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2018

working paper series

MIGRATION DYNAMICS DURING
THE REFUGEE INFLUX IN JORDAN

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Working Paper No. 1190

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April 2018

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First published in 2018 by
The Economic Research Forum (ERF)
21 Al-Sad Al-Aaly Street
Dokki, Giza
Egypt
www.erf.org.eg

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Abstract

This paper provides overall evidence of the migration dynamics in Jordan between 2010 and 2016, during which the country experienced a large influx of Syrian refugees. This paper gives a detailed description of immigration in Jordan during that period in particular the composition, characteristics and labour market activities of immigrants in Jordan. It also examines the emigration and return migration patterns of Jordanians as well as the changes in their migration dynamics before and after the inflow of Syrian refugees. We find evidence of a fall in temporary international migration of Jordanians during this period. We also find that almost half of current emigrants have left Jordan with their entire family. Furthermore, we also find a decrease in return migration across the two years. When analysing data on immigrants, we find a change in immigrants' geographical distribution in 2016 compared to 2010, with lower shares of immigrants in areas of high refugee population. Despite similar distribution across occupations of immigrants and refugees in 2016, we find lower immigrants' share in sectors like manufacturing, in which refugees are concentrated. Immigrants themselves have increased their engagement in informal work and differed in occupations and economic activities from 2010 to 2016 suggesting that immigrants might have been affected by the refugee influx.

JEL Classifications: J61, J46, N35, O15, R23

Keywords: refugees, emigration, immigration, return migration, informal market.

ملخص

تقدم هذه الورقة أدلة شاملة على ديناميكيات الهجرة في الأردن بين عامي 2010 و2016، والتي شهدت خلالها البلاد تدفق أعداد كبيرة من اللاجئين السوريين. تقدم هذه الورقة وصفا مفصلا للهجرة في الأردن خلال تلك الفترة ولا سيما تكوين خصائص وأنشطة سوق العمل للمهاجرين في الأردن. كما تدرس أنماط هجرة وعودة الأردنيين، فضلا عن التغييرات في ديناميات الهجرة قبل وبعد تدفق اللاجئين السوريين. ونجد دليلاً على هبوط الهجرة الدولية المؤقتة للأردنيين خلال هذه الفترة. كما نجد أن حوالي نصف المهاجرين الحاليين غادروا الأردن مع أسرهم بأكملها. علاوة على ذلك، نجد أيضاً انخفاضاً في معدل المهاجرين العائدين على مدار العامين. عند تحليل البيانات المتعلقة بالمهاجرين، نجد تغييراً في التوزيع الجغرافي للمهاجرين في عام 2016 مقارنة بعام 2010، مع انخفاض عدد المهاجرين في المناطق التي يشكل فيها اللاجئين عدداً كبيراً. وعلى الرغم من تشابه التوزيع بين مهن المهاجرين واللاجئين في عام 2016، نجد أن نسبة المهاجرين أقل في قطاعات مثل التصنيع، حيث يتركز اللاجئون. زاد المهاجرون من انخراطهم في العمل غير الرسمي واختلّفوا في المهن والأنشطة الاقتصادية في الفترة من 2010 إلى 2016 مما يوحي بأن المهاجرين قد تأثروا بتدفق اللاجئين.

1. Introduction

The central aim of this paper is to describe the nature and dynamics of migration in Jordan during the period of 2010 and 2016, a period when Jordan had experienced a large influx of Syrian refugees. According to the 2015 Population Census of Jordan, in 2015, Jordan was hosting 1.3 million Syrians, of whom 630,000 were registered as refugees with the United Nations High Commissioner for Refugees (DoS 2016). The Syrian influx came on top of an additional 1.6 million foreigners residing in Jordan. Compared to a total population of 6.6 million Jordanians in 2015, the non-national population of refugees and immigrants had potentially increased Jordan's population by about 45%. Thus, this paper will provide an overview of that dynamics of migration of foreign immigrants, Jordanian emigrants³, and Jordanian overseas returnees in Jordan before and after the influx of refugees.

Using the Jordan Labor Market Panel Survey of 2010 and 2016, we find that there were fewer Jordanian households with current members overseas in 2016 compared to in 2010. However, the evidence also suggests that almost half of the Jordanian emigrants have left with their entire household. Although the composition of emigrants still seemed to be skewed toward the educated, the destinations of Jordanian emigrants had changed over 2010-2016, perhaps reflecting international labor demand and the global economic environment. At the same time, there were fewer Jordanian returnees in 2016 compared to in 2010. In other words, the evidence suggests less migration dynamics for Jordanians both in term of emigration and return migration. On the other hand, Jordan had witnessed a substantial inflow of Syrian refugees, and surprisingly a bigger inflow of immigrants during that period. We find that immigrants exhibited a change in their geographical location and distribution across economic sectors between 2010 and 2016.

The next section will describe the JLMPS 2010 and JLMPS 2016. Section 3 will focus on current Jordanians overseas, and section 4 on return migrants. Section 5 will examine immigrants in Jordan and how they compare to Syrian refugees. Section 6 summarises the main findings.

