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Making trade work for jobs: international evidence and lessons for MENA

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Making Trade Work for Jobs :
International Evidence and Lessons for MENA

by

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Views expressed in this paper are those of the authors' and should not be necessarily attributed to the organizations they are associated with.

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1. Introduction

Accelerating the pace of job creation is a key challenge in MENA. Across the region unemployment is high and the working age population is growing fast. Even though the young and fast growing labor force is a valuable asset for the future, it also presents a serious challenge: How to achieve faster, more labor-intensive growth, to accelerate job creation and reduce the currently very high unemployment rates across the region? Past policies, relying on the expansion of public sector employment, the use of oil rents to stimulate domestic demand, migration, growth in agricultural employment, are running out of steam, calling for more innovative approaches to stimulate employment growth.

Can trade expansion help MENA countries step up the pace of job creation? In a number of countries that successfully integrated into global markets, export-led growth has eventually brought large employment dividends. But evidence on the impact of trade on employment is not clear-cut because usually, in developing countries, trade expansion often relies on trade liberalization that may hurt sheltered sectors in the short term and displace workers in import-competing industries. Moreover, the reforms that help expand trade are part of more comprehensive programs aimed at improving competitiveness and economic efficiency that may also entail adjustment costs. However, trade expansion holds the promise of substantial dividends in terms of job creation and income growth in the medium term. The delocalization of production in developing countries, in labor-intensive manufacturing such as textiles and clothing, footwear, and food processing, eventually spurs the demand for labor and boosts workers' earnings.

The paper examines the medium-term relationship between international trade and employment in manufacturing in developing countries. The analysis draws on a panel data set from 59 developing countries, spanning five-year periods from the early 1960s to the late 1990s. Evidence reveals a positive medium-term association between employment in manufacturing and openness to trade, after controlling for other structural determinants of employment. By contrast, an opposite relationship is found in high-income countries.

But countries in MENA find it difficult to make trade a driver of employment creation and growth. After controlling for other structural determinants of employment in manufacturing, evidence suggests that trade openness has contributed less to overall employment creation in manufacturing in MENA compared to trends seen elsewhere in developing countries. This is so partly because MENA exports are concentrated in low value added, slowly-growing products, and partly because MENA trade is poorly linked to global production networks and FDI flows (Nabli and De Kleine, 2000; Yeats and Ng, 2000; Petri, 1997a,b). Evidence indeed suggests that while the impact of trade expansion on employment in manufacturing is highly significant in developing countries that are large FDI recipients, trade adds only little to job creation in countries that receive only small amounts of FDI.

To step up employment growth, MENA exports would need to be diversified away from raw materials and resource-based manufactures, towards high value-added, labor-

intensive products, linked more closely with international production networks and global investment flows. The challenge is to bridge the “quality gap” in MENA trade, through deeper integration with trade partners and improved attractiveness to investment. To meet this challenge, trade liberalization will not be enough. Companion policies would be needed to strengthen the investment climate and relax the “beyond-the-border” constraints—especially in trade-related services—that increase the cost of doing business and limit the attractiveness of MENA as a place to invest.

2. The employment challenge in MENA

Accelerating the pace of job creation is a key policy challenge in MENA because unemployment across the region is among the highest in the world—at above 15 per cent in most countries, and close to 30 per cent in Algeria. High unemployment hinders the reduction of poverty, adds to inequality, and feeds social instability in an already fragile region. As a result of slow growth and the slack in the labor market, real wages fell by 30-50 per cent in 1980-90, and have stagnated or fallen since. Projections suggest that the required employment growth in MENA, to reduce the unemployment rate by half over the next 15 years, would range between 4 and 5 per cent per year—well above the average growth of 2.5-3 percent seen in the past (Figure 1.a; also see Dhonte et al., 2001).

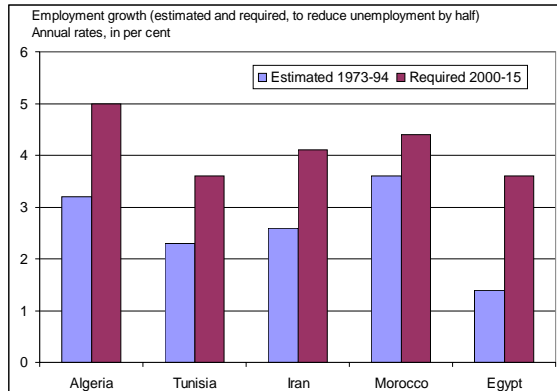
Fast employment growth is needed not only because of the high actual unemployment, but primarily owing to the fast growth of working-age population. Although the growth of working-age population in Arab countries is projected to slowdown somewhat over the next 15 years, it will remain significantly faster than in the rest of the world, adding to labor market pressures (Figure 1.b). Moreover, reflecting the very low and rising participation rates of women, the labor force is likely to grow even faster in the years ahead. Thus, unless the pace of employment growth accelerates, unemployment could rise further across the region. According to estimates, 50 million new jobs would need to be created over the next 10 years to employ expected additional job seekers. This is four times bigger than in Eastern Europe and Central Asia, and about as much as in all of Latin America—a region three times bigger than MENA in terms of GDP. The employed workforce would need to rise by almost 60 per cent in 10 years—an even stronger increase than in East Asia in its years of high growth.

The employment challenge is further complicated by the important structural imbalances in MENA labor markets that heighten economic inefficiencies and exacerbate social tensions. First, unemployment is more severe among female workers and on the rise—exceeding by far levels seen in other middle-income developing countries (Figure 1.c). This discourages the participation of women in the labor force—thus preventing a needed increase in the very low female participation rates—and denies MENA a significant part of its productive human resources. Second, compared to other middle-income countries, unemployment in MENA is much higher among skilled workers with secondary education, while unemployment of workers with higher education remains very high as well (Figure 1.d). Thus, MENA countries are losing the benefit of substantial past investments in human capital—a sizeable opportunity cost in a context where the

knowledge-based economy is becoming an increasingly strong driver of growth. The high rates of unemployment among the educated and female workers are also reflected in severe unemployment among the young and first-time job seekers.

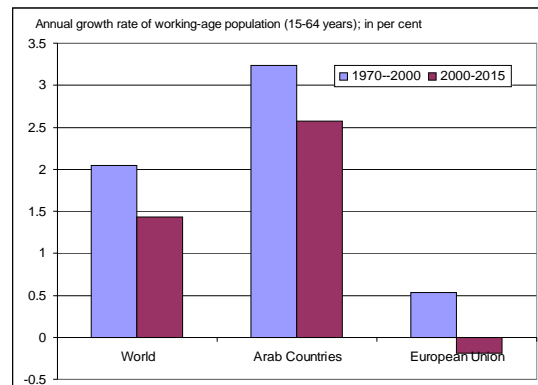
Figure 1: Accelerating job creation in MENA—a multifaceted challenge

To reduce unemployment job creation will have to accelerate significantly...



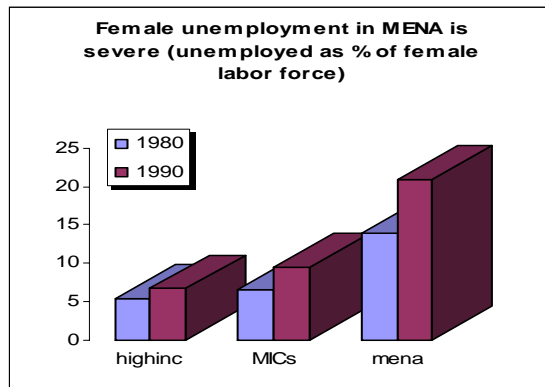
(a)

...because fast growing working-age population will exacerbate pressures in MENA labor markets



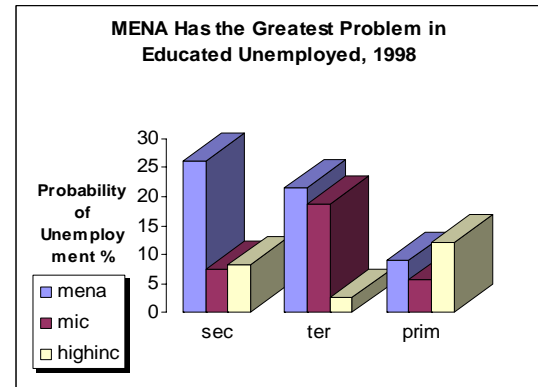
(b)

Improving employment prospects of women remains a challenge...



