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Return migration and entrepreneurship in Cameroon

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Abstract: In this paper, we examine the determinants of the entrepreneurial behaviour of returnees to Cameroon based on original survey data from 2012. Contrary to the existing literature, we focus on the skills received from abroad without omitting the effect of savings. We distinguish between three types of competences related to qualifications. We also differentiate between the probability of starting a business in the primary sector and the probability of starting a business in the tertiary sector. The main results, obtained from a probit model, show that: (i) degrees and qualifications and qualifications acquired abroad do not positively influence the probability of migrants to undertake a new activity once back home; in contrast, accumulated savings, captured by the time spent abroad, have a positive influence; (ii) other qualifications have no influence on the entrepreneurial behaviour of return migrants; and (iii) the entrepreneurial behaviour of return migrants is not oriented towards the primary sector but rather towards the tertiary sector. These results are robust when we account for endogeneity.

Key words: returnees, skills, entrepreneurship, probit model, endogeneity, Cameroon

JEL classification: C25, F22, J61, L26

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Note: As the research is part of one of the author's PhD thesis, they will hold copyright to facilitate its publication.

On 7 October 2022, the copyright line has been corrected.

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1 Introduction

In addition to reducing unemployment and stimulating economic growth, entrepreneurship contributes to improving competitiveness and adapting to economic change and structural change in economies (Audretsch 2002; Alshanty and Emeagwali 2019). Despite this recognition of the benefits of entrepreneurship for economic development, it is still struggling to take off in developing countries. While a number of obstacles to the development of entrepreneurship in developing countries can be identified, the literature mainly focuses on credit market imperfections (Stark 1991; Massey et al. 1993; Massey and Parrado 1998) and human capital accumulation (Bruns et al. 2008; Dimov 2010; Bradley et al. 2012).

Return migration then appears to be the ideal way to circumvent these obstacles thanks to the financial and human capital acquired by individuals during migration (Caseiro and Coelho 2019; Gruenhagen and Davidsson 2018). This undoubtedly justifies the renewed interest in the economic literature to study the relationship between return migration and entrepreneurship (Hagan and Wassink 2020). In this respect, three observations can be made. First, some work highlights the effects of financial and human capital accumulation during the stay abroad on business creation (Mesnard 2004; Black and Castaldo 2009; Hamdouch and Wahba 2015). Second, other studies put forward the optimal length of time for migrants to accumulate sufficient resources and be productive upon return (Djajić and Milbourne 1988; Dustmann 1995, 1999; Dustmann and Kirchkamp 2002; Mesnard 2004). Finally, some authors go further by comparing the entrepreneurial activity of returned migrants with that of non-migrants (Batista et al. 2017; Loschmann and Marchand 2020; Naudé et al. 2017). Overall, on one hand, empirical work shows that migrants are more entrepreneurial than non-migrants (Démurger and Xu 2011; Batista et al. 2017), and on the other hand, individual and demographic characteristics are determinants of entrepreneurship among return migrants (Démurger and Xu 2011; Hamdouch and Wahba 2015; Wassink 2020).

Although impressive, this literature has several limitations. First, the role of new skills acquired abroad is often minimized. However, the mobilization of resources (tangible and intangible) acquired abroad influences the capacity of migrants to be actors of economic development once they return to their countries of origin (Cassarino 2004; Hagan and Wassink 2016, 2020). Tangible resources mainly include financial capital, while intangible resources include new skills (Cassarino 2004). In particular, for the analysis of intangible resources, while some authors integrate them by considering the intellectual level acquired during migration, migratory experience, and time abroad (Black and Castaldo 2009; Hamdouch and Wahba 2015), other authors consider years of education and migratory experience instead (Démurger and Xu 2011). More recently, Croitoru (2020) and Wassink (2020) have focused on time abroad, education, and migration experience. These different indicators considered separately or taken partially appear to be reductive. Both recent and earlier work show that the capital accumulated abroad includes educational and vocational training, informal learning (which includes skills acquired in the workplace through interaction with colleagues, practice, and trial and error), the acquisition of a new language, and the acquisition of external standards (Findlay et al. 1996; Hagan et al. 2015; Hagan and Wassink 2016; Grabowska 2018).¹ Second, the literature does not distinguish migrant entrepreneurship by activity sector. Most often, authors focus either on a global binary indicator (Black and Castaldo 2009; Wahba and

¹ To our knowledge, only Hagan and Wassink (2016) have made this separation, distinguishing between formal and informal skills in the case of Mexico.

Zenou 2012; Marchetta 2012; Hamdouch and Wahba 2015; Wassink 2020) or on a binary indicator focusing only on agriculture (Démurger and Xu 2011; Loschmann and Marchand 2020). Third, despite the impressive migration waves from sub-Saharan African countries, very few studies focus on these countries (Tabutin et al. 2020). To our knowledge, with the exception of Côte d'Ivoire, Ghana, Senegal, and Mozambique, most of the work focuses on the countries of the Maghreb, the Middle East, Central and Eastern Europe, South-East Asia, and Latin America.

The aim of this article is to fill this gap by examining for the first time the determinants of entrepreneurial behaviour among returning migrants in Cameroon. More specifically, we assess the effect of the capital acquired from the return migrants' migration experience on their propensity to engage in entrepreneurial activity upon return. The choice of Cameroon stems not only from the availability of data but above all from the relevance of return migration in this singular context where it has the best trained diaspora in sub-Saharan Africa (Andréa 2007). We use a unique database resulting from the survey conducted in 2012 by the Institute of Demographic Training and Research (IFORD) with the support of the United Nations Population Organization and the European Union. On one hand, this database allows us to distinguish between the formal and informal skills of return migrants acquired abroad in addition to certain fundamental traditional characteristics such as duration or activity during migration. On the other hand, it allows us to distinguish migrants' entrepreneurship by sector of activity. Like Marchetta (2012) and Hamdouch and Wahba (2015), to control for potential problems of endogeneity, the estimation strategy relies successively on a simple probit, a probit with instrumental variables, and a recursive bivariate probit.

Our main results show that diplomas and qualifications acquired abroad negatively influence the probability of migrants to undertake a new activity once back home. In contrast, accumulated savings, captured by the duration abroad, exert a positive influence. Furthermore, other qualifications have no influence on the entrepreneurial behaviour of return migrants. The latter is not oriented towards the primary sector but rather towards the tertiary sector.

The rest of the article is organized in five sections. Section 2 summarizes the literature on the subject. Section 3 presents the Cameroonian migration context. Section 4 describes the survey data and the characteristics of return migrants. Section 5 carries out the econometric analysis. Section 6 concludes.

2 Literature review

As noted in the introduction, the literature on the impact of return migrants on entrepreneurship can be grouped into three categories. The first category of work, which focuses on the effect of financial and human capital accumulation during the stay abroad on entrepreneurship, contrasts optimistic and pessimistic views.

According to the optimistic view, migration is a means of overcoming credit market imperfections in developing countries. For example, Ilahi (1999), drawing on the case of Pakistani returnees, shows that migrants who undertake non-agricultural entrepreneurship save more than other migrants because of the transitional income accumulated abroad. Following Ilahi (1999), McCormick and Wahba (2001) advance the literature by comparing the determinants of entrepreneurial activity for illiterate and literate Egyptian migrants. Their results reveal that in the case of literate return migrants, time abroad and savings are important elements. In contrast, for illiterate return migrants, only the accumulated savings abroad matter in the probability of

becoming an entrepreneur upon return. Mesnard (2004) shows in the case of Tunisia that migrants who invested once they returned to their country of origin stayed longer and accumulated more money than employed returnees. Gubert and Nordman (2011) extend Mesnard's (2004) analytical framework by integrating the gender aspect. Their results for Tunisia, Egypt, and Morocco confirm that women are less likely than men to become entrepreneurs. In the same vein, Black and Castaldo (2009) find that migration experience and financial capital accumulated abroad are determinants of entrepreneurship for returnees to Côte d'Ivoire and Ghana. Hamdouch and Wahba (2015) reach a similar result for the case of Morocco by considering rather individual and pre-migration characteristics. Zulfiu Alili and Adnett (2021), in the case of Albanian migrants, show using a multinomial logit that the characteristics of migrants before, during, and after migration are the determinants of the entrepreneurship of return migrants. The results also show that the incidence of self-employment is 2–3 times higher than it was before migration and 15 times higher than the percentage of self-employed in the overall population. However, these results are questionable. The authors ignored the problems of endogeneity driven by certain variables such as the duration abroad, which is sufficiently well documented in the empirical literature (Dustmann and Kirchkamp 2002; Wahba and Zenou 2012). Some studies in the case of China show that return migrants play a crucial role in the development of the e-commerce industry by transferring the idea and skills of selling goods online from the cities to the countryside (Koo and Liu 2015; Lu et al. 2015).

