

Labor Market and Growth in Morocco
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Introduction

To a large extent the differences in per capita incomes across countries reflect differences in the ability to implement technologies that are in general already known (Lucas 1988). Accordingly, economic growth is shaped by the process of human capital accumulation at the national level. The contribution of education, as measurable component of human capital, to economic growth have for a long time been stressed by empirical literature. Limam and Makdissi (2001) found a positive and significant relationship between human capital as measured by average schooling years of the labor force and economic growth in MENA region. Sekkat (2002) corroborates the same result for the specific case of Morocco. However, Pissaridies (2000) pointed out that human capital is not much contributing to growth in MENA region due to its misallocation that diverted it from growth enhancing activities to rent seeking activities.

Recently more emphasis has been put on understanding the reasons behind this misallocation of labor resources by examining the institutional context in which the decisions of human capital accumulation are taken. In particular, labor market institutions and policies are proven to be the main channel through which the signals are sent to the households. Inefficient institutions and ineffective labor market policies distort the allocation of human resources across sectors and regions. They also limit the ability of the economy to reallocate labor from declining activities to innovative industries. To the extent that flexible allocation of labor is an important growth ingredient, excessive labor market regulations hampers economic growth. Labor market functioning tends also to affect returns to education through the prevalent wage structure which may induce households to undertake inappropriate investments in human capital. One of the stylized facts of the recent literature as surveyed by Topel (1999) suggests that incentives to invest in human capital are associated with rewards to such investments, which are determined by a flexible wage structure.

The purpose of this paper is to investigate how the functioning of the labor market in Morocco is affecting economic growth. The first section examines the demographic factors affecting the supply side of the labor market such as the population growth, the pace of urbanization, and the increase of female labor force participation over the last decades. These three demographic factors, although dealt with jointly, don't have the same effects on the labor market conditions and may be connected to economic growth through different channels. The second section explores the potential distorting effects of policy choices undertaken by policy makers in Morocco over the last four decades. For a long time, the government provided much more incentives to capital intensive investment at the extent of labor intensive technologies, which distorted the allocation of resources and crowded out the abundant labor force. As a consequence, formal sector has not created enough job opportunities while survival activities in the informal sector have expanded very rapidly. The third section investigates the educational system as the main mechanism through which human capital is accumulated. As in Lucas-Uzawa framework, human capital is accumulated endogenously as a result of individual optimal investment decisions on the basis of the expected returns on the labor market. One of the key issues is the increasing rate of graduates unemployed. Does this mean that educational system is not adequately responding to the needs of the productive system? Or that the productive system is still underdeveloped to absorb all the available skilled labor supplied on the marketplace. The fourth section of the paper examines the

contribution of the public sector to employment and the nature of qualifications required by public sector jobs. The public sector wage bill in Morocco is excessive and tends to put constantly pressure on the government budget, which threatens macroeconomic stability and restrains growth prospects. The fifth section presents briefly the labor market regulation in Morocco and the extent to which they are effectively enforced. It attempts to assess the extent to which the existence of minimum wage has protected the purchasing power of workers. It also deals with the impact of existing regulations imposed to the formal sector on the expansion of a large informal sector.

1. Demographic factors

1.1. The labor force is growing fast

The labor force in Morocco has grown at much faster rate than the growth rate of the population. During the period 1971-82 total population increased from 15.4 to 20.4 million which is equivalent to an average annual growth rate of 2.6 percent. During the same period, the labor force expanded from 4 to almost 6 million, which leads to an average annual growth rate of 3.66 percent. Although population growth declined to 2.06 percent over the period 1982-94 and stood around 1.6 percent for the period 1994-2000, and fertility rate declined from 7 children per woman in the sixties to less than 3 more recently; the labor force is still growing rapidly as shown in table 1.

The slowdown experienced in fertility rates has not been reflected yet in the labor force. Over the last six years (1994-2000), the labor force in Morocco increased by an average annual growth rate of 3.57 percent. By the year 2000, more than 10 million people are into the labor force among which 1.4 million are unemployed.

The fast growing labor force in Morocco combined with the low level of GDP growth rate and its implications in terms of job creation explain to a large extent the worsening of the labor market conditions. Unemployed population increased from 349 000 people in 1971 to 642 000 in 1982 which is equivalent to an average annual growth rate of 5.7 percent. The growth rate of unemployed population has even increased to reach 6.27 percent during the implementation of structural adjustment program (1982-1994).

Table 1. Population, Labor force and GDP (1960-2000)

	1960	1971	1982	1994	2000	AAGR (60-71)	AAGR (71-82)	AAGR (82-94)	AAGR (94-00)
Total population (million)	11,6	15,38	20,42	26,07	28,71	2,84	2,61	2,06	1,62
Urban population (% of total)	29,2	35,0	42,6	51,2	54,5	4,72	4,46	3,63	2,68
Labor force (million)	3,26	4,04	5,99	8,33	10,29	2,19	3,66	2,78	3,57
Employed population (million)	2,95	3,69	5,36	7,00	8,89	2,06	3,44	2,25	4,07
Unemployed population (thous)	305	349	642	1332	1394	1,23	5,70	6,27	0,76
Unemployment rate (%)	9,4	8,8	10,7	16,0	13,6	**	**	**	**
GDP (billion \$ 1995)	8,10	13,73	23,01	35,31	38,51	4,92	4,81	3,63	1,45
GDP per worker(thous \$ 1995)	2,744	3,719	4,295	5,044	4,331	2,80	1,32	1,35	-2,51
GDP per capita (thous \$ 1995)	0,696	0,874	1,127	1,354	1,341	2,09	2,34	1,54	-0,16

Source: data on population, labor force and unemployment from General censuses (60/71/82/94) and from national survey on the labor force for 2000. Data on GDP, GDP per worker and per capita are computed from world development indicators (2001). AAGR is the average annual growth rate.