(c)

...while high unemployment of skilled workers involves a significant waste of human resources



(d)

Source: Authors' calculations; partly based on data from Dhonte et al. (2001)

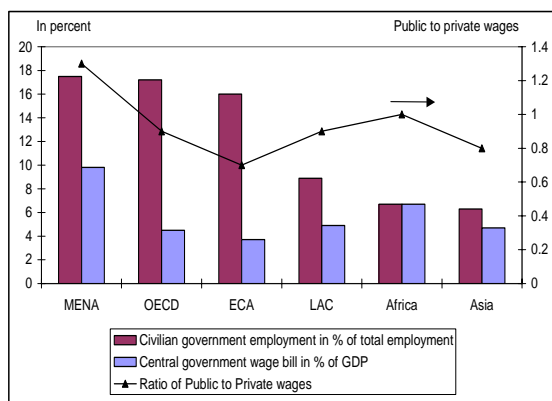
Even more worrisome is the fact that in the face of sluggish job creation, continuing pressures from population growth, and structural imbalances in the labor market, the mechanisms that sustained employment in past are running out of steam. In MENA, public sector employment (in civil service and public enterprises) expanded rapidly in the 1970s and 1980s in response to the oil boom, because it was seen as a convenient means

of redistributing income; providing a social safety net; and alleviating the pressures of the fast growing flow of new entrants to the labor market. Despite efforts to scale back public employment and pay in the 1990s, prompted by the reversal of the oil boom, both public sector employment and the wage bill remain higher in MENA than elsewhere in developing countries and cannot be relied upon to promote employment in the years ahead (Schiavo-Campo, de Tommaso, and Mukherjee, 1997; Figure 2.a). If anything, public employment would have to be downsized, as in many MENA countries the wage bill in the public sector exceeds that in private sector manufacturing—contrary to patterns seen in other developing countries, including the economies in transition (Figure 2.b). Moreover, employment in agriculture, which still accounts for about 30 per cent of jobs on average in MENA, is declining. If anything, the shift out of agricultural employment would further intensify pressures on the labor market. Migration has also provided substantial relief to MENA labor markets in the past. However, with slowing growth in high-income countries and tighter immigration controls the pace of migration has considerably slowed. For example, Egyptian immigrant workers, which account for about 10 per cent of the workforce, have been stagnant since 1997.

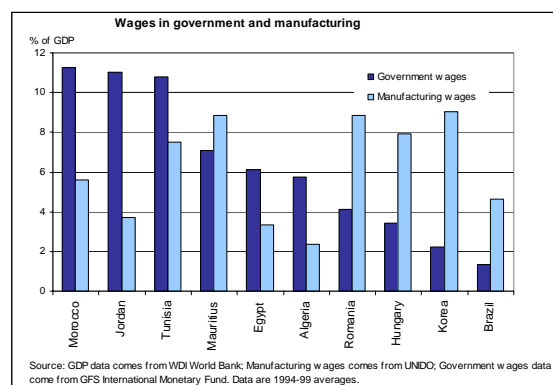
Figure 2: Patterns in public sector employment and pay

Public sector employment and pay remain overweight in MENA countries...

...and, contrary to patterns seen elsewhere, public sector pay exceeds the wage bill in private-sector manufacturing



(a)



(b)

Note: Figure 2.a. refers to the early 1990s.

Source: Based on Schiavo-Campo, de Tommaso, and Mukherjee, 1997, and authors' calculations.

3. Can trade expansion become an engine of job creation?

World merchandise trade has grown rapidly during the 1990s, at an annual rate of about 9 per cent, and is also expected to be a major engine of growth over the next ten to fifteen years (World Bank, 2001). Thanks to continued reforms that have enhanced competitiveness, developing countries are gaining strength in global non-energy merchandise export markets, with their market share increasing more than 7 percentage

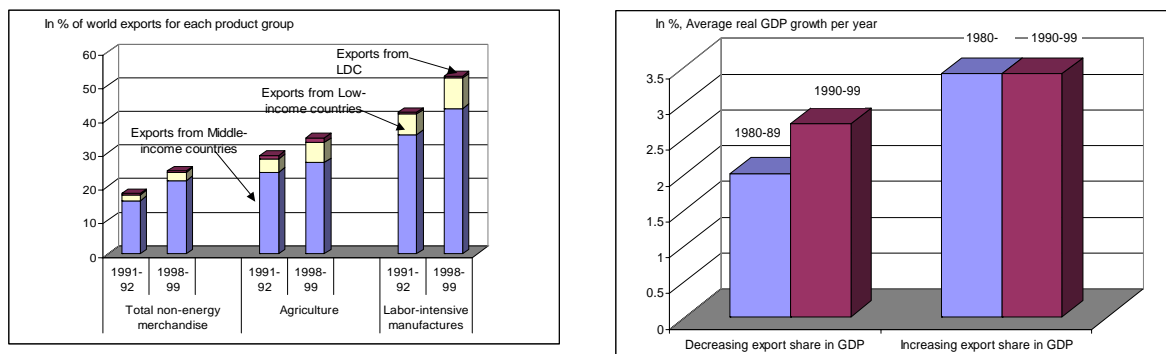
points over the 1990s (Figure 3.a). And despite still high market access barriers in labor-intensive manufactures such as textiles and clothing, footwear, and food processing, developing countries' exports increased sharply in the 1990s, and their export market share now surpasses that of high-income countries.

Trade expansion, especially in the form of rising exports, has been a major source of growth in developing countries. During each of the past two decades, developing countries which have had fast export growth—leading to an increase in the share of non-energy merchandise exports in GDP—have also had, on average, 1 per cent higher real GDP growth (Figure 3.b). Faster overall growth is in turn the prerequisite for accelerated job creation. And global trade in manufactures can be a major driver for employment growth in the years ahead, as it is expected to increase almost threefold by 2010, compared to the late 1990s. By contrast, trade in non-oil commodities is projected to double, and trade in fuels is expected to rise by only 50 per cent (Riordan et al., 1997). Thus, from the demand side, there is ample room for further growth in MENA's non-energy exports, provided the region succeeds to meet the challenge of increased competition in global markets.

Figure 3: Export performance and output growth in developing countries

Developing countries are gaining market share in exports of labor intensive manufactures...

