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**The impact of international work experience on  
being self-employed after return: evidence of  
Polish return migrants**

Master's thesis

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Name and signature of supervisor.....

Allowed for defence on.....

I have written this master's thesis independently. All viewpoints of other authors, literary sources and data from elsewhere used for writing this paper have been referenced.

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## **THE IMPACT OF INTERNATIONAL WORK EXPERIENCE ON BEING SELF-EMPLOYED AFTER RETURN: EVIDENCE OF POLISH RETURN MIGRANTS**

Dmytro Luchyk<sup>1</sup>

### **Abstract**

This thesis studies the impact of temporary migration on self-employment upon return for Polish citizens from 2002 to 2014. Several potential factors have been tested that could influence the chances of Polish returnees to become self-employed after the return, divided into the following groups: personal characteristics, education and working experience, and working conditions abroad. The results have shown that age, education, and the industry of occupation after return, in addition to the self-employed status abroad influence their probability to be self-employment after returning to their home country. Author suggests that often returnees find it easier to be involved into self-employed activities in Poland as their low qualification and previous experience cannot meet the requirements of a salaried position. As for their professional status while abroad, returnees who have previous self-employment experience abroad were found to have a better chance to develop and implement their business ideas in Poland.

**JEL Classification:** F22, F24, J44, J61

**Keywords:** return migration, self-employment, East-West migration, Poland

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## **1. Introduction**

An effective migration policy is one of the key challenges for the policy makers in developing countries that are facing socio-economic problems and are not capable of offering proper social security and adequate standard of living for their citizens. In these circumstances, citizens are more willing to consider different alternatives, such as temporary work abroad, to gain financial resources to themselves and their families. Often, these conditions may lead to massive migration to more developed countries with higher comparative earnings that may cause demographic gaps and reduction of the active labour force in home countries (Black and King, 2003). Therefore, the topics on managing the migration flows with delivering positive effects for sending and host countries has received an interest from the researchers and researchers worldwide.

In our research, we are interested in the effects of international work experience on migrants in terms of their occupational choices after returning to their homeland. Main advantages of work abroad for the return migrants include remittances and savings earned, potentially spent or invested in their home countries, as well as acquired knowledge, skills and technologies (Kupets, 2011). However, migrants are involved in low-skill jobs and they are not able to bring additional value to home countries in terms of acquired skills or knowledge. In addition, the original qualification and networks at home countries could be lost for returnees (Shima, 2010). Having mapped such typical controversy of positive and negative influence of migration experience on self-employment, we would like to estimate whether temporary work abroad could be beneficial for the returnees in terms of occupational choice.

The main advantages of migration experience that we described are applicable to the returnees and raise their chances to become self-employed after return (Batista and McIndoe-Calder, 2014). We could assume that accumulated financial capital and work experience, in addition to experiencing an overall business environment abroad, and meeting new connections could help returnees to develop and implement new business ideas after return. Therefore, they could have higher chances to foster local development by introducing innovations, creating jobs, and sharing their experience with others. We are especially curious to which extent returning migrants from developed countries could use their experience for developing local entrepreneurship and creating jobs.

This paper focuses on Poland, which has been a major labor exporting country since it entered the European Union in 2004. Around 11.2% of the labor force or 2.3 million Poles, both educated and uneducated, were working overseas during the peak of migration in 2007 (Nowakowska, 2014). Worth to mention that during next years this number has been relatively stable, there are around 2.1-2.2 million of Polish individuals abroad according to the Eurostat database. We found Poland to be an interesting country to examine this topic due to its rich migration history and increasing migration patterns after Poland entered EU (Coniglio and Brzozowski, 2016 and White, 2014).

Several papers have previously analyzed return migration in Central and East European countries, including Poland, however they were mainly focused on how work experience abroad affects the labour market performance of returnees in terms of their income and improving living standards after return (Grabowska-Lukinska, 2010; Martin and Radu, 2012). This analysis is attempting to fill the gap in the current literature by preparing a complex analysis of personal and professional factors that could influence the self-employment activities of Polish returnees in Poland in the context of the migration between the old and new member states of the EU.

In our paper, we use three comparable groups of Polish individuals: return migrants, current migrants and non-migrants or stayers. A comparison of the results for returnees and other two groups could provide us more insights on this topic. We think that such knowledge can help policy makers with the planning and implementation of programs and initiatives that will favour the most productive aspects of return (Lera and Carames, 2013).

The aim of our thesis is to study link between return migration and self-employment in case of the European East-West migration with the example of Poland. Due to the defined aim, we have set and answered several research questions. Who are Polish return migrants and how do they differ from current migrants and stayers? Which activities do return migrants choose and in which industries they are involved after their return to Poland? How different are self-employed return migrants from the comparable current migrants and stayers? To what extent demographic background and personal characteristics influence the occupational choice of return migrants? How does the migration experience affect the occupational choice of returnees?

