

**LABOR MARKET
COMPETITIVENESS AND
FLEXIBILITY**

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Working Paper 0129

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LABOR MARKET COMPETITIVENESS AND FLEXIBILITY IN EGYPT

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Abstract

The purpose of this paper is to analyze the structure and performance of the labor market in Egypt, in order to assess its competitiveness. The paper also considers issues related to labor market flexibility and labor market reforms. The study found that the labor market has been increasingly suffering from many distortions and disequilibria during the last two decades that affected its competitiveness. The study indicated that the collective impact of the legislative and institutional rules that control the labor market on the private sector profitability and hence, on job creation was minor. The paper concluded that the challenge of job creation could only be met through adopting a comprehensive strategy which aims at achieving a high labor intensive rate of growth, hand in hand with raising labor productivity and competitiveness.

1- Introduction

As liberalization, globalization and integration of world economies are increasing in the nineties “competitiveness” turns out to be the key for increasing trade, employment and the standard of living of the citizens in the MENA region, including Egypt. Although the term “competitiveness” is vague and has various meanings, most of its definitions assert that a country, to stay competitive, should try to enhance its labor productivity and restrain its labor cost in order to hold down its unit labor cost. Thus, the role of a competitive and flexible labor market is crucial in the process of adjustment to a more market forces oriented economy and to a more open economic environment. In Egypt, the labor market has witnessed major changes since the mid- seventies and in the last 15 years real wages have deteriorated remarkably. This downward real wage flexibility has gone hand in hand with declining productivity and mounting unemployment of new entrants into the labor force.

In light of the foregoing, the purpose of this paper is to analyze the structure and performance of the labor market in Egypt, to identify the economic, regulatory and institutional factors and mechanisms that determine its competitiveness with respect to both labor productivity and labor cost. The paper will also consider, in particular, issues related to labor market flexibility and labor market reforms.

Besides the introduction, the paper consists of four sections. Section 2 analyzes the structure and performance of the labor market from the mid-seventies till the mid- nineties. Issues of employment, unemployment and informal sector will be addressed and trends of real wages will be analyzed. As to section 3, it focuses on different labor market regulations and institutions in order to assess their impact on market flexibility and unemployment. Section 4 of the paper compares wages with productivity in order to assess unit labor cost in the manufacturing sector. Section 5 concludes.

2- Structure and Performance of the Egyptian Labor Market (1976-1996)

In this section, we highlight the different aspects of the Egyptian labor market in the mid-nineties. The underlying objective is to identify the structure and performance of this market, along with the transformations of

the market characteristics since the mid-seventies. This would help determine the level of competitiveness of this market and the degree of flexibility or rigidity that characterizes it.

2-1. Employment and Unemployment

The performance of the labor market is generally determined by two factors. The first is the GDP growth rate, and its composition, i.e. whether growth creates jobs and uses labor-intensive techniques. The second factor is the degree of flexibility of the labor market, i.e. the adjustment of labor supply to labor demand, through the flexibility of nominal and real wages, and also through the freedom of labor-absorbing sectors, particularly the private sector, for changing the employment and wage levels in accordance with demand conditions, and finally, through labor mobility.

Developments of employment and unemployment conditions in Egypt during the last four decades can be broken-down into 3 consecutive periods namely¹:

1. 1960-1972: A period of high GDP growth rate, that reached an average annual level of 6 percent during the first 5-year plan with the intensive industrialization efforts. Then, the rate decreased to 3 percent during the period 1965-1972, but demand for labor remained high as a result of public investment. The major labor-absorbing mechanisms during that period were represented by expansion of government, public sector and military employment. The period was also characterized by a government pledge to employ graduates of universities and higher institutes, maintaining nominal wages and inflation at low levels hence, ensuring a quasi-stable level of real wages. Furthermore, the period was characterized by full employment (the unemployment rate was 2.2 percent only), and by low levels of productivity.
2. 1973-1985: This period was characterized by unprecedented growth rates, reaching an annual average of 8 percent due to substantial flows of foreign exchange. However, the composition of growth was obviously

¹ See El-Ehwany, N. (1993), “The Impact of ERSAP on Unemployment in Egypt.” Paper presented to an Expert Meeting on Unemployment in ESCWA Countries, ESCWA, Amman, Jordan, 26-29 July 1993. Radwan, S. (August 1997), “Towards a Strategy and Programmes for Creating New Jobs and Alleviating Poverty in Egypt”, UNDP and ILO, Geneva.

weak. The major sectors that absorbed employment during that period were non-tradable sectors that failed to provide sufficient job opportunities. On the other hand, the employment capacity of the agricultural sector declined and the proportion of workers in the manufacturing sector deteriorated due to the adoption of capital-intensive techniques. In addition, the labor market was highly segmented and the occupational mobility was relatively rigid. Thus, and despite the role assumed by the informal sector as a new labor-absorbing mechanism, open unemployment emerged, and -according to the 1976 Census- reached 4.3 percent. This was associated with shortages of certain categories of labor. It is also worth noting that the Egyptian economy started to experience an acute economic crisis since the early eighties due to shortage of foreign exchange resources. The government, however, embarked on expansionary financial and monetary policies that helped maintain a high GDP growth rate which averaged 6-7 percent annually throughout the mid-eighties. This -in turn- helped maintain a high level of employment.

3. 1986-1996: This is a period of severe economic crisis in the Egyptian economy. Accordingly the government had to proceed, first, with some piecemeal reform measures, followed by a comprehensive economic reform and structural adjustment program (ERSAP) since 1991. This period can be broken-down into two sub-periods; the first extending from 1986 to 1992, when the rate of economic growth slowed down and ranged from negative values to 2.5 percent per annum. The second sub-period (1993-1996) was characterized by a shift in the performance of growth, although the rate of growth remained at a low average of 4.3 percent per annum. Also, this period witnessed the elimination of many external and internal imbalances, while savings and investments declined, as a percentage of GDP. The slowdown of the growth rate, along with its concentration in public investment in infrastructure, and the return of expatriate Egyptians led to an increase in the unemployment rate, as it reached 11.1 percent, according to the 1986 Census, and 9 percent according to the following Census of 1996. Furthermore real wages declined in all sectors of the national economy, as illustrated later.

Based on the above analysis, the data available on the labor market (as compiled and calculated from the population censuses during the period from the mid-seventies to mid-nineties) can be interpreted as follows:

2-1-1. Labor force and employment

The Egyptian labor force (15 years and over), was 17.2 million persons in 1996, compared to 12.8 millions and 9.6 millions in 1986 and 1976, respectively. This implies that the growth of the labor force was constant across the inter-census periods. The average growth rate was 2.9 percent per annum. Such constancy, however, masks major differences in the geographic-based and the gender-based growth. The growth of rural labor force exceeded the corresponding growth in urban areas during the period 1986-1996. This, in turn, raised the share of rural areas in the total labor force, reaching 54 percent, a matter that reflected the rapid growth of population in rural Egypt. In addition, growth of female labor force exceeded the corresponding rate of males during the inter-census periods. Thus, females share increased to over 15 percent of the total labor force in 1996, which represents double the share that prevailed in the mid-seventies. Such a gender-based shift in the labor force structure is due to higher rates of employment of females holding secondary and above intermediate education certificates. It is also attributed to more employment of married females in the age bracket 30 years and more. As for males, the higher school enrollment has reduced the rate of male employment. More significant in this respect is the early withdrawal of non-educated males from the labor market in the age of 50 and above².

Between 1986 and 1996, employment grew at a rate of 3.2 percent to reach 15.6 millions. The growth of employment during this period was triple the corresponding growth during the period 1976-1986 (1.2 percent on average per annum), a low rate that reflected the low labor-content in the higher growth of GDP that took place during that period.

The structure of employment, by type of sector of ownership (as reflected in Table 1), reveals significant facts, which contradict the macro economic policies since the adoption of the open-door policy in the early seventies. In contrast to expectations, the private sector did not play the desired and expected role in creating job opportunities in the Egyptian economy, whereas the government administration played a major role in this regard.

² Assaad, R. (Nov.29-30, 1999), "The Transformation of the Egyptian Labor Market 1988-1998." Paper prepared for the conference on Labor Market and Human Resource Development in Egypt, EPIC, Cairo, pp.9-13.

Despite the fact that the private sector is the major source of employment yet, the average rate of its employment growth was almost stagnant during the period 1976-1986 (0.2%), and tended to be low during the period 1986-1996 (3.2%). This led to a decline of the private sector's employment absorption capacity-from slightly less than 75 percent of the total employment in the mid-seventies to about two-thirds in the two Censuses of 1986 and 1996. This is due to the fact that agriculture remains the main provider of job opportunities in the private sector, while the capacity of agricultural activities to create jobs has deteriorated since the mid-seventies due to workers' migration either to Gulf oil states, or to urban areas, or alternatively, to the construction sector. Another major factor was the prevalence of mechanization. Outside agriculture, the other major private sectors are tourism, real estate and construction. These are not by nature among the labor-intensive activities. Furthermore, the private manufacturing sector did not generate sufficient job opportunities, due to the fact that this sector employs capital-intensive techniques, and produces product mixes that are also capital-intensive, e.g. capital and durable goods.

In contrast, government employment experienced an average annual growth of 3.6 percent during the period 1976-1986, which increased to 5.6 percent during the period 1986-1996, despite the adoption of the reform program and the call for downsizing government employment. The result was a higher relative employment share of this sector. It is observed that a major part of this increase is due to the appointment of large numbers of teachers and clerical workers. In the public sector, the employment rate declined during the period from the mid-eighties to the mid-nineties, hence leading to a decline of the relative share of this sector. To conclude, the state is still the major sector in generating non-agricultural employment, particularly in government service activities. The contribution of the informal sector to employment is addressed in a separate sub-section because this sector is not appropriately represented in Table (1). Also, data on this sector require special methods of calculation and analysis.