...and a rising export share in GDP is associated with faster growth in developing countries



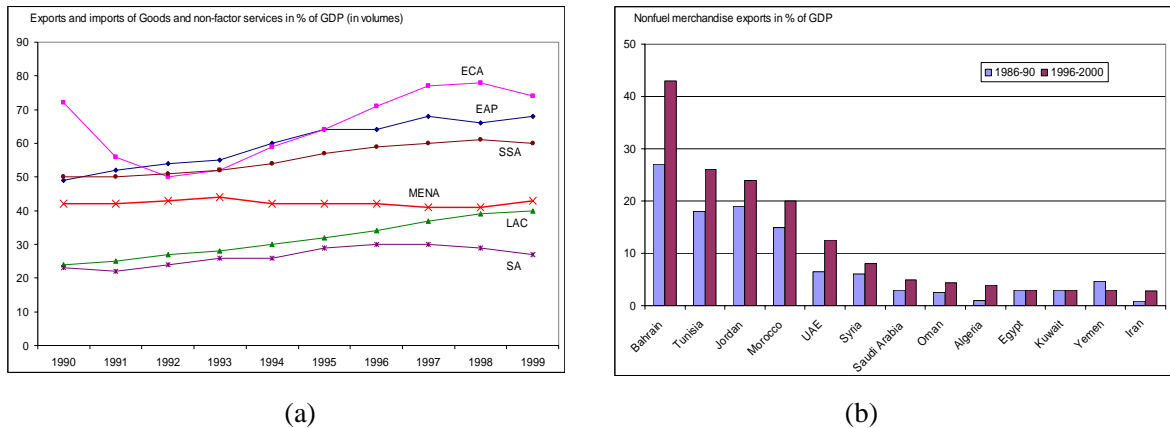
Source: World Bank, GEP 2002

However, MENA was bypassed by expanding global trade in the 1990s. Across the region, trade flows have stagnated at about 40 per cent of GDP on average, while in other developing regions trade expanded rapidly (Figure 4.a). The trade performance of MENA countries is even weaker when non-hydrocarbon exports are considered separately. While a few countries—such as Bahrain, Morocco, Tunisia, Jordan, and the UAE—succeeded in diversifying their exports, non-hydrocarbon merchandise exports remain in a number of countries compressed to very low levels, at below 5 per cent of GDP (Figure 4.b). This is even more of concern in countries with a large labor force—such as Algeria, Egypt, and Iran—that face high and rising levels of unemployment, because the hydrocarbon sector and the downstream industries contribute little to job creation.

Figure 4: Trade patterns in MENA

MENA was bypassed by growing global trade in the 1990s...

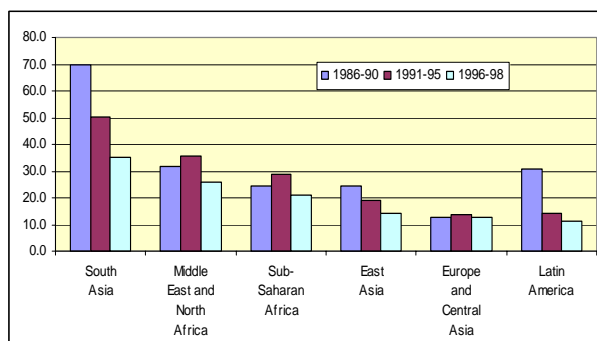
...and, despite progress in a few countries, export diversification out of hydrocarbons remains limited



Source: Author's calculations

The slow integration of MENA countries into global trade reflects bottlenecks in export capacity, but is also linked to the still high levels of protection of domestic markets. Despite some progress in the late 1990s in liberalizing external trade regimes, partly in connection with the Association Agreements with the EU and partly as a result of unilateral moves, the average level of tariff protection still remains higher in MENA than elsewhere in developing countries—with the exception of South Asia (Figure 5). Regions such as Latin America, where trade protection used to be as high as in MENA, have slashed tariffs by more than three times in a decade, while low-income regions, such as Sub-Saharan Africa, have reduced tariffs to levels below those in MENA. Besides tariff barriers, “para-tariffs” are also widespread in MENA. They are often geared to raising revenues for the state, but they also in effect protect domestic companies (Zarrouk 2000).

Figure 5: MENA markets still remain highly protected



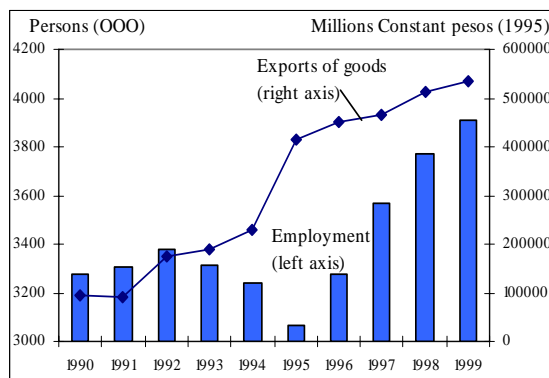
Source: Authors' calculations

The delocalization of production of labor-intensive manufactures in developing countries has the potential of spurring the demand for labor and boosting workers' earnings. The most visible part of job creation, driven by exports of labor-intensive manufactures, has been associated with FDI—as for example in China's Eastern provinces, or in Mexico's Maquiladoras. Thanks to the NAFTA and radical economic reforms, Mexico's trade more than tripled, from USD 82 billion in 1990 to about USD 280 billion in 1999, making Mexico the seventh largest trading nation in the world. The pace of job creation has been particularly swift in manufacturing that shared most in the expansion of trade (Figure 6.a). Job creation has also been strong in export processing zones in a number of developing countries—such as Mauritius, the Dominican Republic, and El Salvador (Rama 2001).

Indonesia is an earlier example of a country that started a major trade reform effort in the mid-1980s, substantially reducing nontariff barriers and impediments to foreign investment in the process. Manufactured exports and FDI boomed and were accompanied by rising manufacturing employment rates (Figure 6.b). The Indonesia case is especially relevant to some MENA countries, since Indonesia was “single-engine” economy (oil and natural resources) until the mid-1980s, when it found a new engine of growth in the form of manufactured exports (Agrawal, 2002). In MENA, Tunisia is an example of successful diversification out of resource-based exports. Tunisian exports of textiles and clothing have boomed in the distortion-free environment for “off-shore companies” that supply foreign markets, while employment in the offshore sector increased steeply.

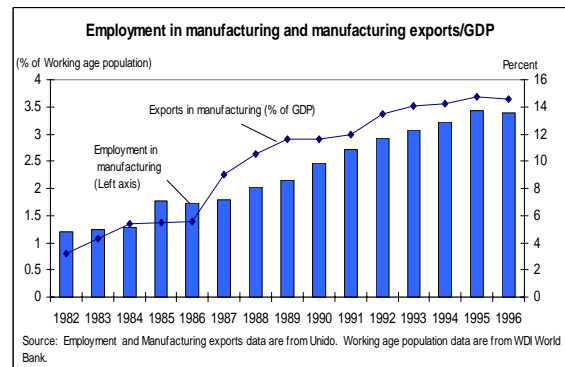
Figure 6: Examples of trade expansion and job creation in manufacturing

Mexico's booming exports have boosted manufacturing employment after accession to NAFTA



(a)

In Indonesia exports have also promoted employment in manufacturing



(b)

Source: Author's calculations

However, trade expansion may occur in a number of different ways that affect employment differently—for example, as a result of better access to foreign markets, due

to lower international trade barriers, or owing to export-oriented foreign direct investment seeking to take advantage of an economy's comparative strengths. But, in most cases, sustained trade expansion follows domestic reforms that reshape taxes and incentives in the economy. Typically such reforms call for lowering tariff protection and non tariff barriers with the aim of reducing the anti-export bias of protective external trade regimes—especially in countries where narrow domestic markets cannot provide sufficient support for industrial growth. Trade liberalization reduces the anti-export bias, as it helps domestic producers purchase inputs at internationally competitive cost. By increasing the profitability of export sectors, trade liberalization helps shift resources to the uses where countries enjoy the greatest comparative advantage.

