

The Employment Effect of Trade and Investment Policies in Jordan

Summary

Jordan, like other developing countries in recent years, faces an accelerated pace of change caused by globalization, which has brought both opportunities and challenges. The opportunities for Jordan have included an Association Agreement with the European Union, a free trade agreement with the United States, and membership in the World Trade Organization. These advantages, especially the Qualifying Industrial Zones (QIZ) trade arrangement with the U.S., have helped Jordan achieve a measure of industrial growth by fostering expansion of its export garment and textile industries.¹

Jordan faces acute challenges, however, in terms of employment and labor market outcomes. Our analysis shows that increased international trade has created jobs in Jordan, but much of the employment growth has occurred in sectors, like apparel manufacturing, that feature sub-standard working conditions or which employ significant numbers of migrant workers. In addition, because of Jordan's QIZ arrangement, FDI entering Jordan has the potential to raise the price elasticity of Jordanian labor, holding down Jordanian workers' wages and potentially jeopardizing quality work conditions.

These challenges are partly attributable to the lack of a coherent framework of employment promotion, as well as the separation of investment and growth policies from employment objectives. The country is at a juncture where in order to maximise the benefits of trade and investment policies, it is necessary to better articulate the linkages between trade and employment. Impact on wages, income employment opportunities and labour standards are necessary elements of impact of trade policies. If the Jordanian export industry is to become sustainable it must depend less on migrant workers and more on local workers so that the benefits of this sector can become tangible for Jordanians. In short, Jordan needs to develop a coordinated trade strategy which is socially responsible and addresses issues beyond exports such as productivity, skills, job quality, and workers' rights.

¹ Exports of garments and textiles amounted to almost 30% of Jordanian exports in 2005, up from only 3% just six years earlier.

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Annex I: Regression Findings

I. Introduction

Since the 1980s, almost all developing countries have begun to liberalize their trade regimes in order to increase international trade and investment. Despite this, the impact of trade liberalization on labor markets in developing countries remains under-studied. Liberalization's effects on employment, wages, and working conditions differ depending on whether liberalization policies are sensitive to employment implications. Although less developed countries theoretically have the most to gain from free trade, these countries can have much to lose when poorly crafted liberalization programs fail to adequately consider workers' needs.²

Studies of trade liberalization have sometimes shown unexpected results, making the analysis of trade liberalization's labor market impacts a fruitful area for illuminating research.³ The ILO has undertaken pilot studies on these subjects in Uganda and the Philippines in the past.⁴ The present study is part of an expansion of these studies to a very different region: the Middle East, and specifically the Kingdom of Jordan. Over the past fifteen years, Jordan's sustained economic liberalization has resulted in dramatically growing trade and foreign direct investment, making it one of the bright spots in MENA trade.⁵

This paper examines the impact of Jordan's trade liberalization on its labor market, focusing on the creation of employment opportunities, wages, and working conditions. The analysis shows that trade liberalization has created additional jobs for Jordanians, but at the same time it has increased wage inequality in manufacturing in Jordan. To improve Jordan's labor market outcomes in the future – that is, to create many well-paid jobs with decent working conditions for Jordanian workers – Jordanian policymakers must design liberalization programs that explicitly aim to achieve Jordan's labor market goals.

The first section provides an overview of theories about trade's labor market effects, presents some comparative evidence from the literature, and discusses the Jordanian economic context and Jordan's liberalization program. The paper then utilizes a regression to calculate the impact of four factors – total output, export orientation, gross fixed capital, and openness to imports – on the number of jobs created in the Jordanian manufacturing sector from 2000-2004. Next, the paper analyzes the working conditions in the types of jobs that have been created both in the export oriented sectors and those induced by foreign direct investment (FDI). By exploring these jobs' demographic data, wages, hours, and working conditions, we illuminate a more complete picture of the employment effect of trade.

Finally, we explore the wide gulf between Jordan's development frameworks and its labor market situation. Jordan's economic development and trade liberalization strategies usually assume that trade growth will provide more jobs in Jordan. Our analysis shows that the picture is more complex. To improve the labor market impacts of Jordan's expanding trade, national development and economic liberalization strategies should explicitly analyze their impacts on employment and working conditions. These strategies should aim specifically to foster growth in employment-intensive sectors that will provide quality jobs

² Jose M. Salazar-Xirinachs, "Decent Work and Trade." Remarks presented at European Conference: "Promoting Decent Work in the World: The Contribution of the EU." Brussels, 4-5 December 2006.

³ For example, studies of NAFTA have shown very modest job creation, despite expectations to the contrary. Salazar-Xirinachs, *op. cit.*

⁴ Peter Mandelson, "Trade Policy and Decent Work," Remarks, EU Decent Work Conference on Globalization, Brussels 5 December 2006.

⁵ World Bank, *Trade, Investment and Development in the Middle East and North Africa: Engaging with the World*. Washington, DC: World Bank, 2003, 34-35.

1.1 Theoretical Framework

The effects of trade liberalization and growing international trade on labor market conditions in a developing country vary depending on the type of liberalization, the country's human, natural and technological resources, its trade competitors, and so on. Traditional trade theory generally suggests that trade should increase employment and wage equality in developing countries through several pathways.⁶ First, trade should increase developing countries' overall economic growth by increasing their specialization in production, expanding markets and creating scale economies, and improving technology. Second, trade would be expected to raise employment by utilizing abundant low-skilled labor.

One of the earliest models of international trade, Ricardo's model of comparative advantage, argues that technological differences between countries cause trade, resulting in rising wages for unskilled laborers in developing countries.⁷ Countries that have a technological advantage in making a particular product will be able to produce it more cheaply than less technologically advanced countries. Thus, the advanced countries will be expected to export the product, and developing countries would be expected to import it. Such a dynamic would cause skilled workers' wages to rise, relative to unskilled workers' wages, in the producing country (because technology-heavy industries employ proportionately more skilled workers than other industries). In developing countries importing the technology-heavy products, unskilled workers' wages would be expected to rise relative to skilled workers' wages, because the developing country's skilled workers are facing stiffer competition. The developing country has, as a result, a comparative advantage in unskilled labor, leading to higher wages for unskilled workers (and higher wage equality in general) as the country specializes in unskilled labor-intensive products.

However, in the modern world, technology and capital are relatively mobile across borders – both a cause and a consequence of international trade. This assumption informs a different model, the factor proportions theory of trade, which is useful for discussing the impact of two-way trade in manufactures. The factor proportions theory also predicts growing wage equality, but through a different approach.⁸ If skilled laborers are relatively scarce in one (developing) country compared to other (developed) countries, in the absence of trade, skilled labor will cost relatively more in the developing country. Thus, when the countries start to trade in manufactures, the developing country will specialize in products that require unskilled labor, and export those products, in accordance with its comparative advantage in them. Thus, in the developing country, unskilled laborers' wages are predicted to rise relative to skilled workers' wages, increasing wage equality in the developing country. If employment adjustments are smooth between industries, then the level of overall employment should remain the same; if employment adjustments are difficult, employment will fall.

Of course, at the same time as low-skilled manufactures are being exported from developing countries ever more quickly after liberalization, imports will be increasing as well – and competing with formerly protected import-substitution industries. This competition will decrease wages and probably employment in the formerly protected import industries. But overall gains in wages and employment are still predicted from liberalization, under the comparative advantage framework in which gains from export growth should outweigh losses from import growth.

⁶ ILO, Committee on Employment and Social Policy. GB291/ESP/2, 291st Session. Geneva, Nov. 2004.

⁷ Ricardo's model is summarized in Robert Baldwin, "The Effects of Trade and Foreign Direct Investment on Employment and Relative Wages." OECD Economic Studies No. 23, Winter 1994, 17. This paragraph draws heavily on Baldwin's summary.

⁸ This paragraph again draws heavily upon Baldwin, op. cit., for its summary of the factor proportions theory of trade. See also Ghose, *Jobs and Incomes in a Globalizing World*. Geneva: International Labor Office, 2003, 43-44.

In developing countries, some of the assumptions made by these two models do not hold.⁹ One is the assumption of full employment in developing countries under autarky. “Most developing countries,” as Ghose argues, “have dualistic labor markets and substantial stocks of surplus unskilled labor.” In such countries, most skilled laborers are employed in a regulated sector, but most unskilled laborers are employed outside the regulated sector. The productivity of these workers is extremely low, and even if they do not register formally in unemployment statistics, they are “not in fact employed in any meaningful sense.” Thus, when trade increases the demand for unskilled labor, as long as this surplus pool of unskilled labor exists then companies will be able to hire more workers without increasing wages. This theory predicts globalization to cause greater employment in the developing country, but not greater wage equality.¹⁰ Nevertheless, in this framework Ghose predicts that the increase in demand for unskilled laborers in developing countries, even if it does not lead to higher real wages for unskilled manufacturing workers, should be poverty-reducing. Most impoverished workers are day-laborers or the self-employed, he writes, whereas jobs created in manufacturing should generate incomes above the poverty line.

Several more recent trade theories also suggest that trade liberalization may not foster greater wage equality in developing countries. One theory holds that the inequality-fostering role of technological change outweighs the equality-fostering role of trade in developing countries. In this model, “production of the least skill-intensive Northern goods [migrates] South, where they become the most skill-intensive Southern goods.”¹¹ As a result, demand for skills and corresponding wage inequality rise in both the industrialized and developing world.

Another third theory of why trade liberalization might cause increasing wage inequality in developing countries focuses on the pre-liberalization tariff schedule.¹² If the pre-liberalization tariffs favored low-skill sectors, then liberalization might comparatively disadvantage those sectors, leading to greater wage inequality in the country.

Foreign direct investment (FDI) in the context of globalization also has important consequences for workers’ wages and working conditions. All other things being equal, increasing FDI is expected to increase total factor productivity and overall economic growth. But in reality, positive effects on employment and wages may be mitigated or contradicted by other factors. In a dynamic model, FDI may actually reduce domestic investment, limiting the overall potential for growth. When foreign investors operate in imperfectly competitive sectors, they may harm local investment by “extracting rents and siphoning off capital through preferred access to local capital markets and local supplies of foreign exchange.”¹³ The foreign companies, after replacing local producers, might switch to imported inputs, harming other local companies. If the foreign investors repatriate their profits, they may reverse the FDI process and reduce the amount of capital in the host country. The result would be lower labor demand and lower wages.

⁹ This section draws heavily on Ghose, *op. cit.* See also Salazar-Xirinachs, *op. cit.*, and Mandelson, *op. cit.*

¹⁰ This model works only for developing countries that are significant exporters of manufactures, rather than commodities. Manufactures can in principle be produced anywhere, but only some developing countries have been successful in exporting manufactures; others have continued to rely on exports of primary commodities (so-called “marginalized countries”). The expected benefits of trade liberalization theorized above do not apply to marginalized countries; marginalized countries may actually be hurt by early liberalization if they expose infant manufacturing industries to foreign competition or open their markets to foreign produce.

¹¹ ILO & WTO, “Trade and Employment: Challenges for Policy Research.” Switzerland, 2007, p. 41.

¹² ILO & WTO, 49.

¹³ Moran, *op. cit.*, 21.

In addition, economic liberalization in general and FDI in particular may increase the elasticity of labor demand, jeopardizing the position of local workers.¹⁴ Liberalization and the increased competition it brings mean that it is more difficult for companies to accept higher wages. As it becomes easier to outsource work through FDI, companies gain access to cheaper foreign labor, again making it less attractive for them to employ relatively higher-priced local labor. Thus, FDI mobility raises the price elasticity of labor demand; even relatively small increases in domestic wages may cause a steep decline in labor demand as corporations move their manufacturing elsewhere.¹⁵ There are four major results of the increased elasticity of labor demand, all of them unfavorable to workers. First, the costs of increased labor standards must be borne more heavily by workers, rather than by employers. Second, the labor market becomes more volatile, fostering feelings of insecurity among workers.¹⁶ Third, the option to outsource work through FDI reduces the bargaining power of local workers. Fourth, a higher elasticity of labor demand makes it more difficult for governments to redistribute wealth through the manipulation of wages.

Thus, more recent insights confirm only some of the predictions of traditional trade theories. Recent theories still predict long-term economic growth, job creation, and rising wages in developing countries as a result of trade. But, due to the impact of technical change, there is reason to doubt that developing countries will see growing wage equality.

1.2 Comparative evidence from the literature

Data from international comparisons show that the employment effect of trade is, overall, positive for export-oriented middle-income countries.¹⁷ For example, a World Bank study cited by the ILO and WTO cites the long-run benefits of trade for employment and wages.¹⁸ However, the disaggregated data show that the employment effects of trade are not uniform in all middle-income countries. A significant number of these countries, mostly in Latin America, actually saw a drop in manufacturing employment as trade increased. This has been attributed to general economic stagnation in those countries at that time; insufficient and inconsistent inflows of FDI; and a failure of the countries to specialize in unskilled labor-intensive exports.

Interestingly, the effect of trade on employment appears to be independent of its effect on wages. The ILO's examinations of five countries, including countries that increased manufacturing employment and countries where employment declined, found that increased trade had a positive effect in each country on real wages in the manufacturing sector.¹⁹ Those rising wages also resulted in rising wage inequality within the manufacturing sector. As other studies have pointed out, however, long-term gains can face serious short-term transition problems, especially churning of jobs within particular sectors and the sacrifice of formal sector jobs to informal ones.²⁰

¹⁴ "Trade and Employment: Challenges for Policy Research." ILO and WTO Joint Study, 2007, p. 45. The international evidence as to whether globalization affects labor demand elasticities is mixed. ILO & WTO, p. 52.

¹⁵ ILO & WTO, 42.

¹⁶ International studies have confirmed that increasing elasticity of labor demand can affect workers' perceptions of economic insecurity. ILO & WTO, 54.

¹⁷ This section also draws heavily on Ghose, *op. cit.* See also World Bank, *op. cit.*, 45. The World Bank report analyzes 59 developing countries over almost 40 years and finds a "positive medium-term association between employment in industry (as a share of the total working-age population) and openness to trade." When taking into account other structural factors affecting employment, the correlation between employment and openness to trade becomes even stronger.

¹⁸ ILO & WTO, 35, citing the World Bank study by Dollar and Collier (2001).

¹⁹ The five countries are Mexico, China, Brazil, India and Malaysia. Ghose, *op. cit.*, 67.

²⁰ ILO & WTO, 35.

Non-wage labor standards in export-oriented sectors of developing countries are generally expected to improve with increased international trade in export-oriented sectors. All other things being equal, the rise in unskilled workers' real wages is almost always associated with rising non-wage labor standards.²¹ As mentioned above, manufacturing wages have risen in developing countries, so a rise in labor standards would be expected (especially in countries that have successfully exported manufactures). However, in some countries, the share of jobs in regulated sectors has declined, and unregulated jobs have proliferated – potentially leading to an erosion of non-wage labor standards because of weaker worker protections in unregulated sectors.

