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Migration, Trade in Services and Employment Interactions in Jordan

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The multiple linkages between Jordan and its partners plead for an in-depth analysis of the interactions between migration, service exports and the labor market. For this purpose we develop a dynamic general equilibrium framework capturing how labor mobility affects the dynamics of local labor markets and the feed-back effects on migration.

Introduction

Jordan has been characterized by the paradox of "strong investment, strong GDP growth and high unemployment" (World Bank, 2008). Indeed, despite a strong economic growth and a growing interest from investors, Jordan displays unemployment rates that average 13%, reaching 30% for the high skilled youth. Moreover, Jordanian youth have difficulties entering the labor market and face job instability as well as high risk of holding an informal job, that lower their chances of getting a stable and protected contract in the future (Amer, 2012).

Besides, Jordan is characterized by large outflows and inflows of labor. The country witnesses a real brain-drain phenomenon with an outflow of skilled workers. Indeed, as stressed by Mryan (2012), Jordan is close to the rich Gulf countries, which have abundant natural resources and a small population. The availability of opportunities and the higher wages in the GCC have pulled a significant number of Jordanian skilled workers to migrate to those countries. Moreover, Jordan is surrounded by neighbors with larger populations such as Egypt, Iraq and Syria whose citizens can enter without visas to Jordan. Economic or security conditions push many of them to migrate to Jordan. The flows are significant, but irregular, affecting therefore labor supply (Mryan, 2012).

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In terms of interregional integration, Jordan has strong economic ties both within the MENA region1 and the rest of the world, as a WTO member and having signed various regional and bilateral Free Trade Agreements. The main agreements including services are with the United States (entered into force in 2001) and with Singapore (entered into force in 2005), but neither contains a chapter on temporary mobility. To our knowledge, the impact of these various agreements on the labor market has not been studied yet.

The multiple linkages between Jordan and its partners plead for an in-depth analysis of the interactions between migration, service exports and the labor market. For this purpose we develop a dynamic general equilibrium framework capturing how labor mobility affects the dynamics of local labor markets and the feed-back effects on migration. One of the model specificities is its detailed treatment of the labor market. Labor supply increases with expected wages and decreases with transfers including migrants remittances. Labor demand is disaggregated by sector, skill and age. Wage setting takes into account the trade-off between wage variation and unemployment and the impact of public wage variation on private wages. Finally transition rates between education cycles follow the evolution of the expected returns to skill.

The Jordanian Labor Market: Low Participation and High Unemployment

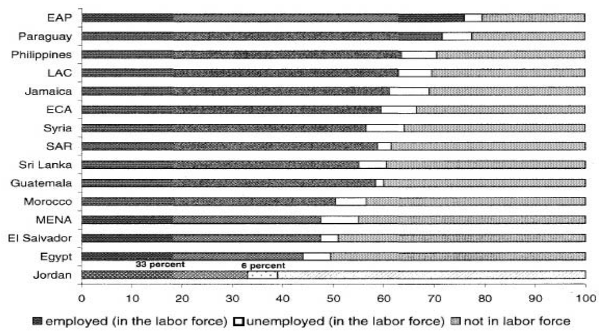
The Jordanian labor force participation rate is one of the lowest in the world (World Bank, 2008).

As in other Arab countries, the low participation rate is partly due to the female participation rate which only reaches 15%. Nevertheless, the high labor market participation of skilled in Jordan (Amer, 2012; Assaad, 2012) is a significant difference with the other countries in the region.

The labor force is also increasingly educated, with the share of university graduates moving from 8% to 13% over the last decade and that of those with no education declining from 18% to 12% over the same period.

Arouri (n.d.) estimates that over the next years there will be around 50,000 to 70,000 new entrants on the Jordanian labor market each year, meaning that 60,000 to 90,000 jobs need to be created each year in order to maintain a stable unemployment rate (Saif and El-Rayyes, 2010). In a thorough analysis of the

Figure 1: International Comparisons of Labor Force Status



Source: World Development Indicators 2006, Department of Statistics Employment and Unemployment Survey 2005.

