

# Towards Competitiveness

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# The Productivity and Competitiveness of the Egyptian Economy<sup>1</sup>

By Dr. Ashraf El-Araby

## Abstract

Since productivity and competitiveness are two correlated terms reflecting the performance of a nation's economy, taking into consideration the status of Egypt's productivity becomes essential for enhancing Egypt's competitiveness ranking. One of the most important aspects of productivity is labor productivity). The lack of efficient, well-educated, and highly-trained labor in Egypt has led to the current deteriorated rank of Egypt's competitiveness. This paper is trying to highlight the status of the productivity of Egyptian labor, existing impediments, and tips for overcoming such impediments. Triumphant over the constraints to Egypt's productivity and; therefore competitiveness can be accomplished through several measures including creating a supportive environment for development and a comprehensive internally consistent program of reform; investing in human capital; overcoming the illiteracy problem; enhancing the quality of Egyptian education while paying a special attention to higher education and Research and Development; and providing necessary vocational training opportunities.

## Productivity and Competitiveness...Two Sides of One Coin

The term *Productivity* refers to the technical relationship between the inputs and outputs, in which the factors of production, such as labor, capital and other inputs (raw materials and

intermediary services) are converted to final goods and services. As such, the concept of productivity relates to the degree of effectiveness in utilizing the inputs either at the macro level of the national economy or at the micro level, dealing with each factor input separately.

<sup>1</sup> This paper was prepared by Dr. Ashraf El-Araby (Economic Expert, Institute of National Planning) in light of the workshop organized by the Egyptian National Competitiveness Council (ENCC) on "The Productivity and Competitiveness of the Egyptian Economy", convened in the Conrad Hotel in Cairo, Wednesday December 24, 2008.

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Despite the various measures and indicators of productivity, the labor productivity measure is well-known as the most important and widespread measure adopted so far. It reflects the workers' level of education, qualification, the extent of their efficiency, the contribution to the production process, as well as the increases of the production level. In addition to the labor productivity measure, another essential widely-used measure of the overall productivity of a country or an individual sector is the total factor productivity, which focuses mainly on measuring the impact of technological progress and the efficiency of the production process on the increase in output/production.

On the other hand, the term competitiveness is considered a relatively recent measure of productivity that has gained great momentum with the launch of the first annual competitiveness report by the World Economic Forum (WEF) in 1978. During the last decades the term has witnessed major evolutions, it has shifted away from the degree of availability of natural resources in one country, or what has been known as the comparative advantage in the literature of international trade, to a much broader concept of what is called the competitive advantage, which relies on the advantages gained by human effort, in particular through raising skills and capabilities, upgrading scientific research, and technological development leading to productivity increases and cost reduction.

The book, "Competitive Advantage of Nations" by Michael Porter (1990) is considered one of the leading works that contributed to the creation of the first theory of competitiveness based on the causes of productivity rather than natural resources and endowments, or comparative advantage. In his book, Porter emphasized that competitiveness is the synonym of productivity, that the only comprehensive definition of competitiveness is a country's productivity, and that the type and productivity of the factors of production – not their availability - is the major determinant of competitive advantage.

The Global Competitiveness Reports (GCRs) have settled on a certain definition of competitiveness as "the set of institutions, policies and factors that determine the level of productivity of a country." Competitiveness also represents the country's ability to produce goods and services that are internationally marketable, to bring about an increase in its citizens' real income. The level of competitiveness in a country is measured through what is known as the Global Competitiveness Index (GCI). The GCI consists of three main groups of indicators: those related to basic requirements which includes four pillars (institutions, infrastructure, macroeconomic stability, and health and primary education); those related to efficiency enhancers which includes six pillars (higher education and training, goods market efficiency, labor market efficiency, financial market sophistication, technological readiness, and market size), and those related to innovation and