2. The Data

This paper uses the two waves of Jordan Labor Market Panel Survey (JLMPS 2010 and JLMPS 2016), which collected micro-level individual information in 2010, and 2016-2017 respectively. The surveys were designed and administered by the Economic Research Forum (ERF) in cooperation with the Department of Statistics in Jordan (DoS). See Krafft and Assaad (2018) for further details about JLMPS 2010 and JLMPS 2016. The 2016 wave tracks the 5,102 households and 25,953 individuals from 2010. The 2016 sample contains 3,000 refresher households, to capture non-Jordanian, mainly Syrian refugees, households. Like the original sample, the refresher sample is designed to be nationally representative of the population of Jordan once weights are used. The JLMPS has rich information on the labour market characteristics including informal employment (job contracts and social security coverage status), full job histories, education outcomes, women empowerment measures, demographic characteristics, migration histories, and socio-economic background among others.

Although we use both waves of the data, it is important to note that there are several differences between the two waves. JLMPS 2016 has an additional refresher sample of 3000 households that was designed to better capture immigrants and refugees; i.e. that refresher sample is not part of the panel. In addition, there is an extensive module on return migration, and a more comprehensive set of questions on current migrants as well as immigrants in Jordan in 2016 compared to in 2010. Hence, many questions on current migrants were not collected in 2010.

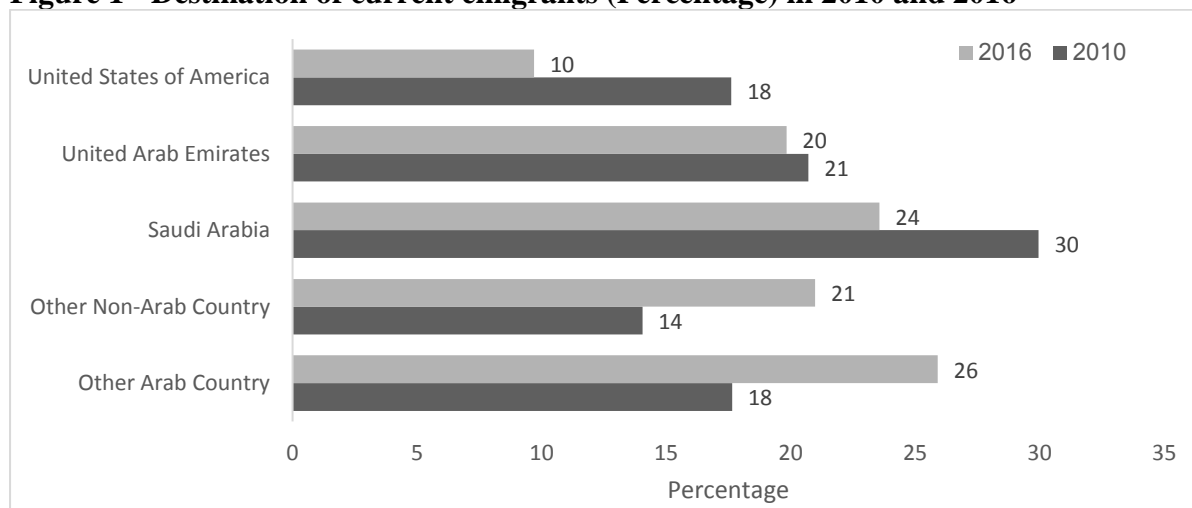
³ Note that *immigrants* are defined as foreign nationals who live in Jordan who are not refugees, while *emigrants* are Jordanian nationals who live abroad. Throughout the analysis, whenever we refer to *immigrants* we exclude refugees.

In this paper, we define refugees as individuals in household where at least one member 1) has arrived after 2011 and 2) has fled violence and conflict or is registered as a refugee. However, both waves collected rich retrospective information such as long employment histories. In the next sections, we focus on Jordanians first: current emigrants and returnees, before turning our attention to immigrants and refugees.

3. Jordanian Current Emigrants

Temporary migration has been a prominent feature of international migration in the Arab region. This is particularly the case for migrants who chose the Gulf States as their destinations, which are popular among Jordanian emigrants. By analysing data on Jordanian households who had a member of their household living and working overseas, we find that in 2010 around 4.6% of Jordanian households had at least one migrant, compared to only 2.1% in 2016. This suggests that temporary out-migration, or more specifically the migration of one or more members of a household only, in Jordan had decreased between 2010 and 2016. It is important to note that those figures do not include the emigration of households where the entirety of the household had emigrated, which is roughly 50% of all emigrants. Hence, one needs to treat those figures with caution.