More recently, by analysing the role of formal and informal skills acquired abroad on the probability of investment by Mexican returnees, Hagan and Wassink (2016) reveal that human capital acquired abroad has a positive effect on the entrepreneurship of return migrants. Unlike the previous authors, Kilic et al. (2009) analyse the effects of migrant return on the probability of being an entrepreneur in the case of Albania according to the main destination countries of migrants. While an additional year in Greece increases the probability of owning a family business by about 6 per cent, a similar experience in Italy or more distant countries increases the probability by more than 25 per cent.

As for the pessimistic point of view, it casts doubt on the real potential of return migrants to undertake once back home. Among the authors who share this point of view are Naudé et al. (2017), who believe that migrants should not be considered as super entrepreneurs. One of the reasons for this allegation stems from the very definition of entrepreneurship. Piracha and Vadean (2010) had already drawn attention to this point by distinguishing between self-employed individuals and business owners with employees they pay. For these authors, it is the latter who are considered entrepreneurs. While this definition of entrepreneurship is used by Wassink (2020) in the case of Mexico, in most of the existing literature we cannot say exactly whether the entrepreneurship indicators chosen fit this definition. Another definition of entrepreneurship, notably that of Schumpeter (1991), which focuses on innovation, states that the creative destructive power of the entrepreneur calls into question the results of these numerous studies. More often than not, authors use binary indicators as proxies for entrepreneurial activity that do not really inform on the nature of the activity (Black and Castaldo 2009; Hamdouch and Wahba 2015). According to Hart and Acs (2011), about 16 per cent of high-tech firms in a US sample had a migrant owner. In the United States, it has been pointed out that migrant entrepreneurs may be disproportionately represented among high-growth and highly innovative firms (Saxenian 2002; Wadhwa et al. 2007) and biotechnology firms (Stephan and Levin 2001).

More recently, Zulfiu Alili and Adnett (2021) pose the problem of the definition of entrepreneurship. Studies suggest that self-employment is a poor predictor of entrepreneurship. The authors differentiate between necessity and opportunity entrepreneurship (entrepreneurs). The results reveal that women, those who were trained during migration and return migrants who sent

more money per year, were more likely to become entrepreneurs after their return, while men—those who were self-employed before leaving, those who spent more time abroad, those who were forced to return, migrants who returned to their place of birth and residence, and those who returned from Greece—were more likely to be self-employed. Similar to Alili and Adnett (2021) but in a qualitative approach, Kerpaci (2019) analyses the circumstances in which Albanian returnees decided to return and start a business in the city of Tirana, focusing on a necessity-opportunity entrepreneurship. The results reveal that some became entrepreneurs out of necessity to avoid unemployment and others due to business opportunities. In the case of returnees seizing opportunities, some planned their return and intended to start a business before migrating. Their goals in Greece were to save money and acquire the know-how to start and run a business in Albania.

The second category of work puts the spotlight on the optimal length of time for migrants to accumulate sufficient resources and be productive upon return. Models will be developed that take into account savings collected abroad and duration abroad as a solution to the problem of maximizing inter-temporal utility (Djajić and Milbourne 1988; Dustmann 1995, 1999). A simplification of these models has been proposed by Dustmann and Kirchkamp (2002). In the context of Turkish return migrants, these authors develop a model where the migrant simultaneously chooses the optimal duration abroad and the activity to be carried out after return. Among these activities, they distinguish between entrepreneurial activity, salaried employment, and non-participation in the labour market. Overall, the findings reveal that a high wage level is associated with a short stay abroad. Dustmann (2003) further supports the results of Dustmann and Kirchkamp (2002). He shows that the duration of migration is reduced if the wage differential between host and home country increases.

The third category of work compares the entrepreneurial activity of returning migrants with that of non-migrants. Thus, Wahba and Zenou (2012), in the case of Egypt, show that return migrants are more likely to become entrepreneurs than non-migrants despite the loss of social human capital observed among migrants. Kveder and Flahaux (2013) in the Senegalese case show that migrants who have not prepared their return or accumulated capital seem to be over-represented in self-employment. By contrast, those who have prepared their return are more likely to benefit from qualified employment, unlike non-migrants. Démurger and Xu (2011) show in the Chinese case that return migrants are more likely to become entrepreneurs. Batista et al. (2017), analysing the case of Mozambique, find that the probability of owning a business for a household with a migrant is higher than for a household without a migrant. This probability appears higher after correcting for self-selection problems.

Looking at the existing literature, three main problems emerge. First, there is a lack of empirical studies focusing on the effect of new skills acquired abroad on the probability of investing. Second, very few studies correct for endogeneity issues. The decision to become an entrepreneur pushes migrants to choose the specific skills and the optimal duration abroad, allowing them to gather the necessary resources in order to invest once back (Dustmann and Kirchkamp 2002). The literature also presents evidence that new skills acquired abroad have an effect on the likelihood of investing once back home. Similarly, the duration abroad influences the resources acquired abroad and has an effect on the probability of investing once back (Dustmann 2003; Hamdouch and Wahba 2015). Third, the literature has not made a distinction between migrant entrepreneurship by sector of activity. Ignoring this endogeneity problem leads to biased results. Finally, despite the impressive migration waves from sub-Saharan African countries, very few studies focus on these countries (Tabutin et al. 2020). To our knowledge, with the exception of Côte d'Ivoire, Ghana, Senegal, and Mozambique, most of the work focuses on the countries of the Maghreb, the Middle East, Central and Eastern Europe, South-East Asia, and Latin America. This article therefore aims to fill this gap

in the literature by analysing the effects of new skills acquired abroad on the probability of investing in the case of Cameroon.

3 The Cameroonian migration context

Researchers have focused little attention on Cameroonian international migration, even though the migration history of this Central African country is very rich. After the economic crisis of the 1980s, which led to the adoption of structural adjustment policies and the devaluation of their currency, the CFA franc, in 1994 the Cameroonian people adopted migration as a solution to improving their living conditions. Cameroonians see migration mainly to Europe, the United States, and the Near and Far East as a means of overcoming obstacles at the national level (Pelican 2013). According to the United Nations Department of Social Affairs (UNDESA), the number of Cameroonian international migrants has doubled in recent decades. It has increased from 266,000 in 1990 to 579,200 in 2020. This increase in the flow of international migrants can be explained by the implementation of migration policies in some Western countries, seeking skilled labour to cope with the ageing of their population (Zourkaleini et al. 2013). For example, for Andréa (2007), Cameroonian migrants constitute an important economic potential for both German and Cameroonian society because of their dynamism and high educational profile.

Despite this dynamism of Cameroonian migrants, very few studies have focused on their involvement in the development process of their country. This marginalization of the literature could be explained by the lack of data at the national level. This concern has recently attracted the attention of organizations in charge of migration—hence the creation of a programme called Assisted Voluntary Return. According to International Labor Organisation, this involves logistical, financial, and administrative support, including reintegration assistance for migrants unable to stay in the host or transit country and wishing to return to their country of origin. This programme has enabled the UNDESA to include assisted voluntary return in its database. Thus, this indicator reveals that between 2012 and 2018 the number of assisted Cameroonian returnees increased significantly. It went from 90 in 2012 to 1,700 in 2018 despite a significant drop to 1,300 in 2019. Alongside these migrants who return following particular programmes, there are migrants who lead a transnational life or who return after achieving their objectives abroad (Djajić and Milbourne 1988; Dustmann 1999; Cassarino 2004).

Cameroon is a prime field for analysing the effects of return migration on entrepreneurship. Its economic structure is dominated by small and medium-sized enterprises (SMEs). The latter vary very little due to financing failures on the part of financial institutions and the level of human capital accumulation (Kenfack 2016).

In an attempt to find solutions, the Cameroonian government has established the bank for SMEs and vocational training grants through the Ministry of Employment and Vocational Training. Despite this attempt to find solutions, problems related to financing and human capital accumulation persist. In this constrained economic context, international migration via returning migrants offers the possibility of mobilizing financial resources and accumulating new skills. This could stimulate opportunities for entrepreneurship (Marvel 2013; Hagan and Wassink 2016, 2020).

4 Data and characteristics of return migrants

4.1 Presentation of IFORD survey data

Our work is based on data collected from 4 August to 9 September 2012 in Cameroon by IFORD. These data were collected as part of the project entitled 'Impact of South-South migration on the development of Cameroon' and financed by the United Nations Population Fund and the European Union. This survey made it possible to collect data on the socio-demographic characteristics of migrants. In the case of return migrants, it collected information on age, marital status, gender, level of education, activity before leaving Cameroon, migratory experience, and reasons for returning to Cameroon.

In the context of the quantitative survey, the target populations are composed of the members of the households included in the samples, whether or not they include a migrant. The sampling frame (population and households per village/neighbourhood) is derived from data from the third General Census of Population and Housing (RGPH) conducted in 2005 and from the Cameroon Household Survey (ECAM 3) conducted in 2007. The villages/neighbourhoods, representing here the enumeration sections or enumeration area, constitute the primary survey units that were all covered. An enumeration of all households in the enumeration sections was carried out by collecting some information to decide on the eligibility of the household (i.e. whether or not there was a migrant in the household), as well as geographical information to re-contact these households. All villages/neighbourhoods and households meeting this eligibility criterion constitute the sampling frame for the systematic drawing of households from the sample.