Jordanian labor market, Saif and El-Rayyes (2010) highlight that even though there is no alarming trend in the labor force increase, the projections were made assuming that net migration is nil, pointing out the Government's strategy of encouraging outmigration in order to lower unemployment.

Despite this, unemployment represents a significant challenge, with rates averaging 13.8% between 2003 and 2007 (Saif and El-Rayyes, 2010). Moreover, high unemployment rates increasingly concern the youth (more than the double of the national average) and the highly educated as their unemployment rate went from 12.1% in 1995 to 15.5% in 2007 for those holding a university diploma. A major concern is the unemployment's slow response to economic growth, as was the case between 2004 and 2007 when unemployment barely fell from 14 to 12% while GDP annual growth rates were averaging 8% (Assaad, 2012). Assaad (2012) notices this shift in the structure of Jordanian labor force towards more educated youth which, given that job creation mainly concerns low quality jobs, is willing to choose unemployment to downgrading.

Table 1: Unemployment Rates Trends by Age and Education Level

		1995	2000	2007
Age	15-24	27.9%	26.7%	28.3%
	25-34	13.8%	11.6%	12.0%
	35-44	6.7%	6.7%	6.3%
Education level	45-54	6.6%	7.0%	4.6%
	55-64	6.6%	5.2%	3.8%
	None	10.1%	10.8%	9.3%
	Primary	14.0%	14.9%	12.6%
	Secondary	20.8%	13.5%	12.4%
	University	12.1%	11.8%	15.5%

Source: DoS, Saif and El-Rayyes (2010)

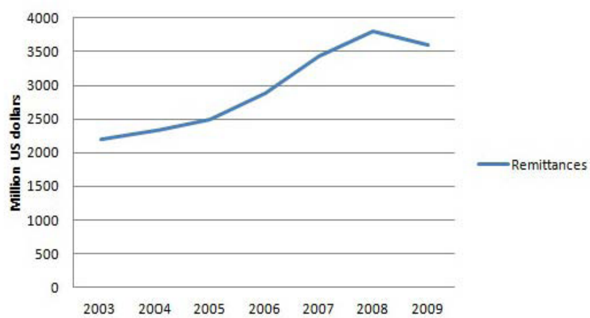
High Temporary Migration and Remittance Inflows

In terms of migration, the most striking fact is the outflow of high skilled labor to GCC countries and the immigration of low-skilled foreign workers (Corm, 2009). The major destination for Jordanian migrants are the GCC countries, with an estimated stock of 141 202 Jordanian workers in 2008 (Ministry of Labor).

The direct consequence is the temporary nature of Jordanian migration and Wahba (2012) shows that 38% of Jordanian migrants have left in the last two years. Using the 2010 Jordan Labor Market Panel Surevy (JLMPS), she analyzes the main characteristics of Jordanian migration and its interlinkages with the local labor market. The study points out the high skill intensity of outmigration, with 62% of emigrants holding a university degree, and finds evidence of an increase in local wages due to emigration. It is important to notice that despite the high expatriation rate of skilled workers, Beine et al. (2008) find that Jordan, together with Syria and Egypt, experiences a beneficial brain drain. OECD countries attract fewer Jordanian migrants, their number having been estimated at 36 thousands according to DIOC-E database, with the United States as the main destination.

The World Bank ranked Jordan as 10th in terms of remittance receiving country proportionally to GDP. Remittances' share of GDP went from 16 percent in 2008 to 23 percent in 2009.

Figure 2: Inward Remittance Flows



Source: World Bank

The Impact of the Global Crisis

The global crisis had a negative impact on growth and unemployment in Jordan and this effect is likely to persist in the coming years. We ran an experiment to assess the effects of the global crisis on labor supply and demand, unemployment, emigration, remittances and education outcomes. The results presented in the tables are in comparison to the reference scenario, based on IMF forecasts realized before 2008.

As shown by table 2 the scenario induces a decrease in investment and labor demand in Jordan. The crisis also reduces the level of remittances sent by Jordanian emigrants, which has a positive effect on the labor force participation rate through the disincentive effect of remittances on labor supply. The decrease of capital income plays a similar role in the increase of labor supply. The combined effect of lower labor demand and higher labor supply results in much higher unemployment rates. Migration slightly increases by 0.9% on average during the considered period, but this low variation hides a decrease in emigration from 2008 to 2011 and an increase from 2012 to 2015. This switch is mainly due to a faster recovery from the economic crisis in the Gulf countries than in Jordan.