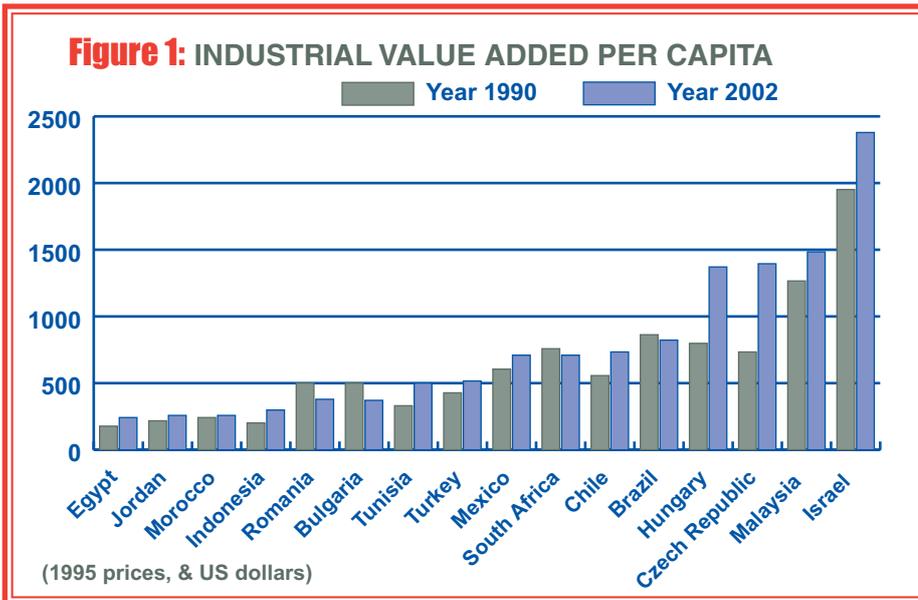
sophistication factors which includes two pillars (business sophistication and innovation).

### **The Current Status of Productivity and Competitiveness is Still Far Behind What is Achievable**

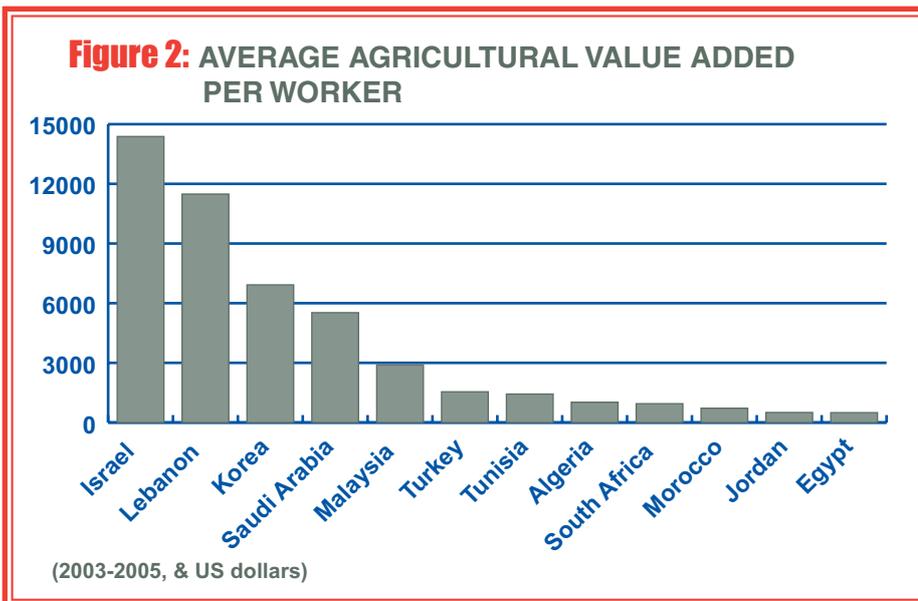
During the period 1981/82 - 2000/01 there was a modest real increase in the average productivity of the Egyptian worker, amounting to around 1.3% as an annual average. This overall average conceals a considerable discrepancy in the performance within various sectors. While the general trend for this average was increasing with respect to the Egyptian agricultural sector (with an annual average growth rate of almost 2%), it had been declining in the industrial sector (with annual average decline of almost 0.4%).

