Beyond experience and capital. Is there a return to return migration?

Bensassi, Sami; Jabbour, Liza

DOI:
10.1080/00220388.2021.1988076

Document Version
Publisher's PDF, also known as Version of record

Citation for published version (Harvard):
Bensassi, S & Jabbour, L 2021, 'Beyond experience and capital. Is there a return to return migration?', *Journal of Development Studies*, pp. 1-22. https://doi.org/10.1080/00220388.2021.1988076

The Journal of Development Studies

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/fjds20

Beyond Experience and Capital. Is there a Return to Return Migration?

Sami Bensassi & Liza Jabbour

To cite this article: Sami Bensassi & Liza Jabbour (2021): Beyond Experience and Capital. Is there a Return to Return Migration?, The Journal of Development Studies, DOI: 10.1080/00220388.2021.1988076

To link to this article: https://doi.org/10.1080/00220388.2021.1988076

Published online: 28 Oct 2021.

The Journal of Development Studies, 2021
https://doi.org/10.1080/00220388.2021.1988076

Beyond Experience and Capital. Is there a Return to Return Migration?

SAMI BENSASSI & LIZA JABBOUR
Birmingham Business School, Department of Management, University of Birmingham, Birmingham, UK

(Original version submitted September 2019; final version accepted September 2021)

ABSTRACT *This paper explores the effect of return migration on the performance of Egyptian household firms. A growing body of evidence suggests that return migrants are more likely to become and remain entrepreneurs. The length of the migration spell and the experience and capital accumulated overseas may influence the ability of return migrants to establish and successfully manage their firms. We expand this literature by examining the impact of return migrants on the net earnings of the business units they manage. Our findings suggest that migration alone is not sufficient to enhance the performance of entrepreneurial activities. However, industry-specific human capital accumulated abroad has a significant impact on net earnings.*

KEYWORDS: Return migration; household firms; Egypt

1. Introduction

Anecdotal evidence of successful firms started by return migrants abounds: from Robin Li the founder of Baidu in China, to Kumal Bahl in India or Hisham Haddara in Egypt.[1] However, no systematic evidence exists to show that firms founded by return migrants outperform businesses founded by stayers. Our paper intends to fill this gap.

In recent return migration models (Djajić & Vinogradova, 2015; Dustmann, Fadlon, & Weiss, 2011), return migration is included in the broader framework of expected revenue maximisation over the individual's life cycle. The possibility of return is considered by the migrant along with the decision to migrate. The decision whether to return or not depends on accumulating sufficient capital and/or knowledge abroad, enabling the migrant to engage in an activity that they can generate positive value at home.

This paper contributes to the emerging literature on the role of return migrants in entrepreneurial activities. de Vreyer, Gubert, and Robilliard (2010) examine whether return-migrant-run businesses are more successful than those started by non-migrants in the West African urban context. They find this to be the case for migrants returning from OECD countries. However, due to the limitations of their data, they were not able to disentangle the channels – skills, experience acquired abroad or starting capital – that enable this positive impact. We engage in the pursuit of this task in the Egyptian context.

In a qualitative study, Ayman (2004) presents 34 cases of internal and/or international migration in Egypt. Of particular relevance are the cases of Ahmed Abdelaleem, an aluminium manufacturer, and Mahmoud el Sellini, an ironer, who both became successful entrepreneurs after they returned to

Correspondence Address: Sami Bensassi, Birmingham Business School, Department of Management, University of Birmingham, University House, 116 Edgbaston Park Rd, Birmingham, B15 2TY, UK. Email: s.bensassi@bham.ac.uk

Egypt. Ahmed Adbelaleem left Egypt for Jordan where he worked in an aluminium factory. On his return, he established an aluminium workshop in Cairo and later expanded his activities to aluminium production. Mahmoud El Sellini was already an ironer when he left Egypt. Of his nine years of experience in Saudi Arabia, he commented that, 'Beside saving a lot of money, I have benefited more out of learning the new techniques used in ironing like dry cleaning services'. He set up a dry cleaning service business on his return that his eldest son has inherited.

Using data from the third wave of the Egypt Labour Market Panel Survey (ELMPS 2012) on household firms and return migration, we are able to analyse whether human and physical capital accumulated abroad by return migrants influence the performance, measured by net earnings, of businesses in the home country.

According to Barrett and Goggin (2010) and Reinhold and Thom (2013), return migrants who engage in salaried work in their country of origin can translate the experience they accumulated abroad, and in particular the experience gained within the same sector of activity as their current employment, into a wage premium (on average 2.2% for the Mexican returnees in Reinhold and Thom (2013) and 7 per cent for the Irish returnees in Barrett and Goggin (2010)). El-Mallakh and Wahba (2021) find that a longer duration of migration favours the upward mobility of return migrants over stayers in Egypt. Likewise, better access to capital and the experience they gained abroad also affect the occupational choice of migrants once they are back home. Most importantly for this paper, returnees tend to be keener to start a new business (Black & Castaldo, 2009; de Vreyer et al., 2010; Wahba & Zenou, 2012). In addition, Marchetta (2012) finds that experience and the financial savings accumulated while abroad are the main reasons that return migrants become and remain entrepreneurs.[2]

At the sectoral level there is no consensus whether return migration has a positive impact on the performance of firms. Saxenian (2002) studies the information technology sector in Taiwan, China and India. She shows that in 1999, 40 per cent of the companies located in the Hsinchu Science Park in Taiwan were started by returnees from the United States. Also in the high technology sector, Wei, Liu, Lu, and Yang (2017) show that Chinese returnees help to increase the efficiency of the firms they work for when there is a large technology gap between these firms and the most capital-intensive firms in the industry.

In contrast, Sun (2013) shows that return migrants in the venture capital sector in China seem to perform less well than their local Chinese counterparts. The author considers the lack of an established network (particularly with government officials) as a possible explanation for the weaker performance of return migrants. Wahba and Zenou (2012) formalise a similar hypothesis regarding the effect of social networks, the lack of which is a major disadvantage in terms of business opportunities for return migrants. However, the impact of networks is not straightforward. As suggested by Saxenian (2002), the networks built abroad by return migrants and their role as bridges between several communities may be at the origin of their advantage over local workers and entrepreneurs.

The lack of quantitative studies on the economic impact of return migrants is a result of two main obstacles. First, how to define success when the entrepreneurs may be at the head of very small economic units? As noted by Li and Rama (2015), small economic units in developing countries are often informal, making them difficult to observe. de Mel, McKenzie, and Woodruff (2009) add that even when information is available, researchers are confronted with three main issues: consistency of the data reported, recollection bias and under-reporting of profit. Second, how to deal with the bias stemming from the self-selection of return migrants, namely their initial migration and their decision to return. There is a growing consensus in the literature regarding the need to address selection issues when assessing the returns on migration experience (Batista, McIndoe-Calder, &

Vicente, 2017; Wahba, 2015). Selection into migration and return may be based on observable features like education, age or gender (Ambrosini, Mayr, Peri, & Radu, 2015; Chiquiar & Hanson,

2005). But migrants may also have unobservable characteristics that lead them to self-select into migration and return, such as talent, ability and attitude to risk (Akee, 2010; de Coulon & Piracha, 2005). These characteristics may be correlated with the potential success of entrepreneurial activities. Failing to account for selection into migration will lead to biased estimates of the return on the migration experience. Whether the selection bias is positive or negative seems to vary across countries of origin and/or destination and remains an empirical question. While certain studies find a positive selection bias (Akee, 2010; Chiquiar & Hanson, 2005; McKenzie, Stillman, & Gibson, 2010), others document a negative selection bias, particularly into return (Batista et al., 2017; Ramos, 2007; Wahba, 2015).

We overcome these obstacles by exploiting the richness of the ELMPS 2012 survey. In particular, the information available on the monthly net earnings of firms owned by households (hereafter, household firms) allows us to overcome the issue of performance measurement and to follow the advice of de Mel et al. (2009) to directly adopt reported measures of profits as the preferable performance measure, rather than calculating the difference between revenue and expenses.[3] Moreover, the 2012 wave contains key indicators relating to the size, formal status and assets of household firms. We deal with the selection bias issue first by controlling for the selection of returnees in a classic two-stage least squares (2SLS) framework and second by matching returnees' and stayers' firms on a wide array of characteristics.