As for whether trade fosters wage equality in developing countries, international evidence is mixed. In Asia, trade appears to have fostered greater wage equality, whereas in Latin America the opposite is true.²² Gini coefficients in Latin America rose during the periods in which particular countries liberalized their trade regimes. Similarly, in Mexico, the evidence indicates that as FDI transformed moved low-skill American manufacturing jobs into high-skilled Mexican manufacturing jobs, Mexican wage inequality increased.

One argument sometimes made is that developing countries are competing in a “race to the bottom” in which, attempting to expand exports by competing for FDI, they weaken and dilute their non-wage labor standards. But as Ajit K. Ghose has written:

[T]here are no good reasons to think that a race to the bottom in this sense is under way. There is no clear evidence to show that expanding trade has undermined labour standards in manufactures-exporting developing countries. Nor is there evidence to suggest that countries with low labour standards have better export performance than those with high labour standards or that foreign investors favour countries with lower labour standards. In short, empirically, no signs of a race to the bottom of the type in question have so far been detected.²³

As has been noted, if working conditions are analyzed globally within particular industries – say, within textile or garment production – then the shift in jobs from developed to developing countries means that working conditions in the garment sector worldwide have decreased. This is consistent, however, with improving working conditions in the developing world.

Some observers have expressed particular concerns about working conditions in special export processing zones.²⁴ While conditions globally in export zones vary widely, the conditions have been found to be generally better than conditions in the rest of the economy, though concerns about freedom of association and other rights have been raised.

1.3 The Jordanian Context

Jordan is a small low- to middle-income country, located in an unstable region, with a relatively open economy. The Jordanian economy has always been sensitive to economic and political events in the region.²⁵ Moreover, Jordan has experienced several migration waves that have changed the composition of its population.

²¹ “It is hard to find instances where rising real wages are associated with declining non-wage benefits; it can be plausibly assumed that when real wages rise, non-wage benefits either rise or remain unchanged but do not decline.” Ghose, *op. cit.*, 99.

²² ILO & WTO, 47.

²³ Ghose, *op. cit.*, 102.

²⁴ ILO, *op. cit.*

²⁵ Among the regional political events that have impacted Jordan's economy are the Israeli-Palestinian conflict, the first Gulf War against Iraq, and the summer 2006 war in Lebanon. Some events, like the first Gulf War, had mixed economic consequences for Jordan. One result of the war was that many Jordanian migrant workers in

Jordan has a young and rapidly growing population of about 5.9 million people. Children (age 0-14) represent roughly 40% of the population and young adults (age 15-29) about 30%. The demographic trends coupled with the moderate growth rate in the economy during most of the 1990s have led to severe pressure on the labor market. The labor force growth is high (about 4-5% annually). Unemployment remains high, ranging from 12-15%, according to official figures. The unemployment rate for women, at 16.5%, is higher than that for men despite women's low participation in the labor market, which was estimated at 11.2% at the end of 2003 compared to a participation rate of 63.2% for males.

Jordan lacks natural resources, and so it has had to compensate by focusing its efforts on developing its human capital and investing heavily in education. This strategy paid off, with Jordan exporting its skilled and educated labor force to the Gulf market while at the same time receiving a large number of expatriate workers to fill the low-paid jobs, and to partly fill in the vacuum left behind by labor immigration. As a result, Jordanian growth during the 1970s and early 1980s was remarkable. Boosted by the oil boom in the Gulf market, Jordan enjoyed an unprecedented growth rate and notably low levels of unemployment and poverty. However, this dynamic in the labor markets has its own disadvantages because it renders Jordan heavily reliant on external factors over which Jordanian policymakers have little or no control or influence.

Symptoms of economic illness began to surface by the mid 1980s, with the steep decline in oil prices. That decline made Jordan's semi-rentier economy vulnerable, because Jordan's expatriate workers in the Gulf were unable to maintain their previous high level of remittances, which ranged from 20-25% of GDP in the early 1980s.²⁶ The government response was slow and officials resorted to external borrowing in order to maintain the same level of government expenditures. External debt accumulated, and by 1989 Jordan could no longer service its debt. As a result, the country embarked on a structural adjustment program under the auspices of the International Monetary Fund and the World Bank.

1.4 Trade Liberalization in Jordan

Trade liberalization has been the thrust of Jordan's adjustment efforts. During successive rounds of liberalization, quantitative barriers to imports and tariffs were eliminated or reduced on a multilateral or regional basis, opening Jordan to world markets. Simultaneously, the Jordanian government pursued a strategy of obtaining preferential market access for Jordanian exports through bilateral trade initiatives.

The comparison with the import-substitution policies of the past is revealing. Until the late 1980s, Jordan had a high and complex tariff structure, with a maximum tariff rate of 318% and an average weighted tariff rate of 19%. Widespread exemptions implied that 51% of all imports were exempted from import duty. In addition, about 40% of imports were subject to quantitative restrictions. The tariff structure was also characterized by a high degree of variation.

By 2004, Jordan had a simple import tariff structure, with an average weighted import tariff rate of 13%, a maximum rate of 30%, and a standard deviation of 15.7%. Non-tariff barriers are limited to the exclusive trading rights for petroleum products, due to expire in 2008. Exemptions have also been reduced significantly with a small portion of imports now exempted from import duties.

the Gulf were forced to return to Jordan, raising unemployment and the need for social services but also bringing skilled workers and high investment potential.

²⁶ M.I.T. El Sakka, "Migrant Workers' Remittances and Macroeconomic Policy in Jordan," Table 1.

More importantly, Jordan acceded to the WTO in 2000 with a commitment to gradually reduce tariff and non-tariff barriers over the next eight years. In particular, the maximum tariff rate will be reduced to 20% by 2010 under the WTO agreements.

Multilateral liberalization has been complemented with a series of bilateral trade agreements aimed at increasing market access for Jordanian exports. One of the most important agreements established the Qualifying Industrial Zones (QIZs) in 1996, the products of which are granted un-reciprocal duty-free access to U.S. markets.²⁷ The QIZs were established for political and economic purposes: to facilitate technology transfer to Jordan, to foster linkages between Israeli and Arab businesses, and to integrate the Israeli economy more deeply into the Middle East. Reflecting these goals, QIZ products must have at least 35% of Israeli, Jordanian, or Palestinian content in order to qualify for duty-free access to U.S. markets.²⁸

In addition, Jordan ratified a Free Trade Agreement with the United States in 2001 and an Association Agreement with the European Union (EU) in 2002. Jordan's Free Trade Agreement with the U.S. is very preferential to Jordan compared to other U.S. free trade agreements. The U.S.-Jordan agreement's rules of origin requires that only 35% of the exported good's value must originate in Jordan, as compared to other agreements in which the entire product must originate in the exporting country. In this way Jordan can, in a sense, act as a transit point for other countries' exports to the U.S.

Jordan has also been a member of the Arab Free Trade Agreement since 1998 and has signed bilateral free trade agreements with most countries of the MENA region and some European countries that are not yet members of the EU. In addition, the government launched in 2001 an ambitious project, the Aqaba Special Economic Zone (AZEZA), aimed at providing free-trade zone status and a streamlined administration with significant tax and infrastructure incentives.

Jordan's Free Trade Agreement with the U.S. is its only multilateral trade agreement that includes labor protections; the Arab free Trade Agreement and the EU Association Agreements do not. In the free trade agreement, the Jordanian government commits to enforce existing labor laws, not to relax laws in order to promote trade, and to reaffirm its commitment to the ILO's Declaration on Fundamental Principles and Rights at Work. The labor laws to which the agreement refers are the internationally recognized labor rights of association, organizing, collective bargaining, a minimum age for the employment of children, a prohibition on compulsory labor, and acceptable wages, hours of work, and health & safety standards.

As Jordan opens up to the world through the WTO, as well as bilateral and multilateral agreements, it is clear that Jordan, like other MENA countries, is moving away from the interventionist-redistributive social contract of the 1950s through the 1980s in which the state played an active role in promoting import-substitution industrialization.²⁹ Jordan is transitioning toward a new neo-liberal social contract in which the state acts as a promoter of private investment rather than the dominant economic player. The two thrusts of Jordan's economic reform program are to promote the private sector's role and also to increase Jordan's export orientation.³⁰ These economic reforms are also part of a larger package of reforms taking place in Jordan, including issues related to governance, human rights and transparency.

²⁷ Saif, Ibrahim. "The Socio-Economic Implications of the Qualified Industrial Zones in Jordan." Center for Strategic Studies, University of Jordan, 2006.

²⁸ In addition, at least 1/3 of the 35% must come from Israel, and 1/3 from Jordan.

²⁹ Yousef, Tarik. *Unlocking the Employment Potential: Toward a New Social Contract*. Washington, DC: World Bank, 2004, 23-44.

³⁰ Saif, Ibrahim. "Understanding the Reform Process: The Case of Jordan." Global Development Network, Aug. 2004, p. 16.

II. Trade’s Impact on Growth and Employment

Consistent with its export-oriented strategy of economic growth and transformation, Jordan has been seeking to increase its producers’ competitiveness and expand their access to foreign markets. In one sense, this strategy has been successful, as trade is now playing a larger role in Jordan’s economy than ever before. But trade has had a disproportionate impact on particular sectors of the Jordanian economy, creating important consequences for workers in export-oriented industries and in import-competing industries.

In this section, through a correlation matrix and regression, we examine the relative impact of five variables on industrial employment in Jordan. The regression helps us to investigate whether, as Jordan sells and buys more goods from abroad, Jordanian companies hire more workers.

Jordan’s increased exports would be expected to generate increased Jordanian employment, because Jordan’s comparative advantage lies in labor-intensive products³¹ and because Jordan’s economy has a relatively high employment elasticity of growth at 0.9279.³² Through this pathway, Jordan’s export growth would create jobs and reduce Jordan’s unemployment rate. On the other hand, opening to the world economy means that imported goods are more affordable in Jordan, making it more difficult for local Jordanian products to compete with imports. Local Jordanian producers that are unable or unwilling to seek markets abroad would be expected to be negatively impacted, affecting their workers’ jobs and wages.

International comparative studies have generally indicated that employment increases generated by expanding exports have outweighed employment reductions from import competition,³³ creating an expectation that increased trade will increase overall employment in Jordan. We seek to test that hypothesis in this section.

2.1 Impact of Trade on Economic Growth

International trade is playing a much larger role in Jordan’s economy today than at any other time in the last 10 years. Since 1995, Jordan’s trade has grown substantially in absolute terms (see Table 1). More importantly, as Jordan has liberalized its trade regime, Jordan’s trade has grown relative to its GDP. As Figure 2 demonstrates, from 1995 through 2003, exports were stable relative to GDP, at between 18 and 23.2 percent. But in 2004 and 2005, exports jumped from 23.2 percent of GDP to 28.5 percent. The explosive growth in Jordan’s imports was even more dramatic, jumping from 56.3 percent of GDP in 2003 to 71.8 percent in 2004 and 82.6 percent in 2005.

Table 1: Jordan’s Trade Performance, 1995-2005

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
GDP ³⁴	4560. 8	4711	5137. 6	5609. 8	5767. 3	5992. 1	6363. 8	6794	7228. 7	8081. 3	9012. 2
Dom. Exports ³⁵	1004.	1039.	1067.	1046.	1051.	1080.	1352.	1556.	1675.	2306.	2570.

³¹ Ajit K. Ghose, “Trade Liberalization and Manufacturing Employment.” Employment Paper, ILO, Geneva, 2000, 4.

³² Ibrahim Saif, “Employment Poverty Linkages and Policies for Pro-Poor Growth in Jordan,” 2006, 24.

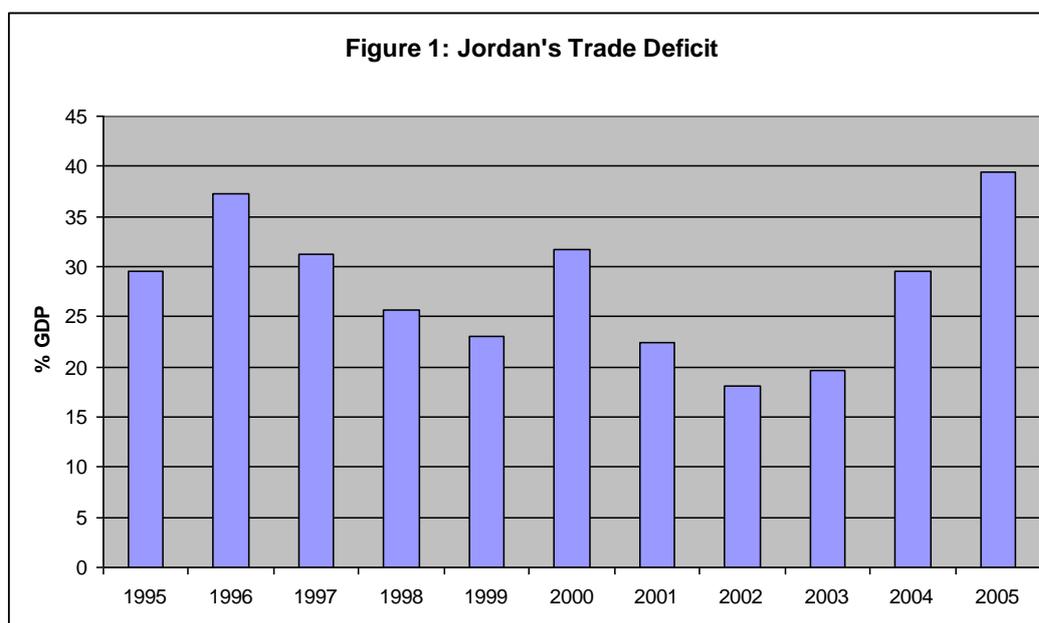
³³ See, i.e., Baldwin, op. cit., 43-44.

³⁴ Nominal GDP at market prices, in JD millions.

³⁵ Central Bank of Jordan, Monthly Statistical Bulletins, Table 33(34): Summary of External Trade Developments.

	5	8	2	4	3	8	4	7	1	6	2
Dom. Exports (%)	22	21.2	20.8	18.7	18.2	18	21.3	23	23.2	28.5	28.5
Imports³⁷	2590.	3043.	2908.	2714.	2635.	3259.	3453.	3599.	4072	5799.	7442.
	3	6	1	4	2	4	7	2		2	9
Imports (% GDP)	56.8	62	56.6	48.4	45.7	54.4	54.3	53	56.3	71.8	82.6
Trade Deficit (% GDP)³⁹	-29.5	-37.2	-31.2	-25.6	-23	-31.7	-22.4	-18.1	-19.6	-29.6	-39.5
Vol. of Trade (% GDP)	78.8	83.2	77.4	67.1	63.9	72.4	75.6	76	79.5	100.3	111.1

Source: Central Bank of Jordan, Monthly Statistical Bulletin, Dec. 2006, July 2005, Mar. 2002 and Sept. 2000. Exports, imports and GDP are measured in JD millions.