1.2. The pressure of urbanization on the labor market

The accelerated growth of urban population compared to total population has also large implications in terms of allocation of the labor force among sectors as well as on the level unemployment rates in both urban and rural areas. Urban population has rapidly increased due to migration flows from rural areas. The average growth rate of urban population stood at 3.63 and 2.68 for the periods (1982-94) and (1994-2000) respectively. Accordingly, urbanization rate soared to 54.5 percent in 2000 while it did not exceed 29.2 percent in 1960 and 35 percent in 1971.

Rural unemployment rate did not exceed 5 percent in 2000 while it stood at 21.5 percent in urban area. One explanation of the large gap between the two areas in terms of unemployment is partially due to the lack of job opportunities in rural area, which discourages people from searching a job and by definition those who are not actively looking for a job are excluded from the labor force and are not considered as unemployed. These people survive thanks to their family transfers or continue to live in their extended families. It should be noticed that underemployment rather than unemployment represents the main problem in rural area.

However, the main explanation of the high level of unemployment rate in urban area can be attributed to migration flows from rural areas to the cities and particularly to the large ones. To circumvent the scarcity of job opportunities, and the hard environment (lack of potable water, basic roads, and electricity¹) that characterizes the rural area in Morocco; unemployed people move to the cities looking for better life. Roughly 100 000 people per year left rural area for the cities during the seventies. The net migratory flows reached 271 000 for the period 1986-88². Urban areas have not been able to keep up with these large migratory flows in terms of employment, affordable housing and other basic social services (sanitation and schools). This phenomenon contributed to the expansion of informal activities, and vulnerable and unprotected occupations. The migratory flows have even strengthened over the last years due to the frequency of droughts. According to the last national survey on the labor force, more than one fifth of urban unemployed originate from rural area.

1.3. More women in the labor force

The drastic reduction of fertility rate over the last three decades and the relatively higher educational attainment of women have had a decisive effect on women labor force participation. The proportion of females in total employment increased from 11.5 percent in 1960 to 19.3 percent in 1994 and 29.5 percent in 1999. In rural area, 35 percent of employed population are females, against 22.7 percent in urban area. Female unemployment rate experienced also a substantial rise from 2.1 percent in 1960 to 14 percent in 1999. In urban area, female unemployment rate is roughly 27 percent according to the 1999's national survey on the labor force.

Making productive use of women labor force through higher female contribution in economic activity is undoubtedly an extremely positive phenomenon. However in order to assess the nature of this participation one needs to have a closer look at the educational level of female labor force, its sectoral structure and its status in the workplace. In particular one would like to know whether the increase that occurred in female participation reveals the transition to a modern society where the gender biases are being disappearing, or instead that economic

¹ Only 30 percent of rural population has piped potable water, and 20 percent has electricity. (LSMS 1998?).

² Rapport National sur le Développement Humain (1997).

constraints facing households are so tight and tough that they are compelled to supply women labor force to maintain their standards of living. In practice both factors contribute jointly in explaining the unprecedented female participation rate in Morocco. Disentangling both effects requires economic analysis based on individual data, which is not available to us for the moment.

Table 2. Female participation rate, proportion of female employment

	Urban	Rural	Total
Female labor force	3 153 415	1301 766	1 851 649
Female employed population	948 199	1 817 272	2 765 471
Female participation rate	21	36	27
Proportion of females in the labor force	22.7	35.0	29.5
Unemployment rate	27.6	2.1	13.3
Proportion of females in unemployed population	22	28	25

Source:

Employed female population is highly concentrated in primary activities (agriculture, forestry and fisheries) that offer jobs to 62 percent of employed women against 41.8 percent for men. However, a large share of employed females particularly in the agriculture is considered as providing family help and does not obtain any salary or pay.

Female participation is also relatively high in manufacturing which absorbs 17.9 percent of female labor force. The government sector and community services provide jobs for 8.8 percent of females especially in urban area where this percentage is as high as 24.5 against 18.8 percent for males. Public employment seems to attract more women in particular educated ones.

Table 3. Sectoral Structure of Employed population

	Males			Females			National level
	Urban	Rural	Total	Urba n	Rural	Total	
Agriculture, forestry and fisheries	5.6	76.4	41.8	6.0	91.3	62.0	47.8
Manufacturing	2.4	4.2	12.1	39.1	6.9	17.9	13.8
Building and public work	11.2	5.7	8.4	0.5	0.0	0.2	6.0
Commerce	22.5	6.1	14.1	7.2	0.6	2.9	10.8
Transport and communication	6.4	1.9	4.1	1.3	0.0	0.4	3.0
Other services	14.9	2.8	8.7	20.9	0.7	7.6	6.6
Non Classified activities	0.2	0.1	0.2	0.4	0.0	0.2	0.2
Government and community services	18.8	2.8	12.5	24.6	0.5	8.8	10.0

Source: National survey on the labor force, employment and unemployment (1999).

According to the 1999' industrial sector survey, 69 percent of female employment in industrial sector is concentrated in textiles and leather activities, 16 percent in food industry and only 3 percent in electric industry and electronics. To a certain extent, female labor force tends to crowd out male labor force in industrial sector. The crowding out is particularly pronounced for low skilled workers. In addition, women tend to be relegated to jobs that require little training and that can tolerate high levels of job turnover. The same finding has been suggested by Ragui (2002) in the case of the Egyptian labor market. There is also evidence that women accept low wages, harder working conditions and are less inclined to belong to unions in comparison with men³.

