Migration patterns and labour market outcomes[1]

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This article focuses on the external effects of emigration on non-migrants and particularly on the interactions with labour market outcomes in Tunisia before and after the revolution. Using the Tunisia Labour Market Panel Survey (TLMPS) we conduct an in-depth analysis of the structure and dynamics of recent migration in Tunisia including the profile of migrants and their origin households, mainly in terms of skills and spatial composition. We also investigate transition matrices, employment status, and the evolution of remittances. Our analysis confirms the role of emigration as a security valve for the Tunisian labour market. Moreover, origin households of migrants have a significantly higher wealth index. Remittances play a significant role for the Tunisian economy and at the household level. Our analysis also tends to confirm the effects of remittances on labour supply of non-migrants which can have a negative impact on Tunisia's unemployment rate when a crisis in destination countries affects negatively the remittance rate.

Introduction

From anecdotal stories to macroeconomic analyses, migration shapes the socioeconomic environment in Tunisia. Natter (2015) sketches a historical fresco of Tunisian migration from French colonization to the Revolution focusing on the Tunisian policies towards emigration and the Diaspora. Since Independence these policies were mainly encouraging migration to secure an "economic safety valve". The Ben Ali regime pursued this policy, reinforced the political control on the diaspora and adopted a cooperative approach with destination countries, mainly EU countries, to consolidate and legitimise the authoritarian nature of the regime. In his proposed research agenda on migration, Clemens (2011) proposes to focus on the external effects of emigration on non-migrants. We propose to deal mainly with this issue in this article, and particularly on the interactions with labour market outcomes. David and Marouani (2015) have dealt with the interactions between migration and labour markets outcomes in Tunisia following a macroeconomic approach. One of their main findings is that migration matters significantly for labour market outcomes, especially during crisis time. The main link variable is the evolution of the level of remittances.

The second issue tackled here is the evolution of migrants' profile, mainly in terms of skills. Although there is no agreement on the net effect of skilled migration as the literature review of Clemens (2011) shows, there is no doubt that the skill composition of migration is central in the debate on migration external effects on origin countries. Similarly, the spatial composition of migration has certainly a significant impact, particularly in a country where regional inequalities are one of the main characteristics and have been highlighted as one of the main concerns since the 2011 revolution.

Microeconomic research on migration in Tunisia is still limited due to the scarcity of data. The Tunisia Labour Market Panel Survey (TLMPS) allows an in-depth analysis of the structure and dynamics of

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recent migration in Tunisia and allows us to sketch the profile of migrants and their origin households.

This profile would allow a better knowledge of the evolution of recent migration in terms of geographical origin, destination countries, age, marital and educational statuses and labour market characteristics. We also investigate transition matrices, employment status and income abroad by education level, how migration occurred and the socio-economic background of migrants' families. The characteristics of returnees are also analysed and compared to those of non-migrants. Finally, we analyse the evolution of remittances levels, country of origin, channels and the characteristics of its recipient households.

Previous research on the issues linked to migration in Tunisia mainly use administrative data or specific small-scale surveys. Kriaa et al. (2013) draw a profile of labour migration from Tunisia over the period 2002-2012 using data from various administrative sources[2]. They conclude on the absence of a unique and coherent information database on emigration from Tunisia and the need of a better information system. Looking specifically at migration to OECD countries, Gubert and Nordman (2009) use macro level data from the OECD, the World Bank and the Euro-Med Consortium for Applied Research on International Migrations (CARIM) and highlight the match between excess labour supply in Middle East and North Africa (MENA) countries and the labour shortages in Europe. Boubakri (2010) describes the weaknesses and strengths of the Tunisian labour market, linking it with migration and stresses the country's experience in managing the exports of its professional labour force through specialised agencies. In a more recent paper, he focuses on international migration and the Tunisian revolution and offers an in-depth analysis on the links between the two (Boubakri, 2013).

Another strand of the microeconomic literature on the Tunisian migration focuses on returnees. Menard (2004) uses a survey conducted by the Office des Tunisiens à l'Etranger (OTE) in 1986 on return migrants and data from the Central Bank and analyses the drivers of self-employment for returnees and non-migrants. She finds little evidence of human capital accumulation through temporary migration, but strong evidence that the repatriation of savings from migration allows poor workers to overcome credit constraints for investment into small projects. David and Nordman (2014) use data from a survey conducted by the European Training Foundation and the World Bank on returnees and non-migrants and study the skills that migrants acquire before and during migration and the way these skills are used upon return. They find evidence of skill mismatch in Tunisia, where the under-education phenomenon is more prevalent among return migrants.

The TLMPS study offers a new and complete perspective on recent Tunisian migration and allows a comparison between the migrant cohorts before and after the revolution. The survey is nationally representative and covers 16,200 individuals, in over 4,600 households. But there are several limitations to using TLMPS in order to study migration. First of all, due to the fact that information on the current migrants is reported by their origin households, this only gives a limited and biased view of the diaspora and our results should be read with this observation in mind. Also, while there are specific questions allowing capturing the emigration of entire households, we do not have specific information about the characteristics of those households, such as education for instance. Finally, due to recall biases, we only capture the relatively recent migration.