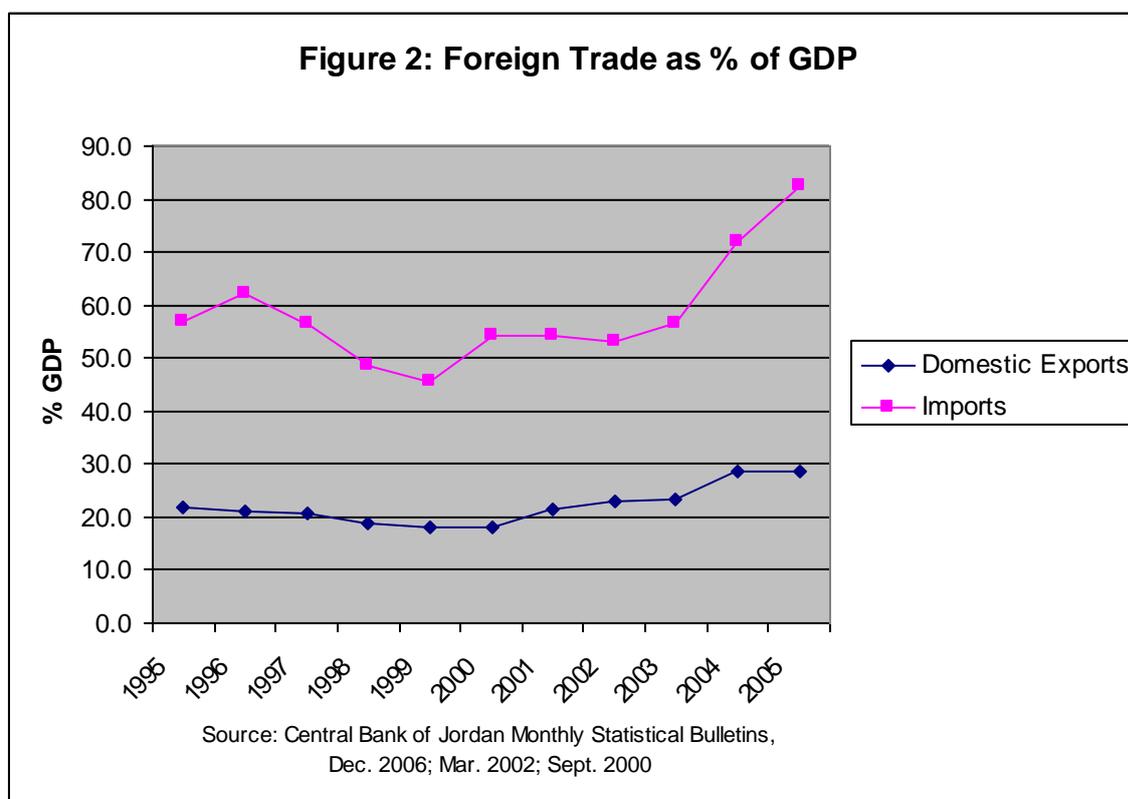
As Jordan's trade liberalization began to impact the economy in the mid-1990s, Jordan's trade deficit relative to GDP steadily declined from 1996 through 2002 (save for a small jump in 2000). But since 2002, the deficit has skyrocketed relative to GDP, from 18.1% in 2002 to 39.5% of GDP in 2005. From 1996 through 2000, the declining trade deficit was driven by declining imports; Jordan's exports remained largely stagnant. But since then, exports have increased dramatically, from JD 1.6 billion in 2001 to JD 3 billion in 2005. But as exports were growing, imports began to increase even more steeply, from JD 3.2 billion in 2002 to JD 6.6 billion in 2005. This immense increase in imports has outpaced Jordan's strengthening exports, leading to the increasing trade deficit relative to GDP from 2003-2005. In 2005, Jordan's exports of JD 3 billion were less than half of its imports of JD 6.6 billion.

³⁶ Ibid.

³⁷ Ibid.; includes imports of non-resident agencies.

³⁸ Ibid.

³⁹ Central Bank of Jordan, Monthly Statistical Bulletins, Table 1: "Main Economic Indicators." The trade deficit as a percentage of GDP does not correspond exactly to the import and export figures, because 1) domestic exports excludes re-exports, while the overall trade deficit figure includes them.

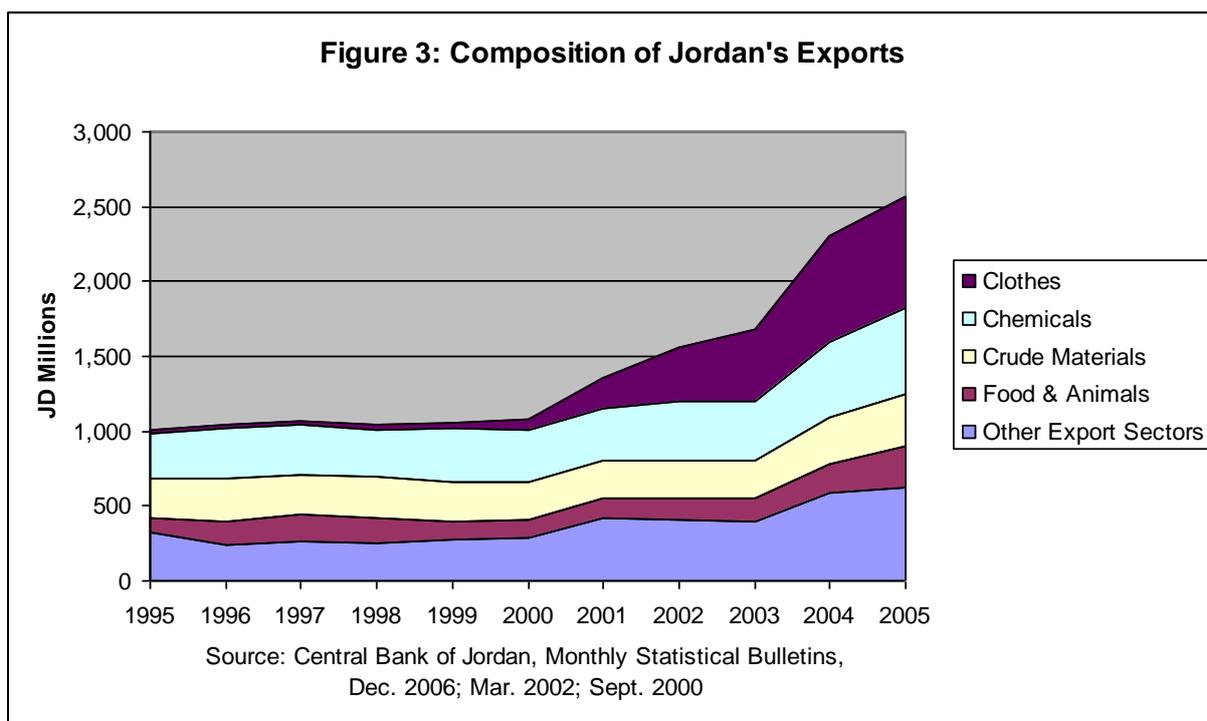


The increase in exports has been driven primarily by a dramatic increase in manufacturing, especially the manufacturing of clothes, a highly labor-intensive sector. Clothes exports have expanded twenty-fold in just six years, from JD 34 million in 1999 to JD 745 million in 2005, to become the largest sector of Jordan's exports. Other export sectors have also increased substantially, including exports of food and animals (also labor-intensive), crude materials, and chemicals, though none approaches the exponential growth of Jordan's textile sector, as Figure 3 shows.

Table 2: Composition of Jordan's Exports (JD millions)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Clothes	17	24	26	33	35	76	204	358	479	709	745
Chemicals	302	332	335	323	353	347	345	392	390	502	576
Food & Animals	100	160	181	165	127	116	136	141	157	201	275
Crude Materials	260	285	259	269	265	249	250	252	259	310	350
Other Export Sectors	326	239	266	256	272	292	41	414	391	584	624
Total Domestic Exports	1,005	1,040	1,067	1,046	1,051	1,081	1,352	1,557	1,675	2,307	2,570

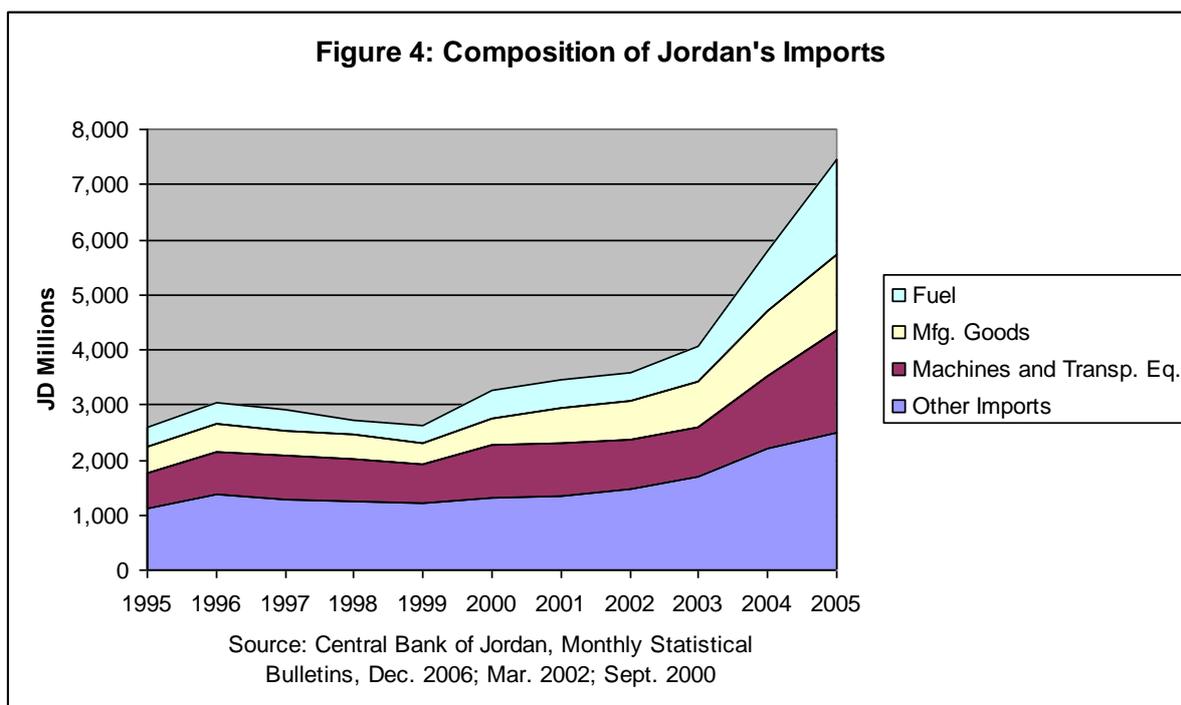
Source: Central Bank of Jordan, Monthly Statistical Bulletins.



Jordan's influx of imports from 2003-2005 was composed of fuel (a nearly threefold increase from JD 661 million in 2003 to JD 1.7 billion two years later); machines and transportation equipment (JD 920 million in 2003 to JD 1.8 billion in 2005); and manufactured goods in general (increasing from JD 802 million in 2003 to JD 1.36 billion in 2005), as Figure 4 shows.

Table 3: Composition of Jordan's Imports

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Fuel	336	373	384	252	319	509	495	540	661	1,110	1,714
Mfg. Goods	504	513	443	436	391	494	667	690	803	1,162	1,361
Machines and Trans. Equipt.	635	790	814	777	725	931	939	891	920	1,315	1,869
Other Imports	1,115	1,369	1,267	1,250	1,200	1,326	1,353	1,478	1,687	2,211	2,499
Total Imports	2,590	3,044	2,908	2,714	2,635	3,259	3,454	3,599	4,072	5,799	7,443



The import increases in sectors such as manufactured goods and equipment signify a more competitive environment for Jordanian producers selling their products domestically. The large increase in fuel costs reflects the cessation of subsidized fuel from Iraq and the Gulf since 2003, and these rising costs hurt Jordanian producers by increasing their production costs. The combination of the factors – increased import competition in manufactured goods sectors, rising fuel costs, and declining fuel subsidies – means that Jordanian manufacturers simultaneously face increased costs of production and greater foreign competition within the Jordanian and international markets. These factors disproportionately threaten small producers, as they have the least ability to market their products abroad and they are least able to bear higher production costs.

2.2 Impact of Trade on Job Creation

To more precisely analyze what is driving job creation and destruction in Jordanian manufacturing, we use regression to calculate the impact of four factors on the number of jobs created in each manufacturing sector over the period 2000-2004.⁴⁰

The first factor is the sector's total output, which would be expected to have a positive correlation with employment. The second factor is the sector's export orientation, calculated as the percentage of the sector's exports relative to total output. The export orientation would also be expected to correlate positively with employment, as Jordan has been increasing its exports to the world market, and exports would be expected to generate jobs in labor-intensive sectors in addition to the gains in terms of the economies of scale. The third factor is the amount of gross fixed capital in the sector, used to estimate the impact of technology and other capital and productivity improvements. The fourth factor is the sector's openness to imports, measured by imports as a percentage of total aggregate supply. Openness would be expected to correlate negatively with jobs, as imports compete with domestic producers for a share of the Jordanian market. These factors were selected in order to establish a direct link between trade and employment. Because of the limited period covered by the data (2000-2004), a panel regression approach has been used.

⁴⁰ Goods produced in Qualifying Industrial Zones (QIZs) are excluded from this portion of the analysis, because of their unique trade status. The jobs and working conditions in QIZs will be analyzed later in the paper.

This analysis was conducted at two levels. First a correlation matrix between the various variables was constructed in order to reveal the relationship between various variables.