³ Rapport National sur le Développement Humain (1997).

Table 4. Employed females by professional status

	Males			Females			National
	Urban	Rural	Total	Urban	Rural	Total	Level
Independent	22.7	34.2	28.6	16.1	13.8	14.6	24.4
Employer	4.0	1.4	2.7	1.1	0.1	0.4	2.0
Wage earner	62.4	24.9	43.2	73.1	5.0	28.4	38.8
Family worker	5.4	38.8	21.4	6.2	80.2	54.9	31.3
Apprentices	2.8	0.7	1.7	2.5	0.4	1.1	1.6

Source: National survey on the labor force, employment and unemployment (1999). Other minor status and non declared status are not reported.

2. Economic Performance and Policy Choices

The average growth rate of Moroccan economy during the period (1994-2000) has been around 1.5 percent. It declined from 4.9 percent in the sixties, 4.8 percent in the seventies and 3.63 percent in the eighties and early nineties. Economic growth in Morocco over the last two decades has been substantially driven by structural adjustment program. The social cost of this adjustment has been extremely high and its burden has mainly been borne by workers and poor communities. From 1994 to 2000, GDP per worker decreased by 2.5 percent on average on annual basis, and GDP per capita decreased by 0.16 percent. These figures provide a first signal on the low productivity level of jobs created during the last years.

Table 5. Average annual growth rate of value added (VA) and employment (EMP) by sector from 1960 to 2000

By sector	1960-1971		1971-1982		1982-1994		1994-2000	
	VA	EMP	VA	EMP	VA	EMP	VA	EMP
Agriculture, forestry and fisheries	4,5	0,7	1,5	1,1	8,1	1,7	-7,9	6,1
Mining	1,8	0,5	3,5	4,3	0,7	-0,7	1,7	0,4
Energy	5,8	2,9	6,9	0,2	5,1	6,2	6,4	-4,1
Manufacturing	4,6	3,0	5,6	7,2	3,8	1,4	3,1	1,2
Building and public work	7,6	8,0	8,3	6,9	-0,4	2,1	4,4	1,5
Transport, Commerce and services	4,0	3,0	4,6	4,4	3,6	3,7	3,3	4,8
Government	7,5	2,3	10,7	3,2	5,0	4,6	3,3	0,6
Total	4,9	2,1	4,8	3,4	3,6	2,2	1,4	2,7

Source: Rapport National sur le Developpement Humain 1997 (2000) and Rapport de Bank Al Maghrib (2000).

Over the three first decades following the political independence, Morocco experienced an average GDP growth rate higher than the average rate of job creation. The gap was particularly significant in the sixties where GDP grew by 4.9 percent per year, and employment increased only by 2.1 percent per year. As a consequence of the low rate of job creation, unemployed population increased by an annual average rate of 5.7 percent in the seventies and by more than 6 percent in the eighties and early nineties.

To a large extent the strong increase experienced by unemployment records can be attributed to the economic policies designed at that time in which substantial incentives were given to capital intensive investments both in agriculture and industry. Employment was not considered as a priority in any of the first economic plans and was assumed to be an automatic outcome of sustained economic growth.

In agriculture, the expansion of the modern irrigation system has been a pillar of Moroccan policy prior and since independence. The authorities expanded modern irrigation from 150 000 ha in the early sixties to 1.4 million ha currently, which is equivalent to 17 percent of

cultivated land (WB SP 2001). Farmers that have access to modern irrigation are mainly growing export and industrial crops. Conversely, traditional agriculture and the rain fed areas have less benefited from the effort of public investment. From 1973 to 1980, more than 70 percent of investment in agriculture were oriented to irrigated land (Khrouz 1988 p 42). Expenditures on small scale irrigation have even gone down sharply since 1990 compared to expenditures devoted to modern irrigation systems. Most of the projects in modern agriculture were capital intensive and led to very limited job opportunities.

During the seventies, while irrigated areas represented less than 10 percent of cultivated land, they benefited from most (about 60 percent) of input subsidies and credits attributed by (CNCA)⁴. Per ha, modern agriculture received five times more subsidies than did rain fed areas. The vast majority of rural population (80 percent) live in non irrigated areas and continue to be very vulnerable to weather conditions. This vulnerability is even increased by the ownership structure of land in rural area. Roughly 25 percent of farmers do not own any plot of land and 68 percent of farmers have plots of less than 10 ha.

Regarding the industrial sector, large investments were undertaken during the seventies. Gross fixed capital as a share of GDP increased from 14 percent in 1973 to 33 percent in 1977. During the period 1973-1977, investment in industrial sector increased by 29 percent per year on average while employment has only increased by 7.2 percent over the period 1971-82. The tightness of the domestic market and the limited opportunities in terms of exports of some of the industries led to an over capacity of manufacturing sector. In 1980, only 67 percent of the existing capacity in the industrial sector is effectively used. The rate of utilization has even decreased during the nineties and stood in 1999 at 56 percent according to industrial sector survey. For some sub sectors, this rate did not exceed 44 percent (leather industry and shoes).