To answer those questions, we have been working with the dataset from Polish Labour Force Survey which was conducted during 2002-2014 and includes 2,988,735 observations. In our paper, we have used several variations of probit models to find out to which degree personal and professional characteristics are associated with the occupational choice of the three compared groups and the status of their employment. Regarding the specifications, we started with a probit model for all three groups of study, including a full list of current characteristics of the individuals. Second, we estimated a probit model for the returnees by adding a set of characteristics relating to the working conditions during their time abroad. Finally, we used probit models with the interactions of tested variables and dummies for return migrants, current migrants, and non-migrants separately. The analysis is structured in a way of defining a set of characteristics which influence and increase the probability of being self-employed for the return migrants. Based on these aspects, we also tried to formulate several suggestions to the policymakers that could be considered in future.

The rest of the paper is organized as follows. In section 2 we review the literature on return migration and entrepreneurial activities of returnees. Section 3 provides an overview of the background on Polish migration. Section 4 includes the data and examination of the characteristics of Polish returnees and current migrants as well as stayers and focus our attention to self-employed representatives of all three groups of Poles. Section 5 is an empirical analysis on the determinants of self-employment activities among mentioned groups, while Section 6 describes main results of our work. Section 7 stresses out main conclusions and possible suggestions for policy makers.

## **2. Literature review**

The link between the return migration and entrepreneurship has intrigued scholars for many years. Studies on return migration are usually connected to measuring the impact of temporary migration on the sending countries. The reliance on small entrepreneurship as one of the generators of growth may be an important strategy for the developing countries, which suffer from the high unemployment and aim to cut the poverty. A number of studies have proven that encouraging international migrants to return and setting up new businesses generated important gains not only for the migrant workers

themselves, but also for the sending countries as well (Katseli and Lucas, 2006; Mesnard, 2001).

The literature examining the occupational status of return migrants and self-employment activities of returnees is limited but growing. Most of the previous studies on the mentioned topics were conducted in the developing countries during a transition period, facing financial and economic challenges, or some other internal conflict. Authors usually test a well-known hypothesis whether returnees have more chances to become self-employed, compared to the stayers. A positive effect of international work experience on the self-employment status of return migrants is usually explained with the savings earned during migration, the time stayed abroad, and acquired skills and knowledge (Ilahi, 1999; McCormick and Wahba 2001). However, negative effects may also be possible due to the potential of low-skilled jobs that the migrants were employed in, and the reduced access to social networks in their home countries.

Thus, it is crucial to stress the difference between the self-employment and entrepreneurship activities, as very often they are being used as the same categories. Usually, researchers define self-employment as a person, working for oneself as a freelancer, or own-account worker who does not create jobs. With the title of “entrepreneur”, studies designate as a person who runs a business and provides jobs to employees (Bogenhold and Staber, 1991). However, in our empirical part, we will use the term “self-employed” for both respondents who employ employees and for those who do not employ workers due to data limitations.

The first attempt on measuring the effect of return migration on the occupational status of migrants was done by King (1984) on southern Italians who left their provinces during the 1950-60s to work in more developed countries of Northern Europe. Authors found out that a large part of them had returned approximately 20-30 years later and set up small businesses in their home regions. Similar research was conducted by Gitmez (1988) for Turkish migrants returning from Western countries. Interestingly, in both cases, small businesses, set up by return migrants, were not profitable, and were founded rather as activities that meet needs of rural habitants. Therefore, we could assume that such self-employment occupations have not been driven by the entrepreneurial abilities of migrants or specific skills acquired abroad, but rather presented a kind of a necessity entrepreneurship.

Going further, Murillo (1988) provided an analysis of Colombian return migrants from Venezuela who used remitted savings as investments into their own businesses and stressed the importance of dedicating themselves to the creation of a new enterprises, rather than simply investing from abroad. Similar findings have been reported by Cornelius (1990) for Mexico, by Mendonsa (1985) for Portugal and by Ahmed (2000) in Somaliland.

More recently, Gubert and Nordan (2011) have showed that almost 30% of a sample of returnees to Algeria, Tunisia and Morocco became employers or independent workers. Authors have found out that an occupational choice after return was influenced by the qualification of job overseas and the level of integration there. In case of rural China Démurger and Xu (2011) found that returnees were more likely to become entrepreneurs than non-migrants, and that likelihood was enhanced both by savings and by the change of occupation in the country of destination relative to the job before migration. Such findings suggest that work experience during migration enhances an individual's human capital and entrepreneurial abilities. However, in some cases, the high rate of self-employment and entrepreneurial activities were connected to poor local conditions of the home country labor market and low prospects of salaried employment for returnees. Both effects lead us to summarize that repatriated migration experience could be a key stimulating factor in promoting rural entrepreneurial activities.

In an extensive study by Ilahi (1999) the determinants of becoming self-employed separately for urban and rural return migrants in Pakistan were explored. He found out that skilled returnees showed a higher tendency for wage employment over self-employment as they received higher salaries, while unskilled returnees had more propensity to set up their own small business. He explained this fact with the ability of skilled return migrants to fit labor market demands with their skills and knowledge.