Table 4: Correlation Matrix using SPSS

		Jg	Out	Ex	Cap	Open
Jg	Pearson Correlation	1	.559(**)	.373(**)	.395(**)	-.329(**)
	Sig. (2-tailed)		0	0	0	0
	N	115	115	115	115	110
Out	Pearson Correlation	.559(**)	1	.676(**)	.511(**)	-.393(**)
	Sig. (2-tailed)	0		0	0	0
	N	115	115	115	115	110
Ex	Pearson Correlation	.373(**)	.676(**)	1	.233(*)	-0.114
	Sig. (2-tailed)	0	0		0.012	0.236
	N	115	115	115	115	110
Cap	Pearson Correlation	.395(**)	.511(**)	.233(*)	1	-.528(**)
	Sig. (2-tailed)	0	0	0.012		0
	N	115	115	115	115	110
Open	Pearson Correlation	-.329(**)	-.393(**)	-0.114	-.528(**)	1
	Sig. (2-tailed)	0	0	0.236	0	
	N	110	110	110	110	110

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

As hypothesized, job growth was found to be negatively and significantly correlated with openness to imports. This means that the higher the level of import penetration, the lower the expansion in the domestic output and hence the fewer jobs are created. This finding was further substantiated by the negative correlation found between output and openness. Clearly openness or higher import level discouraged expansion in output during the period under investigation. On the other hand, it was found that export expansion was associated with job creation export expansion, confirming the export-led hypothesis. Job growth was found to be positively and significantly correlated with export growth.

What is not clear in this partial correlation is how all the variables interact with each other. In order to answer this question we ran a multiple regression with job growth as the dependent variable and the other variables used as independent variables. The equation is:

$$Y_1 = C + B_1(\text{Openness}) + B_2(\text{Exports}) + B_3(\text{GCF}) + B_4(\text{Output})$$

[Y₁ = job growth at the sub-sectoral level]

The findings substantiate what emerged in the correlation matrix.⁴¹ The independent variable (job growth) was found to be positively correlated with export level and negatively correlated with import penetration. This lends support to the hypothesis that export expansion contributes to expanding the market and enables industries to increase their level of output. The contrary applies to the import side, where we found that once import share in total supply increases it discourages domestic output and hence potential expansion in employment.

Other variables such as output growth and capital expansion hold the expected relationship. That is, more capital was associated with job growth and expansion in output was accompanied by growth in employment. It is worth noting that expansion in employment was far more strongly linked to growth in output than it was to growth in exports. At the same time, growth in exports accounts for much of the growth in output, considering Jordan's limited national market.

However, this analysis (which partially agrees with classical theory about the impact of international trade, especially with regards to exports) does not tell us much about where these jobs have been created and under what conditions. These issues are addressed in sections III and IV of this paper.

In addition to the direct impact of trade on job creation, there will be indirect effects as well. Under usual circumstances, an input-output table could be used to analyze the indirect impact on job creation, examining the backward linkages for each relevant economic sector. Because an updated input-output table for Jordan is unavailable, however, we will limit our analysis to the direct impact of trade on job creation.

Beef it up

2.3 Foreign Direct Investment and Employment in Jordan

As discussed in the theoretical framework, FDI is expected to have a positive impact on employment and wages when all other factors are held equal. However, FDI can potentially crowd out domestic investment and also raise the price elasticity of labor demand, with serious consequences for wage growth and also for the improvement of working conditions. Also, international evidence also indicates that FDI tends to generate fewer jobs (though higher-paying jobs) than domestic investment.

Jordan has double-edged relationship with FDI because of the QIZ framework. Jordan, like most liberalizing developing countries, seeks to attract FDI to create economic growth and quality jobs for its citizens. The QIZs have attracted FDI; as of mid-2004 about JD 492 million had been invested in them (though not all of it by foreign investors). Yet because 67% of the QIZ workers are non-Jordanians, much of the FDI directed to the QIZs is in a sense "outsourced" immediately to non-Jordanian workers. The presence of so many foreign laborers in the QIZs means that the Jordanian labor force there suffers the higher labor elasticity and the resulting reduced bargaining power and work conditions.

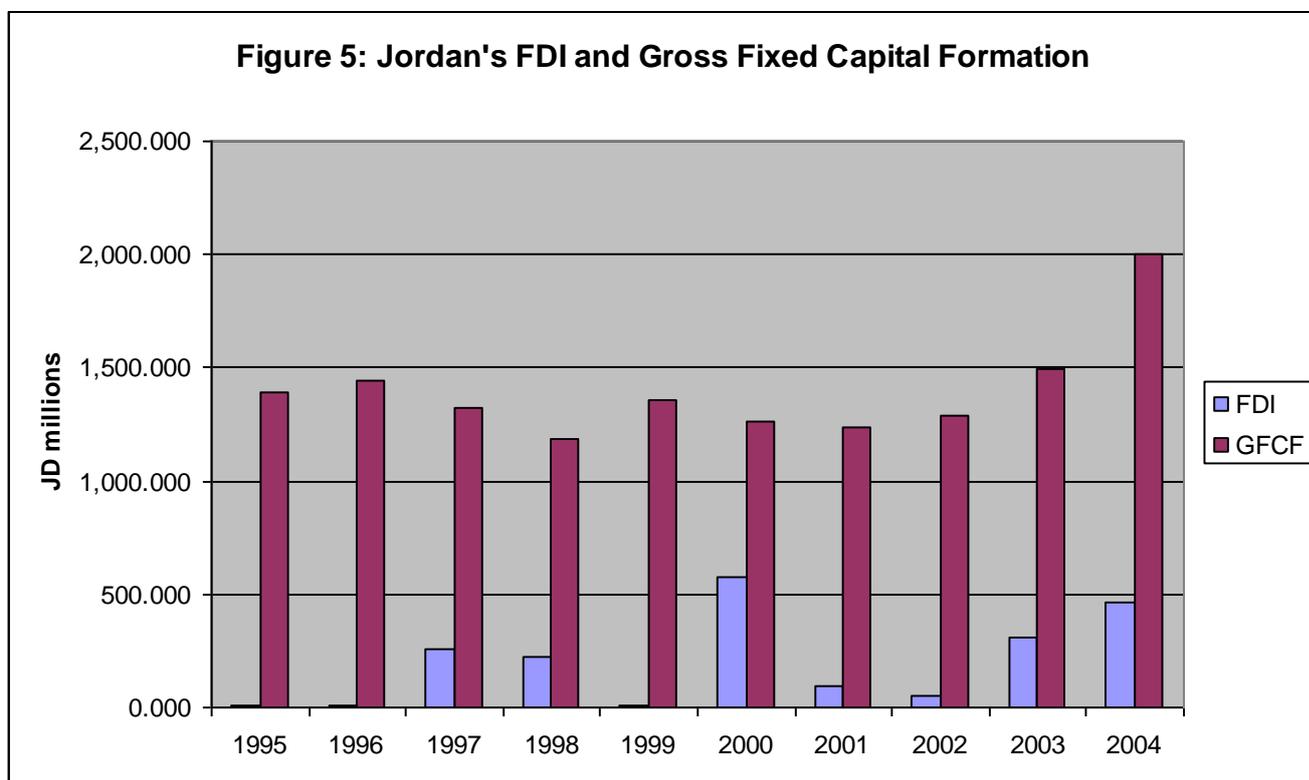
Countries in the Middle East and North Africa currently receive miniscule amounts of foreign direct investment compared to many other developing countries. In 2000, for example, MENA received just over 1% of all FDI directed toward developing countries.⁴² But since increasing trade integration is usually linked to FDI, Jordan's increasing trade should be reflected in greater FDI inflows. Indeed, Jordan has received relatively more FDI than most other countries in the region.⁴³

⁴¹ Annex one contains the outcome of this analysis.

⁴² World Bank, *Trade, Investment and Development*, 37-38.

⁴³ World Bank, *Trade, Investment and Development*, 38, Figure 1.18.

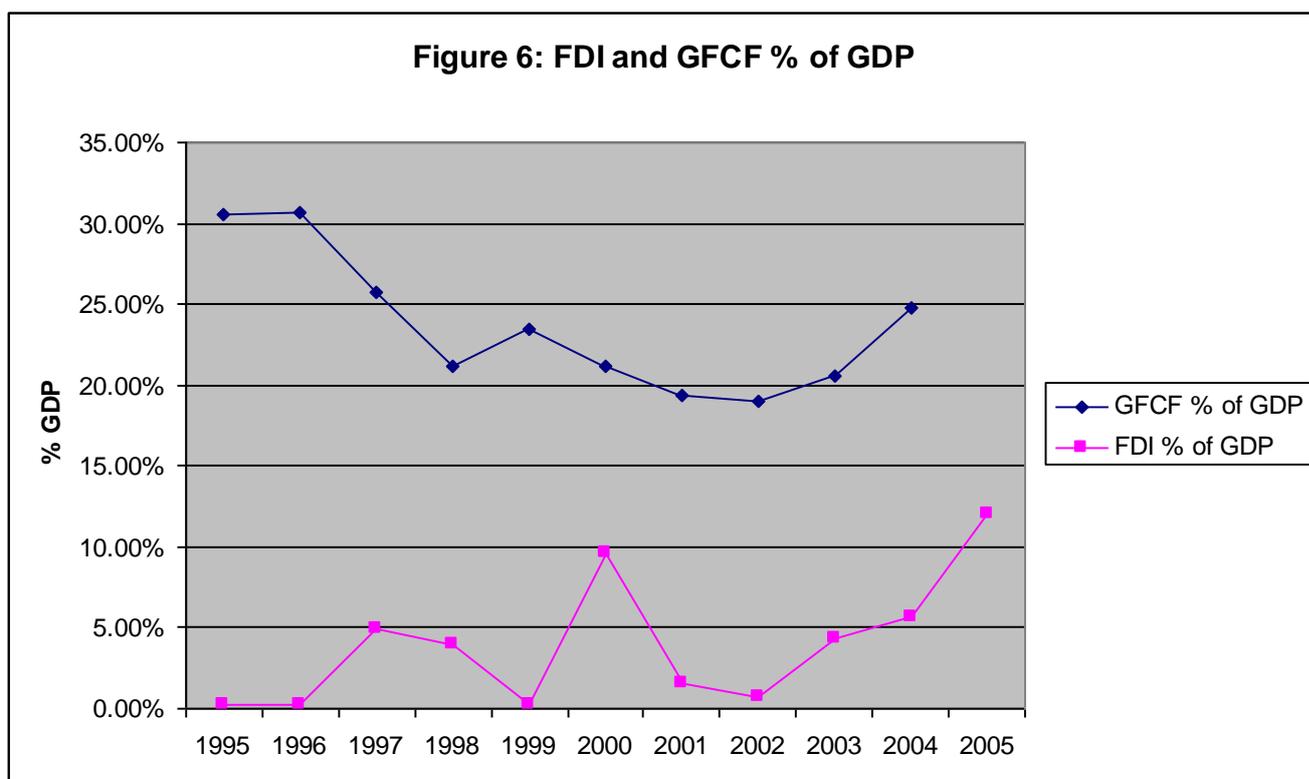
Over the last ten years, the relative importance of FDI relative to domestic Jordanian investment has fluctuated dramatically. (See Figure 5.) In 1995, 1996 and 1999, FDI in Jordan was negligible – less than JD 12 million in each year, or less than 1% of total investment. The high level of FDI in the year 2000 was an aberration caused by investment in privatized public entities.⁴⁴ FDI was quite low in 2002 (JD 58 million, 3.9% of total investment), but has increased markedly since – to JD 309 million in 2003 (17% of total investment), to JD 461 million in 2004 (18% of total investment), and then more than doubling its absolute level in 2005 to over JD 1 billion.



While FDI has increased since 2002, Jordanian domestic investment has increased along with it. Jordanian gross fixed capital formation has dramatically increased from JD 1.287 billion in 2002 to over JD 2 billion in 2004. This positive trend indicates that FDI has so far not swamped or crowded out local investment in Jordan; instead, Jordan has moved closer to meeting its FDI potential while also attracting additional local investment.

Investment has increased not only in absolute terms; both FDI and Jordanian investment have increased in recent years relative to Jordan's fast-growing GDP. This analysis confirms the positive trends for both FDI and domestic Jordanian investment. Since 2002, FDI has increased dramatically as a percentage of Jordan's GDP, from less than 1% in 2002 to just over 12% in 2005. (See Figure 6.) During the same period, domestic Jordanian investment has grown from 18.95% of GDP to almost 25% of GDP in 2004.

⁴⁴ Jordan Investment Board, Annual Report 2005, 19.



Although FDI is growing faster than domestic investment relative to Jordan’s GDP, FDI started from a much weaker position. Like the rest of the Middle East, Jordan had under-performed in attracting FDI before 2002; the recent FDI growth is an indication that FDI may be moving closer to meeting its potential. Jordan’s domestic investment, on the other hand, dropped from about 30% of GDP in the mid-1990s to about 20% of GDP at the turn of the millennium – but it appears to be rebounding solidly since 2002.

Despite the growth in domestic investment and FDI, some analysts have concluded that the investment response of the private sector has been weaker than expected.⁴⁵ Though investments have been increasing in absolute terms and relative to GDP, the particular structure of the Jordanian economy and the distribution of FDI in Jordan has had several negative impacts on Jordanian workers.

Much of Jordan’s incoming FDI has been targeted specifically at qualifying industrial zones (QIZs), in which the workforce is (as of April 2006) about 33% Jordanians and 67% foreign workers. This makes Jordan a very peculiar case as an FDI recipient, because in contrast to most FDI recipients, most of the workers benefiting from FDI entering Jordan are not Jordanian.

The theoretical framework outlined above describes FDI’s serious negative indirect impact on Jordanian workers. QIZ employers’ importing non-Jordanian labor into the QIZs is equivalent, from a Jordanian worker’s perspective, to outsourcing those jobs. Thus, because the QIZs permit foreign workers in addition to Jordanian workers, Jordan experiences some of the negative aspects of an FDI-sending country rather than just an FDI recipient. When a QIZ employer brings more foreign workers into the QIZs, that not only means fewer opportunities available for Jordanians – it also means lower wages, reduced bargaining power, higher labor volatility, lower labor standards, and a reduced ability of the government to redistribute wealth. Because QIZ employers can, in effect, outsource jobs to non-

⁴⁵ Musa Shteivi and Slah al-Lawzi, “Labor and Human Resource Development Issues: Jordan Country Profile.” Economic Research Forum, Cairo, Egypt, 21.

Jordanian workers within the QIZs, Jordanian workers have leverage versus employers and are forced to shoulder more of the costs associated with better working conditions.

The option for QIZ employers to bring foreign labor into the QIZ, as a lower cost and potentially more productive substitute for local Jordanian labor, decreases Jordanian workers' bargaining power. Jordanian workers are vulnerable; they have little leverage to push for wage increases or other improvements in working conditions because of the institutional framework in which Jordan receives its FDI. The phenomenon is reinforced because the foreign investors in the QIZs are likely to take less interest in factory working conditions than would a local employer with closer ties to the region.⁴⁶

Another large portion of FDI has been directed at privatized public entities.⁴⁷ These privatization programs do little to increase employment or working conditions in Jordan, since the incoming external funding merely takes charge of an existing enterprise rather than generating new employment opportunities. In the long term, FDI aimed at making these enterprises internationally competitive should have a positive effect on employment in Jordan, but in the short term employers are unlikely to hire new workers, as they attempt to become competitive without state subsidies.