The rest of the article is organised as follows: section 2 deals with emigration trends and patterns, section 3 is focused on return migration, section 4 deals with remittances' characteristics and section 5 concludes.

Recent international migration trends and patterns

The total stock of Tunisian migrants abroad was estimated at 1,223,000 in 2012 according to the National Statistical Institute (INS) from registrations in Tunisian consulates abroad. This represented more than 10% of the resident population in Tunisia. However, this figure includes the second generation of the diaspora, whereas in this section we will focus our analysis on recent migration, therefore on current migrants as defined in the survey, which implies that the households interviewed still consider them as part of the household. In practice, this means that our analysis of current migrants is restricted (with very few exceptions) to migrations which occurred during around 15 years before our survey was conducted, that is the 1997-2013 period.

For our analysis we will be using the Tunisia Labour Market Panel Survey (TLMPS) of 2014, which is part of broader series of labour market panel surveys run under the initiative of the Economic Research Forum (ERF). The TLMPS, collected in partnership between ERF and the Tunisian National Institute of Statistics (INS) is the first wave of a longitudinal survey of the Tunisian

[2] *The National Statistics Institute (INS), the Office for Tunisians Abroad (OTE), the Agency for Cooperation and Technical Assistance (ATCT), the Ministry of Labour, the Ministry of Interior etc.*

labour market and is a nationally representative survey featuring information on households and individuals[3]. The survey, representative also at the governorate level, is based on a sample of 4,521 households and 11,738 individuals aged 15 or more. The questions cover household characteristics, detailed labour market outcomes and job history, as well as migration trajectories and financial transfers. Data is weighed in order to account for representativity and non-response.

Using the survey, we see that migrants represent slightly more than 2% of the total population, which, as expected, is significantly lower than the figure for the extended diaspora computed by the INS. We also observe that 4% of households have at least one migrant.

Natter (2015) retraces the main historical patterns of Tunisian migration so we focus here on the information that is given by the TLMPS 2014. If we exclude those for whom the households answered that they did not know in which year they migrated[4], we notice that almost 42% of the sample has left the country between 2011 and 2013. Almost all the others (the remaining two thirds of migrants for which the date of migration is known) emigrated between 1997 and 2010. The information on current migrants provided by the survey thus mainly refers to information on recent migrants, while the analysis of the profile of returned migrants gives us a better picture on earlier migrants.

This boost in migration just after the Tunisian uprising is due to the absence of border controls entailed by the security void in the aftermath of the revolution. According to Frontex data, between January and March 2011, 20.258 Tunisians arrived in Lampedusa. Boubakri (2013) describes the intensity of migrations in the aftermath of the events of January 2011, highlighting the factors that facilitated and spurred the outflows. Although it is expected to be a temporary hike in outflows, in our analysis we distinguish between those who have migrated before and after the Tunisian revolution. This choice is not straightforward as the revolution will not necessarily entail a structural break in the profile of Tunisian migrants. A robust assessment of this hypothesis could only be done after a few years. However, given that the economic situation has been stagnating in Tunisia since 2011, migration patterns can be affected. Given that the signs of recovery are not visible yet, it is useful to distinguish the new features of Tunisian migrants (if any) that appear from the survey analysis.

In terms of destination countries, Tunisians mainly emigrate to Europe (70%) and, more precisely to France (38%). Germany and Italy come second and third as European destinations. Although Libya was already a major destination for Tunisians before the uprising (due to the high labour demand in oil-related activities), we notice a spike in emigration to this specific destination in the aftermath of the revolution, mainly in 2013.

In terms of origin, Tunisian migrants mainly come from urban areas, although we observe a shift after the revolution (Table 1)[5]. Before the revolution, only slightly more than 20% of Tunisian migrants were coming from rural areas, while after the revolution, the percentage went up to almost 50%. This confirms further our assumption that pattern of the recent migration is different from the one before the revolution.

Table 1
Origin of migrants (%)

	Before revolution	After revolution	Total
Urban	79.2	50.8	70.3
Rural	20.8	49.2	29.7
Total	65.2	34.8	100
Sample size	*121*	*83*	*204*

Source: Authors' computation using TLMPS 2014

At a closer look, we see that even the distribution of governorates of origin has changed after the revolution. Before the uprising, Tunis surroundings (Ariana, Ben Arous), Cap Bon (Nabeul governorate) and the area bordering Lybia (Medenine governorate) provided around half of Tunisian emigrants according to the survey. After 2011, this is not the case anymore and share of migrant outflows from especially Mahdia, and Sidi Bouzid (the latter being the governorate where uprisings started) increased.

In Table 2 we compute some descriptive statistics on the current migrants and distinguish between those that have migrated before and after the revolution. We see that while the average age at the time of migration of Tunisians is 25 years old, those that have migrated after the revolution were slightly older when they left the country compared to those that have migrated before. This is probably due to a decrease of the share of tertiary educated workers who generally migrate younger for their studies.

