Welcome Home in a Crisis: Effects of Return Migration on the Non-Migrants' Wages and Employment
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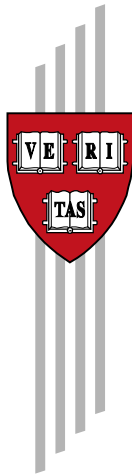
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Welcome Home in a Crisis: Effects of Return Migration on the Non-migrants' Wages and Employment[*]

Ricardo Hausmann[†] and Ljubica Nedelkoska[‡]

Abstract

Albanian migrants in Greece were particularly affected by the Greek crisis, which spurred a wave of return migration that increased Albania's labor force by 5% between 2011 and 2014 alone. We study how this return migration affected the employment chances and earnings of Albanians who never migrated. We find positive effects on the wages of low-skilled non-migrants and overall positive effects on employment. The gains partially offset the sharp drop in remittances in the observed period. The employment gains are concentrated in the agricultural sector, where most return migrants engage in self-employment and entrepreneurship. Businesses run by return migrants seem to pull Albanians from non-participation, self-employment and subsistence agriculture into commercial agriculture.

Keywords: Return migration; wages and employment of non-migrants
JEL codes: J21, J23, J24, J31, J61

1. Introduction

How does return migration affect the labor market of non-migrants? A standard supply-demand model of the labor market of non-migrants would predict that wages should decline as a result of increased competition for the (initially) constant number of jobs (Borjas 2003). The labor outcomes, however, can positively deviate from such zero-sum prediction if capital grows in response to the increase in labor supply, for instance, as a result of return migrant entrepreneurship. Such capital adjustment would expand the number of jobs available in the economy. Moreover, if in addition to adjustable capital, the skills of migrants and non-migrants are complements, or at least not substitutes, return migration can even increase the wages of non-migrants. In this article, we test the above hypotheses in a unique natural experiment of return migration prompted by the recent economic crisis in Greece.

Greece has been an attractive place to work for Albanians since the early 1990s, when Albania's communist regime fell and when GDP p.c. differences between Greece and Albania were factor 15 or higher. Some 600,000 Albanians (approximately 40% of Albania's migrant population, or over 20% of its current population) were estimated to live in Greece before the 2009 crisis (Martin, Marin & Weil 2006). However, as the economic crises in Greece unfolded and the unemployment rate in Greece reached 27%, the unemployment rate of Greece's largest minority, the Albanians, reached 40%. This spurred a large wave of return migrants from Greece to Albania, estimated at over 134,000 working age Albanians (Filipi et al. 2014). The suddenness and the size of the migration created conditions for studying the impact of return migration on the home labor market in a natural experiment setting.

We use data from Albania and Greece's Quarterly Labor Force Surveys (QLFS) for our analysis. These data give us an advantage over previous studies in at least three respects. First, they allow us to observe the labor market dynamics on both sides of the border. Second, the panel structure of the data allows us to draw inference from individual level changes in the employment and earnings status. Finally, the QLFS offers information which can be used as exogenous variation to the choice of the place of return, helping us make a causal statement about the impact of return migration on non-migrants' earnings. In addition to the data advantages, the paper exploits a situation where a negative shock to the host country spurs a large wave of forced return migration, reducing the selectivity among return migrants and disrupting the optimizing cycle of return migration (Dustmann and Kirchkamp 2002; Dustmann and Weiss 2007). This situation increases the generalizability of our findings.

We find that the majority of Albanians return to their district of origin. There, they are disproportionally more likely to engage in self-employment and entrepreneurship, mainly in the agricultural sector. Through entrepreneurship they do not only create jobs for themselves, but also for the non-migrants. In particular, they seem to pull non-migrants away from non-participation, unemployment and subsistence agriculture and into commercial farming. In this sense, migrants and non-migrants act more as complements than as substitutes in the labor market. Previous field studies have pointed out the importance of knowledge transfer through mobility from Greece to Albania in the agricultural sector (Neven 2009; Barnhart 2012). These studies, for instance, document that return migrants and dual nationals have been the main drivers of innovation in the production of citrus fruits and greenhouse products in Albania. Hence, our results are mainly at odds with the standard predictions, and more in

line with a model of adjustable capital and imperfect substitutability of skills between migrants and non-migrants.

We also compare the non-migrants' gains from return migration in terms of wage growth and employment with the losses resulting from lower remittances. Our estimates of the gains vary, depending on the assumptions, between 0.6% and 1.5% in GDP annually, offsetting between 38% and 94% of the annualized losses in remittances.

The rest of the article is organized as follows. Section 2 provides background on the recent history of migration between Albania and Greece and explains the economic circumstances under which Albanians started the massive return migration. Section 3 explains the data, the sample and the definition of key variables. Section 4 provides the theory for our study. The key descriptive analysis can be found in Section 5. In Section 6 we lay out the econometric specifications, while in Section 7 we elaborate the econometric findings. Section 8 concludes.

2. Background

In 1992, Albania broke away from the 46 year long communist regime, which over time turned Albania into an autarky and banned international migration for decades (Vullnetari 2007). In the aftermath of the regime collapse, Albanians left their country in large numbers, mainly to the wealthier neighbors Greece and Italy. Prior to the Greek economic crisis, about a third of the people born in Albania lived outside the country. Of these migrants, 80% lived in Greece and Italy. An estimated 600,000 Albanians resided in Greece in 2005 (Vullnetari 2007; Martin, Marin & Weil 2006). This corresponded to over 20% of Albania's population in 2005.

The prospects of the Albanians in Greece started deteriorating from the onset of the recent crisis. Figure 1 shows the development of the unemployment rates in Greece of Greek nationals and Albanian nationals. The two rates had similar levels and trends prior to 2009, but started diverging sharply since then. The unemployment rate of Albanians surpassed 40% in 2013, while the unemployment rate of Greek nationals reached 27% in the same period. This development in the Greek labor market spurred a wave of return migration to Albania.

The share of working age Albanians reporting that they have worked abroad increased significantly between 2011 and 2014. In the third quarter of 2011[1] about 7.3% of the surveyed population reported that they have worked abroad in the past. This share reached 10.7% by the last quarter of 2014. This translates into an increase of the working age population by over 87,000 (3.9%). Mainly due to their demographic structure (prime age, male), return migrants are more active on the labor market than non-migrants. Their share in the labor force increased from 10.5% to 15.9% between 2011 and 2014, causing an increase in the labor force of almost 65,000 individuals or 4.8%.[2]

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[1] As evidenced by Filipi et al (2014), the wave of mass return migration started already in 2009, but in our data, the annual Albanian Labor Force Survey (LFS) of 2011, conducted in November 2011, is the first LFS in which the question 'Have you ever worked abroad?' was asked.

[2] Filipi et al. (2014) surveyed 2,000 return migrants in 2013 and based on this sample estimated that the number of returnees 18 years or older, between 2009 and 2013 was 133,500.
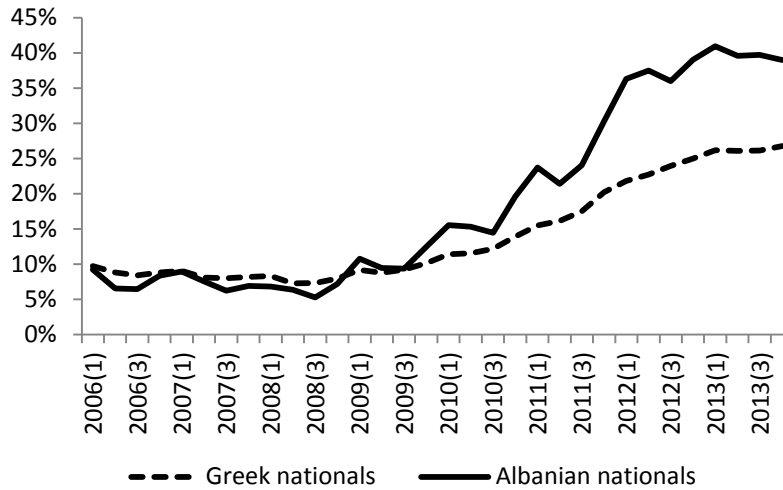
Figure 1: Unemployment Rate of Albanian and Greek Nationals in Greece 2006-2013
Source: QLFS Greece
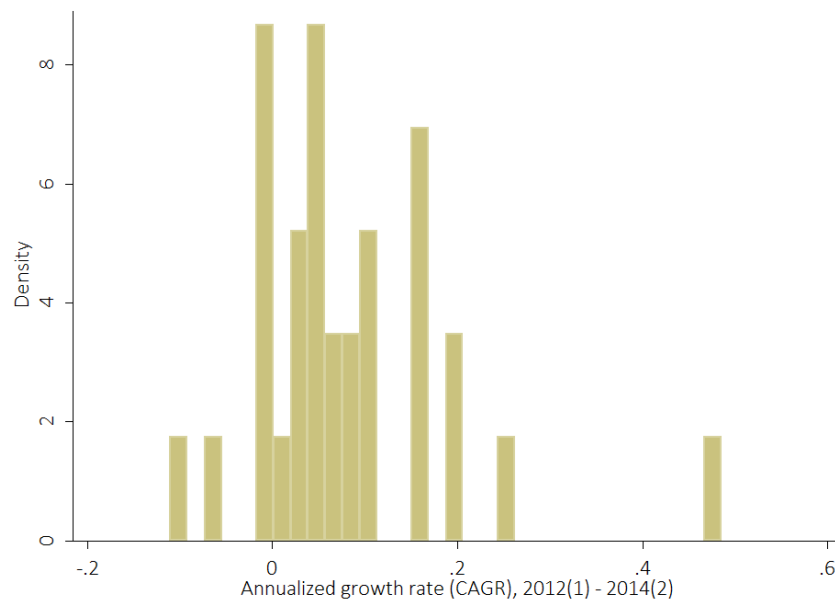
Figure 2: Annualized Growth Rates of Return Migration by District
Source: QLFS Albania, own calculations

Note: The district information is only available between Q1 of 2012 and Q2 of 2014.