To briefly summarise our findings, we show that the increased capital and skills acquired abroad not only explain the entrepreneurial behaviour of return migrants (Black & Castaldo, 2009; Marchetta, 2012), they also play a role in improving the performance of returnees' firms. Moreover, we find that the benefits of the capital, whether physical or human, accumulated abroad are not specific to certain economic activities or locations. Our results suggest that government support dedicated to return migrants should not be limited to a subset of the return migrant population selected on the basis of academic achievement or the sector of economic activity. For example, return migrants in Egypt are more likely to locate their entrepreneurial activity in rural areas, maintaining/developing economic activities in regions that have previously proven difficult to alleviate from poverty in Middle Eastern and North African countries (Boutayeb & Helmert, 2011; World Bank, 2014).

The paper proceeds as follows. In Section (2), we discuss the characteristics of the returnees and their firms. Section (3) presents our methodology. In Section (4), we present and discuss our findings. Section (5) concludes.

2. Return migrants and household firms

2.1. Data sources

The ELMPS 2012 is the third wave of a survey carried out by the Economic Research Forum (ERF) and Egypt's Central agency for Public Mobilisation and Statistics (CAPMAS). Two previous waves of the ELMPS survey were carried out in 1998 and 2006. A national representative sample of 12,060 households was surveyed. Of these, 6,752 were also in the 2006 sample (Assaad & Krafft, 2013).[4] All individuals in the households aged six and above are included, resulting in an overall sample of 49,186 individuals. The ELMPS provides historical data on the characteristics of the surveyed households and individuals, such as education, employment and migration history. The modules relating to return migration, saving and borrowing were introduced in the 2012 survey.

We explore the relationship between return migration and the performance of household firms using the modules on return migrants and household firms. The combination of these two modules provides a level of detailed information that was not available in previous waves of the survey. Each household is requested to provide the details of up to four household firms, including the ID code of all members of the household working for the firm, indicators of the starting and current capital, the sector of activity, the number of employees, an estimation of expenditure on fixed assets and material

inputs, and an estimation of the firm's net earnings. The module on return migration allows us to identify return migrants, the household they belong to and a number of personal characteristics at the moment of the survey and when they were abroad. Return migrants were asked additional questions regarding the conditions of departure, their employment history, their financial situation abroad and their reasons for returning to Egypt.[5]

2.2. Return migrants

According to the ELMPS 2012 survey, 1,381 of the surveyed individuals are returnees (less than 3% of the total surveyed population, and around 5% of the adult population included in the survey). These returnees are associated with 1,339 households (11% of the total). Most of the returnees are male (97%) and over 21, the age of legal majority in Egypt at the time of the survey (seven return migrants are minors).[6] Among male adult returnees, 23 per cent are engaged in an entrepreneurial activity, whereas the proportion of entrepreneurs non-migrants is 16 per cent of the total number of male adult non-migrants.

Since our paper focuses on the impact of return migration on the performance of household firms, we limit our sample to households reporting the ownership of a household firm. We also limit the sample to these households' main firm. Each firm is associated with a main entrepreneur, the member of the household considered to have the most knowledge of the firm's activities. Since the majority of entrepreneurs (88%) and returnees are male, in the remainder of this paper we focus our analysis on the sample of male, adult (over 21) entrepreneurs.

Table 1 displays the characteristics of return migrants compared with non-migrants. The return migrants are, on average, four years older. They are also more likely, on average, to be married, to be the head of their household, to have a second job and to live in rural areas than the non-migrants. Significant differences are also observable in terms of education. Relatively fewer return migrants belong to the group defined as illiterate (13.9% versus 19.1%), however fewer return migrants have been to university (17.5% versus 23.6%). Conversely, a relatively larger number of them have an education level corresponding to secondary school (40.01% versus 29.2%). In terms of prior

Table 1. Returnee and non-migrant population characteristics

Variable	Returnees	Non-Migrants	*t*-Test
Age	44.3	40.7	3.98***
Married (% of population)	96.5	88.25	5.46***
Urban (% of population)	41.1	58	−3.9***
Head of household (% of population)	97.1	86.2	7.84***
Education level (% of population)			
illiterate	13.9	19.1	−2.06**
read and write	8.9	7.7	0.49
elementary school	13.2	13.8	−0.24
middle school	6.2	6.4	−0.14
secondary school	40.1	29.2	3.05***
university	17.5	23.6	−2.15**
Second job (% of population)	23.6	17.76	1.8*
Employment_{HH} (% of population)	17.5	24.2	−2.5**
Accumulated experience in the sector/all entrepreneurs			
Accumulated experience in the sector, in Egypt	3.23	3.6	−0.81
Accumulated experience in the sector, abroad	1.11		
Accumulated experience in the sector/entrepreneurs with a non-null experience			
Accumulated experience in the sector, in Egypt	11.44	11.83	−0.45
Accumulated experience in the sector, abroad	7.02		

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).

experience in the same field of activity as the firm they manage, returnees and non-migrant entrepreneurs have accumulated a similar number of years of experience in Egypt before starting their businesses. However, returnees benefit, on average, from one additional year of experience acquired abroad. It should nonetheless be noted that an important share of the entrepreneurs have no prior experience in the field of activity of the firm they manage. Only 30 per cent of returnee or non-migrant entrepreneurs have acquired some experience in Egypt and only 16 per cent of returnees have acquired some experience abroad in the same field of activity. When we consider only entrepreneurs with non-null prior experience, all entrepreneurs have on average 12 years of experience acquired in Egypt and returnees have acquired, on average, seven years of additional experience abroad.[7]

Table 2 presents information on the migration experiences of returnees. On average, returnees left Egypt at the age of 25 for a migration spell that lasted approximately five years. It is worth noting that the distribution of the migration spell is skewed. Although 72 per cent of the returnees remained abroad for up to five years, 26 per cent had a migration spell of one year or less and 45 per cent had a migration spell of up to two years. The vast majority of the return migrants have returned from North African and Middle Eastern countries, in particular Saudi Arabia, Iraq, Libya or Jordan. The return decisions have been prompted, in most cases, by difficult economic or political conditions in the country of migration. Only 16.6 per cent of return entrepreneurs reported that the main motive of their return related to economic opportunities in Egypt.[8]

2.3. The characteristics of household firms

We identify a total of 1,942 household firms, 297 of which are managed by a returnee. The average monthly net earnings in our sample are EL 5705 (USD 942).[9]

According to the literature, firms' performance has been linked to their location in urban or rural areas (Owoo & Naudé, 2016; Rijkers, Söderbom, & Loening, 2010), size (Montenegro & Patrinos, 2014), age (Nichter & Goldmark, 2009), capital availability (Grimm, Krüger, & Lay, 2011) and the skills of their labour force (Moretti, 2004). Table 3 shows that 55 per cent of the firms in our sample are located in urban areas. A large majority of these, 87%, are fully owned by the household. In terms

Table 2. Returnees' migration experience

Average age at departure	25
Average migration spell	5.2
Motives for return (in (%) of the returnee population)	
Economic hardships abroad	53.6
Economic opportunities at home	16.6
Social problems at home or abroad	13.6
Social opportunities at home	16.05
Main destination countries ((%) of the returnee population)	
Saudi Arabia	27.1
Iraq	26.8
Libya	20.5
Jordan	10.9
Kuwait	4.8
United Arab Emirates	3.1
Qatar	2.3
Italy	1

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).

Table 3. Household firms

Variable	All Firms	Firms with Returnees	Firms without Returnees	*t*-Test
Firm population	1942	297	1645	
Age of the firm	13.4	11.6	13.6	−2.4**
Net monthly earnings (LE)	5705	3416.3	6138.2	−2.7***
Urban (%)	55.6	41	58	−3.9***
Shared ownership (%)	12.7	14.3	12.9	0.45
Total workers	1.32	1.32	1.34	−0.21
Hired workers	0.22	0.24	0.22	0.16
Number of household members working for the firm	1.11	1.07	1.11	−1.55
Licence (%)	48.6	49.4	47.9	0.36
Bookkeeping (%)	18.2	18.4	18.1	0.1
Registration (%)	34.4	31.5	34.4	0.84
Tax payment (%)	26	22.7	26.6	−1.24
Categories of tangible capital	0.91	0.9	0.92	−0.39
Main Sector of Economic Activities				
Retail trade, except motor vehicles and motorcycles (47)	39.57	34.4	40.5	−1.8*
Land transport and transport via pipelines (49)	12.15	19.1	11.4	−2.28**
Specialised construction activities (43)	6.12	9.4	5.6	1.73*

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).

of size, 91 per cent of firms have only one member of the household working for the firm and only 4 per cent of the firms hire workers from outside the household. The firms in our sample are, on average, 13 to 14 years old.