Because the previously protected import-substitution sectors are likely to be capital-intensive, semi-skilled (especially female) labor is likely to be underutilized. With sizeable amounts of labor staying underemployed in the home, or queuing for public sector employment, trade liberalization is likely to have a net positive impact on employment *in the medium term*. But in developing countries the fear is that massive trade liberalization would erode rents, expose inefficient industry to competition and cost jobs. Indeed, trade liberalization may disrupt job creation *in the short term* for a number of reasons:

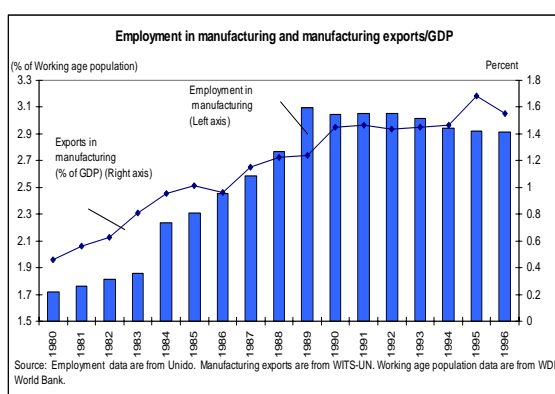
- Lowering trade barriers may initially hurt sheltered domestic producers and displace unskilled workers in import-competing industries. Though import-competing industries are usually capital-intensive, in many middle-income countries—and also in MENA—industries intensive in unskilled labor are often protected disproportionately, because they face potentially stiff competition from lower-cost producers (Wood, 1997). For example, in Morocco, before trade liberalization, the nominal tariff and import license coverage in apparel and footwear was among the higher in manufacturing (Currie and Harrison, 1997). Similarly, in Egypt, import-weighted tariffs on textiles were in 1995 about three times higher than average tariffs for the economy as a whole (Dessus and Suwa-Eisenman, 1998).
- Trade reallocates activity and labor across import-competing and export-oriented sectors. But while market exit of previously sheltered companies may be swift, business expansion takes time, and the timing of the net benefits will depend on the flexibility of product and labor markets, and on the availability of finance. Bottlenecks in the access to credit or in the availability of trade-related services (transport, communications) may tame the growth of export-oriented industries in the medium term. Moreover, the quality of the investment climate affects investment and, thus, job creation. In some cases the investment climate may not be sufficiently attractive—so that export-oriented companies may lack incentives to expand and absorb labor released by the contracting, import-competing industries.
- Companion policies—such as exchange rate management—also affect the impact of trade policy reform. Exchange rate misalignment has been a factor of weak

export performance in manufacturing in MENA (Nabli and Veganzones, 2002; Sekkat and Varoudakis, 2002). Morocco is a case in point: Over the 1980s, Morocco witnessed fast growth in exports and employment in manufacturing, supported by trade liberalization. However, over the 1990s the growth in manufactured exports and employment run out of steam, partly owing to deteriorating competitiveness (Figure 7.a). The fixed exchange regime implemented in the 1990s helped achieve stabilization, but led to a 22 per cent appreciation of the real effective exchange rate over the decade, which heightened competitive pressures on the tradable goods sector (Figure 7.b). The association of the textile producers reported the loss of 29,600 jobs in the textile industry (about 12 per cent of employment in that industry) since 1999 (IMF, 2001).

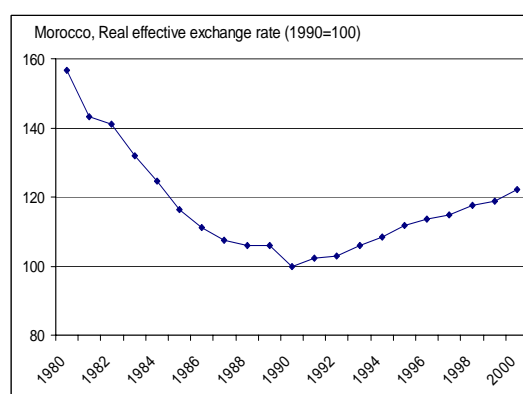
Figure 7: Growth of manufactured exports and employment in Morocco

Over the 1990s, the boom of manufactured exports run out of steam...

...partly reflecting an appreciation of the real effective exchange rate



(a)



(b)

Source: Authors' calculations—based on IMF data on the real effective exchange rate

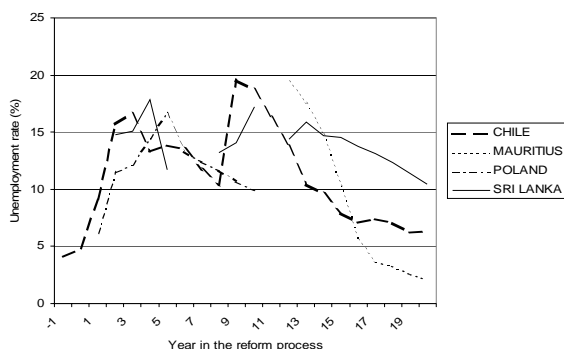
Trade liberalization may thus typically lead to an increase in the rate of unemployment, which may take some time to reverse (Figure 8.a). Although unemployment is generally trending downward in the medium term, its persistence will depend on market flexibility, exchange rate policy, and other reforms that may accompany trade liberalization. In the adjustment process the impact of trade liberalization is difficult to single out, because other reforms—such as privatization of state-owned enterprises and reforms of bloated administrations and government agencies—are also likely to generate employment costs.

Job destruction has been particularly dramatic when trade policy reform has been associated with large-scale downsizing of state-owned enterprises, as in the transition economies where millions of workers had to be made redundant for the restructured enterprises to become profitable as private firms. For example, in Algeria, an estimated 500,000 workers—about 10 per cent of the labor force—lost their jobs from 1995 to 1999 as a result of, still partial, restructuring of non viable state-owned enterprises.

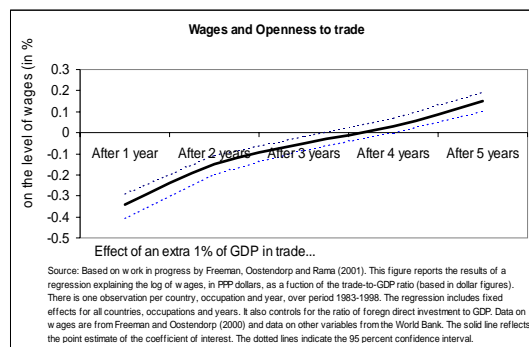
Figure 8: Adjustment costs to trade liberalization

Adjustment costs to trade liberalization may spread over time, depending on market flexibility and other ongoing reforms...

...but in the medium term the benefits tend to outweigh the costs, as real wages tend to grow faster



(a)



(b)

Source: World Bank

The increase in unemployment during the adjustment to trade liberalization may also be associated with a decline in real wage growth, as a result of the slack in the labor market (Figure 8.b). But evidence on the net employment impact of labor market adjustment is mixed. In Mexico, Revenga (1997) found that even in the protected sectors, trade liberalization resulted in lower wages when rents were eroded rather than lower employment. The wage reductions were uneven but a feature of her micro data set was that it showed wage reductions but no employment reductions across the board. Experience in Morocco tells a similar employment story. Although experience across different occupations differed, trade liberalization surprisingly had no noticeable impact on either wages or employment. Currie and Harrison (1997), who studied a large micro data set for Morocco, concluded that the reduction in economic rents was absorbed by a reduction in profit margins and improvements in labor productivity but not less overall employment. In the medium term, as the labor-intensive, export-oriented sectors gain strength, the demand for labor increases, and leads to an increase in the real wages. The net benefit to wage earners shows up on average after the fourth year of the adjustment process (Figure 8.b).

4. The medium-term impact of trade expansion on manufacturing employment: Evidence from developing and high-income countries

To assess the medium-term impact of trade expansion on employment, we examined evidence from both developing and high-income countries. The developing country sample includes 59 countries—containing about 140 observations, spanning five-year periods from the early 1960s to the late 1990s. The high-income country sample includes 22 countries and 135 observations on five-year periods, spanning over the same period. In order to remove short run fluctuations, we averaged the data over five-year periods.

Casual inspections of the developing country sample reveals a positive medium-term association between employment in industry (as a share of the total working-age population) and openness to trade, but the association is at first sight weak, because there is considerable variation in employment outcomes across countries (Figure 9). Cross-country differences in employment ratios in manufacturing reflect, indeed, a number of diverse factors apart from trade, that may affect the demand (or the supply) of labor. Such factors may include the relative size of the primary and services sectors—which depends on the level of development; the overall level of production capacity and technical skills in manufacturing; the size of the informal economy (since the reported employment ratios capture employment in the formal sector); the level of real wages; but also socioeconomic factors that affect the participation of women in the labor force.