Kilic (2009) found a strong, positive correlation between migration and business ownership for the Albanian returnees. Results showed that a former migration experience exerted a positive impact on the probability of owning a non-farm business as well as on the duration of work experience abroad in the host country. Piracha and Vadean (2010) explored findings for Albania with dividing returnees into own-account workers and employers. They found out that own-account workers had similar characteristics to unemployed individuals such as low qualification or limited former working experience,

however people, that became employers, exhibited characteristics in common such as high education level, foreign language skills, ability to accumulate savings or additional skills, that were gained during working abroad. Furthermore, in comparison with people that have not migrated, return migrants are more likely to be entrepreneurs, but also less likely to participate in the labour market. Therefore, migration experience was found to be an effective tool for creation of working places in Albania. In addition, the study for Egypt found that returnees had a higher chance of continuance over time as entrepreneurs compared to stayers (Marchetta, 2012).

Lianos and Pseiridis (2009) examined the factors, affecting the employment decision of return migrants, with the sample of citizens of Bosnia-Herzegovina, Bulgaria, Georgia, Kyrgyz Republic, Romania, and Tajikistan using a similar approach towards 3 possible occupational statuses: salaried employment, self-employment without employees, and entrepreneurs with employees. It was discovered that remittances, sent back to families during the migration, formal and informal education, previous qualified experience and continuation of international work experience increased the probability for returnees to become employers instead of own-account workers. Additionally, the authors run separate regression models for males and females and discovered their employment decisions are shaped in a different way. They discovered that marital status and the amount of years abroad increased the likelihood of self-employment for females, however the size of household, number of remittances and saving were insignificant.

The gender topic is generally not tackled enough as the majority of migrants in surveys are males. Males usually have a larger tendency for return self-employment, even after controlling for other factual or perceptual factors (Arenius and Minniti, 2005). Interestingly, Hundley (2000) found that an increasing number of children increased the probability of females becoming wage-employed, however higher number of children had a positive and insignificant effect on male self-employment.

Some studies did not find any influence of international work experience on having a higher chance of becoming self-employment after return. For example, Enchautegui (1993) used the data of Puerto Rican male migrants, who returned from the mainland United States in the 1970s, and found that their experience abroad was neither penalized nor rewarded in terms of entrepreneurship. Similar results were discovered for Ukrainian and Estonian returnees. Kupets (2011) examined the performance of return labor migrants

in the Ukrainian labor market and found that they did not have a higher chance to become entrepreneurs after return. Among the Ukrainian returnees the number who used their acquired skills and knowledge in their salaried positions was very small, and even smaller for self-employed returnees. For Estonian returnees, Masso, Eamets and Motsmees (2014) compared their jobs before and after migration to find the effect of international work experience on the occupation after the return to home country. They discovered no effect of temporary migration on upward occupational mobility, and even found a negative impact for females. In all mentioned studies, this tendency was connected to the low-skilled work experienced by returnees in host countries, and not acquiring additional skills or knowledge abroad as well as not very friendly business environment in home countries (only for Ukraine).

Among other factors authors most frequently relate to the return entrepreneurial activities are savings collected abroad. For instance, Thomas-Hope (1999) described the importance of investments by returnees in Jamaica in self-employment in the service sector and in agriculture. Wahba and McCormick (2001) highlighted that total savings accumulated by Egyptian migrants abroad and the duration of international work experience positively affected the probability to become self-employed for educated migrants and did not have any effect in case of uneducated individuals. Mesnard (2004) used an example of Tunisian migrants, and described crucial gains for the sending country through the remittances being used for consumption and investments, and less with human capital accumulation, as the majority of migrants were involved into low-skilled jobs.

Some authors were also analyzing influence of educational factors on the occupational status of returnees. Dustman and Kirchkamp (2002) found a positive correlation between the educational level of return migrants to Turkey and the chances to become self-employed or a salaried worker, and negative correlation with the probability of non-participation in Turkish labor market. Also, they found that individuals with higher levels of education may have expected a higher wage in their home country, which could have been a reason for the positive effect on the salaried worker option; in addition, education may have positively affected the return to self-employment activities, and therefore increased the probability of choosing this option. Similar findings were discovered by Radu and Epstein (2007) for Romanian migrants. Social capital and networks very often

play a crucial role in determining occupational status of return migrants. Prashantham and Dhanarjee (2010) studied how Indian IT workers, after returning from the United States had been benefiting from accumulated human capital at home.

Several studies have been done for Polish return migrants as well. Anacka and Fihel (2010) used a data on former migrants that came to Poland during the 2004-2008 and found that they were relatively well educated but usually were employed in low-paying jobs abroad. Another finding was that many highly-skilled migrants were not eager to come back due to making progress in terms of social or economic integration abroad. Smoliner and Forschner (2012) explored the topic with using data from the Polish Population Census conducted in 2002. According to census, highly-skilled returnees mainly come from the U.S. (17.6%), Germany (15.9%), Great Britain (7.5%), France (5.7%) and Canada (4.9%) and the vast majority of them were at economically active age. Moreover, Klagge and Klein-Hitpaß (2007) observed that majority of the highly skilled returnees were salaried employees (almost 90%) and represented professions such as high-ranking officials, managers and specialists. Grabowska-Lukinska (2010) also analyzed the career patterns of returnees and found that only approximately 8% of returnees could enhance their career after return.

Following the topic of advancing occupational status after working abroad, Coniglio and Brzozowski (2016) have analyzed the potential factors that could affect the successful return migration of Poles and proved that involvement in low-skill jobs led to the skill waste, further lowering their chances of successful return to labour market in Poland, e.g. searching for a job that fits their original qualification.