Related to the above is the distribution of employment by branches of economic activity, as shown in Table (2) in the Appendix. The developments of this structure reveal major distortions represented by a decrease in the relative share of workers in the commodity sectors, against an increase in the employment-generating capacity of the services and

distribution sectors. This is evident from the fact that in 1996 the commodity sectors accounted for only 54.6 percent of total employment, against 64 percent in 1976. The underlying cause of such a decline is the decrease of the employment growth rate in agriculture to less than 1 percent between 1976 and 1996, hence, the decrease of the relative share of agricultural employment. In addition, employment in the manufacturing sector tended to slow-down during the period of concern, resulting in an almost constant relative share of employment in this sector. The building and construction sector experienced the highest rate of employment growth among other commodity sectors during the period 1976-1986. Employment in this sector grew at 7.5 percent annually, though it tended to decline during the period 1986-1996 (reaching 4.1 percent).

On the other hand, the finance, real estate and business services experienced the highest rates of employment growth during the two periods alike (11 percent on average). Accordingly, the relative share of employment in these sectors increased. The share of employment in the social services sectors increased from 20 percent in the mid-seventies to about 25 percent in 1996.

In accordance with the above-mentioned distribution, employment by occupation (Table (3)) shows that the only group with above average growth rate is the group of professionals and managers. Thereby, their relative share in employment has more than tripled during the period concerned, and they ranked second after agricultural employment.

As for the structure of employment by working status, the detailed data of the three censuses show that the majority of workers are cash-wage-earners (on average – 68.6 percent). The ratio of employers, on the other hand, was higher in the mid- nineties, as compared to the mid-eighties. The relative share of the self-employed has decreased during the same period, while unpaid workers have substantially increased in number during the period elapsing between the last two censuses, with an average growth rate amounting to 79 percent over the period. This is particularly evident in the number of female workers in the rural households, who are non-wage-earners.

Another peculiar attribute of Egypt's labor force is its educational status. In spite of improvements in the levels of education, the 2 groups of "illiterates" and "just read and write" accounted for slightly over 50 percent

in 1996. In contrast, holders of intermediate certificates, above intermediate, and university graduates, increased substantially and together their relative share in employment almost doubled during the period 1976-1996, to reach 39 percent of the total.

2-1-2 Unemployment

After a period of full-employment during the sixties, open unemployment started to emerge in the mid-seventies. However, the unemployment rate remained at a low level not exceeding 4.3 percent based on the data of the 1976 Census. After a decade of jobless high growth of GDP and also, with the severity of the economic crisis that started in the early eighties, the problem of unemployment became more pronounced, and the unemployment rate reached 11.1 percent, according to the 1986 Census. Given the slow-down of the economic growth rate during the decade 1986-1996, along with the decline of investments, the problem of unemployment remained unresolved, and the unemployment rate, as recorded by the latest census, amounted to 9 percent. The 1997 Labor Force Sample Survey shows that the rate of unemployment amounted to 8.4 percent, against 8.8 percent in 1992 (as recorded by the 1992 Survey)³.

The seriousness of the problem lies also in the structure and the characteristics of the unemployed and the developments of this structure since the mid-seventies. Such developments reveal a steady trend of increasing unemployment among youth who have no previous work experience. Almost 95 percent of the unemployed in 1996 were new entrants to the market. About 90 percent of this category belongs to the 15-29 age group and 70 percent of these are in the 20-29 age group. It is worth

noting that the numbers of new entrants unemployed in the age group 25-34 have almost doubled between 1986 and 1996.

The distribution of the unemployed shows continuity in the pattern that prevailed in the mid-eighties, with the majority represented by holders of intermediate certificates, increasing from 67 percent in 1986 to about 75 percent in 1996. The illiterates, as well as those who just read and write, accounted for a marginal ratio in both decades of the eighties and the nineties. In contrast, new university graduates experience high unemployment. From a gender perspective, female unemployment - as sub-category of the unemployed educated youth - is higher than that of males. Furthermore, the number of the unemployed remained relatively constant in the urban areas between the mid - eighties and the mid - nineties, whereas the corresponding numbers in the rural areas grew at an average rate of 4.4 percent per annum.

Finally, it has to be noted that the number of workers who became "out of work" is decreasing between the last two censuses. This could be explained by the ineffectiveness of the unemployment insurance schemes hence, the tendency of workers to seek jobs either in the informal sector, or through self-employment.

These facts underline the seriousness of the unemployment problem in Egypt during the nineties. These facts also show that education has a negative social return, indicating wasteful investments in the field of human resources. Also, there exists a bias against female employment. It is important to note that open unemployment is not the sole phenomenon that indicates misuse of human resources in Egypt. Rather, it is accompanied by disguised unemployment. The latter is found in the government departments, public authorities and in the informal sector, and is associated with low productivity and low wage levels.

³ It is worth mentioning that the declining trend of the unemployment rate during the nineties is hardly convincing in light of the performance of the Egyptian economy. For a detailed assessment of the unemployment problem see: Fergany, N. (December 1999), "An Assessment of the Unemployment Situation in Egypt," Al Mishkat, Research Notes, no.13, pp4-10.

2-2 The Informal Sector

The informal sector plays an important role in the Egyptian economy, as it is absorbing large and increasing numbers of workers since the mid-seventies⁴.

Employment in the informal sector was estimated at 2.4 million workers in 1976, against only 170 thousand in the formal private sector. This implies that employment in the informal sector represents 93 percent of the total non-agricultural private sector⁵. The number of workers in the informal sector was found to be 2.4 million and 2.9 million in 1980 and 1985, respectively, compared to less than one million persons during the sixties⁶. In addition, and based on a comparative assessment of the 1976 and 1986 Censuses, the preliminary results indicate that the informal sector – particularly the employers and the self-employed – accounted for the overwhelming majority of job opportunities outside the agricultural and the public sectors, especially in rural Egypt⁷.

In the nineties the labor market has witnessed a substantially high growth of the informal private sector, a matter that resulted in a doubling of the total number of workers during one decade. Table (4) in the Appendix shows that the number of workers in the informal private sector- excluding agriculture- amounted to 5.2 million in 1996. This is the residual after subtracting workers in the non-agricultural formal private sector who were estimated at only 474 thousand out of the total workers in the non-agricultural private sector, amounting to 5.6 millions. This entails that the informal sector

employment accounts for 91.6 percent of the total non-agricultural private sector employment. This is a major percentage that highlights the inability of the formal sector to create jobs.

Employment in the informal private sector can be also estimated using a different method. This method is based on the assumption that the employment size is represented by all workers in the private sector outside the establishments, in addition to all workers in the private establishments employing less than 5 workers. Agriculture is excluded in both cases⁸. The underlying reason for taking this segment into account is the fact that we agree with many analysts on the argument that the number “10 workers” is unrealistic. For example, an establishment could be employing 9 workers but, in the meantime, it could be registered, formal and operating in the modern sector. Using the data shown in Table (5), the number of workers in the informal private sector - excluding agriculture - approximately amounts to 4.8 million, distributed between: workers outside the establishments (2.3 million, i.e. 48.5 percent) and workers inside the establishments employing less than 5 workers (2.5 million, i.e. 51.5 percent). This entails that workers in this sector represent 31 percent of the total number of workers in the Egyptian economy, 46.9 percent of the private sector workers, and 85.9 percent of the private sector workers after exclusion of agriculture, fishing and hunting. According to the 1986 Census⁹ the total non-agricultural informal sector workers amounted to 2.6 million, distributed between: workers outside the establishments (42.3 percent) and workers inside establishments employing less than 5 workers (57.7 percent). These represent 33 percent of the private sector workers and 76 percent of the non-agricultural private sector workers. This confirms the doubling of the informal employment throughout one decade with an average annual growth of 8.7 percent. During that period also, the relative share of workers outside the establishments grew at 7 percent, while the corresponding share of workers inside the establishments declined.

⁴ Several criteria are used to define the informal sector and to estimate its employment. Among these is the one based on a comparison between the total employment in the non-agricultural private sector, and the magnitude of employment in the non-agricultural private sector establishments using more than 10 workers. The residual is the estimate of employment in the informal sector.

⁵ Kamel, S.R. (1991), “The Structure and Operation of the Informal Sector in Egypt” in Handoussa & Potter (eds.), *Employment and Structural Adjustment- Egypt in the 1990s*, ILO, WEP, Chapter.6

⁶ Fergany, N. (1991), “A Characterization of the Employment Problem in Egypt” in Handoussa & Potter, Ibid. pp. 35-36

⁷ Handoussa, H. (1991), “Crisis and Challenge: Prospects for the 1990s”, in Handoussa & Potter, Ibid. pp 16-18.

⁸ This method of estimation has been used in: Kamel, S.R. (December 1999), “Education and Labor Market in Egypt,” Research Papers Series, Faculty of Economics and Political Science, Cairo University, No.6, pp.11-12.

⁹ Ibid, p.11

This analysis indicates the importance, along with the growing role of the informal sector in Egypt, with respect to the absorption of employment and the generation of incomes for a remarkably high percentage of workers during the nineties. Being widespread in both rural and urban areas, the informal sector is capable of absorbing females, males and minors. They are all engaged in meaningful, rather than marginal, activities. They do not conform with the stipulations of the labor and insurance laws, nor with the other controls that govern the other sectors of the economy.

2-3 Wage Determination Mechanisms and Wage Behavior during the Nineties

The structure of wages in the Egyptian economy is characterized by a high level of dualism. While certain sectors have flexible wage systems that duly reflect the market supply and demand forces, yet others demonstrate rigid systems that are subject to institutional constraints in the first place. In addition, there are differences between the local enterprises and the joint ventures, with respect to the wage determination systems. Furthermore, wage differentials between the skilled and the unskilled workers, and between males and females, do not essentially reflect corresponding differentials in productivity, or in performance efficiency.

In this context, we examine the mechanisms of wage determination in different segments of the national economy, along with the behavior of nominal and real wages during the nineties.

2-3-1 Wage determination mechanisms

The labor market in Egypt is broken down into two major segments. The first is subject to government regulations and includes: the government administration units, the public enterprises and the formal private sector. The second segment is only subject to limited work regulations and includes the agricultural sector and the informal private sector. We focus in the following on the wage determination mechanisms in the different sectors, with emphasis on the respective levels of flexibility or responsiveness.