Figure 9: Employment in manufacturing and trade flows: Evidence from developing countries



Source: Authors' calculations

To account for different structural factors that may affect employment in manufacturing, we estimated employment equations that include other determinants of the demand for labor along with a variable for trade effects. The explained variable in the regressions presented in the tables below is employment in manufacturing in per cent of working-age population. A number of controls were used: (i) real labor costs per worker; (ii) a measure of total physical capital as a ratio to total employment; (iii) the real interest rate. The capital-to-employment ratio captures changes in manufacturing employment due to growth in production capacity, but also due to the shift of employment between sectors

along with economic development (e.g., from manufacturing to the services sector). All regressions are logarithmic (except for the real interest rate) and were run using fixed effects. Four different indicators of trade expansion were used: (i) total trade flows (the sum of exports and imports); (ii) total exports; (iii) merchandise exports; and, (iv) merchandise exports excluding hydrocarbons. All four indicators are measured relative to GDP. While the three last indicators are proxies of export-led growth, the first indicator also accounts for import penetration, and thus also indirectly reflects the impact of trade liberalization (Box 1).

Box 1: Measuring the impact of trade liberalization on employment

Employment effects are likely to be different when trade expansion is the result of a reform process that restructures implicit and explicit taxes and incentives in the economy. In developing and transition economies trade expansion usually follows a reform process that may well have more important effects on employment than the growth of trade itself. Usually these other effects are more difficult to assess, and likely to be more diverse than the reallocation effects of trade. The diversity of the likely effects is the reason behind the fact that the empirical literature has not reached a consensus about the overall effects of trade on labor market outcomes.

If trade liberalization follows other reforms, should one attribute the employment effects of the whole process to trade? In an ideal world the answer is likely to be no. But in the real world of political economics a country needs to have incentives to reform. The institutions that are dismantled in the reform process shield some sections of society and these sections are usually ones with the power to stop the reform from taking place. The prospect of beneficial trade growth gives incentives to those in power to push through the reforms, and those that are hurt by the process to accept them.

In the statistical analysis it would be difficult to describe the institutional framework of each country and measure the implications of its reform. There is very little in the literature on measures of institutional rigidity, and what there is usually applies to single points in time and to the richer countries that keep more complete statistical records. It is therefore not possible to disentangle the employment effects of institutional reform from those of the trade expansion that follows the reforms. But our usual measures of trade expansion may not be bad proxies for reform. A country that dismantles rigid institutions in labor markets when it liberalizes trade is likely to experience faster trade growth than one that keeps the rigid institutions. Trade growth in the statistical analysis picks up both the direct effects of trade and the indirect effects of reform. For this variable to be a good proxy it has to bear a monotonic relation to the degree of reform. Although there is no research on this point, intuitively it makes sense. Trade growth normally requires restructuring of employment and countries with flexible labor markets are in a better position to take advantage of the new trade opportunities that liberalization offers.

The equation fits the data well, with real wages having a negative impact on employment in manufacturing and capital having a positive impact (Table 1). The size and significance of the coefficients varies according to the different specifications. All else equal, a 10 per cent increase in real labor costs lowers the industrial employment ratio by an estimated 2 to 3 per cent on average. High real interest rates appear to also depress

industrial employment—though in a statistically less robust way across the different specifications.

The findings suggest that trade expansion has a positive medium-term impact on employment in developing countries. All coefficients associated with trade expansion are statistically significant. This comes true for the various measures of export performance, but also for the broader measure of trade openness that accounts for import penetration. All else equal, a 10 per cent increase in the share of non-oil merchandise exports in GDP is associated with an increase in the employment ratio in manufacturing by about 1.4 per cent, while the same increase in the share of trade flows in GDP could raise the employment ratio by an estimated 2.3 per cent.

The estimates also accounted for the fact that the measures of trade expansion are endogenous, which could be at the origin of some bias to the extent that both trade and employment in manufacturing could be affected by a common set of factors not included in the regression. One of the specifications (Table 1; sixth column) uses the black market premium, total world trade as a share of world GDP, and the country population, as instruments for trade expansion. The results are consistent with the previous specifications, with total merchandise exports remaining a significant determinant of the manufacturing employment ratio. However, when instrumental variables are used, the significance of trade expansion is not always robust across specifications.

Table 1: Determinants of employment in manufacturing—developing countries
(Dependent variable: ratio of employment in manufacturing to working-age population)
(Estimation period: 1960-1995)

Employment in manufacturing and openness to trade in Developing countries								
Explanatory Variables	Explained variable: log of employment in manufacturing-to-working age population ratio							
Log of trade to GDP ratio	0.229*				0.613**			
Log trade-to-GDP ratio non-MENA countries					0.247**			
Log trade-to-GDP ratio MENA countries					-0.04			
Log of exports to GDP ratio	0.202*							
Log of merchandise exports to GDP ratio					0.312**			
Log of merchandise exports non-MENA countries					0.343**			
Log of merchandise exports MENA countries					0.054			
Log of merchandise exports (excluding petroleum) to GDP ratio					0.143**		0.201*	
Log of labor costs in manufacturing	-0.187*	-0.192*	-0.271*	-0.216*	-0.339**	-0.301*	-0.198*	-0.266*
Log of total physical capital-to-total labor force ratio	0.15	0.159	0.396**	0.240**	0.257	0.319*	0.169*	0.370**
Real interest rate					-0.005*		-0.003	
Constant	0.589	0.764	-2.13	0.104	-1.228	-0.481	0.45	-1.845
Observations	140	140	110	134	102	96	140	110
Number of group(country)	49	49	49	45	44	40	49	49
R-squared	0.16	0.16	0.3	0.2	0.36	0.23	0.18	0.32

* significant at 5%; ** significant at 1%

All figures are US \$ based. Working age population is defined as persons between 15-64 years old.

Source: Data on wages and employment are from Rama and Artecona (2000); data on total physical capital are from Sandeep Mahajan, (2001)

data on merchandise exports including non-oil merchandise exports comes from U.N. Comtrade database; data on working age population, exports, total population, gdp, total world trade come from World Development Indicators, World Bank.

The estimates suggest that the medium-term benefits of trade expansion in terms of employment could be substantial. In MENA, the share of non-oil merchandise exports in GDP was about 10 per cent on average, against 23 per cent in East Asia and the Pacific

(regression sample statistics). Bridging *half* of this gap in export performance could bring about an estimated 2 percentage points increase in industrial employment as a share of working-age population. This would be equivalent to a 4 percentage points decrease in the average unemployment rate, as participation in the labor force in MENA amounts to only about 50 per cent of the working-age population.

Moreover, the full impact of trade expansion on manufacturing employment may be underestimated because the data only account for formal employment in manufacturing. With the regulatory framework in the labor market unchanged, an increase in formal employment is likely to also have an impact on informal manufacturing employment. Higher employment and incomes in (formal and informal) manufacturing would also boost domestic expenditure in non tradables, so that second-round multiplier effects from trade expansion could further contribute to economy-wide job creation.

It is noteworthy that trade has a different impact on manufacturing employment in high-income and developing countries. The results presented in Table 2 and Figure 10 suggest that, after controlling for other factors, trade has a *negative* impact on manufacturing employment in high-income countries. The results are only statistically significant for the trade-to-GDP ratio and total exports, but all coefficients signs are congruent across specifications. Indeed, in several high-income countries, trade intensification has gone in tandem with de-localization of production to developing countries, along with a shift towards areas of comparative advantage in higher-skill activities in services.