Controversial findings were discovered in the study for Central and Eastern Europe countries, where Martin and Radu (2012) have identified that Polish returnees earn substantial labour income premia for both salaried employment and self-employment. They also discovered that returnees had higher propensity to not participate in the labor market and/or switch to self-employment activities after coming back to Poland, as they lack professional experience or social capital in comparison to non-migrants.

Although, several papers have analyzed return migration in Poland and occupational choices of returnees, the existing studies have provided very little information on the linkages between return migration and entrepreneurship and whether some specific characteristic of demographical background, education or previous experience of

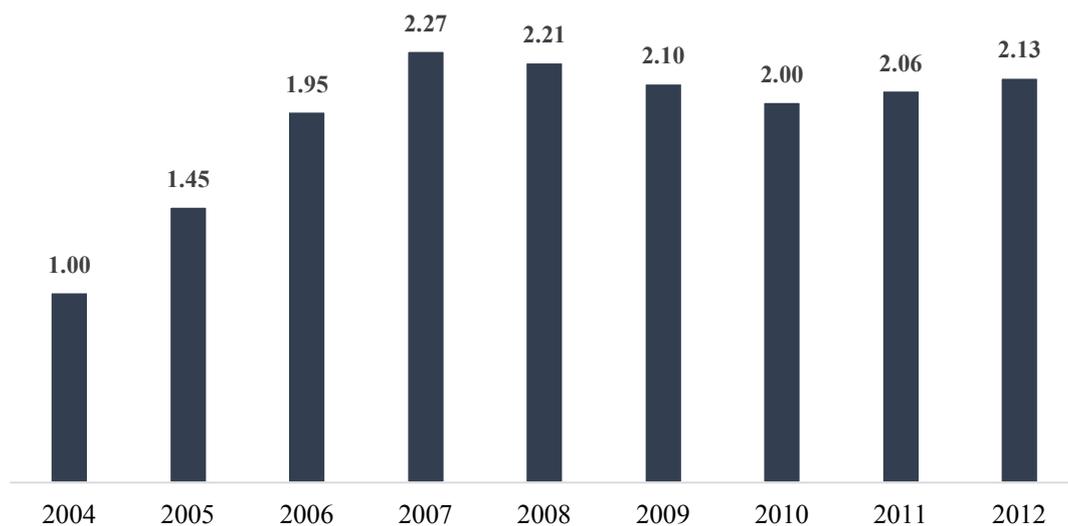
returnees could influence their self-employment activities after coming back to Poland. Defining them could help policymakers have a better overview on which groups of return migrants have a higher chance to become self-employed or an entrepreneur after return and adjust their financial and educational initiatives and programs accordingly.

### 3. Poland: patterns of migration and return

International migration is an important phenomenon in Poland which plays a significant role in the process of its socio-economic development. Poland has a rich history as an emigration country (Kołodziej, 1982; Pilch, 1984) including several large waves of migration to European and North American countries.

Since joining the European Union and the opening of the labor market in 2004, Poland experienced a mass migration of over 2 million people going abroad, what makes Poles till now the largest group of migrants from the CEE countries. It is estimated that only between 1 May 2004 and 1 January 2007 at least one million people emigrated from Poland (Nowakowska, 2014). In general, migrants constituted over 4% of the working age population in 2010 (Okolski, 2012). Please see the total number of Polish migrants during 2004-2012 in figure 1 below.

**Figure 1. Number of Polish migrants during 2004-2012, mln.**



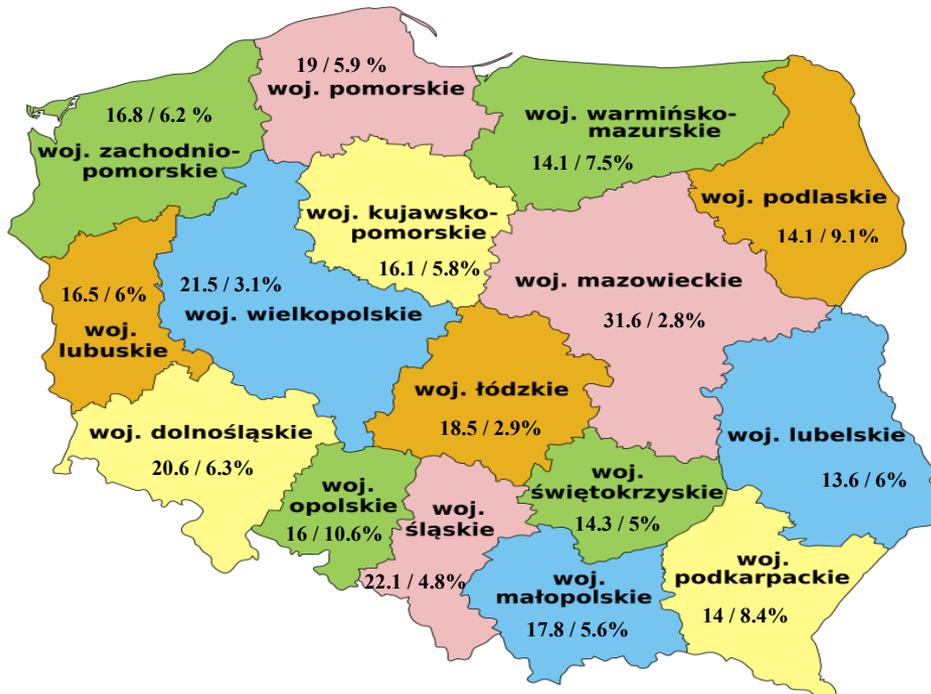
Source: *stat.gov.pl*

Based on the data from the Polish Central Statistical Office (PCSO), which estimated that in 2011 as many as 2.06 million permanent residents of Poland had stayed abroad for over