As opposed to FDI, local investment seems to have been concentrated in non-productive activities such as construction.⁴⁸ Real estate sales have grown nearly threefold from JD 1.3 billion in 2003 to JD 3.5 billion in 2005.⁴⁹ Foreign investors have also invested in real estate, however; the non-Jordanian share of real estate transactions grew from 2.6% in 2003 to 4.2% in 2005.⁵⁰

In an attempt to facilitate foreign and domestic investment, the Jordan Investment Board (JIB) was established as a "one-stop shop" to cut through otherwise imposing government bureaucracy regulating investments. The JIB seeks to attract foreign investments, through an investment promotion law and other means, and to motivate domestic investments. Though the JIB focuses only infrequently on direct labor market impacts, it notes the growth of employment in tourism (from 11,200 in 1999 to 44,000 in 2005), pharmaceutical manufacture (expected to grow to 7,000 by 2012) and the food & beverage manufacturing sector (expected to reach 54,000 employees by 2012).⁵¹ It specifically highlights employment growth in the communications sector, which added 5,094 employees in 2004 alone.

III. Characteristics of Jobs in the Export Sectors

Overall, as we have seen, trade has been a positive force for job creation in Jordan. But the jobs created by trade have not been evenly distributed within the Jordanian economy. Some exports, such as the manufacture of apparel, have benefited disproportionately from trade – both because of Jordan's particular international trade framework and because of Jordan's status as a developing country with abundant unskilled labor. Other formerly state-supported import-competing sectors have suffered especially heavily from increased international competition. Because the costs and benefits of Jordan's trade liberalization have been distributed unequally by sector, and because working conditions in each sector differ substantially, we must analyze trade's sectoral impact to gain a comprehensive picture of how trade has impacted working conditions in Jordan.

⁴⁶ On the other hand, the opposite may in some cases be true: some multinational corporations are more responsive to public pressure and more respectful of workers' rights than smaller local corporations.

⁴⁷ Shteivi and al-Lawzi, *op. cit.*, 8.

⁴⁸ *Ibid.*

⁴⁹ Jordan Investment Board, Annual Report 2005, 18.

⁵⁰ *Ibid.*

⁵¹ Jordan Investment Board, Annual Report 2005, 20-29.

The table below gives an overview of industrial sectors in Jordan according to the second level of the International Standard Industrial Classification of all Economic Activities (ISIC). As can be seen, the dominant industrial activities in Jordan are the manufacture of chemicals and chemical products, apparel, food products & beverages, and refined petroleum products.

Table 5: Overview of Industrial Sectors (2004)

Sector	Value added (000s JDs)	Gross output (000s JDs)	% of industrial output
Manufacture of chemicals and chemical products	237730	1610092	23.7
Manufacture of wearing apparel, dressing and dyeing of fur	114160*	932698	13.7
Manufacture of Food Products and Beverages	227363	843916	12.4
Manufacture of coke, refined petroleum products and nuclear fuel	76590	678337	10.0
Mining and Quarrying	242091.8	426048	6.3
Manufacture of other non-metallic mineral products	206809	420369	6.2
Electricity, gas, steam and hot water supply	141796	332052	4.9
Manufacture of basic metals	97818	273596	4.0
Manufacture of Tobacco Products	144330	234223	3.4
Manufacture of fabricated metal products, except machinery and equipment	73661	191787	2.8
Manufacture of electrical machinery and apparatus (n.e.c)	35579	137953	2.0
Manufacture of rubber and plastics products	47522	131464	1.9
Manufacture of paper and paper products	44317	123379	1.8
Publishing, printing and reproduction of recorded media	50236	107458	1.6
Manufacturing of furniture, manufacturing n.e.c.	41283	100815	1.5
Manufacture of machinery and equipment	31778	90379	1.3
Manufacture of Textiles	23178	51594	0.8
Manufacture of motor vehicles, trailers and semi-trailers	13719	38549	0.6

*Based on 2003 figures, 2004 figures not available

With the exception of the manufacture of refined petroleum products, these industries are also the biggest contributors to total domestic exports. Mining & quarrying⁵² and agriculture are also important contributors to domestic exports.

⁵² Quarrying accounts for a negligible proportion of activity in this area

Table 6: Sectoral Contribution to Total Domestic Exports

Sector	Proportion of total domestic commodity exports				
	2000	2001	2002	2003	2004
Mining and Quarrying	21.80%	17.60%	15.40%	14.30%	12.40%
Manufacture of Food Products and Beverages	6.90%	6.00%	6.30%	5.30%	7.50%
Manufacture of Tobacco Products	0.50%	1.20%	1.70%	1.60%	1.30%
Manufacture of Textiles	1.80%	1.50%	1.00%	1.90%	4.40%
Manufacture of wearing apparel, dressing and dyeing of fur	6.90%	15.00%	23.00%	27.00%	26.90%
Manufacture of paper and paper products	2.90%	3.20%	2.30%	1.80%	1.50%
Publishing, printing and reproduction of recorded media	1.30%	1.00%	0.40%	0.30%	0.20%
Manufacture of coke, refined petroleum products and nuclear fuel	0.00%	0.00%	0.00%	0.30%	0.60%
Manufacture of chemicals and chemical products	31.20%	24.30%	24.50%	22.40%	21.10%
Manufacture of rubber and plastics products	2.10%	2.20%	1.40%	1.20%	1.30%
Manufacture of other non-metallic mineral products	2.30%	2.90%	2.60%	2.20%	1.50%
Manufacture of basic metals	2.10%	3.00%	2.30%	2.20%	3.20%
Manufacture of fabricated metal products, except machinery and equipment	1.30%	1.70%	1.30%	1.10%	1.30%
Manufacture of machinery and equipment	3.50%	3.80%	3.50%	2.10%	2.00%
Manufacture of electrical machinery and apparatus (n.e.c)	1.30%	2.40%	1.70%	1.50%	1.70%
Manufacture of motor vehicles, trailers and semi-trailers	1.60%	2.90%	1.50%	0.70%	0.90%
Manufacturing of furniture, manufacturing n.e.c.	1.80%	2.00%	2.30%	4.10%	4.70%
Electricity, gas, steam and hot water supply	0.00%	0.00%	0.00%	0.00%	0.00%
Agriculture	6.60%	7.00%	7.50%	6.60%	6.10%
Total	96	97.6	98.7	96.4	98.6

This paper will first examine characteristics of jobs in the larger export-heavy sectors, and then go on to briefly discuss a selected few of the smaller export-oriented industrial sectors. These sectors have also been selected based on their relatively high level of wages and wage productivity, with a view to identifying nascent export-oriented industries which produce quality jobs.

As Table 7 shows, sub-sectors with high export orientation witness a stronger growth in job creation. This was the case in apparel and chemical manufacturing. This table also shows that there are wide variations in the wages earned by employees in different sectors and in their levels of productivity.

Table 7: Characteristics of Employment by Sector, 2004

Sector	Value added (000s JDs)	No. of employees	Weight in employment	Employment growth (2001-2004)	Average wage	Labor Productivity	Wage productivity
Mining and Quarrying	24209100.00%	747500.00%	1.06%	-5.30%	49900.00%	32.39	0.00206
Manufacture of Food Products and Beverages	22736300.00%	2864700.00%	4.06%	13.20%	23400.00%	7.94	0.00103
Manufacture of Tobacco Products	14433000.00%	123800.00%	0.18%	24.20%	42700.00%	116.58	0.00296
Manufacture of Textiles	2317800.00%	325400.00%	0.46%	-2.30%	19000.00%	7.12	0.00818
Manufacture of wearing apparel, dressing and dyeing of fur	114160*	4801500.00%	6.80%	33.60%	QIZ: 130 non-QIZ: 145	2.61*	0.00122*
Manufacture of paper and paper products	4431700.00%	329600.00%	0.47%	15.90%	27300.00%	13.45	0.00617
Publishing, printing and reproduction of recorded media	5023600.00%	557400.00%	0.79%	30.20%	27800.00%	9.01	0.00554
Manufacture of coke, refined petroleum products and nuclear fuel	7659000.00%	357100.00%	0.51%	8.50%	59500.00%	21.45	0.00777
Manufacture of chemicals and chemical products	23773000.00%	1322600.00%	1.87%	26.60%	39300.00%	17.97	0.00165
Manufacture of rubber and plastics products	4752200.00%	448100.00%	0.63%	-14.00%	20000.00%	10.61	0.00421
Manufacture of other non-metallic mineral products	20680900.00%	1593100.00%	2.26%	12.00%	26600.00%	12.98	0.00129
Manufacture of basic metals	9781800.00%	365500.00%	0.52%	41.80%	30400.00%	26.76	0.00311
Manufacture of fabricated metal products, except machinery and equipment	7366100.00%	1204300.00%	1.71%	7.20%	17200.00%	6.12	0.00234
Manufacture of machinery and equipment	3177800.00%	398200.00%	0.56%	15.40%	22800.00%	7.98	0.00717

Sector	Value added (000s JDs)	No. of employees	Weight in employment	Employment growth (2001-2004)	Average wage	Labor Productivity	Wage productivity
Manufacture of electrical machinery and apparatus (n.e.c)	3557900.00%	229500.00%	0.33%	69.60%	25300.00%	15.5	0.0071
Manufacture of motor vehicles, trailers and semi-trailers	1371900.00%	172500.00%	0.24%	30.10%	25400.00%	7.95	0.01851
Manufacturing of furniture, manufacturing n.e.c.	4128300.00%	1006600.00%	1.43%	-13.10%	22000.00%	4.1	0.00533
Electricity, gas, steam and hot water supply	14179600.00%	705200.00%	1.00%	6.20%	48800.00%	20.11	0.00344
Agriculture		110837*	10.57%*	-2.9%**	n/a	n/a	n/a

*Based on 2003 figures, 2004 figures not available

**For the years 2001-2003

Apparel manufacturing

Apparel manufacturing contributes far more to employment than any other industrial sector in Jordan, making up nearly 7% of all employment. As Table 7 also shows, this sector has shown one of the highest job growth rates (33.6%) in the industrial sector from 2001-2004. Clothes accounted for 29% of Jordan's domestic exports in 2005, up dramatically from only 3% of Jordan's exports only six years before.

However, wages in this sector are low. In 2003, the average monthly wage for a QIZ worker was 130 JDs⁵³ compared to an average of 260 JDs in the industrial sector⁵⁴, 211 JDs in the private sector and 244 JDs overall (see Tables 10-12 later). This is equivalent to 38% less than the average private sector wage, 46% less than the average Jordanian wage and 50% less than the average wage in the industrial sector. Moreover, productivity in apparel manufacturing is the lowest of any industrial sector. Apparel manufacturing also has the second lowest level of wage productivity among industrial sectors.

In addition to low wages, working conditions in garment factories are also poor. Conditions often do not abide by international labour standards, or even the compliance needed under the labour codes of the trade agreements. While the QIZs were established to provide more job opportunities for Jordanians, over the years the number of Jordanian workers has been diminishing, giving rise to increased migrant labour. Reasons behind this include low wages, difficult working conditions and remote locations which many Jordanians are unable to accept.

Given the low wages and poor working conditions (discussed in section 4.2), it is unsurprising that relatively few Jordanians have taken up employment in this sector. Indeed, about 67% of employees in this sector are migrant workers,⁵⁵ working under conditions which have been described as resembling

⁵³ Ibrahim Saif, "The Socio-Economic Implications of the Qualifying Industrial Zones in Jordan," Amman: Center for Strategic Studies, 2006.

⁵⁴ Department of Statistics (2006) Industry Survey 2004.

⁵⁵ Jordan Department of Labor, April 2006.

the U.S. government's definition of involuntary servitude,⁵⁶ with confiscation of foreign workers' passports common in a number of factories.

Manufacturing of chemical products

Jobs in the chemical manufacturing sector account for around 1.9% of employment in Jordan. But although apparel manufacturing creates about 3½ times as many jobs as chemical manufacturing, the average wage in chemical manufacturing is much higher at 393 JDs. This compares favorably with average Jordanian wages both in the public and private sectors. The average wage in this sector is also 47% higher than the average wage in the industrial sector. The relatively high level of both wages and exports in this sector illustrates that the competitiveness of Jordanian exports is not necessarily determined by low wage levels.

The chemical manufacturing sector is also categorized by relatively high levels of productivity. Although wage productivity in this sector is low compared to other industrial sectors, the relatively high level of absolute wages in this sector suggests that low wage productivity merely reflects the high level of productivity in the sector. It is also worth noting that this sector is growing at a rapid rate suggesting that it has the potential to contribute to the creation of high-quality jobs (see Table 8 below).

Table 8 – Sectors' growth in output (2000-2004)

Sector	Growth in output (%)
Manufacture of wearing apparel, dressing and dyeing of fur	340.9
Manufacture of chemicals and chemical products	137.7
Manufacture of basic metals	131.9
Manufacture of electrical machinery and apparatus (n.e.c)	118.1
Manufacture of fabricated metal products, except machinery and equipment	80.3
Manufacture of machinery and equipment	65.7
Manufacture of other non-metallic mineral products	64.4
Manufacture of motor vehicles, trailers and semi-trailers	61.1
Publishing, printing and reproduction of recorded media	56.1
Manufacture of Food Products and Beverages	54.7
Manufacture of coke, refined petroleum products and nuclear fuel	43.9
Manufacture of rubber and plastics products	41.1
Manufacturing of furniture, manufacturing n.e.c.	40.1
Manufacture of paper and paper products	37.6
Electricity, gas, steam and hot water supply	33.6
Mining and Quarrying	28.2
Manufacture of Tobacco Products	27
Manufacture of Textiles	8.6

Mining & quarrying

Like chemical manufacturing, mining and quarrying has a small employment impact but a high level of wages. It also has a relatively low wage productivity level but as with the case of chemical manufacturing, this reflects the high level of productivity in the sector. Importantly, the number of jobs

⁵⁶ National Labor Committee, "U.S. – Jordan Free Trade Agreement Descends into Human Trafficking and Involuntary Servitude," May 2006, accessed online Jan. 16, 2007.

in this sector has declined over the past few years. However, this sector is resource-based with relative prices determined by external sources. High wages and value added could be attributed to the nature of the sector more than the dynamics of competition.

Manufacture of food products & beverages

Food manufacturing has a high employment impact compared to other industrial sectors, at over 4% of total Jordanian employment. It is worth noting however, that most of the jobs created in this sector cannot be attributed to exports. Although this sector makes a significant contribution to domestic exports, it is largely geared towards the domestic market, exporting less than one fifth of its output.⁵⁷

Moreover, although wages in the food manufacturing sector are about 10% higher than the average private sector wage, wage productivity in this sector is the lowest of any industrial sector. Moreover, there is a high level of import penetration, with imports accounting for an average of 42.2% of the total aggregate supply of food products and beverages over the period 2000-2004 (reaching a high of 46.1% in 2004). This suggests that food manufacturing is a highly competitive sector.

