

The effects of return migration on Egyptian household revenues*

Sami Bensassi[†] Liza Jabbour[‡]

July 15, 2015

Abstract

This paper explores the effects of return migration on Egyptian household revenues. Egyptian Households may have different sources of revenues: wages, benefits, remittances, household firms, household farms. For several of these sources, return migrants may have specific impact on the generation of revenues. The length of the migration spell, the experience accumulated overseas, and the capital accumulated abroad may influence the ability of return migrants to find regular waged jobs, establish household firms and successfully manage these firms. After presenting a series of descriptive statistics on the characteristics of return migrants and the differences in terms of revenues between households with and without return migrants, we focus our analysis on the revenue generated by household firms. An increasing body of evidences suggests that return migrants are more likely to be and to stay entrepreneurs once they come back. We expand this literature by examining the impact of return migrants on the revenue of household firms. Our result reveals a paradox. We find that household firms associated with a return migrant have a significantly larger starting capital. However, despite this advantage these firms do not generate greater revenues than firms with no association with return migrants. The fact that most return migrants come from rural areas seems to counterbalance these positive aspects. We do find that the experience accumulated abroad by return migrants has a positive impact on revenues generated by household firms.

Keywords: Return Migration, Household firms

JEL classification: F13, F12, F47.

*We gratefully acknowledge financial support from the Economic Research Forum (ERF) for this work, as part of its project "The use of online harmonized household survey data". The authors are solely responsible for the views expressed in this paper.

[†]University of Birmingham (sami.bensassi@bham.ac.uk).

[‡]University of Birmingham (liza.jabbour@bham.ac.uk).

1 Introduction

This paper explores the effects of return migration on Egyptian household revenues. Egyptian Households may have different sources of revenues: wages, benefits, remittances, household firms, household farms. For several of these sources, return migrants may have specific impact on the generation of revenues.

The length of the migration spell, the experience accumulated overseas, and the capital accumulated abroad may influence the ability of return migrants to find regular waged jobs, establish household firms and successfully manage these firms.

We start by presenting a series of descriptive statistics detailing the characteristics of return migrants. We also compare the different sources of revenues across two types of households, those with return migrants and those without return migrants. We subsequently focus our analysis on the revenue generated by household firms.

An increasing body of evidences suggests that return migrants are more likely to be (Wahba and Zenou, 2012)(Mesnard, 2004)and to stay (Marchetta, 2012) entrepreneurs once they come back. We expand this literature by examining the impact of return migrants on the revenue of household firms.

We base our analysis on the last wave of the Egypt Labor Market Survey (ELMPS2012). This last wave contains key indicators related to the performance of the household firms. As underlined by the literature on migration in general and returnees in particular (Wahba, 2015), endogeneity is a problem. Return migrants might have unobservable characteristics that self-select them into migration and entrepreneurship (talent and attitude to risk). We deal with this issue using an instrumental variable strategy. We follow Marchetta (2012) in adopting the rate of growth of the population in the year of birth of the entrepreneur as an exclusion variable.

Our results reveal a paradox. We find that household firms associated with a return migrant have a significantly larger starting capital. We also find that the experience accumulated abroad by return migrants has a positive impact on revenues generated by household firms. However, despite these advantages, the firms with a return migrant at their head do not generate greater revenues than firms with no association with return migrants. The fact that most return migrants come from rural areas and have a higher propensity to have a second job seem to counterbalance the positive aspects of having a return migrant as the head of the household firm. We don't find any evidence of the impact

of the lack of domestic networks identified by Wahba and Zenou (2012) for return migrants. It has to be noticed that return migrants might be aware of this possible handicap and have found a way to circumvent it. Indeed return migrants seems to be more eager to engage in partnership. Our results associate shared ownership with higher firm revenue.

The paper is organized as follows. In Section (2), we look at the return migrants characteristics. In Section (3), we discuss the composition of household revenues. In Section (4), we focus on the household firms revenue and the consequences of having a return migrants at the head of the household firm. Finally, in Section (5), we present some preliminary conclusions.

2 Who are the returnees?

The ELMPS (2012) is the third wave of a survey carried out by the Economic Research Forum (ERF) and the Egypt's Central agency for Public Mobilization and Statistics (CAPMAS).¹ 12060 households were surveyed, among these 6752 from the 2006 sample (Assaad and Krafft, 2013). The modules related to return migration, saving, and borrowing were introduced in the 2012 survey.²

The ELMPS 2012 module on return migration allows us to identify return migrants, the households they belong to and many of their personal characteristics at the moment of the inquiry and when they were abroad. According to the ELMPS 2012 survey, 1381 of the surveyed individuals are returnees (less than 3% of the total of 49186 included in the survey). These returnees are associated with 1339 households (11% of the total).

As shown in table 1, returnees are overly male (97%), head of their household once they returned (87.09%), and very few of them are unemployed (only 9.26%). The job status is identified from the following question: "did you participate in any employment during the past three months?". The second job status is identified from the following question: "did you have any secondary job in addition to your main job during the past three months?". Approximately 15% of returnees report having a secondary job. On average, returnees have completed 9 years of schooling (Education).

Return migrants live mostly in rural area. They left Egypt at 25 years old on average for a migration spell of approximately 5 year (Table 1). It is worth noting that the distribution of the migration spell is skewed; 72% of the returnees stayed for 5 or less years abroad,

¹Two previous waves of the ELMPS survey were carried out in 1998 and 2006.