1. Government administration and public enterprises

Wages in the government administration and in public enterprises are determined in accordance with the state legislation. This legislation is not only concerned with the determination of minimum wages and the cost of

living allowance, but also extends to include identification of the different job categories, the fields of specialization and qualifications required for each category, and the corresponding wage ranges. This is known as: “Certificates Pricing” system, according to which employees and laborers are classified, based on their educational certificates. Furthermore, the state sets the systems of promotion, incentives, wage increases, fringe benefits and cost-of living allowances. Thus, this highly centralized wage system is rigid by nature.

In 1978, public enterprises were granted a certain degree of independence with regard to the conditions of employment and the wage levels. Scarce qualifications, with high educational and technical skills, have become differentiable from those demonstrating excess supply in the labor market. In addition, the system of appointing new graduates in these enterprises was put to an end. Bases and standards have also been set for wages in the public enterprises sector, to match them with those applied in the private sector. It should be noted that the public sector incentive systems are more effective in stimulating higher productivity, as compared to the government sector.

Both the government and the public enterprises sectors had recourse – on a large scale - to temporary hiring as a mean for avoiding the controls of hiring and the rigidity of wages. In the context of this practice in the public sector, the employing unit has the freedom to set the wage levels, according to its budget constraints¹⁰. Thus, more flexibility is attained due to this practice, but job security is not ensured in the public sector.

2. Formal private sector

Wages in the formal private sector are determined according to market forces. The government role in this regard is confined to the drawing-up of legislation and the formulation of the general rules required for sound labor relationships, such as: job security, social insurance, minimum wage in the private sector, special wage increases, cost-of-living allowances, and amendments to the relevant regulations.

¹⁰ Zaytoun, M. (1991) “Earnings and the cost of Living: An Analysis of recent developments in the Egyptian Economy”, in Handoussa & Potter, op.cit, p.229.

In practice, employers evade -to a large extent- the social insurance regulations- as illustrated in section 3. Furthermore, the minimum wage rules are not reinforced outside the public sector, except in the big establishments. The same applies to the cost-of-living allowances and the special increases applied since the mid-seventies. Given the weak role of labor unions in Egypt in general, along with the small membership base of private sector workers in those unions, wages in the private sector are determined according to individual employment contracts that, in turn, are guided by the field of specialization, the level of expertise and the forces of market supply and demand on different types of skills. Hence, wages are relatively flexible in the formal private sector.

3. The agricultural sector

The agricultural labor market is highly competitive and reflects the interaction of the supply and demand forces. Thus, agricultural wages are substantially flexible and capable of clearing the agricultural labor market during the high activity seasons. Some seasonal unemployment, however, exists during the rest of the year, despite the availability of other non-agricultural types of work¹¹. During the seventies and the early eighties, both the nominal and real agricultural wages increased and reached unprecedented levels. This was due to a host of factors that resulted in lower levels of agricultural manpower supply. Predominant among these factors is labor migration. It stimulated workers remittances which, in turn, contributed to the generation of more rural, non agricultural job opportunities. Added to these were the government sector jobs in the rural areas. This was also associated with a tendency by many small farms to shift from crop-growing to livestock-related activities. Real wages demonstrated an upward response during this period. They also responded in the opposite direction, when adverse economic conditions emerged in the mid-eighties, and in 1988 they went down to about 70 percent of the peak levels.

4. Informal private sector

Wages in the informal sector are substantially flexible and reflect the relative scarcity in some fields. Such flexibility also demonstrates the absence of employer-employee contractual relationships, along with the non-existence of controls on the hire and fire practices, and on the adherence to the social insurance or health regulations. Therefore, this market is characterized by a high degree of freedom in wage determination. However, labor mobility between the informal private sector, agricultural employment, the casual workers, the self-employed and the government- and public-enterprise employment results in more flexibility of the wage-based labor supply in the informal sector and thereby, lead to a relative stability of wages¹².

2-3-2 Wages behavior during the nineties

During the decade between the mid-seventies and the mid-eighties, real wages increased significantly due to the growth of the national economy, with major variances existing between different branches of economic activity. Similar variances also existed between the public and the private sectors. The major increases in real wages occurred in the sectors of: agriculture, building and construction, manufacturing, and – to a lesser extent – in services. Real wages have increased significantly in the private sector till the mid-eighties. On the other hand, the public enterprises experienced lower levels of increase, while the increases witnessed by the government sector were substantially lower. Real wages in government started to experience a decrease since 1982. This was due to the economic crisis, associated with the government inability to sustain the heavy cost burden of redundant workers in the government administration.

Since the mid-eighties, and with the exacerbation of the economic crisis, real wages in the different economic sectors declined and this trend continued till the mid-nineties. By 1994/95, real wages had declined to two-thirds of their 1985/86 levels¹³.

¹¹ Richards, A. (1991), "Agricultural Employment, Wages and Government Policy During and After the Oil Boom", in Handoussa & Potter, op.cit, p80.

¹² Kamel, S.R. (1989), "Labor Flexibility and Unemployment: the Case of Egypt," paper presented to a conference on unemployment in Egypt, Faculty of Economics and Political Science, Cairo University, p. 306.

¹³ Radwan, S. (December 1997), Towards Full Employment: Egypt into the 21st Century, ECES, Distinguished Lecture Series 10, p.13.

The steady steep downward trend of real wages in all economic activities and in both public and private sectors during the nineties is highlighted in Table (6) in the Appendix. The data show the average nominal and real weekly wages, taking 1986 as a base year. It appears that, while total nominal wages increased by 160 percent during the period 1987-1996, total real wages decreased by about 25 percent. The decrease was more pronounced in the private sector, as opposed to the public sector. The largest decrease was experienced in: commerce and hotels, manufacturing, building and construction and agriculture. Within the economic activity branches, the decrease in real wages has substantially varied between the public and the private sectors. The decrease was most acute in the private enterprises engaged in: building and construction, manufacturing, finance, and business services. The average decrease in these sectors was double that in the corresponding public sector enterprises. In agriculture, real wages remained stable in the private sector, while those of the mining and electricity sectors increased. In contrast, the deterioration of real wages of the social services public sector workers was substantial and higher than the corresponding decrease in the private sector.

As there were public-private variations in the decrease in real wages within the different branches of economic activity, there were also gender-related differences, particularly when the public - private differentiation is simultaneously considered. Table (7) in the Appendix indicates a prevalent pattern in the Egyptian labor market namely, the payment of lower wages to female workers (on average, a woman receives 83 percent of a man's wage). This differential, however, disguises public-private, gender-related differentials. While government and public-sector employment contributed to the narrowing of the male-female wage differentials (about 93 percent), the underpayment to females is conspicuous in the private sector, where, on average, a woman is being paid slightly over two-thirds of a man's wage. Within the economic activity branches, gender-related wage differences are highest in the sectors of: manufacturing, community, personal and social services.

Table (7) shows also that, while nominal wages paid to males and females during the period 1990-1996 have increased, real wages have decreased. In the sectors of agriculture, gas and electricity, the decrease in female real wages was higher than that of male workers. The same observation applies

to the finance and business services sector. However, real wages of females in the personal and social services sectors increased, while those of males in the same sectors declined.

From this analysis it is evident that the Egyptian labor market experienced an acute deterioration of real wages during the period between the mid-eighties and the mid-nineties. This phenomenon applied - with no exceptions - to all sectors and branches of economic activity.

3- Labor Market Regulations and Institutions

This section studies the main features of the regulations and institutions of the Egyptian labor market, and analyzes their impact on its degree of flexibility and on the evolution of unemployment.

3-1 The Legal and Institutional Framework

3-1-1 Social insurance systems

The social insurance systems have represented a major pillar of social policy since the 1950s. They are governmental in the first place, and are based on the principle of contributions. Four laws govern social insurance in Egypt¹⁴. Each of these laws is concerned with specific strata of the society, as categorized according to the status of the employer. In addition, special insurance schemes for specific professions, called "Alternative Social Security Schemes", are in effect and include 8 private funds, established by companies or banks. Furthermore, there are 580 special insurance funds, with assets amounting to LE 8 billion¹⁵.

Governmental social insurance is widespread in Egypt, covering 16.9 million persons, as of June 30, 1997. This number accounts for 86 percent of the Labor force in Egypt - a high percentage that matches the corresponding percentages in the industrial countries. Government, public and private sector employees represent together 55 percent of the total number of the insured, and 49 percent of the total number of pensioners. These are followed by casual workers, who represent 34.5 percent and 43.5

¹⁴ For more details see: El Ehwany, H. (1995), Principles of Social Insurance Law, Dar Abou El Magd, Cairo.

¹⁵ Osman, M.O., Egyptian Social Insurance Systems, current status and Potential for Development, INP, Unpublished.

percent, respectively. Self-employed and the like represent only 10 percent and 7.4 percent, respectively. It is noteworthy that all government and public sector employees are covered by social insurance, whereas - despite the mandatory nature of such coverage - substantial percentages of the private formal and the informal sector workers are not covered. This is due either to the tendency of employers to evade insurance, or to the workers' ignorance of their entitlements, together with the modest levels of the insurance and the complexities of the administrative procedures related to obtaining such entitlements. These facts, combined with the non-wage benefits of the government sector employment, explain why a significant percentage of workers prefer government, rather than private sector employment.

Determination of contributions differs according to the law governing social insurance¹⁶. The rate of contributions is relatively high, averaging 36 percent of the basic salary and 31 percent of the variable salary. Employers' contributions are higher than those of the employees and the public Treasury (1 percent), respectively. It is worth noting that the employee's contribution is the same, irrespective of the sector (14 percent against the basic salary and 11 percent against the variable salary). Employees pay one third of the total contributions, whereas employers incur the higher burden. This is in contrast with the systems applied in the Western countries. In addition, the rates of contributions in Egypt are relatively high, when compared with other countries. Nevertheless, pensions are low and do not meet the basic living requirements.

High rates of contributions result in insurance-evasion on the part of employers. About 30 percent do not pay their assessed contributions, and about 40 percent of the self-employed declare levels of income below LE 60 per month. On the other hand, the system of inspection is rather weak and fails to efficiently assess the extent of insurance evasion.