three months, a large majority – for over one year. It is interesting to note that around 85% of all Polish migrants stayed within the European Union, mainly in the United Kingdom (30%), Germany (23%), Ireland (6%), the Netherlands (4,7%), Italy (4,7%), France (3%) and others (around 14,5%). Except for Western and Northern Europe countries, among the main destinations for Polish migrants are traditional immigration countries such as the United States, Canada, and Australia, where Poles often reunited with their ancestors who left Poland during previous migration waves. According to the Polish 2011 Census data, the United States hosted the third highest number of Polish residents who stayed abroad for over three months – almost 219 thousand, while the number of Polish migrants in Canada and Australia is 48 and 14 thousand respectively. The primary reasons behind mass Polish migration are economic, including higher wages offered abroad and high unemployment rate among young people in Poland, 17% in 2007 (Eurostat). Even though Poland was one of the few EU Member states that remained relatively unharmed by the economic crisis and showed economic growth during post-crisis years (Coniglio and Brzozowski, 2016), Polish migrants were going abroad to the Western countries which were suffering from the crisis leading to fiercer competition in their labor markets. The reason is that even seasonal low-skilled jobs in more developed Western countries could be more beneficial in terms of earnings than permanent high-skilled ones in Poland. According to Eurostat data, the gross average wage in 2012 in United Kingdom was 3,605 EUR, in Germany – 2,720 EUR, and in Ireland – 2,997 EUR, while at the same time the average gross wage in Poland was 850 EUR. In addition to economic reasons of Polish migration, we need to mention that a lot of young Polish individuals go studying abroad, and if they come back to the homeland, they bring in high human capital, potentially positively correlating with probability of them starting their own business (White, 2010).

It is not surprising that, the emigration patterns of migrants are different for various regions of Poland, with the lower shares of migrants from the regions that are historically and economically are recognized as richer, and vice versa (figure 2).

**Figure 2. GDP per Capita (PPP) and % of emigrants in Polish regions in 2016, thousand EUR**



Source: [ec.europa.eu/eurostat](http://ec.europa.eu/eurostat)

Based on the PSMO's data of 2011 the voivodships in Poland with the highest number of emigrants were the Opole (10.6%), Podlaskie (9.1%), Podkarpackie (8.4%) and Warmińsko-Mazurskie (7.5%), contrasted with much smaller emigration percentage from Mazowieckie (2.8%), Łódzkie (2.9%) and Wielkopolskie (3.1%).

Return migration is one of the most important channels through which sending countries might benefit from emigration, and return migrants are widely recognized as important agents of change, inducing modernization processes of their home countries (King, 1978). For Poland with developing economy and its huge share of citizens working abroad, repatriating them back to Poland is challenging, however very beneficial process.

It is crucial to mention that actions of promoting self-employment and small business formation amongst returning migrants has been recognized by many governments and international organizations, which have targeted schemes to assist with investments in business activities. For example, in a comprehensive overview of assisted return schemes aimed at promoting development, Ghosh (2000) surveys many multilateral schemes sponsored by bodies such as the EU, UNDP and IOM as well as bilateral (sending and receiving country) and individual national schemes (sponsored by countries of origin).

We should admit that the recent economic crisis and continuing decline in the global economy have decreased the number of jobs in the destination countries of Polish migrants. This pattern combined with the strong performance of the Polish economy has crucially contributed to the many Poles returning home. Although it is difficult to estimate the exact number of Polish return migrants due to the lack of information whether such returns were temporary or permanent. Based on the Labor Force Survey (LFS) only in the last quarter of 2007 around 213,000 returnees came back to Poland (Anacka, Fiihel, 2012: 148). Previously, based on the CBOS Public Opinion Research Centre during 1998-2007, around 2.9 million Poles have returned home from working abroad.

It is worth mentioning that since the 1990s in Poland in addition to repatriation schemes has developed several initiatives and programs for Polish migrants both at the central and local levels. Majority of them are focused on information and counseling campaigns rather than on the labor-related issues (job offers, housing, and financial support).

Among the initiatives related to encouragement of return migration on central level, some of such issues have been mentioned in governmental strategies such as Poland 2030 – National Development Strategy (2009) or National Strategy Report on Social Protection and Social Inclusion (2010), however very briefly and have not been developed any practical methods of stimulating Polish migrants returning. Same is related to the national informational campaigns “Have you got a Plan to return?” or site [ReturntoPoland.pl](http://ReturntoPoland.pl). Among the local initiatives, we could list such programs as “The 12 cities to go back”, “Powroty”, “To return and what next?” and others. Considering rapid aging of the population and decrease of the active workforce due to the migration flows, Polish government should put maximum efforts in creating convenient conditions for returnees and minimize the influence of any obstacles that return migrants could face during the reintegration at home.