²For a detailed presentation of the survey please refer to Assaad and Krafft (2013)

26% have a migration spell of 1 year or less and 45% have a migration spell of up to 2 years.

Table 1 also displays the characteristics of the general population of individuals by gender and age group. In comparison to the general population of individuals, return migrants are older, more educated, have a higher propensity to be employed and to have second jobs, and are more likely to come from rural areas. These differences remain when we compare returnees to the general population of adults. When we distinguish adults by gender, we find that the advantage of returnees in terms of education is predominantly explained by their gender. Compared to the population of male adults, returnees are slightly less educated on average. However, they continue to be more likely to be employed and have second jobs. In terms of employment status (Table 2), return migrants are more likely to be employer, self-employed or unpaid family worker than the general population.

Returnees and General Population Characteristics

Table 1: Returnees and General Population Characteristics

| | Returnees | General population | Adult* population | Adult* Male population | Adult* Female population |
|-------------------------------|-----------|--------------------|-------------------|------------------------|--------------------------|
| Population | 1381 | 49144 | 31768 | 15573 | 16195 |
| Age (average) | 43.52 | 26.3 | 37.6 | 37.28 | 37.9 |
| Sex (% male) | 97.68 | 49.70 | 48.96 | | |
| Education | 9.10 | 6.03 | 8.2 | 9.20 | 7.42 |
| Head of household (%) | 87.09 | 24.18 | 37.90 | 62.67 | 14.12 |
| Urban (%) | 34.54 | 43.65 | 45.89 | 45.73 | 46.04 |
| Average age at departure | 25.5 | | | | |
| Average duration of migration | 4.8 | | | | |

Job status

| | | | | | |
|--------------------------------|-------|-------|-------|------|-------|
| Unemployed (%) | 9.26 | 65.03 | 55.02 | 25.6 | 83.22 |
| Employed (%) | 90.74 | 34.97 | 44.98 | 74.4 | 16.78 |
| Secondary jobs (% of employed) | 14.12 | 7.89 | 7.98 | 9.47 | 1.72 |

age over 16

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Table 2: Returnees and General Population Employment Status

| | Returnees | General population |
|--------------------------|---|---|
| | (in (%) of the employed returnees population) | (in (%) of the employed general population) |
| Wage worker | 67.66 | 70.6 |
| Employer | 18.92 | 11.19 |
| Self-employed | 12.3 | 10.3 |
| Unpaid family worker | 14.67 | 7.46 |
| Unpaid Worker for others | 0.08 | 0.45 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Return migrants were asked to report the reason of their return. Most of them (60%) came back because of the economic and political situation in the country where they have migrated (The first gulf war in 1990 triggered a large wave of return that can be seen in figure 1), only 7.8% of return migrants reported that the main motive of their return was to set up a new business or to take over a family business or a family farm (Table3). 80% of return migrants reported that they planned a temporary migration when they first left Egypt while 13% reported that they planned a permanent migration. The vast majority of the return migrants comes back from North African and Middle Eastern countries (85% come back from either Iraq, Saudi Arabia, Libya and Jordan, Table 4)

Table 3: Return migrants motives of return

| Motives of return (in (%) of the returnees population) | |
|---|-------|
| Due to Economic Hardships abroad | 61.83 |
| Owe to Economic Opportunities at home | 7.82 |
| Due to Social problems at home or abroad | 15.67 |
| Owe to Social Opportunities at home | 14.67 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Table 4: Return migrants main destination countries

| Main Countries of Destination ((%) of the returnees population) | |
|--|-------|
| Iraq | 25.13 |
| Saudi Arabia | 24.3 |
| Libya | 19.9 |
| Jordan | 15.7 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Table 5 compares households depending on whether they include a return migrant or not. Table 5 shows that households with return migrants are, on average, wealthier, and have more often savings than households without returnees.

Table 5: Returnees and Household Characteristics

| Variables | Household with Returnees | Household without Returnees |
|---|--------------------------|-----------------------------|
| household size | 4.92 | 3.97 |
| Nb of male | 2.56 | 1.96 |
| Average Education | 7.86 | 7.75 |
| Average Age | 29.91 | 26.48 |
| Rural | 65.05 | 51.38 |
| household with at least 1 firms (%) | 26.43 | 17.55 |
| household with at least 1 migrant (%) | 5.6 | 6.2 |
| Saving (% of the household with saving) | 10.38 | 7.62 |
| Wealth ³ (ln) | 0.019 | -0.042 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