If we dig deeper into the disaggregated impact of the crisis on the labor market and in particular on unemployment we find that the high skilled are the least affected mainly due to initial high unemployment. This is due to their lower reliance on transfers given their very high activity rates (close to 75%). Moreover, real wages decrease for all categories, but the highest cost is borne by the low skilled who lose on average 5.9% for the youth and 5.1% for the non youth.

The Impact of a Mode 4 Agreement

Services play a crucial role in the economy as they account for more than 70% of GDP. Banking and financial services have the highest growth rate. In terms of employment, service sectors account for more than 78% of total employment, thus reinforcing the major role of services in the Jordanian economy. We therefore simulate an increase by 20% of service exports, potentially intensive in Mode 4 activities[1].

The simulation shows a limited positive impact on GDP growth, an increase in labor demand and in the labor force participation rate. Unemployment decreases by 0.2 percentage point per year on average. Labor supply increases because remittances decrease. This drop in remittances is due to the exchange rate

Table 2: Average Yearly Variation as Compared to the Reference Scenario

	2008 (%)	2009 (%)	2010 (%)	2011 (%)	2012 (%)	2013 (%)	2014 (%)	2015 (%)
GDP Growth differential p.p.	1.2	-0.5	-3.7	-3.5	-3.2	-3.0	-2.7	-2.3
Emigration	0.0	-0.8	-1.0	-0.3	0.6	1.7	2.8	4.0
Total investment	1.3	0.1	-3.4	-6.8	-10.3	-13.9	-17.1	-20.1
Loc. labor demand	0.1	0.1	-0.1	-0.3	-0.5	-0.8	-0.9	-1.1
Total potential active population	0.0	0.0	0.0	0.1	0.1	0.2	0.4	0.5
Total Unemployment p.p.	-0.3	0.0	0.9	1.8	2.6	3.3	3.9	4.3
Total activity rate p.p.	-0.1	0.1	0.4	0.7	1.0	1.2	1.3	1.4
Remittances	1.1	-1.6	-6.0	-8.7	-10.9	-12.8	-14.2	-15.3
Exchange rate	0.7	0.8	-1.2	-3.0	-4.5	-5.9	-7.2	-8.2

[1] Data on Mode 4 trade is not available as the balance of payments does not distinguish trade in services by mode

Table 3: Macro Results

	2012 (%)	2013 (%)	2014 (%)	2015 (%)
GDP Growth	0.1	0.1	0.1	0.2
Emigration	-0.5	-0.9	-1.3	-1.8
Total investment	0.2	0.3	0.6	1.0
Local labor demand	0.2	0.4	0.6	0.9
Total potential active population	0.0	0.0	0.1	0.3
Total Unemployment (p.p.)	0.0	-0.1	-0.2	-0.3
Total activity rate (p.p.)	0.0	0.1	0.1	0.1
Remittances	-0.6	-1.2	-1.9	-2.7
Exchange rate	-0.2	-0.3	-0.5	-0.8

Table 4: A Homogeneous Increase of Foreign Wages

	2012 (%)	2013 (%)	2014 (%)	2015 (%)
GDP Growth (p.p.)	0.1	0.1	0.2	0.3
Emigration	1.2	2.3	3.2	4.1
Total investment	1.2	2.5	4.1	6.0
Local labor demand	-0.1	-0.2	-0.3	-0.4
Total potential active population	-0.1	-0.2	-0.3	-0.3
Total Unemployment (p.p.)	-0.4	-0.8	-1.2	-1.7
Total activity rate (p.p.)	-0.2	-0.4	-0.6	-0.8
Remittances	3.9	8.1	12.5	17.1
Exchange rate	-0.8	-1.3	-1.9	-2.6

appreciation induced by the increase of exports, but also to the households' income increase. Indeed, given the assumed altruistic behavior of migrants, their remittance rate decreases when their origin households are better off.