Almost half the firms in our sample are licenced and a third have a commercial registration. However, only a quarter of firms declare paying any taxes and only a limited share of firms (18%) maintain a bookkeeping activity. Firms were asked to report the ownership of different types of assets and, on average, the firms in our sample report owning 0.9 types of assets. In fact, according to the survey, 32 per cent of firms own no assets while 48 per cent own only one type of asset.[10]

In Table 3, we also compare household firms managed by a returnee with household firms managed by a non-migrant. The two group of firms show significant differences. Returnees' firms are on average two years younger. Regarding the variable that we consider as the best measure of household firm success, the firms managed by non-migrants generate higher monthly earnings on average (EL 6,138 USD versus EL 3,416). Return migrants' firms are mostly located in rural areas (60%), while non-migrants' firms are more often located in urban area (58%). The two groups of firms are active in similar economic sectors, namely retail trade, land transport and construction activities. However, there are relatively more firms without returnees in the retail trade sector (40.6% versus 34.3%) and more firms with returnees in the land transport sector (19.2% versus 11.4%) or the construction sector (9.6% versus 5.7%).

Entrepreneurs were asked to estimate the starting and current capital of their firm on an ordinal scale with seven categories. Table 4 compares firms with and without returnees in terms of capital, listing the share of firms corresponding to each capital value category. There are no significant differences in terms of starting capital (current capital) between the firms managed by returnees and non-migrants, with the exception of the group of firms with a starting capital (current capital) in the category between LE 10,000 and 49,000 (USD 1,652–8,264). A larger proportion of firms managed by returnees (23.20% versus 14.52%) start their existence with this relatively high amount of capital. Table 4 tends to suggest that returnees bring financial capital that they inject into household firms. However, it is important to note that not all the returnees had definitively returned when their firms

Table 4. Starting and current capital of household firms (% of firm population)

Value in LE (USD)	Starting Capital		
	Firms with Returnees	Firms without Returnees	*t*-Test
None	6.56	9.27	−1.54
1–499 (0.16–83)	15	17.9	−1.1
500–999 (83–165)	11.4	12.89	−0.64
1,000–4,999 (165–826)	21.28	21.34	−0.02
5,000–9,999 (826–1,652)	15.54	13.77	0.68
10,000–49,999 (1,652–8,264)	23.2	14.52	2.78***
50,000 or more (8,264 or more)	8.68	8.51	0.08
Value in LE (USD)	Current Capital		
	Firms with Returnees	Firms without Returnees	*t*-Test
None	5.07	6.93	−1.2
1–499 (0.16–83)	10.82	13.22	−1.11
500–999 (83–165)	6.94	9.57	−1.52
1,000–4,999 (165–826)	17.50	19.67	−0.74
5,000–9,999 (826–1,652)	17.67	16.22	0.57
10,000–49,999 (1,652–8,264)	27.97	19.15	2.55**
50,000 or more (8,264 or more)	15.44	13.75	0.66

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).

started their activities (139 return migrants out of 297 (46.8%)). These returnees might have injected the capital they had saved at this particular moment of their migration and managed the firm remotely with the support of family and friends. Nonetheless, in 27 cases we can disregard this possibility: in 23 cases (7.7%), the establishment of the firm predates the return of the migrant but also predates the first migration of the returnee; in 5 cases (1.6%), the returnee stated that his motive for returning to Egypt was to take over the family business; while in 2 cases (0.6%), the returnee was taking over a family business founded before the date of departure of the first migration.[11]

3. Methodology

As highlighted in the introduction, the empirical assessment of the benefit of a migration experience needs to deal with issues of selection bias. Migrants are likely to have different abilities, attitudes to risk and entrepreneurial motivations compared with non-migrants. These unobservable characteristics will affect their choice of activity in general and their propensity to engage in entrepreneurial activities in particular. Moreover, these unobserved characteristics are likely to influence the success of their entrepreneurial activity. In this paper, we follow the literature (El-Mallakh & Wahba, 2021; Marchetta, 2012; Wahba & Zenou, 2012) and estimate a structural simultaneous model of household firms' net earnings that accounts for the initial decision of returnees to migrate.[12] More specifically, we estimate the following model:

$$y_i = \gamma_1 Firm_i + \lambda_1 Entrepreneur_i + \alpha_1 Returnee_i + \beta_1 Experience_i + \mu_{1_i} \quad (1)$$

$$Returnee_i = \gamma_2 Oil\ Price_i + \lambda_2 Entrepreneur_i + \mu_{2_i} \quad (2)$$

where, y denotes the average monthly net earnings of the firm managed by individual i, *Firm* is a vector of firm-level characteristics including the starting capital of the firm, its number of workers (including members of the household), its age, a dummy indicating whether the ownership of the firm is shared or not, indicators of formality, the number of assets owned by the firm and a set of governorate and industry fixed effects.[13] *Entrepreneur* is a vector of entrepreneur-level characteristics including age, education attainment, a marital status dummy and a location dummy indicating whether the entrepreneur lives in an urban area or not. *Experience* controls for the entrepreneur's experience in Egypt and abroad and includes two indicators of the availability of employment relate income at the household level. The first indicator *SecondJob* is a dummy variable of whether or not the entrepreneur has a second job in addition to their entrepreneurial activity, while the second indicator $Employment_{HH}$ is a dummy variable of whether or not other members of the household have an employment activity (outside of the household firm). *Returnee* is a dummy variable indicating whether the entrepreneur is a return migrant or not, and μ is an error term.

The second equation of the system estimates the probability of temporary migration.[14] We use historical, inflation-adjusted oil prices as an exclusion restriction. Arab countries are the main destination for Egyptian migration and oil prices are a strong determinant of migration, not only into oil-producing Arab countries but also into non-oil Arab countries (as replacement workers) (Wahba & Zenou, 2005). We therefore use the inflation-adjusted oil price when the individual was 25, the average age of migration in our sample, as an exogenous instrument for temporary migration. Higher oil prices, when an individual is 25, are expected to induce a migration decision. The identification assumption is that, historical oil prices are expected to affect the average earnings of household firms only through temporary migration.[15]

It can be difficult to assess the performance of micro-firms, particularly in developing countries, due to the availability and reliability of data. As highlighted by de Mel et al. (2009), the challenges of measuring the profits of micro-firms relate to the limited use of bookkeeping, recall errors, the seasonality of expenditure and the under-reporting of revenues. de Mel et al. (2009) show that business owners provide consistent estimates of their sales and profits, suggesting that the direct reporting of profits is a reliable measure of a firm's performance, despite the presence of under-reporting. In this paper we therefore rely on directly reported net earnings as our measure of firm performance.

Although reported net earnings should provide a good and reliable measure of the profitability of micro-enterprises, our empirical strategy may face additional challenges if there are significant differences between returnees and non-migrants in terms of the difficulties associated with the measurement of profitability. However, as indicated in Table 3, there are no significant differences between returnees and non-migrants in terms of formality (having a licence or a commercial registration), bookkeeping or tax payment. This suggests that we should not expect recall and under-reporting problems to differ across the two groups of entrepreneurs.[16]

4. Results

Table 5 reports our main results. Column 1 presents the results for our main specification and shows that migration experience per se does not seem to influence the performance of household firms, since the coefficient of the Returnee dummy is not statistically significant. When we distinguish between the experience accumulated overseas and the experience accumulated in Egypt, within the same sector of activity, we find that both are positive and significant. However, the coefficient of the experience accumulated overseas is much larger.[17] This result suggests a positive association between migration experience and entrepreneurial success that is channelled through the sector-specific experience gained abroad. More precisely an additional year of experience abroad is associated with a 4.3 per cent increase of the average monthly net earnings; an additional year of experience in Egypt with a 0.8 per cent increase.