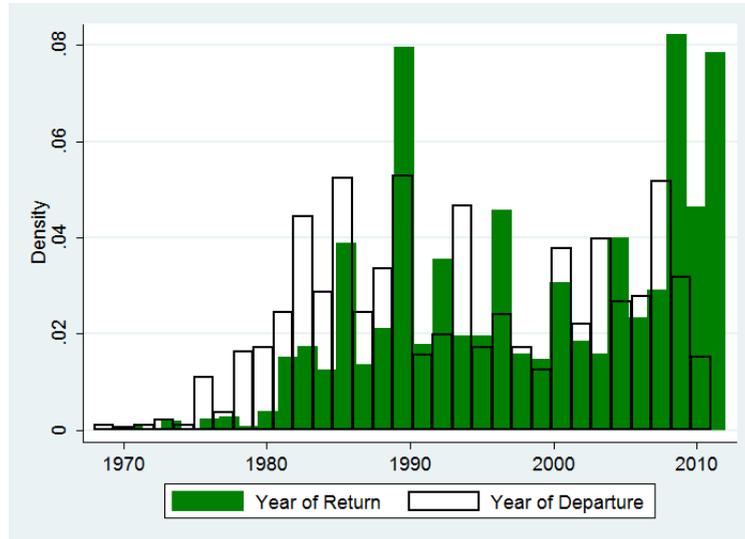


Figure 1: Year of return and departure of returnees

3 Stylised facts: the Egyptian household revenues and their components

In comparison to the earlier waves, the 2012 wave contains more detailed information about the different sources of revenues available to each household, in particular the revenue generated by household firms.

We identify six possible sources of revenues at the household level: the wages received by the household members for a month (we use the variable "total monthly wage" that accounts for all sources of wages, regular and irregular, primary or secondary received by a household member during the last month before the survey), the total remittances received by the households (households are asked to report the total cash received and the cash value of remittance received in nature during the last year before the survey), the monthly revenue that households extract from household firms, the average monthly revenue generated through household farms⁴, the monthly transfers received from the state, religious institutions and/or family and the monthly revenue generated by fixed or financial assets.

Table 6 column 1, shows some descriptive statistics about the total revenue and its

³Wealth is a variable summarizing the fixed assets owned by the household. It has been built from the information gathered on the nature of the household dwelling and the white goods in possession of the household

⁴farms can generate revenues from different sources, land can be rented, livestock can be sold, some equipments can be rented (tractors for example), crops and other products of the farm (eggs, milk, honey) when produced in a quantity large enough can also generate revenue. The ELMPS survey allows to keep track of all these sources of revenues.

components reported at the last month before the survey for all the households composing the survey (12060).

Table 6: Household revenue and its components

| Components | All | Without return migrant | With return migrant | t-Test |
|----------------------|------|------------------------|---------------------|----------|
| Total revenue | 1955 | 1927 | 2177 | 4.62** |
| Wage revenue | 970 | 951 | 1124 | 16.61*** |
| Remittance | 68 | 69 | 58 | 0.45 |
| Firm revenue | 338 | 331 | 392 | 1.34 |
| Agricultural revenue | 150 | 136 | 261 | 10.06*** |
| Benefits | 219 | 232 | 108 | 24.47*** |
| Return on assets | 211 | 209 | 231 | 0.08 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Tables 6 column 2 and 3 show some differences in terms of total revenue and its components between households without return migrants (10721 households) and with return migrants (1339 households). Table 6 column 4 presents test of mean differences across the two sub-samples of households for total revenue and each of its components. Table 6 shows significant differences in terms of average total revenue, average wages, agricultural revenues, and benefits between the two groups. Households with returnees report significantly higher total revenue, wage revenues and higher agricultural revenues while receiving significantly lower level of benefits. The difference in terms of wages and benefits might be related to the higher propensity of return migrant to find an employment (Wahba, 2015). The difference in terms of agricultural might be due to the fact that return migrants invest their capital when they return in arable land or machinery however a finer analysis of household revenues is out of the scope of this paper. Household with return migrant received more revenue from the household firms however the difference between the two groups is not significant.

Table 7 presents a decomposition of the Gini coefficient of inequality, in terms of total revenue, by revenue source in each of the two groups of households. Following Lerman and Yitzhaki (1985), the Gini coefficient is decomposed into $G = \sum_{k=1}^k S_k G_k R_k$ where k indicate the source of revenue, S_k indicates the share of source k in total revenue, G_k indicates the Gini coefficient of source k , and R_k is Gini correlation of income from source k with the distribution of total revenue. The influence of any revenue source upon total revenue inequality depends on: the important of this source in total revenue (S_k); the extent to which the revenue source of equally or unequally distributed (G_k); and how the revenue source and the distribution of total income are correlated (R_k) (Stark, Taylor, and Yitzhaki, 1986). Table 7 reports the marginal effect of each source of revenue on the Gini

coefficient of total revenue.

The main sources of revenues in the two groups consists in wage revenue and household firms revenue. Their contributions in total revenue is similar for the two groups (49% and 17% in the two groups). Wage revenue is the least unequally distributed source of revenue (gini coefficient of 0.62 and 0.56 in the group of household without returnees and with returnees). Household firm revenue is more unequally distributed in the group without return migrant than with return migrant (0.92 versus 0.86). A one percent increase in household firm revenue would increase the inequality observed in terms total revenue by 0.041% for the households without return migrant and would decrease the inequality observed in terms total revenue by 0.0189% for the household with return migrant.

In relation with the other sources of revenue, differences exist between the two groups. Remittances and benefits are more important for the households without return migrant (respectively 4.07% versus 2.84% and 12.17% versus 4.6%), agricultural revenue and return on assets are more important for household with return migrants (respectively 7.01% vs 12.41% and 9.77% versus 13.21%). If remittance and benefits contributes to the reduction in inequality for households without return migrant this is not the case for households with return migrant. At the exception of wages, household firms revenue is the only element that contributes to the reduction in inequality for households with return migrant.