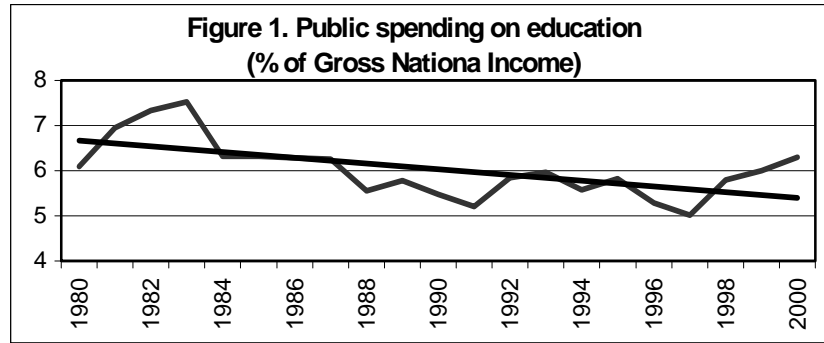
Overall, the strategy of industrializing the country was very unbalanced and put much more emphasis, without any obvious economic justification, on capital formation rather than job creation.

The low pace of job creation and the surge experienced by the capital labor ratio in the nineties can be also attributed to a certain extent to the real appreciation of the dirham. This real appreciation of the local currency may have lowered the cost of capital relative to labor and forced producers to improve their productivity by substituting capital for labor to regain competitiveness (IMF 2001).

3. Education

Human resource investments play a major role in economic growth process. Education is the main way available to workers to increase their productivity and incomes, and the most direct tool of equalizing opportunities across income and gender groups (World Bank 1995). The new growth literature has already shown that initial stock of human capital has more predictive power for future economic growth than does initial physical investment.

⁴ CNCA : Caisse Nationale de Crédit Agricole.



WDI (2001)

Figures on net enrollment ratio, defined as the ratio of the number of children of official school age who are enrolled in school to the population of the corresponding official school age, are presented in table 7. The net enrollment ratio in primary education increased from 39 percent in 1970 to 62 percent in 1980 and reached 80 percent in 2000. Despite the fact that parents are legally supposed to send their children to schools, more than two million school age children are still out of school.

The problem of access is the most acute in the dispersed rural areas and tends to affect more girls than boys. As can be learned from Doudich's paper (2002), the poorest households tend to be the least educated, and education sharply shapes population growth, female labor force participation and fertility. So far, education spending has mainly benefited urban and better-off segments of the population. In recent years, educational policy has increasingly targeted rural areas and female school enrollment, with significant achievements.

Table 7. Net School enrollment Ratio

	1970	1980	1985	1990	1995	2000
Primary	39	62	61	58	72	80
Secondary	13	20	29	29	33	33
Tertiary	1	6	9	11	11	11

Data from WDI (2001)

The public spending on education as a share of gross national income amounted to 6.3 percent in 2000 after it slowed down to an average of 5.5 percent from 1990 to 1998. The average public spending on education stood at 6.4 percent during the eighties. In spite of the relative slow down that occurred in the nineties, the government expenditure on education in Morocco is still high compared to other middle income countries.

The issue in Morocco has more to do with the quality of education, the allocation of resources devoted to education between rural and urban areas and among rich and poor households, and the efficiency of educational system. In 1999, Morocco posted the lowest grade among the four MENA countries that participated in the Third International Mathematics and Science test. As far as internal returns to education in Morocco are concerned, the following figure reveals the seriousness of the issue since out of 100 pupils enrolled in basic education only 12 reach university and not more than five obtain a diploma.

Figure 2. Internal Return to education in Morocco

Basic 1		Basic 2		Secondary			Higher	
1 Y	6 Y	7 Y	9 Y	1 Y	3 Y	diploma	1 Y	Diploma
100	72	65	48	36	21	13	12	5

Source: COSEF report

According to the World Bank estimates, one fifth of the budget of education is devoted to administrative overheads of the 260 000 employees. By breaking down expenditure for grades 1-6 and 7-12 one can easily notice that they are skewed against the fundamental education. Per student, expenditures devoted to secondary schools are 3.3 times higher than for primary schools. A significant share of education resources have been used to provide secondary and higher education free of charge, with a very limited focus on primary and rural education.

The increasing rate of graduates from higher education that are suffering from long-term unemployment reveals the multiple weaknesses of the Moroccan educational system and its inability to respond appropriately to the need of the economy. Despite the apparent oversupply of skills, the private sector employers often complain that educated workers lack the skills required in the marketplace.

According to the national survey on the labor force undertaken in 1999, unemployment among high diploma holders stood at 27.6 percent at the national level and 34.1 percent in rural area. Unemployed people with university level represent 21.3 percent of total unemployment, while they only count for 9 percent of the labor force. The number of unemployed graduates rapidly grown since the beginning of the eighties and increased from 94 200 in 1990 to 286 000 in 1999, which is equivalent to an annual growth rate of 12.3 percent.

Unemployed graduate females represent more than 42 percent of unemployed graduates, yet female population does not exceed 27 percent of total unemployment. This relative over representation of females in the specific segment of unemployed graduates may reflect the presence of some kind of gender bias against educated females. However, this apparent gender-bias may be rationalized by the existing social norms and practices according to which females are more constrained in terms of the workplace, time table and the type of tasks they can undertake.

Table 8. Unemployment rate and structure by level of diploma (1999)

	Unemployment rate			Unemployment structure		
	Urban	Rural	Total	Urban	Rural	Total
No diploma	15.2	3.8	0.4	35.1	62.1	40.2
Intermediate diploma	30.3	16.0	27.0	43.5	29.8	40.9
High diploma	27.2	34.1	27.6	21.3	7.8	18.7
Total	22.0	5.4	13.9	100	100	100

Source: National survey on the labor force, employment and unemployment (1999).

To sum up, the figures presented reveal clearly the efficiency loss born by Moroccan society as a whole since a large share of those who are supposed to improve productivity and contribute to growth are outside the production system. Educational system cannot be blamed

alone for the existence of such inefficiencies, they are also driven the capacity of the productive system to absorb highly educated people and to a certain extent to the excessive labor market regulations that discriminate against workers without experience or expertise.