Table 5. Return migration and the performance of household firms: main findings

Profit Equation	(1)	(2)	(3)
Entrepreneur-Level Variables			
Age	−0.007**	−0.006*	−0.007**
	(0.003)	(0.003)	(0.003)
Education			
Read & Write	0.287**	0.289**	0.285**
	(0.126)	(0.126)	(0.127)
Elementary School	0.106	0.105	0.106
	(0.101)	(0.101)	(0.102)
Middle School	0.196	0.199	0.189
	(0.128)	(0.128)	(0.127)
Secondary School	0.267***	0.268***	0.261***
	(0.094)	(0.094)	(0.095)
University	0.308***	0.307***	0.307***
	(0.106)	(0.106)	(0.106)
Married	0.172*	0.17*	0.17*
	(0.09)	(0.09)	(0.09)
Returnee	−0.367	−0.252	−0.375
	(0.241)	(0.248)	(0.277)
Migration Spell		−0.026**	
		(0.011)	
Urban*Returnee			0.007
			(0.07)
Overseas Experience	0.041***	0.051***	0.041***
	(0.014)	(0.014)	(0.014)
Experience in Egypt	0.009**	0.008*	0.009**
	(0.004)	(0.004)	(0.004)
Second Job	−0.207**	−0.212**	−0.207**
	(0.086)	(0.086)	(0.086)
Employment_{HH}	−0.17**	−0.17**	−0.17**
	(0.069)	(0.069)	(0.069)
Urban	0.027	0.023	0.007
	(0.065)	(0.065)	(0.07)
Firm-Level Variables			
Starting Capital			
Between 1–499	−0.203	−0.207	−0.203
	(0.126)	(0.126)	(0.126)
Between 500–999	0.01	0.006	0.12
	(0.134)	(0.134)	(0.134)
Between 1,000–4,999	0.113	0.11	0.11
	(0.124)	(0.124)	(0.124)
Between 5,000–9,999	0.446***	0.443***	0.45***
	(0.135)	(0.135)	(0.135)
Between 10,000–49,000	0.431***	0.43***	0.432***
	(0.135)	(0.135)	(0.135)
50,000 or more	0.746***	0.745***	0.75***
	(0.155)	(0.155)	(0.155)
Categories of Tangible Capital	0.131***	0.131***	0.13***
	(0.038)	(0.038)	(0.038)
Licence	0.17**	0.172**	0.171**
	(0.076)	(0.076)	(0.076)
Bookkeeping	0.33***	0.33***	0.33***
	(0.092)	(0.092)	(0.092)
Tax Payment	0.121	0.124	0.118
	(0.075)	(0.076)	(0.076)
Total Workers	0.098***	0.097***	0.098***
	(0.026)	(0.026)	(0.026)

(*continued*)

Table 5. (*Continued*)

Profit Equation	(1)	(2)	(3)
Shared Ownership	0.12	0.112	0.12
	(0.104)	(0.105)	(0.104)
Firm Age	0.013***	0.013***	0.013***
	(0.003)	(0.003)	(0.003)
Constant	6.99***	7.01***	7.01***
	(0.274)	(0.276)	(0.276)
Return Migration Equation			
Age	0.026***	0.026***	0.026***
	(0.003)	(0.003)	(0.003)
Education			
Read & Write	0.2	0.2	0.2
	(0.192)	(0.192)	(0.192)
Elementary School	0.328**	0.328**	0.325**
	(0.16)	(0.16)	(0.16)
Middle School	0.46**	0.46**	0.45**
	(0.207)	(0.207)	(0.208)
Secondary School	0.65***	0.65***	0.65***
	(0.13)	(0.13)	(0.13)
University	0.313**	0.313**	0.31**
	(0.146)	(0.146)	(0.146)
Married	0.453**	0.452**	0.456**
	(0.178)	(0.178)	(0.178)
Historical Oil Prices	0.297***	0.296***	0.297***
	(0.08)	(0.08)	(0.08)
Urban	−0.357***	−0.357***	−0.355***
	(0.093)	(0.093)	(0.093)
Constant	−3.99***	−3.98***	−3.99***
	(0.483)	(0.483)	(0.484)
N	1935	1935	1935
Log Likelihood	−3427.6	−3425.41	−3427.1
rho12	0.133	0.139	0.1
	(0.115)	(0.115)	(0.13)

Note: Standard errors in parentheses. ***, ** and * indicate significance at the 1%, 5 per cent and 10 per cent levels, respectively. The omitted category in the 'Education' variable is 'Illiterate' and the omitted category in the 'Starting Capital' variable is 'No Capital'. rho12 indicates the correlation between the error terms of the selection equation and the revenue equation.

The length of the sector-specific overseas experience may simply reflect the length of the migration spell. In this case the positive coefficient of the overseas experience variable may indicate that a longer migration spell, regardless of sector-specific experience, has a positive impact on firms' net earnings. To disentangle the effect of the length of migration spell from that of experience gained abroad, we introduce, in Column 2, a 'Migration Spell' variable that measures the duration of the migratory experience. Column 2 shows that a longer migration spell is negatively correlated with the performance of the household firms of returnees. A longer migration spell may deplete the returnee's social capital in the home country, generating negative consequences for entrepreneurial activity. This finding is similar to the results reported by Wahba and Zenou (2012), who show that the loss of social capital in the home country reduces the propensity of returnees to become entrepreneurs. Moreover, the coefficient of our variables of interest is robust to the addition of a migration spell variable. Column 2 confirms that the positive relationship between migratory experience and entrepreneurial performance is driven by the accumulation of industry-specific human capital.

Table 3 shows that returnees' household firms are significantly more likely to be located in non-urban areas. This difference in the geographical distribution of firms may exercise a downward bias on the coefficient of the Returnee variable, given that firms in non-urban areas may have fewer opportunities to thrive. Our main specification includes a dummy variable for urban location, in addition to fixed effects at the governorate level, and the results indicate no significant differences in performance between urban and non-urban firms. However, to further investigate any implications of the uneven geographical distribution of returnees' firms, we introduced an interaction term between the 'Urban' and 'Returnee' dummy variables. The results, presented in Column 3 of Table 5, confirm our main findings.

Regarding the other determinants of firm performance, our results show that an entrepreneur's higher educational attainment (secondary school or university) is positively and significantly related to firm performance.[18] The coefficient of the second job and household employment variables are negative and significant. Having alternative sources of income, from a second job or the employment activity of other household members, is associated with a 17 per cent to 20 per cent decrease of the monthly average net earnings. The negative association between these variables and firm performance may indicate that when entrepreneurs and/or members of their families have other employment activities they are unable, or may not need, to invest their time and effort in the household firm. An alternative interpretation is that when the net earnings of household firms increase, entrepreneurs and other members of their household do not need to supplement their income by engaging in a second job.

Concerning firm-level characteristics, as expected, we find that starting capital is a significant determinant of firm performance.[19] Household firms that were founded with a larger capital value generate higher levels of net earnings. Moreover, we find that more profitable firms own a greater number of categories of tangible capital. Being a licenced firm and engaging in bookkeeping are positively associated with firm performance. Bookkeeping in particular is related to a 33 per cent increase of the monthly average net earnings. However, we find no correlation between firm

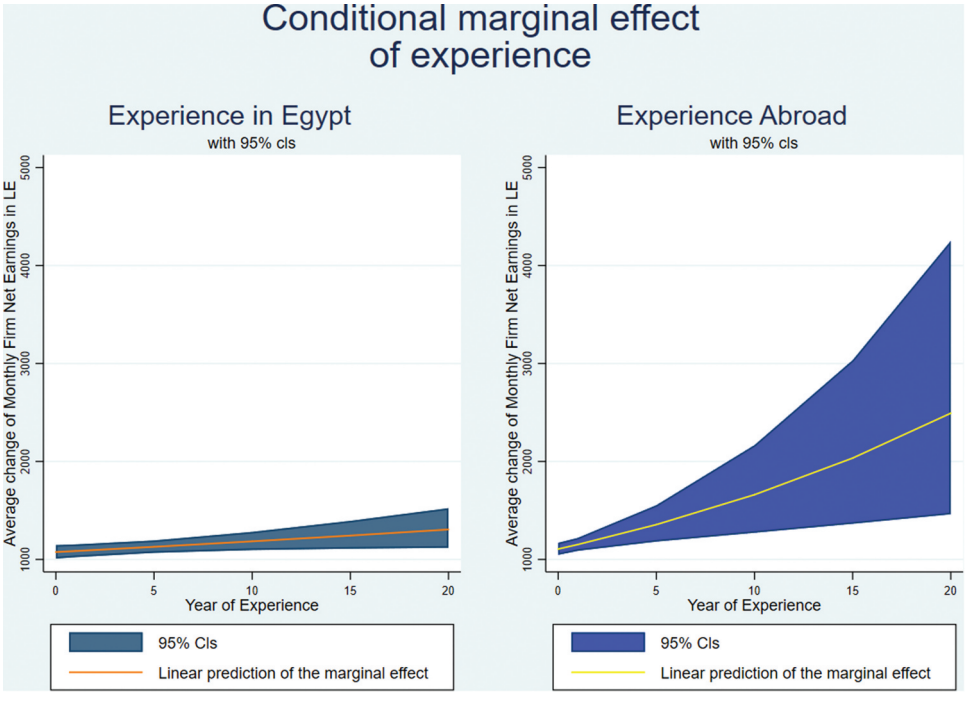

Figure 1. Marginal effect of experience on firm monthly average net earnings.

performance and whether the firm pays taxes or not. Finally, we find that the age of the firm is also significant and positively correlated with the net earnings of the firm and that more profitable firms hire a larger number of workers.