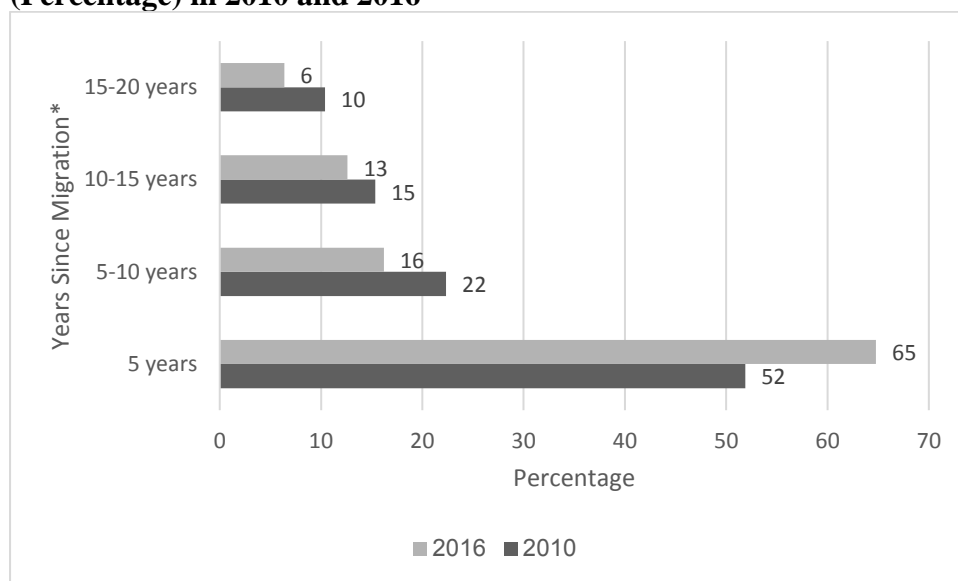
Figure 1 - Destination of current emigrants (Percentage) in 2010 and 2016



Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

In terms of destinations, there has been a decline in the share of current emigrants to the three main destinations between 2010 and 2016, namely the United Arab Emirates, Saudi Arabia and the United States of America, and an increase in the share of emigrants to other Arab and other non-Arab countries, mainly Western countries. A substantial proportion, around two-thirds, of current emigrants in 2016 emigrated in the previous five years, while approximately half of emigrants in 2010 had migrated in the five years leading up to 2010 (see Figure 2). The substantial increase in emigration after 2010 could be correlated with the refugee influx, but we refrain from making any causal claims based on the descriptive statistics in this paper.

Figure 2 - Timing of Emigration of Current Jordanian Emigrants (Percentage) in 2010 and 2016

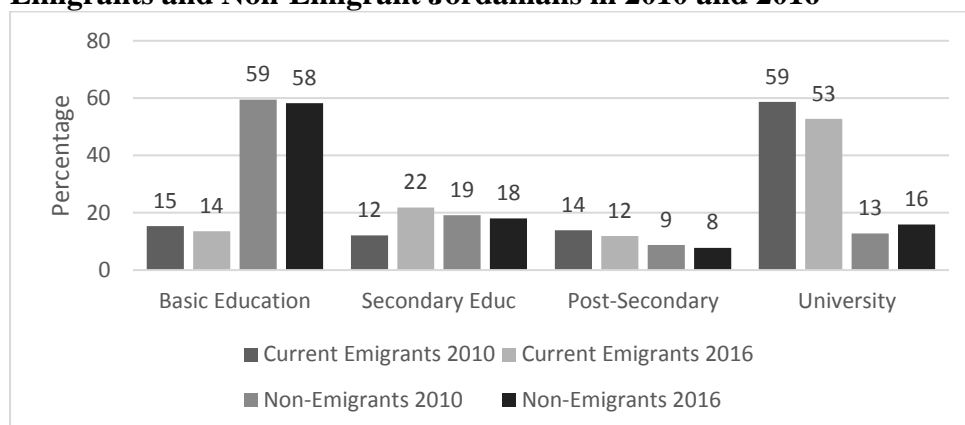


*Measured in years before the survey.

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Despite a decrease in the share of current emigrants who have household members left behind among the Jordanians, the profile of the current emigrants remained a highly educated one. Compared to resident Jordanians, emigrants had much higher levels of education where over 80% of them had achieved at least secondary education and over 50% were university graduates. There does not appear to have been a notable change in the educational composition of Jordanian emigrants between 2010 and 2016. Figure 3 suggests that the Jordanian emigrants are highly selected by education.

Figure 3 - Education Levels (Percentage) of Current Jordanian Emigrants and Non-Emigrant Jordanians in 2010 and 2016



Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Examining the job characteristics of current emigrants in 2010 and 2016, we find that 64% and 50% of emigrants in 2010 and 2016, respectively, were employed before migration. Of those, we find that 85% of emigrants in 2016 were employed in the private sector in Jordan before migrating compared to 75% in 2010. While most emigrants abroad were waged employees in both 2010 and 2016, there has been an increase of around 8 percentage points (p.p.) in waged employees, a 3 p.p decrease in employers, and more than 4 p.p decrease in self-employment among Jordanian current emigrants between 2010 and 2016. In both 2010 and 2016, current

emigrants tend to be engaged overseas in skilled rather than low skilled occupations, which is commensurate with their educational levels.