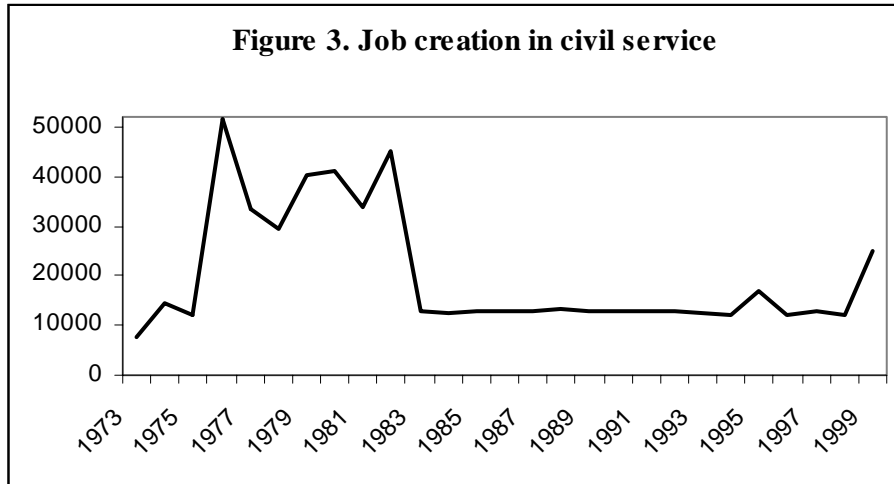
Since the beginning of the nineties, different measures aiming at reducing graduate unemployment have taken place. Firms are allowed to hire recent first job seekers graduates on a temporary basis, paying them roughly the official minimum wage and even receiving a subsidy for employing them. The purpose of such a scheme is to help young labor market entrants acquire practical experience. Other measures has been implemented to assist those among the unemployed graduates wishing to start their own businesses through special credit programs. These measures have covered only a limited number of unemployed graduates (chemists, lawyers, and medical professions). Although these schemes contributed to create new opportunities for some of unemployed graduates, there is no clear evidence of their effectiveness in tackling the issue.

Recently, a strategy for education reform over the medium term has been set out in the National Charter for Education and Training, drafted in 1999. The most immediate priority is to substantially increase primary enrollment. The Charter also intends to improve governance of universities, human resources, and partnerships with the private sector. In the spirit of the expected reform the quality of education must be upgraded and higher education must closely respond to business needs and requirements.

4. Public sector appointment policy

As has been shown so far, the large involvement of the public intervention in the economy contributed to a large extent to create distortions that lead to the observed outcomes in terms of growth and labor market functioning. The heavy public intervention overprotected industry at the extent of agriculture, distorted educational system, and stimulates capital-intensive investments at the extent of labor-oriented strategies.

The interventionist attitude gave rise to a large public sector in which the state and public enterprises employed a significant share of the labor force, particularly in urban area. Nevertheless, it has to be noticed that the share of public sector employment is relatively low in comparison with other MENA countries such as Koweit, Algeria, Jordan, Tunisia and Egypt. Its share has even shrunk following the privatization process and the slowness of the government hiring in the nineties. However, the public sector wage bill in Morocco is large either by regional or by international standards. It stands at 12.2 percent of GDP in 2001 which put constantly pressure of the government budget and threatens macroeconomic stability. According to IMF (2001), the wage bill and interest payments absorb almost three quarter of tax revenues, leaving few resources for other essential outlays, or for facing exogenous shocks such as droughts or higher energy costs.



Source: Ministry of Finance, Morocco (1999).

Jobs offered by the public sector are overprotected and relatively well paid. Public sector wages are even higher than in the private sector at all skill levels especially when all the benefits are accounted for (World Bank 1995). In addition, pay in the civil service is more sensitive to seniority than in the private sector, less sensitive to performance, and less rewarding for scarce skills. Based on these facts, students tend to acquire a type of education that allow them to work for the public sector ignoring the type of skills required by the private sector. A closer look at the type of education received by the unemployed graduates confirm this inference.

5. Labor market segmentation and excessive regulation

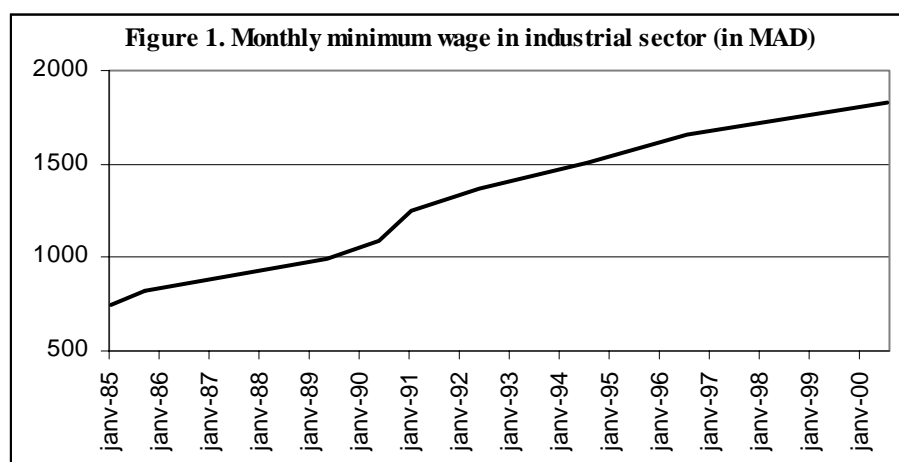
Alvaro and Rama (2000) show that countries with more rigid labor markets regulations experienced declines in economic growth rates before they adopted adjustment programs, and weaker recoveries afterwards. They also provide evidence that after adjustment, the flexible country grows faster than it did long before it, whereas the opposite is true for the rigid country. Their econometric analysis is based on four indicators of labor market rigidity. The level of minimum wages, the cost of mandated benefits, the strength of the labor unions, and the size of government employment.