## **4. Data and descriptive statistics**

### **4.1 The overview of the dataset and source.**

Our analysis for the rest of the paper will be based on the EU Labour Force Survey (EU-LFS) data. EU-LFS is the largest European household sample survey that provides quarterly and annual data on labour market performance of people aged 15 and over.

The EU-LFS includes a typical household questionnaire covering general demographic background, labour status, and employment characteristics of the main job and secondary jobs, as well as employment history. The survey also provides brief information on the previous migration background and previous occupations of the households. Finally, the questionnaire supplies information about education and training activities of households, which include information on education level, field of previous studies, and the existence of recent additional education. Unfortunately, several relevant variables of the Polish dataset information had in most cases missing values, as for example, the field of education or professional occupation at the current job.

For our analysis, we used three comparable groups of Polish individuals. The first group is designated “stayers” and consists of people for whom we do not observe migration experience and currently reside in Poland. Second group includes migrants, who at the time of the survey, are working overseas. Finally, we have return migrants. The return migrant is defined as a Polish citizen who lived and worked abroad for at least one quarter over the last two years and who reside – or with the intention to reside – indefinitely in Poland and was present at the time of the survey. The survey data includes 2,978,225 observations of stayers, 8,639 migrants and 3,933 return migrants collected during 2002-2014.

Based on the EU-LFS questionnaire, we group the responses into several groups of variables that could have potential influence on the occupational status of Polish return migrants, such as demographics, personal characteristics, education, working experience and working conditions. The full list of mentioned characteristics can be found below.

1) Demographics and personal characteristics:

- Age (in years);
- Nationality (Polish or non-Polish);
- Marital status (single, married and divorced / widowed);
- Gender (male or female);
- Place of residence (city, town, rural);
- Presence of children (1-2 children, more than 2 children or no children).

2) Education and working experience:

- Education level (higher, medium or lower);

- Economic activity (primary sector (including agricultural, fishing, forestry, and the mining and quarrying sectors), manufacturing, construction, business services or public services);

3) Working conditions:

- Existence of more than 1 job (yes or no)<sup>2</sup>;
- Size of firm where person is occupied (up to 10 employees or more than 10 employees);
- Number of weekly working hours (up 30 hours, 30-40 hours, more than 40 hours);
- Monthly (take home) pay from main job in deciles (only for the salaried workers).
- Occupation during residence abroad (only for return migrants and current migrants and includes such statuses as self-employed (together with or without employees<sup>3</sup>) or salaried employee).
- Country of destination.

#### 4.2. Who returns? The characteristics of returnees.

We start the overview of our dataset with the comparison of characteristics for the three groups (Appendix A, B and C). Overall, we find many similarities between the both groups that have a migration experience: return and current migrants. They are more often male and married, compared to the stayers. We think that higher share of married among returnees may originate from necessity to financially support family, while more males among the returnees are coming from the environment where males are predominantly main-earners. Also, they are residing more often in rural areas in comparison with stayers. Such situation is connected to the fact that Polish individuals from cities usually have more opportunities to launch their career in Poland in comparison to the people from rural areas, who have more incentives to go abroad and do low-skilled jobs as their chances to find a job in their regions are smaller.

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<sup>2</sup> In some cases, return migrants data includes several working conditions variables (e.g. existence of more than one occupation, number of weekly working hours, size of firm where person is occupied) counted during time abroad.

<sup>3</sup> Due to the data limitations, we are able only to distinguish between salaried employment and self-employment of Poles, however the data on employed people is missing.

We did not find any substantial difference between returnees and other groups in terms of mean age and nationality. We also can see that return and current migrants have more children in comparison with people without migration experience<sup>4</sup>. We assume that the reason behind such pattern is also connected to the necessity of financial support for their families.

In terms of education, we could observe that return migrants are less educated than stayers, e.g. the share of those with lower education is 76.9%, compared to 58%. Interestingly, migrants are even less educated than returnees, with the highest share of lower education (82.2%). We determine that such pattern is linked to the abilities of educated Poles to find jobs in Poland and less incentives to go abroad and search for jobs there. Regarding the industry of occupation, we see again that return migrants also have similarities with current migrants, with higher shares of involvement in the construction (29.7%), manufacturing (23.3%) and business services (27.5%) industries and lower in primary sector and public services compared with stayers. We believe that the involvement of Polish migrants in jobs that do not require a higher qualification is often connected to their expertise diminishing while abroad<sup>5</sup>.

