    | 30   |
| Thailand       | 37       | 39           | 40                          | 38           | 35    | 31   |
| Chile          | 23       |              | 26                          | 29           | 31    | 32   |
| Tunisia        |          |              |                             |              | 32    | 33   |
| Brazil         | 35       | 35           | 31                          | 30           |       | 34   |
| Czech Republic | 30       |              | 34                          | 34           |       | 35   |
| Portugal       | 33       |              | 28                          | 33           |       | 36   |
|                |          |              |                             |              |       |      |

(cont'd)

Table 18: BCI comparison for the years 1998-2003

## Business Competitiveness Index Ranking for the year

| Country             | 1998     | 1999 | 2000     | 2001 | 2002       | 2003 |
|---------------------|----------|------|----------|------|------------|------|
| India               | 44       | 42   | 37       | 36   | 37         | 37   |
| Hungary             | 31       | 33   | 32       | 27   | 28         | 38   |
| Greece              | 38       | 36   | 33       | 46   | 43         | 39   |
| Lithuania           |          |      |          | 50   | 40         | 40   |
| Jordan              | 32       | 32   | 35       | 47   | 53         | 41   |
| Malta               |          |      |          |      | A VIII AIP | 42   |
| Slovak Republic     | 36       | 48   | 36       | 40   | 42         | 43   |
| Mauritius           |          | 30   | 38       | 51   | 49         | 44   |
| Costa Rica          |          | 38   | 43       | 48   | 39         | 45   |
| China               | 42       | 49   | 44       | 43   | 38         | 46   |
| Poland              | 41       | 37   | 41       | 42   | 46         | 47   |
| Mexico              | 39       | 34   | 42       | 52   | 55         | 48   |
| Morocco             |          |      |          |      | 48         | 49   |
| Vietnam             | 43       | 50   | 53       | 62   | 60         | 50   |
| Colombia            | 49       | 52   | 48       | 57   | 56         | 51   |
| Turkey              | 29       | 31   | 29       | 35   | 54         | 52   |
| Trinidad and Tobago |          |      | <i>*</i> | 31   | 44         | 53   |
| Botswana            |          |      |          |      | 57         | 54   |
| Namibia             |          |      |          |      | 51         | 55   |
| Jamaica             |          |      |          | 39   | 59         | 56   |
| Sri Lanka           |          |      |          | 58   | 47         | 57   |
| Egypt               | 40       | 43   | 39       | 40   |            | 58   |
| Panama              |          |      |          | 49   | 50         | 59   |
| Indonesia           | 51       | 53   | 47       | 55   | 64         | 60   |
| Dominican Republic  | <b>*</b> |      |          | 60   | 41         | 61   |
| Croatia             |          |      |          |      | 52         | 62   |
| Ghana               |          |      |          |      |            | 63   |
| El Salvador         |          | 47   | 51       | 64   | 63         | 64   |
| Philippines         | 45       | 44   | 46       | 53   | 61         | 65   |
| Russia              | 46       | 55   | 52       | 56   | 58         | 66   |
| Kenya               |          |      |          |      |            | 67   |
| Tanzania            |          |      |          |      |            | 68   |
| Argentina           | 34       | 40   | 45       | 54   | 65         | 69   |
| Gambia              |          |      |          |      |            | 70   |
| Uruguay             |          |      |          | 45   | 62         | 71   |
| Malawi              |          |      |          |      |            | 72   |

(cont'd)

Table C.18: BCI comparison for the years 1998-2003

## Business Competitiveness Index Ranking for the year

| Country    | 1998     | 3 1999 | 2000     | 2001 | 2002     | 2003 |
|------------|----------|--------|----------|------|----------|------|
| Ukraine    | 52       | 2 56   | 56       | 59   | 69       | 73   |
| Uganda     |          |        |          |      |          | 74   |
| Pakistan   |          |        |          |      |          | 75   |
| Romania    |          |        |          | 61   | 67       | 76   |
| Bulgaria   |          | 54     | 55       | 68   | 68       | 77   |
| Zimbabwe   | 48       | 3 45   | 50       | 65   | 70       | 78   |
| Serbia     |          |        |          |      | AK       | 79   |
| Nigeria    |          |        |          | 66   | 71       | 80   |
| Peru       | 47       | 7 46   | 49       | 63   | 66       | 81   |
| Macedonia  |          |        |          |      |          | 82   |
| Cameroon   |          |        |          |      | <b>\</b> | 83   |
| Zambia     |          |        |          |      |          | 84   |
| Venezuela  | 50       | 51     | 54       | 67   | 72       | 85   |
| Guatemala  |          |        |          | 69   | 73       | 86   |
| Senegal    |          |        |          |      |          | 87   |
| Algeria    |          |        |          |      |          | 88   |
| Ecuador    |          | 57     | 57       | 72   | 77       | 89   |
| Madagascar |          |        |          |      |          | 90   |
| Bangladesh | 4        |        | <i>y</i> | 73   | 74       | 91   |
| Mali       |          |        |          |      |          | 92   |
| Mozambique |          | A      |          |      |          | 93   |
| Nicaragua  |          |        |          | 71   | 75       | 94   |
| Honduras   |          |        |          | 74   | 78       | 95   |
| Ethiopia   |          |        |          |      |          | 96   |
| Paraguay   | <b>*</b> |        |          | 70   | 76       | 97   |
| Bolivia    |          | 58     | 58       | 75   | 79       | 98   |
| Chad       |          |        |          |      |          | 99   |
| Haiti      |          |        |          |      | 80       | 100  |
| Angola     |          |        |          |      |          | 101  |

Table C.19: Comparison of BCI among Middle East Countries

| Country | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 |
|---------|------|------|------|------|------|------|
| Israel  | 21   | 20   | 18   | 17   | 18   | 20   |
| Tunisia |      |      |      |      | 32   | 33   |
| Jordan  | 32   | 32   | 35   | 47   | 53   | 41   |
| Morocco |      |      |      |      | 48   | 49   |
| Turkey  | 29   | 31   | 29   | 35   | 54   | 52   |
| Egypt   | 40   | 43   | 39   | 40   |      | 58   |
| Algeria |      |      |      |      |      | 83   |

Source: Compiled from GCR tables by ENCC's Technical Committee.