To illustrate our results, Figure 1 shows the predicted increase in the monthly average net earnings of firms based on the number of years of experience in the same sector in Egypt or abroad. The accumulation of experience abroad has a stronger impact on the predicted average net earnings of the firm than the accumulation of experience in Egypt. Moving from five to ten years of experience abroad produces a LE 305 (USD 50) increase in average net earnings; this increase is only LE 56 (USD 10) for the same additional number of years of experience in Egypt. The average years of experience abroad for returnees (seven years) has a slightly larger impact on firms' average revenue (LE 1470, USD 239 versus LE 1196, USD 323) than the average number of years of experience in Egypt (11 years).

In the case of Egypt, most of the returnees have come back from Gulf countries that are wealthier and more advanced than their home country. Returnees might have been in contact with more modern production techniques and management methods, which they brought back to Egypt and successfully applied to their firms.

Figure 2 shows the impact of a higher starting capital on firms' monthly average net earnings. The impact of this variable might be only indirectly related to return migration, however we have seen that a significantly higher share of return migrants (23.20% versus 14.52%) started their activity with capital between LE 10,000 and LE 49,999 (USD 1,632-USD 8,264). In contrast, the majority of firms managed by a non-migrant (21.34%) start their activities with capital between LE 1,000 and LE 4,999 (USD 163-USD 826) and earn, on average, 379 (61 USD) less monthly.

We now turn to the results of our selection equation. Our results confirm the general finding in the literature that better educated, married individuals from rural areas are more likely to emigrate. We also find that a higher oil price when the entrepreneur was 25 years old increases the probability of emigration. We find no correlation between the error terms of the two equations. This indicates that

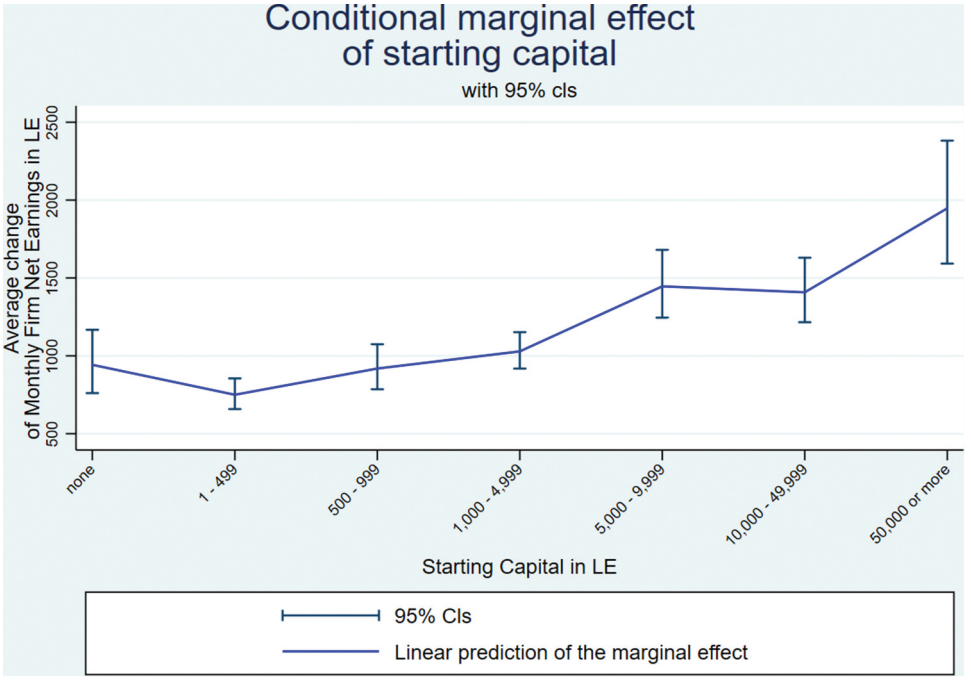

Figure 2. Marginal effect of starting capital on firm monthly average net earnings.

Table 6. Return migration and the performance of household firms: robustness checks

	(1)	(2)	(3)	(4)
Entrepreneur-Level Variables				
Age	−0.008**	−0.011**	−0.008**	−0.006*
	(0.003)	(0.004)	(0.003)	(0.003)
Education				
Read & Write	0.277**	0.257*	0.309**	0.261**
	(0.115)	(0.13)	(0.128)	(0.131)
Elementary School	0.141	0.047	0.116	0.096
	(0.092)	(0.11)	(0.103)	(0.107)
Middle School	0.19*	0.177	0.224*	0.186
	(0.113)	(0.131)	(0.132)	(0.133)
Secondary School	0.265***	0.224*	0.274***	0.24**
	(0.085)	(0.120)	(0.095)	(0.098)
University	0.334***	0.328***	0.32***	0.336***
	(0.097)	(0.114)	(0.107)	(0.109)
Married	0.186**	0.174	0.186**	0.14
	(0.081)	(0.11)	(0.095)	(0.09)
Returnee	−0.193	−0.025	−0.408*	−0.154
	(0.223)	(0.7)	(0.23)	(0.5)
Overseas Experience	0.043***	0.031**	0.04***	0.033*
	(0.013)	(0.014)	(0.014)	(0.018)
Experience in Egypt	0.008**	0.012***	0.008**	0.006
	(0.004)	(0.004)	(0.004)	(0.004)
Second Job	−0.208***	−0.221**	−0.211**	−0.185**
	(0.077)	(0.09)	(0.087)	(0.092)
Employment_{HH}	−0.17***	−0.145**	−0.157**	−0.182**
	(0.061)	(0.071)	(0.07)	(0.073)
Urban	0.032	0.06	0.016	0.04
	(0.06)	(0.08)	(0.06)	(0.069)
Firm-Level Variables				
Starting Capital				
Between 1–499	−0.191	−0.138	−0.21	−0.186
	(0.12)	(0.137)	(0.128)	(0.13)
Between 500–999	−0.023	0.08	0.021	0.04
	(0.127)	(0.134)	(0.137)	(0.141)
Between 1,000–4,999	0.093	0.162	0.137	0.133
	(0.117)	(0.123)	(0.127)	(0.13)
Between 5,000–9,999	0.374***	0.555***	0.487***	0.48***
	(0.127)	(0.136)	(0.137)	(0.142)
Between 10,000–49,000	0.4***	0.47***	0.467***	0.42***
	(0.13)	(0.137)	(0.137)	(0.142)
50,000 or more	0.682***	0.87***	0.8***	0.747***
	(0.147)	(0.153)	(0.158)	(0.162)
Categories of Tangible Capital	0.112***	0.128***	0.117***	0.142***
	(0.036)	(0.039)	(0.041)	(0.04)
Licence	0.141**	0.157**	0.143*	0.217***
	(0.07)	(0.08)	(0.077)	(0.08)
Bookkeeping	0.361***	0.323***	0.346***	0.32***
	(0.085)	(0.094)	(0.093)	(0.097)
Tax Payment	0.121*	0.086	0.094	0.086
	(0.07)	(0.078)	(0.077)	(0.08)
Total Workers	0.07***	0.097***	0.105***	0.103***
	(0.017)	(0.025)	(0.024)	(0.026)
Shared Ownership	0.103	0.13	0.098	0.122
	(0.1)	(0.106)	(0.107)	(0.11)
Firm Age	0.012***	0.014***	0.013***	0.012***
	(0.003)	(0.004)	(0.004)	(0.004)

(*continued*)

Table 6. (*Continued*)

	(1)	(2)	(3)	(4)
Constant	7.515***	7.13***	7.07***	6.99***
	(0.25)	(0.296)	(0.275)	(0.286)
N	1935	1786	1857	1789

Note: Standard errors in parentheses. ***, ** and * indicate significance at the 1%, 5 per cent and 10 per cent levels, respectively. The omitted category in the 'Education' variable is 'Illiterate' and the omitted category in the 'Starting Capital' variable is 'No Capital'.

unobservable characteristics associated with the migration experience do not necessarily impact the performance of entrepreneurial activities.

Table 6 presents a series of robustness checks that test the validity of our findings. In Column (1), we test the sensitivity of our findings to the presence of outliers. We winsorise the dependent variable at the 99 per cent percentile and at the 1 per cent percentile of firms' monthly net earnings distribution and find no significant difference compared to our main specification.