Among the current migrants 7.8% are self-employed and the remaining 92.2% work as employees. The number for return migrants is slightly lower in comparison with current migrants, with 6.3% of self-employed individuals and 93.7% of salaried workers respectively. We also found that return migrants more often have only 1 occupation after coming back to Poland, however they work shorter hours, as the share of working hours more than 40 per week is 44.6% in comparison with stayers, whose share equals 71.3%. The majority of salaried returnees have higher monthly pay from their main occupation in comparison with stayers (more or equal to the 9<sup>th</sup> deciles 59% and 12.1% respectively), although less than current migrants, whose share of people with monthly income more or equal to the 9<sup>th</sup> deciles is 74%. We assume that as return migrants were earning more abroad and continue after, they could afford to work shorter hours after the return to Poland compared to Poles who do not have migration experience. The majority of people

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<sup>4</sup> Please note that the stayers constitute the majority of the dataset and thus they generally have very similar characteristics to the overall averages. Therefore, there is no need to compare characteristics of return or current migrants with the general dataset.

<sup>5</sup> For the business services sector, we use less knowledge intensive and more knowledge intensive branches, and for the manufacturing industry we distinguish between low-tech, medium-low-tech, medium-high tech, high-tech branches (Pavitt classification, 1984).

with migration background less often work in companies that employ up to 10 workers, while in the stayers' category this share is a bit higher (23.7%). Overall, we can summarize that return migrants have similar characteristics with current migrants.

### 4.3. Who are the Entrepreneurs?

Our dataset contains 500 self-employed return migrants, 670 self-employed current migrants and 235,112 self-employed stayers. Please find table 1 below which includes demographic background of self-employed individuals.

**Table 1. Demographic and personal characteristics of self-employed Polish returnees, migrants and stayers**

<b>Characteristics</b>	<b>Self-employed return migrants</b>	<b>Self-employed migrants</b>	<b>Self-employed stayers</b>
<b>Age (in years)</b>			
<24	23.9%	19.9%	36.5%
25-39	28.7%	29.6%	12.7%
40-59	45.3%	48.2%	28.4%
60+	2.1%	2.3%	22.4%
<b>Nationality</b>			
<i>Polish = 1</i>	97.4%	99.3%	94.3%
<b>Marital status</b>			
<i>Widowed, divorced</i>	5.1%	5.4%	6.6%
<i>Single</i>	23.5%	13.9%	13.5%
<i>Married</i>	71.4%	80.7%	79.9%
<b>Sex</b>			
<i>Male</i>	83.6%	90.1%	64.4%
<i>Female</i>	16.4%	9.9%	35.6%
<b>Residence</b>			
<i>City</i>	26.6%	29.5%	21.5%
<i>Town</i>	12.8%	16%	15.5%
<i>Rural</i>	60.6%	54.5%	63%
<b>Existence of children</b>			
<i>No</i>	33.8%	23.1%	39.4%
<i>1-2</i>	50.6%	61%	46.8%
<i>More than two</i>	15.6%	15.8%	13.7%

Source: own calculations using Polish LFS for years 2002-2014.

We could observe that self-employed return and current migrants have similar distribution in terms of age groups and nationality, with a higher share of respondents

being 40-59 years old. Among the self-employed individuals with migration background, we find also more males and those who are married. The distribution between different residence areas is very similar for all groups of self-employed respondents, who more often stay in rural areas. Self-employed migrants more often have children and hold the highest share of respondents who have more than two children (15.8%). Brief statistics on educational and working experience of self-employed respondents can be found in the table 2.

**Table 2. Education and working experience of self-employed Polish returnees, migrants and stayers**

Characteristics	Self-employed return migrants	Self-employed migrants	Self-employed stayers
<b>Education level</b>			
<i>Higher</i>	12.7%	8.2%	15.7%
<i>Medium</i>	7.5%	6%	14.9%
<i>Lower</i>	79.8%	85.8%	69.4%
<b>Economic activity (time of survey)</b>			
<i>Primary sector</i>	29.2%	1.9%	52.5%
<i>Manufacturing</i>	6.4%	6.3%	5.6%
<i>Construction</i>	37.2%	71.6%	7.3%
<i>Business services</i>	24.8%	16.3%	31.6%
<i>Public services</i>	2.4%	3.9%	3%
<b>Occupation abroad</b>			
<i>Self-employed</i>	6.3%	7.8%	<i>Not applicable</i>
<i>Salaried employed</i>	93.7%	92.2%	<i>Not applicable</i>

Source: own calculations using Polish LFS for years 2002-2014.

Overall, we can see that that self-employed stayers are the most educated group (share of respondents with higher education being the highest at 15.7% and the share of lower education lowest at the 69.4%), while self-employed current migrants are least educated (respondents with lower education hold almost 86%). Similar pattern was observed for the overall dataset, too. Regarding the distribution across industries, we see that among the return migrants the largest shares belong to the construction (37.2%), primary sector (29.2%) and business services (24.8%) industries, while most current migrants are involved into construction (72.1%) and business services (16.4%) industries. We find it

not surprising as launching self-employed activities abroad for Polish migrants is much easier in construction industry in comparison with others, where the entry barriers are higher (e.g. requires higher initial financial and other resources). More than half of self-employed stayers – 52.5% - work in the primary sector and 31.6% in business services. It explains a largest share of residing in rural areas among stayers in comparison with current and return migrants. Only 6.3% of self-employed returnees have been self-employed abroad as well, while 93.7% were salaried workers. The proportion of self-employed individuals abroad is smaller than the proportion of self-employed stayers in Poland due to the obstacles of launching self-employment activities (including the bureaucracy of receiving licenses and other permits, and understanding local business specifics), and a lack of social networks in the host country. Finally, brief statistics on working conditions of self-employed individuals are presented in table 3 below.