Two important features have to be taken into account when dealing with the issue of labor market regulations: their coverage and their enforceability.

Labor regulations are irrelevant to small farmers and for the large and growing number of workers in the urban informal sector. Excessive regulation has even pushed much of the economic activity into informal sector and created a two tier system that overprotects formal sector employees and under protects informal sector ones (World Bank 1995).

The issue of enforceability and the extent to which regulations can be circumvented are also extremely important in shaping labor market outcomes. The labor code can include clauses that protect workers, but practically labor inspection agencies may not be efficient or corrupt and do not force employers to comply.

Labor law in Morocco sets a minimum wage and tightly restricts dismissals. The minimum wage seems to play a central role in private sector wage determination in Morocco. In the long run, the purchasing power of minimum wage has risen, while it has declined in many other developing countries. In the formal sector, minimum wage is equivalent to 50 percent of the average wage and 90 percent of the median wage. One third of employees of formal industrial sector, which accounts for 10 percent of urban employment, earns roughly the minimum wage. It has to be noticed that formal sector employment represents 27 percent of total urban employment.



Over the three last decades (1970-2000), the purchasing power of minimum wage in Morocco has increased by an average annual rate of 1.14 percent. In this respect, minimum wage has not only protected the purchasing power of workers but has also allow them to benefit from labor productivity improvements. A closer look to the data on industrial labor productivity computed as the ratio of the industrial value added to the number of employees corroborate this finding. In the meantime, industrial sector average experienced an average growth rate slightly below inflation rate and its purchasing power has declined at an average rate of 0.7 percent per year over the period 1980-1999. The decline was even higher in the eighties where it stood at 1.8 percent.

**Average annual growth rate of wage and labor productivity indicators
over the period 1980-1999 in percent**

	1980-1999	1980-1990	1990-1999
Industrial sector average wage	5.0	5.3	4.7
Purchasing power of industrial sector average wage	-0.7	-1.8	0.5
Minimum wage in industrial sector	7.7	10.3	4.8
Purchasing power of minimum wage in industrial sector	1.8	2.8	0.6
Nominal labor productivity	6.9	9.4	4.1
Real labor productivity	1.9	1.8	2.0

Source: Computed from industrial survey reports and yearbook statistics of Morocco.

However, in the short run minimum wage in Morocco has evolved very irregularly and without any direct link with the labor market conditions. To illustrate this purpose, minimum wage was frozen from 1996 to July 2000 and increased by as much as 10 percent in July 2000. This irregular pattern of minimum wage can be attributed to the exogeneity of the process of its setting. Econometric tests reject the hypothesis of any significant relationship between the level of minimum wage and urban unemployment, employment rate, cost of living or industrial labor productivity.

Empirical evidence tends also to suggest that this upward trend has reduced the demand for young skilled workers in the formal sector while the number of unskilled workers employed at less than the minimum wage, in small firms has risen.

The probability of losing his or her job for an employee who earns the minimum wage is significantly higher when the minimum wage is increased than if it is maintained at its level. This probability is also extremely higher when compared to the probability of losing his or her job for an employee who earns three times the minimum wage or more. Industrial survey data on employment show that on average and controlling for other variables, industrial employment tends to fall by 3 to 5 percent following the decision of raising the minimum wage.

In Morocco, there is evidence that imposed minimum wages and high severance payments have discouraged employers from hiring permanent workers, affecting the prospects on younger skilled workers and relegating unskilled workers to informal activities.

Private sector unionization rates are high in Morocco in comparison to other MENA countries. Nevertheless, a large share of private sector workers remain unorganized and in some sectors such as textiles and handicrafts, labor laws and regulations are only poorly enforced. Three main confederations lead the unionism in Morocco: the UMT (Union Marocaine des Travailleurs), the CDT (Confédération démocratique du Travail) and the UGTM (Union Générale des Travailleurs du Maroc). The latter two are tied to political parties. Another 15 smaller unions compete. The right to organize and bargain collectively exists in the constitution for a long time, but the “social dialogue” has initiated only recently to stop massive and frequent worker strikes. Unions often complain that managers and employers refuse to negotiate seriously. In addition no specific law protects workers from anti-union discrimination, and unions charge employers fire workers for trade union activity.

Conclusion

The purpose of the paper is to understand the reasons behind the low contribution of labor and more specifically human capital to economic growth in Morocco. It examines the institutional context in which the decisions of human capital accumulation are taken. It also presents labor market institutions and policies through which the signals are sent to the households. According to the literature; inefficient institutions and ineffective labor market policies distort the allocation of human resources across sectors and regions. They also limit the ability of the economy to reallocate labor from declining activities to innovative industries. Labor market functioning tends also to affect returns to education through the prevalent wage structure which may induce households to undertake inappropriate investments in human capital.

From the supply side of the labor market, three factors seem to have affected the size of the labor force in Morocco over the last decades: the effect of the high fertility rates experienced in the seventies and early eighties, the pace of urbanization, and the increase of female labor force participation. Although population growth declined to 2.06 percent over the period 1982-94 and stood at 1.6 percent for the period 1994-2000, and fertility rate declined from 7 children per woman in the sixties to less than 3 more recently; the labor force is still growing and the slowdown of fertility rates has not been reflected yet in the labor force. Over the last six years (1994-2000), the labor force in Morocco increased by an average annual growth rate of 3.57 percent. The fast growing labor force in Morocco combined with the low level of

GDP growth rate and its implications in terms of job creation explain to a large extent the worsening of the labor market conditions.