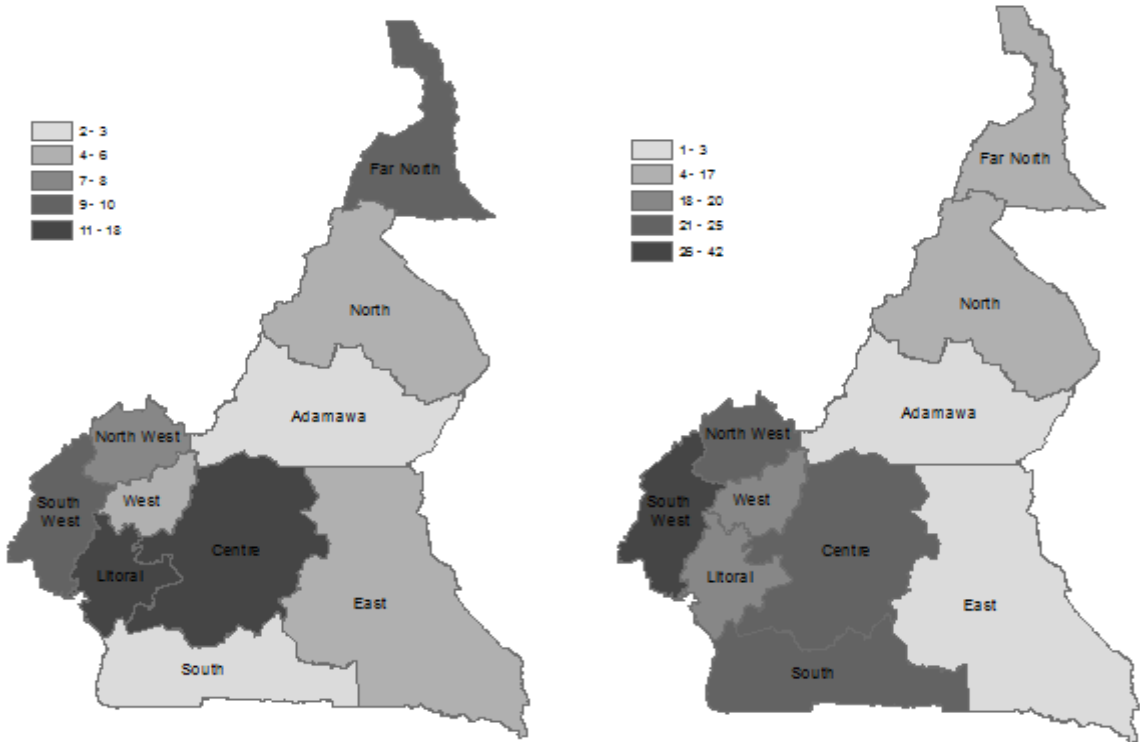
From the list of households from the enumeration, 15 households per village/neighbourhood were selected by systematic drawing. For each village/neighbourhood, these households are ideally distributed as follows: 10 households with at least one migrant (seven with at least one South-South migrant and three with at least one North-South migrant) and five households without migrants. However, it is important to note that if the information from the enumeration did not allow for this ideal distribution, the draw was made by respecting the maximum number (10) of households with at least one migrant of any kind or by selecting all households with at least one migrant if their number is less than 10. Based on the enumeration sheet that lists households that meet the eligibility criteria, a household 'n' was replaced with the next household 'n+1'. If the latter was also unavailable, it was replaced by household 'n-1' and so on.

The study sample is based on an aerial, stratified, two-stage draw. In the first stage, primary sampling units were selected on the basis of the emigration and international immigration weights of each department in the region to which it belongs and according to the place of residence. These selected departments were then used as the sampling frame for the selection of 82 villages/neighbourhoods (71 urban and 11 rural), which were selected with probability proportional to size. In the second stage, a sample of households (15) in each village/neighbourhood, preferably 10 with at least one migrant (seven with at least one South-South migrant and three with at least one South-North migrant) and five with no migrants, was drawn. All members of these selected households were identified using a household questionnaire.

Figure 1. Number of villages surveyed and percentage of migrants by region

(a) Number of villages surveyed by region

(b) Percentage of migrants by region



Source: authors' construction based on the survey conducted by IFORD.

The questionnaire administered enabled data to be collected in 82 villages spread over the 10 regions of Cameroon, in addition to the cities of Douala and Yaoundé (see Figure 1). This data collection revealed a total of 1,235 households, 287 immigrants, and 332 returnees. For the purposes of this article, only return migrants are of interest to us.

A return migrant is any household member who was born or stayed in Cameroon but has lived in another country for three months or more. This definition is consistent with that of the United Nations Statistical Division, which takes into account country of citizenship and long-term migration, and with that of the Organisation for Economic Co-operation and Development, which focuses on country of birth to avoid excluding those who have become naturalized abroad.

4.2 Origin of returnees

Table 1 presents statistics on the distribution of migrants by destination. It emerges from Table 1 that the favourite destination of the return migrants in our sample is Central Africa, which accounts for 46.68 per cent, followed by West Africa at 32.53 per cent, Europe at 9.93 per cent, the Maghreb at 5.41 per cent, other continents at 4.21 per cent, and other countries (Madagascar, Botswana, and Sudan) at 1.204 per cent. As far as migrants from Central Africa are concerned, 57 come from Gabon and 38 from Chad—a respective percentage of 36.77 per cent and 24.51 per cent of all migrants from Central Africa. In the case of West Africa, Nigeria alone received 74 migrants—68.51 per cent. In the case of Europe, France alone received 20 migrants, or 60.60 per cent. In the case of the Maghreb, the distribution seems more balanced.

Table 1. Distribution of return migrants by area of provenance

Area of provenance	Number of return migrants	Percentage
Central Africa	155	46.686
West Africa	108	32.53
Maghreb	18	5.421
Europe	33	9.939
Other continents (excluding Europe and Africa)	14	4.216
Others	4	1.204
Total	332	

Source: authors' calculations based on the survey conducted by IFORD.

4.3 Activities of returnees

After having presented the characteristics relating to the destination of return migrants, we present below those relating to the activity carried out before and after migration. This information is gathered in Table 2.

Table 2. Main activity before and during migration

Activities	Before migration	Percentage	During migration	Percentage
School/training	89	26.807	64	19.277
Salaried work	66	19.879	102	30.722
Self-employed worker	128	38.554	78	23.493
Unemployed	30	9.036	45	13.554
Unpaid work	4	1.204	8	2.409
Retired	4	1.204	4	1.204
Others	11	3.313	31	9.337
Total	332		332	

Source: authors' calculations based on the survey conducted by IFORD.

First, before migration, 26.807 per cent of migrants were in school and training compared to 19.277 per cent after migration. There are two main reasons for this discrepancy. On one hand, given the fact that this is a study focusing on South-South migration, very few migrants from African countries may have needed additional training as opposed to migrants from other regions in order to get a job. On the other hand, the percentage of migrants from other regions is very low (see Table 1), which may explain this decrease in the number of migrants in training during migration. Second, there is an increase in the number of employed workers by 10.843 per cent. This increase is in line with theoretical work on migration. Indeed, as the choice of professional status and the decision to migrate are taken simultaneously, migrants choose an optimal duration abroad allowing them to accumulate sufficient resources to realize their entrepreneurial projects upon return (Dustmann and Kirchkamp 2002; Mesnard 2004). Savings are thus an important determinant of entrepreneurial activity after return (Hamdouch and Wahba 2015; Wassink 2020). Therefore, the surplus of employed migrants after migration can be explained mainly by the desire to build up savings. Third, there is a decrease in the percentage of the self-employed. This suggests that migrants are more likely to be wage earners in order to gather resources abroad as quickly as possible. Fourth, there is a rise in the unemployment rate during migration. This can be explained by the fact that migrants largely come from the South (see Table 1). As migrants are most often confronted with exploitative and abusive jobs, including forced labour, they may have an incentive to refuse certain requests for work in an African context where labour is very low paid. Finally, there is an increase in self-employment during migration. This may be explained by the migrant's desire to accumulate the necessary resources abroad in order to be able to start his or her own business once back to the country of origin.

In this work, the definition of entrepreneurship used respects two considerations. First, as in Wassink (2020), it includes any self-employed activity with at least one non-family employee. Second, it also includes any self-employment with or without a family employee. This choice is conditioned by the database that does not allow separating the two types of activities.