Table 7: Return Migration and Revenue Inequality

| Source | S_k | G_k | Share | Change |
|--|--------|--------|--------|---------|
| <i>Households without return migrant</i> | | | | |
| Wage Revenue | 0.4987 | 0.6234 | 0.4207 | -0.078 |
| Remittance | 0.0407 | 0.9641 | 0.036 | -0.0047 |
| Firms revenue | 0.1711 | 0.9289 | 0.2122 | 0.041 |
| Agricultural revenue | 0.0701 | 0.9494 | 0.0787 | 0.0086 |
| Benefits | 0.1217 | 0.8414 | 0.084 | -0.0377 |
| Return of assets | 0.0977 | 0.9829 | 0.1684 | 0.0707 |
| Total Revenue | | 0.5225 | | |
| <i>Households with return migrant</i> | | | | |
| Wage Revenue | 0.495 | 0.5681 | 0.3769 | -0.1181 |
| Remittance | 0.0284 | 0.9668 | 0.0326 | 0.0042 |
| Firms revenue | 0.1745 | 0.8631 | 0.1555 | -0.0189 |
| Agricultural revenue | 0.1241 | 0.9099 | 0.1476 | 0.0236 |
| Benefits | 0.046 | 0.9394 | 0.0471 | 0.0012 |
| Return of assets | 0.1321 | 0.9827 | 0.2402 | 0.1081 |
| Total Revenue | | 0.5039 | | |

Source: Authors elaboration on ELMPS (2012) ⁵

⁵Sampling weights were not included in this calculus as the descogini command used in Stata doesn't accept weighted values; however bootstrapping was stratified by region. The results are still very indicative of the distribution of revenues and inequalities

4 Household firms revenues and returnees.

4.1 Literature review

Two strands of the economic development literature on small and medium enterprises (SME) have recently received a growing attention. The first (Vreyer, Gubert, and Robilliard, 2010; Wahba and Zenou, 2012; Mesnard, 2004) has focused on the activities of return migrants once they have made their way home. Returnees, at least the ones who were not forced to return in their country of origin, seem to be keener to start a business at home. The second (Gindling and Newhouse, 2014) asks the question of the success of SME in developing countries. Indeed, it has been noticed that many SME in countries like Egypt or Tunisia (WB, 2014) tend to stay very small and barely bring any earning to the households. Few papers have tried to link these two lines of research (McCormick and Wahba, 2003; Nordman and Gubert, 2011; Marchetta, 2012). In particular Marchetta (2012), find the survival chances of return migrants entrepreneurial activities in Egypt is superior to the one of the stayers. She points to experience and the financial savings accumulated while abroad as the sources of explanation for this difference. If Egyptian return migrants tend to be more likely entrepreneurs (Wahba and Zenou, 2012) and their entrepreneurial activities more likely to last (Marchetta, 2012), the natural extension to these works is to understand if return migrants firms generate more revenues than their counterparts. In this section, we investigate whether SMEs in Egypt with return migrants are more successful than others.

Gindling and Newhouse (2014) have recently made a major contribution helping to understand the various situations under the category self-employed worker. They show that various individual characteristics (years of education, age, sex) might play role in making a successful entrepreneur. They defined success as earning above \$2/day or to be an employer. However they did not specify if the self employed are return migrant or not.

There are two main reasons to believe that returnees may be successful entrepreneurs. As noticed by the literature on returnees and entrepreneurship, better access to capital (Black and Castaldo, 2009; Wahba and Zenou, 2012; Marchetta, 2012) and experience gained abroad (Wahba and Zenou, 2012; Marchetta, 2012) might give a head start to household firms with a returnee. Ayman (2004) illustrates several cases in the construction or services industry. However these advantages might not compensate for being cut of local social networks for a long time (Wahba and Zenou, 2012), at least for the few years neces-

sary to re-build enough social capital in the return country. Hence several hypotheses can be put forward regarding the contribution of returnees to household firms and their impact on the success of the firms: if the returnees have come back unwillingly to their home country due to financial hardships abroad, without financial capital or additional knowledge their contribution might be negative, if they come back with some financial capital and additional knowledge, their contribution to an existing firm might be positive; their contribution to a firm they have set up might be ambiguous, the lack of social capital mitigating the advantages in terms of financial capital and knowledge. Finally, their contribution to a firm they have funded with local long term residents of the country might be positive, the social capital of the collaborators offsetting the returnee's lack of it. In addition, it is possible that as the times goes and new competitors (returnees or non-returnees) enter the market, the novelty of the ideas brought back by the returnees and the advantage enjoyed by larger capital at the start fade away.

We explore the relationship between return migrations and the performance of household firms using the ELMPS (2012) modules on return migrants and household firms. These two modules provide a level of detailed information that was not existent the precedent waves of the survey. Each household is requested to provide details of up to 4 household firms, these details include the ID code of all members of the household working for the firm, an indicator of the starting capital, the sector of activity of the firm, the number of employees, an estimation of expenditures on fixed assets and material inputs, an estimation of the earnings of the firm, and an estimate of the revenue that the household extract from the firm.