Law 79/1975 for employees of the government, the public and private sectors provides for different insurance benefits of which old age, disability and death payments are the most significant. Together, they represent 97.7

percent of the total benefits. At the retirement age, the pension amounts to 80 percent of the wage. This indicates that the maximum pension of the government and the business sector employees is LE 800 per month and the minimum pension payment is LE40 per month. The average retirement pension payments per month are LE356, LE325, and LE 143 for the government sector employees, the public sector workers and the private sector workers, respectively. The corresponding averages for the self-employed and the casual workers are LE63 and LE43, respectively. Law79 also provides for unemployment insurance, the burden of which is borne by the employers at 2 percent of the total salaries of their respective employees. It is worth highlighting that unemployment insurance applies only to the workers of the public and the formal private sectors and excludes the government sector employees. In practice, however, the law stipulates six conditions for entitlement to the unemployment payments. These are very stringent conditions and, together with the modest payments implied, they render this benefit ineffective¹⁷.

As of June 30,1997, the total number of pensioners and predecessors amounted to 6.2 million persons. In 1995/96, the total amount of pensions and compensations paid against basic and variable salaries reached LE7291 million. About 91.7 percent of the total pension and compensation payments accrued to the individuals subject to Law79, while 7.7 percent accrued to self-employed and the like¹⁸.

Despite the steady increase in the value of pensions during the last two decades, there are large discrepancies between the respective levels of pension payments to the different categories of pensioners. Government sector pensioners come at the top rank, while the casual workers are ranked lowest. In addition, geographic disparities indicate that Cairo and the urban governorates benefit most. On the other hand, inflation had an adverse impact on the real value of pensions for all categories of pensioners, a matter that acts as an obstacle to attaining a decent standard of living for these groups of the population.

¹⁶ For more details see: El Sayed, H. (January-April 1998), "Social Insurance Systems and the Standard of Living in Egypt", *L'Egypte Contemporaine*, No. 449-450, year-89, Cairo, pp 72-74.

¹⁷ El Sayad, M.H. (30-31 March 1998), "The Current status of Social Insurance in Egypt," paper presented to a seminar on Social Insurance in Egypt, the Ministry of Social Affairs, Cairo, pp. 4-10.

¹⁸ El Sayed, H., op.cit, pp 80-82

3-1-2 Health care

Insurance against illness applies to employees of the government, public and private sectors who are subject to Law 79/1975. This type of insurance is financed via employees' and employers' contributions. It is different from the insurance against work-related injuries, which is financed exclusively via employers', rather than employees', contributions. For employees of the government and the public sector, the contribution amounts to 4 percent of the monthly salary (3 percent by the employer and 1 percent by the employee). Contributions by the private sector amount to 5 percent of the monthly salaries of the insured persons (4 percent by the employer and 1 percent by the employee)¹⁹. In all cases, contributions are very modest, particularly if compared to the corresponding levels in the developed countries, where contributions reach 14 percent of income²⁰.

It should be noted that a new draft law for health insurance is currently under review. The law aims at extending the health care insurance to cover the disadvantaged groups. It aims also at enhancing the standards of the medical care services provided to the insured persons.

3-1-3 Labor laws

The labor regulations play a dual role, albeit minor, in exacerbating the rigidity of the labor market. To illustrate, the current Labor Law (137/1981), that superseded Law 91/1959, prohibits employers from terminating the work contracts of their employees after the elapse of the probation period. It also limits their ability to hire workers directly. Given the low levels of workers' productivity in the different economic sectors, in general, these constraints represent inconveniences for the employers and restrict the provision of new job opportunities.

On the other hand, the employees themselves suffer from the repercussions of the weak enforcement of the current law. It tends to overlook the workers' rights in many instances and does not protect workers in the micro enterprises, where the employers hire workers without contracts. Furthermore, employers always find leeway to overcome the obstacles

imposed by the current law. Amongst these is the practice of forcing employees to sign a non-dated resignation prior to signing the employment contract. Also, the workers are denied the right to strike in cases when they face deteriorating work conditions. They are also prohibited from engaging in collective bargaining and their representatives in the trade unions are not capable of negotiating efficiently for protecting the workers' rights. All of these obstacles result in a tendency towards avoiding private sector jobs and an associated preference for government employment despite the low levels of real wages in the latter, hence increasing the rigidity of the labor market. The underlying reason is the guarantee offered against work contract termination in the government and public sectors, the benefits of pensions and other forms of insurance, the fewer number of working hours and, the possibility of having more than one job (moonlighting).

In an aim to reformulate work relations, as an aspect of the institutional reform on the one hand, and to create a more competitive and flexible labor market on the other, a new labor law was drafted and is awaiting submission to the People's Assembly. This draft law, however, is facing severe opposition, due to the perceived impact on the social security. Therefore, submission of the draft law to the People's Assembly was postponed several times, despite the fact that the drafting process started as early as 1993. Many amendments were introduced to the draft law, the latest of which was in February 1997.

The draft law covers all enterprises in the business sector, with the exclusion of the self-employed. Article (4) of the draft law states that the law provisions are not applicable to the employees of the government administrative units, the local government entities, the public authorities, domestic servants, and the like. It also excludes the family workers who are actually dependents of the employer. The new draft law comprises 270 articles, grouped under 6 sections, the most important of which are: "Individual Work Relations" and "Collective Work Relations". A scrutiny of the major articles of these sections reveals that the draft law introduces new privileges for the workers which are not provided under the current

¹⁹ El Ehwany, H, op.cit, pp. 294-303

²⁰ Scheben, T, (ed.) (Sept, 1994), Conference on "Systems of Social Security- Egyptian and German Experiences," Konrad Adenauer Stiftung, Cairo, pp.36 and 102.

law. Examples are: entitling workers to a periodic wage increase, to more leaves and to strikes²¹.

Nevertheless, the review and analysis of other articles of the draft law show that other provisions are in favor of the employers and the government, rather than the workers. Numerous examples can be cited, such as granting employers more freedom in direct hiring, termination of employment contracts after a maximum period of 5 years, firing, partial or full shut-down of establishment, and laying off²². On the other hand, the law limits workers right to strike and lowers their representation in the consultation and cooperation, and narrows their collective bargaining particularly in view of the weaknesses of labor unions²³. Moreover, some provisions contain ambiguous and uncertain language that carries the risk of abuse and adverse effects on workers rights²⁴.

It can be argued that should the Draft Labor Law be adopted it would result in a more flexible labor market. However, it should be taken into consideration that the Draft Law would cause unease in Labor relations, a matter that would adversely affect growth and efficiency. Also, the Labor market flexibility, coupled with the widespread unemployment, poverty, lack of unemployment insurance and of an efficient social insurance network, would aggravate the social and economic problems. In addition, labor market flexibility would render government employment more attractive due to the non-wage benefits.

3-1-4 Minimum wage and work hours

In the private sector, Law 119/1981 sets total minimum wage at LE25 per month for workers in the age brackets of 18 years and over. The minimum wages for workers in the ages of 16 and 14 are: LE22 and LE19, respectively. For free-zone enterprises, employers are obliged to pay wages, salaries and bonuses in foreign currencies, with a condition that the minimum wage amounts to the equivalent of LE45 per month (article 102

of Law 32/1977). It is worth noting that, effective 1975 (Law 40), cost of living allowances have become obligatory in the private sector. This has increased the total minimum wage to reach over LE 25 (ranging from LE 27.5 for single to LE 29.3 for the married workers having dependents, as of 1981).

As for government and public sectors, the Law issued in 1984 sets the minimum wage at LE35, and according to the systems of cost of Living allowances, the minimum total wage of an unmarried employee is LE37 monthly. For the married worker having two or more children, the minimum monthly wage is LE41.

As for the monthly minimum and maximum wage levels, the legislation of 1984 set them at LE 35 and LE 217, respectively, compared to LE 5 and LE 150, in 1964. This entails a tendency towards narrowing the gap between the minimum and maximum wages, as reflected by a higher percentage increase of the minimum wage, compared to the maximum²⁵.

Concerning the hours of work, The current Labor Law (Article 133) states that “a worker shall not be obliged to effectively work for more than 8 hours per day, or for more than 48 hours per week. These periods shall be exclusive of the time allotted for breaks and meals”. However, the Court of Cassation gave employers the right to organize the daily work schedule with less number of hours, e.g. 4-6 hours. The law also entitles the Minister of Manpower to decrease the daily work period to 7 hours for certain groups of workers or for certain industries or activities.

On the other hand, the law permits a decrease in the weekly work hours, to reach 42 hours, in certain industrial establishments, as identified by a decree issued by the Minister of Industry. The underlying objective of such a decrease is to address the problem of unemployment, by means of obliging the management of industrial establishments to hire more workers for performing the same volume of work. This policy resulted in higher costs of production. The law also allows employers not to abide by the maximum daily or weekly time of work in specific cases. An overtime payment shall be made against the extra work hours.

²¹ For more details see: Draft Labor Law (January 1996), Proposed Amendments to the Law Provisions (24/2/1997), Articles 4, 7, 9 and 193.

²² See articles 14, 104,69,110 and 203 of the Draft Law.

²³ See articles 194, 195, 196 and Chapter of Collective Relations.

²⁴ See articles 41 and 197.

²⁵ Soliman, S. et al. (1992), *The Right to Work in the Egyptian Economy*, Cairo, Dar El Nahda.

With respect to leaves and holidays, the law entitles workers to weekly days off, in addition to the eligibility of having 6 types of paid leaves²⁶.

3-1-5 Labor unions

Law 12/1995 governs all union affairs. Currently, membership of all workers' syndicates is about 4.5 million, i.e. about 25 percent of the labor force. The majority of members are workers in the services sectors and government agencies, while 25 percent are workers in public manufacturing sector enterprises. Only 25 percent of the members are private sector workers, despite the large base of employment in the private activities in tourism, agriculture and transport. Despite the generally low level of syndicate membership in Egypt, this level is deemed higher than the corresponding representation in other Arab countries with similar economic conditions, such as: Morocco, Tunisia and Jordan. Syndicate membership in these countries does not exceed 10 percent of the total labor force²⁷.