Table C.20: MENA Rankings

|   | Isr  | ael  | Jordan |      | Egypt |      | Tunisia |      | Morocco |      | Algeria |      |
|---|------|------|--------|------|-------|------|---------|------|---------|------|---------|------|
|   | 2003 | 2002 | 2003   | 2002 | 2003  | 2002 | 2003    | 2002 | 2003    | 2002 | 2003    | 2002 |
| Business<br>Competitiveness<br>Index                  | 20   | 18   | 41     | 53   | 58    |      | 33      | 32   | 49      | 48   | 88      |      |
| Company<br>&Operations<br>Strategy                    | 2    | 0    | 5      | 59   |       | 56   |         | 8    | 4       | 9    | 9       | 3    |
| Quality of the<br>National<br>Business<br>Environment | 1    | 9    | 3      | 35   |       | 52   | 2       | 9    | 49      |      | 8       | 6    |

Table C.21: The Networked Readiness Index Rankings

| Country        | Score | NRI<br>Rank |   | Country                 | Score | NRI<br>Rank |   | Country     | Score | NRI<br>Rank |
|----------------|-------|-------------|---|-------------------------|-------|-------------|---|-------------|-------|-------------|
| United States  | 5.50  | 1           |   | Latvia                  | 3.74  | 35          |   | Philippines | 3.10  | 69          |
| Singapore      | 5.40  | 2           |   | Hungary                 | 3.74  | 36          |   | Peru        | 3.09  | 70          |
| Finland        | 5.23  | 3           |   | South Africa            | 3.72  | 37          |   | Tanzania    | 3.09  | 71          |
| Sweden         | 5.20  | 4           |   | Thailand                | 3.72  | 38          |   | Venezuela   | 3.09  | 72          |
| Denmark        | 5.19  | 5           |   | Brazil                  | 3.67  | 39          |   | Indonesia   | 3.06  | 73          |
| Canada         | 5.07  | 6           |   | Tunisia                 | 3.67  | 40          |   | Ghana       | 3.06  | 74          |
| Switzerland    | 5.06  | 7           |   | Slovak Republic         | 3.66  | 41          |   | Macedonia   | 3.05  | 75          |
| Norway         | 5.03  | 8           |   | Lithuania               | 3.63  | 42          |   | Pakistan    | 3.03  | 76          |
| Australia      | 4.88  | 9           |   | Mauritius               | 3.62  | 43          |   | Serbia      | 2.98  | 77          |
| Iceland        | 4.88  | 10          |   | Mexico                  | 3.57  | 44          |   | Ukraine     | 2.96  | 78          |
| Germany        | 4.85  | 11          |   | India                   | 3.54  | 45          |   | Nigeria     | 2.92  | 79          |
| Japan          | 4.80  | 12          |   | Jordan                  | 3.53  | 46          |   | Uganda      | 2.90  | 80          |
| Netherlands    | 4.79  | 13          |   | Poland                  | 3.51  | 47          |   | Senegal     | 2.90  | 81          |
| Luxemburg      | 4.76  | 14          |   | Croatia                 | 3.48  | 48          |   | Gambia      | 2.85  | 82          |
| United Kingdom | 4.68  | 15          | ĺ | Costa Rica              | 3.45  | 49          |   | Cameroon    | 2.82  | 83          |
| Israel         | 4.64  | 16          |   | Argentina               | 3.45  | 50          | * | Kenya       | 2.81  | 84          |
| Taiwan         | 4.62  | 17          |   | China                   | 3.38  | 51          |   | Zambia      | 2.80  | 85          |
| Hong Kong SAR  | 4.61  | 18          |   | Trinidad and<br>Tobago  | 3.37  | 52          |   | Guatemala   | 2.76  | 86          |
| France         | 4.60  | 19          |   | Jamaica                 | 3.36  | 53          |   | Algeria     | 2.75  | 87          |
| Korea          | 4.56  | 20          |   | Uruguay                 | 3.35  | 54          |   | Malawi      | 2.71  | 88          |
| Austria        | 4.56  | 21          |   | Botswana                | 3.34  | 55          |   | Ecuador     | 2.68  | 89          |
| Ireland        | 4.55  | 22          |   | Turkey                  | 3.32  | 56          |   | Bolivia     | 2.66  | 90          |
| New Zealand    | 4.48  | 23          |   | Dominican<br>Republic   | 3.32  | 57          |   | Paraguay    | 2.62  | 91          |
| Belgium        | 4.43  | 24          |   | Panama                  | 3.31  | 58          |   | Madagascar  | 2.60  | 92          |
| Estonia        | 4.25  | 25          |   | Namibia                 | 3.28  | 59          |   | Bangladesh  | 2.57  | 93          |
| Malaysia       | 4.19  | 26          |   | Colombia                | 3.28  | 60          |   | Nicaragua   | 2.56  | 94          |
| Malta          | 4.15  | 27          |   | Romania                 | 3.26  | 61          |   | Zimbabwe    | 2.53  | 95          |
| Italy          | 4.07  | 28          |   | El Salvador             | 3.22  | 62          |   | Mali        | 2.52  | 96          |
| Spain          | 4.01  | 29          |   | Russian Fed-<br>eration | 3.19  | 63          |   | Mozambique  | 2.51  | 97          |
| Slovenia       | 3.99  | 30          |   | Morocco                 | 3.19  | 64          |   | Honduras    | 2.41  | 98          |
| Portugal       | 3.94  | 32          |   | Egypt                   | 3.19  | 65          |   | Angola      | 2.41  | 99          |
| Chile          | 3.94  | 32          |   | Sri Lanka               | 3.15  | 66          |   | Haiti       | 2.32  | 100         |
| Czech Republic | 3.80  | 33          |   | Bulgaria                | 3.15  | 67          |   | Ethiopia    | 2.13  | 101         |
| Greece         | 3.76  | 34          |   | Vietnam                 | 3.13  | 68          |   | Chad        | 2.09  | 102         |