We also verify whether our results might be driven by the aftermath of the 2011 Egyptian revolution, as the data were collected between March and June 2012 (Assaad & Krafft, 2013). In this particular period, Egypt was ruled by the Supreme Council of the Armed Forces, which was organising the presidential election at the time. As noted by Assaad and Krafft (2013), Egypt was already experiencing a severe economic downturn due to the financial crisis of 2008/9; this downturn was made worse by the political instability following the revolution. Our main analytical concern regarding the revolution stems from the possibility that economic sectors may be affected differently by the crisis. If return-migrant entrepreneurs and domestic entrepreneurs who set up their firm in 2011 chose their sector according to their perception of the impact of the crisis, and these perceptions were different across the two groups of entrepreneurs, our coefficients might be biased. In Column (2), we report results based on a sample where we remove observations associated with firms founded after the start of the 2011 Egyptian revolution and observations associated with returnee entrepreneurs who returned to Egypt in or after 2011. In Column (3), we report results based on a sample where we eliminate the observations related to the economic sectors that were most affected by the economic crisis according to Hosny, Kandil, and Mohtadi (2014).[20] Overall the results are consistent with our main findings. Finally, in Column 4 we re-run our main specification, eliminating observations linked to the return-migrant entrepreneurs whose firms were founded before their return, and find similar results.

In a final robustness exercise, we apply matching techniques to compare the performance of returnees' firms to a group of very similar non-migrant firms along a range of observable characteristics. We match firms on the basis of age, governorate, location (urban/non-urban), sector of activity (two-digit ISIC classification), starting capital, indicator of formality (licence and bookkeeping

Table 7. Return migration and the performance of household firms: matching approach

	(Main Sample)	(Matched Sample)
Entrepreneur-Level Variables		
Age	−0.007**	−0.026***
	(0.003)	(0.009)
Education		
Read & Write	0.287**	0.403*
	(0.126)	(0.128)
Elementary School	0.106	0.033

(*continued*)

Table 7. (*Continued*)

	(Main Sample)	(Matched Sample)
	(0.101)	(0.211)
Middle School	0.196	0.435**
	(0.128)	(0.219)
Secondary School	0.267***	0.82
	(0.094)	(0.171)
University	0.308***	0.017
	(0.106)	(0.106)
Married	0.172*	0.445
	(0.09)	(0.28)
Returnee	−0.367	0.122
	(0.241)	(0.92)
Overseas Experience	0.041***	0.04***
	(0.014)	(0.014)
Experience in Egypt	0.009**	0.015*
	(0.004)	(0.008)
Second Job	−0.207**	0.004
	(0.086)	(0.154)
Employment_{HH}	−0.17**	−0.14
	(0.069)	(0.132)
Urban	0.027	0.335***
	(0.065)	(0.118)
Firm-Level Variables		
Starting Capital		
Between 1–499	−0.203	−0.406
	(0.126)	(0.255)
Between 500–999	0.01	−0.108
	(0.134)	(0.262)
Between 1,000–4,999	0.113	0.11
	(0.124)	(0.247)
Between 5,000–9,999	0.446***	0.395
	(0.135)	(0.258)
Between 10,000–49,000	0.431***	0.31
	(0.135)	(0.25)
50,000 or more	0.746***	0.877***
	(0.155)	(0.282)
Categories of Tangible Capital	0.131***	0.72
	(0.038)	(0.08)
Licence	0.17**	0.023
	(0.076)	(0.133)
Bookkeeping	0.33***	0.6***
	(0.092)	(0.172)
Tax Payment	0.121	0.036
	(0.075)	(0.132)
Total Workers	0.098***	0.09*
	(0.026)	(0.05))
Shared Ownership	0.12	0.103
	(0.104)	(0.15)
Firm Age	0.013***	0.021***
	(0.003)	(0.007)
Constant	6.99***	7.12***
	(0.274)	(0.482)
N	1935	532

Note: Standard errors in parentheses. ***, ** and * indicate significance at the 1%, 5 per cent and 10 per cent levels, respectively. The omitted category in the 'Education' variable is 'Illiterate' and the omitted category in the 'Starting Capital' variable is 'No Capital'.

dummies) and the education level of the main entrepreneur. The matching process allows us to take into account certain layers of selection; for example, selection into urban or rural areas or selection into activity sectors, that we are not able to control for in our empirical specification. Tables A1 and A2, in the Appendix, compare returnees' firms to matched non-migrant firms and show very limited differences across the two groups of firms. We re-estimate our system of equations on the matched sample. The results, reported in Table 7, confirm our main findings regarding the impact of the migration experience on the success of entrepreneurial activities. Although some of the control variables cease to be significant, we continue to find that sector specific-experience accumulated overseas has a positive and significant impact on firms' net earnings.[21]

5. Conclusion

Is the story of return migration a success? Evidence from studies on return migrants' wages once they return to their home countries tends to suggest 'yes' (Barrett & Goggin, 2010; Reinhold & Thom, 2013). Our paper completes this picture by analysing the performance of firms started by return migrants in Egypt. Two main factors favour these firms: the experience acquired abroad by return migrants seems to be more valuable than experience acquired in the same sector in Egypt, and return-migrant entrepreneurs tend to start their firm with a larger starting capital than their counterparts who have stayed in Egypt all their working life.

The absence of appropriate skills and the lack of capital are identified as key obstacles to the growth of the private sector in the last Egypt Country Private Sector Diagnostic (International Finance Corporation, 2020), moreover the World Bank with the Egyptian government has invested USD 800 millions over the last decade to try to overcome these issues in support of job creation through entrepreneurship.[22]

Should governments and international organisation increase the scope and the scale of programmes supporting the creation of firms by return migrants? At first sight it looks an economic policy with positive outcomes: helping them as they return with valuable skills and/or capital in order to strengthen the entrepreneurial activities in their home country. However, it is far from evident that such economic policies, for example easing material conditions for returnees, would help the desired migrants or be provided at the right moment. A migrant's decision to start and run a company stems from a series of choices. In particular, it would seem important to identify the return migrants who have accumulated enough skills and/or capital to succeed on their return.

Notes

1. See h1https://www.theguardian.com/technology/2005/dec/08/piracy.newshttps://www.theguardian.com/technology/2005/dec/08/piracy.news h2https://timesofindia.indiatimes.com/11poster-boys-of-indian-startup-industry/11-poster-boys-of-indian-startup-industry/photostory/52624470.cms h3https://www.si-ware.com/staff/hisham-haddara-ph-d/.
2. Wahba and Zenou (2012) and Marchetta (2012) rely on reported employment status to explore the link between return migration and entrepreneurship in Egypt. Our paper, however, uses data on business units at the household level to measure entrepreneurial success.
3. The exact formulation of the question reported in the questionnaire is: 'What are the average net earnings of your enterprise per month during the past year?'
4. For a detailed presentation of the survey, please refer to Assaad and Krafft (2013).
5. In section 13 of the ELMPS survey, household members were asked 34 questions regarding non-agricultural household firms; in section 12, 47 questions were addressed to household members regarding the situation of household members currently abroad; while section 10.1 included 30 questions specifically addressed to return migrants. The questionnaires are available at: http://www.erfdataportal.com/index.php/catalog/45http://www.erfdataportal.com/index.php/catalog/45. The data are available on demand from the Economic Research Forum.
6. The age of legal majority in Egypt was lowered from 21 to 18 in 2015. http://english.ahram.org.eg/NewsContent/1/64/120441/Egypt/Politics-/Egyptian-cabinet-approves-amendment-to-lower-age-o.aspxhttp://english.ahram.org.eg/NewsContent/1/64/120441/Egypt/Politics-/Egyptian-cabinet-approves-amendment-to-lower-age-o.aspx.
7. Figures A2 and A3 in the Appendix show the distribution of years of experience in Egypt and abroad among entrepreneurs.