The share of migrants grew in most districts between the first quarter of 2012 and the second quarter of 2014, the period for which we have district-level data. Figure 2 shows the distribution of the annualized

growth rates by district. The median growth was 5% annually and the mean was 8%. Among those who returned, 81% say they returned from Greece and another 14% returned from Italy.[3]

These trends were also reflected in the flows of remittances to Albania. The flow peaked in 2008 at about USD 1,450 million (current) or 11% of Albania's GDP and fell down to USD 1,150 million (current) in 2014 or 8.5% of GDP (Figure 3).
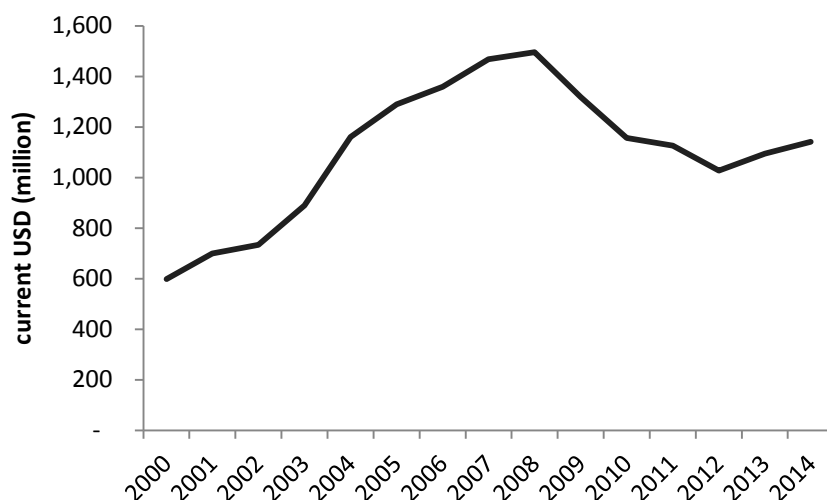
Figure 3: Inflow of Remittances to Albania 2000-2014
Source: World Bank 2015

3. Data and Sample

The primary source of data is the Quarterly Labor Force Survey (QLFS) of Albania 2012-2014. The sample includes all individuals 15 years or older in 5,040 selected households. The households are selected using two-stage sampling procedure.[4] The survey uses a rotational sampling design, whereby a household once initially selected for interview, is retained in the sample for a total of five consecutive quarters. This means that in each quarter 20% of the selected households are new and 80% of them are in common (INSTAT 2012). The first and the fifth interview are exactly one year apart. This allows us to observe changes in wages and labor market status of individuals over time. The QLFS offers rich information regarding the employment status[5] of individuals. This is very important in the Albanian case because of the informal character of a large share of the jobs in the economy and the low threshold of

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[3] The country from which the migrants returned was only asked among a subset of the QLFS samples, limiting the use of this information for analysis of the host-country aspects.

[4] The first stage selects the geographic areas with a probability proportional to the area size. In the second stage, within each of the geographical areas, a fixed number of 8 households is selected with equal sampling probability.

[5] QLFS uses the following definition of employment:

- Persons who have worked even for one hour with a respective salary or profit during the reference week.
- Persons who were receiving a salary or wage while they were in training during their work.
- Persons temporarily not at work during the reference week for some reasons
- People who work on their small farm, who do not sell their products, but produce only for self-consumption, are also considered employed.

the amount of work required in the employment definition. Employment can take one of the following forms:

1. Regular job for pay for someone who is not a member of your household.
2. Job on a farm owned or rented by you or a member of your household, from which at least part of production is sold.
3. Job in non-agricultural sector for your business or an activity that belongs to you or someone in your family.
4. Occasional job for pay or profit such as sold goods in the street, helped someone for his business etc.
5. Job on a farm owned or rented by you or a member of your household, from which the whole production is only for own consumption.

The QLFS also asks about the professional status of respondents with jobs, distinguishing among: (a) employees, (b) self-employed with employees, (c) self-employed without employees (own-account workers or free-lancers) and (d) unpaid family workers. Another important type of information is pay. The QLFS asks about the net pay in the reference week and about the usual net pay. Most people choose to report monthly amounts. Information about the hours worked in the reference week and the usual hours worked is also available, allowing us to calculate the hourly wage in reference week and the usual hourly wage.

In addition, we employ the QLFS Greece 2006-2013 in order to understand the employment dynamics, the stock of Albanian migrants and the self-selection of return migrants on the other side of the border. The Greek QLFS has a similar structure to the Albanian QLFS. The survey includes a question about the country of birth of each interviewed individual and about the person's nationality, allowing us to identify Albanian nationals and Albanian-born individuals.

3.1. Sample Restrictions

Our data include the eleven quarters between the second quarter of 2012 and the last quarter of 2014. We only include observations for which we have non-missing information about the employment status, age, gender, educational attainment and information about their experience of working abroad. We only include individuals that we observe at least two times in the QLFS.

We noticed sampling problems in two of the 36 districts of Albania and decided to exclude these from the analysis.[6] In the district of Kolonje, no one was interviewed in three consecutive quarters: 2012(Q3), 2012(Q4) and 2013(Q1). In the district of Tropoje, the probability weights are unreliable.[7] These restrictions result in a sample of 25,291 non-migrants (66,297 observations). Of these, 2,316 individuals (7,413 observations) also have information on hourly wages and information on the place of birth of return migrants, a variable which we will use as an instrumental variable. The information about the place of birth was only collected in 7 out of 11 quarters: 2012(Q3)-2014(Q1). See Table A1 in the

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[6] All our estimations and specifications are insensitive to the decision to exclude these districts. The results including these districts are available from the authors upon request.
[7] For instance, 78 sampled persons expand to 23,402 people in 2014(1) and 75 expand to only 3,043 in 2014(2).

appendix for the summary statistics of the exact samples used in the econometric estimations of the impact of return migration on wages and employment.

3.2. Imputing the Education Variable

The variable indicating the highest educational attainment can take four levels:

1. Primary education or less;
2. Secondary general education;
3. Vocational Training;
4. University degree or higher.

Those with secondary general education, or primary education or less are later categorized as low skilled and those with vocational training, or university degree or higher are categorized as skilled. Almost 15% of the individuals who appear at least twice in our data report educational attainment that changes with time. The changes are more common among the young survey participants and these are probably reflecting the process of educational upgrading typical for young individuals. However, the educational attainment in our data does not always increase over time. Sometimes we observe higher educational attainment in the earlier quarters, and lower in the latter ones, and sometimes we even observe a person reporting two or more levels of attainment in no particular order. Among the 15% reported earlier, 7.4% belong to those who upgrade educational attainment, another 6.4% to those that "downgrade" their attainment and 1.2% to those that change their attainment in no particular order. In order to preserve a logical consistency, we establish a few simple rules and impute the educational attainment variable accordingly:

1. One cannot first have higher, then lower education. The opposite is allowed.
2. Those with primary education or less cannot obtain a university degree before obtaining a secondary degree.
3. Those with primary education or less cannot obtain vocational training before obtaining a secondary degree.
4. One cannot change the educational attainment more than once in the observed period (ten quarters).

In the spirit of the first rule, the cases in which the educational attainment is higher in the earlier quarters and lower in the latter ones are redefined such that the values of the latter quarters are recoded to the higher attainment reported earlier. In cases where there is an unexpected jump from primary education or less to university education or from primary education or less to vocational training, we recode the values of the high education back to primary education. Finally, it is very unlikely that someone can transition among three levels of educational attainment in two and a half years or less. This happens with 0.1% of the individuals that we observe more than once. We exclude these individuals from the sample.

4. Theory

The setup in which a labor market is confronted with a large inflow of labor in a rather short period of time reminds us of many situations in which a host country is faced with a large immigration, e.g., Mariel

Boatlift on the Miami labor market as in Card (1990) or the inflow of immigrants from the Soviet Union to Israel between 1990 and 1994 as documented by Friedberg (2001). The theory of the effects of immigration on natives' wages and employment is well developed and is accompanied by abundant empirical research. This section borrows from that literature, but points out that there are certain aspects that make return migration different from immigration. These aspects are later also reflected in our choice of empirical approach.

In the canonical model of immigration research, under the assumption of a downward sloping demand curve and upward sloping supply curve, immigration shock should result in lower wages and lower employment for the non-migrants (e.g., Borjas 2003, p. 1337).[8] This established model, however, makes a number of strong assumptions and imposes too much structure on the groupings of migrants and natives for the purpose of our study.

First, the model assumes fixed capital even in the long run. With constant stock of capital, constant technology and perfect substitutability between groups, employers lower the wages offered, but since capital does not adjust in the assumed Cob-Douglas production function, the number of jobs does not adjust either and some of the natives' jobs are now held by the immigrants. Under these assumptions, Borjas (2003) shows that a 10% increase in the supply of immigrants reduces the wages of Americans by 3 to 4% and the ones of the least educated natives by 9%. In a later work, (Borjas and Katz 2007) discuss the case of adjustable capital stock in the long run and show that, with elastic supply of capital, the effect of immigration on the long-run average wage of natives is zero. In the case of Albania, the rapid return home in the midst of financial uncertainty in Greece correlated with a withdrawal of the savings from Greece and their transfer to Albania (ACIT 2012, p. 9), acting as one source of investment in that period. If capital adjusts, which we think is a more adequate assumption for our data, as illustrated in Figure 4a, the employment of non-migrants can expand too, even if migrants and natives compete for the same kinds of jobs.

Second, a phenomenon that we would like to shed light on is return migrants' entrepreneurship. Return migrants are more entrepreneurial than non-migrants even after controlling for observable socio-demographic characteristics. They are more likely to be self-employed, employ others and work as managers. Hence, they do not only create jobs for themselves, but also for others. Figure 4b illustrates the scenario where return migrants create a surplus of jobs, while still maintaining the assumption of perfect substitutability. The illustration shows that in presence of additional job creation for non-migrants, return migration relaxes the downward pressure on wages induced by the labor shock. This is not an unusual pattern, neither in the cases of return migration, nor in the cases of immigration. For the USA, for instance, Fairlee (2008) finds that immigrants are about 30% more likely to start a business than non-immigrants and Lofstrom (2014) and Kerr and Kerr (2015) find that business ownership is higher and growing among immigrants. In the case of return migration, the stronger probability of becoming an entrepreneur upon return was also observed by Piracha and Vadean (2010). While the capital flows may

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[8] See Borjas (2014, Chapters 7 and 8) and Dustmann, Schönberg and Stuhler (2016) for an overview of the typical theoretical setup. See Card (2012) and Card and Peri (2016) for a critique of some of the key assumptions in Borjas' model.

be more pronounced in the Albania-Greece case, the pattern is certainly not unique to it. Demurger and Xu (2011) and Zhao (2002), evidenced that Chinese return migrants engage in rural entrepreneurship and self-employment upon return and invest more in productive farm assets than non-migrants. Dustmann and Kirchkamp (2002) showed that the guest workers to Germany who decided to return to their home countries in the 1980s and remained active on the labor market at home, mainly engaged in entrepreneurial activities. Hence, even in the short-run, we expect adjustment of the capital stock and job creation precisely because of return migration.