The positive effects of the shock are not equally distributed across skills. The gains are increasing with the skill level for both unemployment and wages. The main beneficiaries are high skilled non youth, given the intensity of the selected service sectors in this category of workers.

The impact of the shock by skill is reflected in the migration patterns, with the highest reduction for high skilled workers. These increasing returns to skill act as incentives for education by increasing transition rates.

The Impact of an Increase in Foreign Wages

In what follows we assess the effects of increasing migrants wages on local labor markets when the increase is homogeneous across skills (by 3% per year) and when it only concerns high skilled migrants (by 6% per year).

An homogeneous increase

Higher foreign wages (equivalent for all skill levels) induce an increase in emigration and remittances, which have a negative impact on the local labor market participation rate. Higher emigration and lower participation induce lower unemployment and higher local wages. These wage increases have a negative impact on labor demand. Given that remittances represent a significant share in GDP, their rise induces a significant increase in investment, which leads to higher economic growth. The main beneficiaries in terms of unemployment reduction are the low and medium skilled who witness a higher reduction in their activity rates due to the higher share of remittances in their total revenues. The consequence is a higher incentive to migrate for high skilled workers as compared to the other categories.

A selective wage increase

The macroeconomic results' trend is similar to the one observed in the previous scenario, but with a lower magnitude, except for GDP growth. Moreover, aggregated labor demand no longer decreases as the drop in the activity rate is lower. The aggregate unemployment rate decreases, but this evolution hides a significant disparity at the skill level. While high skilled unemployment decreases by 14.1%, low and medium skilled unemployment levels increase by 1.1% and 0.1% respectively. This drop in high skilled unemployment is due to the increase in high skilled emigration and to the decrease of high skilled workers' activity rate, driven by the increase of high skilled migrants' remittances.

Table 5: An Increase of Highly Skilled Foreign Wages

	2012 (%)	2013 (%)	2014 (%)	2015 (%)
GDP Growth	0.1	0.1	0.1	0.2
Emigration	0.6	1.1	1.4	1.5
Total investment	0.6	1.3	2.2	3.4
Local labor demand	0.0	0.0	0.0	0.0
Total potential active population	-0.1	-0.2	-0.3	-0.3
Total Unemployment (p.p.)	-0.1	-0.2	-0.4	-0.6
Total activity rate (p.p.)	0.0	-0.1	-0.1	-0.1
Remittances	1.9	4.1	6.7	9.6
Exchange rate	-0.4	-0.7	-1.1	-1.6

Conclusions and Policy Implications

We developed a framework allowing an in-depth analysis of the circular linkages between workers international mobility and labor market outcomes in Jordan. The global crisis scenario shows a simultaneous increase of labor supply due to lower transfers and a decrease in labor demand. The low and medium skilled are the most affected, given their higher reliance on remittances. Emigration decreases at the beginning of the period, but rebounds once the Gulf countries recover from the global crisis.

These results shed light on the need for designing bilateral or regional management schemes of migration flows, taking into account both origin and destination countries economic climates. These frameworks would allow a better risk-sharing between origin and destination countries.

The counterfactual increase of services' exports has a positive impact on GDP growth and on aggregate unemployment, since labor demand increases more than labor supply. The highly skilled non youth are the main beneficiaries in terms of unemployment reduction and wage increases. Emigration decreases, mainly for high skilled workers thereby illustrating the potential of services exports in reducing brain drain. The scenario also shows their positive impact on education transitions. Given the relatively low youth inclusiveness of service exports, the Government should accompany its efforts of obtaining higher Mode 4 concessions by fostering the youth access to these sectors.

The increase of receiving countries' wages has a positive impact on unemployment reduction and wages in Jordan. The effects are channeled through increased migration incentives and higher remittances which lower the pressure on the local labor market, mainly through higher emigration and a lower labor participation rate. It has a positive impact on GDP through higher investment given the share of remittances in GDP. When the wage increases are limited to highly skilled workers, the observed reduction of unemployment and the wage increase for high skilled workers is much higher than in the previous scenario. Education transitions are also significantly increased by the higher wage premium.

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