Table 2: Determinants of employment in manufacturing—high-income countries
(Dependent variable: ratio of employment in manufacturing to working-age population)
(Estimation period: 1960-1995)

Explanatory Variables	Employment in manufacturing and openness to trade in Developed countries			
	Explained variable: log of employment in manufacturing-to-working age population ratio			
Log of trade to GDP ratio	-0.259*			
	[2.22]			
Log of exports to GDP ratio		-0.267*		
		[2.29]		
Log of merchandise exports to GDP ratio			-0.24	
			[1.76]	
Log of merchandise exports (excluding petroleum) to GDP ratio				-0.121
				[1.14]
Real interest rate				
Log of labor costs in manufacturing	-0.447**	-0.443**	-0.261	-0.401**
	[3.88]	[3.84]	[2.02]	[3.03]
Log of total physical capital-to-total labor force ratio	0.297**	0.309**	-0.144	0.244**
	[3.69]	[3.76]	[1.20]	[2.80]
Constant	3.828**	3.434**	8.609**	3.491**
	[7.15]	[5.79]	[5.63]	[5.79]
Observations	135	135	60	121
Number of group(country)	22	22	21	20
R-squared	0.18	0.18	0.32	0.1

* significant at 5%; ** significant at 1%

Absolute value of t-statistics in brackets

* significant at 5%; ** significant at 1%

Absolute value of t-statistics in brackets

* significant at 5%; ** significant at 1%

All figures are US \$ based. Working age population is defined as persons between 15-64 years old.

Source: Data on wages and employment are from Rama and Artecona (2000); data on total physical capital are from Sandeep Mahajan, (2001)

data on merchandise exports including non-oil merchandise exports comes from U.N. Comtrade database; data on working age population, exports, gdp come from World Development Indicators, World Bank.

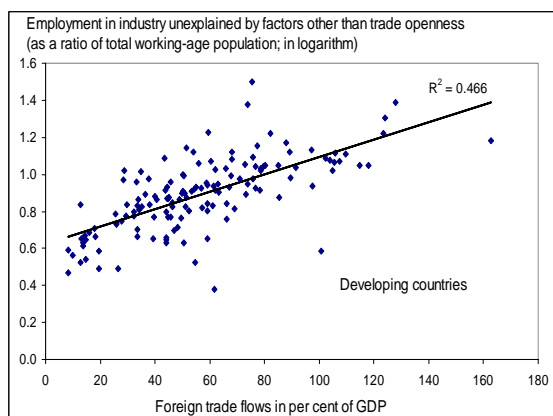
Given the trends of the variables used in the regressions, the story told by these estimates is consistent with the theoretical argument that in the medium to long run, capital growth increases the demand for labor but is absorbed by wage growth, which offsets its impact on employment. In the economy as a whole, trade should have no role to play in an employment equation, but in a regression restricted to manufacturing it has a role. In high-income countries, wage growth alone cannot explain the fall in manufacturing employment because wages are common across the whole economy. Trade expansion lies behind the fall in manufacturing employment relative to employment elsewhere.

The influence of trade expansion on the overall level of employment in developing countries that dismantle trade barriers is different from its effect on employment in developed countries. Trade barriers and other institutional rigidities have deadweight costs, in addition to disincentives that are associated with implicit and explicit taxes used to finance them. Removing costly institutional structures increases national welfare, improves incentives and increases both the demand and supply of labor, by attracting more people of working age into the labor force. Thus, in developing countries, trade expansion promotes manufacturing employment in the medium term, because it allows these countries to take better advantage of their comparative advantage in labor-intensive industries.

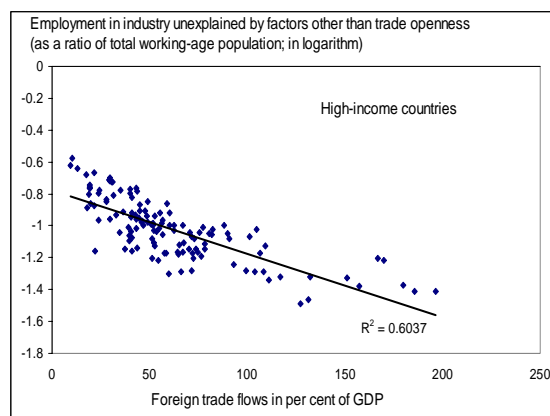
Figure 10: Trade expansion and manufacturing employment in developing and high-income countries

Trade expansion is associated with higher industrial employment in developing countries...

...and shrinking manufacturing employment in high-income countries



(a)



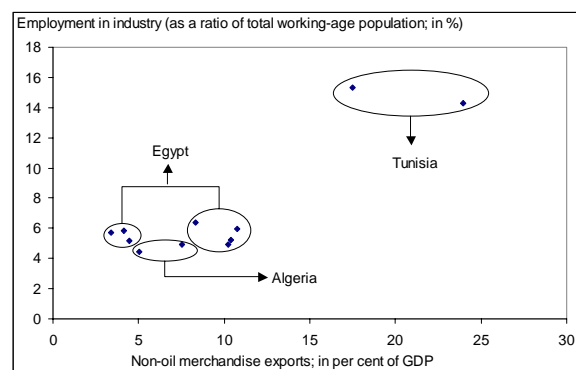
(b)

Source: Authors' calculations

5. Why has trade expansion had a weak impact on manufacturing employment in MENA?

Despite the evidence presented so far, there is a widespread sentiment that the impact of trade expansion on manufacturing employment in MENA has been weak. That perception is, indeed, confirmed by our estimates: As shown in Table 1, when estimated separately, the coefficients of trade in the employment equations turn out not to be significant for the MENA countries. This comes true not only for broad indicators of trade flows, but also for indicators of export performance. To be sure, employment in manufacturing is higher in countries with high non-oil merchandise exports (Tunisia, Morocco, Jordan), compared to countries weak export performance (Algeria, Egypt). However, such differences are largely explained by country-specific factors (such as, for example, greater female participation in the labor force in Tunisia), and structural factors other than trade. The employment ratio responded only modestly to changes in the share of non-oil merchandise exports in GDP in both groups of MENA countries (Figure 11). Empirical evidence suggests that, contrary to the experience elsewhere in developing countries, when such structural factors accounted for, trade expansion did not have a significant impact on industrial employment in MENA.

Figure 11: In MENA, the impact of trade expansion on manufacturing employment has been weak



Source: Authors' calculations

What might be the reasons for the weak impact of trade on employment in MENA? A number of factors can be singled out. They are partly related to what might be called the “*quality gap*” in MENA trade, and partly to *poorly performing labor market institutions* that tame the medium-term benefits from increased trade openness while exacerbating the adjustment costs.

A number of attributes of MENA trade may account for the weak impact of trade on employment:

- Non-hydrocarbon exports are concentrated in resource-based, low value-added products, whose growth has only a weak impact on labor demand and

employment (Petri, 1997). Moreover, in these sectors world trade is growing slowly, so that MENA could not take advantage of the strong growth in world trade growth over the 1990s, that gave an impetus to employment creation elsewhere in developing countries.

- In hydrocarbon-rich countries—such as, for example, Algeria—exports of manufactures are concentrated in the downstream energy industries, which are capital intensive and have only little impact on employment (for example, refined gas; fertilizers; plastics).
- MENA trade is poorly integrated into cross-border production sharing networks, which have increasingly become a driver of growth in global trade (Humels et al., 2001; Yeats and Ng, 2000). MENA exports do not, thus, benefit from rapidly expanding vertical trade. As a result, FDI—the complement of increased participation in global production networks—remains limited. The weak responsiveness of foreign and domestic investment to trade liberalization tames the impact on job creation.

The functioning of the labor markets may also affect the incidence of trade on job creation, because the net effect on employment depends on the response of wages to the reform process—and, thus, on the institutional rigidities in the labor market and the wage setting process. To give some examples, the reforms and trade expansion that accompanied Spain's transition to democracy in the late 1970s did not give rise to more employment because newly-emancipated trade unions claimed those benefits in the form of higher wages. The integration of eastern Germany into the western economy in the 1990s also tells a similar story, as the newly liberated labor in the east sought to catch up with their western counterparts through overvalued wages (and their western counterparts supported the big wage rises to stop massive immigration).