In effect, workers' syndicates in Egypt did not play a significant role in protecting workers rights, nor in setting the wage levels. The underlying reason is the lack of sufficient independence. This, in turn, is due to several factors, including: the centralized hierarchial structure of syndicates, as well as the government intervention and tendency to control syndicates' leaders to ensure political stability and to achieve strict control of the labor market. In addition, the government tended to attract and contain syndicates' leaders, by means of granting several privileges, involving them in boards of directors of the holding companies, with signals for having official positions. In the meantime, the government prohibited strikes and demonstrations, as per the current labor law. The government also continued to use its right to exclude persons at its discretion, in accordance with the syndicates law of 1976, until the Constitutional Court stopped such a practice in 1993²⁸.

²⁶ Ibid.

²⁷ El-Mikawy, N. and Posusney, M. (March 2000), "Labor Representation in the Age of Globalisation: Trends and Issues in Non-oil Based Arab Economies," paper presented to the third MDF, Cairo, p.27.

²⁸ Ibid, p.9

With the government's adoption of the open door policy and the trend towards privatization, the political authorities succeeded in getting the support of the general Federation of Labor Union for Law 203/1991 concerning the Public Enterprises. In contrast with the standpoint of the workers leaders, members of the syndicates protested against privatization, restructuring of the companies, dismissal of permanent workers, reductions in incentives and bonuses granted to casual workers, and also against forcing workers to sign new employment contracts with lower basic salaries and more penalties. The last years have also witnessed an increasing number of actual strikes. But generally speaking, the role of the workers' syndicates in Egypt has been always weak. It is not anticipated that this role will become stronger with the proposed Draft Labor Law in the light of the actual structural, political and institutional factors. This indicates that the legislative reform will not be conducive alone to a more flexible and competitive labor market.

3-2 Flexibility of the Labor Market and its Relevance to Unemployment

Flexibility of the labor market refers to the extent of adjustment of the labor supply to demand conditions and the ability of the market to eliminate all types of rigidities that might hinder adjustment. If the economic growth rate declines and the effective demand drops to levels that are not sufficient to secure full employment, then involuntary unemployment emerges. In such a situation, if the labor market is rigid and constrained, distortion and disequilibrium will continue and unemployment will become more pronounced. On the contrary, if the market is free and flexible, its mechanisms will lead to absorption of the excess supply and to the curtailment of unemployment.

The flexibility of the labor market manifests itself in many forms. The first is the flexibility of real wages, so that wages freely decrease to their "equilibrium" level. The second is the flexibility of employment, i.e. the adjustment of employment level to the conditions of the demand on products. This entails the possibility of changing the number of work hours with no restrictions, and increasing the occupational and geographical mobility of workers. This situation would require short-term employment contracts on a large scale on the one hand, and a general and technical training of manpower on the other hand. In addition, there would be a possibility of freeing enterprises of part of their social and tax obligations,

as well as removing other restrictions imposed by the state. The third form of flexibility is structural; a large portion of labor would be absorbed in the informal sector.

In the Egyptian case, unemployment rates have sharply increased during the last two decades as previously mentioned. It is often claimed that the labor market is rigid and responsible for aggravating unemployment. In fact, evidence does not confirm that the labor market in Egypt is so rigid, or that rigid rules and restrictions alone are detrimental to employment and competitiveness.

On the one hand, the study shows a high degree of real wage flexibility, as these wages remarkably declined in all sectors during the last decade. On the other hand, the analysis points out to the importance and the growing role of the informal sector. The co-existence of this sector and the agricultural sector provides evidence of the labor market flexibility, as they are sectors of flexible working conditions.

As for the regulations that control the labor market, the review and analysis of these controls show that the intervention of the legislator has taken several forms that contributed to restricting labor mobility and fostered demand for government jobs. In addition, these constraints burdened the private sector, particularly the small and medium scale enterprises, with several laws that limited the growth of these enterprises due to the adverse environment that discouraged investment and job creation. Furthermore, labor flexibility in Egypt is limited by noticeable market segmentation. In fact, the market has different types of segmentation (rural/urban, public/private, formal/informal, education-based, gender-based). Currently, four labor laws governing civil servants, private sector workers, share holding companies, and public enterprise workers govern the labor market.

However, it cannot be argued that the growing unemployment in Egypt is due to excess controls and rigid labor rules which raise the cost of employment. A scrutiny of the labor market in the last three decades shows, on the one hand, the absence of compliance with the employment related controls in the private sector and the marginal impact of such controls on employers (e.g. minimum wages, insurance, hours of work). As a matter of fact, there is a host of other obstacles that hinder the private sector's strive to achieve the high levels of profitability that are essential for increasing

investments and job creation. Amongst the most significant of these obstacles are the high tax rates, the high financing cost, the stagnation of demand and the instability of prices. On the other hand, such a scrutiny indicates that the unemployment problem in Egypt is a structural problem that can be attributed to the slow or distorted growth of GDP, along with the shortage of effective demand, as well as the adopted macro-economic and investment policies.

4- Competitiveness and Unit Labor Cost

The term "competitiveness" is widely used in the business and economic literature with various meanings. The diamond theory provides a useful concept which stresses that competitiveness involves more than just macroeconomic issues, stability and so forth. Addressing these is necessary, but not sufficient. Countries must start to improve conditions at the micro level of the economy²⁹.

Competitiveness should be measured by productivity. It relates to measures that firms, industries and regions adopt to foster, maintain and increase productivity on a sustainable basis. It depends on the continuous upgrading of human, capital and natural resources. But some economists indicated that these elements are related to comparative advantage which is different from competitive advantage. Countries that have low labor cost may have a comparative advantage. But many of these countries are caught in a cycle of poverty and slow development, and that does not necessarily mean that they are competitive³⁰. The emphasis should be on how to build competitive industries. So the comparative advantage can be considered the basis on which competitive advantage can be built.

This section examines whether current labor productivity and cost of labor give Egypt a competitive edge over its neighbors in the region. With this in mind, the section analyzes developments in nominal productivity and nominal wages, real productivity and real wage, as well as unit labor cost in the manufacturing sector. In addition, real wages and productivity in dynamic industries will be studied. The emphasis will be on the

²⁹ Porter, M.(1999) , "Building Competitive Advantage : Lessons from Other Countries," Internet, p.2.

³⁰ Khemani, S. (1999), "Fostering Competitiveness," Internet, p.1.

manufacturing sector due to its prospects for growth and its potential for increasing exports and job opportunities.

A- Nominal productivity and nominal wages

Egypt's manufacturing sector has consistently been at the center of the country's growth strategy. The growth rate achieved by the sector has averaged 7 percent from 1981/1982 to 1997/1998, and the sector's contribution to GDP has increased from 15.6 percent in 1981/1982 to 19.6 percent in 1997/1998. The share of the manufacturing sector in total employment and fixed investment has been stable at 13.4 percent and 21.6 percent respectively³¹.

Egypt's manufacturing sector has achieved significant progress in labor productivity. Over the 1980 to 1989 period, overall labor productivity rose by 13.8 percent, from \$2585 to \$9406, while the nominal wage per worker increased by 8.5 percent as shown in Table (8) in the Appendix.

The increase in labor productivity in manufacturing during this period can be explained by:

- 1) The increased share of manufacturing in fixed investment from 20.2 percent in 1980/1981 to 23.5 percent in 1989/1990. The growth rate of real industrial output (in 1990 prices) reached 6.8 percent during the period 1981-1989³².
- 2) The increased share of value added in industrial output from 25.3 percent in 1980 to 32 percent in 1989. The growth rate of real value added reached 5 percent, on average, during 1980-1989 and has exceeded the growth rate of employment. Thus, the productivity of labor showed an increasing trend during the eighties.
- 3) The increase in productivity of labor during the eighties coupled with a low growth rate of employment which reached 1.9 percent during this period. This low rate of growth was due to a combination of factors including a change in the government hiring policies in the large public sector companies and relative scarcities of different categories of labor due

to migration³³. The slowdown in the average number employed may be an indication that the industrial firms favored mechanized production processes. The growth rate of the ratio of fixed capital to employment has reached 10 percent, on average, during the eighties³⁴.

During the period 1990-1995, labor productivity increased by 1.2 percent, implying that the growth in labor productivity through the first half of the nineties is lower than that achieved during the eighties. The decreasing trend of labor productivity growth during the period 1990-1995 may be explained by the negative growth rate of the value added. In fact, the growth rate of real value added decreased from 5 percent during 1980-1989 to (-7.3 percent) during 1990-1995. Important factors behind this trend are the various measures adopted within the Economic Reform and Structural Adjustment Program (ERSAP). The measures which are likely to have most affected value added are³⁵:

(1) Trade liberalization

Trade liberalization involves two elements: elimination of direct trade controls or non-tariff barriers such as permits, quotas; and reduction of the mean tariff rate and tariff dispersion (i.e. reducing the difference between maximum and minimum tariff rates). In effect, trade Liberalization under ERSAP means opening up the domestic market and hence exposing local producers to strong competition from imports. This leads to an accumulation of stocks of finished products. Since the companies adjust production to sales, they cannot expand output in the presence of stocks. Accordingly production declines and the idle capacities increase.

(2) Sales tax

³³ UNIDO (1994), Egypt: An Enabling Environment for Investment, *Industrial Development Review Series*, p. 24.

³⁴ Calculated from UNIDO, Industrial Statistics Database, 1998.

³⁵ Abdel-Khalek, G. (1996), Structural Adjustment and Industrialization in Egypt, The Microeconomic Effects of ERSAP: The Aluminum and Iron and Steel Industry, prepared for Fondazione Eni Enrico Mattei, April, p.4.

³¹ Calculated from National Bank of Egypt, *Economic Bulletin*, 1998.

³² Calculated from National Bank of Egypt, *Economic Bulletin*, 1992.