Table 1 - Characteristics of Jobs of Current Emigrants in 2010 and 2016 (Percentage)

	2010	2016
<i>Current Sector Abroad</i>		
<i>Government</i>	15	18
<i>Private</i>	85	82
<i>N</i>	222	102
<i>Current Employment Status abroad</i>		
<i>waged employee</i>	86	94
<i>employer</i>	8	5
<i>self-employed</i>	6	1
<i>N</i>	222	102

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Comparing Jordanians households who had an emigrant member abroad with households without any emigrants, we find that households with emigrant members had a higher average age (36 years of age) than those without emigrants (27 years of age) in 2010 and this pattern persisted in 2016. Similarly, the heads of households with emigrants were older (52 years of age in 2010 and 58 years of age in 2016). It is also evident that households with emigrants had a higher wealth score compared to households without emigrants, which could be correlated with emigration. We also find that education level was higher for household heads who had an emigrant abroad than their counterparts, not surprisingly given that current emigrants were also more educated. Thus, overall, the evidence suggests that Jordanian emigrants have better socio-economic background.

3.1 Measuring emigration using siblings information

Migration is a complex phenomenon which has proved difficult to measure worldwide, even with the best data available. In the analysis so far, we have focused on Jordanian migrants reported by their respective left behind household members. Naturally, this would exclude any migrants who have moved with their entire household from this measurement. For this reason, we repeat the previous analysis using different information from the migrants' sibling data.

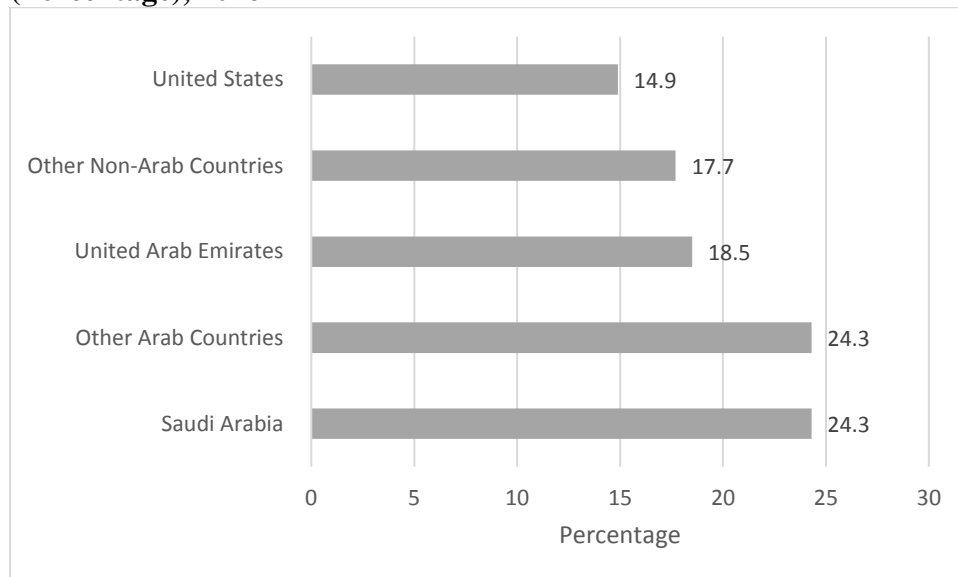
JLMPS 2016 collects data from household members about their siblings who do not live in the same household: their numbers, whether they are deceased or alive, and whether they have migrated. While these data have their own pitfalls, they do offer further insights over the prior analysis. The main drawback in analysing these data is the risk of double counting migrants, i.e. if more than one household in our sample share siblings, we are likely to over-report the level of migration.

In order to minimize potential double counting, and because the JLMPS is a representative sample of Jordan, we assume that the likelihood of observing the siblings of a household member who live outside that household but in Jordan is very high. Therefore, to account for the risk of double counting sibling migrants, we divide our figures by the number of living siblings in Jordan.

We find that around 8% of individuals have at least one sibling abroad, and among those there on average 2.7 siblings abroad with a maximum of 9 siblings. Out of the siblings who are abroad, we find that 51% of them have moved with their entire households, which suggests that this could be more a form of permanent migration. Hence, assuming that the 2.1%

migration figure that we have obtained in the previous section is for temporary migrants only, we estimate overall migration rate to be around 4% (i.e. twice that of temporary migrants)⁴. Indeed, using the siblings' data and using our very conservative method of counting, we find that the migration rate of siblings (temporary and permanent) is around 3.7%. Similar to our findings in Figure 1, we find that most of the emigrants have chosen Saudi Arabia and United Arab Emirates as their country of destination, but we find a larger number of emigrants who have gone to the United States of America, possibly permanently.

Figure 4 - Destinations of Emigrants based on Siblings Data (Percentage), 2016



Source: Authors Calculations based on JLMPS 2016

We also find that a substantial proportion of these emigrants have left in recent years. In fact, more than 39% have migrated after 2010, and more than 30% after 2012 (Table 2). Finally, when measuring migration as the number of individuals abroad as a proportion of current Jordanian residents, we find that the proportion is more than 3.7%, which is higher than our previous estimate of 2.1% - which is likely to represent temporary migration. This indicates that Jordanian migration may be taking a more permanent nature than it did in the past.