Third, the canonical model assumes that migrants and non-migrants are perfect substitutes, assuming that one classifies them correctly within homogenous education-experience. Ottaviano and Peri (2008, 2012) show that it greatly matters if residents and newcomers of comparable skill-experience profile are treated as perfect substitutes or as imperfect substitutes. Perfect substitution like in the studies of (Borjas 2003; Borjas and Katz 2007), in combination with fixed capital and unchanging production technology, would lead to direct negative effects on the wages of residents. Allowing for imperfect substitution, which is favored by the data, (Manacorda, Manning & Wadsworth 2012; Ottaviano and Peri 2008 and 2012) show that most native groups actually gain from the inflow of newcomers. Figure 4c illustrates how non-migrants could benefit from return migration if in addition to capital adjustment, we allow from imperfect substitutability between returnees and non-migrants. Since the two do not compete for the same jobs, the supply curve on the market for non-migrants does not shift. At the same time, job creation through return migrants' entrepreneurship expands the demand curve, raising both wages and employment levels.

What makes return migrants with nominally same education and experience different than non-migrants? Greece, a country which GDP p.c. is still a factor five higher compared to Albania, is much knowhow-richer than Albania. In agriculture, the single most significant economic sector in Albania, Greece is a net exporter in all bilateral trade with seemingly homogenous goods. Tourism, a sector for which Albania is geographically similarly well-positioned to develop, is far better developed in Greece: in 2014 travel exports p.c. were factor 2.8 higher in Greece (COMTRADE 2016). Albanians working in Greece are exposed to higher technological standards, higher division of labor, export practices, better developed distribution networks, a second language, larger firm size and different management style. The skills acquired at the job in Greece are hence different from those acquired at the job in Albania. USAID, which has been actively working with return migrants in Albania over the last several years, acknowledges the importance of their knowhow for the development of agriculture in Albania (Neven 2009; Barnhart 2012).

Finally, we should also note that in the canonical model, migrants and non-migrants (or immigrants and natives using the terms of the immigration literature) are divided among skill-experience groups within which migrants and non-migrants are assumed to be substitutes. Unlike the case of immigration, where the main political debate evolves around the hypothesis of immigrant-native substitution, as we will demonstrate later, our descriptive results do not indicate that substitution is a dominant mechanism at

work here. Hence, we will later work with broader skill groups than proposed in the modelling by Borjas and others.[9]
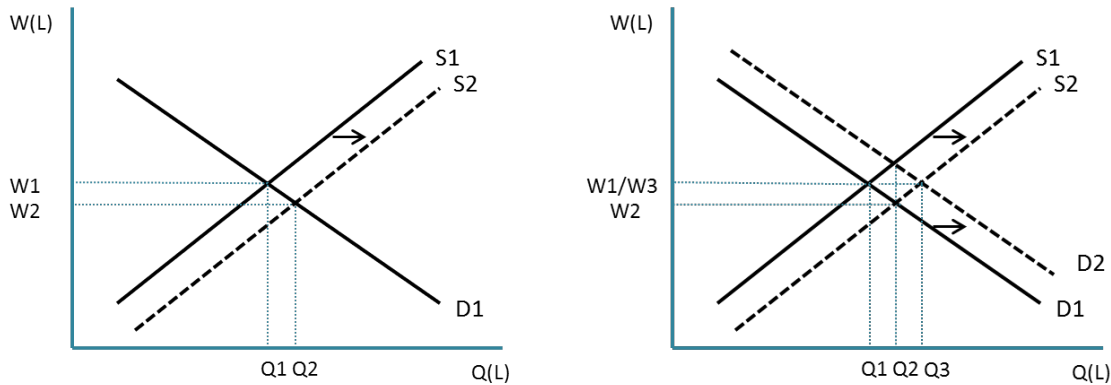
a) Adjustable Capital and Perfect Substitutability   b) Job Creation through Migrants' Entrepreneurship
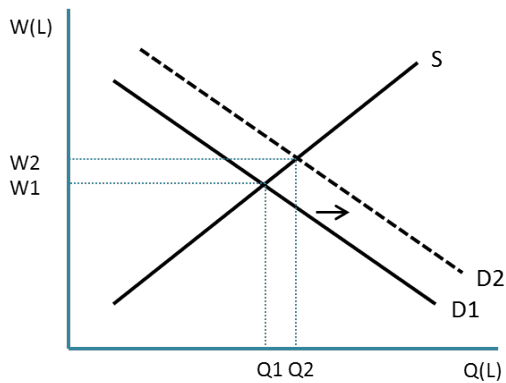
c) Entrepreneurship and Imperfect Substitutability

Figure 4: Illustration of the Non-Migrants' Wage and Employment Reactions to Migration Shock under Varying Assumptions

In summary, let us go over the major implications under the proposed alternative assumptions to the ones in the canonical model, all illustrated in Figure 4. Under the assumptions of perfect substitutability between migrants and non-migrants, but adjustable capital, the effects on wages are negative, but the effect on employment is positive (Figure 4a). If the capital adjusts enough to drive the demand for jobs up, e.g., through entrepreneurship, employment could grow without experiencing wage depression (Figure 4b). Finally, if migrants and non-migrants do not compete for the same jobs (are not substitutes), non-migrants can experience wage growth and more employment chances precisely because of return migration (Figure 4c).

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[9] The skill-group choices made by Borjas (2003, 2013) have been strongly criticized by Card and Peri (2016).

5. Returnees, Non-migrants and the Albanian Labor Market

In this section, we first study the socio-demographic and economic differences between return migrants and non-migrants. We then turn to describing the labor market of non-migrants in order to set initial expectations about job creation and destruction.

5.1. Sociodemographic and Economic Characteristics of Returnees and Non-migrants

Return migrants differ from the non-migrants in many regards. While 46% among the non-migrants are prime age (25-54), this is the case with 79.1% of the return migrants (Table 1). Most return migrants are male (89%). Knowing that males are more active on the labor market than females (64.3% vs. 46.8%), these characteristics at least partially explain why returnees are much more active (Figure 5). Hence, part of what we are observing is the return of the family breadwinners. This adds an important angle to our story, which is not so relevant to the scholars measuring the effects of immigrants on the outcomes of natives.

Table 1: Differences between migrants and non-migrants

	Without controls		After matching on observables		
	Non-migrants	Returnees	Non-migrants	Returnees	t-stat
%Prime age (25-54)	46.00	79.09			
%Vocational training	9.42	16.25			
%University degree	11.44	5.47			
%Male	45.13	89.02			
%Paid non-farm job	18.78	22.40	28.99	20.68	10.64
%Commercial farm job	5.01	8.84	6.29	8.42	(4.52)
%Subsistence farm job	9.50	16.06	14.32	17.51	(4.83)
%Self-employed	11.03	28.31	24.83	28.87	(5.88)
%Unemployed	7.79	14.98	10.93	13.79	(5.61)
%Employing others	0.71	2.03	1.52	2.19	(3.22)

Source: QLFS 2012-2014

Note: Exact matching on observables: gender, education, district; propensity score (nearest neighbor matching) on age. All variables are shares in the total working age population (15 years or older). Weighted averages over the observed period are used for the non-matched statistics.

In terms of education, the incidence of vocational training is significantly higher among return migrants, but return migrants are half as likely to hold a university degree (Table 1). De Coulton and Piracha (2005) and Piracha and Vadean (2010) studied the characteristics of the return migrants in Albania prior to the crisis. They find that return migrants are negatively selected among the general Albanian population in terms of education. This is because, in general, the migrants to the neighboring Greece and Italy, the two countries which absorb 80% of the Albanian migrants are negatively selected in terms of college education. This finding is confirmed in our LFS data too. In 2008, only 6% of the Albanian nationals in Greece and only 4.9% of Albanian-born in Italy had a college degree or higher, while this was the case with 8.3% of the Albanians in Albania that year.
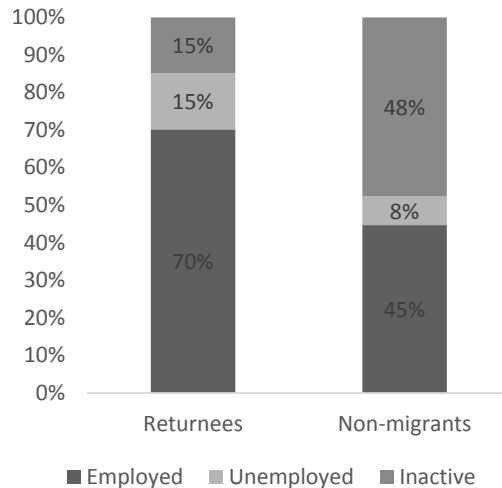
Figure 5: Labor Market Status of Non-migrants and Return Migrants
Source: LFS 2011, QLFS 2012-2014.
Note: Average share over the observed period.

However, our data also reveal that return migrants are much more likely to have vocational training than non-migrants (18.6 vs. 10.1% in 2011).[10] Over time, we observe that the earlier cohorts of return migrants were less likely to have a college degree or higher (only 3.7% in 2011), but they were more likely to have vocational training (18.6%). This suggests that low and medium skilled workers from Germany returned sooner. The educational composition of return migrants changed by 2014, when about 7% of them held college degree or higher and 14% had vocational training. For the period included in our econometric analysis (first quarter 2012-second quarter 2014), we can say that in terms of education, most return migrants resembled the low-educated Albanians at home. However, this is far from saying that the skills of return migrants resemble those of non-migrants. The return migrants spent extended periods of employment in a more productive country and probably gained experience that was not available to those who remained at home. For this reason, it is more reasonable to assume imperfect substitutability between the two groups.

5.2. The Choice of Jobs

While the share of return migrants in the working age population varies between 10 and 16%, their share in the pool of self-employed with employees varies between 16 and 30%, showing that they are over-represented among employers. Similarly, their share among the self-employed without employees varies between 16 and 23%, suggesting that a disproportional share of them do not compete for jobs created by others (Figure 6). In fact, their share among employees varies between 8 and 12%, meaning that they are underrepresented in this category. As the overall share of return migrants in the working age population increased, so did their shares among the employees, employers and self-employed (Figure 6).