4.2 The characteristics of the household firms

We identify a total of 2351 household firms, 52% if these are located in urban areas.⁶ These household firms are on average 12 years old and 88% of these are totally owned by the household. On average each household firm has 1.1 household members working for it; 90.5% of firms have only one member of the household working for the firm and 1 firm employs a maximum of five members of the household. 96% of firms do not employ any workers that are not member of the household, and 99% of firms employ five or less non-household members. The largest firms in terms of hired workers employ 30 workers. We

⁶Some firms may belong to the same household, however very few household report more than one household firm.

remove 232 of these firms from the analysis because we are unable to identify with certainty whether a return migrant works for the firm or not (231) or the revenue generated by the firm (1).

In this subsection, we compare household firms with a returnee at their head with the household firms with a non-returnee at their head⁷ (Table 8). The two groups of firms show differences at several levels. Regarding the two variables that we consider as translating the best the success of a household firm, its average monthly earning and the average amount of money from the firm that goes to the household on a monthly basis, the firms without returnees at their head generate on average a higher monthly earning (4959 EL against 3505 EL) and more income to the household (1721 EL against 1460 EL) however the mean of the latter variable is not significant. The firms with returnees at their head tends to hire more external employees (0.26 against 0.13).

Table 9 shows the different characteristics of the return migrant and non-return migrant entrepreneurs. Return migrants entrepreneurs are on average older (44 years old compared to 38), slightly more educated (9.47 years of schooling compared to 8.97, however the difference is not significant) and have more experience in the field of activity of the firm before joining the firm (4.32 years against 2.92). They are more likely to have another job; on average 24.85% return migrants entrepreneurs have another job compared to 20% for non-return migrant entrepreneurs.

Table 8: The household firms

| Variable | Firms with Returnees | Firms without Returnees | t-Test |
|---|----------------------|-------------------------|----------|
| firm population | 307 | 1811 | |
| age of the firm | 11.71 | 11.69 | 0.00 |
| starting capital ⁸ | 3.75 | 4.24 | 11.90*** |
| monthly earning (EL) | 3505 | 4959 | 3.72** |
| amount of money from the firm that goes to the household | 1460 | 1721 | 1.42 |
| urban (%) | 40.28 | 53.14 | 9.17** |
| shared ownerships | 14.91 | 11.93 | 0.32 |
| total workers | 1.34 | 1.25 | 0.32 |
| hired workers | 0.26 | 0.14 | 1.82 |
| number of household members working for the firms | 1.08 | 1.10 | 1.64 |
| Main sector of Economic Activities | | | |
| Retail trade, except of motor vehicles and motorcycles (47) | 34.52 | 44.05 | |
| Land transport and transport via pipelines (49) | 17.74 | 10.27 | |
| Specialized construction activities (43) | 9.35 | 5.11 | |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

⁷In the few instances (1% of the firm) where there are several household members working for the firm, we consider the most senior respondent as the head of the firm

⁸The variable starting capital is categorical variable taking the values from 1 to 8. 1 indicates a starting capital of 0 Egyptian Lira (EL), 2 between 1 and 499, 3 between 500 and 999, 4 between 1000 and 5000, 5 between 5000 and 9999, 6 between 10000 and 49999, 7 50000 or more, 8 the respondent do not know the

Table 9: Main entrepreneur in the household firms

| Variable | Returnees | Non Returnees | <i>t</i> -Test |
|--|-----------|---------------|----------------|
| age | 44.34 | 38.21 | 51.40*** |
| sex (% of male) | 99.65 | 85.50 | 156.69*** |
| education attainment (year of schooling) | 9.47 | 8.97 | 1.77 |
| marital status (% of population) | 96.27 | 83.84 | 61.72*** |
| second job (% of population) | 24.85 | 19.85 | 2.35*** |
| cumulated experience in the sector | 4.32 | 2.92 | 6.33*** |
| cumulated experience in the sector, in Egypt | 3.19 | 2.92 | 0.38 |
| cumulated experience in the sector, Abroad | 1.13 | | |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Households were asked to report an estimation of the starting and current capital of the firm on an ordinal scale with 7 categories. Table 10 compares firms with and without returnees at their head in terms of capital. For each category, table ?? lists the share of firms with a capital value corresponding to this category. Table 10 shows that firms with returnees at their head tend to be better capitalized in terms of starting and current capital. A lower share of firms with returnees at their head have no starting and no current capital in comparison to firms without a returnee. The opposite is true for the two highest categories of capital value where the share of firms with returnees at their head is larger than the share of firms without a returnee at their head. Moreover, in terms of starting capital the largest share of firms with returnees at their head falls in the category of 1000 to 4999 followed by the category 10000 to 49999. In comparison, the largest share of firms without a returnee at their head falls in the category 1 to 499 followed by the category 1000 to 4999. Figures in table 10 tend to confirm our hypothesis that returnee bring financial capital that they inject in household firms.

value.