Despite the increase in the average industrial value added per capita to \$226 in 2002 compared to almost \$142 in 1990, this number is still much lower than its counterparts in Tunisia (\$493), Turkey (\$538), and South Africa (\$754), not to mention Malaysia (\$1517) and Israel (\$2608). (Figure 1)

The agricultural value added per worker reached \$497 during the period 2003-2005, which is considered a very low average compared to its corresponding levels in several Arab countries such as Saudi Arabia and Lebanon where it reached \$5523 and \$11485 respectively. It represented less than 4% of the prevailing average in Israel during the same period (\$14380). (Figure 2)



(Source: United Nations Industrial Development Organization "UNIDO", 2005)



(Source: World Bank, World Development Report 2008)

Despite the fact that the cost of labor in Egypt was less than a quarter of the Middle East and North Africa (MENA) region average, the average unit-labor cost in Egypt is much closer to the regional average. While the average wage per worker in Jordan and Israel is 1.5 and 11.4 times that of Egypt respectively, the average unit-labor cost in both Jordan and Israel are 0.55 and 1.9 of the corresponding cost in

Egypt, respectively, which indicates the low productivity of Egyptian workers.

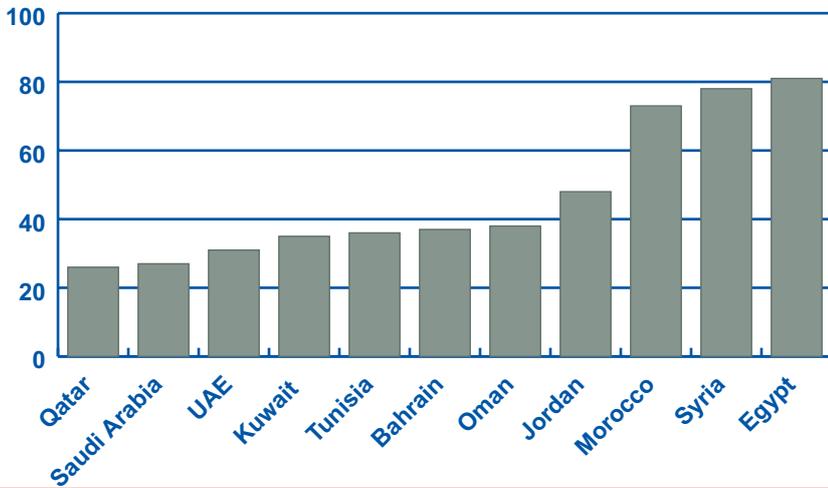
While the contribution of total factor productivity to economic growth amounted to 19% in South Korea, 24% in Malaysia and 40% in Thailand during the period 1973-1999, the same contribution was negative in the Egyptian case during the period 1965-2000.

The GCRs indicate a decline in Egypt's rank according to the GCI over time. Egypt's rank fell from 58 out of 114 countries in 2005/2006 to 71 out of 125 countries in 2006/2007, then to 77 out of 131 countries in 2007/2008, and lastly to 81 out of 134 countries in 2008/2009. The decline of Egypt's rank can be attributed either to the deterioration of the Egyptian economic performance (the absolute value of the GCI dropped from 4.2 in 2006/2007 to 3.98 in 2008/2009) or to other nations achieving higher rates of progress compared to Egypt - or both factors together. In addition, Egypt's rank comes after all the Gulf countries, along with Jordan, Morocco, Tunisia and Syria. (Figure 3)

The majority of the factors responsible for the decline of Egypt's rank are related to the quality of education, labor productivity, brain drain, and the efficiency of the labor market. According to the 2008/2009 GCR, Egypt ranked 114 out of 134 countries in the pay and productivity the variable, 126<sup>th</sup> in the quality of the education system variable, 128<sup>th</sup> in the quality of math and science education variable, 129<sup>th</sup> in both the quality of primary education and brain drain variables, 133<sup>rd</sup> in the female participation in labor force variable, and last for the labor market efficiency pillar. (Figure 4)