As expected, the migrants are predominantly males (85%), although a slight decrease in this proportion

[3] For detailed information on the survey, see Assaad et al. (2016).

[4] For 23% of the migrant sample, the households answered that they did not know in which year the individuals had migrated.

[5] In 2014, the urban share is 66% of the total population according to the World Bank.

is observed in the very recent outflows. More than half of the emigrants are married, but this proportion is lower if we restrict the sample to those that have migrated recently (38.6%). In terms of education, almost a quarter of Tunisian emigrants are highly educated, with those having migrated before the revolution being slightly more educated.

Table 2
Current migrants' basic characteristics

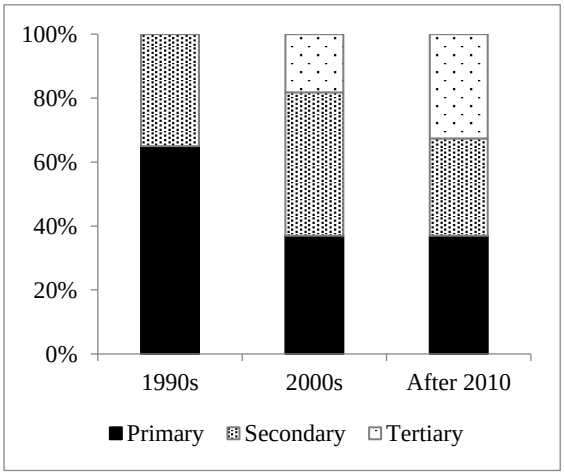
	Before revolution	After revolution	Total
Age at the time of migration	24.4	27.0	25.5
Male (%)	87.9	79.5	85.0
Married (%)	59.3	41.7	53.7
Single (%)	38.6	58.3	44.8
Education (%)			
Primary	39.4	44.5	41.0
Secondary	34.7	33.8	34.4
Tertiary	26.0	21.8	24.6

Source: Authors' computation using TLMPS 2014

Despite the drop in education levels in the very recent emigration flows, Figure 1 shows an increase in the education levels over the last decades, with the share of migrants holding a tertiary education level diplomas increasing considerably. When we compare the acquired education levels of emigrants to those of returnees and of non-migrants (Figure 2) we find that emigrants are more educated than the non-migrants and returnees, suggesting a positive selection into migration, often pointed out in the literature (Wahba, 2015a, McKenzie et al. 2010). Indeed, a higher expected return to human capital is one of the key drivers of emigration as shown by Gibson and McKenzie (2011), but education also impacts the migration decision through the aspirations channel as highlighted by Docquier et al. (2014), who argue that less educated (poorer) people are only somewhat less likely to want to be migrants than more educated individuals. Although we do not have information about the reasons of migration, we see that almost 35% of the tertiary educated emigrants have entered the destination countries with a student visa, indicating the importance of student migration in the case of Tunisia.

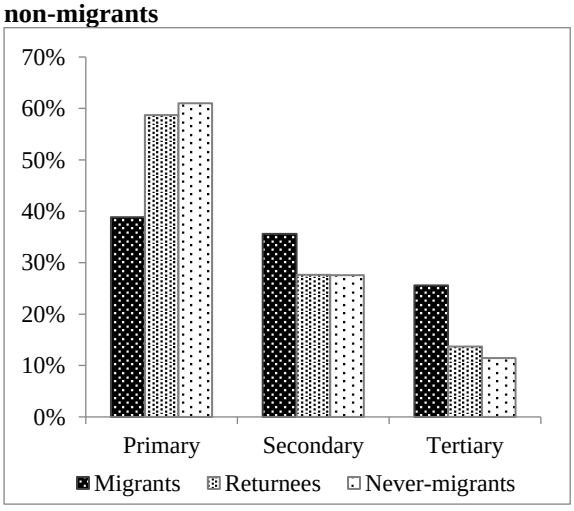
Using the MIREM[6] database, Boughzala and Kouni (2010) argue that the more migrants acquire skills, the lower their probability of return to Tunisia. In the case of students, scholarships are usually granted to those who get the best ranks in the country. This raises a serious concern about the risks of losing "talents". According to the TLMPS2014 database, only 6.5% of returnees had emigrated from Tunisia with a student visa, while the share of current migrants having emigrated with a student visa is of 13%, suggesting low return rates of Tunisian students abroad. But these students with high capacities may not reach their maximal potential if they stay at home. The policy issue then is how to use these talents through cooperation with the highly skilled members of the diaspora or by attracting them back when their skills are needed at home[7].