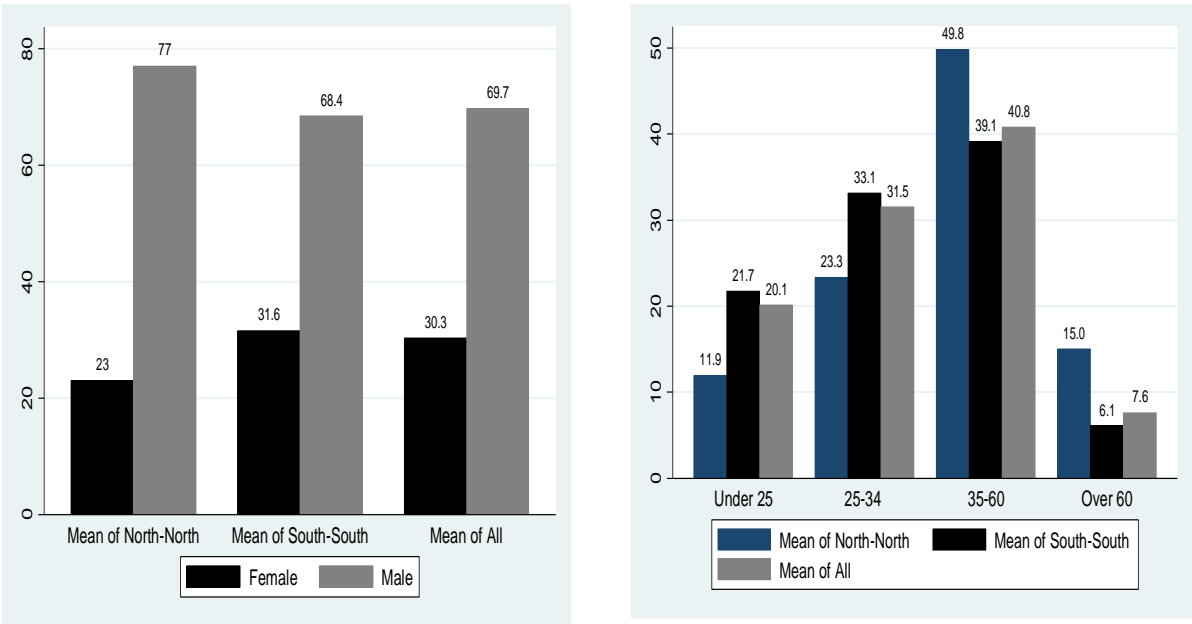
4.4 Distribution of returnees by age and gender

In addition to the above information, this database also provides us with statistics on the age of migrants according to whether they come from a third-world country or a developed country. Data relating to gender are presented according to this same characteristic. Figure 2 provides information on the age and sex of migrants according to the above-mentioned characteristic.

Figure 2. Distribution of return migrants by sex and by age group (%)

(a) Distribution of return migrants by sex (%)

(b) Distribution of return migrants by age group (%)



Note: North-North refers to migrants coming from a developed country. South-South refers to migrants coming from a developing country. All means taking into account all migrants.

Source: authors' construction based on the survey conducted by IFORD.

5 Econometric analysis of the determinants of entrepreneurship of returnees

5.1 Probit model

We consider a simple probit model inspired by Hamdouch and Wahba (2015) and Wassink (2020). More specifically, we model the probability (Y_i^*) that a returnee i will start a business. Since the latent probability of starting a business depends on unobserved factors, we cannot estimate directly

Y_i^* . Thus, the specified model captures the observed probability that return migrant i will start a business (Y_i). We do not observe Y_i^* unless the returnee i has invested in a project. That is to say:

$$Y_i = \begin{cases} 1 & \text{if } Y_i^* > 0 \\ 0 & \text{if } Y_i^* \leq 0 \end{cases} \quad (1)$$

The unobservable latent variable Y_i^* is written:

$$Y_i^* = X\alpha + \varepsilon_i \quad (2)$$

More specifically, equation 2 is written:

$$Y_i^* = \beta_1 N_i + \beta_2 D_i + X\alpha + \varepsilon_i \quad (3)$$

where N_i represents the new skills acquired abroad² by the returnee i . In order to identify the different types of competences acquired abroad, we approximate this variable alternatively by degrees and qualifications, other qualifications, and qualifications acquired abroad. D_i refers to the savings accumulated abroad by the returnee i . However, in the absence of savings accumulated abroad, such as Dustmann and Kirchkamp (2002), Wahba and Zenou (2012), and Hamdouch and Wahba (2015), we use the duration of migration abroad.³ X_i represents the vector of individual and demographic characteristics of the returnee i . These control variables can be summarized as the individual characteristics of the migrants, the migratory experience, the situation after return, social capital and the area of provenance. With regard to individual characteristics, we mobilize variables such as age (used to analyse the increase in age on the probability of investing) and level of education (Démurger and Xu 2011; Wassink 2020; Hamdouch and Wahba 2015). As for the migration experience, we integrate the following variables: invested overseas and membership in a migrant network approximated by the variable active association (Black and Castaldo 2009). With regard to the situation after return, we retain two variables, namely the place of residence and the duration since return to the country of origin (Hamdouch and Wahba 2015). With regard to the situation before migration, we retain one variable, namely self-employed/salaried work (Hamdouch and Wahba 2015). With regard to social capital, we use remittances (Wahba et Zenou 2012). Remittances allow migrants to maintain ties with the country of origin (Hagan and Wassik 2020). As regards the area of provenance, this variable includes three modalities: return migrants from Western country (reference group), West and Central Africa. These variables are in line with the debate on the effects of area of provenance on entrepreneurship (Kilic et al. 2009; Wassink 2020). ε_i refers to the term error, distributed according to a normal law of mean 0 and variance 1.

² Very little used in the literature on return migration, this human capital accumulated abroad is nevertheless considered on a theoretical level as one of the levers on which return migrants rely to boost economic development. Migrants acquire new skills through formal vocational training. But much more, they acquire skills informally in the workplace through interaction with colleagues, observation, and trial and error (Grabowska 2018).

³ Dustmann and Kirchkamp (2002) show that the stock of capital accumulated by the migrant depends on the duration of the migrant's stay abroad.

Table 3. Variables' presentation

Variables	Description	Observations	Mean	Standard errors
<i>Variable of interest</i>				
Qualifications	=1 if the migrant has received any training or qualification abroad and 0 otherwise	332	0.461	0.499
Degrees and qualifications	=1 if the migrant has acquired new training and qualifications abroad during their stay and 0 otherwise	332	0.256	0.437
Other qualifications	=1 if the migrant has acquired other competences such as conduct, social and environmental norms, or any other informally acquired competence and 0 otherwise	332	0.364	0.482
Log duration abroad	Variable valued in months ranging from 3 to 390 months	332	3.439	0.7051
<i>Instruments</i>				
Language mastery	=1 if the migrant masters the language of the host country and 0 otherwise	332	0.771	0.421
Residence permit/nationality	=1 if the migrant has obtained a residence permit/nationality of the host country and 0 otherwise	332	0.340	0.475
<i>Education level</i>	=0 if the migrant has no level of education (reference group); 1 if the migrant has a level of education corresponding to primary school; 2 if the migrant has a level of education corresponding to university	332	1.765	0.889
<i>Dependent variables</i>				
New activity	=1 if the migrant has undertaken self-employment or any self-employment with at least one family or non-family employee and 0 otherwise	332	0.566	0.496
Primary sector	=1 if the migrant has undertaken an activity in the primary sector and 0 otherwise	332	0.0904	0.287
Tertiary sector	=1 if the migrant has undertaken an activity in the tertiary sector and 0 otherwise	332	0.476	0.50
<i>Individual characteristics</i>				
Age	Variable ranging from 12 to 77 years	332	36.858	12.843
<i>Migration experience</i>				
Invested overseas	=1 if the migrant has invested overseas and 0 otherwise	332	0.542	0.499
Active association	=1 if the migrant is a member of a transnational association and 0 otherwise	332	0.13	0.336
Area of provenance	=0 if a Western country was the migrant's host country (reference group); 1 if West Africa was the migrant's host country; 2 if Central Africa was the migrant's host country	332	2.160	0.778
<i>Social capital</i>				

Remittances	=1 if the migrant had transferred money to a person while abroad and 0 otherwise	332	0.361	0.481
<i>Situation before migration</i>				
Self-employed/salaried work	=1 if the migrant was an employee or entrepreneur during migration and 0 otherwise	332	0.617	0.487
<i>Situation after migration</i>				
Log duration since return	Estimated duration in months ranging from 9 to 566 months	332	2.996	1.6345
Place of residence	=1 if the migrant lives in an urban area and 0 otherwise	332	0.837	0.37

Source: authors' calculations based on the survey conducted by IFORD.

Contrary to previous work, the general investment of return migrants is also subdivided into investment in the primary sector and investment in the tertiary sector.⁴ Table 3 presents descriptive statistics for all the variables used.