Agriculture

Agriculture makes an important contribution to employment in Jordan, accounting for around 10% of jobs. Agriculture is also a very export-oriented industry, exporting 45-60% of its gross output over the last few years.

The average agricultural wage is among the lowest of any sector. Workers work long hours and in many cases they need to sleep in the workplace if they do not live there. For Jordanians from the urban or semi-urban centers, this is not an attractive sector in which to work. Indeed, there has been out-migration from the agricultural sector into other sectors due to these low wages and poor conditions. As with the apparel manufacturing sector, this has led to a high proportion of non-Jordanian workers in this sector.

A major disadvantage of working in agriculture is the fact that agricultural workers are excluded from the provisions of the Labor Law and its employment rights. Moreover, we estimate that well below 10% of agricultural workers are socially insured.⁵⁸

Agriculture in Jordan is a sector in decline. The sector's contribution to GDP has dropped from a level of 6-7% in the early 1990s to a level of 2-3% during 2000-2003. Employment in the agricultural sector over this period has also dropped from 14%, to 11% by 2003. The fact that the sharp decline in the sector's share of GDP was not matched with a similar drop in employment suggests deteriorating productivity in the sector. Indeed, the productivity gap between agriculture and the rest of the economy has been widening, mainly as a result of the decline in agricultural productivity rather than due to an increase in productivity in the other sectors.⁵⁹

The agricultural sector's exports of low value-added agricultural products are not sustainable for Jordan, which is one of the ten most water-poor countries in the world. Jordan is already running a water deficit of 500 million cubic meters per year, with a disproportionate share of available water (62.5%) going to agriculture,⁶⁰ which accounts for only 2-3% of GDP. If agriculture is to continue as

⁵⁷ Department of Statistics, Industry Survey 2004.

⁵⁸ According to the Social Security Corporation, only 9,545 agricultural workers were socially insured in 2005. Although figures for the number of people employed in agriculture for 2005 are not available, figures from 2003 suggests that this is well below 10% of total workers in the sector.

⁵⁹ Saif, "Employment Poverty Linkages."

⁶⁰ World Bank, Country Assistance Strategy for the Hashemite Kingdom of Jordan, FY 2006-2010. Sept. 13, 2006.

one of Jordan’s main export sectors, and to play a sustainable role in job creation, it will be necessary for the sector to make a major transition towards high value-added products, targeting high-price export markets.

Manufacture of machinery & equipment, motor vehicles, and electrical equipment

These three sectors each constitute 2% or less of Jordan’s total industrial output, but they all show moderately high rates of growth since 2000 (see Table 8). The first two sectors, manufacture of machinery & equipment and manufacture of motor vehicles, are both highly export-oriented (see Table 9), implying the potential for these sectors to play an important role in further export growth.

Table 9: Percentage of Output Exported for Selected Sectors

Sector	% of output exported				
	2000	2001	2002	2003	2004
Manufacture of machinery & equipment	68.4	87.9	80.8	48.3	51
Manufacture of motor vehicles, trailers and semi-trailers	73	58.2*	70	39	52
Manufacture of electrical equipment	22.4	44.6	34.4	28.1	28.2

Source: Department of Statistics, Industry Survey 2004

*There was no reliable figure for this year. This figure is an estimate based on the average the remaining years listed in this table.

Although jobs in the manufacture of machinery and equipment sector are paid below the industrial average, they are well-paid compared to the private sector as a whole, with an average wage of 228 JDs in 2004. This sector also has one of the highest levels of wage productivity in Jordanian industry. Moreover, job growth in this sector has been moderate compared to other industrial sectors, with a 15.8% increase in the number of jobs during the period 2001-2004. The combination of high output growth, high exports and decent wages suggests that this is a sector with the potential to contribute to the creation of decent export-oriented jobs.

Similarly, jobs in the manufacture of motor vehicles sector are relatively well-paid, and the average wage (254 JDs in 2004) is higher than the average Jordanian wage. Over the period 2001-2004, there has been a 30.1% increase in the number of jobs in this sector. This is among the highest job growth rates in Jordanian industry. Again, these indicators suggest that the manufacture of motor vehicles is a promising sector with respect to the creation of decent export-oriented jobs.

The manufacture of electrical equipment is less export-oriented than the two previous sectors, as Table 9 shows. Yet jobs in this sector are relatively well-paid, as the average wage (253 JDs) is higher than the average Jordanian wage. The job growth rate for this sector over the period 2001-2004 is the highest of any industrial sector (Table 7).

IV. Trade, Employment and Decent Work

As discussed above, while traditional trade theory predicts growing wage equality in developing countries during liberalization, more recent insights suggest that trade may not increase wage equality in developing countries, and may indeed foster greater inequalities. This may happen because low-skill Northern jobs become high-skill Southern jobs, or because large pools of unemployed or barely employed laborers are available to fill unskilled positions, or because of pre-liberalization tariff schedules. In the following sections, we find that the evidence in Jordan supports the more recent theoretical contributions.

4.1 Conditions of Work

Working conditions include both wage and non-wage benefits. This section evaluates both types of benefits, focusing especially on conditions of jobs created through export growth.

Wages

Over the last few years, real wages in Jordan registered a decline both in the private and the public sectors. Tables 10 to 12 below provide information on overall average wages in Jordan, as well as the breakdown for averages in the private and public sectors. These figures provide a benchmark against which to compare the level of wages in different export-oriented sectors. They also give an overview of wage structure in Jordan. Perhaps most striking is the fact that public sector wages are considerably higher than private sector wages, in contrast to the wage structure in most economies. Moreover, while real wages in the public sector increased over the period 2000-2004, real wages in the private sector declined. There is also a clear gender pay gap in both sectors, although it is more pronounced in the private sector.

Table 10: Average Monthly Wages in Jordan

Year	Average wage (JD) ⁶¹			Consumer Price Index (2002= 100) ⁶²	Average real wage (both sexes)
	Males	Females	Overall		
2000	234	201	226	96.5	234
2001	238	211	232	98.2	236
2002	246	219	240	100.0	240
2003	249	226	244	101.6	240
2004	250	218	242	105.1	230

Source: Department of Statistics⁶³

Table 11: Average Monthly Private Sector Wages in Jordan

Year	Average wage (JD) ⁶⁴			Consumer Price Index (2002= 100)	Average real wage (both sexes)
	Males	Females	Overall		
2000	211	163	202	96.5	209
2001	212	174	205	98.2	209
2002	219	190	213	100.0	213
2003	221	172	211	101.6	208
2004	218	178	210	105.1	200

Source: Department of Statistics,⁶⁵ Central Bank of Jordan Monthly Bulletins

⁶¹ Assuming that the reference month (October) is representative of all months of the year.

⁶² Central Bank of Jordan Monthly Bulletins.

⁶³ Department of Statistics (DOS), http://www.dos.gov.jo/owa-user/owa/employment.em_select?lang=E&dist_t=5

⁶⁴ Assuming that the reference month (October) is representative of all months of the year.

⁶⁵ DOS, op. cit.

Table 12: Average Monthly Public Sector Wages in Jordan

Year	Average wage (JD) ⁶⁶			Consumer Price Index (2002= 100)	Average real wage (both sexes)
	Males	Females	Overall		
2000	272	234	261	96.5	270
2001	280	241	268	98.2	273
2002	288	244	274	100.0	274
2003	297	277	291	101.6	286
2004	316	267	301	105.1	286

Source: Department of Statistics,⁶⁷ Central Bank of Jordan Monthly Bulletins

Using figures from the Department of Statistics Employment Surveys, we measure the differences in wages between skilled and non-skilled jobs over the period 1995-2004. As discussed earlier, factor proportions theory predicts growing wage equality between skilled and unskilled workers in developing countries with trade liberalization. If wage equality across skill levels is indeed increasing, wages in lower skill occupations should be performing better over time than those in higher skill occupations. In fact, the opposite was true in Jordan between 1995 and 2004. On average, the real wages of skilled workers (occupational categories a, b, c and d) fell by 1.4% over this period.⁶⁸ Over the same period, the real wages of unskilled workers (occupational categories e, f, g and h) fell by 18.7%,⁶⁹ thus increasing (rather than decreasing) the wage differential between skilled and unskilled workers. Although the occupational categories listed below do not perfectly correspond to the skilled/unskilled distinction, they give a good indication of it as suggested by the fact that a large majority of workers in each of categories a, b, c and d have secondary/post-secondary educational qualifications while a large majority of workers in each of categories e, f, g and h have less than secondary educational qualifications (Table 13).

Table 13: Wages by Major Occupational Category (1995, 2000, 2004)

Major occupational category	Year	Average wage ⁷⁰	Number of employees	% change 1995-2004
a. Legislators, senior officials and managers	1995	616.6	17,696	+12.4%
	2000	682.9	21,373	
	2004	693.1	24,386	
b. Professionals	1995	318.1	97,105	+2.7%
	2000	350.3	107,344	
	2004	326.7	157,036	
c. Technicians and associate professionals	1995	241.8	44,365	-3.8%
	2000	243.5	93,028	
	2004	232.6	77,704	
d. Clerks	1995	232.7	43,673	-12.8%
	2000	222.8	70,206	

⁶⁶ Assuming that the reference month (October) is representative of all months of the year.

⁶⁷ DOS, op. cit.

⁶⁸ This is based on the average change in wages across categories a, b, c and d weighted to take account of the number of workers in each category. The figure used for the number of workers in each category was the average for figures for the years 1995 and 2004.

⁶⁹ This is based on the average change in wages across categories e, f, g and h weighted to take account of the number of workers in each category. The figure used for the number of workers in each category was the average for figures for the years 1995 and 2004.

⁷⁰ Monthly average real wage in JD. Wages have been deflated by using the Consumer Price Index (CPI=2002).

	2004	202.7	72,763	
e. Service workers, shop and market sales workers	1995	183.1	15,534	-22.4%
	2000	145.1	60,449	
	2004	142.1	70,930	
f. Craft and related trade workers	1995	182.7	43,597	-11.8%
	2000	172.0	78,853	
	2004	161.1	72,901	
g. Plant and machine operators and assemblers	1995	211.2	39,076	-29.3%
	2000	189.6	52,525	
	2004	149.3	85,101	
h. Elementary occupations	1995	152.4	58,056	-14.5%
	2000	142.0	101,362	
	2004	130.3	145,015	
Total	1995	250.9	363,774	-12.7%
	2000	234.2	585,140	
	2004	219.0	705,838	

Source: Department of Statistics,⁷¹ Central Bank Monthly Bulletins

*

Table 14: Paid Employees by Major Occupation Category and Educational Level (2004)

Major occupational category	Total	Illiterate/read & write	Less than secondary	Vocational apprenticeship	Secondary	Intermediate diploma	BA/ BSc	More than BA/BSc
a. Legislators, senior officials and managers	24,386	15	635	72	2,575	3,906	12,370	4,813
b. Professionals	157,036	0	0	0	0	30,393	106,864	19,779
c. Technicians and associate professionals	77,704	0	40	6	28,430	36,038	12,447	742
d. Clerks	72,763	40	23,215	841	27,027	14,311	6,813	516
e. Service workers, shop and market sales workers	70,930	582	29,043	1,835	27,761	8,176	3,484	50
f. Craft and related trade workers	72,901	1,139	45,713	8,370	14,879	2,392	399	9
g. Plant and machine operators and assemblers	85,101	1,738	57,727	3,132	19,224	2,855	408	17
h. Elementary occupations	145,015	5,283	117,706	2,296	17,648	1,827	255	0
Total	705,838	8,798	274,079	16,552	137,545	99,899	143,040	25,926

This evidence supports the more recent trade theories that do not predict growing income equality for liberalizing developing countries. In Jordan, the substantial group of unemployed laborers

⁷¹ DOS, op. cit.

characteristic of its dualistic labor market likely play a role in holding down low-skilled wages, fostering wage inequality. The fact that there is an oversupply and a high level of unemployment means that the negotiating power of unskilled labor is rather weak. Most of the unemployed are scattered, and there are no institutions or stakeholders to adopt their causes. In addition, within the QIZs, the availability of cheap foreign labor holds down wage increases.

Working hours

Working hours regulations are also much more flexible in Jordan than in most other MENA and OECD countries. Jordan's "Rigidity of Hours Index," at 20, is far lower than its MENA countries (44.7) and the OECD (45.2). Jordan allows a maximum of 6 working days per week and there are no restrictions on night work. Workers with 20 years of experience are guaranteed a relatively low 21 working days of paid annual vacation, and employers may extend the workweek up to 50 hours per week (including overtime) for two months of the year. On the other hand, there are restrictions on "weekly holiday" work in Jordan.

Labour market flexibility

Jordan ranks relatively highly – 30th in the world – in ease of employing workers, according to the World Bank's "Doing Business" report.⁷² Overall, Jordan has less rigid employment regulations than other MENA countries and than the OECD. Jordan's "Rigidity of Employment Index," an average of the rigidity of hiring, hours and firing indices, comes out to 27 – less than the MENA average of 35.8 and the OECD average of 33.3 (higher scores represent more rigidity).

It is easier to hire workers in Jordan than in most MENA or OECD countries. Jordan's "Difficulty of Hiring Index" is a low 11, easily undercutting the regional average of 29.7 and the OECD average of 27. For example, in Jordan, there is no maximum duration of term contracts, and term contracts may be used for non-term work. The ratio of mandated minimum wage to average value added per worker is 0.39.

However, it is far harder to fire workers in Jordan. Jordan's "Difficulty of Firing Index" is 50, significantly higher than the MENA average of 32.9 and the OECD average of 27.4. For example, in Jordan employers need the approval of a third party in order to terminate a single redundant worker. Jordanian workers thus have greater protections against being fired, but these restrictions may make employers less willing to hire new employees in the first place, or may induce employers to offer fixed-term contracts rather than permanent positions. On the other hand, employers need not consider retraining or reassignment options before terminating employees and no priority rules apply to redundancies or re-employment.

Jordan, according to the WB, is competitive in terms of non-wage labor costs (at 11% of salary, compared to 15.6% for MENA and 21.4% for the OECD) and far less stringent than its competitors in terms of firing costs (at only 4.3 weeks of wages, compared to a staggering 56.9 for MENA and 31.3 for the OECD). Employees with 20 years of *continuous* service are compensated with 4.3 weeks of salary, though employees with 20 years of non-continuous service are not guaranteed any termination compensation, and there is no legally mandated penalty for redundancy dismissal.