Figure 1
Educational level of current migrants over time, 15+



Source: Authors' computation using TLMPS 2014

Figure 2
Educational level of migrants, returnees and non-migrants



Source: Authors' computation using TLMPS 2014

In terms of labour market outcomes, we notice that more than half of migrants (55.4%) were unemployed before leaving Tunisia and close to a

[6] MIREM stands for MIgration de REtour au Maghreb and it was collective research programme was launched in December 2005 and ended in December 2008. f

[7] Malaysia for example created an institution in charge of attracting talent (Talentcorp).

third were working (Table 3). This tends to suggest that emigration can alleviate part of the pressure on the labour market created by job seekers. Indeed, as shown by David and Marouani (2015) in a general equilibrium framework, the outflow of Tunisian labour force can contribute to unemployment reduction through the decline in the active population[8].

Table 3:
Transition matrix for the work status before and during migration[9] (in %)

Work status during migration	Work status before migration			Total
	Work-ing	Unem-ployed	Not working and not seeking	
Working	92.4	65.2	28.7	69.0
Unemployed	7.6	20.8	6.1	14.7
Not working and not seeking	0.0	6.7	62.6	11.8
Don't know	0.0	7.4	2.6	4.4
Total	31.6	55.4	13.0	100

Source: Authors' computation using TLMPS 2014

In terms of informality, we see that almost 69% of the migrants were not covered by social security (a proxy for being an informal worker) before their departure and there is no significant difference between those that have left before and after the Tunisian uprising. Once abroad, almost 71% of migrants are working and 14% are unemployed. Even though the percentage of unemployed is higher for those that have migrated after the revolution, this is likely to be a temporary situation since, on the one hand, migrants need a certain time laps in order to adjust and integrate the host country's labour market, and, on the other hand, the recent economic downturn in Europe limits job opportunities for new incomers. We notice nevertheless that once individuals migrate, they experience a positive transition, for most of them, with 65% of the unemployed in the origin country becoming employed in the destination country.

To sum up, what precedes confirms the safety valve emigration has played for the Tunisian labour market and for emigrants themselves.

The migrants' situation abroad also affects the origin country's labour market. Having a stable and well-paying employment status abroad does not only entail higher remittances, but also more significant financial and human capital accumulation if the migrant returns (Dustmann and Görlach, 2016). Unfortunately, we do not have sufficient data to analyse the implications for the Tunisian case, but the outcomes of Tunisian migrants can give us a glimpse of the possible fallouts on the home country.

As expected, the TLMPS2014 data shows a correlation between the education level and the employment status abroad, with the share of regular wage workers increasing with the education level (Figure 3). Thus, more educated migrants have better outcomes in destination labour markets, but since their return rates are lower as we previously observed, their positive impact on the origin country might be limited.

The survey also gives information about whether the individual migrated alone or with family and we see that the share of individuals that migrate alone increased over time (Figure 4). This can be due either to more and more migrants joining family already abroad, or to growingly restrictive immigration policies that lead to more risk-taking behaviour.

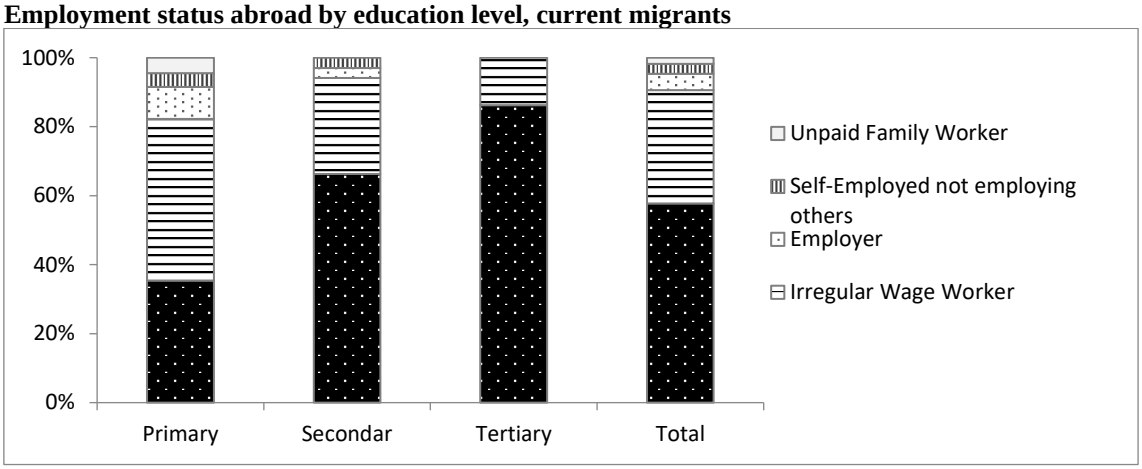
Finally, we can take a glimpse at the impact that migration has on the origin country by looking at the welfare of remaining households. If we look at the situation of the origin households of migrants in the TLMPS2014 data, we notice that they have a significantly higher wealth index (Table 4). However, we do not have enough elements that could indicate whether the households with migrants are richer because they have migrants abroad that send them remittances or whether the wealthier households were the ones that could afford to send migrants abroad.

However, if we look at the education level of the head of households differentiating between households with and without, the distributions are relatively similar (Figure 5).