5.2 Discussion of the results

We proceed in three stages for better legibility. First, we present and discuss the results of the marginal effects from the estimation of the probit model in the case where the variable of interest (new competences acquired abroad) is approximated by degrees and qualifications (Table 4), other qualifications (Table 5), and qualifications (Table 6). In each table, we introduce the variables progressively. Our variables of interest, namely new skills acquired abroad and duration abroad, are globally significant. An exception is made when the new skills acquired abroad are captured by the other qualifications. This variable is not significant. The results show that skills such as driving, or any skills acquired in an informal setting, have no effect on the probability of investing. Similarly, when migrants' investment is focused on the primary sector, few variables are significant. This result can be explained by the fact that only 18 migrants invested in this sector out of all 332 migrants. Let us focus on the significant variables of interest. The negative effect of new skills acquired abroad is contrary to the results of the optimistic authors who believe that these new skills have a positive effect on business creation upon return. An illustration is given in the work of Hagan and Wassink (2016) who show that these skills have a positive effect on the probability of investing. On the other hand, this negative effect is consistent with the results of pessimistic authors who do not consider migrants as super entrepreneurs (Naudé et al. 2017; Zulfiu Alili and Adnett 2021). In the theoretical literature, the negative effect can be explained by the fact that migrants acquire skills abroad that do not correspond to the specific needs of their country of origin (Cassarino 2004). In the case of the duration abroad variable, the positive effect is consistent with the empirical literature (Black and Castaldo 2009; Hamdouch and Wahba 2015; Wassink 2020). According to this literature, migrants choose an optimal duration abroad that allows them to gather the most resources for the return (Stark 1991; Dustmann 2003; Mesnard 2004).

⁴ The primary sector refers to agriculture and extraction (working the soil, subsoil, and water), and the secondary sector refers to the more or less elaborate transformation of raw materials. The tertiary sector, on the other hand, refers broadly to trade and services. We recoded the new activity variable on the basis of this definition. This shows that no returnees invested in the primary sector. Only the secondary and tertiary sectors are taken into account in addition to the new activity variable. The exclusion of the secondary sector is explained by the fact that our database does not provide us with information on this subject.

With regard to the other control variables, the results show that, overall, the age of the migrant, their place of provenance, their professional status before migration, place of residence, and duration after migration have a positive influence on the probability of investing overall and specifically in the tertiary sector. The positive effect of age on the probability of investing is contrary to some results obtained in the empirical literature (Wahba and Zenou 2012; Hamdouch and Wahba 2015). In many studies, age is an important determinant of entrepreneurship as the probability of entrepreneurship increases with age (Horton 1987; Fairlie and Meyer 1996). Indeed, age measures past work experience, accumulation of start-up capital, and establishment of a professional reputation (Carr 1996; Borjas 1986). In addition, Butler and Herring (1991) associate age with the acquisition of skills and experience needed to run a business. In contrast to migrants from the Western countries, those from West Africa have a positive effect on the probability of entrepreneurship. This result can be attributed to the number, as migrants from the Western countries (Maghreb, Europe, Asia and North America, the reference modality) represent only 20 per cent of all migrants.

The positive effect of professional status (self-employed or salaried) before migration is in line with the results obtained in other studies (Wahba and Zenou 2012; Hamdouch and Wahba 2015). This effect can be explained by the fact that these migrants, through their past professions, have accumulated professional experience that is fundamental in the process of setting up a business. The positive effect of the environment of residence also corroborates the results of previous work (Hamdouch and Wahba 2015). A possible explanation for this positive effect may be due to the fact that unlike rural areas, which present obstacles that hinder entrepreneurial activity such as lack of access to resources, urban areas are conducive to the development of entrepreneurship because of location effects, urbanization effects, and the argument of Glaeser et al. (2010). Finally, the positive effect of duration after return is also a result present in the work of Hamdouch and Wahaba (2015). This positive effect can be explained theoretically by the reintegration process. After a long stay abroad, the migrant needs time to reintegrate into his or her home community (Cassaorino 2004). Once this integration has taken place, they can engage in a new activity to make use of the skills acquired during the migration.

The probit specification represented by equation 3 does not solve the endogeneity problems (Démurger and Xu 2010; Hamdouch and Wahba 2015; Wassink 2020) driven by the variables duration abroad and new skills (illustrated in the session robustness checks). In case of endogeneity, the coefficients from the estimation of the probit model may be under- or overestimated (Hamdouch and Wahba 2015). Thus, to solve this endogeneity problem, we estimate a two-stage probit with instrumental variables.

Table 4. Probability of investment, taking into account degrees and qualifications (probit model)

	New activity			Primary sector			Tertiary sector		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Degrees and qualifications		-0.171*	-0.391*		0.532**	0.616**		-0.359**	-0.652***
		(0.1042)	(0.203)		(0.259)	(0.289)		(0.179)	(0.211)
Log duration abroad			0.211*			-0.297			0.294**
			(0.125)			(0.198)			(0.123)
<i>Individual characteristics</i>									
Age	-0.00671	-0.00639	-0.0104*	0.0104	0.00972	0.00165	0.0108*	-0.0101*	0.0106*
	(0.00611)	(0.0062)	(0.00622)	(0.00849)	(0.00872)	(0.0101)	(0.00610)	(0.00612)	(0.00627)
<i>Migration experience</i>									
Invested overseas	-0.0792	-0.111	-0.149	0.0576	0.160	0.307	-0.0902	-0.152	-0.257
	(0.206)	(0.209)	(0.236)	(0.298)	(0.308)	(0.346)	(0.203)	(0.206)	(0.232)
Active association	-0.193	-0.177	-0.415*	-0.126	-0.238	-0.131	-0.142	-0.105	-0.380
	(0.215)	(0.215)	(0.241)	(0.357)	(0.375)	(0.409)	(0.215)	(0.216)	(0.245)
Area of provenance (ref group: Western countries)									
West Africa	0.323*	0.330*	0.452**	0.731**	0.722**	0.707**	-0.788	0.771**	0.722**
	(0.196)	(0.196)	(0.213)	(0.306)	(0.311)	(0.327)	(0.419)	(0.323)	(0.334)
Central Africa	-0.229	-0.211	-0.238	0.169	0.0837	0.0906	-0.285	-0.248	-0.279
	(0.193)	(0.194)	(0.216)	(0.332)	(0.340)	(0.374)	(0.192)	(0.194)	(0.217)
<i>Social capital</i>									
Remittances	-0.134	-0.129	0.0125	-0.381	-0.407	-0.364	0.0138	0.0237	0.143
	(0.160)	(0.160)	(0.180)	(0.250)	(0.256)	(0.284)	(0.158)	(0.159)	(0.179)
<i>Situation before migration</i>									
Self-employed/salaried work	0.247	0.231**	0.118*	-0.123	-0.0544	-0.219	0.237	0.206*	0.174**
	(0.186)	(0.116)	(0.007)	(0.273)	(0.281)	(0.313)	(0.184)	(0.124)	(0.0887)
<i>Education level (ref group: none)</i>									
Primary	0.0110	0.0154	-0.0517	0.258	0.244	0.172	-0.127	-0.123	-0.155
	(0.264)	(0.264)	(0.327)	(0.376)	(0.380)	(0.460)	(0.263)	(0.264)	(0.322)
Secondary	0.102	0.129	0.0308	0.0388	-0.0584	-0.142	0.0732	0.127	0.0808
	(0.232)	(0.233)	(0.295)	(0.344)	(0.353)	(0.436)	(0.232)	(0.234)	(0.292)
University	0.0910	0.160	0.103	-0.0797	-0.300	-0.440	0.0937	0.238	0.270
	(0.273)	(0.282)	(0.334)	(0.413)	(0.433)	(0.501)	(0.271)	(0.281)	(0.332)
<i>Situation since return</i>									
Place of residence (ref group: rural)	0.310*	0.311*	0.423*	0.126	0.204	0.0633	0.229	0.208	0.395*
	(0.188)	(0.187)	(0.220)	(0.286)	(0.297)	(0.326)	(0.189)	(0.191)	(0.227)
Log duration since return	0.00238*	0.00240**	0.00222**	-0.00164	-0.00173	-0.00150	0.00268**	0.00275**	0.00256*

	(0.00122)	(0.00122)	(0.00113)	(0.00183)	(0.00183)	(0.00205)	(0.00118)	(0.00117)	(0.00133)
Pseudo R-squared	0.051	0.053	0.081	0.088	0.109	0.11	0.032	0.416	0.077
Sample size	332	332	332	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

Table 5. Probability of investment, taking into account other qualifications (probit model)