The sales tax imposed on inputs has led to an increase in the cost of production. At the same time sales tax on finished products resulted in higher prices for buyers. This is the familiar “excise tax” effect which, *ceteris paribus*, may result in lower sales. Also, ERSAP has a deflationary component which tends to reduce demand in the domestic market. This is particularly so because of the cut-down in the rate of public investment under ERSAP.

As for the nominal wage per worker, it has decreased by an average of 1.3 percent through 1990-1995.

B- Real wages and real productivity

If the real value of wages and productivity is considered, the growth rates will be different compared to the growth rates of the nominal values, as shown in Tables (8) and (9).

While real productivity grew at an average rate of 2.7 percent during the period 1980-1989, it decreased by 8.4 percent during the period 1990-1995. On the other hand, real wages declined all through the period 1980-1995, by average rates of 5.8 percent during 1980-1989 and 11.4 percent during 1990-1995.

To conclude, during the years 1990-1995 real wages and real productivity in the manufacturing sector were decreasing, but the rate of decline of wages was higher, resulting in a widening gap between real wages and real productivity which positively affected unit labor cost.

C- The cost of labor in manufacturing

Competitiveness is determined by relative prices, for given products, between countries. If the U.S prices are lower than those of Japan, South Korea, Taiwan, Germany and others, when measured in common currency units, then U.S is competitive compared to the other countries.

To compare labor prices, unit labor cost is a useful measure. It is calculated as the wage rate times the reciprocal of labor productivity³⁶. The formula uses the wage rate as a proxy for labor remuneration. The second element is the reciprocal of labor productivity.

³⁶ Klein, L.R. (1988), “Component of Competitiveness.” *Science*, V. 241, p. 309.

The reciprocal of labor productivity provides a measure of unit labor cost which, in turn, is an important efficiency measure. If labor productivity rises and wage rates are constant, unit labor cost will decrease. If wage rates also decline, the decrease in unit labor cost will be bigger. To become competitive, a country should try to hold down its unit labor cost and may do so, either through wage restraint or through productivity enhancement, or through a combination of both³⁷.

Table (8) shows the decreasing trend of unit labor cost in Egypt in manufacturing during 1980-1995. Unit labor cost decreased from \$0.56 in 1980 to \$0.31 in 1995. Consequently, Egypt has an obvious and significant cost advantage to business operating in Egypt in comparison with other countries such as Malaysia, the Philippines and Thailand. These Countries have achieved high rates of growth in productivity. This is noted from Table (10).

By using the real values of wages and productivity, as indicated in Table (9), the absolute value of unit labor cost decreased from \$0.82 in 1980 to \$0.36 in 1990 and to \$0.29 in 1995. So the trend of unit labor cost is decreasing during 1980-1995.

According to Tables (8) and (9), the competitiveness of Egyptian labor in manufacturing increased because its unit labor cost decreased. But these tables reveal that the decline in unit labor cost is not just an outcome of real wage decrease only, but it is also a result of labor productivity decline. This means that Egyptian workers are still lagging behind some of their international competitors in terms of productivity as shown in Table (11). Studies of the determinants of labor productivity reveal that it depends on a number of factors including capital formation, education and training, technological change and infrastructure. The experience of other countries such as Turkey shows how important it is to increase labor productivity to be competitive as it succeeded in raising productivity in the manufacturing sector at an annual rate of 3.4 percent in 1995³⁸. Hence, Turkey’s competitiveness increased over the period 1980-1986 compared to Korea, Taiwan and Spain.

³⁷ Ibid.

³⁸ ERF (1998), *Indicators: Trends in the MENA Region*, p. 89.

D- Real wages and productivity in dynamic industries

In what follows, the productivity and unit labor cost in some manufacturing activities such as, textiles, food products, chemical products, metal products, iron products and non- metallic mineral products³⁹ will be analyzed. They are considered dynamic industries in Egypt because they have high shares in employment and high contribution in value added. Also, they have high potentials for growth due to their competitive advantages. During the period 1980-1995, their contributions to value added, on average, have been calculated as: 25.7 percent for chemical products, 20 percent for food products, 18.3 percent for textiles, 16.2 percent for metal products, (8.1 percent) for non- metallic mineral products and 7 percent for iron products. Also, their shares in employment, on average, are represented by the following values: textiles (31.3 percent), food products (21 percent), metal products (15.5 percent), chemical products (13.5 percent), non- metallic mineral products (7 percent) and iron products (7.1 percent)⁴⁰.

In analyzing the degree of competitiveness of different branches or activities in the manufacturing sector, two indicators are used: labor productivity and unit labor cost, over two periods: 1980-1989 (pre ERSAP) and 1990-1995 (post ERSAP). Each indicator is calculated on two levels. The first is the traditional one, that is, the average labor productivity in each activity. As to the second level, it is based on a ranking system for the indicator. The rankings depend on the ratio of the values of the indicator in the activity to that of the average value for all activities⁴¹. For example, in Table (14), the value of 2.06 for chemical products in the period 1990-1995, refers to the ratio of the average labor productivity in these years in that activity to the average labor productivity in the same years in all manufacturing activities. Table (14) indicates that chemical products activity has the highest labor productivity using this method, followed by metal products and equipment, iron products and food products. The textiles

products activity ranks last from the labor productivity perspective with a ratio of 0.36.

When the unit labor cost indicator is considered, on the two levels, the same trend is found. Chemical products had the lowest unit labor cost in 1990-1995, while textiles products had the highest one, as indicated in Table (11).

The table also reveals a declining trend in unit labor cost in the years 1990-1995 as compared to the years 1980-1989 for all activities, particularly in the iron products activity.

From the above analysis we can draw an important conclusion namely, that the structure of the manufacturing sector has witnessed a major shift away from the traditional activities, such as textiles, and towards higher value added activities, such as chemical products, iron products and equipments. The shift entails more usage of capital-intensive techniques and hence creates relatively less job opportunities.

5- Concluding Remarks

The main findings of this study can be summarized as follows. The labor market in Egypt has been increasingly suffering from many distortions and disequilibria during the last two decades, namely, the slow rate and distorted structure of employment growth; the segmentation along several divides; the mounting rate of unemployment between the educated youth with increasing trends of “feminization” and “ruralization” of unemployment; the growing role of the informal sector during the nineties; and the sharp decline in real wages in all sectors of the national economy. In addition, the study indicates that regardless of the existence of many legislative and institutional rules that control the labor market, their collective impact on the private sector profitability and hence on job creation is minor. Also, the analysis shows that the increasing “competitiveness” of Egyptian labor in manufacturing during 1980-1995 is an outcome of a decrease in real wages and of a decline in labor productivity. When the structure of the manufacturing industries is analyzed, a remarkable shift appears entailing more usage of capital-intensive techniques and less job opportunities.

These findings confirm the fact that the problems of the labor market in Egypt, which affect its competitiveness, are a natural outcome of the

³⁹ The definition of each activity will be found in the Appendix.

⁴⁰ Calculated from UNIDO (1998), Industrial Statistics Database.

⁴¹ DEPRA, pp. 17-18.

complete divorce between the macro-economic policies and the employment policies. In fact, Egypt never had a systematic strategy for the labor market. This has been obvious in drawing and implementing the policies of ERSAP during the nineties, where no job creation strategy or policies have been included at all.

It appears, therefore, that the main challenge facing decision makers in both the medium and long term lies in the creation of sufficient, productive and permanent jobs to reduce unemployment, and in enhancing labor competitiveness. This challenge can only be met through adopting a comprehensive strategy and designing precise and detailed policies and programs for employment, rather than merely by the introduction of legal reform and the attenuation of rigid labor regulations, claimed responsible for increasing labor cost and unemployment.

The proposed employment strategy will be complementary to and integrated into the macro-economic policies. The main objective of both is to achieve a high labor-intensive rate of economic growth, hand in hand with raising labor productivity and competitiveness. In this regard four areas of reform can be perceived.

The first area is related to the macro-economic policies necessary to ensure a sustained and a high rate of growth. This would require macro-economic stability, increasing domestic and foreign investments, and encouraging the private sector to increase its role relative to that of the State through reducing the obstacles that hinder private investment.

The second area of the employment strategy is to maximize the employment content of growth. This should take place on two fronts: accelerating the rate of job creation in the formal sector, and improving work conditions and solving the problems of the informal sector. As for the first front, the labor-intensive activities in the manufacturing and services sectors should be targeted, particularly in the small and medium-size enterprises, for both local and foreign markets. This will go hand in hand with creating job opportunities on a broad scale in the New Development Projects launched by the government. In view of the growing role of the informal sector in absorbing employment and generating incomes, more attention and help should be given to the activities that have potential for growth, through solving the problems of credit, marketing and production techniques.

Expanding protection and improving work conditions in the informal sector is necessary to reduce poverty.

As for the third area of the employment strategy, that is training, the study already reveals the low and decreasing trend of real labor productivity in manufacturing since the mid-eighties. The low level of labor productivity in the Egyptian economy, in general, has contributed to push up the relative price of labor vis-à-vis capital, and hence lower the labor intensity in the manufacturing activities. Therefore, the upgrading of the skills of the labor force requires sound and coherent policies for reforming the current training and retraining systems, expanding its scope to include labor intensive sectors other than manufacturing, and linking training with skills required in the labor market. The private sector should be involved in the training programs.

Finally, and clearly related to training, the upgrading of skills in order to raise productivity depends heavily on increasing human development. Investment in human capital entails increasing spending on health, nutrition, housing and education, along with reforming the educational system and improving its quality.

It is worth noting that the four above-mentioned areas of the Employment Strategy will not be efficient without the reform of the legal and institutional framework of the labor market, civil service reform, and the provision of an effective social safety net.