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[10] We use the Albanian LFS records for 2011 only because the Italian and the Greek LFS bunch middle school and vocational training in one category in the classifications made available in our data.
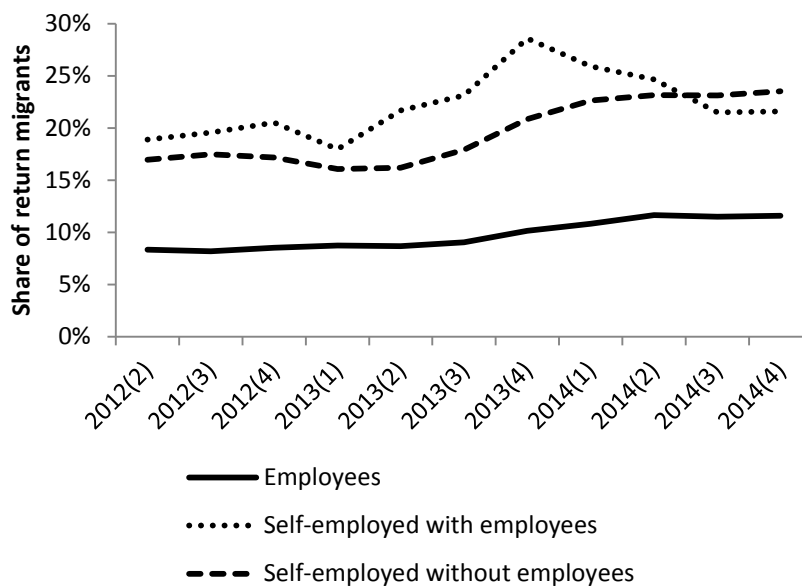
Figure 6: Share of Return Migrants by Job Type
Source: LFS 2011, QLFS 2012-2014.
Note: 3-period moving averages.

Among the employees, we pay particular attention to three types of jobs: paid non-farm jobs (paid jobs), jobs in farms where at least part of the produce is sold on the market (commercial farm jobs) and jobs in farms that consume all their produce (subsistence farm jobs)[11]. Return migrants are less likely to have a paid job after matching on observables (20.7% vs. 29%), but the opposite is true before matching (Table 1). They are furthermore more likely to engage in commercial farming (8.8% vs. 5% before and 8.4% vs. 6.3% after), but also in subsistence farming (16.1% vs. 9.5% before and 17.5% vs. 14.3% after matching).

When not employed by others, returnees are more likely to be unemployed, self-employed and work as employers for others, before and after matching. Returnees are much more likely to be self-employed (28.3% vs. 11% before and 28.9% vs. 24.8% after matching), and, what is more important, they are significantly more likely to employ others (2% vs. 0.7% before and 2.2% vs. 1.5% after matching).

These results suggest that in addition to working as employees for others, return migrants create jobs through self-employment for themselves and through entrepreneurship for others more than non-migrants do. To a large extent this is due to the fact that these are the prime age male workers who are now returning home. However, even after matching on age, gender, district and educational attainment, we see higher tendency towards self-employment and entrepreneurship. This is in line with previous findings by Piracha and Vadean (2010) about the occupational choice of return migrants in Albania and the impact of the migration experience on this choice.

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[11] Agricultural jobs are important in Albania. In 2014 according to the LFS, almost 43% of all jobs were in agriculture.

Finally, we look at the differences in the occupational and industry distributions of jobs held by migrants and non-migrants. In terms of occupations, about half of the returnees report working as skilled agricultural workers, another 16% report crafts jobs (which include construction jobs) and another 14% say they work as service and sales workers (Sub-Figure 7a). Returnees are overrepresented among crafts workers, managers and agricultural workers (Sub-Figure 7b). For instance, returnees are 1.2 times more likely to work as managers than are non-returnees.
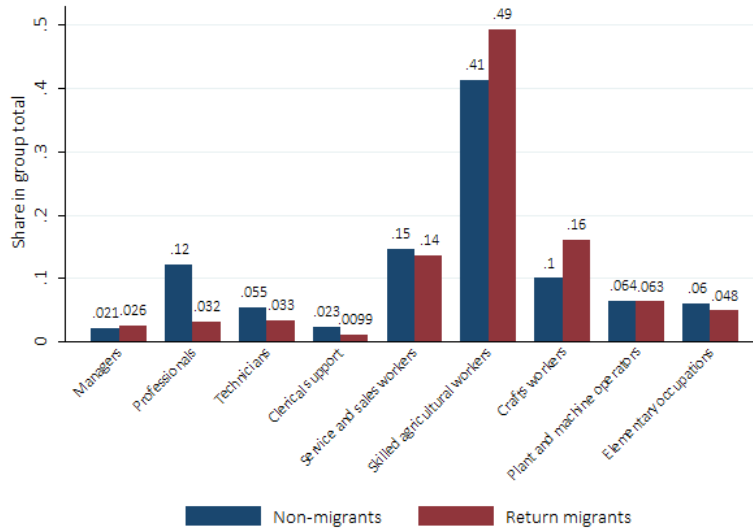
a) Employment Shares by Occupation
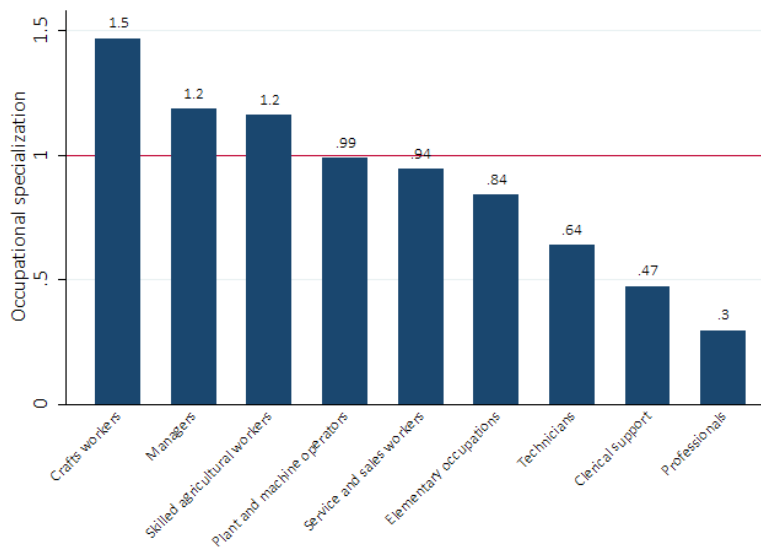
b) Occupational Specialization (Location Quotient)
Figure 7: Occupational Distributions of Non-migrants and Return Migrants
Source: LFS 2014, all quarters

14
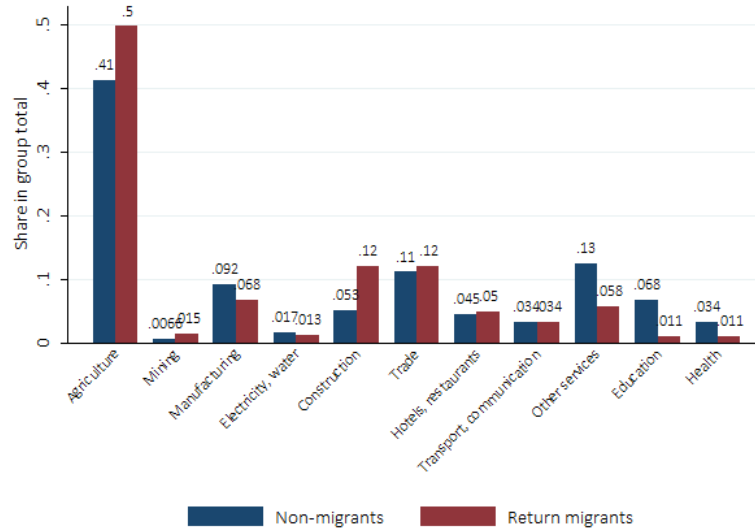
a) Employment Shares by Industry
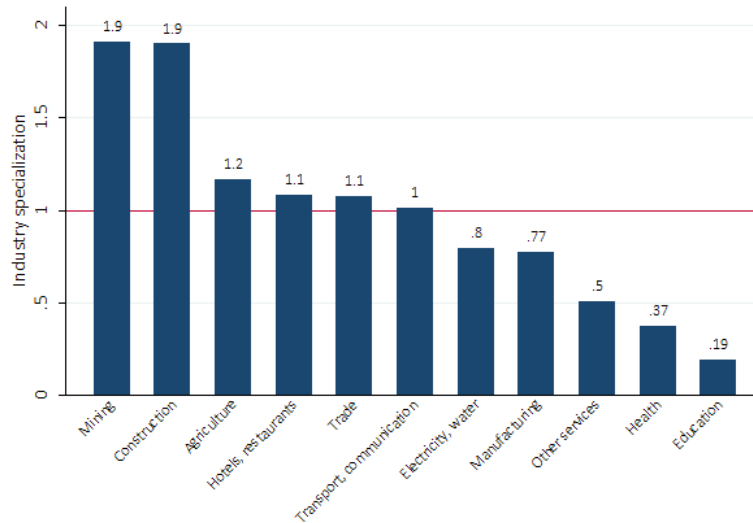
b) Industry Specialization (Location Quotient)

Figure 8: Industry Distributions of Non-migrants and Return Migrants

Source: LFS 2014, all quarters

In terms of industries (Figure 8), about half of the returnees work in agriculture, 12% work in construction and another 12% work in the trade sector. They are almost twice as likely to be employed in mining and construction, and they are 1.2 times more likely to work in agriculture. An interesting observation is that returnees are rarely found among the professionals and the jobs associated with the public sector (e.g., health, education, utilities and other services), all of which are more stable formal jobs. They are also underrepresented in the manufacturing sector. All of this once again points out that in the observed period, return migrants did not rely much on jobs created by others, but ventured in sectors where self-employment and entrepreneurship are more common.

5.3. Who Returns and the Choice of Region

Our coefficient estimates would be biased upwards (downwards) if the wave of return migrants was positively (negatively) selected in terms of productivity from the total population of migrants. One could argue that better educated, more experienced migrants have more human and financial capital to transmit back home than do less educated and less experienced ones. Our analysis of the sample of return migrants indicates that they are negatively selected in terms of university education and positively selected in terms of vocational training. In terms of educational attainment, those with vocational training and those without university education returned sooner (see Figure 9).