	New activity		Primary sector		Tertiary sector	
	(1)	(2)	(3)	(4)	(5)	(6)
Other qualifications	-0.0370 (0.155)	-0.124 (0.175)	0.164 (0.227)	-0.0113 (0.259)	-0.0986 (0.154)	-0.121 (0.172)
Log duration abroad		0.207* (0.123)		-0.232 (0.191)		0.215* (0.120)
<i>Individual characteristics</i>						
Age	-0.00665 (0.00613)	-0.0106 (0.00691)	0.0101 (0.00849)	0.00303 (0.00970)	0.0106* (0.00611)	0.0110* (0.0066)
<i>Migration experience</i>						
Invested overseas	-0.0805 (0.206)	-0.0696 (0.231)	0.0539 (0.297)	0.205 (0.337)	-0.0938 (0.203)	-0.132 (0.227)
Active association	-0.186 (0.217)	-0.417* (0.243)	-0.163 (0.360)	0.00579 (0.388)	-0.123 (0.217)	-0.396 (0.245)
Area of provenance (ref group: Western countries)						
West Africa	0.323* (0.196)	0.433** (0.212)	0.731** (0.307)	0.708** (0.321)	-0.00175 (0.192)	0.345* (0.207)
Central Africa	-0.230 (0.193)	-0.286 (0.214)	0.173 (0.332)	0.211 (0.359)	-0.353* (0.206)	-0.344 (0.214)
<i>Social capital</i>						
Remittances	-0.128 (0.162)	0.0287 (0.182)	-0.418 (0.256)	-0.370 (0.284)	0.0307 (0.161)	0.159 (0.180)
<i>Situation before migration</i>						
Self-employed/salaried work	0.248* (0.1503)	0.157** (0.0801)	-0.116 (0.272)	-0.306 (0.305)	0.240 (0.185)	0.220** (0.111)
<i>Education level (ref group: none)</i>						
Primary	0.0146 (0.264)	-0.0605 (0.326)	0.243** (0.112)	0.211** (0.107)	-0.118 (0.263)	-0.179 (0.319)
Secondary	0.108 (0.233)	-0.00367 (0.294)	0.0218 (0.346)	-0.0478 (0.426)	0.0891 (0.233)	0.00273 (0.289)
University	0.104 (0.278)	-0.00680 (0.328)	-0.133 (0.421)	-0.203 (0.484)	0.127 (0.276)	0.0489 (0.323)
<i>Situation after migration</i>						
Place of residence (ref group: rural)	0.309* (0.188)	0.430* (0.219)	0.137 (0.288)	-0.0250 (0.312)	0.225 (0.189)	0.402* (0.223)
Log duration since return	0.00237* (0.00122)	0.00217** (0.00109)	-0.00168 (0.00183)	-0.00156 (0.00208)	0.00268** (0.00118)	0.00240* (0.00134)
Pseudo R-squared	0.052	0.072	0.091	0.093	0.033	0.052
Sample size	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

Table 6. Probability of investment, taking into account qualifications (probit model)

	New activity		Primary sector		Tertiary sector	
	(1)	(2)	(3)	(4)	(5)	(6)
Qualifications	-0.0739 (0.152)	-0.386* (0.213)	0.519** (0.232)	-0.698* (0.310)	-0.262* (0.151)	-0.407** (0.173)
Log duration abroad		0.430** (0.208)		-0.232 (0.191)		0.253** (0.121)
<i>Individual characteristics</i>						
Age	0.011* (0.006)	0.011* (0.006)	0.00989 (0.00860)	0.00303 (0.00970)	0.0103* (0.00614)	0.011* (0.006)
<i>Migration experience</i>						
Investment overseas	-0.0850 (0.207)	-0.0879 (0.232)	0.0728 (0.299)	0.205 (0.337)	-0.110 (0.204)	-0.161 (0.228)
Active association	-0.182 (0.216)	-0.409* (0.242)	-0.233 (0.367)	0.00579 (0.388)	-0.104 (0.217)	-0.371 (0.245)

Area of provenance (ref group: Western countries)						
West Africa	0.324*	0.445**	0.708**	0.708**	0.00439	0.768**
	(0.196)	(0.212)	(0.309)	(0.321)	(0.192)	(0.306)
Central Africa	-0.225	-0.260	0.0858	0.211	-0.273	-0.305
	(0.193)	(0.215)	(0.337)	(0.359)	(0.193)	(0.216)
<i>Social capital</i>						
Remittances	-0.123	0.0369	-0.488*	0.443**	0.0550	0.195
	(0.161)	(0.181)	(0.261)	(0.213)	(0.161)	(0.180)
<i>Situation before migration</i>						
Self-employed/salaried work	0.243	0.351**	-0.0518	-0.306	0.465*	0.453**
	(0.186)	(0.178)	(0.276)	(0.305)	(0.255)	(0.210)
Education level (ref group: none)						
Primary	0.0151	-0.0541	0.234	0.211	-0.113	-0.154
	(0.264)	(0.326)	(0.387)	(0.453)	(0.263)	(0.320)
Secondary	0.115	0.0170	-0.0184	-0.0478	0.117	0.0533
	(0.233)	(0.294)	(0.353)	(0.426)	(0.234)	(0.291)
University	0.125	0.0615	-0.292	-0.203	0.213	0.203
	(0.281)	(0.334)	(0.431)	(0.484)	(0.280)	(0.329)
<i>Situation after migration</i>						
Place of residence (ref group: rural)	0.313*	0.406*	0.207	-0.0250	0.202	0.409*
	(0.188)	(0.221)	(0.296)	(0.312)	(0.191)	(0.230)
Log duration since return	0.00237*	0.00215	-0.00170	-0.00156	0.00267**	0.00238*
	(0.00122)	(0.00140)	(0.00186)	(0.00208)	(0.00117)	(0.00134)
Pseudo R-squared	0.0524	0.076	0.114	0.093	0.039	0.066
Sample size	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

5.3 Robustness checks

In order to test the sensitivity of our results and to check for potential endogeneity problems, we perform a robustness test based on the change of the estimation method. An endogeneity problem may result from the existence of reverse causality. In our case, reverse causality can occur at two levels. First, the decision to become an entrepreneur and the acquisition of new skills abroad may influence each other. Temporary migration can influence the professional choice of migrants once they go back home (Dustmann and Kirchkamp 2002; Mesnard 2004). To this end, once abroad, migrants acquire skills that correspond to the specific needs of the country of origin (Cassarino 2004). Therefore, the new skills acquired abroad influence their prospects of becoming an entrepreneur upon return. Migrants acquire abroad, in addition to financial capital, human capital that expands their entrepreneurial potential upon return (Hagan and Wassink 2016).

At the same time, the decision to become an entrepreneur may lead the migrant to seek appropriate academic and vocational training or specific jobs that will enable them to acquire specific skills for entrepreneurship upon return (Cassarino 2004). Second, reverse causality may also be driven by the variable duration abroad. If an individual migrates abroad with the specific aim of starting an activity upon return, then the duration of migration is assumed to be endogenous to the occupational choice upon return (Dustmann and Kirchkamp 2002; Dustmann and Weiss 2007). Empirical evidence has emerged in recent years showing that migrants choose an optimal duration abroad that allows them to accumulate sufficient resources abroad to be able to start an activity upon return (Lindstrom 1996; Hamdouch and Wahba 2015; Wassink 2020). In conclusion, the duration abroad is assumed to be endogenous to the occupational choice upon return. Using it as an exogenous regressor may cause a simultaneity problem that will lead to biased coefficient estimates (Ihali 1999; Mesnard 2004).

Thus, to address this potential endogeneity problem, we estimate a two-stage probit model. There is no consensus on the choice of instruments in the empirical literature. According to Greene (2008), a good instrument should be highly correlated with the endogenous predictor but should not have an unobservable relationship with the dependent variable. For example, Wahba and Zenou (2012) use average real international oil prices as an instrument for migration in the Egyptian context because 95 per cent of return migrants come from arable countries where oil prices play a crucial role in the demand for foreign labour. We cannot use this variable because most migrants come from the South. Other authors use the local migrant network and the local squared migrant network (Démurger and Xu 2011; Piracha and Vadean 2010; Woodruff and Zeneto 2007; Wassink 2020). The local migrant network affects the probability of migrating in two ways: first, by increasing the subjective cost of non-migration, which increases the diversion of non-migrants from their migrant peers (Stark and Taylor 1989); and second, by lowering the objective costs of migration through the dissemination of information about border crossing and potential employment opportunities in the destination country (Singer and Massey 1998). Although relevant, we cannot use this variable mainly because we focus on the skills acquired abroad rather than on the act of migration itself. Hamdouch and Wahba (2015) show that mastery of the host country language affects resource mobilization abroad. However, this variable has no effect on the duration abroad and the probability of becoming an entrepreneur upon return. Thus, we instrument the new skills acquired abroad by the mastery of the host country language.

With regard to the duration abroad, early work uses age at first migration (Mesnard 2004; Démurger and Xu 2011). Migrants who leave their home country early are likely to spend more time abroad due to limited family ties in the home country (Massey and Espinosa 1997). Wassink and Hagan (2018) show in the case of Mexico that migrants who go abroad at a young age do so in response to marginal labour market statuses and therefore are less likely to start an activity once they return. Thus, this variable violates Greene’s (2008) exclusion condition because of a possible link to occupational choice upon return. More recently, Hamdouch and Wahba (2015) use involuntary migration and the migrant’s marital status abroad as instruments. We cannot use these two variables. Involuntary migration cannot be used because when we regress duration abroad on this variable, it is not significant. On the other hand, the variable marital status abroad is not in our database. Wassink (2020) uses the total dollar amount of the US Border Patrol Budget in 2010. In the case of this study, we use the acquisition of a residence permit in the host country as an instrument. The possession of such a document has a direct effect on the duration abroad. However, this variable has no effect on the acquisition of new skills and the investment made after return.