The accelerated growth of urban population compared to total population has also large implications in terms of allocation of the labor force among sectors as well as on the level unemployment rates in both urban and rural areas. Urban population has rapidly increased due to migration flows from rural areas. The average growth rate of urban population stood at 3.63 and 2.68 for the periods (1982-94) and (1994-2000) respectively. Accordingly, urbanization rate soared to 54.5 percent in 2000 while it did not exceed 29.2 percent in 1960 and 35 percent in 1971. To circumvent the scarcity of job opportunities, and the hard environment (lack of potable water, basic roads, and electricity⁵) that characterizes the rural area in Morocco; unemployed people move to the cities looking for better life. Roughly 100 000 people per year left rural area for the cities during the seventies. The net migratory flows reached 271 000 for the period 1986-88⁶. Urban areas have not been able to keep up with these large migratory flows in terms of employment, affordable housing and other basic social services (sanitation and schools). This phenomenon contributed to the expansion of informal activities, and vulnerable and unprotected occupations. The migratory flows have even strengthened over the last years due to the frequency of droughts.

The drastic reduction of fertility rate over the last three decades and the relatively higher educational attainment of women have had a decisive effect on women labor force participation. The proportion of females in total employment increased from 11.5 percent in 1960 to 19.3 percent in 1994 and 29.5 percent in 1999. In rural area, 35 percent of employed population are females, against 22.7 percent in urban area. Employed female population is highly concentrated in primary activities (agriculture, forestry and fisheries) that offer jobs to 62 percent of employed women against 41.8 percent for men. However, a large share of employed females particularly in the agriculture is considered as providing family help and does not obtain any salary or pay. Female participation is also relatively high in manufacturing which absorbs 17.9 percent of female labor force. The government sector and community services provide jobs for 8.8 percent of females especially in urban area where this percentage is as high as 24.5 against 18.8 percent for males. Public employment seems to attract more women in particular educated ones. To a certain extent, female labor force tends to crowd out male labor force in industrial sector. The crowding out is particularly pronounced for low skilled workers. In addition, women tend to be relegated to jobs that require little training and that can tolerate high levels of job turnover. The same finding has been suggested by Ragui (2002) in the case of the Egyptian labor market. There is also evidence that women accept low wages, harder working conditions and are less inclined to belong to unions in comparison with men⁷.

The second section explores the potential distorting effects of policy choices undertaken by policy makers in Morocco over the last four decades. Over the three first decades following the political independence, Morocco experienced an average GDP growth rate higher than the average rate of job creation. The gap was particularly significant in the sixties where GDP grew by 4.9 percent per year, and employment increased only by 2.1 percent per year. As a consequence of the low rate of job creation, unemployed population increased by an annual average rate of 5.7 percent in the seventies and by more than 6 percent in the eighties and early nineties.

⁵ Only 30 percent of rural population has piped potable water, and 20 percent has electricity. (LSMS 1998?).

⁶ Rapport National sur le Développement Humain (1997).

⁷ Rapport National sur le Développement Humain (1997).

To a large extent the strong increase experienced by unemployment records can be attributed to the economic policies designed at that time in which substantial incentives were given to capital intensive investments both in agriculture and industry. Employment was not considered as a priority in any of the first economic plans and was assumed to be an automatic outcome of sustained economic growth.

In agriculture, the expansion of the modern irrigation system has been a pillar of Moroccan policy prior and since independence. Conversely, traditional agriculture and the rain fed areas have less benefited from the effort of public investment. Expenditures on small scale irrigation have even gone down sharply since 1990 compared to expenditures devoted to modern irrigation systems. Most of the projects in modern agriculture were capital intensive and led to very limited job opportunities. In the meantime, the vast majority of rural population (80 percent) live in non irrigated areas and continue to be very vulnerable to weather conditions. This vulnerability is even increased by the ownership structure of land in rural area. Roughly 25 percent of farmers do not own any plot of land and 68 percent of farmers have plots of less than 10 ha.

Regarding the industrial sector, large investments were undertaken during the seventies. Gross fixed capital as a share of GDP increased from 14 percent in 1973 to 33 percent in 1977. During the period 1973-1977, investment in industrial sector increased by 29 percent per year on average while employment has only increased by 7.2 percent over the period 1971-82. The strategy of industrializing the country was very unbalanced and put much more emphasis, without any obvious economic justification, on capital formation rather than job creation.

The third section investigates the educational system as the main mechanism through which human capital is accumulated. In spite of the relative slow down that occurred in the nineties, the government expenditure on education in Morocco is still high compared to other middle income countries. The issue has more to do with the quality of education, the allocation of resources between rural and urban areas and among rich and poor households, and the efficiency of educational system. Evidence shows that the poorest households tend to be the least educated. So far, education spending has mainly benefited urban and better-off segments of the population. According to the World Bank estimates, one fifth of the budget of education is devoted to administrative overheads of the 260 000 employees. By breaking down expenditure for grades 1-6 and 7-12 one can easily notice that they are skewed against the fundamental education. Per student, expenditures devoted to secondary schools are 3.3 times higher than for primary schools. A significant share of education resources have been used to provide secondary and higher education free of charge, with a very limited focus on primary and rural education.

The increasing rate of graduates from higher education that are suffering from long-term unemployment is another weakness of the Moroccan educational system, it reveals its inability to respond appropriately to the need of the economy. According to the national survey on the labor force undertaken in 1999, unemployment among high diploma holders stood at 27.6 percent at the national level and 34.1 percent in rural area. Unemployed people with university level represent 21.3 percent of total unemployment, while they only count for 9 percent of the labor force. The number of unemployed graduates rapidly grown since the beginning of the eighties and increased from 94 200 in 1990 to 286 000 in 1999, which is equivalent to an annual growth rate of 12.3 percent.