In terms of age (a proxy for experience), the return migrants complement the missing part of the Albanian age distribution (the prime-age workers) as shown in Figure 10. This pattern does not reveal particular experience bias among the return migrants from the general population of migrants.[12]
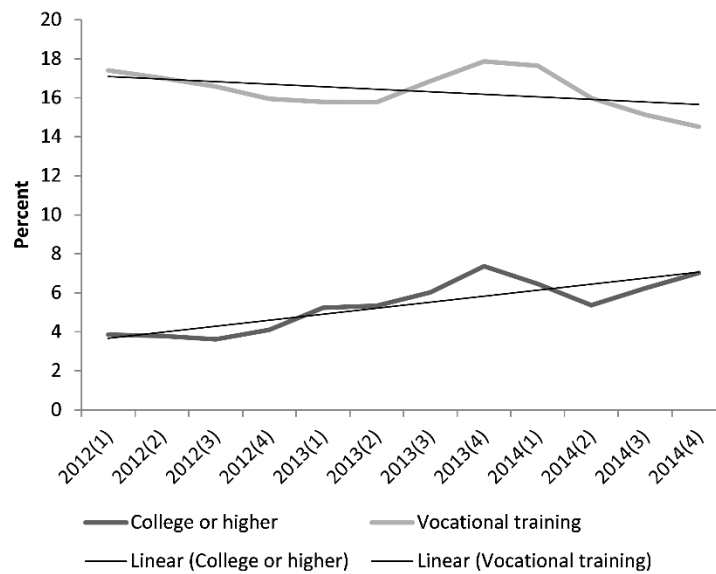
Figure 9: Educational Achievement of Return Migrants
Source: QLFS Albania
Note: 2-period moving averages

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[12] Theorizing in terms of expectations, one would expect that Greek firms would try to retain their best and most experienced workers in periods of crisis, and only let them go in cases of serious downsizing or closures. This pattern finds an analogy in a firm experiencing negative demand shock. Such firm can still choose who to layoff and would probably try to retain its core and most experienced employees first (Gibbons and Katz 1991; Wang and Weiss 1998). Hence, if anything, those who were laid off first during the Greek crisis, were probably more likely to be less experienced and less skilled.
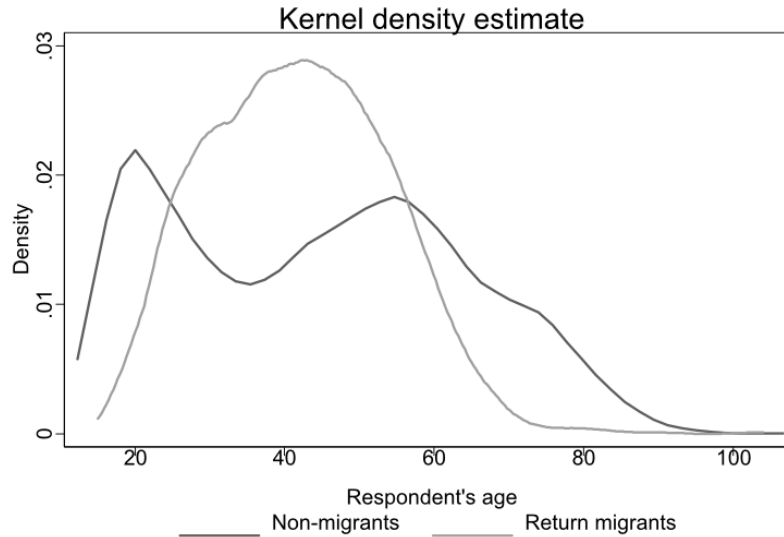
Figure 10: Age Distributions of Non-migrants and Return Migrants

Source: QLFS Albania, 2014

As we will elaborate in the next section, our main dependent variable is the share of return migrants in Albanian districts. That is, we study how the level of return migration in a region affects the wages and employment chances of non-migrants living in those regions. Therefore, understanding the choice of return region is a key aspect of our identification strategy. There are at least two possible scenarios where non-random choice of the region could induce a spurious relationship between wages and return migration. On the one hand, if migrants were mainly selected from poor regions and after the shock returned back to these regions, we may observe a negative spurious relationship between return and the wages of non-migrants. Similar argument can be made about the growth of these regions. If migrants return to regions which are further deteriorating, we may observe a spurious negative relationship between return and non-migrants' wages.

On the other hand, if migrants anticipate that they will be better-off in richer and growing regions, they will be more likely to choose these regions for their return. In such case, we will observe a positive relationship between return and wages of non-migrants even in the absence of a causal relationship between the two. Figure 11 shows the relationship between the share of return migrants in the last period for which we have regional identifiers (second quarter of 2014) and the regional employment rate, participation rate, and median hourly wage in the earliest available period (third quarter of 2011). It also shows the relationship with the distance in km to the nearest border-crossing with Greece.
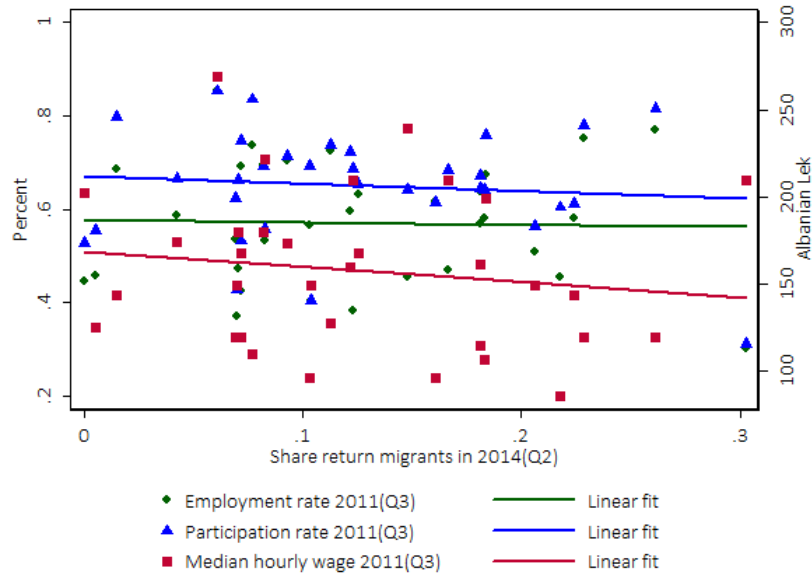
a) Employment Rate, Participation Rate and Median Wages
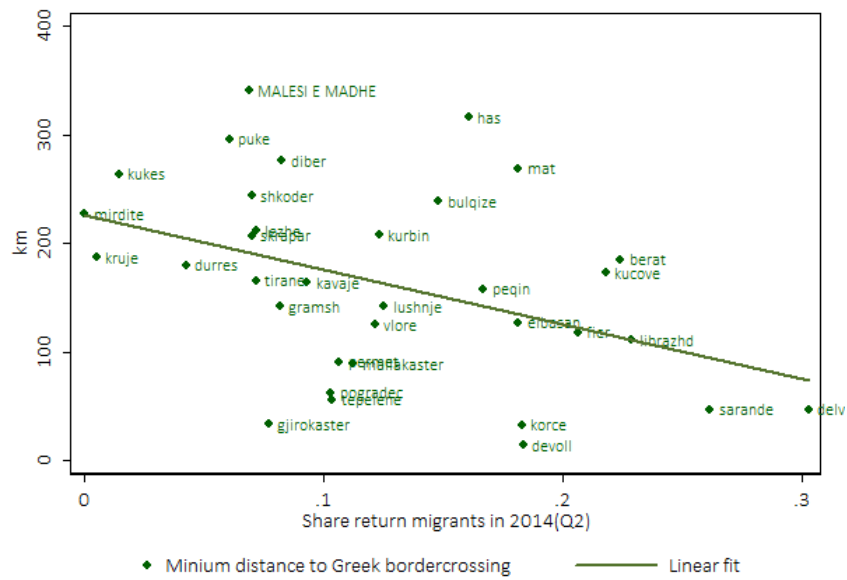
b) Distance to the nearest Border-crossing with Greece

Figure 11: Share of Return Migrants by Region and Regional Characteristics

The correlations between return migration, and wages, participation, and employment in the initial period are weak and slightly negative[13], suggesting that return migrants did not cluster in more

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[13] The correlation coefficients are as follows: -0.14 for wages, -0.03 for the employment rate, -0.10 for the labor participation rate and -0.42 for the distance to the Greek border.

prosperous regions. Instead, two other factors explain the choice of region much better. First, Figure 11b shows a pronounced negative correlation with the distance to Greece. Regions closer to the Greek border, received disproportionally more return migrants as a share of their population than did regions that are away from the border. Second, we find that 80% of return migrants reside in their districts of birth upon return. In the econometric part of our analysis, we will use the distance to the Greek border and the place of birth of migrants to instrument the choice of region of return migrants.

6. Econometric Specification

In what follows, we propose a measurement of the impact of return migration on the wages and employment of non-migrants. To test the hypotheses put forward in the theory section, we need to look at two outcomes: wages and employment of non-natives. The canonical model predicts a negative impact of return migration on both the wages and the employment of non-migrants. If we allow for adjustable capital, the employment effects can actually be positive (or at least non-negative). If we additionally allow for job creation through return migrant entrepreneurship, in addition to more employment, wages do not necessarily need to adjust downward. Finally, if we additionally relax the assumption of perfect substitutability between return migrants and non-migrants, non-migrants could benefit from more jobs and better paying jobs.

The literature on the measurement of the impact of immigration on natives' labor market outcomes is instructive, but needs to be applied with caution.[14] In a recent study, Dustmann, Schönberg and Stuhler (2016) compare the three widely used approaches to measuring the effects of the immigration on natives' wages and employment: the *national skill-cell approach* as in Borjas (2003); the *pure spatial approach* as in Altonji and Card (1991), Dustmann, Frattini and Preston (2013) and Card (2009); and the *mixed skill-spatial approach* as in Card (2001) and Dustmann and Glitz (2015). They conclude that only the pure spatial approach measures the *total* effect (as opposed to partial, group-specific) effect of immigration on natives' labor market outcomes and it is hence the only approach whose estimates have a clear interpretation. The spatial approach is immune to misclassifications of natives and migrants into what seem homogenous groups[15]. We hence adopt a spatial approach, with only broad skill distinctions in the case of non-migrants, but without attempt to bunch migrants and non-migrants into similar skill categories.

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[14] The more established choice of theoretical models and derived empirical set up is best elaborated by George Borjas (e.g., Borjas 2003; Borjas 2014). This work, however, has recently been challenged by several scholars, most prominently by David Card and Giovanni Peri, (Card 2012; Card and Peri 2016). They dispute the choice of assumptions in the modelling (no adjustment of capital over a 20-year period, assumed degree of substitutability among natives and migrants, and the susceptibility of the results outcomes to the assumptions about the relative productivity trends), all of which change the impact predictions significantly. Moreover, Card and Peri raise valid concerns about how Borjas and followers translate the theory into empirics, and show that the proposed econometric specifications induce spurious relationships between the changes in the share of migrants on the one hand, and wages and native employment on the other (Card and Peri 2016).