In MENA, labor market rigidities are largely associated with the important role of public sector employment and pay, which sets the stage for real wage increases and employment conditions in the formal labor market. As shown in Figures 2.a. and 2.b., MENA is the developing region with the largest share of public sector employment and pay—by far larger than the share of manufacturing employment in total employment or of the share of manufacturing wages in GDP. The large share of public sector employment and pay makes MENA the only region where real wages in the public sector are, on average, higher than real wages in the private sector. Because of non-pecuniary benefits of public sector employment and job security, this translates in queuing for public sector jobs, and puts pressure on private-sector real wages in order to attract workers (especially skilled workers) when activity is expanding. The restrictive employment regulations in the private-sector formal labor markets and the high non-wage costs may further tame the responsiveness of job creation to growing trade.

Among the above factors, our estimates highlight, in particular, the role of foreign direct investment as an explanatory factor of the weak incidence of trade on jobs in MENA. Indeed, in developing countries, the impact of trade expansion on employment is likely to

be reinforced by capital flows. Trade liberalization allows large international corporations to take advantage of the cheaper labor in developing countries and locate processing plants in them, through direct investment. FDI flows into developing countries have been identified with higher wages and with more male/female wage equality. They increase the demand for labor in the receiving country by increasing the supply of capital. The impact of this on employment creation is likely to be greater than the impact of the demand-driven increase in demand because although the demand-driven increase may hit supply bottlenecks, the FDI-induced increase is not likely to be. Indeed, the effect of more FDI on the domestic economy must be beneficial, unless the higher wages that they pay provoke comparability demands elsewhere in the economy, an argument that has not received support in the empirical literature.¹

Table 3: Determinants of employment in manufacturing in developing countries: The role of Foreign Direct Investment
(Dependent variable: ratio of employment in manufacturing to working-age population)
(Estimation period: 1960-1995)

Explanatory Variables	Employment in manufacturing and openness to trade in Developing countries by Foreign Direct Investment Level							
	Explained variable: log of employment in manufacturing-to-working age population ratio							
Log trade-to-GDP ratio * High FDI	0.534**							
Log trade-to-GDP ratio * Low FDI		0.021						
Log of merchandise exports * High FDI			0.270*					
Log of merchandise exports * Low FDI				0.309				
Log of exports of goods and services * High FDI					0.447*			
Log of exports of goods and services * Low FDI						-0.013		
Log of merchandise exports excluding petroleum* High FDI							0.222*	
Log of merchandise exports excluding petroleum* Low FDI								-0.017
Log of labor costs in manufacturing	-0.074	-0.377*	-0.054	-0.419*	-0.044	-0.383*	-0.079	-0.483**
Log of total physical capital-to-total labor force ratio	0.195	0.377*	0.305	0.573*	0.157	0.396*	0.323	0.496**
Constant	-2.172	-0.235	-2.414	-3.452	-1.208	-0.329	-2.328	-0.884
Observations	60	69	53	57	60	69	57	65
Number of group(country)	31	35	27	32	31	35	29	33
R-squared	0.38	0.19	0.36	0.3	0.35	0.19	0.28	0.26

* significant at 5%; ** significant at 1%

All figures are US \$ based. Working age population is defined as persons between 15-64 years old. All openness variables were interacted with variable that separate countries in two groups depending the level of FDI.

Source: Data on wages and employment are from Rama and Artecona (2000); data on total physical capital are from Sandeep Mahajan, (2001) data on merchandise exports including non-oil merchandise exports comes from U.N. Comtrade database; data on working age population, exports, gdp come from World Development Indicators, World Bank.

The estimates reported in Table 3 confirm the critical role of FDI in job creation. They are similar to the estimates for developing countries reported in Table 1, with the difference that the observations in the sample are split in two different groups: (i) a group of developing countries with large FDI inflows and, (ii) a group of small FDI recipients—the cutoff point being the overall sample median of 0.7 per cent of GDP. While the impact of trade expansion on employment in manufacturing is highly

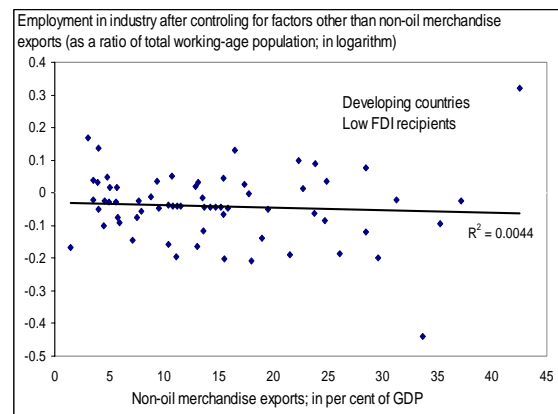
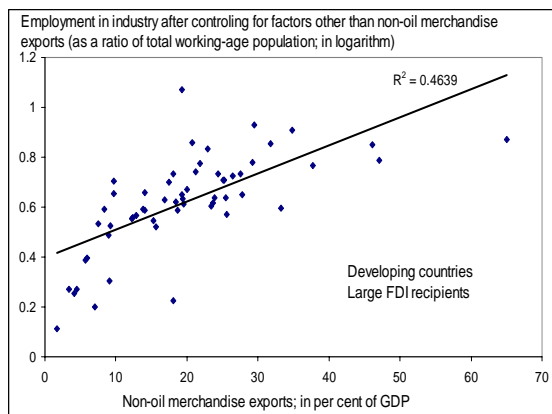
¹ There is some concern that the jobs created by FDI are also less secure, as financial crises or political uncertainties can lead to capital flight and job closures. However, experience since the Asian crisis has shown that FDI and the employment that it generated has been resilient to the financial crisis. FDI in 2001 was at about the same level as in 1997, despite the collapse of private debt and equity flows. See World Bank, 2002a.

significant in the group of large FDI recipients (Figure 12.a), the estimated coefficients of trade turn out not significant in the other group of countries that receive only small amounts of FDI (Figure 12.b). This comes true whatever the indicator of trade in the regressions.

Figure 12: The quality of the investment climate determines the impact of trade on job creation in manufacturing

Trade creates more jobs in developing countries that attract large amounts of FDI...

...but trade expansion does not significantly add to jobs when FDI is low



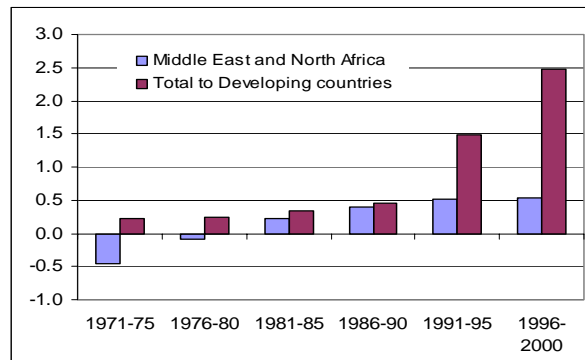
(a)

(b)

Source: Authors' calculations

But MENA countries have lagged considerably behind other developing regions in attracting FDI, which also explains the limited impact of trade expansion on job creation. MENA has in particular missed the surge in FDI to developing countries seen in the 1990s, with the share of FDI in GDP remaining compressed to 0.5 percent, against 2.5 per cent, on average, in developing countries (Figure 13). Moreover, the structure of FDI in MENA is highly skewed toward the hydrocarbon sector, thus contributing even less to job creation in manufacturing—or in services. Reflecting the slow pace of restructuring and privatization of the business sector in MENA, and a weak investment climate, non-energy FDI stagnated over the 1990s, compared to the levels seen in Latin America, Central and Eastern Europe, and East Asia among lower middle-income countries (Nabli et al., 2000; Petri, 1997b; Council on Foreign Relations, 2002).