8. The economic hardship abroad category in Table 2 encompasses reasons such as sudden contract termination by the employer, poor working conditions, end of contract and the war in Iraq and Kuwait. The economic opportunities at home category includes reasons such as taking over a family business or a farm or setting up a new business. The social problems abroad category encompasses reasons such as health problems, accidents, taking care of family members or being too old to work. Finally, the social opportunities at home category includes reasons such as returning to get married or to study.
9. We apply an exchange rate of 6.05 Egyptian Pounds per US Dollar (Exchange rate on the 30th of January 2012, https://www.exchangerates.org.uk/USD-EGP-spot-exchange-rates-history-2012.html).
10. The survey lists nine categories of assets: buildings, land, machinery equipment or tools, bicycles, small trucks, cars, boats, other vehicles and other types of assets. Machinery equipment or tools are the most frequently reported assets.
11. We keep these observations in our sample in order to assess the impact of capital. As a robustness check, we eliminate them to further explore the potential relationship between return migration, capital and firm revenue.
12. As such, our model does not control for selection into return among migrants. Our approach is similar to Marchetta (2012), Wahba and Zenou (2012) and El-Mallakh and Wahba (2021) who estimate a system of two equations to control for selection into migration of returnees. Wahba and Zenou (2012) and El-Mallakh and Wahba (2021) use historical oil prices as an exclusion restriction explaining the decision to migrate while Marchetta (2012) uses historical data on the rate of population growth.
13. Industry fixed effects are at the ISIC 1 level.
14. This system equation is estimated simultaneously using a Conditional Mixed Process allowing all the errors to be correlated (Roodman, 2011).
15. Figure A1 in the Appendix shows no association between historical oil prices and the net earnings of household firms in our sample.
16. This is consistent with the findings of de Mel et al. (2009), who report that bookkeeping or under-reporting do not vary across individual-level characteristics.
17. The difference between the coefficient of the two experience variables is statistically significant at the 5 per cent level.
18. The omitted category in terms of educational level is illiteracy.
19. The omitted category is no capital.
20. Accommodation, travel agencies, tour operators, food and beverages.
21. Results for the selection equation associated with the specifications reported in Tables 6 and 7 are available from the authors upon request. Our results are robust to the use of an alternative selection variable in the return migration equation, namely population growth in the year of birth (Marchetta, 2012). Our results are also robust to the estimation of a simultaneous equations model that controls for migration, return, labour market participation and entrepreneurship decisions (Wahba, 2015). These unreported results are available from the authors upon request.
22. The World dedicated USD 300 millions to the 'Enhance Access for Micro and Small Enterprise' initiative between 2010 and 2015, USD 300 millions to the Promoting Innovation for Inclusive Financial Access between 2015 and 2019, and launched in 2019 the USD 200 millions "Catalysing Entrepreneurship for Job Creation initiative. source: https://www.worldbank.org/en/news/feature/2021/02/22/egypt-job-creation-for-better-livelihoods.

Acknowledgements

We gratefully acknowledge the financial support of 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.

Funding

This work was supported by the Economic research forum (ERF) [The use of online harmonized household survey data].

Disclosure statement

No potential conflict of interest was reported by the author(s).

References

Akee, R. (2010, January). Who leaves? deciphering immigrant self-selection from a developing country. *Economic Development and Cultural Change*, *58*(2), 323–344. doi:10.1086/647978

Ambrosini, J. W., Mayr, K., Peri, G., & Radu, D. (2015). The selection of migrants and returnees in Romania. *Economics of Transition*, *23*(4), 753–793. doi:10.1111/ecot.12077

Assaad, R., & Krafft, C. (2013). The Egypt labor market panel survey: Introducing the 2012 round. *IZA Journal of Labor & Development*, *2*(1), 8. doi:10.1186/2193-9020-2-8

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.

Barrett, A., & Goggin, J. (2010). Returning to the question of a wage premium for returning migrants. *National Institute Economic Review*, *213*(1), R43–R51. doi:10.1177/0027950110380326

Batista, C., McIndoe-Calder, T., & Vicente, P. C. (2017). Return migration, self-selection and entrepreneurship. *Oxford Bulletin of Economics and Statistics*, *79*(5), 797–821. doi:10.1111/obes.12176

Black, R., & Castaldo, A. (2009). Return migration and entrepreneurship in Ghana and Côte d'Ivoire: The role of capital transfers. *Tijdschrift voor economische en sociale geografie*, *100*(1), 44–58. doi:10.1111/j.1467-9663.2009.00504.x

Boutayeb, A., & Helmert, U. (2011). Social inequalities, regional disparities and health inequity in North African countries. *International Journal for Equity in Health*, *10*(1), 23. doi:10.1186/1475-9276-10-23

Chiquiar, D., & Hanson, G. H. (2005). International migration, self-selection, and the distribution of wages: Evidence from Mexico and the United States. *Journal of Political Economy*, *113*(2), 239–281. doi:10.1086/427464

de Coulon, A., & Piracha, M. (2005). Self-selection and the performance of return migrants: The source country perspective. *Journal of Population Economics*, *18*(4), 779–807. doi:10.1007/s00148-005-0004-4

de Mel, S., McKenzie, D. J., & Woodruff, C. (2009). Measuring microenterprise profits: Must we ask how the sausage is made? *Journal of Development Economics*, *88*(1), 19–31. doi:10.1016/j.jdeveco.2008.01.007

de Vreyer, P., Gubert, F., & Robilliard, A.-S. (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.

Djajić, S., & Vinogradova, A. (2015). Overshooting the savings target: Temporary migration, investment in housing and development. *World Development*, *65*, 110–121. Migration and Development. doi:10.1016/j.worlddev.2014.01.015

Dustmann, C., Fadlon, I., & Weiss, Y. (2011). Return migration, human capital accumulation and the brain drain. *Journal of Development Economics*, *95*(1), 58–67. doi:10.1016/j.jdeveco.2010.04.006

El-Mallakh, N., & Wahba, J. (2021). Upward or downward: Occupational mobility and return migration. *World Development*, *137*, 105203. doi:10.1016/j.worlddev.2020.105203

Grimm, M., Krüger, J., & Lay, J. (2011). Barriers to entry and returns to capital in informal activities: Evidence from Sub-Saharan Africa. *Review of Income and Wealth*, *57*, S27–S53. doi:10.1111/j.1475-4991.2011.00453.x

Hosny, A., Kandil, M., & Mohtadi, H. (2014). What does Egypt's revolution reveal about its economy? *International Economic Journal*, *28*(4), 589–611. doi:10.1080/10168737.2014.907581

International Finance Corporation. (2020). *Egypt country private sector diagnostic* (Technical report). Washington, DC: World Bank Group.

Li, Y., & Rama, M. (2015). Firm dynamics, productivity growth, and job creation in developing countries: The role of micro- and small enterprises. *The World Bank Research Observer*, *30*(1), 3–38. doi:10.1093/wbro/lkv002

Marchetta, F. (2012). Return migration and the survival of entrepreneurial activities in Egypt. *World Development*, *40*(10), 1999–2013. doi:10.1016/j.worlddev.2012.05.009

McKenzie, D., Stillman, S., & Gibson, J. (2010). How important is selection? experimental vs. non- experimental measures of the income gains from migration. *Journal of the European Economic Association*, *8*(4), 913–945. doi:10.1111/j.1542-4774.2010.tb00544.x

Montenegro, C. E., & Patrinos, H. A. (2014). *Comparable estimates of returns to schooling around the world* (Policy Research Working Paper Series 7020). Washington, DC: World Bank Group.

Moretti, E. (2004). Workers' education, spillovers, and productivity: Evidence from plant-level production functions. *American Economic Review*, *94*(3), 656–690. doi:10.1257/0002828041464623

Nichter, S., & Goldmark, L. (2009). Small firm growth in developing countries. *World Development*, *37*(9), 1453–1464. doi:10.1016/j.worlddev.2009.01.013

Owoo, N. S., & Naudé, W. (2016). Spatial proximity and firm performance: Evidence from non- farm rural enterprises in Ethiopia and Nigeria. *Regional Studies 51*(5), 1–13.

Ramos, F. (2007). Out-migration and return migration of Puerto Ricans. In J.B. George & R.B. Freeman (Eds.), Immigration and the Work Force: Economic Consequences for the United States and Source Areas. (pp. 49–66). Chicago: University of Chicago Press.

Reinhold, S., & Thom, K. (2013). Migration experience and earnings in the Mexican labor market. *Journal of Human Resources*, *48*(3), 768–820. doi:10.1353/jhr.2013.0021

Rijkers, B., Söderbom, M., & Loening, J. L. (2010). A rural-urban comparison of manufacturing enterprise performance in Ethiopia. *World Development*, *38*(9), 1278–1296. doi:10.1016/j.worlddev.2010.02.010

Roodman, D. (2011). Fitting fully observed recursive mixed-process models with cmp. *Stata Journal*, *11*(2), 159–206. doi:10.1177/1536867X1101100202

Saxenian, A. (2002). Transnational communities and the evolution of global production networks: The cases of Taiwan, China and India. *Industry and Innovation*, *9*(3), 183–202. doi:10.1080/1366271022000034453

Sun, W. (2013). The productivity of return migrants: The case of China's "Sea Turtles". *IZA Journal of Migration*, *2*(1), 1–19. doi:10.1186/2193-9039-2-5

Wahba, J., & Zenou, Y. (2005). Density, social networks and job search methods: Theory and application to Egypt. *Journal of Development Economics*, *78*(2), 443–473. doi:10.1016/j.jdeveco.2004.11.006

Wahba, J., & Zenou, Y. (2012). Out of sight, out of mind: Migration, entrepreneurship and social capital. *Regional Science and Urban Economics*, *42*(5), 890–903. doi:10.1016/j.regsciurbeco.2012.04.007

Wahba, J. (2015). Selection, selection, selection: The impact of return migration. *Journal of Population Economics* 28, 535–563. doi:10.1007/s00148-015-0541-4.