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Table 1: Distribution of Employed Persons by Sectors (15 years and more)

Sectors	1976		1986		1996		Ave. Rate of Growth %	
	No.s	%	No.s	%	No.s	%	1976-86	1986-96
Government	1,786,064	17.67	2,545,315	22.36	4,374,613	28.02	3.61	5.56
Public								
Enterprises	964,583	9.54	1,287,719	11.31	876,729	5.62	2.93	-3.77
Private								
Enterprises	7,355,770	72.78	7,537,285	66.20	10,336,689	66.21	0.24	3.21
Foreign								
Enterprises	0	-	10,842	0.10	23,911	0.15	-	8.23
Unclassified	0	-	4,565	0.04	39	0.00	-	-37.89
Total	10,106,417	100.00	11,385,726	100.00	15,611,981	100.00	1.20	3.21
Urban	n.a	-	5,446,613	47.84	7,214,167	46.21	-	2.85
Rural	n.a	-	5,939,113	52.16	8,397,814	53.79	-	3.52
Male	n.a	-	10,343,844	90.85	13,526,684	86.64	-	2.72
Female	n.a	-	1,041,882	9.15	2,085,297	13.36	-	7.19

Source: Calculated from CAPMAS, General Population Censuses, 1976,1986 and 1996.

Table 2: Distribution of Employed Persons by Branches of Economic Activity (15 years and more)

Branch of Economic Activity	1976		1986		1996		Ave. Rate of Growth %	
	No.s	%	No.s	%	No.s	%	1976-86	1986-96
Agriculture & Fisheries	4,089,252	44.26	4,347,447	38.18	4,872,806	31.21	0.61	1.15
Mining & Quarrying	32,474	0.35	42,430	0.37	63,090	0.40	2.71	4.05
Manufacturing	1,297,342	14.04	1,489,152	13.08	2,168,257	13.89	1.39	3.83
Electricity, Gas & Water	61,487	0.67	95,946	0.84	159,170	1.02	4.56	5.19
Construction	408,878	4.43	842,300	7.40	1,260,052	8.07	7.49	4.11
Trade, Hotels & Restaurants	821,678	8.89	846,752	7.44	1,627,284	10.42	0.30	6.75
Transport, Storage & Communication	472,794	5.12	653,052	5.74	909,313	5.82	3.28	3.37
Finance, Insurance & Business Services	87,117	0.94	236,508	2.08	706,254	4.52	10.50	11.56
Community & Social Services	1,816,151	19.66	2,615,721	22.97	3,758,685	24.08	3.72	3.69
Unclassified	151,210	1.64	216,418	1.90	87,070	0.56	3.65	-8.70
Total	9,238,383	100.00	11,385,726	100.00	15,611,981	100.00	2.11	3.21
Urban	n.a	-	5,446,613	47.84	7,214,167	46.21	-	2.85
Rural	n.a	-	5,939,113	52.16	8,397,814	53.79	-	3.52
Male	8,644,522	93.57	10,343,844	90.85	13,526,684	86.64	1.81	2.72
Female	593,861	6.43	1,041,882	9.15	2,085,297	13.36	5.78	7.19

Source: Calculated from CAPMAS, General Population Censuses, 1976,1986 and 1996

Table 3: Distribution of Employed Persons by Occupation (15 years and more)

Occupation	1976		1986		1996		Ave. Rate of Growth %	
	No.s	%	No.s	%	No.s	%	1976-86	1986-96
Professionals, Scientists & Managers	826,848	8.60	1,588,053	13.95	4,370,197	28.00	6.74	10.65
Clerical Workers & Like	700,950	7.29	998,992	8.77	1,123,399	7.20	3.61	1.18
Sales & Services Workers	1,442,913	15.01	1,428,312	12.54	1,456,208	9.33	-0.10	0.19
Workers in Agriculture & Fisheries	4,033,281	41.95	4,302,166	37.79	4,676,481	30.00	0.65	0.84
Production Workers & Like	2,052,506	21.35	2,769,172	24.32	3,860,486	24.73	3.04	3.38
Unclassified	557,271	5.80	299,031	2.63	125,210	0.80	-6.04	-8.34
Total	9,613,769	100.00	11,385,726	100.00	15,611,981	100.00	1.71	3.21
Urban	n.a	-	5,446,613	47.84	7,214,167	46.21	-	2.85
Rural	n.a	-	5,939,113	52.16	8,397,814	53.79	-	3.52
Male	8,915,529	92.74	10,343,844	90.85	13,526,684	86.64	1.50	2.72
Female	698,240	7.26	1,041,882	9.15	2,085,297	13.36	4.08	7.19

Source: Calculated from CAPMAS, General Population Censuses, 1976, 1986 and 1996

Table 4: Employment in Non-Agricultural Informal Private Sector by Economic Activity, 1996 (Method I)

Economic Activities	Total non-Agricultural Private Sector (1)	Non-Agricultural Formal Private Sector (2)	Non-Agricultural Informal Private Sector (3)=(1)-(2)	% of Informal Sector (4)=(3) ÷ (1)
Mining and Quarrying	26,022	8,094	17,928	68.9
Manufacturing	1,512,545	300,032	1,212,513	80.2
Electricity, Gas & Water	11,595	523	11,072	95.5
Construction	1,110,591	8,467	1,102,124	99.2
Trade	1,324,568	34,913	1,289,655	97.4
Hotels & Restaurants	190,388	29,167	161,221	84.7
Transport, Storage & Com.	565,392	13,336	552,056	97.6
Finance & Insurance	43,254	19,149	24,105	55.7
Real Estates & Bus. Serv.	449,014	12,745	436,269	97.2
Education	87,561	26,926	60,635	69.2
Health & Social Work	51,124	12,007	39,117	76.5
Community, Soc. & Pers. Serv.	143,796	7,983	135,813	94.4
Services to Households	43,401	112	43,289	99.7
Unclassified Activities	78,204	-	78,204	100.0
Total	5,637,455	473,454	5,164,001	91.6

Sources: (1) Calculated from: CAPMAS, General Population Census 1996, Final Results, Table 25, pp163-170. (2) Workers in the establishments employing 10 workers and more. Calculated from CAPMAS, Employment, Wages and Hours of work (EWHW), October 1996, Table (1), pp.21-51

Table 5: Employment in Non-Agricultural Informal Private Sector by Economic Activity, 1996 (Method II)

Economic Activities	Employment in Establishments using less than 5 Workers	Out of Establishments (Employment)	Total Employment	% to Total
	(1)	(2)	(3)	(4)
Mining and Quarrying	312	12,523	12,835	0.3
Manufacturing	484,890	244,242	729,132	15.1
Electricity, Gas & Water	159	4,672	4,831	0.1
Construction	16,466	943,137	959,603	19.8
Trade	1,468,904	504,993	1,973,897	40.8
Hotels & Restaurants	150,683	34,988	185,671	3.8
Transport, Storage & Com.	52,174	469,571	521,745	10.8
Finance & Insurance	810	5,718	6,528	0.1
Real Estates & Bus. Serv.	94,609	28,462	123,071	2.5
Education	7,702	14,676	22,378	0.5
Health & Social work	90,484	6,694	97,178	2.0
Community, Soc. & Pers. Serv.	125,516	50,263	175,779	3.6
Services to Households	-	13,929	13,929	0.3
Int. Organizations	78	-	78	0.0
Unclassified Activities	1,257	14,893	16,150	0.3
Total	2,494,044	2,348,761	4,842,805	
% to Total	51.5	48.5	100.0	100.0
		Rural 1,021,491		
		Urban 1 327,270		

Sources: (1) Calculated from: CAPMAS, General Population Census, Detailed results of Establishments, 1996, Table 12, pp 179-207. (2) Calculated from: CAPMAS, General Population Census, 1996, Final results, Table 25, pp163-170

Table 6: Trends in Average Nominal and Real Wages by Sectors and Economic Activity, 1987-1996; (Nominal: L.E per week) (Real: 1986= 100)

Economic Activities	Sectors	1987		1990		1991		1994		1995		1996		%of change 1987-96	
		N	R	N	R	N	R	N	R	N	R	N	R	N	R
Agriculture and Fisheries	Pu	27	25.1	35	19.6	42	19.6	56	17.8	59	17.8	74	19.8	174.1	-21.1
	Pr	17	15.8	32	17.9	30	14.0	51	16.3	58	17.5	59	15.8	247.1	0.0
	T	25	23.3	34	19.0	39	18.2	54	17.2	59	17.8	64	17.1	156.0	-26.6
Mining and Ouarrving	Pu	49	45.6	92	51.4	80	37.3	109	34.7	128	38.6	129	34.5	163.3	-24.3
	Pr	64	59.6	172	96.1	189	88.2	249	79.3	205	61.8	278	74.3	334.4	24.6
	T	59	54.9	114	63.7	127	59.3	165	52.6	160	48.2	181	48.4	206.8	-11.8
Manufacturing	Pu	38	35.4	56	31.3	56	26.1	79	25.2	90	27.1	102	27.3	168.4	-22.9
	Pr	37	34.5	49	27.4	54	25.2	72	22.9	73	22.0	76	20.3	105.4	-41.2
	T	38	35.4	54	30.2	55	25.7	77	24.5	84	25.3	93	24.9	144.7	-29.7
Electricity. Gas and Water	Pu	30	27.9	40	22.3	57	26.6	64	20.4	70	21.1	88	23.5	193.3	-15.8
	Pr	33	30.7	-	-	96	44.8	95	30.3	46	13.9	119	31.8	260.6	3.6
	T	30	27.9	40	22.3	57	26.6	65	20.7	70	21.1	88	23.5	193.3	-15.8
Construction	Pu	40	37.2	53	29.6	60	28.0	85	27.1	89	26.8	100	26.7	150.0	-28.2
	Pr	46	42.8	75	41.9	64	29.9	144	45.9	127	38.3	93	24.9	102.2	-41.8
	T	40	37.2	55	30.7	61	28.5	88	28.0	91	27.4	100	26.7	150.0	-28.2
Trade and Hotels	Pu	34	31.7	49	27.4	57	26.6	84	26.8	90	27.1	106	28.3	211.8	-10.7
	Pr	36	33.5	51	28.5	61	28.5	66	21.0	77	23.2	82	21.9	127.8	-34.6
	T	34	31.7	49	27.4	58	27.1	77	24.5	85	25.6	83	22.2	144.1	-30.0
Transport and Storage	Pu	34	31.7	49	27.4	54	25.2	83	26.5	88	26.5	111	29.7	226.5	-6.3
	Pr	49	45.6	72	40.2	70	32.7	123	39.2	118	35.6	119	31.8	142.9	-30.2
	T	36	33.5	53	29.6	57	26.6	88	28.0	92	27.7	112	29.9	211.1	-10.7
Finance. Insurance and Bus. Serv.	Pu	38	35.4	66	36.9	68	31.7	95	30.3	100	30.1	107	28.6	181.6	-19.2
	Pr	112	104.3	118	65.9	151	70.5	210	66.9	233	70.2	230	61.5	105.4	-41.0
	T	49	45.6	76	42.5	85	39.7	120	38.2	131	39.5	170	45.4	246.9	-0.4
Soc. and Pers. Serv.	Pu	39	36.3	61	34.1	47	21.9	62	19.8	61	18.4	73	19.5	87.2	-46.3
	Pr	31	28.9	42	23.5	47	21.9	63	20.1	81	24.4	88	23.5	183.9	-18.7
	T	33	30.7	46	25.7	47	21.9	63	20.1	79	23.8	94	25.1	184.8	-18.2
All Activities	Pu	37	34.5	55	30.7	57	26.6	81	25.8	88	26.5	103	27.5	178.4	-20.3
	Pr	42	39.1	57	31.8	64	29.6	84	26.8	88	26.5	91	24.3	116.7	-37.9
	T	38	35.4	55	30.7	59	27.5	82	26.1	88	26.5	99	26.5	160.5	-25.1