Table C.22: The Networked Readiness Component Indices Environment Component Index

| Country        | Score | Rank |   | Country                | Score | Rank |     | Country                 | Score | Rank |
|----------------|-------|------|---|------------------------|-------|------|-----|-------------------------|-------|------|
| United States  | 5.17  | 1    |   | Brazil                 | 3.6   | 35   |     | Bulgaria                | 2.88  | 69   |
| Singapore      | 5.12  | 2    |   | Tunisia                | 3.63  | 36   |     | Gambia                  | 2.85  | 70   |
| Finland        | 4.98  | 3    |   | Namibia                | 3.62  | 37   |     | Peru                    | 2.83  | 71   |
| Switzerland    | 4.93  | 4    |   | Latvia                 | 3.61  | 38   |     | Nigeria                 | 2.8   | 72   |
| Iceland        | 4.84  | 5    |   | Slovenia               | 3.60  | 39   |     | Russian Fed-<br>eration | 2.82  | 73   |
| Sweden         | 4.72  | 6    |   | Hungary                | 3.60  | 40   |     | Vietnam                 | 2.80  | 74   |
| Canada         | 4.67  | 7    |   | Thailand               | 3.57  | 41   |     | Romania                 | 2.80  | 75   |
| Taiwan         | 4.66  | 8    |   | Jordan                 | 3.56  | 42   |     | Pakistan                | 2.80  | 76   |
| Luxembourg     | 4.64  | 9    |   | Botswana               | 3.49  | 43   |     | Senegal                 | 2.79  | 77   |
| Denmark        | 4.61  | 10   |   | India                  | 3.45  | 44   | 100 | Uganda                  | 2.79  | 78   |
| Hong Kong SAR  | 4.56  | 11   |   | Lithuania              | 3.41  | 45   | •   | Serbia                  | 2.78  | 79   |
| Australia      | 4.56  | 12   |   | Costa Rica             | 3.37  | 46   |     | Mali                    | 2.77  | 80   |
| Israel         | 4.54  | 13   |   | Mexico                 | 3.36  | 47   |     | Venezuela               | 2.75  | 81   |
| United Kingdom | 4.52  | 14   |   | Mauritius              | 3.36  | 48   | Þ   | Philippines             | 2.67  | 82   |
| Netherlands    | 4.46  | 15   |   | Trinidad and<br>Tobago | 3.36  | 49   |     | Cameroon                | 2.62  | 83   |
| Norway         | 4.45  | 16   |   | Poland                 | 3.31  | 50   |     | Guatemala               | 2.61  | 84   |
| Germany        | 4.42  | 17   |   | Slovak Republic        | 3.30  | 51   |     | Bolivia                 | 2.60  | 85   |
| New Zealand    | 4.37  | 18   |   | Uruguay                | 3.25  | 52   |     | Zambia                  | 2.59  | 86   |
| Japan          | 4.34  | 19   |   | Panama                 | 3.24  | 53   |     | Madagascar              | 2.59  | 87   |
| Korea          | 4.34  | 20   |   | Dominican<br>Republic  | 3.23  | 54   |     | Malawi                  | 2.58  | 88   |
| United Austria | 4.30  | 21   |   | Croatia                | 3.22  | 55   |     | Bangladesh              | 2.57  | 89   |
| Ireland        | 4.28  | 22   | A | Jamaica                | 3.20  | 56   |     | Ecuador                 | 2.57  | 90   |
| France         | 4.27  | 23   |   | Argentina              | 3.15  | 57   |     | Kenya                   | 2.55  | 91   |
| Belgium        | 4.11  | 24   | 1 | Turkey                 | 3.14  | 58   |     | Paraguay                | 2.53  | 92   |
| Estonia        | 4.00  | 25   |   | Macedonia              | 3.22  | 59   |     | Ukraine                 | 2.53  | 93   |
| Malaysia       | 3.95  | 26   |   | Egypt                  | 3.08  | 60   |     | Algeria                 | 2.48  | 94   |
| Portugal       | 3.89  | 27   |   | Morocco                | 3.07  | 61   |     | Mozambique              | 2.44  | 95   |
| Italy          | 3.89  | 28   |   | El Salvador            | 3.07  | 62   |     | Honduras                | 2.29  | 96   |
| Malta          | 3.87  | 29   |   | China                  | 3.03  | 63   |     | Zimbabwe                | 2.29  | 97   |
| Spain          | 3.86  | 30   |   | Colombia               | 3.02  | 64   |     | Nicaragua               | 2.23  | 98   |
| Chile          | 3.85  | 32   |   | Tanzania               | 3.01  | 65   |     | Chad                    | 2.19  | 99   |
| Greece         | 3.76  | 32   |   | Sri Lanka              | 2.99  | 66   |     | Haiti                   | 2.19  | 100  |
| South Africa   | 3.68  | 33   |   | Ghana                  | 2.97  | 67   |     | Angola                  | 2.00  | 101  |
| Czech Republic | 3.66  | 34   |   | Indonesia              | 2.92  | 68   |     | Ethiopia                | 1.99  | 102  |