Egypt's poor performance in the previous indicators is a normal consequence of the high illiteracy rates, and the low levels of education among the population in general and its labor force and employees in particular. The adult illiteracy rate (15 years

**Figure 3: EGYPT'S GLOBAL COMPETITIVENESS RANK COMPARED TO SELECTED ARAB COUNTRIES**

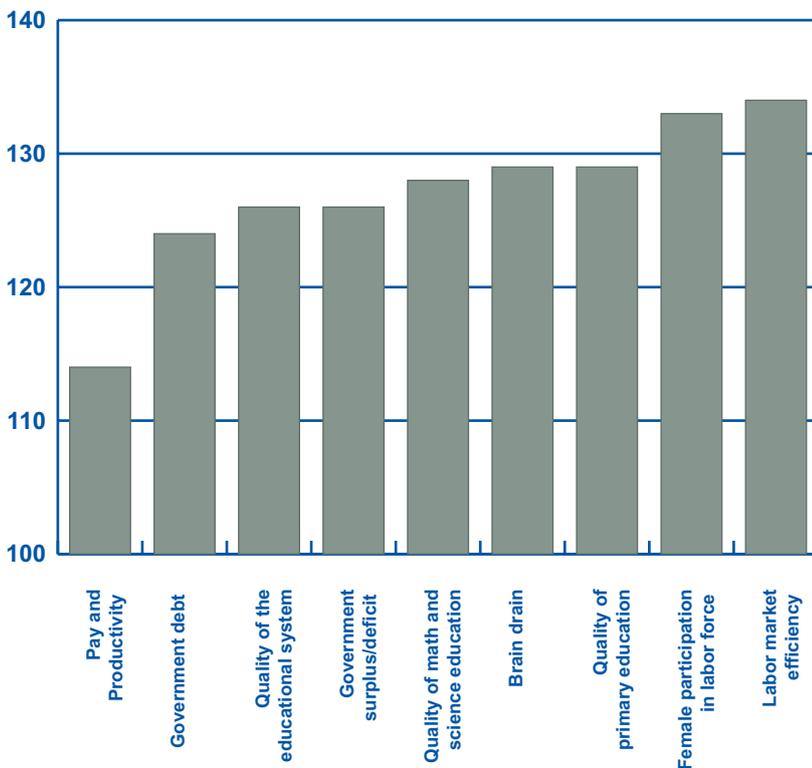


(Source: World Economic Forum (WEF), GCR 2008/09)

and above) was about 44% in 2003 compared to about 18% in South Africa, 12% in Indonesia, 12% in Malaysia, 10% in Jordan and 3% in Israel in the same year. The high illiteracy rate together with the low enrollment rate in higher education (about 28% now) have been reflected in the decline in average years of education among adults (25 years and above). The value of this indicator in Egypt was 5 years in 2000 compared with 7.4 years in Jordan and 10.5 years in South Korea.

These indicators shed light on the productivity and competitiveness of the Egyptian worker. Essentially more than 40% of the labor force is illiterate or hardly knows how to read or write. Less than 17% hold a university or higher education degree, not to mention the mismatch between the skills acquired by higher education graduates and the needs of Egypt's competitive labor market.

**Figure 4: LABOUR EFFICIENCY PILLAR AND SOME VARIABLES RESPONSIBLE FOR EGYPT'S DECLINE IN THE GCI**



(Source: WEF, GCR 2008/09)

# ...EIGHT KEY MESSAGES...

## **The First Message: Supportive Environment, Clear Vision, and the Will to Change...Essential Requirements for Development:**

- The availability of a supporting political, cultural and community-based environment for reform,
- The availability of a clear and comprehensive vision for renaissance, with the participation of various active actors in its formulation and implementation,
- The existence of a real community will for change to be reflected in clear policies to rearrange the country's priorities.