The specification equations for the two-stage probit model with instrumental variables are as follows:

$$D_i = a_0X + a_1T_i + \varepsilon_i \tag{4}$$

$$N_i = \alpha_0X + \alpha_1L_i + \varepsilon_i \tag{5}$$

where T_i and L_i refer to obtaining a residence permit in the host country by the migrant i and the mastery of the host country language by the migrant i . Tables 7, 8, and 9 present the results of the estimation of the two-stage probit model with instrumental variables, respectively, in the cases where the variable of interest is degrees and qualifications, other qualifications, and qualifications. The selected instruments performed well in the model. An important property for the instrumental variables is that they do not affect the dependent variable, except through the channel of the endogenous variable included in the second stage regression (Angrist et al. 1996).

Table A1 in the Appendix shows that the selected instruments are not associated with the probability of investing in any sector. The p-values associated with the Wald exogeneity test are respectively: 0.64, 0.561, and 0.651 in the case of degrees and qualifications, other qualifications, and qualifications and 0.543 in the case of duration abroad. Thus, the Wald test of exogeneity failed to reject the hypothesis that the error term in the first stage is not correlated with the error term in the second stage of the regression. The non-significant Wald test indicates that endogeneity is not a serious concern in the case of return migration and business formation in the case of Cameroon. This finding is consistent with studies on international migration and entrepreneurship (Mesnard 2004; Démurger and Xu 2011; Garip 2014; Wassink 2020). Globally, the results of the two-stage probit model with exogenous regressors broadly support the results obtained with the probit model.

Table 7. IV probit estimation, taking into account degrees and qualifications (robustness checks)

	Degrees and qualifications	Log duration abroad	New activity		Primary sector		Tertiary sector	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fitted degrees and qualifications			0.294***	-0.115*	-0.472**	-0.557**	-0.429**	-0.210**
			(0.0867)	(0.0596)	(0.207)	(0.233)	(0.217)	(0.102)
Fitted Log duration abroad				0.0971*		-0.178		0.367***
				(0.0566)		(0.190)		(0.132)
Age			-0.00691	-0.0151*	0.00978	0.000875	-0.0106	0.0139*
			(0.00677)	(0.00771)	(0.0100)	(0.0103)	(0.00665)	(0.00744)
Invested overseas			-0.0640	-0.192***	0.155	0.0522	-0.106	-0.217
			(0.355)	(0.0628)	(0.530)	(0.400)	(0.353)	(0.261)
Active association			-0.201	-0.533*	-0.235	-0.226	-0.130	-0.432
			(0.258)	(0.277)	(0.450)	(0.432)	(0.260)	(0.274)
Area of provenance (ref group: Western countries)								
West Africa			0.503***	0.472**	0.723**	0.748**	0.002*	0.186*
			(0.116)	(0.216)	(0.321)	(0.329)	(0.001)	(0.12)
Central Africa			-0.239	-0.186	0.0870	0.229	-0.276	-0.262
			(0.253)	(0.221)	(0.434)	(0.369)	(0.252)	(0.220)
<i>Social capital</i>								
Remittances			-0.136	-9.82e-05	-0.406	-0.435	0.0161	0.146
			(0.164)	(0.181)	(0.268)	(0.284)	(0.165)	(0.178)
<i>Situation before migration</i>								
Self-employed/salaried work			0.209*	0.443**	-0.0573	-0.332	0.380*	0.431*
			(0.121)	(0.208)	(0.369)	(0.325)	(0.208)	(0.222)
Education level (ref group: none)								
Primary			0.00781	-0.0289	0.245	0.220	-0.130	-0.158
			(0.267)	(0.327)	(0.390)	(0.454)	(0.266)	(0.320)
Secondary			0.0880	0.148**	-0.0539	-0.0366	0.0872	0.0202
			(0.341)	(0.0717)	(0.511)	(0.426)	(0.338)	(0.290)
University			0.0576	-0.00268	-0.288	-0.209	0.136	0.0504
			(0.682)	(0.325)	(1.060)	(0.478)	(0.683)	(0.319)
<i>Situation after migration</i>								

Place of residence (ref group: rural)			0.446**	0.629**	0.202	0.0815	0.452**	0.542**
			(0.219)	(0.269)	(0.361)	(0.371)	(0.219)	(0.267)
Log duration since return			0.00234*	0.00246*	-0.00173	-0.00216	0.00269**	0.00266**
			(0.00131)	(0.00149)	(0.00192)	(0.00223)	(0.00127)	(0.00135)
<i>Instruments</i>								
Language mastery	-0.113**							
	(0.0548)							
Residence permit		0.312***						
		(0.0878)						
Wald test of exogeneity (p-value)	0.64	0.543						
Sample size	332	332	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

Table 8. IV probit estimation, taking into account other qualifications (robustness checks)

	Other degrees and qualifications	Log duration abroad	New activity		Primary sector		Tertiary sector	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fitted other qualifications			0.0101	-0.499	0.0668	-0.134	-0.0160	-0.898
			(0.227)	(0.632)	(0.345)	(0.233)	(0.224)	(2.365)
Fitted Log duration abroad				0.268*		-0.0448		0.152***
				(0.162)		(0.226)		(0.0557)
<i>Individual characteristics</i>								
Age			-0.00675	-0.017**	0.0102	-0.0018	-0.0108*	-0.0152*
			(0.00613)	(0.00872)	(0.00849)	(0.0113)	(0.00612)	(0.00830)
<i>Migration experience</i>								
Invested overseas			-0.0792	-0.372	0.0533	-0.00327	-0.0913	-0.370
			(0.206)	(0.317)	(0.298)	(0.460)	(0.203)	(0.307)
Active association			-0.195	-0.215	-0.144	-0.0119	-0.139	-0.192
			(0.219)	(0.341)	(0.364)	(0.503)	(0.219)	(0.338)
Area of provenance (ref group: Western countries)								
West Africa			0.323*	0.392	0.731**	0.934**	-0.00105	0.124**
			(0.196)	(0.257)	(0.307)	(0.419)	(0.192)	(0.0603)
Central Africa			-0.229	-0.294	0.171	0.577	-0.472*	-0.286
			(0.193)	(0.252)	(0.332)	(0.433)	(0.251)	(0.193)
<i>Social capital</i>								
Remittances			-0.136	-0.120**	-0.402	-0.784**	0.0167	0.169
			(0.164)	(0.0612)	(0.259)	(0.359)	(0.163)	(0.213)
<i>Situation before migration</i>								

Self-employed/salaried work			0.143*	0.361**	-0.116	-0.364	0.238	0.358**
			(0.128)	(0.144)	(0.272)	(0.391)	(0.185)	(0.142)
Education level (ref group: none)								
Primary			0.0107	-0.148	0.258*	0.331*	-0.126	-0.254
			(0.264)	(0.361)	(0.1563)	(0.195)	(0.264)	(0.354)
Secondary			0.100	0.179	0.0392	0.0227	0.0761	0.195
			(0.235)	(0.328)	(0.349)	(0.469)	(0.235)	(0.323)
University			0.0879	-0.143	-0.0937	-0.191	0.0991	-0.0600
			(0.283)	(0.375)	(0.433)	(0.573)	(0.282)	(0.371)
<i>Situation after migration</i>								
Place of residence (ref group: rural)			0.310*	0.815***	0.129	0.163	0.158**	0.431*
			(0.188)	(0.106)	(0.287)	(0.176)	(0.0712)	(0.222)
Log duration since return			0.00237*	0.108***	-0.00169	-0.00430	0.00268**	0.0031**
			(0.00122)	(0.0412)	(0.00184)	(0.00334)	(0.00118)	(0.00157)
<i>Instruments</i>								
Language mastery	-0.790***							
	(0.0461)							
Residence permit		0.312***						
		(0.0878)						
Wald test of exogeneity (p-value)	0.561	0.543						
Sample size	332	332	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

Table 9. IV probit estimation, taking into account qualifications (robustness checks)

	Qualifications	Log duration abroad	New activity		Primary sector		Tertiary sector	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Fitted qualification			0.0123	-0.302**	0.135*	-0.912**	-0.0157**	-0.140**
			(0.275)	(0.154)	(0.0818)	(0.4629)	(0.008)	(0.0615)
Fitted Log duration abroad				0.270*		-0.0440		0.103**
				(0.162)		(0.227)		(0.0480)
<i>Individual characteristics</i>								
Age			0.0067*	0.018**	0.0106	-0.00222	0.0108*	0.0155*
			(0.00407)	(0.00891)	(0.00851)	(0.0114)	(0.00613)	(0.00844)
<i>Migration experience</i>								
Invested overseas			-0.0788	-0.381	0.0600	-0.00915	-0.0909	-0.375
			(0.207)	(0.319)	(0.298)	(0.468)	(0.204)	(0.309)
Active association			-0.196	-0.285	-0.170	-0.0991	-0.143	-0.216
			(0.219)	(0.370)	(0.370)	(0.554)	(0.219)	(0.364)
Area of provenance (ref group: Western countries)								