Table 10: Starting and Current Capital of The household firms

| Vahne | Starting Capital | | Current Capital | |
|-----------------|--------------------|-----------------------|--------------------|-----------------------|
| | Firms with returns | Firms without returns | Firms with returns | Firms without returns |
| None | 7.26 | 10.47 | 5.48 | 8.2 |
| 1 - 499 | 14.52 | 21.23 | 10 | 15.64 |
| 500 - 999 | 13.2 | 12.92 | 9.35 | 10.1 |
| 1,000 - 4,999 | 22.11 | 20.17 | 17.74 | 19.07 |
| 5,000 - 9,999 | 13.2 | 14.6 | 15.16 | 15.97 |
| 10,000 - 49,999 | 20.79 | 14.04 | 24.84 | 16.73 |
| 50,000 or more | 8.91 | 6.57 | 15.48 | 11.95 |
| do not know | | | 1.94 | 2.34 |

Notes: Sampling weights included

Source: Authors elaboration on ELMPS (2012)

Finally figure 2 show when a migrant return in comparison to the year of foundation of the household firm. In a large number of cases (115), the return of the migrant coincided with the start of the firm. In most of the case (143) the firm was started after the return of the migrant and in a minority of cases (45) before the return. This might have an importance related to the lack of social capital hypothesis proposed by Wahba and Zenou (2012). If the returnee, in particular when he is the sole investor in the household firm takes back an existing firm or waits before starting a new firm, their lack of social capital might not be as significant as if they have started a new firm the year of their return.



Figure 2: Year of Return and fundation of the firm

4.3 Returnees impact

4.3.1 Empirical strategy

In this section we present empirical evidences on the link between return migration and the performance of household firms based on the estimation of the following equation:

$$y_i = \gamma firm_i + \lambda entrepreneur_i + \alpha Returnee_i + \beta z_i + \mu_i, \quad (1)$$

where, y is the monthly revenue of the firm i , $firm$ is a vector of firm level characteristics including the starting capital of the firm, the number of workers of firm i including members of the household, its age, a location dummy, and variables controlling for the ownership structure and a set of industry fixed effects. $entrepreneur$ is a vector of entrepreneur

characteristics including the age, the sex, the education attainment, the experience of the entrepreneur and if the entrepreneur has a second job. *Returnee* is a dummy variable indicating whether the entrepreneur is a return migrant or not. z is a vector of variables controlling for the characteristics of the household, μ is normally distributed error term.

4.3.2 Main results

Table 11 reports the results for our estimations of the equation 1. Column 1,2 and 3 presents the results for OLS regressions where first the characteristics of the entrepreneurs are included without their experience, second with their experience in Egypt or abroad and third the characteristics of the entrepreneurs and the firms are included. Column 4 present the results for our IV strategy. We use a two-staged framework relying on the conditional mixed-process (cmp) estimator⁹. We estimate a probit over the return decision, and we use the results in our estimation of the revenue of the firms. The advantage of the cmp procedure is to allow for more flexibility in the variables included in the first stage equation. Our exclusion variable is the rate of growth of the population in Egypt in the year of birth of the entrepreneur as Marchetta (2012).

At the entrepreneur characteristics some of our results are very consistent over our different specifications. The level of education of the entrepreneur and the fact to be male are positively and significantly related to the performance of firms. We distinguish between the experience accumulated overseas and the experience accumulated in Egypt. Both variables are positive and significant, however the coefficient on the experience accumulated overseas is more than the double of that of the experience gained in Egypt. This result supports our hypothesis that return migrants positively impact household firms through their gained experience. The coefficient on the variable second job is negative and significant. The negative association between this variable and the performance of the firm indicates that when members of the household working for the firm have other employment they are unable or may not need to invest their time and effort in the household firm. The coefficient on the variable age is not significant once we introduce the firm characteristics.

We turn to the firms characteristics before commenting of the returnees variable. As expected the coefficients on the number of workers and on start capital are significant and positive. The starting capital of the firm is a significant determinant of the performance of

⁹see David Roodman, 2007. "CMP: Stata module to implement conditional (recursive) mixed process estimator," Statistical Software Components S456882, Boston College Department of Economics, revised 01 Jul 2008

the firm. Household firms that were founded with a larger value of capital generate higher level of earnings. The number of workers is associated with a larger value of earnings. The age of the firm is also significant and positively correlated with the earnings of the firm, however table 11 shows a non linear relationship between age and the performance of household firms. Share Ownership is a dummy taking the value one if the household shares the ownership of the firm and zero otherwise. Household ownership share is equal to the share of the household in the ownership of the firm. The coefficients on these two variables indicate that shared ownership is significantly associated with a better performance of the firm and that a larger share of household ownership is associated with a lower performance of firms however for this last variable the coefficient is not significant.

Coming back to the returnee dummy, the coefficient on this variable is negative but not significant. This result indicates that beyond the effect of capitalisation and gained experience, the engagement of return migrant in a household firm has no further positive impact on its performance.

Finally we control for the fact that the presence of a current migrant in the household might have an impact on firm performance on the firm. The variable Household with migrant is a dummy indicating whether a member of the household is currently a migrant. There seems to be no difference between the presence of a migrant at the household level and the performance of household firms. We also control for the location of the firm. Firms located in urban areas perform better than firms located in rural areas.

In table 12 we present results based on the value of revenue that the household take from the firm. Column 1 presents OLS results and column 2 CMP results. We add the monthly earnings of the firm as an additional regressor. Our results are similar to those presented in table 11 at one important exception. Household revenue generated from a firm is positively associated with the starting capital of the firm, its size in terms of employees, its age, and its urban location. It is also positively correlated with the education level of head of the firm and its accumulated experience in the the field of activity of the firm abroad and in Egypt. Employment outside the firm for the entrepreneurs translates in lower revenues generated to the household. However our returnee variable is now positive and significative in our CMP specification. When the entrepreneur is a returnee, he seems to bring back more revenue from the firm to the household.