Table C.23: The Networked Readiness Component Indices Usage Component Index

| Country         | Score | Rank |    | Country                 | Score | Rank | Country     | Score | Rank |
|-----------------|-------|------|----|-------------------------|-------|------|-------------|-------|------|
| Finland         | 6.07  | 1    |    | Portugal                | 4.65  | 35   | Indonesia   | 3.91  | 69   |
| Sweden          | 5.95  | 2    |    | Latvia                  | 4.63  | 36   | Morocco     | 3.87  | 70   |
| United States   | 5.95  | 3    |    | Thailand                | 4.59  | 37   | Egypt       | 3.86  | 71   |
| Singapore       | 5.85  | 4    |    | Hungary                 | 4.53  | 38   | Philippines | 3.84  | 72   |
| Denmark         | 5.81  | 5    |    | Greece                  | 4.50  | 39   | Namibia     | 3.81  | 73   |
| Norway          | 5.71  | 6    |    | Brazil                  | 4.49  | 40   | Ghana       | 3.81  | 74   |
| France          | 5.66  | 7    |    | Mauritius               | 4.47  | 41   | Macedonia   | 3.80  | 75   |
| Canada          | 5.66  | 8    |    | Tunisia                 | 4.47  | 42   | Tanzania    | 3.70  | 76   |
| Australia       | 5.56  | 9    |    | Poland                  | 4.44  | 43   | Serbia      | 3.70  | 77   |
| United Kingdom  | 5.54  | 10   |    | Croatia                 | 4.42  | 44   | Pakistan    | 3.67  | 78   |
| Japan           | 5.51  | 11   |    | Colombia                | 4.34  | 45   | Cameroon    | 3.61  | 79   |
| Germany         | 5.50  | 12   |    | South Africa            | 4.33  | 46   | Algeria     | 3.59  | 80   |
| Switzerland     | 5.44  | 13   |    | Mexico                  | 4.29  | 47   | Zambia      | 3.54  | 81   |
| Netherlands     | 5.36  | 14   |    | Russian Fed-<br>eration | 4.26  | 48   | Nigeria     | 3.49  | 82   |
| Austria         | 5.32  | 15   |    | Argentina               | 4.24  | 49   | Guatemala   | 3.48  | 83   |
| Iceland         | 5.24  | 16   |    | India                   | 4.23  | 50   | Bolivia     | 3.46  | 84   |
| Taiwan          | 5.25  | 17   |    | Jordan                  | 4.19  | 51   | Senegal     | 3.45  | 85   |
| Ireland         | 5.24  | 18   |    | Dominican<br>Republic   | 4.18  | 52   | Nicaragua   | 3.42  | 86   |
| Korea           | 5.24  | 19   |    | Uruguay                 | 4.18  | 53   | Paraguay    | 3.42  | 87   |
| New Zealand     | 5.16  | 20   |    | China                   | 4.14  | 54   | Malawi      | 3.42  | 88   |
| Belgium         | 5.16  | 21   | 4  | Costa Rica              | 4.14  | 55   | Kenya       | 3.42  | 89   |
| Estonia         | 5.11  | 22   |    | Romania                 | 4.13  | 56   | Uganda      | 3.32  | 90   |
| Israel          | 5.06  | 23   | T. | Jamaica                 | 4.11  | 57   | Zimbabwe    | 3.24  | 91   |
| Spain           | 5.00  | 24   |    | Ukraine                 | 4.08  | 58   | Gambia      | 3.23  | 92   |
| Luxembourg      | 4.96  | 25   | 1  | El Salvador             | 4.08  | 59   | Ecuador     | 3.19  | 93   |
| Italy           | 4.91  | 26   |    | Bulgaria                | 4.06  | 60   | Madagascar  | 3.05  | 94   |
| Slovenia        | 4.90  | 27   |    | Turkey                  | 4.05  | 61   | Bangladesh  | 3.00  | 95   |
| Hong Kong SAR   | 4.87  | 28   |    | Venezuela               | 4.02  | 62   | Honduras    | 2.97  | 96   |
| Malaysia        | 4.86  | 29   |    | Panama                  | 4.01  | 63   | Angola      | 2.95  | 97   |
| Chile           | 4.73  | 30   |    | Sri Lanka               | 3.98  | 64   | Haiti       | 2.93  | 98   |
| Malta           | 4.70  | 32   |    | Trinidad and<br>Tobago  | 3.98  | 65   | Mali        | 2.86  | 99   |
| Lithuania       | 4.69  | 32   |    | Peru                    | 3.97  | 66   | Mozambique  | 2.80  | 100  |
| Czech Republic  | 4.68  | 33   |    | Vietnam                 | 3.93  | 67   | Ethiopia    | 2.44  | 101  |
| Slovak Republic | 4.67  | 34   |    | Botswana                | 3.91  | 68   | Chad        | 2.32  | 102  |