[8] However, this implies that downturns in destination countries can result in massive returns that can create temporary disequilibria in the local labour market, as was the case with the return of Tunisian migrants in the aftermath of the Libyan uprising (AfDB, 2012).

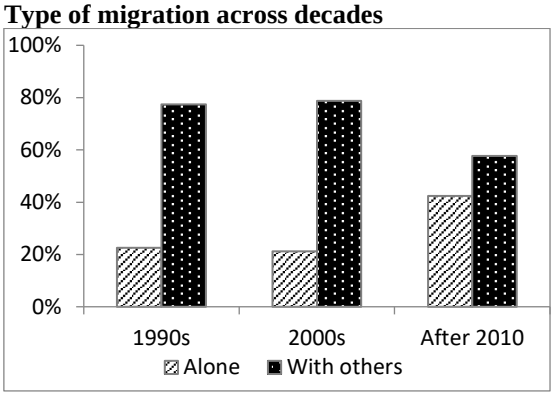
[9] Households were asked which is the "current work status abroad" of the migrant and this is the information used for the "work status during migration".

Figure 3
Employment status abroad by education level, current migrants



Source: Authors' computation using TLMPS 2014

Figure 4
Type of migration across decades



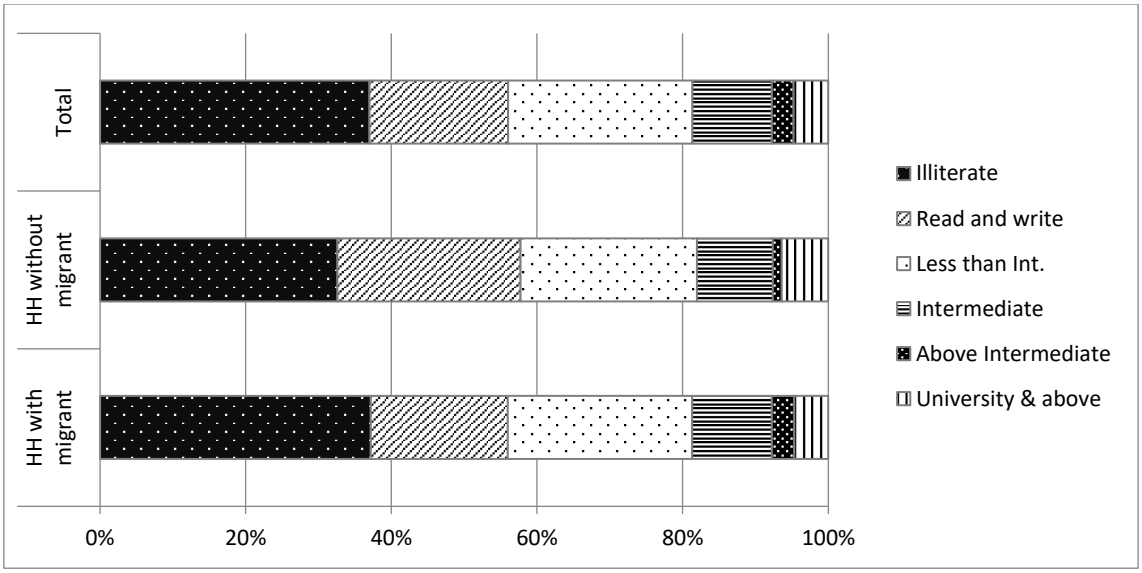
Source: Authors' computation using TLMPS 2014

Table 4
Households' wealth score

	Wealth score
HH with migrants	0,4007
HH without migrants	0,1016
Difference	-0,2992
Significance level	***

Source: Authors' computation using TLMPS 2014
*Note: *** p<0.01, ** p<0.05, * p<0.1, - no significant difference*

Figure 5
Education of the head of household



Source: Authors' computation using TLMPS 2014

Return migration

Return migrants represent slightly more than 1.2% of the Tunisian population according to the TLMPS2014 survey, which is the only nationally representative source of data on returnees to date. By analyzing this population, we can better understand the impact of migration on the local labour market through the return of human capital.

The impact of return migration depends on the timing and the conditions of the return as highlighted by Wahba (2015b). Thus we start by looking at the distribution of return migrants by year of emigration and return. The distribution of migrants by year of final return shows a spike in 2013-2014. This is due to the massive return of Tunisian emigrants from Libya when the civil war broke. As highlighted by Natter (2015), this unexpected inflow of returnees resulted in significant challenges in terms of accommodation, health care and food provision. This also had a negative impact on the Tunisian labour market, aggravating the already very high unemployment rate. A specific study of the African Development Bank and the International Organization for Migration (AfDB, 2012) draws the attention on the difficulties faced by the Tunisians returning from Libya and their eagerness to go back to their jobs when faced with a lacking framework of return assistance in their home country.