⁴ In other words, since permanent migration accounts for approximately 51% of all emigrants from Jordan, and because our initial estimate of 2.1% is likely to reflect temporary migration only (since household members who are left behind report the characteristics of the emigrant), we estimate that the total migration figure is double the 2.1%, i.e. approximately 4%.

Table 2 - Year of Emigration (Percentage)

Temporary Migrants (Migrated without entire Family)		Permanent Migrants (Migrated with Entire Family)	
N=811		N=886	
2012-	36.0	2012-	25.2
2010-2012	8.4	2010-2012	7.9
2005-2010	13.9	2005-2010	15.2
2000-2005	8.3	2000-2005	18.3
1995-2000	8.3	1995-2000	8.0
1990-1995	8.8	1990-1995	8.8
Before 1990	15.5	Before 1990	14.5
Unknown	0.8	Unknown	2.1

Source: Authors Calculations based on JLMPS 2016

4. Returnees

Given that about half of all emigrants are temporary migrants, it is worthwhile assessing the return migration in Jordan and the difference in characteristics and outcomes of returnees in comparison with the resident natives. We find that, in 2010, returnees amounted to around 3% of the resident Jordanians (15-59 years of age, excluding immigrants). However, the share of returnees had declined to around 1% in 2016. This seems to be consistent with the finding that migration is becoming more permanent in nature, but also an underestimate of the size of return migration given that the two main destinations are UAE and Saudi Arabia, countries known for their temporariness of their migration and the large wave of return that happened after the Gulf crisis of 2014.

In line with the finding that emigrants are more educated, we find that returnees were also better educated than resident native Jordanians. Indeed, in 2010, around three quarters of returnees had secondary education and above (Table 3). The figure rose to 80% in 2016. In contrast, only around 40% of resident Jordanians had secondary education and above in each of the two waves. That said, the percentage of illiteracy halved between 2010 and 2016 among resident Jordanians (see Hailat (2018)).

Comparing the job characteristics of returnees to non-migrant Jordanians at the time of the surveys, we find that returnees were mostly concentrated in manufacturing, wholesale and retail trade, transportation, and education in 2010. In 2016, there was no meaningful change in their concentrated economic activities. In terms of occupations, there were more returnees who worked in professional occupations in 2016 (40%) than in 2010 (25%). There was a decrease in their engagement in service and sales occupations (see Table 4).

Table 3 - Educational level (Percentage) of Returnees and Non-Migrants in Jordan in 2010 and 2016

	2010			2016		
	Non-Migrant	Returnee	Total	Non-Migrant	Returnee	Total
Illiterate	9	1	9	5	0	5
Read & Write	13	10	12	16	4	16
Basic Education	35	15	34	34	15	34
Secondary Education	21	22	21	20	23	20
Post-Secondary	9	21	10	8	23	8
University	12	25	12	15	24	15
Post-Graduate	1	5	2	2	10	2
Total	100	100	100	100	100	100
N	13,553	282	13,835	16,264	122	16,386

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Table 4 - Occupation of Employed Returnees and Non-Migrants in Jordan (Percentage) in 2010 and 2016

	2010			2016		
	Non-Migrant	Returnee	Total	Non-Migrant	Returnee	Total
Managers	1	4	2	1	0	1
Professionals	20	25	20	25	40	25
Technicians and associates	8	9	8	7	13	7
Clerical support workers	9	12	10	7	9	7
Service and sales workers	26	24	26	27	15	27
Skilled agricultural work	2	1	2	3	1	3
Craft and trades workers	16	9	16	14	12	14
Plant and machine operators	11	12	11	10	9	10
Elementary occupations	7	3	6	6	1	6
Total	100	100	100	100	100	100
N	5,208	190	5,398	5,495	69	5,564

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

5. Immigration

In this section, we turn our attention to the immigrants in Jordan. Jordan has been a major destination for Egyptian and South Asian migrants, and evidence from the Jordanian Census of 2015 shows that there has been a large increase in non-Syrian migrants since the 2004 census. Table 4 shows the composition of Jordan in terms of resident natives, returnees, immigrants, and refugees. The share of Syrian refugees of the Jordanian society increased to 14% in 2016 (Panel A). It is worth noting here, as a caveat, that it is not possible to identify refugees in 2010 data. However, evidence suggests that Jordan did not experience such an influx of refugees in the years shortly prior to 2010⁵ (see Salemi, Bowman, and Compton, 2018). The Syrian refugee influx started in 2012. We also find that the proportion of immigrants

⁵ We are aware that Jordan was home to both Palestinian and Iraqi refugees. Palestinians have arrived in mass numbers after Al Nakba and Iraqis after the 2003 war in Iraq. However, it is not possible to distinguish those who are immigrants from refugees in 2010 wave. Nonetheless, Iraqis have not been placed in refugee camps in Jordan. As an example, for those who have fled violence in Iraq between 2003 and 2007, the upper bound estimates who have entered and exited Jordan during that period are at around 547,000 according to the Jordanian immigration authorities (Fafu and UNFPA, 2007). As of 2017, the number of Iraqi refugees registered with the UN refugee agency is estimated at around 62,830 individuals.