Social protection

⁷² World Bank, "Doing Business" rankings. Accessed on Sunday, Feb. 18, 2007 at <http://www.doingbusiness.org/ExploreEconomies/Default.aspx?economyid=99>

Although there is no available data concerning health coverage at the sectoral level, the Multi-Purpose Household Survey 2003 reported that 53.9% of the population is covered by health insurance, with the remaining 46.1% uninsured.⁷³ This can be generalized over the workers in the private sector where many do not enjoy health insurance which, unlike social security, is not mandatory. When employers are asked why they do not provide their employees and their families with health insurance, policy cost is an often cited reason. However, some agree that offering health insurance could decrease the high turnover. Some factory owners⁷⁴ argue that additional costs will negatively influence their export capabilities and their share in the domestic market. The same arguments were also made by those operating in the textile industry.⁷⁵

The proportion of paid employees covered by social security in Jordan was 73.6% in 2004. This is higher than the proportion of paid employees in the industrial sector covered by social security, which was 64.6% for that year, and far higher than the coverage for workers in the agricultural sector, which was 8.4% in 2003, the latest year for which figures are available.

Table 15: Social Security Coverage by Sector

Sector	2001	2002	2003	2004
Agriculture	6.3%	7.6%	8.4%	N/A
Industry	56.1%	59.6%	62.8%	64.6%
All sectors	66.2%	72.6%	75.6%	73.6%

Sources: Department of Statistics, Statistical Yearbook 2005; Department of Statistics⁷⁶

4.2 Labour migration and the export zones

There are approximately 300,000 migrant workers in Jordan. Approximately 36,000 migrants work in Qualifying Industrial Zones, and approximately 50,000 are domestic workers. The remainder, mostly Arabs from neighboring countries, work largely in agriculture and construction. While Jordan's labour law does not discriminate between Jordanian and migrant workers, there are increasing reports of violations and abuse of migrant workers rights.

The percentage of foreign workers in the QIZs has increased constantly, to the point that Jordanian workers are now a minority in the QIZs. In 2001, Jordanians constituted 64% of the QIZ workforce. But as of April 2006, according to the Ministry of Labor, out of the 54,077 workers in the QIZs, 17,928 (33%) were Jordanians, while 36,149 (67%) were migrant workers of different nationalities including Sri Lankan, Chinese, Indian, and Bangladeshi.

There are growing concerns at the recruitment and working conditions of foreign workers in Jordanian factories, in particular those recruited mainly from Asia (Bangladesh, China and Sri Lanka, and to a lesser extent India and the Philippines) for short-term employment in the QIZ. In a report published in May 2006 the National Labor Committee, based in New York, found substandard conditions in more than 25 of Jordan's roughly 100 garment factories. Common complaints included delay (and sometimes failure) in paying wages, long working hours for which no overtime was paid, of identity documents facilitating labour exploitation, restrictions on terminating employment or changing work places, debt bondage deriving from highly inadequate recruitment methods in countries of origin (including

⁷³ Department of Statistics, Multi-Purpose Household Survey, 2003, 101.

⁷⁴ Interview with Dr. Iyad Abu Haltam , Deputy Director of General Deluxe, Amman on Feb. 11, 2007.

⁷⁵ Interview with Firas Remwi, Operations Manager , El-Zay Group. *Russeifeh* on Feb. 13, 2007. It is worth noting that EL-Zay, which was proud for not hiring non-Jordanian until 2002, has resorted to non-Jordanian labor, mainly from Pakistan and Bangladesh. Foreign laborers have become 30% of their workforce. They said that Jordanians were less flexible, less productive and not dedicated.

⁷⁶ DOS, op. cit.

coercion and deception), and in some cases even physical abuse by managers.⁷⁷ Since the report was published, improvements have been made at many factories but serious cases of wage and working time violations persist.⁷⁸

There appears to be a generalized and structural problem in the 114 QIZ factories, though practice by some managers may have been particularly abusive. Contributory factors are serious deficiencies in the labour law itself, and in the overseas recruitment practices, as well as weak labour inspection.

Despite the high unemployment rates among Jordanians, QIZ employers still suffer from the lack of qualified and committed Jordanian workers. QIZ employers are constantly seeking to hire more Jordanians but are not succeeding. On the other hand, Jordanians might be reluctant to work in this sector due to the difficult working conditions and low wages. Additionally, some of the QIZ locations are too far for Jordanians workers who have to commute on daily basis. It is imperative that more Jordanians are hired so that the benefits of this growing sector can be shared by more Jordanians.

4.3 Gender Issues

Research has increasingly pointed to the ambiguous nature of the impacts of trade on women. On the one hand, trade liberalization has led to an increase in employment opportunities for women—particularly in feminized sectors such as apparel manufacturing. It is certainly the case that in Jordan, women are better represented in the QIZ workforce (they comprise around 70% of the QIZ workforce⁷⁹) than in the formal labor market as a whole (in which they account for 21% of the workforce⁸⁰). A 2002 study on women employed in Jordanian QIZs points out that "the textile and garment industry is providing young, single, urban and rural women from poor families with new employment opportunities, which they otherwise would not have had"⁸¹ and that "this work opportunity has provided some of these women with self-fulfillment and new life experiences"⁸². However, this study also notes that most of these jobs consist of repetitive assembly-type work which does not provide further career opportunities or help these women to develop transferable skills.⁸³

Indeed, while earning an income can lead to greater empowerment for women, it is important to note that there is a high level of vertical segregation in Jordan's industrial sector as a whole, as suggested by the high gender pay gap in this sector. As shown in Tables 18 and 19 below, Jordanian women in the industrial sector are paid, on average, 80% less than men while non-Jordanian women in this sector are paid, on average, 49% less than men. Importantly, the pay gap in the industrial sector is far higher than the overall gender pay gap (15% in 2004) or even that in the private sector (22% in 2004). If the Jordanian government is to continue to focus on expanding manufacture exports as a development strategy, it is imperative that greater attention is paid to issues of gender inequality in industry.

With regard to non-wage benefits, in theory Jordanian women employed in industry should generally benefit from greater maternity benefits than their counterparts in other sectors. This is because Jordanian legislation regarding childcare stipulates that firms employing more than twenty female

⁷⁷ National Labor Committee "U.S. Jordan Free Trade Agreement Descends into Human Trafficking & Involuntary Servitude", May 2006, Accessed online on Jan. 16, 2007 from <http://www.nlcnet.org/article.php?id=10>

⁷⁸ National Labor Committee, "An Update on the Situation in Jordan", September 27, 2006, Accessed online on Jan. 16, 2007 from <http://www.nlcnet.org/article.php?id=136>

⁷⁹ World Bank (2005) The Economic Advancement of Women in Jordan: A Country Gender Assessment

⁸⁰ Department of Statistics Employment Survey 2004

⁸¹ Ministry of Labor and the International Labor Organization (2002) "Women Workers in the Textiles and the Garment Industries in Jordan: A Research on the Impact of Globalization", Amman, pg.2.

⁸² *Ibid.* pg.20.

⁸³ Ministry of Labor and the International Labor Organization (2002) "Women Workers in the Textiles and the Garment Industries in Jordan: A Research on the Impact of Globalization", Amman.

employees with more than ten children under the age of four are required to provide fully funded nursery facilities. Thus women employed in the industrial export-oriented sectors, which are dominated by large firms rather than SMEs, should have especially good access to childcare provision. SMEs currently account for 90% of businesses in Jordan and a shift towards work in larger firms should be beneficial to women from a childcare perspective given the current state of legislation in this area. However, in reality childcare regulations are very weakly enforced.

With regard to other sectors, the gender pay gap in the service sector (9% in 2004)⁸⁴ is significantly smaller than that in the industrial sector. This suggests that a focus on exporting services, rather than manufactures, may foster greater gender equality. Moreover, women are well-represented in the service sector in Jordan comprising 27% of its employees⁸⁵ compared to 21% of employees in the formal labor market as a whole. Although women actually earn more than men in the **waged** agricultural sector, they are severely underrepresented in this sector (6.6% of the **waged** agricultural workforce compared to 21% of the formal labor market) which involves intensive manual labor and is thus considered inappropriate for women. It is worth noting, however, that in some countries women have found increased employment opportunities in certain non-traditional agricultural activities, such as cut flowers.⁸⁶

Table 18: Women vs. Men’s Pay in Agriculture and Industry (2005)

Sector	Average wage (Jordanian)	Average wage (Non-Jordanian)
Industry		
Male	300	155
Female	167	104
Agriculture		
Male	146	135
Female	162	148

Table 19: The Gender Pay Gap in Agriculture and Industry (2005)

Sector	Gender pay gap ⁸⁷	
	Jordanian	Non-Jordanian
Industry	80%	49%
Agriculture	-11%	-9%

Finally, it is important to recognize that as the overall quality of export-related jobs improve this is likely to result in the replacement of women by men employees in export-related sectors. The experiences of several developing countries show that when production calls for higher skills or technological sophistication, women tend to be replaced by men. This has been the case in the electronics industry in the Republic of Korea and in the maquiladoras in Mexico, for example.⁸⁸ Such a scenario is especially likely to transpire in Jordan where social attitudes towards women’s employment remain unfavorable.⁸⁹ Indeed, it already seems to be the case in Jordan that men are preferred for high-

⁸⁴ Department of Statistics Employment Survey 2004

⁸⁵ Department of Statistics Employment Survey 2004

⁸⁶ Randriamaro, Z. (200-) “Gender and Trade”, Institute of Development Studies (Bridge Publications)

⁸⁷ The gender pay gap expresses the difference between the average wage of female and male workers. A pay gap of 10% means that women are paid, on average, 10% less than men.

⁸⁸ Kamal Malhotra et al., *Making Global Trade Work for People*. Earthscan Publications Ltd., 2003.

⁸⁹ James Zogby, “The Attitudes of Arabs 2005: An In-Depth Look at the Social and Political Concerns of Arabs.” 2005.

status jobs as is indicated by the fact that women tend to have higher educational qualifications than men in similar jobs. World Bank estimates show that the average female wage earner in Jordan is likely to have 12.3 years of education, compared with 9.3 years for men holding a similar job.⁹⁰ Moreover, the unemployment rate for women with post-secondary qualifications is about double that of men with equivalent educational qualifications whereas female disadvantage in finding a job is much less marked for people with lower educational qualifications.⁹¹

V. Employment and Trade within Jordan's Policy Framework

5.1 Trade and employment within national planning frameworks

Jordanian national development plans have long made a link between trade policies and employment on a vague rhetorical level. However, these plans have consistently failed to elaborate on this link by formulating specific policies to ensure that the liberalization of trade leads to the creation of decent jobs. As a result, Jordan's economic policymaking, labor outcomes are almost completely dissociated from its trade policies. Effects on the labor market are seen as a byproduct, rather than a goal, of trade and investment decisions.

While policymakers clearly recognize the importance of addressing the issues of unemployment and the need for job-creation, the policy prescriptions put forward in these frameworks are inadequate given the magnitude of the employment challenge in Jordan. The scale of the disequilibrium in the Jordanian labor market is indicated by the fact that there are about 70,000-80,000 new entrants into the labor market each year while in recent years the Jordanian economy has been creating about 30,000 jobs per year. To cover the gap and maintain unemployment at its current rate, Jordan needs to generate an additional 40,000-50,000 jobs per year.⁹²

One early plan in Jordan's structural adjustment era was the 1993-1997 Economic and Social Development Plan. This plan listed among its aims a reduction in Jordan's unemployment rate from 15% in 1992 to 9.6% in 1997, mainly through the creation of 224,100 new jobs. However, the plan made no link between employment and trade policies. The employment section of the plan did not mention trade and investment policies. Rather, it proposed to increase employment through supporting SMEs, encouraging the establishment of private employment agencies, assisting Jordanians in finding jobs abroad, and regulating the inflow of foreign labor. Similarly, the plan's section on trade policies did not discuss employment or job creation, instead setting out guidelines for modifying customs regulations and tariffs as well as a strategy for increasing exports.

The Economic and Social Development Plans in succeeding years have continued to neglect to link trade and employment. The plan for 1999-2003 set the target of achieving an average of 5.2% growth in the export of goods and services, and it also aimed to bring unemployment below 10%, but again no link was made between trade policy and liberalization on the one hand and employment on the other. The plan for 2004-2006 called for the development of education and vocational training programs to address unemployment. However, vocational training alone cannot spur the dramatic employment growth necessary for Jordan to keep pace with its expanding labor market, much less actually reduce the unemployment rate.

⁹⁰ World Bank, "Economic Advancement of Women."

⁹¹ It is worth noting that the extremely low unemployment figure for illiterate women primarily reflects a complete lack of employment among illiterate women, who are thus not actively seeking jobs.

⁹² Saif, Ibrahim. *Employment Poverty Linkages and Policies for Pro-Poor Growth in Jordan (1990-2003)*, citing unpublished statistics from the National Center for the Development of Human Resources.

Jordan's National Agenda, adopted in 2005 to formulate the state's development priorities, makes a clearer link between trade policies and employment goals in its call for "the growth of labor-intensive and export-oriented industries and traded services."⁹³ But despite the valuable proposal, the agenda splits its discussion of employment and investment/trade policies into separate "themes," fostering divergent rather than integrated labor market policies.

The "Employment Support and Vocational Training Theme" of the Agenda deals directly with labor market issues, but includes little analysis of how trade or investment policies could affect employment. Although the theme recognizes that vocational training has been unsuccessful in the past, it stresses familiar policy prescriptions like revitalizing vocational training and revising labor laws. The theme does mention the importance of reducing unemployment through "investments in priority economic sectors," but this important concept is not further elaborated.

The "Investment Development Theme," by contrast, focuses almost exclusively on fostering a friendly investment climate and strengthening Jordan's international competitiveness. The theme mentions the projected employment impact of the theme's initiatives (270,000 jobs over 10 years), but the discussion frames the labor market impact purely as a result rather than a priority or goal. Within this theme is a section on "prioritization of economic sectors," but employment generation does not appear to influence which sectors are prioritized.

The *Kolana Al-Urdun* Action Plan, published by the government in 2006, is unique among Jordan's development frameworks in that it goes beyond theoretically linking trade with employment goals and makes concrete suggestions to prioritize specific export sectors based on their job creation potential. To this end, the plan suggests focusing on service exports in labor-intensive sectors like tourism, medical and educational services. Recognizing the agricultural sector's importance in the labor market, the plan also calls for policies to support agricultural exports.

In most Jordanian policies, insofar as trade and employment have been linked, there seems to have been an assumption that economic growth, spurred by increased trade, will automatically translate into job creation. Until very recently there has been little attention to focusing Jordan's trade policies on positive labor market outcomes, and as a result many of the potential labor benefits of trade over the last decade have been missed.