West Africa	0.123*	0.402*	0.702**	0.941**	-0.00100	0.00832*
	(0.0648)	(0.243)	(0.305)	(0.424)	(0.192)	(0.00504)
Central Africa	-0.231	-0.274	0.0924	0.598	-0.290	-0.0970
	(0.193)	(0.255)	(0.333)	(0.439)	(0.193)	(0.160)
<i>Social capital</i>						
Remittances	-0.136	-0.146	-0.419*	-0.807**	0.0173	0.160
	(0.165)	(0.217)	(0.253)	(0.359)	(0.164)	(0.214)
Situation before migration						
Self-employed/salaried work	0.249	0.429**	0.0750	-0.400	0.239*	0.208**
	(0.186)	(0.201)	(0.276)	(0.407)	(0.1448)	(0.102)
Education level (ref group: none)						
Primary	0.0105	-0.145	0.268	0.243	-0.126	-0.253
	(0.264)	(0.361)	(0.385)	(0.501)	(0.263)	(0.354)
Secondary	0.100	0.181	0.0437	0.0212	0.0774	0.196
	(0.236)	(0.328)	(0.356)	(0.470)	(0.236)	(0.323)
University	0.0872	-0.135	-0.108	-0.188	0.103	-0.0572
	(0.298)	(0.375)	(0.459)	(0.574)	(0.298)	(0.371)
<i>Situation after migration</i>						
Place of residence (ref group: rural)	0.295***	0.355**	-0.149	0.849	0.228	0.332*
	(0.0828)	(0.1802)	(0.295)	(0.569)	(0.191)	(0.193)
Log duration since return	0.00238*	0.134*	-0.00166	-0.00347	0.00268**	0.00402**
	(0.00122)	(0.0701)	(0.00185)	(0.00296)	(0.00118)	(0.00204)
Language mastery	-0.652***					
	(0.0537)					
Residence permit		0.312***				
		(0.0878)				
Wald test of exogeneity (p-value)	0.651	0.543				
Sample size	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.

6 Conclusion

Based on original data from a survey carried out in 2012 by IFORD, this article examined for the first time the determinants of the entrepreneurial behaviour of returnees to Cameroon. Contrary to the existing literature, on one hand, we distinguish the probability of investing in the primary sector from the probability of investing in the tertiary sector, and on the other hand, we focus on the skills received from abroad without, however, omitting the effect of savings. We distinguish between three types of competences, namely degrees and qualifications, other qualifications (obtaining a driving licence, hotel training, and acquiring new social and political norms), and qualifications.

The main results, obtained from a probit model, are particularly interesting. First, they show that degrees and qualifications and qualifications acquired abroad do not positively influence the probability of migrants to engage in a new activity once back home. In contrast, accumulated savings, captured by time spent abroad, exert a positive influence. Second, other qualifications have no influence on the entrepreneurial behaviour of return migrants. Third, the probability of

investing in a new activity is positively affected by duration after return and the urban environment. Fourth, the entrepreneurial behaviour of return migrants is not oriented towards the primary sector but rather towards the tertiary sector. These results are robust to the use of instrumental variables probit, which take into account potential problems of endogeneity.

In light of our results, it appears that migrants in general and returnees in particular are development actors. The new skills acquired abroad, the savings collected, and the social network to which they belong are assets that they can contribute to the development of their community of origin. It is therefore up to the states of developing countries to create conditions that facilitate the successful return of migrants.

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Appendix

Table A1. Verification of the relevance of our instruments (probit model)

	New activity	Primary sector	Tertiary sector	New activity	Primary sector	Tertiary sector	New activity	Primary sector	Tertiary sector
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Degrees and qualifications	-0.397*	0.709**	-0.681***						
	(0.207)	(0.307)	(0.215)						
Other qualifications				-0.325	0.0665	-0.333			
				(0.247)	(0.374)	(0.245)			
Qualifications							-0.386*	0.698**	-0.676***
							(0.213)	(0.310)	(0.216)
Log duration abroad	0.213*	-0.255	0.282**	0.175	-0.192	0.207*	0.192	-0.218	0.244**
	(0.128)	(0.204)	(0.126)	(0.126)	(0.196)	(0.123)	(0.127)	(0.203)	(0.125)
<i>Individual characteristics</i>									
Age	-0.0107	0.00285	-0.0113	-0.0111	0.00413	-0.0117*	-0.0109	0.00418	-0.0118*
	(0.00694)	(0.0102)	(0.00690)	(0.00698)	(0.00980)	(0.00690)	(0.00698)	(0.00998)	(0.00698)
<i>Migration experience</i>									
Invested overseas	-0.177	0.239	-0.278	-0.125	0.146	-0.175	-0.151	0.212	-0.236
	(0.239)	(0.357)	(0.236)	(0.236)	(0.347)	(0.231)	(0.237)	(0.351)	(0.233)
Active association	-0.420*	-0.192	-0.383	-0.394	-0.0209	-0.371	-0.402*	-0.155	-0.357
	(0.241)	(0.429)	(0.245)	(0.244)	(0.398)	(0.246)	(0.243)	(0.416)	(0.247)
Area of provenance (ref group: Western countries)									
West Africa	0.445**	0.722**	0.131	0.427**	0.725**	0.105	0.443**	0.687**	0.136
	(0.214)	(0.334)	(0.208)	(0.212)	(0.327)	(0.205)	(0.213)	(0.330)	(0.207)
Central Africa	-0.228	0.119	-0.288	-0.281	0.263	-0.354	-0.237	0.120	-0.302
	(0.217)	(0.385)	(0.219)	(0.216)	(0.368)	(0.216)	(0.217)	(0.380)	(0.219)
<i>Social capital</i>									
Remittances	0.0129	-0.330	0.128	0.0546	-0.364	0.179	0.0462	-0.429	0.195
	(0.181)	(0.293)	(0.180)	(0.183)	(0.289)	(0.182)	(0.182)	(0.295)	(0.182)
<i>Situation before migration</i>									
Self-employed/salaried work	0.120	-0.178	0.165	0.158	-0.279	0.213	0.135	-0.190	0.177
	(0.210)	(0.319)	(0.208)	(0.208)	(0.307)	(0.206)	(0.209)	(0.312)	(0.208)
Education level (ref group: none)									
Primary	-0.0349	0.283	-0.164	-0.0273	0.278	-0.168	-0.0311	0.255	-0.149
	(0.330)	(0.468)	(0.325)	(0.329)	(0.458)	(0.321)	(0.329)	(0.468)	(0.323)
Secondary	0.0556	-0.0471	0.0666	0.0461	0.0262	0.0236	0.0574	-0.0535	0.0692
	(0.302)	(0.445)	(0.300)	(0.301)	(0.434)	(0.296)	(0.301)	(0.444)	(0.299)
University	0.116	-0.300	0.226	0.0286	-0.0952	0.0418	0.0999	-0.268	0.195
	(0.345)	(0.516)	(0.343)	(0.339)	(0.496)	(0.333)	(0.343)	(0.510)	(0.340)
<i>Situation after migration</i>									
Place of residence	0.452**	0.114	0.419*	0.480**	0.0106	0.445**	0.446**	0.0739	0.409*
	(0.224)	(0.345)	(0.231)	(0.223)	(0.326)	(0.227)	(0.224)	(0.337)	(0.230)
Log duration since return	0.00218	-0.00173	0.00252*	0.00202	-0.00176	0.00228*	0.00200	-0.00161	0.00220
	(0.00141)	(0.00210)	(0.00134)	(0.00142)	(0.00211)	(0.00136)	(0.00142)	(0.00216)	(0.00137)
<i>Instruments</i>									
Residence permit/nationality	-0.0755	-0.431	0.0423	-0.0839	-0.336	0.000915	-0.0702	-0.463	0.0534
	(0.186)	(0.300)	(0.185)	(0.185)	(0.292)	(0.182)	(0.186)	(0.299)	(0.185)

Language mastery	-0.128	0.0972	-0.166	-0.335	0.0655	-0.346	-0.326	0.443	-0.0552
	(0.202)	(0.321)	(0.201)	(0.280)	(0.437)	(0.278)	(0.242)	(0.363)	(0.378)
Pseudo R-squared	0.083	0.113	0.079	0.077	0.101	0.0568	0.082	0.131	0.0782
Sample size	332	332	332	332	332	332	332	332	332

Note: values in brackets are robust standard errors. *** Significant at 1%, ** significant at 5%, and * significant at 10%.

Source: authors' calculations.