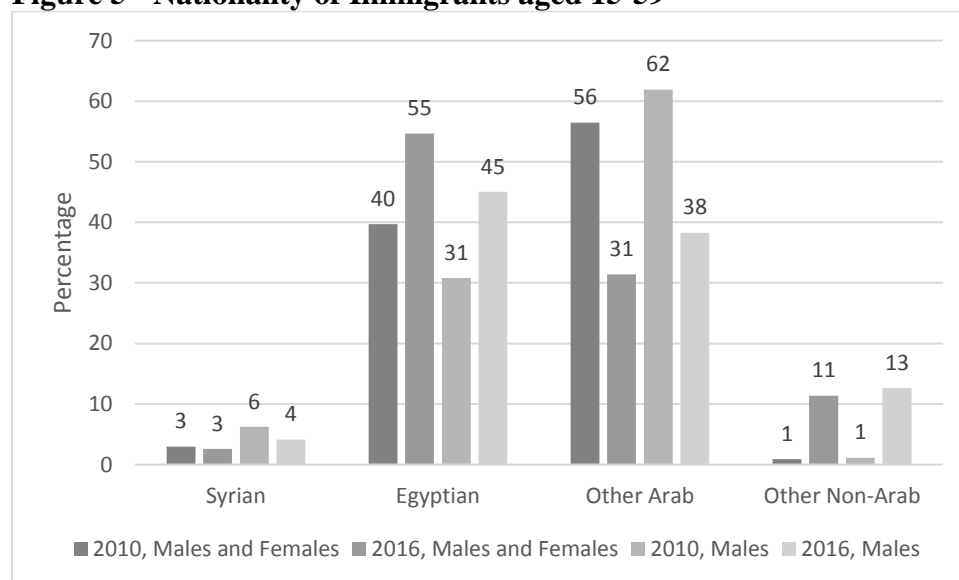
increased from 8% to 17% between the two waves. Because of the change in population size that came about as a result of the Syrian influx, Table 5, Panel B, excludes refugees and shows that the proportion of immigrants increased even to around 20% when we exclude refugees. By exploring the nationality of immigrants, we find a substantial increase in Egyptian and non-Arab proportions and a decrease in other Arabs among immigrants in 2016 compared to 2010 (Figure 5). Given the large influx of Syrian refugees, one would expect other immigrants to find Jordan less attractive. The increase in immigrants' proportions in Jordan is therefore a stark finding which warrants a separate analysis.

Table 5 - Composition of the Population (Percentage) in Jordan in 2010 and 2016

	2010	2016
Panel A: Composition of population : resident natives; returnees; immigrants; and refugees		
Jordanian Residents	90.3	68.4
Jordanian Returnees	2.2	0.4
Immigrants	7.5	17.0
Syrian Refugees	0.0	14.1
Total	100	100
N	25,953	33,450
Panel B: Composition of population: resident natives; returnees; immigrants (EXCL. refugees)		
Jordanian Residents	90.3	79.7
Jordanian Returnees	2.2	0.5
Immigrants	7.5	19.8
Total	100	100
N	25,953	30,420

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Figure 5 - Nationality of Immigrants aged 15-59



Note: Syrians in this figure are immigrants who arrived before the Syrian war or have not registered in refugees/fled violence. Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

As Table 6 shows more refugees lived in urban centers (e.g. Amman) than in governorates that had refugee camps (e.g. Mafraq and Zarqa). As shown in Table 6, in terms of residence location, 39% of refugees lived in Amman, 28% in Irbid, 15% in Mafraq, and 11% in Zarqa. On the other hand, immigrants were mostly concentrated in Amman. Around 59% of

immigrants in 2010 lived in Amman and 14% in Zarqa governorates; however, in 2016 there was an increase of 3% in Zarqa (reaching 17%), a decrease of 8% in Amman, and an increase of 4% in Aqaba, while Mafraq, in which the Zaatari refugee camp is located, witnessed a decrease of 1% in immigrants. However when we decompose into rural urban areas, we find a high overlap between refugees and other immigrants. Despite an approximately 7% reduction in immigrants in urban Amman, they remain substantially high in proportion in relation to refugees. As well as their residence location, we also look into their location work, which is naturally conditional on their employment status. We find sharp increases in immigrants work locations in areas of lower refugee concentration (e.g. Balqa, Madaba, and Aqaba) and a decrease in Amman which hosts the largest of refugees both in residence and place of work. Interestingly, we find an increase in immigrants' work in Mafraq despite a decrease in immigrants' residence in this governorate.