Table C.24: The Networked Readiness Component Indices Readiness Component Index

| Country        | Score | Rank | - | Country                | Score | Rank |   | Country                 | Score | Rank |
|----------------|-------|------|---|------------------------|-------|------|---|-------------------------|-------|------|
| United States  | 5.39  | 1    |   | Czech Republic         | 3.06  | 35   |   | Russian Fed-<br>eration | 2.49  | 69   |
| Singapore      | 5.21  | 2    |   | Mexico                 | 3.05  | 36   |   | Venezuela               | 2.49  | 70   |
| Denmark        | 5.15  | 3    |   | Mauritius              | 3.04  | 37   |   | Sri Lanka               | 2.49  | 71   |
| Norway         | 4.94  | 4    |   | Greece                 | 3.03  | 38   |   | Peru                    | 2.48  | 72   |
| Sweden         | 4.94  | 5    |   | Slovak Republic        | 3.02  | 39   |   | Colombia                | 2.48  | 73   |
| Canada         | 4.88  | 6    |   | Thailand               | 3.00  | 40   |   | Gambia                  | 2.47  | 74   |
| Switzerland    | 4.82  | 7    |   | Latvia                 | 2.99  | 41   |   | Nigeria                 | 2.47  | 75   |
| Luxemburg      | 4.67  | 8    |   | Argentina              | 2.97  | 42   |   | Kenya                   | 2.46  | 76   |
| Finland        | 4.63  | 9    |   | China                  | 2.97  | 43   |   | Serbia                  | 2.45  | 77   |
| Germany        | 4.62  | 10   |   | India                  | 2.94  | 44   | A | Senegal                 | 2.45  | 78   |
| Japan          | 4.56  | 11   |   | Tunisia                | 2.90  | 45   |   | Namibia                 | 2.41  | 79   |
| Netherlands    | 4.53  | 12   |   | Costa Rica             | 2.87  | 46   | n | Ghana                   | 2.39  | 80   |
| Australia      | 4.53  | 13   |   | Brazil                 | 2.85  | 47   |   | Indonesia               | 2.35  | 81   |
| Iceland        | 4.52  | 14   |   | Romania                | 2.85  | 48   |   | Mozambique              | 2.30  | 82   |
| Hong Kong SAR  | 4.39  | 15   |   | Jordan                 | 2.83  | 49   |   | Ecuador                 | 2.27  | 83   |
| Israel         | 4.30  | 16   |   | Philippines            | 2.80  | 50   |   | Zambia                  | 2.27  | 84   |
| Korea          | 4.22  | 17   |   | Croatia                | 2.79  | 51   |   | Ukraine                 | 2.26  | 85   |
| Ireland        | 4.13  | 18   |   | Poland                 | 2.78  | 52   |   | Cameron                 | 2.24  | 86   |
| Austria        | 4.07  | 19   |   | Lithuania              | 2.78  | 53   |   | Macedonia               | 2.23  | 87   |
| Belgium        | 4.02  | 20   |   | Jamaica                | 2.78  | 54   |   | Guatemala               | 2.19  | 88   |
| United Kingdom | 3.99  | 21   |   | Trinidad and<br>Tobago | 2.76  | 55   |   | Algeria                 | 2.18  | 89   |
| Taiwan         | 3.95  | 22   |   | Turkey                 | 2.76  | 56   |   | Madagascar              | 2.17  | 90   |
| New Zealand    | 3.90  | 23   | P | Panama                 | 2.68  | 57   |   | Malawi                  | 2.15  | 91   |
| Malta          | 3.90  | 24   |   | Vietnam                | 2.67  | 58   |   | Bangladesh              | 2.14  | 92   |
| France         | 3.87  | 25   |   | Morocco                | 2.63  | 59   |   | Zimbabwe                | 2.07  | 93   |
| Malaysia       | 3.78  | 26   |   | Botswana               | 2.63  | 60   |   | Nicaragua               | 2.03  | 94   |
| Estonia        | 3.65  | 27   |   | Uruguay                | 2.63  | 61   |   | Angola                  | 2.01  | 95   |
| Slovenia       | 3.47  | 28   |   | Pakistan               | 2.62  | 62   |   | Ethiopia                | 1.98  | 96   |
| Italy          | 3.41  | 29   |   | Egypt                  | 2.62  | 63   |   | Honduras                | 1.97  | 97   |
| Portugal       | 3.29  | 30   |   | Uganda                 | 2.60  | 64   |   | Mali                    | 1.93  | 98   |
| Chile          | 3.24  | 32   |   | Tanzania               | 2.56  | 65   |   | Bolivia                 | 1.93  | 99   |
| Spain          | 3.17  | 32   |   | Dominican<br>Republic  | 2.54  | 66   |   | Paraguay                | 1.91  | 100  |
| South Africa   | 3.15  | 33   |   | El Salvador            | 2.52  | 67   |   | Chad                    | 1.75  | 101  |
| Hungary        | 3.10  | 34   |   | Bulgaria               | 2.50  | 68   |   | Haiti                   | 1.71  | 102  |

Table C.25: Breakdown of Egyptian NRI Rankings by Component and sub-index

| Environment Component Index |  |                               |                      |  |  |  |  |  |
|-----------------------------|--|-------------------------------|----------------------|--|--|--|--|--|
| Market En-<br>vironment     | Political and<br>Regulatory<br>Environment | Infrastructure<br>Environment | Overall Environment  |  |  |  |  |  |
| 49                          | 66   | 65                            | 60                   |  |  |  |  |  |
| Readiness C                 | component Ind                              | lex                           |                      |  |  |  |  |  |
| Individual<br>Readiness     | Business<br>Readiness                      | Government<br>Readiness       | Overall<br>Readiness |  |  |  |  |  |
| 72                          | 60   | 77                            | 71                   |  |  |  |  |  |
| Usage Comp                  | onent Index                                |                               |                      |  |  |  |  |  |
| Individual<br>Usage         | Business<br>Usage                          | Government<br>Usage           | Overall Us-<br>age   |  |  |  |  |  |
| 77                          | 72   | 44                            | 63                   |  |  |  |  |  |

Table C.26: Comparison of NRI among Middle East Countries

| Country | NRI | Environment<br>Component | Readiness<br>Component | Usage Component |
|---------|-----|--------------------------|------------------------|-----------------|
| Israel  | 16  | 13                       | 23                     | 16              |
| Tunisia | 40  | 36                       | 42                     | 45              |
| Jordan  | 46  | 42                       | 51                     | 49              |
| Turkey  | 56  | 58                       | 61                     | 56              |
| Morocco | 64  | 61                       | 70                     | 59              |
| Egypt   | 65  | 60                       | 71                     | 60              |
| Algeria | 87  | 94                       | 80                     | 89              |

## References

#### Chapter 1

Askar, Mohamed. 2004. Conceptual Framework for Enhancing Egypt's Competitiveness. Unpublished paper.