Since the beginning of the nineties, different measures aiming at reducing graduate unemployment have taken place. Firms are allowed to hire recent first job seekers graduates on a temporary basis, paying them roughly the official minimum wage and even receiving a subsidy for employing them. The purpose of such a scheme is to help young labor market entrants acquire practical experience. Other measures has been implemented to assist those among the unemployed graduates wishing to start their own businesses through special credit programs. These measures have covered only a limited number of unemployed graduates (chemists, lawyers, and medical professions). Although these schemes contributed to create new opportunities for some of unemployed graduates, there is no clear evidence of their effectiveness in tackling the issue.

Recently, a strategy for education reform over the medium term has been set out in the National Charter for Education and Training, drafted in 1999. The most immediate priority is to substantially increase primary enrollment. The Charter also intends to improve governance of universities, human resources, and partnerships with the private sector. In the spirit of the expected reform the quality of education must be upgraded and higher education must closely respond to business needs and requirements.

The fourth section of the paper examines the contribution of the public sector to employment. The public sector wage bill in Morocco is excessive and tends to put constantly pressure on the government budget, which threatens macroeconomic stability and restrains growth prospects. According to IMF (2001), the wage bill and interest payments absorb almost three quarter of tax revenues, leaving few resources for other essential outlays, or for facing exogenous shocks such as droughts or higher energy costs. Jobs offered by the public sector are overprotected and relatively well paid. Public sector wages are even higher than in the private sector at all skill levels especially when all the benefits are accounted for (World Bank 1995). In addition, pay in the civil service is more sensitive to seniority than in the private sector, less sensitive to performance, and less rewarding for scarce skills. Based on these facts, students tend to acquire a type of education that allow them to work for the public sector ignoring the type of skills required by the private sector. A closer look at the type of education received by the unemployed graduates confirm this inference.

Finally, the last section presents labor market regulation in Morocco and the extent to which they are effectively enforced. It attempts to assess the extent to which the existence of minimum wage has protected the purchasing power of workers. Labor law in Morocco sets a minimum wage and this seems to play a central role in private sector wage determination in Morocco. In the formal sector, minimum wage is equivalent to 50 percent of the average wage and 90 percent of the median wage. Over the three last decades (1970-2000), the purchasing power of minimum wage in Morocco has increased by an average annual rate of 1.14 percent. In this respect, minimum wage has not only protected the purchasing power of workers but has also allow them to benefit from labor productivity improvements. In the meantime, industrial sector average experienced an average growth rate slightly below inflation rate and its purchasing power has declined at an average rate of 0.7 percent per year over the period 1980-1999. The decline was even higher in the eighties where it stood at 1.8 percent.

However, in the short run minimum wage in Morocco has evolved very irregularly and without any direct link with the labor market conditions. To illustrate this purpose, minimum wage was frozen from 1996 to July 2000 and increased by as much as 10 percent in July 2000. This irregular pattern of minimum wage can be attributed to the exogeneity of the process of its setting. Econometric tests reject the hypothesis of any significant relationship

between the level of minimum wage and urban unemployment, employment rate, cost of living or industrial labor productivity. Empirical evidence tends also to suggest that this upward trend has reduced the demand for young skilled workers in the formal sector while the number of unskilled workers employed at less than the minimum wage, in small firms has risen. In Morocco, there is evidence that imposed minimum wages and high severance payments have discouraged employers from hiring permanent workers, affecting the prospects on younger skilled workers and relegating unskilled workers to informal activities.

The probability of losing his or her job for an employee who earns the minimum wage is significantly higher when the minimum wage is increased than if it is maintained at its level. This probability is also extremely higher when compared to the probability of losing his or her job for an employee who earns three times the minimum wage or more. Industrial survey data on employment show that on average and controlling for other variables, industrial employment tends to fall by 3 to 5 percent following the decision of raising the minimum wage.

Private sector unionization rates are high in Morocco in comparison to other MENA countries. Nevertheless, a large share of private sector workers remain unorganized and in some sectors such as textiles and handicrafts, labor laws and regulations are only poorly enforced.

Appendix

Employees by sector and number of schooling years

(Employment survey in urban area 1993)

	Civil service	Public enterprise	Private (<10 employees)	Private (>10)	Household s	Other sectors	Total
0-5 years	38.2	47.0	87.5	72.6	99.0	33.9	62.9
6-9 years	13.5	14.1	5.0	8.4	0.9	16.2	9.6
10-12 years	10.0	12.4	5.3	8.8	0.1	18.4	8.6
13-16 years	16.1	18.8	2.1	9.2		29.5	10.7
More than 16 years	22.3	7.7	0.1	1.0		1.9	8.2
Total	100	100	100	100	100	100	100

Employees by number of schooling years and sector

(Employment survey in urban area 1993)

	Civil service	Public enterprise	Private (<10 employees)	Private (>10)	Household s	Other sectors	Total
0-5 years	19.1	7.9	34.6	32.5	5.0	1.1	100
6-9 years	43.9	15.4	12.8	24.5	0.3	3.2	100
10-12 years	36.6	15.1	15.4	28.8	0.1	4.0	100
13-16 years	47.3	18.5	4.8	24.2	0.0	5.2	100
More than 16 years	85.9	9.9	0.3	3.5	0.0	0.4	100
Total	31.4	10.5	24.8	28.2	3.2	2.0	100