On average, returnees are 53 years old, thus marking a significant difference with the non-migrants, understandably due to the different life-cycle at which they are observed (Table 5). They are also more likely to live in urban areas and this is in line with the results from the previous section showing that the earlier migration cohorts were mainly urban, insofar we make the assumption that they returned to the same area from which they have left. Interestingly, a simple means test shows that returnees have significantly higher wealth scores compared to non-migrants. Nevertheless, just like for the interpretation of a similar result for current migrants, we cannot exclude that the higher levels of wealth are due to higher welfare levels prior to migration that enabled them to go abroad.

As an illustrative exercise, we can also compare the characteristics of our sample of returnees to the characteristics of the returnees from two other surveys on return migration in Tunisia, MIREM (conducted in 2006-2007) and CRIS[10] (conducted in 2012). Still, given that these last two surveys were conducted using snowball sampling, they suffer from an important selection bias that limits the generalization of the results and, consequently the validity of the comparison. In terms of age, returnees in MIREM and CRIS are younger than the ones in TLMPS and slightly more urban.

Table 5
Basic characteristics of return migrants

	Returnees	Non-migrants	Signi-ficance
Age	52.7	33.7	***
Urban	73.6%	68.0%	**
Wealth score	0.52	0.14	***

Source: Authors' computation using TLMPS 2014
*Note: *** p<0.01, ** p<0.05, * p<0.1, - no significant difference*

Since we only have information about the year of the first migration and the year for the final return, we cannot compute with precision the average migration duration, especially when, as Table 6 shows, we do not have information about the number of migration episodes for more than half of the sample of returnees. For those who declared having migrated only once (38.6% of the sample), we observe an average migration duration of 10 years. While two European countries rank first as destinations of current migrants, Libya appears as the main destination for the first migration of returnees. Again, a striking difference appears with regards to the existing data on return migration with the previously mentioned surveys ranking France and Italy as main destination countries for returnees and Libya ranking third only in the 2012 CRIS survey. This could confirm that the return migration from Libya is a relatively recent phenomenon linked to the deteriorating security conditions and the civil war. Nevertheless, we need to mention that, given that re-emigration to France is more difficult than to Libya, it is reasonable to think that there is a selection bias into return, with individuals being more prone to return after having migrated to Libya. Nevertheless, we cannot draw any conclusion because we only have the information about the country of the first migration and we do not know where migrants return from.

Labour market factors such as unemployment and low-quality jobs are the main reasons that caused individuals to emigrate, with slightly more than 80% having declared that they went abroad because they were unemployed or because they had found better jobs. Interestingly, the reasons related to having emigrated in order to pursue education are not very frequent in the answers of the returnees interviewed in 2014, while this was one of the main three reasons mentioned by returnees in previous

[10] *The Cross-Regional Information System on the Reintegration of Migrants in their Countries of Origin (CRIS) was launched in 2012.*

surveys (and even the first one in CRIS 2012). This supports the hypothesis that student-migrants might increasingly choose to stay abroad, creating a potential loss of skills. Nevertheless, for more than more than half of the sample (63%), the financial situation prior to migration was sufficient or more than sufficient to cover basic needs, in line with the theory according to which migrants do not come from the poorest segment of the population. In order to be able to cover the costs of migration, families need to be relatively well off. This could increase inequality and the gap between the socioeconomic segments.

Table 6
Characteristics of return migrants (in %)

Number of migration episodes		**Country of first destination**	
1	38.6	Libya	34.3
2	6.2	France	27.1
3	0.9	Italy	20.1
4 to 10	3.20	Other Arab countries	7.7
More than 10	0.6	Saudi Arabia	5.7
Does not know	50.6	Other countries	2.7
Main reason for migration		Germany	2.4
Unemployed and seeking work	39.3	**Reason to return**	
Found a better job	41.1	Contract ended	17.1
Higher wages	4.9	Sudden termination by employer	3.7
To help the family	1.3	Retired	14.4
To accompany spouse	5.4	Had health problems	1.5
Other	8.0	To get married	15.5
Financial situation prior to migration		To start up business at home country	10.3
More than sufficient to buy the basic needs	12.2	To look after family business or farm	3.3
Sufficient	51.1	Left work due to poor working condition	11.5
Not sufficient	36.0	Other	22.8

Source: Authors' computation using TLMPS 2014

In terms of reasons to return, one fifth of the sample declared having returned after the end of a contract (either expected or a sudden termination), while 14% returned after retirement. Although 10% of returnees declared returning to start a business in the home country, a significantly higher share of returnees is self-employed or employer on the domestic labour market compared to non-migrants (Figure 6). As pointed out by Wahba (2015b), a differentiation should be made between the status of "employer "and that of "self-employed", with the latter being often a default choice when individuals have difficulties integrating the labour market and thus entailing a higher level of vulnerability. The considerable percentage of business owners and investors among returnees is also confirmed in the MIREM and CRIS surveys, revealing the high job-creation potential of return migration in Tunisia.

In terms of remitting behaviour, close to half of the sample of returnees (47%) declared that they were not sending any remittances to their family while they were abroad (Table 7). Interestingly, this percentage does not significantly fall if we distinguish between those that have migrated alone or with family or between those that had saved while abroad or not.