Dutta S., Jain, A. 2003. Networked Readiness Index 2003-2004: Overview and Analysis Framework, World Bank infodev

Feurer, R. and Chaharbagh K., 1994, Defining Competitiveness: A Holistic Approach, Management Decisions

Jasimuddin, S. M., 2001, Analyzing the competitive advantages of Saudi Arabia with Porter's model, Journal of International Business and Industrial Marketing, pp. 59-68

Kay, J. 1993. Foundation of Corporate Success, Oxford University Press

Khalil, T. 2000, Management of Technology; The Key to Competitiveness and Wealth Creation, McGraw Hill

Kirkman, G., Osorio, C., Sachs, J., 2003. The Networked Readiness Index: Measuring the Preparedness of Nations for the Networked World, World Bank

O'Shaughnessy, N., 1996, Michael Porter's Competitive Advantage revisited, Management Decision

Porter, M. E., 2003 Building the Microeconomic Foundations for Prosperity, World Economic Forum Global Competitiveness Report.

Porter, M.E., 1990 The Competitive Advantages of Nations, Free Press, New York

Tiemstra, J. 1994. Competitiveness and Industrial Policy, International Journal of Social Economics

US Council on Competitiveness.

World Economic Forum. 2003. The Global Competitiveness Report.

#### Chapter 2

Asian Development Outlook. 2003. Competitiveness in Developing Asia: Taking Advantage of Globalization, Technology and Competition.

ECES (Egyptian Centre for Economic Studies). 2001. *Egypt's Export Puzzle*. ECES Policy Viewpoint, Number 9, August.

Economist Intelligence Unit. 2004. Executive Briefing: Egypt. February 7, 2004.

Egypt Brief Country Analysis. February 2004. Internet download.

Fitch. December 2003. Egypt: International Credit Analysis.

----- 2003. World Development Indicators.

Essawy, Amr; and Ghoneim, Ahmad. 2004. Trade Facilitation and the Integration of Egyptian Manufacturers in World Trade with Special Emphasis on Port Efficiency. Paper Presented at the Conference *Revisiting Egypt's Competitiveness: The Road Ahead for Building Leading Sectors.* Sponsored by Center for Economic & Financial Research & Studies (CEFRS); Faculty of Economics and Political Sciences (FEPS) Cairo University (CU); *in collaboration with* The United States Agency for International Development (USAID) and The Egyptian Competitiveness Council. June 28 and 29, 2004

International Monetary Fund. 2004. International Finance Statistics, 2004. -----. September 2003. World Economic Outlook - Chapter II: How can economic growth in the Middle East and North Africa region be accelerated. International Monetary Fund. Ministry of Economy. 1998. The International Competitiveness of Egypt in Perspective: First Report 1998. Ministry of Foreign Trade. 2004. Quarterly Economic Digest, X (2: April – June). -----. 2004. Monthly Economic Digest, XI (3: May). Moody's. May 2003. Egypt: Rating Analysis. Nugent. 2004. Paper Presented at the Conference Revisiting Egypt's Competitiveness: The Road Ahead for Building Leading Sectors. Sponsored by Center for Economic & Financial Research & Studies (CEFRS); Faculty of Economics and Political Sciences (FEPS) Cairo University (CU); in collaboration with The United States Agency for International Development (USAID) and The Egyptian Competitiveness Council. June 28 and 29, 2004 Standard and Poor's. October 2003. Egypt: Rating Research. The World Bank. 1999. Egypt: Stabilization and Structural Change. The World Bank, Egypt Country Department, Middle East and North Africa Region. ----- 1997. Egypt: Issues on Sustaining Economic Growth, Summary Report- A World Bank Country Economic Memorandum. Agenda: March 2004 Progress Report.

## **Biographies**

#### **Helmy Abouleish**

A graduate of the Faculty of Commerce, Cairo University, Helmy Abouleish was closely involved in the establishment of all parts of the SEKEM Initiative and has specialized in finding modern approaches and novel solutions to questions on the global economy and competitiveness.

Founder or cofounder of various organizations, including the Egyptian National Competitiveness Council (ENCC), the International Association for Partnership (IAP), the Egyptian Biodynamic Association (EBDA), and the Centre for Organic Agriculture in Egypt (COAE), he has worked in various positions within the SEKEM organization, and organized the first IFOAM Conference on Organic Cotton in Cairo in 1993 and AGROBIO'96. He represented SEKEM at the meeting of the World Economic Forum 2004, and various regional events of the WEF.

Currently, he is CEO of the SEKEM Group of Companies that consists of six companies (ATOS, CONYTEX, HATOR, ISIS; LIBRA, SEKEM) and covers the fields of biodynamic agriculture, phytopharmaceuticals, organic textiles and organic fast moving consumer goods.

He is chairman of the Egyptian Junior Business Association (EJB) and a board member of the Egyptian Agribusiness Association (EAGA), Society for Cultural Development (SCD), the Institute of Cultural Affairs - Egypt (ICA), the Agriculture Commodity Council (ACC), the German Arab Chamber of Industry & Commerce (GACIC), the Industrial Modernisation Centre - Egypt (IMC) and the Business Council of the National Democratic Party (NDP), as well as a member of the Selecting panel of the Ashoka Foundation in Egypt. He also is an active member of several organizations including the International Demeter Organization (IDO), and the International Federation of Organic Agricultural Movements (IFOAM), and the International Association of Partnership (IAP).

Under his stewardship of its commercial arm, the SEKEM initiative received the "Right Livelihood Award2003" for sustainable development, better known as "Alternative Nobel Prize, and became a member of the Schwab Foundation for outstanding Social Entrepreneurs.

#### **Mohamed Askar**

Dr. Mohamed Askar is an Assistant Professor of Operations Management at the American University in Cairo. Dr. Askar's education background includes a Bachelor Degree in Mechanical Engineering, a Masters of Mechanical Engineering, a Masters of Business Administration and Ph. D. in Management. Dr. Askar's teaching and research interests are in the areas of Operations and Technology Management, Modelling of Business Processes and Business Dynamics. Dr. Askar published several papers about enhancing and restoring Egyptian competitiveness, and assessment of Egyptian industry's competitive priorities. Further, Dr. Askar has been active in consulting throughout Egypt in the areas of technology management, strategic use of information technology, as well as development of strategic performance management systems.