Wei, Y., Liu, X., Lu, J., & Yang, J. (2017). Chinese migrants and their impact on homeland development. *The World Economy.* doi:10.1111/twec.12475

World Bank. (2014). *The unfinished revolution: Bringing opportunity, good jobs and greater wealth to all Tunisians* (Technical report). Washington, DC: Author.

Appendix

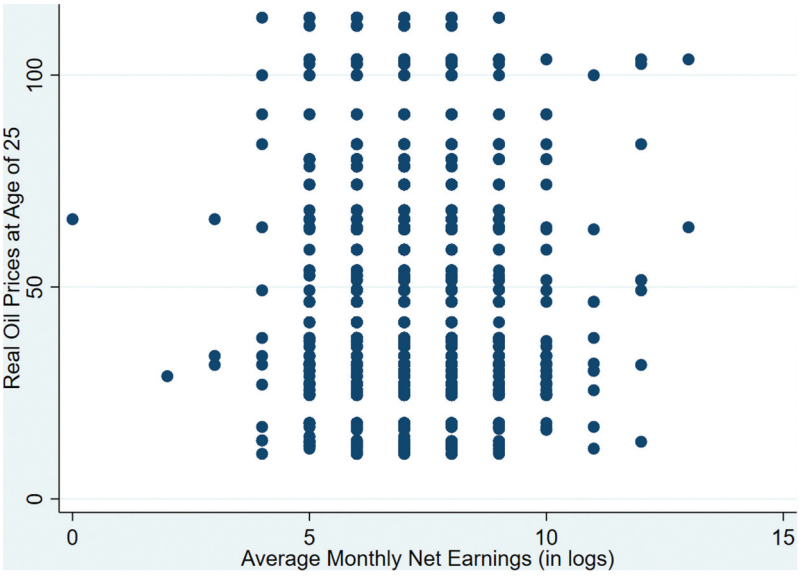

Figure A1. Distribution of average net earnings and oil prices.

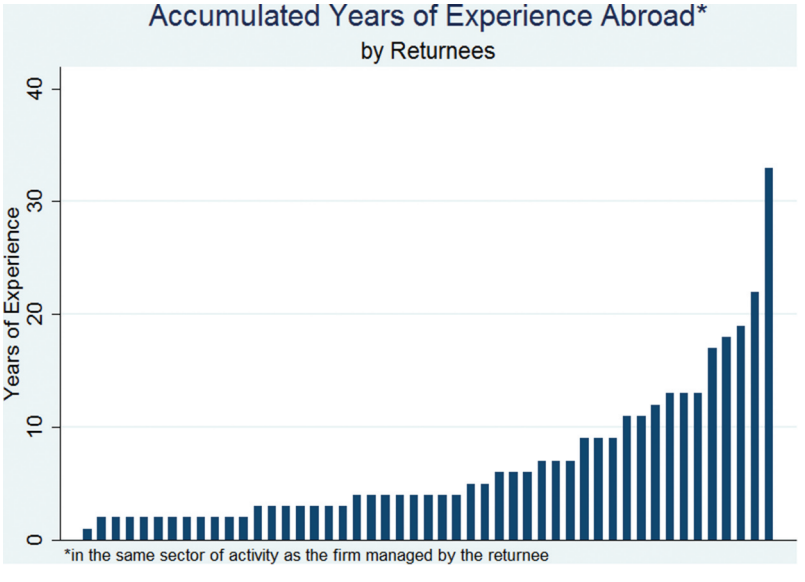

Figure A2. Prior work experience abroad in the same field of activity as the firm managed.

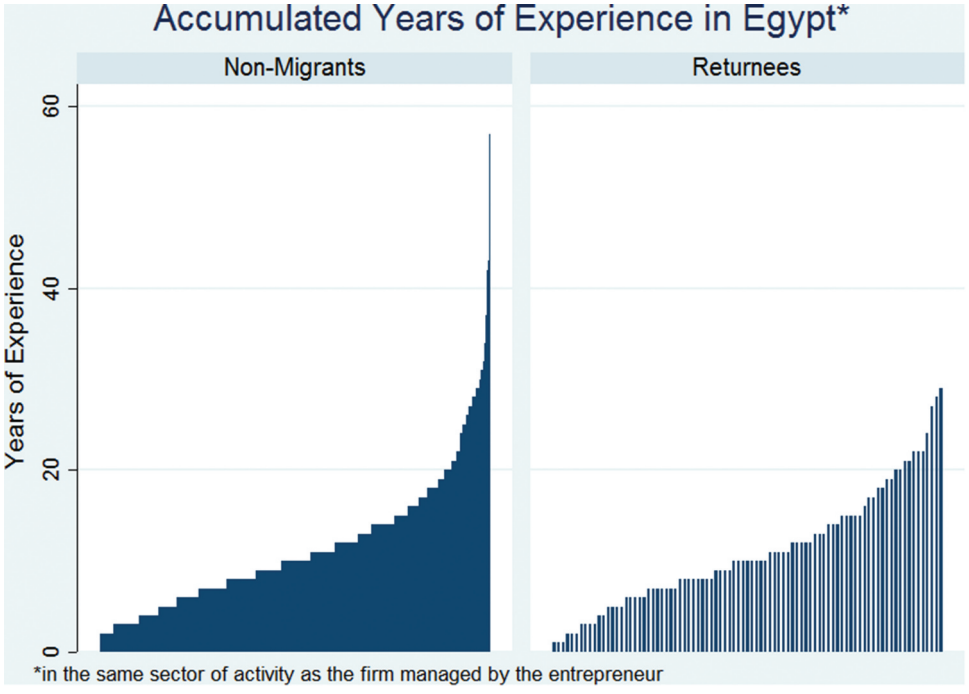

Figure A3. Prior work experience in Egypt in the same field of activity as the firm managed.

Table A1. Matched household firms

Variable	All Firms	Firms with Returnees	Firms without Returnees	*t*-Test
Firm population	532	286	246	
Age of the firm	11.6	11.5	11.7	−0.2
Net monthly earnings	4927.66	3435.5	6701.5	−1
Urban (%)	41.7	41.3	42.2	−0.17
Shared ownership (%)	13.1	14.2	12.1	0.54
Total workers	1.26	1.18	1.33	1.53
Hired workers	0.17	0.25	0.07	1.8*
Number of household members working for the firms	1.09	1.08	1.11	−0.9
Licence (%)	47.3	48.8	46.2	0.51
Bookkeeping (%)	18.3	18.7	18.1	0.1
Registration (%)	33.2	31.3	35.6	−0.9
Tax payment (%)	21.4	22.8	19.9	0.77
Categories of tangible capital	0.9	0.9	0.88	0.2
Main sector of economic activities				
Retail trade, except motor vehicles and motorcycles (47)	39.05	35	43.9	−1.9*
Land transport and transport via pipelines (49)	17.3	18.8	15.4	0.8
Specialised construction activities (43)	8	9.8	5.8	1.5

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).

Table A2. Matched sample: starting and current capital of household firms (% of firm population)

	Starting Capital		
Value in LE (USD)	Firms with Returnees	Firms without Returnees	*t*-Test
None	6.68	8.3	−0.7
1–499 (0.16–83)	15	16.6	−0.4
500–999 (83–165)	11.4	12.3	−0.3
1,000–4,999 (165–826)	21.3	20.6	0.19
5,000–9,999 (826–1652)	14.02	15.3	−0.35
10,000–49,999 (1,652–8,264)	22.8	18.6	1.02
50,000 or more (8,264 or more)	8.5	8.2	0.12
	Current Capital		
Value in LE (USD)	Firms with Returnees	Firms without Returnees	*t*-Test
None	5.2	5.1	0.01
1–499 (0.16–83)	11.1	13.4	−0.7
500–999 (83–165)	7.1	9.2	−0.83
1,000–4,999 (165–826)	17.15	17.65	−0.13
5,000–9,999 (826–1,652)	16.6	17.8	−0.3
10,000–49,999 (1,652–8,264)	28.05	23.5	1.05
50,000 or more (8,264 or more)	14.7	13.1	0.5

Note: Sampling weights included.
Source: Authors' elaboration on ELMPS (2012).