4.3.3 Robustness

Our findings are robust and consistent across various specifications. We test for different quantiles. We have eliminated outliers with very large reported monthly earnings and are results are unchanged. We have also dropped firms with a returnee that were founded before the return of the migrant and our results remained the same. We have added several control variables that account for the social capital of the migrant like the number of brothers in Egypt and the length of the migration spell and these variables have no implications on our results.

5 Conclusion

This paper focuses on return migrants in Egypt and explore their impact on various components of household revenues. This paper shows that return migrants are different to non-migrant individuals. They are predominately male, perhaps reflecting that in a developing country like Egypt women are less likely to migrate. They come from rural areas. Are on average more educated however not necessarily when we compare them to the sample of male individuals. Most seem to return home to form independent households.

We have identified six different components of household total revenues and compared these across two subsamples: households with a return migrant and households without a return migrants. We have found that these revenues of these households are different mostly in terms of wage revenues, agricultural revenues, benefits and return on assets. Return on assets, wage revenues and agricultural revenues are significantly larger in household with return migrants while benefits are significantly larger in households without returnees. Moreover, return on assets is the component with the highest share in the total revenue of households with returnees followed by wages, while remittance are the largest component in the total revenue of households without returnee. The significance of return on assets reflect the possibility that returnees accumulated savings while abroad and invest these upon their return to the home country.

In this paper we have also explored the relationship between return migration and one specific source of revenue: the earnings of household firms. We find that when a return migrant heads a firm, this firm tends to have a larger starting capital and a larger current capital. Return migrant entrepreneurs positively influence the performance of household firms they head through the injection of capital as our results show that the starting capital is a significant determinants or the performance of the firm. Return migrant entrepreneur also positively impact the performance of household firms through their accumulated experience overseas. Accumulated experience, in the same of field of activity of the firm, is an important determinant of the performance of firms however our results show that experiences accumulated overseas has a stronger impact than experience accumulated in Egypt. We don't find any evidence of the impact of the lack of domestic networks identified by Wahba and Zenou (2012) for return migrants entrepreneurs despite the fact we test for several proxies of the network and social capital. It has to be noticed that return migrants might be aware of this possible handicap and have found a way to circumvent

it. Indeed return migrants seems to be more eager to engage in partnership. Our results associate shared ownership with higher firms revenue. When we test for the revenue from the firm brought back to the household, return migrants seem to have an impact beyond starting capital and experience accumulated abroad. This might be due to the fact that the households with return migrant seem to benefit less from transfer mechanism such as remittance and benefits as shown in the section dedicated to the various of revenue of the Egyptian households.

Return migrant entrepreneurs through the capital and the experience they accumulated abroad have a positive impact on the revenue of the firm they head. However, because return migrants are more rural and often have a second job, these firms don't generate more revenue than their counterpart. This is only true at the firm level, at the household level, return migrant entrepreneur transfer more revenue from the firm to the household. As the return migrant entrepreneur seem eager to engage in partnership, government and non-government organisation might be interested in matching potential return migrant and non return migrant entrepreneur with similar project. It might help to palliate some of the problems of access to capital and/or expertise encounter by local potential entrepreneur and to create more revenues for the firms commonly owned.

References

- ASSAAD, R., AND C. KRAFFT (2013): "The Egypt labor market panel survey: introducing the 2012 round," *IZA Journal of Labor & Development*, 2(1), 8.
- AYMAN, Z. (2004): "Interrelationships between internal and international migration in Egypt: a pilot study," CEPR Discussion Paper Research Reports Series, Development Research Center on Migration, Globalization, and Poverty, University of Sussex.
- BLACK, R., AND A. CASTALDO (2009): "Return Migration and Entrepreneurship in Ghana and Cote d'Ivoire: The Role of Capital Transfers," *Tijdschrift voor economische en sociale geografie*, 100(1), 44–58.
- GINDLING, T., AND D. NEWHOUSE (2014): "Self-Employment in the Developing World," *World Development*, 56(0), 313 – 331.
- LERMAN, R. I., AND S. YITZHAKI (1985): "Income Inequality Effects by Income," *The Review of Economics and Statistics*, 67(1), 151–56.
- MARCHETTA, F. (2012): "Return Migration and the Survival of Entrepreneurial Activities in Egypt," *World Development*, 40(10), 1999 – 2013.
- MCCORMICK, B., AND J. WAHBA (2003): "Return International Migration and Geographical Inequality: The Case of Egypt," *Journal of African Economies*, 12(4), 500–532.

- MESNARD, A. (2004): “Temporary migration and capital market imperfections,” *Oxford Economic Papers*, 56(2), 242–262.
- NORDMAN, C. J., AND F. GUBERT (2011): “Return Migration and Small Enterprise Development in the Maghreb,” Economics Papers from University Paris Dauphine 123456789/10767, Paris Dauphine University.
- STARK, O., J. E. TAYLOR, AND S. YITZHAKI (1986): “Remittances and Inequality,” *Economic Journal*, 96(383), 722–40.
- VREYER, P. D., F. GUBERT, AND A.-S. ROBILLIARD (2010): “Are There Returns to Migration Experience? An Empirical Analysis using Data on Return Migrants and Non-Migrants in West Africa,” *Annales d’Economie et de Statistique*, (97-98), 307–328.
- WAHBA, J. (2015): “Selection, selection, selection: the impact of return migration,” *Journal of Population Economics*, pp. 1–29.
- WAHBA, J., AND Y. ZENOU (2012): “Out of sight, out of mind: Migration, entrepreneurship and social capital,” *Regional Science and Urban Economics*, 42(5), 890 – 903, Special issue on Migration and Development.
- WB (2014): “The unfinished revolution : bringing opportunity, good jobs and greater wealth to all Tunisians.,” Discussion paper, Washington, DC : World Bank Group.