[15] The source of misclassification in the case of immigration is downgrading of immigrants with higher skills to positions that formally require lower ones. This is often a result of language barriers. In our case, the misclassification would stem from the different quality of skills acquired in the Greek vs. the Albanian market as discussed in the theory section.

Moreover, while most of this literature uses repeated cross-sections and Census data (e.g., Borjas 2003; Borjas and Katz 2007; Borjas, Grogger and Hanson 2008; Ottaviano and Peri 2008 and 2012; Card 2012), we have access to time-variant individual-level data. Hence, the proposed empirical specifications which aggregate data at the regional level would leave a lot of useful variance which we have available unused. Additionally, and perhaps more importantly, both camps of scholars (Borjas and followers and Card, Peri and followers) are actively testing the hypothesis of substitutability between migrants and natives. This is why all empirical specifications divide the population into skill-experience groups within which people are likely to enter in direct competition for jobs. In our work, we have little descriptive evidence suggesting substitutability as a dominant pattern. On the contrary, as argued earlier, the return migration is more associated with the return of the bread-winners who probably even complement parts of the non-migrant population, although it is not clear which parts would these be in terms of skills and experience. This is why we do not find it useful to introduce such narrow groupings into the analysis.

6.1. Wages

In the case of the impact of return migration on wages, the supply-demand model can be translated into a Mincer equation:

$$\ln(w_{irt}) = \alpha + \beta R_{rt} + X'_{irt}\gamma + X'_{rt}\delta + u_i + T_t + \epsilon_{irt} \tag{1}$$

The novel term in the regression is R_{rt}, which is the share of working age return migrants in the working age population in a region r at time t, and where $r = \{1, ..., 34\}$ corresponds to 34 districts in Albania and $t = \{2012(3), 2012(4), ..., 2014(1)\}$ corresponds to seven quarters over which we observe the labor market of non-migrants and returnees and for which we have information about the place of birth of the return migrants. X_{irt} is a set of variables which vary at the individual level i: potential labor market experience and its square term, education and gender. X_{rt} is set of variables which vary at the level of regions and over time, but not at the individual level: in the current specification, this only includes the working age population as a control for the size of the labor market. The term u_i is an individual fixed effect which is introduced in the fixed effects regression models, but is absent in the pooled OLS estimations. u_i controls for time invariant individual characteristics, such as personality or individual traits that could affect both the probability to live in a region with high migration and the earnings potential. In the fixed effects models, some of the regional and individual level characteristics which do not vary over time (population size, gender and education) become redundant. T_t are quarter dummies, controlling for macroeconomic developments like the business cycle. We cluster the standard errors at district-quarter level because the regional share of return migrants varies by district and quarter. Not doing so results in understated standard errors and overstated statistical significance.

We choose an instrumental variable approach to address the issue of non-random regional choice. Between 2012(3) and 2013(4) we have information on the place of birth in Albania. Our first instrument for the share of return migrants in a region is the share of return migrants born in each of the 34 districts. The second instrument is the road distance in kilometers between the center of the place of birth and the nearest border crossing with Greece. De Coulon and Piracha (2005) argue that the Albanians from the South were more likely to migrate because of the proximity to Greece and the lower

uncertainty about the labor market conditions in on the other side of the border. This is also confirmed in King (2007) and Labrianidis and Kazazi (2006). The first instrument is time variant; it changes as the regional composition of return migrants changes. The second instrument is not. Hence, while both instruments are used in the 2SLS estimators, only the first instrument is used in the FE 2SLS estimator.

6.2. Job Creation

We estimate duration (Cox proportional hazard) models[16] for the following individual-level transitions among the non-migrants: (a) from inactivity to labor market participation, (b) from inactivity or unemployment to employment, (c) from any labor market state to a regular paid job outside the household, and (d) from non-participation, self-employment, subsistence farming or unemployment to commercial farming, as a function of the fraction of the return migrants in a district.

We can define the proportional hazards model as follows:

$$\frac{h(t|X)}{h_0(t)} = \exp(\beta_1 R_{rt} + \beta_2 expp_{it} + \beta_3 expp_{it}^2 + \beta_4 male + \beta_5 pop_r + \boldsymbol{edu'_i\beta}) \qquad (2)$$

Where $h(t|X)/h_0(t)$ is the relative risk or the hazard ratio of an event (e.g., employment) occurring at time t. The impact of the included variables R_{rt} and controls ($expp$, potential labor experience; $male$, male dummy; pop, population size of the district; and edu, education dummies) on the baseline risk is hence multiplicative. Since we are not using instrumental variables here, we are not restricted to the 7 quarters as in the wage regressions. The samples for this analysis employ 11 quarters of data, 2012(2)-2014(4).

7. Results

7.1. Effects on Wages

The results of estimating equation 1 are shown in Tables 2, 3 and 4. Table 2 shows the results for all non-migrants, Table 3 for the highly skilled non-migrants and Table 4 for the low-skilled non-migrants.[17] In the estimates of the effects on wages for all non-migrants, the positive coefficient observed in the OLS very quickly becomes statistically insignificant in the pooled 2SLS estimates, although the size of the effect is not reduced by much. Hence, the IV correction only makes the estimates less efficient, but does not reveal a strong estimation bias in the OLS. However, adding person fixed effects makes a big difference (model 2), suggesting that the OLS results are upward biased and that the observed positive effect is largely a result of unobserved individual heterogeneity.

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[16] When time-to-event data is available, duration models have two important advantages over the logit model: they take into account right-censoring of the data and also make use of the information about the survival time.
[17] We define highly skilled non-migrants as those with completed upper secondary education and vocational training or those with university education. Low-skilled non-migrants are those with not more than general secondary education. In 6.7% of the cases we observe educational upgrading. In these cases, we need to decide which educational attainment to take when classifying the persons into low and highly skilled groups. In the reported results, we take the higher of the two. The results do not change significantly when instead we take the lower of the two reported educational attainments.

Once we split the sample between highly and low skilled non-migrants, a clearer pattern appears. The inflow of return migrants did not have any effects on the wages of the highly skilled migrants. The IV correction (models 3 and 4) almost halves the OLS coefficient[18] and the controls for individual fixed effects (model 2) bring it very close to zero. Hence, an upward bias in the OLS coefficient of this group comes from two sources: the choice of region and the unobserved individual heterogeneity. Qualified returnees are less bounded to their place of birth and more likely to seek employment in the Tirana-Durres agglomeration where higher paying jobs are available. Moreover, the positive effect measured in the OLS has less to do with the arrival of migrants, and more with the positive correlation between unobserved individual characteristics and earnings.

In the case of low skilled non-migrants, most estimates (except for the 2SLS FE) suggest a positive impact of return migration on the wages. In these estimates, the IV correction only slightly increases the size of the OLS-estimated coefficient on return migration, while the FE estimate is only slightly lower than the one estimated by the OLS. For this group, judging by the IV results, the choice of region is negatively correlated with wages, perhaps because most of them return to the place of birth where economic prospects were not great to start with. Stable personal traits are positively correlated with wages, but this creates only small upward bias in the OLS coefficients. All models suggest a range of estimates between 2% and 2.5% increase in real wages for 1 pp increase in share of return migrants in the region. The F statistics of the included instruments are large (322.6 in model 3 and 228.9 in model 4). The Hansen J statistic of overidentifying restrictions in model 4 is small, meaning that we cannot reject the null hypothesis that the instruments are valid. The last model (model 5) combines the FE and the 2SLS. Here the estimate is close to zero, but (looking at the standard error) it is not statistically different from the estimates in the previous columns. Already in model 2 we see that the estimate becomes very imprecise when adding fixed effects. Hence, it is no surprise that instrumenting the variable of interest as part of a FE model will lead to even higher standard errors and render the estimate statistically insignificant. For completeness, however, we report these results as well.

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[18] The first stage results are strong. The F statistic in models 3 and 4 are 87.9 and 89.5, and both the share of return migrants in the district of birth, and the distance to the Greek border are significant predictors of the share of return migrants. The Hansen J statistic of overidentification is small and insignificant, confirming the validity of the two instruments.

Table 2: Effects of Return Migration on Non-migrants' wages, All Non-migrants

	(1)	(2)	(3)	(4)	(5)
	OLS	FE	2SLS	2SLS	2SLS FE
Second stage (dependent variable: ln(hourly wages)					
R_rt	0.0207**	0.00873	0.0172	0.0186	-0.0116
	(0.00894)	(0.0103)	(0.0139)	(0.0133)	(0.0138)
population	1.78e-07		1.51e-07	1.62e-07	
	(2.14e-07)		(2.40e-07)	(2.38e-07)	
expp	0.0221***	0.0134	0.0218***	0.0219***	0.0128
	(0.00429)	(0.0295)	(0.00434)	(0.00433)	(0.0295)
expp^2	-0.0003***	-0.00024	-0.0003***	-0.0003***	-0.000226
	(7.93e-05)	(0.00068)	(7.99e-05)	(7.97e-05)	(0.00068)
male	0.0144		0.0129	0.0135	
	(0.0374)		(0.0362)	(0.0363)	
primary education	-0.0478		-0.0508	-0.0496	
	(0.0714)		(0.0693)	(0.0692)	
secondary education	0.311***		0.313***	0.312***	
	(0.0585)		(0.0573)	(0.0574)	
tertiary education	0.606***		0.604***	0.605***	
	(0.0660)		(0.0649)	(0.0650)	
quarter dummies	Yes	Yes	Yes	Yes	Yes
Constant	3.791***	4.353***	3.827***	3.813***	
	(0.200)	(0.289)	(0.227)	(0.223)	
R-squared	0.111	0.776			
First stage (dependent variable: R_rt)					
R_it at district of birth			0.734***	0.695***	0.543***
			(0.0607)	(0.0618)	(0.0808)
distance to border				-0.0096***	
				(0.00260)	
expp			-0.0800***	-0.0791***	0.0647
			(0.0192)	(0.0193)	(0.0442)
expp^2			0.00124***	0.00119***	-0.00136
			(0.000333)	(0.000336)	(0.00086)
population			4.58e-06***	4.42e-06***	
			(1.26e-06)	(1.23e-06)	
male			-0.133	-0.135	
			(0.0878)	(0.0861)	
primary education			-0.458***	-0.497***	
			(0.143)	(0.140)	
secondary education			-0.290	-0.312*	
			(0.185)	(0.182)	
tertiary education			-0.448***	-0.557***	
			(0.148)	(0.148)	
quarter dummies			Yes	Yes	Yes
Constant			2.770***	4.699***	
			(0.952)	(1.227)	
Observations	7,413	7,413	7,413	7,413	7,413
Weighted observations	1,903,493	1,891,518	1,903,493	1,903,493	1,891,518
Cragg-Donald/Kleibergen-Paap statistic			146.2	134	45.14
Hansen J test of overidentification				1.22	
Hansen J statistic p-value				0.269	