## **The Second Message: Moving Towards Reform Must Be Comprehensive, Decisive, and Internally Consistent:**

Reform must take place within the framework of a comprehensive strategy that includes: mobilizing political will, increasing access to markets on favorable terms, mobilizing investments, providing the supporting infrastructure, educating individuals to raise their productivity, assuring stable conditions on the political, macroeconomic and social levels, strengthening institutions and facilitating business, ensuring the existence of a modern financial sector, facilitating the acquisi-

tion of technology and innovation, and launching competitiveness initiatives at the regional and sectoral levels.

## **The Third Message: Absolute Priority for Investing in Human Capital... More Competitive Education and Training**

Providing high quality education at all stages, which requires an increase in the share of education from the total public expenditure from about 11% at present to at least 20% in the future, and an increase in spending on education as a percentage of GDP from less than 5% currently to at least 10% in the future. It is also crucial to increase the social and economic return to education, in order to encourage individuals especially the poor, to enroll and complete their education, and not to drop out.<sup>2</sup>

## **The Fourth Message: Improvement of Productivity and Competitiveness Requires Renewed Focus on the Illiteracy Problem**

In order to achieve this outcome there is a need to address the roots of illiteracy by directing attention to the reasons behind non-enrollment or students dropping out of school. In this context, it is proposed to provide free and high quality education

to poor segments of society, combat all forms of child labor and discrimination against females, provide cash and in-kind incentives for low-income families that have children attending school regularly, set a minimum level of education as a precondition for obtaining a job or to engage in any free profession, focus efforts on eradicating illiteracy among youth and individuals under the age of 45, provide valuable incentives for hard working, full time students in literacy programs, and hire university graduates to teach illiteracy eradication and adult education classes giving them in-kind and cash reward incentives.

## **The Fifth Message: The Low Quality of Education is the First Obstacle in the Vicious Circle of Low Productivity, Low Competitiveness, and Poverty**

In this regard it is crucial to emphasize the importance of the following: concentrating efforts on providing free primary education in line with the global standards of quality with no discrimination; reforming and developing vocational education to meet the needs of a competitive labor market; raising teachers' efficiency through high quality training programs; obligating the more experienced, highly qualified and skilled teachers to teach in the primary education stage; increasing the salaries of teachers in

<sup>2</sup> A recent study showed that each additional year of education leads - on average - to a wage increase of about 4.5% for males and 6.7% for females, compared to about 10.9% and 19.7% respectively in low and middle income countries

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a way that fits their importance in the community, meets the basic needs of a decent life, and is linked to a serious assessment of their performance; developing the evaluation system of students in the graduation examinations for secondary schools and the process of admission to universities; making full utilization of technological progress in providing new and attractive educational services especially to young students; developing scientific thinking among students and encouraging them to specialize in fields of increasing importance in the scientific community.

### **The Sixth Message: Higher Education and Scientific Research are the Main Engines of the Knowledge Economy**

This implies the necessity to:

- Start immediately and without further delay the reform of the higher education system in Egypt in line with the requirements of an era of knowledge and technology, in a way that guarantees the independence of universities and encourages them to link their research activities to the needs of the private sector and other development institutions.
- Reconsider the structure of wages and salaries of teachers, university professors, and researchers, to assure a minimum standard of a decent life that fits their importance in the community. This is to coincide with a change in the method of evaluating university professors or researchers so that

evaluation depends on objective scientific criteria.