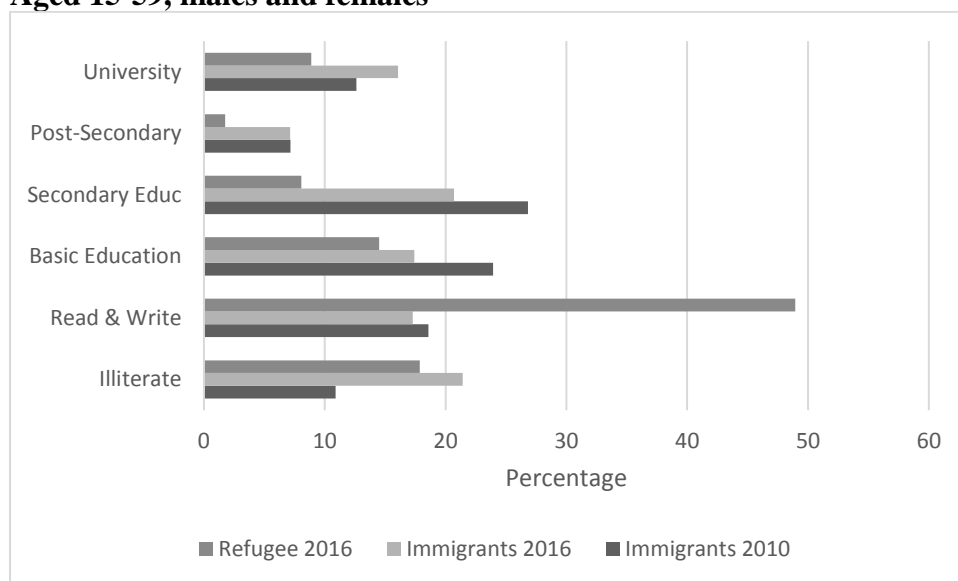
Table 6 – Distribution of Immigrants, Refugees, and Natives' residence and work location across Jordan (Percentage) - males and females age 15-59

	<i>Place of Residence</i>					<i>Place of Work*</i>				
	Immigrants		Refugees	Jordanian		Immigrants		Refugees	Jordanian	
	2010	2016	2016	2010	2016	2010	2016	2016	2010	2016
<i>Amman</i>	58.8	50.5	39.2	37.4	37.3	62.9	49.5	41.6	49.5	48.4
<i>Balqa</i>	2.9	9.6	2.9	6.9	6.8	4.2	10.9	5.2	5.2	4.6
<i>Zarqa</i>	13.6	16.7	11.1	13.1	15.4	11.9	11.5	6.9	11.4	12.4
<i>Madaba</i>	1.1	1.9	1.6	2.5	2.5	1.0	1.3	1.8	1.7	1.7
<i>Irbid</i>	8.0	9.3	27.9	19.5	19.3	7.7	13.3	25.1	14.1	15.0
<i>Mafraq</i>	3.2	2.8	15.4	4.7	4.6	1.9	5.8	11.4	4.1	5.1
<i>Jarash</i>	7.5	3.4		3.1	2.7	3.8	1.7	0.0	1.7	2.2
<i>Ajloun</i>	0.7	0.0	0.2	2.5	2.3	1.2	0.0	0.0	1.4	1.4
<i>Karak</i>	1.4	0.6	1.8	4.7	3.9	1.7	1.2	5.4	4.0	3.4
<i>Tafileh</i>	0.3	0.0	0.0	1.7	1.3	0.5	0.0	0.1	1.5	1.0
<i>Ma'an</i>	1.3	0.2		2.1	1.9	1.9	0.4	0.1	2.0	1.6
<i>Aqaba</i>	1.2	5.0		2.1	2.2	1.3	3.9	0.0	3.4	3.0
<i>Don't Know</i>						0.0	0.5	2.5	0.0	0.2
<i>Total</i>	100	100	100	100	100	100	100	100	100	100
<i>N</i>	771	1,263	1,407	13,835	16,588	345	429	193	5,218	5,190

Notes: *Conditional on having a job. Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Comparing the demographic characteristics of immigrants to those of refugees, immigrants were mostly male – 60% in 2010 and 68% in 2016. Refugees, on the other hand, were mostly female (52%). As depicted in Figure 6, we observe a change in the composition of immigrants' education between 2010 and 2016. In 2010, most immigrants had secondary education, and there were high levels of illiteracy and similarly high levels of tertiary education. However, in 2016, there has been an increase in university-educated immigrants, but the share of illiterate immigrants doubled. Between 2010 and 2016, there was an increase between those who held a university degree as well as those who were illiterate. In contrast, refugees had lower levels of education; around 49% could only read and write and 18% were illiterates. Because of the broad similarities in skills of refugees and immigrants in Jordan as measured by their education, we turn our attention their labour market outcomes to observe whether the two groups also exhibit similarities in their employment choices and opportunities.