Standard errors clustered by district and quarter (total of 233 clusters). *** p<0.01, ** p<0.05, * p<0.1

Table 3: Effects of Return Migration on Non-migrants' wages, Skilled Non-migrants

	(1) OLS	(2) FE	(3) 2SLS	(4) 2SLS	(5) 2SLS FE
Second stage (dependent variable: ln(hourly wages)					
R_rt	0.0183**	0.00146	0.0102	0.0119	-0.0140
	(0.00864)	(0.0122)	(0.0153)	(0.0146)	(0.0153)
population	1.27e-07		6.29e-08	7.66e-08	
	(2.01e-07)		(2.34e-07)	(2.32e-07)	
expp	0.0205**	-0.0543	0.0199*	0.0200*	-0.0532
	(0.0101)	(0.0441)	(0.0103)	(0.0103)	(0.0443)
expp^2	-0.000276	0.00113	-0.000268	-0.000269	0.00111
	(0.00019)	(0.00096)	(0.000196)	(0.000196)	(0.00096)
male	-0.0596		-0.0651*	-0.0639*	
	(0.0382)		(0.0366)	(0.0366)	
secondary education			-0.281***	-0.282***	
			(0.0688)	(0.0689)	
tertiary education	0.288***				
	(0.0732)				
quarter dummies	Yes	Yes	Yes	Yes	Yes
Constant	4.191***	5.321***	4.562***	4.544***	
	(0.216)	(0.438)	(0.281)	(0.277)	
R-squared	0.039	0.738			
First stage (dependent variable: R_rt)					
R_it at district of birth			0.685***	0.650***	0.477***
			(0.0730)	(0.0731)	(0.0864)
distance to border				-0.0099***	
				(0.00294)	
expp			-0.113***	-0.102***	0.189**
			(0.0310)	(0.0307)	(0.0954)
expp^2			0.0017***	0.0015***	-0.00378*
			(0.000546)	(0.000543)	(0.00194)
population			4.17e-06***	3.96e-06***	
			(1.51e-06)	(1.48e-06)	
male			-0.348***	-0.340**	
			(0.135)	(0.135)	
secondary education			0.300	0.362*	
			(0.187)	(0.201)	
quarter dummies			Yes	Yes	Yes
Constant			3.461***	5.235***	
			(1.256)	(1.493)	
Observations	4,195	4,195	4,195	4,195	4,195
Weighted observations	1,055,884	1,042,028	1,055,884	1,055,884	1,042,028
Cragg-Donald/Kleibergen-Paap statistic			87.91	89.54	30.44
Hansen J test of overidentification				1.064	
Hansen J statistic p-value				0.3024	

Standard errors clustered by district and quarter (total of 233 clusters). *** p<0.01, ** p<0.05, * p<0.1

Table 4: Effects of Return Migration on Non-migrants' wages, Low-skilled Non-migrants

	(1)	(2)	(3)	(4)	(5)
	OLS	FE	2SLS	2SLS	2SLS FE
Second stage (dependent variable: ln(hourly					
R_rt	0.0225**	0.0200*	0.0244*	0.0254**	-0.00417
	(0.00980)	(0.0102)	(0.0131)	(0.0127)	(0.0150)
population	2.34e-07		2.48e-07	2.55e-07	
	(2.50e-07)		(2.69e-07)	(2.66e-07)	
expp	0.0241***	0.0768**	0.0243***	0.0244***	0.0743**
	(0.00683)	(0.0336)	(0.00675)	(0.00679)	(0.0327)
expp^2	-0.00041***	-0.00161*	-0.00041***	-0.00041***	-0.00155*
	(0.000147)	(0.00084)	(0.000145)	(0.000146)	(0.00082)
male	0.106**		0.106**	0.106**	
	(0.0487)		(0.0485)	(0.0486)	
primary education	-0.0565		-0.0548	-0.0539	
	(0.0727)		(0.0710)	(0.0709)	
quarter dummies	Yes	Yes	Yes	Yes	Yes
Constant	3.692***	3.406***	3.672***	3.662***	
	(0.204)	(0.356)	(0.217)	(0.215)	
R-squared	0.065	0.779			
First stage (dependent variable: R_rt)					
R_it at district of birth			0.804***	0.763***	0.725***
			(0.0448)	(0.0467)	(0.0601)
distance to border				-0.00848***	
				(0.00228)	
expp			-0.0569***	-0.0615***	-0.00131
			(0.0169)	(0.0178)	(0.0439)
expp^2			0.000974***	0.000987***	0.000393
			(0.000318)	(0.000332)	(0.000846)
population			4.94e-06***	4.86e-06***	
			(1.03e-06)	(1.01e-06)	
male			0.131	0.119	
			(0.103)	(0.101)	
primary education			-0.425***	-0.467***	
			(0.129)	(0.128)	
quarter dummies			Yes	Yes	Yes
Constant			1.481**	3.269***	
			(0.662)	(0.925)	
Observations	3,218	3,218	3,218	3,218	3,218
Weighted observations	847,609	849,490	847,609	847,609	849,490
Cragg-Donald/Kleibergen-Paap statistic			322.6	228.9	145.8
Hansen J test of overidentification				0.915	
Hansen J statistic p-value				0.3388	

Standard errors clustered by district and quarter (total of 233 clusters). *** p<0.01, ** p<0.05, * p<0.1

7.2. Job Creation

The results of estimating equation 2 are presented in Tables 5 - 8. The findings in Table 5 suggest that ceteris paribus, as the share of return migrants increases by 1 pp, the rate of labor market participation increases by 1.2% (1.4% for the low skilled and 0.6% for the highly skilled).[19] The employment results (Table 6) furthermore suggest that all else constant, 1 pp increase in the share of return migrants corresponds with 1.2% increase in the rate of employment (1.5% for the low skilled and 0.3% for the highly skilled).

As described in section 3, we have good information about the types of jobs that constitute employment. Two types of jobs are of particular interest: paid jobs, which largely overlap with the jobs in the formal sector and away from family businesses, and jobs in commercial farms. The latter is of interest because as we showed earlier, half of all return migrants choose to work in the agricultural sector. Hence, we expect most impact there. However, in the agricultural sector lots of jobs are created by subsistence farms, which is a necessity kind of employment and hence not so much of interest.

Interestingly, as Table 7 shows, we find modest negative effects of the increase of return migrants on the rate of entering paid employment of -0.7% for all, -0.6% for the highly skilled and -0.9% for the low skilled. This may suggest that in the case of the formal sector, where jobs were created at a slower rate during the economic recession, return migrants directly competed with non-migrants. Without wage adjustment (as evidenced above), the impact may have been concentrated on the employment choices of firms. At the same time, we find significant positive effects on the rate of finding jobs in commercial farms (Table 8): one pp increase in the share of return migrants corresponds with 3.7% increase in the rate of job finding, 4.4% for the highly skilled and 3.6% for the low skilled. This in combination with our previous findings that return migrants are overrepresented among employers, managers and agricultural workers suggests that the hypothesized effects of capital and job formation through entrepreneurship are concentrated in the agricultural sector.

Combined, the wage and employment results mainly reject the idea of constant capital, expect for the formal sector, where investments were limited during the recession and entry barriers are probably larger for the return migrants. Here, our results also suggest a modest degree of substitutability between non-migrants and returnees. Otherwise, in all specifications and in both skill groups we find non-negative impact on wages. The results for the low skilled are mainly consistent with the scenario of imperfect substitution and elastic supply of capital (i.e., positive effects on wages and on employment), while those for the highly skilled are more in line with a model with certain degree of substitutability and elastic supply of capital (i.e., no effects on wages and positive employment effects).

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[19] Exp(0.0115)-1 = 0.0116; exp(0.00619)-1 = 0.0062 and exp(0.0138)-1 = 0.0139.

Table 5: Return Migration and the Rate of Labor Market Participation among Non-migrants

	(1) All non-migrants	(2) Highly skilled	(3) Low skilled
R_rt	0.0115***	0.00619***	0.0138***
	(0.00175)	(0.00119)	(0.00217)
expp	0.102***	0.0967***	0.104***
	(0.00198)	(0.00273)	(0.00213)
expp^2	-0.00195***	-0.00194***	-0.00196***
	(4.24e-05)	(5.44e-05)	(4.50e-05)
male	0.335***	0.236***	0.382***
	(0.0108)	(0.0103)	(0.0148)
population	-8.14e-05***	-3.63e-05***	-0.000110***
	(1.54e-05)	(1.34e-05)	(1.96e-05)
primary education	-0.0784***		-0.0697***
	(0.0154)		(0.0156)
secondary education	0.0468***		
	(0.0137)		
tertiary education	0.173***	0.0671***	
	(0.0155)	(0.0123)	
Observations	66,297	15,417	50,880
No of events	35,602	10,528	25,074
Chi square	3,808	2,145	3,329

Results from Cox proportional risk models. Standard errors clustered by district and quarter in parenthesis. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

Table 6: Return Migration and the Rate of Employment among Non-migrants

	(1) All non-migrants	(2) Highly skilled	(3) Low skilled
R_rt	0.0115***	0.00310*	0.0152***
	(0.00213)	(0.00163)	(0.00258)
expp	0.114***	0.123***	0.113***
	(0.00243)	(0.00292)	(0.00266)
expp^2	-0.00207***	-0.00230***	-0.00203***
	(4.86e-05)	(5.55e-05)	(5.20e-05)
male	0.304***	0.260***	0.328***
	(0.0117)	(0.0128)	(0.0147)
population	-0.000118***	-4.22e-05***	-0.000163***
	(2.48e-05)	(1.55e-05)	(3.41e-05)
primary education	-0.155***		-0.144***
	(0.0189)		(0.0194)
secondary education	0.0196		
	(0.0154)		
tertiary education	0.139***	0.0887***	
	(0.0232)	(0.0158)	
Observations	66,297	15,417	50,880
No of events	31,189	9,178	22,011
Chi square	3,755	2,747	2,689