- Encourage students to choose practical faculties such as medicine, engineering, natural sciences, computer science, and other important scientific disciplines, through reductions in tuition fees, expansion of scholarships and financial aid, and a raise in wages and salaries of employees in these fields.
- Build a network of tight scientific relationships between Egyptian universities and their counterparts in more developed countries as well as between Egyptian (and Arab) professors working in these universities.
- Appropriate the necessary resources to modernize university and scientific libraries and to ensure access to the latest scientific journals and books, along with enabling universities and research institutes to subscribe to distinguished scientific websites on the internet.
- Increase public spending on scientific research to reach at least 2% of total public spending (compared to about 0.2% currently), and whenever possible focus on scarce areas of studies and those with strategic importance.
- Increase the number of envoys abroad and provide them with appropriate budgets, give more attention to basic and practical sciences, work on strengthening the envoys' devotion to their home country, encourage them to return quickly after the termination of their

mission, and provide an appropriate environment for them to apply what they have learned abroad.

### **The Seventh Message: Developing Technical and Vocational Training and Rehabilitation as an Effective and Quick Solution for the Problem of Lacking Skills**

- Launch an initiative for a national project for training that focuses on providing young graduates with the necessary skills for a competitive labor market, which they did not acquire during their period of study.
- Draft special legislation on education and vocational training that covers all aspects related to training systems management, sources of finance, and the quality of the services provided.
- Develop a strong industrial training system through which the current skills gap can be bridged in the short-run by granting benefits to the companies that train their employees, especially in operational skills.
- Reform secondary and higher technical schools and develop their financial capabilities. There is no doubt that the effective participation of businessmen of the industrial sector in determining the curriculum is vital to ensure appropriateness to the labor market needs.
- Encourage and support the experience of the Industrial Modernization Center in raising the competitiveness of the Egyptian industry.

- Apply a national system for professional standards to be determined in cooperation with the professional unions and syndicates, businessmen associations, and labor unions and chambers of commerce.
- Conduct market and surveillance studies at the national and regional levels to assess the size of future demand for different disciplines and their standards.

**The Eighth Message:  
The Success of Efforts  
to Improve the Level  
of Productivity and  
Competitiveness requires a  
Modern Developed Labor  
Market**

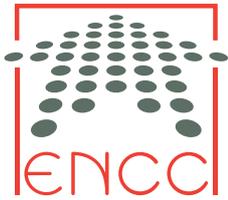
In this framework, it is proposed to:

- Draft and adopt a strategic vision for the development of human resources and maximize the utilization of the available labor force in the medium and long term, provided that a Supreme Council for Development of Human Resources supervises the implementation of this vision. This Council must be independent and have the full power of implementation in accordance with the law.
- Provide technical support to the Ministry of Manpower and Immigration to support its role in light of the new developments that occurred in the Egyptian and international labor markets in recent decades.
- Support the role of trade unions and professional syndicates in the process of collective bargaining

with the government and employers, in order to improve the environment and working conditions and create conducive atmosphere for the workers.

- Adopt a credential policy for qualified and trained human resources, and continuously develop it to meet the needs of different sectors within the major disciplines.
- Embrace a policy that recognizes the role of information provision in improving the links between education and training on one hand and labor market needs on the other.
- Give priority to adopting non-traditional policies for addressing the unemployment problem in Egypt, especially among young people, and learn from successful experiences in countries such as China, Korea, and Malaysia.
- Support and strengthen the Social Fund for Development and other similar funds and initiatives seeking to create productive employment opportunities and address the unemployment problem, especially among young people.
- Conduct periodic review of laws, regulations and resolutions handling the labor market, to ensure the consistency and conformity with the latest global and local developments, in a way that reflects the interests of all parties.
- Perform a comprehensive reform of the wage system in Egypt, including minimum wage policies, to address the distortions and imbalances of the system.

- Undertake the necessary measures and procedures that would encourage the informal sector to gradually and voluntarily engage within the formal sector, thus allowing for productivity improvement while reducing the risk of instability.
- Empower women and combat all forms of discrimination against them, especially in the private sector, guaranteeing that efficiency is the only selection criteria for different jobs and within the promotion system.



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*The views expressed in the “Towards Competitiveness” series are those of the author and do not necessarily represent the views of the Egyptian National Competitiveness Council (ENCC) or its Board.*

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