Figure 13: MENA has missed the surge of FDI to developing countries



Source: Authors' calculations

6. Rising to the challenge: Strengthening the investment climate and enabling greater participation in global production-sharing networks

To step up employment growth, MENA exports would need to be diversified away from raw materials and resource-based manufactures, towards high value-added, labor-intensive products, linked more closely with international production networks and global investment flows. International evidence reviewed in this paper suggests that, to achieve these goals, and provide a stimulus to employment creation, lowering the still high trade protection in MENA will not be enough. Companion policies would be needed, to help bridge the “quality gap” in MENA trade, by strengthening the investment climate and relaxing the “beyond-the-border” constraints that increase the cost of doing business and limit the attractiveness of MENA as a place to invest.

Improving participation in global production sharing is key, because a common pattern of integration in today’s global economy is the increasing fragmentation of production chains across borders (Arndt and Kierzkowski, 1999). This is reflected in far above average growth of global trade in components and partially assembled manufactured goods (Yeats, 2000). Sharp reductions in the cost of moving goods across borders have enabled firms to better co-ordinate production in different locations, and have facilitated exporters’ linkages with vertical production chains that stretch increasingly across borders (Hummels *et al.*, 2001). Lower logistics costs have resulted from an accelerating “*logistics revolution*”—driven by the more widespread use of containers in trade; the adoption of “just-in-time” manufacturing techniques; enhanced supply-chain management; and the more wide-spread use of information technology and the internet in logistics. Lower levels of trade protection have also enabled the fragmentation of production across borders.

Given the increasing sophistication of the division of labor in the global economy, efficient trade-related services are becoming key in enabling producers at various stages of production chains better coordinate their activities with intermediate input suppliers located in other countries. Speed, flexibility, reliability, and low cost of transport and

information logistics are particularly adding value to companies participating in production chains around the globe. Slow or unpredictable delivery delays the response to new market opportunities and rapidly changing demand patterns, forcing customers to hold costly buffer stocks, and making supply-chain management ineffective. Countries that have strengthened their positions in global production chains have improved their ICT capabilities; lowered the cost of transport; and created more competitive finance and insurance markets. Better service delivery has greatly contributed to reducing the cost of doing business, thus improving the attractiveness of these countries to both foreign and domestic investment.

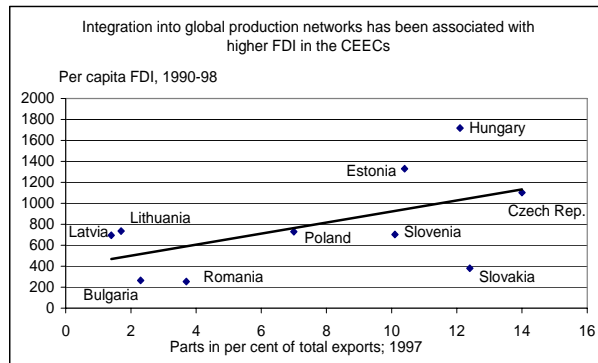
Because the location of manufacturing activities has become footloose, competition to maintain positions has increased. *A strong investment climate and logistical excellence are important parts of all success stories to date.* Countries that have created more open, investment-friendly markets, have been able to attract significant flows of FDI along with their integration into broader economic areas. But for this to happen, the reduction of trade barriers had to go in tandem with broader regulatory reform that improved the attractiveness to investment.

For example, the Central and Eastern European countries (CEECs) that gained EU accession status, carried forward broad-based restructuring programs, while aligning their regulatory framework to the EU single-market. More ambitious reformers and countries that were more successful in integrating EU production networks attracted massive FDI that boosted growth. By contrast, the CIS countries lagged far behind in terms of industrial restructuring, trade expansion, and growth (World Bank, 2002b). Trade liberalization and regulatory reform in the CEECs under the EAAs also spurred a deeper integration of these countries into the EU production sharing networks. CEECs exports of parts have thus increased four-fold from 1993 to 1998—to about US\$ 12 billion, or 14.2 per cent of CEECs manufactured exports (Kaminski and Ng, 2001). The shares of parts in manufactured exports have thus approached those seen in more integrated countries in global production sharing—such as Malaysia and Mexico (about 19 per cent in 1998).² Integration in EU production networks has been also a factor in attracting FDI—as evidenced by the positive correlation between FDI per capita and the share of parts in total exports (Figure 14).

MENA countries are still poorly integrated in global production sharing networks, as reflected by the small share of MENA countries in global FDI flows and trade. The share of components in manufactured exports remains far below that seen in other developing countries—such as Singapore, Malaysia, Taiwan (Yeats and Ng, 2000). One exception is textile and clothing, especially reflecting Tunisia's strong position in EU companies' outsourcing chains.

² The EU absorbs the lion's share of CEECs exports of parts—about 79 per cent in 1998. At the same time, 82 per cent of CEECs imports of parts in 1998 originated in the EU. Germany has emerged as the main trading partner among EU countries, as it takes almost *half* of CEECs exports of parts. Among the CEECs, the Czech Republic, Hungary, Slovenia, Estonia, and Slovakia had the highest participation of parts in their trade.

Figure 14: Integration into EU trade networks and FDI in the Central and Eastern European Countries



Source: Authors' calculations

Trade liberalization, especially in the countries that have signed the Association Agreements with the EU (Tunisia, Egypt, Morocco, Jordan, and most recently Algeria), will help MENA producers improve their competitiveness by purchasing inputs at internationally competitive cost. Moreover, MENA countries could be attractive locations for assembly operations due to low labor costs and a good quality of human resources. The decrease in tariffs on imported intermediate inputs, scheduled in the first stages of the Association Agreements, has the potential to increase trade in components across the Mediterranean and facilitate the integration of MENA countries into EU production networks. The planned free-trade zone with the EU provide thus a unique opportunity to MENA to attract more FDI, increase exports, and benefit from knowledge and technology spillovers. This could also help upgrade the quality of MENA exports towards more high value-added and technologically advanced products, as in the example of the economies in East Asia.

However, MENA has yet to rise to this challenge. Slow progress to date partly reflects heightened competition from the transition economies in Central and Eastern Europe. However, domestic weaknesses, due to the weak investment climate and the poor quality of backbone services that facilitate trade, dilute the potential advantages of MENA countries. Bottlenecks in transport logistics are particularly damaging, but they are not only limited to poor quality and high cost of transport and information services *per se*. Trade-related controls in MENA are associated with burdensome administrative procedures and create red tape.

Creating an enabling environment for foreign and domestic investment would be key to reaping the benefits from further trade liberalization in MENA. In order to encourage transnational companies to extend their supply chains to MENA through partnerships with domestic companies or new investment, further progress in lowering trade barriers should go in tandem with complementary policies in other areas. In particular, trade logistics, transport, and information systems would have to become more flexible,

reliable and sophisticated. This would require ambitious opening up of service markets to competition—supported by continuous efforts at public enterprise reform in network industries; privatization; and pro-competitive regulation.

The stakes of more ambitious liberalization in services are high for a number of additional reasons:

- Inefficient and costly services, provided mostly by the public sector, raise the cost of MENA merchandise exports, limit attractiveness to investment, while also impeding trade expansion within the region.
- With the right enabling environment in place, liberalization of key services—such as, for example, Telecommunications—may facilitate the development of export capacity in other services—especially in tourism-related services and the ICT sector.
- In addition to enhancing export capacity, liberalization in services can create more investment opportunities for the domestic private sector, and help attract more non-debt creating foreign financing in the form of FDI. Stepped up investment can offset the short-term adjustment costs stemming from lower protection of import-competing industries.

Pro-competitive reforms that facilitate entry by new firms can generate employment opportunities for skilled and unskilled workers who are now employed by governments in low-productivity jobs or in threatened import-competing private manufacturing (Council on Foreign Relations, 2002). Because services often cannot be traded, increasing access to service markets is likely to require the entry of foreign competitors through FDI. This will not only lead to the introduction of new technologies that improve efficiency and competitiveness, but also entail the hiring of domestic labor. By creating more opportunities for the employment of skilled workers, services liberalization would also help address the structural imbalances in MENA labor markets, especially the exceptionally high rates of unemployment for educated workers and the young.

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