Results from Cox proportional risk models. Standard errors clustered by district and quarter in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Table 7: Return Migration and the Rate of Entering Paid Jobs among Non-migrants

	(1) All non-migrants	(2) Highly skilled	(3) Low skilled
R_rt	-0.00713**	-0.00629***	-0.00891*
	(0.00297)	(0.00237)	(0.00510)
expp	0.167***	0.163***	0.172***
	(0.00332)	(0.00398)	(0.00492)
expp^2	-0.00322***	-0.00306***	-0.00338***
	(5.49e-05)	(6.35e-05)	(9.00e-05)
male	0.494***	0.199***	0.859***
	(0.0226)	(0.0199)	(0.0408)
population	0.000198***	3.64e-05*	0.000414***
	(1.97e-05)	(1.90e-05)	(3.95e-05)
primary education	0.816***		0.743***
	(0.0425)		(0.0452)
secondary education	1.093***		
	(0.0505)		
tertiary education	1.753***	0.683***	
	(0.0616)	(0.0345)	
Observations	59,840	14,264	45,576
No of events	10,048	5,668	4,380
Chi square	4,377	2,769	2,039

Results from Cox proportional risk models. Standard errors clustered by district and quarter in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

Table 8: Return Migration and the Rate of Finding Commercial Agricultural Jobs among Non-migrants

	(1)	(2)	(3)
	All non-migrants	Highly skilled	Low skilled
R_rt	0.0366***	0.0429***	0.0357***
	(0.0108)	(0.0135)	(0.0107)
expp	0.121***	0.0955***	0.123***
	(0.00547)	(0.0113)	(0.00561)
expp^2	-0.00220***	-0.00202***	-0.00220***
	(8.55e-05)	(0.000192)	(8.70e-05)
male	0.244***	0.331***	0.233***
	(0.0415)	(0.0758)	(0.0412)
population	-0.000366**	-0.000431**	-0.000350**
	(0.000176)	(0.000204)	(0.000174)
primary education	-0.636***		-0.627***
	(0.105)		(0.105)
secondary education	-0.244***		
	(0.0529)		
tertiary education	-1.423***	-1.375***	
	(0.126)	(0.133)	
Observations	53,347	8,952	44,395
No of events	5,111	689	4,422
Chi square	1,099	399.6	970.8

Results from Cox proportional risk models. Standard errors clustered by district and quarter in parenthesis. *** p<0.01, ** p<0.05, * p<0.1

7.3. Remittance Losses vs. Gains in Wages and Employment

In the course of the Greek crisis and the wave of return migration, Albania was on average losing about 1.6% of its 2009 GDP in remittances each year. This is a direct negative effect of the return migration on the economic wealth of non-migrants. The positive effect of return migration on the wages of low skilled estimated above, however, translates into annual gains between 0.6% and 1% of GDP depending on the choice of estimated coefficient (FE - lower bound or 2SLS - upper bound estimate), and whether we use net or gross wages. Wage increase alone hence offset up to 62% of the negative effect of reduced remittances or 1% in GDP. If we take a leap and interpret the employment effects as causal, the total positive effects offset up to 94% of the loss in remittances, i.e., they add up to 1.5% in GDP. See Table A2 for the details of this calculation.

8. Conclusions and Discussion

We analyze the consequences of the wave of return migration from Greece to Albania, spurred by the recent economic crisis in Greece, on the earnings and employment of Albanian non-migrants. Theoretically we consider three scenarios that could characterize the non-migrant labor market: (a) constant supply of capital and perfect substitutability between migrants and non-migrants, (b) elastic supply of capital and perfect substitutability and (c) elastic supply of capital and imperfect substitutability. Our findings differ by the level of skills of the non-migrants, but almost all of them reject the scenario of constant supply of capital, expect for the formal sector where investment was subdued during the recession. Overall, the results are mainly consistent with the scenario of imperfect substitution and elastic supply of capital.

We find that most migrants return to the district of birth where they seem to mobilize their savings in entrepreneurship; the return migrants are significantly more likely than non-migrants to employ others, work as managers and be self-employed. About half of them are active in the agricultural sector, where our findings suggest, pull non-migrants out of non-participation, unemployment and subsistence agriculture and towards commercial farming. The effects are large enough to partially offset the negative shock of lower inflow of remittances during the post-crisis period.

Our findings are much more positive and encouraging that our initial expectations, even if the net effects of return migration in the period of observation are not positive. An important question is whether migration mainly helped returnees set up firms through enabling financial savings, or through the accumulation of knowhow. While we do not have the right data to answer this question, anecdotal evidence and the timing of developments suggests that, although both played a role, the latter must have played a larger one. For instance, in spite of significant remittances towards families who are dependent on agriculture since the 1990s, vegetable exports only took off after 2009.

Do these findings suggest that governments should invest in programs that encourage return migration? Probably not. If the economic state of Greece would not have deteriorated, many return migrants would have probably been better off, economically at least, in Greece. Moreover, home countries do not always offer the right conditions for starting a business and employing others. Oftentimes, countries with high emigration are troubled countries themselves. After all, there are good reasons why people decide to leave them. Finally, it is not always the case that migrants acquire skills that are useful in the

domestic economy. Friedberg (2000), for instance, found little returns to the education and experience acquired abroad of the immigrants coming to Israel in the 1990s.

However, governments should stay open for and in contact with their migrant communities. Policymakers should think of their diasporas as potential sources of knowhow and capital that they can mobilize, perhaps easier, than investments from other communities. Programs designed for active collaborations with the diasporas that help governments learn about the level of development, engagement interests, professional interests and needs of the diaspora, and which actively learn *from* the diasporas, seem more sensible policies for diaspora engagement to start with.

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Appendix

Table A1: Summary Statistics of Samples and Variables used in the Econometric Analyses

Wages

Variable	Observations	Mean	Std. Dev.	Min	Max
ln(hourly wages)	7,413	4.78	1.04	(1.56)	6.50
R_rt	7,413	7.73	5.93	-	32.17
R_rt in district of birth	7,413	8.14	7.58	-	64.14
distance to border	7,413	168.08	79.22	14.00	393.00
potential experience	7,413	27.13	11.83	-	58.00
working age population in district	7,413	173,952	178,303	1,849	581,064
male	7,413	0.57	0.49	-	1.00
educational attainment	7,413	2.72	1.18	1.00	4.00

Employment

A. Labor Market Participation

	Observations	Mean	Std. Dev.	Min	Max
R_rt	66,297	8.55	6.30	-	37.29
potential experience	66,297	30.66	18.86	-	86.00
male	66,297	0.43	0.50	-	1.00
working age population in district	66,297	146,582	159,730	695	581,064
educational attainment	66,297	1.79	1.05	1.00	4.00

B. Employment

	Observations	Mean	Std. Dev.	Min	Max
R_rt	66,297	8.55	6.30	-	37.29
potential experience	66,297	30.66	18.86	-	86.00
male	66,297	0.43	0.50	-	1.00
working age population in district	66,297	146,582	159,730	695	581,064
educational attainment	66,297	1.79	1.05	1.00	4.00

C. Paid Non-farm, Non-family Jobs

	Observations	Mean	Std. Dev.	Min	Max
R_rt	59,840	8.39	6.27	-	37.29
potential experience	59,840	31.05	19.26	-	86.00
male	59,840	0.44	0.50	-	1.00
working age population in district	59,840	149,272	163,074	695	581,064
educational attainment	59,840	1.81	1.06	1.00	4.00

D. Commercial Farm Jobs

	Observations	Mean	Std. Dev.	Min	Max
R_rt	53,347	8.66	6.37	-	37.29
potential experience	53,347	31.62	19.99	-	86.00
male	53,347	0.41	0.49	-	1.00
working age population in district	53,347	137,439	151,545	695	581,064
educational attainment	53,347	1.61	0.93	1.00	4.00

Table A2: Comparing the Gains and Losses from Return Migration

Inputs		
Average annual loss compared to 2009, in 2009 ALL mln	18,233	
Annualized pp increase in the fraction of return migrants	1.42	
2009 employment	1,160,545	
2009 low skilled employment	852,414	
2009 average annual net wages in ALL	336,803	
2009 average annual gross wages in ALL	432,900	
2009 low skilled average annual net wages in ALL	286,070	
2009 low skilled average annual gross wages in ALL	367,691	
2009 GDP (ALL mln)	1,143,936	

Estimated coefficients		
Wage effects (low skilled) per pp increase in the fraction of return migrants		
Lower bound (FE)	2.0%	
Upper bound (2SLS)	2.5%	
Employment effects per pp increase in the fraction of return migrants		
All	1.2%	
Highly skilled	0.3%	
Low skilled	1.5%	

List of losses and gains from return migration		ALL mln	As % of GDP
Annual remittance losses (ALL mln)	A	18,233	1.6%
Annual net wage gains (lower bound)	B	6,908	0.6%
Annual net wage gains (upper bound)	C	8,773	0.8%
Annual gross wage gains (lower bound)	D	8,879	0.8%
Annual gross wage gains (upper bound)	E	11,276	1.0%
Annual employment effects (net wages)	F	4,495	0.4%
Annual employment effects (gross wages)	G	5,778	0.5%
Net wage and employment effect (lower bound)	B+F	11,403	1.0%
Net wage and employment effect (upper bound)	C+F	13,268	1.2%
Gross wage and employment effect (lower bound)	D+G	14,656	1.3%
Gross wage and employment effect (upper bound)	E+G	17,054	1.5%
2009 GDP (ALL mln)		1,143,936	

Net losses(gains) as % GDP		As % of GDP
Annual losses in remittances as % of GDP		-1.6%
Net wage offset (lower bound)	B-A	-1.0%
Net wage offset (upper bound)	C-A	-0.8%
Gross wage offset (lower bound)	D-A	-0.8%
Gross wage offset (upper bound)	E-A	-0.6%
Net wage and employment effect (lower bound)	(B+F)-A	-0.6%
Net wage and employment effect (upper bound)	(C+F)-A	-0.4%
Gross wage and employment effect (lower bound)	(D+G)-A	-0.3%
Gross wage and employment effect (upper bound)	(E+G)-A	-0.1%

Source: Employment and net wages estimated using LFS 2009; Gross wages estimated using the Annual Business Structural Survey 2009 as reported by INSTAT; Remittances as reported by the World Bank; GDP as reported by the Albanian Ministry of Finance.