#### Prof. Hossam Badrawi M.D; M P

Prof. Hossam Badrawi is a professor of OB/GYN in Cairo University, Medical School. He received his graduate studies in Wayne state University, Detroit Michigan, North Western University, Chicago, Illinois and Boston University, Boston, Massachusetts. His academic activities include publishing more than 120 research papers and participating in 8 text books in his field of specialty in obstetrics & gynecology.

Beside his academic work, he is an elected member of the Egyptian Parliament and chairs the committee for Education and Scientific research. He has a clear vision for education reform in Egypt and works actively for that direction.

Dr. Badrawi led the committee of education and scientific research in the last 3 years to become one of the most active and productive committees in the Egyptian Parliament. He also chaired the joint committee of the Parliament for the IPR legislation in Egypt and is considered the father of the law.

Dr. Badrawi played a major role in developing the new policy reforms directions of Education and Health of the National Democratic Party NDP, during 2002 and 2003.

He was elected member of the general secretariat of the party and was given an extra mandate of improving the relationship of the party with the private sector as he chairs a newly developed secretariat of business community

Dr. Badrawi has been chosen on January 2004, as a member of the newly developed supreme council for human rights in Egypt as part of the reform wave in Egypt towards democracy.

Dr. Badrawi is a leader in the private health care sector, with a vision for the health care financing, management and provision. He started the first managed care company in Egypt in 1989 and before that a private health care institution (Nile Badrawi Hospital) in 1982 which is considered one of the largest private hospitals in Egypt.

Dr. Badrawi, beside the family business, which he leads, is an active person in the civil society. He is the founder, chairman of the board as well as a member of a

number of leading NGO's in Egypt. He is also an advocate for youth, women and children rights and shares in the activities of promoting their role in the society.

Dr. Badrawi's experience in civil work, NGO's, and in business as a part of a well routed family, that created investments, especially in service fields, gives him a very special scope of political, academic and private sector vision.

#### **Iman El-Kaffass**

Dr. Iman El-Kaffass is the Associate Dean for Equal Opportunity and Student Competitiveness at the American University in Cairo. She is the founder and chair of the board of the Egyptian Association for Education and Development (EAED), and she is also executive board member of the Education and Scientific Research Committee of the National Democratic Party of Egypt.

Dr. El-Kaffass is holder of a Ph.D. degree in Higher Education Administration from Bowling Green State University, Ohio, the USA, with specialization in organizational assessment and development. Her Master's Degree is in Public Administration with specialization in organizational and human development, from the American University in Cairo, and her bachelor's degree is in Political Science, with specialization in political sociology from the American University in Cairo. Dr. El-Kaffass is member of multiple international and regional associations all working in the domain of human and societal development.

#### **Amina Ghanem**

Amina Ghanem is currently an Advisor to the Minister of Finance, His Excellency, Dr. Youssef Boutros-Ghali. Mrs. Ghanem has worked with Minister Boutros-Ghali since 1990 in his various capacities as Advisor to the Prime Minister, Minister of State, Minister of State for International Cooperation, Minister of Economy, Minister of Economy and Foreign Trade, and Minister of Foreign Trade. She has worked closely with Mr. Boutros-Ghali on Egypt's macroeconomic stabilization and structural adjustment program since 1991. Mrs. Ghanem is a member of the technical secretariat of the ministerial economic committee. She prepares periodic written and statistical analyses of the macro-fiscal economy. She has participated in the Trade and Investment Framework Agreement (TIFA) discussions held between the Egyptian and U.S. governments. She has written a number of articles in the Worldlink magazine and has participated in a number of Euromoney books on Egypt. Past positions include Head of the Sovereign Ratings Department at the Ministry of Foreign Trade, Coordinator for the Economic Reforms Monitoring Team and Coordinator for the Assistance for Trade Reform Project. Her pre-government experience is diverse and includes banking experience abroad and teaching at the American University in Cairo.

Mrs. Ghanem has finished her PhD. coursework and is currently writing her dissertation. She holds a Master of Science in Economics from Cairo University; a Master of Arts in Teaching English as a Foreign Language from the American University in Cairo (AUC); a Diploma in Teaching English as a Foreign Language for Non-Native Teachers of English from the Royal Society of Arts in London; and a Bachelor of Arts in Economics from AUC.

#### **Ahmed Ghoneim**

Ahmed Farouk Ghoneim is currently an Assistant Professor, Faculty of Economic and Political Science, Cairo University and an advisor to the Minister of Industry on foreign trade issues and international agreements. He is a research associate at the Economic Research Forum for Arab Countries, Iran and Turkey (ERF). He works as a consultant to several international organizations including the World Bank and the World Intellectual Property Organization (WIPO). He holds a Ph.D. in Economics and his special interest in research include mainly trade policy, regional trade integration, the multilateral

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#### Rania Gohar

A multilingual Emerging Markets Fund Manager with considerable experience in Middle Eastern equities' investments and relationship management. Till September 1995, used to be a Senior Financial Controller/Cost Accountant at Johnson Wax Egypt. Then, she shifted her focus to the Capital Markets Industry to become a Fund Manager, specialized in Egyptian Equities and Bonds at EFG-Hermes and the Commercial International Investment Company in Egypt till 2000. Rania, then moved to London in 2001 to become a Middle East Fund Manager at Societe Generale Asset Management, responsible for the Societe Generale Arab Fund investing in Middle Eastern & North African Equities. Currently in Egypt, worked on the Financial Restructuring of Egypt Air's Project, focused on finishing several professional finance qualifications and currently is First Assistant to the Chairman at the Mortgage Finance Authority. Additionally has gained substantial studies academically and professionally through two Masters Degrees and a diploma in Business Administration from the American University in Cairo, in International Securities, Investment and Banking from Reading University in the UK; and in Fund Management from the Securities Institute in London. She is also an SFA (Securities & Futures Authority) and IMC (Investment Management Certificated London registered. Additionally, she is a Chartered Financial Analyst, CFA student and a student at both the Securities Institute and the Institute of Islamic Banking & Insurance in London.