Table 11: Return Migration and the Performance of Household Firms: Empirical Evidence

| | (1) | (2) | (3) | (4) |
|--|----------------------|----------------------|----------------------|----------------------|
| | OLS | OLS | OLS | CMP |
| <i>Entrepreneur characteristics</i> | | | | |
| Age | 0.009*** (2.92) | 0.007** (2.46) | -0.002 (-0.57) | -0.001 (-0.13) |
| Sex | 0.875*** (9.3) | 0.826*** (8.61) | 0.522*** (5.9) | 0.556*** (5.51) |
| Returnees | -0.084 (-1.07) | -0.127 (-1.53) | -0.116 (-1.35) | -0.302 (-1.24) |
| Years of schooling | 0.043*** (7.26) | 0.047*** (7.84) | 0.032*** (5.71) | 0.032*** (5.37) |
| Second job | -0.370*** (-4.82) | -0.348*** (-4.51) | -0.244*** (-3.14) | -0.243*** (-3.13) |
| Cumulated experience abroad | | 0.044** (2.86) | 0.040*** (2.67) | 0.040*** (2.73) |
| Cumulated experience in egypt | | 0.014*** (2.8) | 0.015*** (2.94) | 0.015*** (-2.95) |
| <i>Firms characteristics</i> | | | | |
| Starting capital | | | 0.205*** (11.58) | 0.205*** (11.58) |
| Total number of workers | | | 0.083*** (3.38) | 0.083*** (-3.48) |
| Age of firm | | | 0.034*** (3.75) | 0.034*** (3.8) |
| Age of firm squared | | | -0.001* (-2.28) | -0.001** (-2.31) |
| Shared ownership | | | 0.667** (2.38) | 0.669*** (2.6) |
| Household ownership share | | | -1.017* (-1.68) | -1.028* (-1.84) |
| <i>Additional household characteristic</i> | | | | |
| Household owner with migrant | | | -0.07 (-0.32) | -0.058 (-0.28) |
| <i>Dependant variable: Return</i> | | | | |
| Population growth | | | | 0.668*** (3.07) |
| Age | | | | 0.034*** (4.61) |
| Sex | | | | 1.892*** (5.25) |
| Year of schooling | | | | 0.016* (1.79) |
| Marital status | | | | 0.262 (1.49) |
| Number of brothers abroad | | | | 0.470*** (5.18) |
| R-squared | 0.152 | 0.1582 | 0.253 | |
| Adjusted R-squared | | | | 0.2427 |
| Sampling weights | yes | yes | yes | yes |
| Spatial dummies | yes | yes | yes | yes |
| Sector dummies | yes | yes | yes | yes |
| Observations | 2116 | 2116 | 2004 | 2116 |
| ***p<0.01 **p<0.05 *p<0.1 | | | | |

Table 12: Return Migration and the Performance of Household Firms: Further Evidence

| | (1) | (2) |
|--|---------------------|---------------------|
| | OLS | CMP |
| <i>Entrepreneur characteristics</i> | | |
| Age | 0.003 (1.02) | -0.002 (-0.62) |
| Sex | 0.368*** (5.14) | 0.265*** (3.11) |
| Returnees | -0.050 (-0.88) | 0.531** (1.98) |
| Years of schooling | 0.015*** (3.64) | 0.013*** (2.88) |
| Second job | -0.118** (-2.21) | -0.122** (-2.23) |
| Cumulated experience abroad | 0.021** (2.03) | 0.020* (1.93) |
| Cumulated experience in egypt | 0.014*** (4.37) | 0.014*** (4.53) |
| <i>Firms characteristics</i> | | |
| Starting capital | 0.060*** (4.97) | 0.062*** (5.15) |
| Total number of workers | 0.032** (2.03) | 0.031** (2.02) |
| Age of firm | 0.010* (1.89) | 0.009* (1.78) |
| Age of firm squared | -0.000 (-1.08) | -0.000 (-1.04) |
| Shared ownership | -0.159 (0.42) | -0.157 (-1.19) |
| Household ownership share | 0.130 (0.41) | 0.141 (0.47) |
| Firms average earning | 0.346*** (15.89) | 0.344*** (17.10) |
| <i>Additional household characteristic</i> | | |
| Household owner with migrant | -0.037 (-0.35) | -0.071 (-0.59) |
| <i>Dependant variable: Return</i> | | |
| Population growth | | 0.613** * (2.97) |
| Age | | 0.032*** (4.72) |
| Sex | | 1.856*** (5.11) |
| Year of schooling | | 0.014 (1.58) |
| Marital status | | 0.352** (2.16) |
| Number of brothers abroad | | 0.428*** (4.27) |
| R-squared | 0.253 | |
| Sampling weights | yes | yes |
| Spatial dummies | yes | yes |
| Sector dummies | yes | yes |
| Observations | 23 | 2116 |

***p<0.01 **p<0.05 *p<0.1