Figure 6
Current employment status in primary job (ref.1 week) for non-migrant and returnees

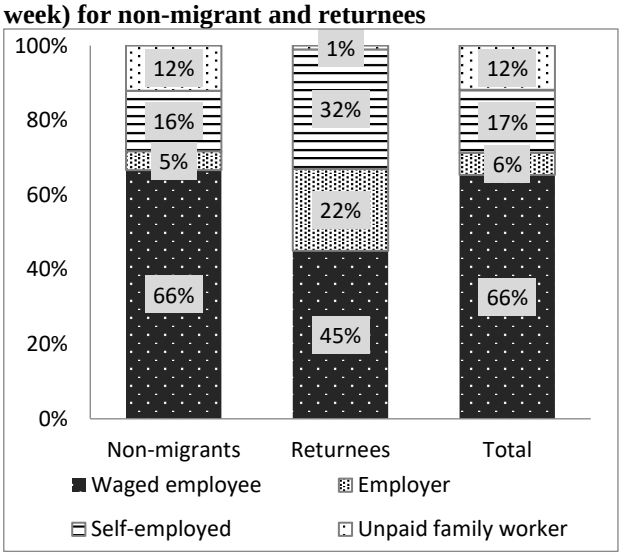


Table 7
Remitting behaviour, returnees

Frequency of remitting	
Yes, regularly	18.5%
Yes, irregularly	33.2%
Yes, regularly & irregularly	1.3%
No	47.0%
Average amount per year	624.3

Source: Authors' computation using TLMPS 2014

Although we do not observe a straight correlation between remitting behaviour and saving or having migrated alone, almost 38% of migrants that had the intention of staying permanently abroad answered not having remitted.

Remittances

Remittances play a significant role for the Tunisian economy accounting for around 4% of GDP over the last decades (Figure 7) and having considerably increased in volume over the last years.

Therefore, it is expected that remittances also play a significant role in determining household labour market behaviour, as also highlighted in David and Marouani (2015).

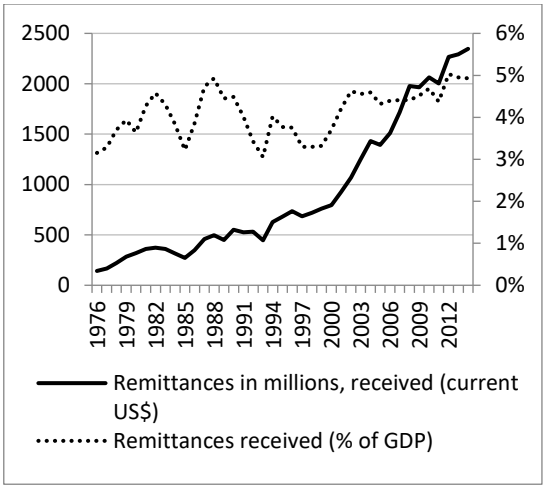
According to the TLMPS survey, around 2.5% of Tunisian households have received remittances from abroad over the last year. For the households receiving remittances, they represent up to 82% of their non-labour income, highlighting their importance for the Tunisian economy.

In terms of origin of remittances received from current migrants, almost half of them come from France and Libya. Interestingly, although the other Arab countries rank 5th in terms of destination country of current migrants, they rank third in terms of origin of remittances. This further confirms that migration to Arab countries is mainly labour migration, as migrants might tend to remit their incomes than invest in the host country.

The most used means to send remittances is through mail, followed by friends or relatives. The large share of migrants who declared bringing themselves the money or sending it through friends or relatives suggests that a significant part of remittances arrive to Tunisia through informal channels. Interestingly, despite the Government's initiative of allowing expatriates to open bank accounts in convertible Tunisian dinars in order to attract investments, only 5% of remittances are sent through the banking system.

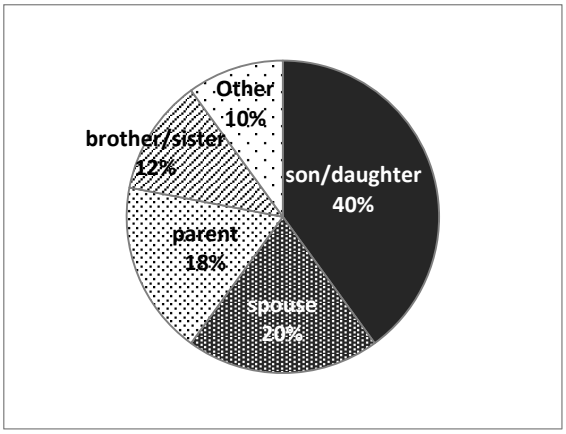
With 78% of remittances being sent to a specific member within a household, the main recipients are mainly the sons and daughters of the donor (Figure 8).