#### Heba Nassar

Heba Nassar, Professor of Economics and Director of the Center for Economic and Financial Research and Studies, Faculty of Economics and Political Science and a Part time Research Professor at the Social Research Center, American University in Cairo. Currently she is the Vice Chair for the Research Alliance for Development of the World Bank in Paris as well as a research fellow of the Economic Research Forum. She is an Advisor for the Economic Committee of the People's Assembly, a member of the Economic Committee in the National Party, a member in the Board of the Holding Company for Electricity in Egypt, a member of the Permanent Scientific Committee for Promotion of Associate Professors in Economics in Egypt, a member of the National Specialized Councils and a member of Economic Committee of the National Council for Women. She has several publications and country papers, mainly on Human Resource Development, Poverty, Economic Participation of Women, Labor, Structural Adjustment and Institutional Economics.

#### Samir Radwan

A graduate from the Universities of Cairo (B.Sc., Economics, 1963) and London (M.Sc., Economics of Underdeveloped Countries, 1967 and Ph.D., Economics, 1973), Samir Radwan specializes in development economics with particular emphasis on employment policies, labor markets and poverty.

Former lecturer at the Faculty of Economics, Cairo University (1963-65) and at the Institute of Economics and Statistics, Oxford and member of St. Anthony's College, Oxford (1970-76), he has been working with the ILO since 1976.

Presently, Dr. Samir Radwan is The Managing Director of the Economic Research Forum for Arab Countries Iran and Turkey. Previously he was Adviser to the Director-General on Development Policies and Counselor on Arab Countries at the International Labour Office, Geneva, Switzerland, and Director of the Development and Technical Cooperation Department (1994-96) and the Development Policies Department (1996-99). He worked at the ILO from 1979 to 2003.

Member of the Bruntland Commission's panel on "Food Security, Agriculture, Forestry and Environment", Mr. Radwan has

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He has published extensively on human resource development, labour markets, rural development, industrialization, Africa, and Arab economies. His publications include: Capital Formation in Egyptian Industry and Agriculture (Oxford, 1974); Agrarian Reform and Rural Poverty (ILO, 1977); the Industrialization of Egypt (with Robert Mabro, OUP, 1974); Employment Opportunities and Equity in Egypt (with Bent Hansen, ILO, 1982); Agrarian Policies and Poverty in Africa (with D. Ghai, ILO, 1983); Agrarian Systems (co-ed. Macmillan, 1979); Towards Full Employment (Cairo, 1997); Employment and Development (in honor of Hans Singer, Macmillan, 1998); Globalization: Losers and Gainers, AUC Fifth Research Conference (Cairo, 1998); Decent Work as a Development Agenda: An International Perspective (Geneva, April 2002); and Employment and Unemployment in Egypt: Conventional Problems, Unconventional Remedies, ECES (Cairo, August 2002).

#### **Amr Saleh**

Dr. Saleh is assistant Professor of Economics at the Ain Shams University, obtained his Ph.D. in Economics (Political Economy, Public Policies) from the University of Marne La Vallée, France. Dr. Saleh has also a Ph.D. in Management from La Sorbonne University in Paris.

He has extensive experience in working with international organizations in Egypt

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# The Egyptian National Competitiveness Council Executive Committee

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## **Definitions**

#### Growth Competitiveness Index, GCI

The GCI has been developed by Jeffery Sachs and John McArthur and is presented as part of the *World Economic Forum Global Competitiveness Report*. The GCI is built on three main pillars:

- Macroeconomic Environment
- · Quality of Public Institutions
- Technology

The first pillar deals with the macroeconomic stability of the economy. The macroeconomic index provides insights on how growth can be achieved by providing a stable macroeconomic environment that supports business development. The macroeconomic measures include the government deficits, public spending, taxation, soundness of the banking system, and the government ability to meet its financial obligations in forms of payments on public loans.

The second pillar deals with the quality of public institutions in the country. Such institutions include the protection of the judicial system, the enforcement of government regulations and provision of services, and the protection of contracts.

The third pillar deals with technology, as it plays an ever increasing role in stimulating economic growth. The extent of technology diffusion determines the degree at which the economy can grow through innovation.

#### **Business Competitiveness Index, BCI**

The Business Competitiveness Index (BCI) has been developed by Michael Porter of Harvard University. Similar to the GCI, the Business Competitiveness Index is calculated on the basis of the Executive Opinion Survey, administered by the World Economic Forum. Since 2000, the results of the BCI have been continuously presented in *The Global Competitiveness Report*.

The Business Competitive Index is built on the examination of two interrelated fields: (1) the sophistication domestic companies and foreign subsidiaries employ while operating in a country, and (2) the quality of the national microeconomic business environment.

### Networked Readiness Index, NRI

The Network Readiness Index (NRI) is defined as a country's degree of preparedness to participate in and benefit from developments in the information and communication technology (ICT) field. The NRI is produced cooperatively by INSEAD, the World Bank (*infodev*) and the World Economic Forum.

The NRI relies on three main component indices: Environment, Readiness, and Usage.

The environment component index measures the degree of conduciveness of the environment a country provides for the development and use of ICT. The environment component index is based on three sub-indices, market sub-index, political/regulatory sub-index and infrastructure sub-index.

The readiness component index measures the capability of the prinipal agents of an economy to leverage the potential of ICT. The readiness component index is based on three sub-indices, each one assessing the readiness of the nation to utilize and leverage ICT. These sub-indices are *Individual Readiness*, *Business Readiness*, and *Government Readiness*.

The third component index measures the extent of ICT-usage by the principal stakeholders of the NRI framework: individuals, businesses and governments. The usage component index is built on three sub indexes, *Individual Usage*, *Business Usage*, and *Government Usage*.

## The Egyptian Competitiveness Report 2003-2004

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