Notes: (1) Pu = Public, Pr = Private, T = Total, N= Nominal, R = Real. (2) Real wages are calculated using Urban CPI for year 1986 = 100; National Bank, Economic Bulletin, vol.51, No.3, 1998 (3) Public Sector includes Public Enterprises. (4) Private Sector: Establishments using 10 workers or more. (5) In 1996 the classification of the Economic Activities is different in CAPMAS data from previous years. In that year the data are more detailed for Agriculture, Trade, Finance, Social and Personal Services. For the purpose of accurate comparison, we calculated the average nominal wage in each of the four activities as an average of the sub-activities in that year.

Source: Nominal wages: CAPMAS, Employment, Wages and Hours of Work (EHW), Several issues - Real wages: calculated.

Table 7: Trends in Average Nominal and Real Wages by Economic Activity and Gender, 1990-1996; (Nominal: L.E per week) (Real: 1986= 100)

Economic Activities	Gender	1990		1991		1994		1995		1996		%of change 1990-96	
		N	R	N	R	N	R	N	R	N	R	N	R
Agriculture & Fisheries	M	34	19,0	40	18,7	55	17,5	59	17,8	65	17,4	91,2	-8,4
	F	32	17,9	39	18,2	51	16,3	57	17,2	54	14,4	68,8	-19,6
	F/M		0.94		0.98		0.93		0.97		0.83	--	--
Mining & Quarrying	M	114	63,7	127	59,3	166	52,9	159	47,9	182	48,6	59,6	-23,7
	F	105	58,7	123	57,4	162	51,6	186	56,0	169	45,2	61,0	-23,0
	F/M		0.92		0.97		0.98		1.17		0.93	--	--
Manufacturing	M	56	31,3	57	26,6	80	25,5	87	26,2	97	25,9	73,2	-17,3
	F	38	21,2	41	19,1	57	18,2	64	19,3	67	17,9	76,3	-15,6
	F/M		0.68		0.72		0.71		0.74		0.69	--	--
Electricity, Gas & Water	M	39	21,8	57	26,6	65	20,7	69	20,8	88	23,5	125,6	7,8
	F	46	25,7	54	25,2	61	19,4	72	21,7	90	24,1	95,7	-6,2
	F/M		1.18		0.95		0.94		1.04		1.02	--	--
Construction	M	55	30,7	61	28,5	88	28,0	91	27,4	99	26,5	80,0	-13,7
	F	50	27,9	59	27,5	86	27,4	96	28,9	108	28,9	116,0	3,6
	F/M		0.91		0.97		0.98		1.05		1.09	--	--
Trade & Hotels	M	51	28,5	59	27,5	78	24,9	87	26,2	84	22,5	64,7	-21,1
	F	42	23,5	53	24,7	72	22,9	78	23,5	76	20,3	81,0	-13,6
	F/M		0.82		0.90		0.92		0.90		0.90	--	--
Transport & Storage	M	53	29,6	56	26,1	85	27,1	89	26,8	111	29,7	109,4	0,3
	F	55	30,7	71	33,1	112	35,7	121	36,5	117	31,3	112,7	2,0
	F/M		1.04		1.27		1.32		1.36		1.05	-	-
Finance, Insurance & Bus. Serv.	M	75	41,9	84	39,2	119	37,9	129	38,9	174	46,5	132,0	11,0
	F	85	47,5	89	41,5	125	39,8	140	42,2	149	39,8	75,3	-16,2
	F/M		1.13		1.06		1.05		1.09		0.86	--	--
Soc. and Pers. Serv.	M	55	30,7	58	27,1	73	23,3	96	28,9	99	26,5	80,0	-13,7
	F	34	19,0	37	17,3	53	16,9	59	17,8	100	26,7	194,1	40,5
	F/M		0.62		0.64		0.73		0.61		1.01	-	-
All Activities	M	57	31,8	61	28,5	83	26,4	90	27,1	103	27,5	80,7	-13,5
	F	46	25,7	50	23,3	69	22,0	77	23,2	83	22,2	80,4	-13,6
	F/M		0.81		0.82		0.83		0.86		0.81	-	-
All Activities													
Public	F/M		0.89		0.91		0.95		0.96		0.92	--	--
Private	F/M		0.69		0.66		0.67		0.73		0.68	--	--

Notes: (1) M = Male, F= Female, N= Nominal, R= Real. (2) Real wages are calculated using urban CPI for year 1986= 100; National Bank, Economic Bulletin, volume 51, No. 3, 1998; (3) For Classification of Economic activities see note (5) in Table 13.

Source: - Nominal wages: CAPMAS, (EHW), Several issues - Real wages: calculated.

Table 8: Nominal Wages, Nominal Productivity and Nominal Unit Labor Cost in Manufacturing Sector

Years	Wage per worker \$	Growth Rate %	Productivity \$ per worker	Growth Rate %	Unit Labor Cost (\$)
1980	1473		2585		0.56
1981	1932		3029		0.63
1982	2078		3501		0.59
1983	2554		4211		0.6
1984	3014		5130		0.58
1985	3331	8.5	6029	13.8	0.55
1986	3629		6520		0.55
1987	4176		7889		0.52
1988	4678		12665		0.36
1989	3313		9406		0.35
1990	2013		5571		0.36
1991	1348		3873		0.34
1992	1438	-1.3	5080	1.2	0.28
1993	1575		5446		0.28
1994	1732		5410		0.32
1995	1868		5965		0.31

Source: Calculated from UNIDO (1998), Industrial Statistics database. Productivity: Annual value Added/ number of workers. Unit labor cost: wage per worker/ productivity.

Table 9: Real Wages, Real productivity and Real Unit labor cost in Manufacturing Sector

Years	Real Wage \$ per Worker	Growth Rate %	Real Productivity \$ per Worker	Growth Rate %	Real Unit Labor Cost (\$)
1980	70		85		0.82
1981	83		98		0.85
1982	78		94		0.82
1983	83		97		0.85
1984	83		103		0.81
1985	82	-5.8	115	2.7	0.71
1986	72		118		0.6
1987	70		126		0.55
1988	66		178		0.37
1989	39		111		0.34
1990	20		56		0.36
1991	11		34		0.33
1992	11		37		0.28
1993	10	-11.4	36	-8.4	0.28
1994	11		34		0.31
1995	10		33		0.29

Source: Calculated from UNIDO (1998), Industrial Statistics Database. Consumer price Index (1990=100) was used to get Real wages. GDP Deflator was (1990=100) used to get Real Productivity.

Table 10: Comparative unit labor costs in the Manufacturing sector, 1992

Country	Unit Labor Cost (\$)	\$ Productivity
Malaysia	0.8	7280
Philippines	0.57	2714
Thailand	0.63	5366
Egypt*	0.28	5080

Source: Agrowal, N. (1995), Indonesia: Labor Market Policies and International Competitiveness, Internet, Sept, p.15; * Table (8)

Table 11: Average Productivity and Average Unit Labor Cost in Manufacturing activities 1980-1995 (in U.S.\$)

Activity	1980-1989				1990-1995			
	1	2	3	4	1	2	3	4
Food Products	207	1.84	1.23	7.81	19	0.41	0.38	1.01
Textiles Products	120	1.07	1.7	2.51	17	0.36	0.61	1.62
Chemical Products	288	2.56	1.25	1.84	95	2.06	0.19	0.51
Iron Products	229	2.03	3.29	4.85	29	0.62	0.6	1.60
Metal Products & Equipment	19651	1.74	1.39	2.05	34	0.73	0.48	1.28

Notes: (1) Average productivity in each activity; (2) The ratio of average productivity in each activity to average productivity in total manufacturing sector; (3) Average Unit Labor Cost in each activity; (4) The ratio of Average Unit Labor Cost in each activity to Average Unit Labor Cost in Total Manufacturing Sector.

Source: calculated from UNIDO (1998), Op. Cit.

Appendix 1:

Definition of activities

- Food products include Food, Beverages and Tobacco (311 +313+314)
- Textiles Products include Textiles, Wearing Apparel, Leather Products and Footwear (321+322+323+324).
- Wood products include Wood products and Furniture (331+332).
- Paper products include Paper products, Printing and Publishing (341+342).
- Chemical Products include Industrial Chemicals, Petroleum Refineries, Miscellaneous Petroleum & Coal products, Rubber & Plastic Products and other chemicals (351+352+353+354+355+356).
- Iron products include Iron, Steel and non- ferrous metals (371+372).
- Metal Products and Equipment include Fabricated Metal Products, Machinery, Electrical Machinery, Transport Equipment, Professional and Scientific Equipment (381+382+383+384+385).
- Pottery, Glass and non –metallic mineral products include Pottery, China Earthenware Glass and other non –metallic mineral products (361+362+369).
- Others include other Manufacturing Products (390).