Figure 7
Official remittances received in Tunisia, 1976-2014



Source: World Bank, "World Development Indicators"

Figure 8:
Recipient of remittances, with respect to the donor



Source: Authors' computation using TLMPS 2014

Although only 20% of remittances are sent specifically to the spouses, we observe a significantly higher incidence of female-headed households among the remittance receiving households compared to non-receiving ones (Table 8). We also find that the heads of households that receive remittances are slightly less educated, with only 3.2% of them having tertiary education, while this percentage is of 7.7% for the heads of households who do not receive remittances. Interestingly, we also find a significant difference in terms of labour market participation, with the heads of households receiving remittances being more often inactive than those receiving remittances. This result was also highlighted from macroeconomic perspective by David and Marouani (2015) who find a significant increase in labour participation due to the decrease of remittances in the aftermath of the economic crisis in Europe.

Table 8:
Characteristics of the head of household, according to whether the household receives remittances (%)

	HH with remittances	HH without remittances	Significance level of the difference
Female HoH	34.4	18.0	***
Education			
Primary	79.3	71.4	*
Secondary	17.4	20.9	
Tertiary	3.2	7.7	**
Urban	67.2	69.4	
In labour force (ref. 3 months, extended definition)	56.5	77.8	***

Source: Authors' computation using TLMPS 2014
*Note: *** p<0.01, ** p<0.05, * p<0.1, - no significant difference*

Conclusion and policy insights

Tunisia has witnessed a boost in migration just after the Tunisian uprising due to the absence of border controls entailed by the security void in the aftermath of the revolution. In terms of origin, we observe a shift after the revolution with a significant increase of rural migrants and those from some regions such as Sidi Bouzid.

In terms of education, almost a quarter of Tunisian emigrants are highly educated, with those having migrated before the revolution being more educated and having left the country at a younger age. On the long run, the share of migrants holding a tertiary education level diploma increased considerably over time. Moreover, emigrants are more educated than the non-migrants and returnees, suggesting a positive selection into migration. This raises the issue of the impact of migration on the country's productivity as the probability of return of the highly skilled is low and there are no mechanisms ensuring their contribution to the country's development as is the case in other countries such as India. A higher degree of engagement with the high skilled diaspora should be one of government's priorities in terms of migration policy. Forums, mentoring programs or broad knowledge exchange programs would be relevant policy option for enhancing the benefits in a country where migration is more often permanent and the probability of return of the high skilled is low. In terms of labour market outcomes, unemployed, irregular and informal workers constitute the bulk of the migrant population. The vulnerability of migrants on the domestic labour market prior to emigration is even more striking when we look at the subsample of those who have left after the revolution. Once individuals migrate, they experience a positive transition, for most of them. As expected, we find a correlation between the education level and the employment status abroad, with the share of regular wage workers increasing with the education level. This confirms the role of emigration as a security valve for the Tunisian labour market.

If we look at the situation of the origin households of migrants, we notice that they have a significantly higher wealth index, but we cannot make any assumption whether this is a cause or a consequence.

Similarly, we observe that returnees have significantly higher wealth scores compared to non-migrants. They are mainly self-employed or employers on the domestic labour market compared to non-migrants. They also have significantly higher wages than non-migrants. Nevertheless, we cannot exclude that the higher levels of wealth are due to higher welfare levels prior to migration that enabled them to go abroad. The financial situation prior to migration for two thirds of them was sufficient or more than sufficient to cover basic needs. This supports the theory according to which migrants do not come from the poorest segment of the population and that, in order to be able to cover the costs of migration, families need to be relatively well off.

Remittances play a significant role for the Tunisian economy accounting for around 4% of GDP over the last decades. At the household level, they represent also up to 82% of their non-labour income of remittances recipient families. In terms of remitting behaviour, a significant share of migrants that had the intention of staying permanently abroad answered not having remitted. Given that migration to Arab countries is mainly labour migration, migrants to these countries tend to remit their income rather than invest it in the host country.

The large share of migrants who declared bringing themselves the money or sending it through friends or relatives suggests that a significant part of remittances arrive to Tunisia through informal channels. The Government's initiative to increase remittances through the banking system seems to have largely failed.

Moreover, we observe a significantly higher incidence of female-headed households among the remittance receiving households compared to non-receiving ones. We also find that the heads of households that receive

remittances are slightly less educated. Interestingly, we observe a significant difference in terms of labour market participation, with the heads of households receiving remittances being more often inactive than those receiving remittances. This would tend to confirm the effects of remittances on labour supply of non-migrants which can have a negative impact on Tunisia's unemployment rate when a crisis in destination countries affects negatively the remittance rate, but, again, we cannot infer any causality at this stage of the analysis.

At the Mediterranean level, negotiations could be set to take into account the economic situation of both sending and host countries. Moreover, labour mobility through trade in services should be promoted within the region and in the negotiations with European countries as this has positive effect on skilled jobs and could be a partial substitute to migration.

A future research agenda on the impact of emigration on Tunisia could address more specifically some pending issues highlighted in this article such as the causal relationship between remittances recipient families' incomes and emigration. A survey on the Tunisian high skilled diaspora could also be useful to understand better its aspirations and how it could contribute to raising productivity, growth and jobs creations in the country.

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