Figure 6 - Educational Levels (Percentage) of Immigrants and Refugees Aged 15-59, males and females



Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016

In terms of the labour market, 78% of immigrant males (aged 15-59) were active in the labour force in 2010 as opposed to only 68% in 2016, while 45% of refugee males (aged 15-59) were active in the labour force in 2016 (Table 6). Of those who were in the labour force, 95% of males were employed in both 2010 and 2016. Of the refugees who were active in the labour force 82% were employed (Table 6). In terms of informality, there has been an increase in immigrants' informal status from 63% in 2010 to 78% in 2016, while 91% of refugees are in the informal sector (where informality is defined as not having an employment contract and not having social security). Notably, when examining the unconditional employment rate among immigrants and refugees in both 2010 and 2016, we find that participation in the labour force is nearly the same as the unconditional employment rate; i.e. very few immigrants are unemployed. We therefore investigate this group further in order to ascertain that there is no evidence of immigrants' misreporting their employment status. Indeed, we find that 52% of non-participants are enrolled in education. In terms of nationality, most of these immigrants that are outside the labour force are classified as "other Arabs"⁶, which suggests they may have migrated from neighbouring countries (e.g. Palestine) to study. Table 6 also portrays the different occupations and economic activities undertaken by immigrant males aged 15-59 as compared to their refugee counterparts. The figures suggest that there were more immigrants working in agriculture, construction, and activities of households as employers. It also seems that there were less immigrants working in manufacturing, a sector which was predominantly saturated with immigrants in the past. There has also been a decrease in their engagement in administrative and support services. Most of the other activities did not change substantially across the two waves.

Comparing male immigrants and refugees in 2016, we find very similar distribution across occupations, but sharp differences across economic activities. Refugees' economic activities were predominantly concentrated in manufacturing and construction activities, both at around 24% in 2016. This construes suggestive evidence that refugees may have replaced or crowded out emigrants in such elementary activities. Indeed, we find a sharp decrease in elementary occupations among immigrants from 14% to 6% in 2010 and 2016 respectively, while 12% of refugees worked in such occupations. Moreover, in 2016, around 25% of refugees worked in

⁶ The data in 2010 classifies nationalities as Jordanians, Syrians, Egyptians, Other Arabs, and Other Non-Arabs.

crafts and related trades occupations, while 24% of immigrants worked in these occupations (a decrease from 28% in 2010). Nevertheless, there was an increase in immigrants' employment in skilled agriculture from 3% in 2010 to 19% in 2016. Overall, there is some suggestive evidence of competition between immigrants and refugees, but further analysis is needed to provide any causal conclusions.

Table 7 - Characteristics of Jobs (Percentages) of Immigrants in 2010 and 2016 and Refugees in 2016, Males Only (15-59)

	Immigrants		Refugees
	2010	2016	2016
Labor Market Status			
<i>In the LF</i>	78	68	45
<i>Unconditional Unemployment Rate</i>	26	35	35
<i>Unconditional Informality</i>	71	85	96
<i>Conditional on Activity in LF: Employed</i>	95	95	82
<i>Conditional on Employment: Informal</i>	63	78	91
<i>N</i>	771	1,234	1,378
Economic Activity			
<i>Agriculture, forestry and fishing</i>	8	21	14
<i>Manufacturing</i>	17	8	24
<i>Construction</i>	15	17	24
<i>Wholesale and retail trade</i>	21	15	21
<i>Transportation and storage</i>	2	1	2
<i>Administrative activities</i>	21	7	1
<i>Activities of households as employers</i>	2	23	0
<i>Other</i>	14	9	16
<i>N</i>	362	470	201
Occupation			
<i>Managers</i>	1	0	0
<i>Professionals</i>	6	7	7
<i>Technicians and associate professionals</i>	2	0	1
<i>Clerical support workers</i>	4	1	2
<i>Service and sales workers</i>	37	40	40
<i>Skilled agricultural work</i>	3	19	15
<i>Craft and related trades workers</i>	28	24	25
<i>Plant and machine operators</i>	6	3	3
<i>Elementary occupations</i>	14	6	8
<i>N</i>	362	472	200

Notes: Based on ref. 3-months market definition (search is required).

Source: Authors' calculations based on JLMPS 2010 and JLMPS 2016.

Conclusion

Jordan had witnessed a substantial influx of Syrians since 2011, however it had also experienced an increase in its immigrant population. Our findings suggest that immigrants' geographical distribution in 2016 was different compared to 2010, with lower shares of immigrants in areas of high refugee population. Despite similar distribution across occupations of immigrants and refugees in 2016, we find lower immigrants' share in sectors like manufacturing, in which refugees are concentrated. Immigrants increased their engagement in

informal work and differed in occupations and economic activities from 2010 to 2016 suggesting that immigrants might have been affected by the refugee influx. However, the evidence also highlights that the majority of Syrian refugees were women and young children (Krafft et al, 2018), rather than prime aged men, which might have dampened any potential negative effects on immigrants at least in the short run.

Our findings also indicate a fall in temporary international migration of Jordanians during this period. More precisely, the share of Jordanian household reporting having a current member of household overseas has fallen in 2016. Although this could possibly be due to under estimation of migration in the JLMPS2016, we find that among current Jordanian overseas, almost half have left Jordan with their entire family. Furthermore, we also find a decrease in return migration. Hence, overall the evidence suggests there has been an increase in permanent or whole family (as opposed to individual) Jordanian migration.

In conclusion, this paper aimed to offer a snapshot of the migration dynamics in Jordan in 2016 compared to 2010 as well discuss the changes in immigrants' labor market outcomes during the refugee influx period. While the paper is purposed to be mostly descriptive, it raises many questions on the impact of the inflow of refugees on migration dynamics in Jordan that warrant in depth research and evaluation.

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