5.2 Review of employment promotion policies in Jordan

There is no clear employment policy regarding the labor market. Government measures to regulate the labor market are sometimes arbitrary. There are no specific goals, for example, to target certain sectors and try to replace non-Jordanians with Jordanian labor. There is some concern expressed regarding unemployment and poverty, but attention has mostly been devoted to reducing poverty and unemployment through short-term and unsustainable measures. However, little attention has been paid to training the poor and integrating them more to benefit from highly paid economic sectors.

A strong investment by the Jordanian state in labor market governance is necessary in order to manage the positive and negative impacts of trade on Jordanian workers. Though an international framework providing guiding principles for labor market governance is established, institutions and systems of labor market governance differ greatly around the world. The challenge for Jordan and the rest of

⁹³ National Agenda, 7.

MENA is to craft a system of labor market governance that accords with international standards and meets labor market challenges.

The international framework for labor market governance is guided by the Labour Administration Convention (No. 150) of 1978, the accompanying Labour Administration Recommendation No. 158, and the ILO's Declaration on Fundamental Principles and Rights at Work of 1998. The convention calls upon states to establish a system of labour administration, and within that system, to ensure consultation and negotiation between "the public authorities and the most representative organizations of employers and workers."⁹⁴ The convention also requires ratifying states to extend official labor market governance to agricultural workers, self-employed workers, and informal sector workers.⁹⁵

The convention and the Labour Administration Recommendation aim to foster a greater degree of social dialogue, coordination and cooperation between state, employers' and workers' institutions. The recommendation highlights the free exercise of the right to association and the right to organize and bargain collectively as important methods of dialogue and negotiation.

Middle Eastern states have a history of a high degree of state management of labor market institutions. In much of the Middle East, including Jordan, an interventionist-redistributive social contract was established in the 1940s and 1950s, featuring a high degree of state direction in economic management. This social contract featured "centralized, hierarchical and tightly regulated corporatist structures" of labor representation.⁹⁶ This provided a tradeoff for workers. The government's heavy regulation of the labor market and its involvement in mediation and negotiation between employers and employees provided strong economic security, social protection and public services for workers. On the other hand, the political participation of workers and associations was curtailed, providing workers few means to push for improvements in wages and conditions except through the centralized corporatist institutions.⁹⁷

Since the economic crisis of the 1980s and the widespread economic stabilization and structural adjustment programs, Jordan has moved toward labor market flexibility by reducing state economic management in favor of a greater role for the private sector. Currently, the institutional capacity of labor unions is weak, and they lack adequate resources to adhere to the best practice in terms of monitoring working conditions. In many cases informal rather than formal channels are utilized to pursue improve employees working conditions and to communicate employees' complaints. Additionally, labor inspectors, though perhaps qualified, are unable to enforce maximum working hours or child labor laws. The maximum penalty for violating the labor law is negligible and rarely paid by those who break the law. Hence, abiding by the labor law is not a common practice for employers because the cost associated with breaking the law is not a strong deterrent.

Jordan ratified the Labour Administration Convention in 2003. Yet despite this, since structural adjustment began in the early 1990s, there has been little management of the impacts of trade on the labor market. As discussed above, most government policies are designed solely to foster trade; there is little linkage with employment, wage or working conditions goals. The state's apparent neglect of trade's labor market implications leaves Jordanian workers (and foreign workers in Jordan) in a weak position in an increasingly competitive international environment. If labor market flexibility is to be promoted in order to increase Jordan's international competitiveness, then it is necessary for the state to counter negative effects of this by ensuring, at least, that jobs are created with decent wages and

⁹⁴ Article 5, section 1.

⁹⁵ Article 7.

⁹⁶ World Bank, *Unlocking the Employment Potential in the Middle East and North Africa*, 25.

⁹⁷ *Ibid*, 39.

working conditions. If this is not done, the political will for economic liberalization and openness will erode, as Jordanian workers see all of the negative aspects of globalization with few benefits.

Strengthening the application of some of the Labour Administration Convention's key components would address some of the negative consequences that Jordan's trade growth and FDI environment have fostered. For example, stronger protection of non-Jordanian workers' rights to organize in Jordan, and especially in the QIZs, would likely result in higher wages and improved working conditions for them. This would in turn improve Jordanian workers' wages and conditions, because employing foreign workers over Jordanians would be less advantageous to employers. Extending the protections of Jordan's labor law to agricultural workers would also strengthen their social protection.

VII. Conclusion

As we have seen, traditional trade theory predicts long-run employment expansion, wage growth, and wage equality as results of trade liberalization in developing countries like Jordan. Our analysis supports the theory of trade as a catalyst for job creation. The regression analysis shows a positive link between export expansion and job growth in Jordan. However, Jordan does not seem to benefit from economics of scale or to increase its degree of specialization. This should be an area of concern for Jordanian policymakers and international organizations concerned with Jordan's economy.

As expected, there is a negative relationship between import penetration and job growth, which indicates that openness and higher competition has some negative consequences on the labor market. As Jordan has reduced its tariffs and opened its markets, jobs that otherwise would have been created in Jordanian industry for the domestic market have not materialized. The more important question is whether the Jordanian jobs created by exports exceed the number of jobs that have been lost due to imports.

On the other hand, we find that trade has not increased wage equality, and has in fact made wages in Jordan less equal. Trade theory suggests that this is a result of Jordan's dualistic and high-unemployment labor market. The importance of technology, in terms of low-skill Northern jobs becoming high-skill southern jobs, also appears to play an important role.

We find also that within the QIZs, the presence of cheap and abundant foreign labor suggests that FDI in these zones may be increasing the price elasticity of demand for Jordanian labor. In this way, FDI coming into Jordan may be outsourced, in a sense, to the foreign workers present in the QIZs. This phenomenon deserves further investigation, as it is likely restraining the ability of Jordanian workers to organize for higher wages.

Jordan has attracted both increased FDI and local investment, which is a positive sign for future growth. A balance between the two types of investment is important, as local investment is likely to foster more jobs, while FDI usually creates more higher-paying jobs.

As for Jordan's manufacturing sectors, we have shown strong employment growth in some export-heavy sectors like apparel manufacturing. These jobs, however, are low-paid with difficult working conditions. Other sectors, such as the manufacture of chemical products, mining, the manufacture of food products, and manufacture of machinery and equipment appear to have export potential, and also appear likely to create relatively well-paid jobs.

In terms of working conditions, non-wage benefits are negligible in Jordan is compared with other countries. Working conditions in the jobs created in the export oriented sectors are not better than the rest of the economy. To the contrary, some newly created jobs in the manufacturing sector have been ill

paid and do not provide for basic human needs. In addition, average wages in the public sector found to be higher than that in the private sector and in general male are paid less than the female.

Lastly, national and development plans have not made the necessary link between labor market and other investment policies. However, improvement in working conditions cannot be assumed to follow growth; a more direct link between liberalization policies and labor market impacts is needed.

Recommendations and Policies

The overarching policy imperative is for Jordanian policymakers to explicitly link further trade liberalization measures to Jordan's labor market goals. Beginning to articulate this link is the first step, but more importantly, trade liberalization programs should be designed to improve labor market impacts rather than aim only for GDP and FDI growth. A link between growth and improved labor market outcomes cannot merely be assumed; it must be an explicit goal. Jordan seeks economic growth not for the sake of growth, but to provide high quality jobs with decent working conditions for all Jordanians. The recognition of this reality will refocus government policymaking on the goal, rather than the means, of development.

Though a link is needed at the national level between trade liberalization and labor market goals, the employment promotion policies that Jordan pursues should be targeted and sector-specific. Policymakers should examine the incentives and restrictions that are affecting employment in each sector, as sectors may differ dramatically in terms of trade's impact on them and why they are or are not generating more jobs with decent working conditions. Tailored policies should be designed to foster positive incentives for employment in sectors with employment growth potential.

There are several possible avenues through which to deal with the challenge of growing wage inequality. Of course, raising and more strictly enforcing the minimum wage is a possibility, but such a policy may have serious costs in terms of reducing overall employment. Instead, Jordan could focus on strengthening the legal framework for, and enforcement of, minimum wages and working conditions in the QIZs. The presence of a cheap and abundant foreign labor supply in the QIZs holds down the possibility of increases in wages for the poorest Jordanian workers, all the more so when QIZ employers have the opportunity to boost their competitiveness and profits by paying foreign workers less than the minimum wage, paying them late, or failing to provide them decent working conditions. By strengthening the legal framework and oversight of the QIZs, not only will foreign workers be more protected, but Jordanian workers will have a better chance to earn higher wages.

Foreign direct investment, both inside and outside the QIZs, must be linked with Jordan's labor markets. This could potentially be done through a variety of means, including seeking and soliciting FDI in labor-intensive sectors, and also ensuring that working conditions in FDI-created jobs are decent.

Working conditions must be included as an integral part of the labor market dynamics. Labor market outcomes are not limited only to wages; non-wage benefits including hiring, firing and hours regulations, social security, and health insurance must also be analyzed. An analysis of all these factors will provide a holistic and comprehensive framework within which to evaluate labor market outcomes.

Real wages have been declining hence discouraging the unemployed to seek jobs and discouraging employees to increase their level of productivity. To address this trend, real wages must somehow be linked with labor productivity.

The gender gap between men's and women's wages in Jordan must be addressed. A stronger legal framework and accountability for employers may be worth investigating.

Greater protection and encouragement of the freedom of association and collective bargaining would address one of the potential causes of greater price elasticity of labor demand: the decline in workers' bargaining power. Since FDI may shift swiftly to foreign workers in QIZs or out of Jordan altogether, workers have little leverage or bargaining power vis-à-vis employers. In this context it is all the more important that the government empower the workers to the degree that it can.

There are a few small sub-sectors which combine both high productivity and high exports. These sectors deserve attention and must be encouraged since they provide decent jobs as well. Encouragement could come in the form of more effective vocational training for young workers, who form the vast bulk of Jordan's unemployed and semi-employed. Jordan's past vocational training programs have received much funding and attention, but have so far been largely a failure. New work training programs must be designed in close consultation with the private sector enterprises that stand to benefit from the programs. Programs must provide immediately marketable skills demanded by the private sector.

Relatedly, education policies must continue to be emphasized. A highly skilled and educated Jordanian workforce has the potential to take advantage of technological change, rather than suffer from it. Currently, technological change fosters income inequality because low-skill manufacturing moves from the North and becomes high-skill manufacturing in Jordan. But if Jordan could create a sufficiently educated workforce such that low-skill manufacturing in the North would also be a low-skill occupation in Jordan, then wage inequality would be expected to decline.

An additional option could be active labor market policies. Considering Jordan's current high budget deficit, this option is unattractive at the moment, but if resources become available it could be a possibility. In addition to the direct impact of an active labor market program, there would be substantial indirect benefits – as the pool of unemployed and under-employed Jordanians decreases, low-skilled workers should see their wages rise, and overall wage equality increase, as the duality in Jordan's labor market declines.

A more direct way to address Jordan's growing wage inequality would be, of course, greater redistribution of wealth at the national level. There are of course costs associated with such a policy, as well as concerns that redistribution be aimed to benefit all segments of Jordanian society.

Lastly, attention must be paid to the pace of Jordan's trade liberalization. There are no quick fixes to instantly create dramatically positive employment outcomes as a result of trade. Instead, over the medium and long term, Jordan must maintain its credibility on liberalization. Part of maintaining credibility consists of maintaining political support for liberalization within the country, which can in part be done through providing adjustment periods and transition assistance for workers in sectors that suffer from liberalization, including previously protected sectors and import-competing sectors.

Annex 1

Regression Findings

Descriptive statistics (in absolute numbers)

Date: 02/13,

03:2

Sample: 2000 2004

Common

	JG?	OUT?	EX?	CAP?	OPEN?
Mean	6431.655	197619.6	53164563	7771.101	0.552652
Sum	707482.0	21738157	5.85E+09	854821.1	60.79177
Median	3478.000	106224.7	24152182	3481.200	0.520683
Maximum	28647.00	1610092.	4.87E+08	67346.60	1.127970
Minimum	7.000000	54.00000	-36691255	-7255.400	0.000179
Sum Sq. Dev.	8.95E+09	1.05E+13	1.22E+18	2.25E+10	44.35921
Std. Dev.	6356.623	238207.8	91286304	12043.19	0.314227
Skewness	1.556797	2.602507	2.767617	2.658312	-0.080286
Kurtosis	5.059805	13.17972	10.43816	11.39404	1.837656
Jarque-Bera	63.87914	599.1283	394.0067	452.4961	6.310454
Probability	0.000000	0.000000	0.000000	0.000000	0.042629
Observations	110	110	110	110	110
Cross section:	22	22	22	22	22

Regression using Cross section weights

Dependent Variable: JG?

Method: GLS (Cross Section Weights)

Date: 02/12/07 Time: 10:20

Sample: 2001 2004

Included observations: 4

Number of cross-sections used: 22

Total panel (balanced) observations: 88

Cross sections without valid observations dropped

Variable					
C	-0.030362	0.012577	-2.414176	0.0180	
OUT?	0.481331	0.062280	7.728458	0.0000	
EX?	0.000129	0.001246	2.103676	0.0191	
CAP?	0.002117	0.001808	1.171421	0.2448	
OPEN?	-0.046617	0.021717	2.146558	0.0347	
Weighted Sta					
R-squared	Mean dependent var				
Adjusted R-squared	S.D. dependent var				
S.E. of regression	Sum squared resid				
F-statistic	Durbin-Watson stat				
Prob(F-statistic)					
Unweighted St					
R-squared	Mean dependent var				
Adjusted R-squared	S.D. dependent var				
S.E. of regression	Sum squared resid				
Durbin-Watson stat					

Correlation matrix using SPSS

Correlations

		Jg	Out	Ex	Cap	Open
Jg	Pearson Correlation	1	.559(**)	.373(**)	.395(**)	-.329(**)
	Sig. (2-tailed)		.000	.000	.000	.000
	N	115	115	115	115	110
Out	Pearson Correlation	.559(**)	1	.676(**)	.511(**)	-.393(**)
	Sig. (2-tailed)	.000		.000	.000	.000
	N	115	115	115	115	110
Ex	Pearson Correlation	.373(**)	.676(**)	1	.233(*)	-.114
	Sig. (2-tailed)	.000	.000		.012	.236
	N	115	115	115	115	110
Cap	Pearson Correlation	.395(**)	.511(**)	.233(*)	1	-.528(**)
	Sig. (2-tailed)	.000	.000	.012		.000
	N	115	115	115	115	110
Open	Pearson Correlation	-.329(**)	-.393(**)	-.114	-.528(**)	1
	Sig. (2-tailed)	.000	.000	.236	.000	
	N	110	110	110	110	110

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).