**Table 3. Working conditions of self-employed Polish returnees, migrants and stayers**

Characteristics	Self-employed return migrants (during time abroad)	Self-employed migrants (time of survey)	Self-employed stayers (time of survey)
<b>Existence of more than 1 job</b>			
<i>No</i>	76.4%	97.9%	94.2%
<i>Yes</i>	23.6%	2.1%	5.8%
<b>Size of firm</b>			
<i>Up to 10</i>	70.1%	93.1%	92.9%
<i>More than 10</i>	29.9%	6.9%	7.1%
<b>Number of working hours (weekly)</b>			
<i>Up to 30</i>	1.4%	3.1%	15.3%
<i>30-40</i>	51.9%	29.3%	31.8%
<i>More than 40</i>	46.7%	67.6%	52.9%
<b>Country of destination<sup>6</sup></b>			
<i>Germany, %</i>	49.7%	48.4%	<i>Not applicable</i>
<i>Netherlands, %</i>	11.7%	12.6%	<i>Not applicable</i>
<i>Norway, %</i>	5.6%	5.9%	<i>Not applicable</i>
<i>Austria, %</i>	5.5%	5.4%	<i>Not applicable</i>
<i>Others</i>	27.0%	27.7%	<i>Not applicable</i>

Source: own calculations using Polish LFS for years 2002-2014.

<sup>6</sup> We find that the number of return migrants that came from United Kingdom or current migrants residing there during time of survey from our dataset is much lower than the statistics on migration to United Kingdom (e.g. 30% of Polish going abroad to United Kingdom). We think that with the EULFS data we were not able to capture much of the migration to UK, because that is more permanent in nature, and that families are accompanying in the migration.

Self-employed returnees more often have more than one job abroad in comparison with current migrants and non-migrants (23.6% with 2.1% and 5.6% respectively) and work for companies with more than 10 employees (29.9% with 6.9% and 7.1% correspondingly). Self-employed return migrants usually work abroad slightly less than others, however all three groups have very high shares of individuals working more than 40 hours (with 47%, 67% and 52% for self-employed returnees, current migrants and stayers respectively). All those characteristics for self-employed returnees, current migrants and stayers are similar to the respective groups from the general dataset including both self-employed and salaried employees. As it was described in the previous chapter, most of the self-employed return migrants were working abroad in Western developed countries: Germany (49.7%), Netherlands (11.7%), Norway (5.6%), Austria (5.5%) and others.

In summary, among mentioned characteristics we found many similarities between the two groups with a migration experience, as well as several crucial differences between them and non-migrants in terms of age groups distribution, education and industry of occupation.

## **5. METHOD**

For our empirical analysis, we are going to use two possible professional statuses of return migrants: wage employment and self-employment. Existing literature on this topic defines two main groups of factors that influence this choice: monetary factors (earnings from the job or business) and non-monetary factors such as working conditions, fringe benefits etc (Hamilton, 2000). Although non-money factors are very crucial in terms of choosing occupational status, we will follow Piracha and Vadean (2009) and will stick to the theoretical models that assume the choice between salaried employment and self-employment being made based on expected relative earnings solely.

The classic formulation of such models has been developed by Blau (1985), Borjas (1986) and Vijverberg (1986). Blau introduced such specific characteristic as “managerial ability” as one additional input to the production function, where the maximization of individual’s utility under constraints follows to the environment in which person chooses self-employment. Vijverberg (1986) has extended this topic with distinguishing between salaried workers and self-employment based on the tasks that they perform. He claimed

that managerial and organizational activities are different in nature in comparison with other activities and based on the individual's abilities to perform them, the individual's occupational statuses will be different. Borjas introduced the model, which compares the expected earnings of salaried workers and self-employment based of personal characteristics of individuals which serves as a basis for many further studies:

$$I_i = y_i - w_i = X_i\beta + u_i \quad (1)$$

where:  $y_i$  – expected net income from self-employment activities of individual  $i$ ;  $w_i$  – wage that individual  $i$  would have if in paid employment;  $X_i$  – is a vector of demographic and socio-economic characteristics of individual  $i$  which define the values of  $y_i$  and  $w_i$ ;  $\beta$  – coefficient vector of individual's characteristics;  $u_i$  – error term for return migrant  $i$ .

Borjas also defined that the probability of self-employment for individual  $i$  is given by:

$$P_i = \Pr(I_i) = \Pr(X_i\beta + u_i > 0) \quad (2)$$

According to this model, each individual has specific characteristics, such as education, age, marital status, risk-taking attitude, managerial capabilities, knowledge, ability to draw capital or possession of necessary funds, etc, based on which the person decides to be self-employment or salaried worker. Later an advanced version of Borjas' model was introduced by Hammarstedt (2004) with adding more specific details on defining the expected relative earning of wage employment and self-employed individuals:

$$I_i = \int_{t=1}^T [\pi(1 - t_1)e^{-\sigma t}]dt - \int_{t=1}^T \{[w(1 - u) + uB](1 - t_2)e^{-\sigma t}\}dt - C_i \quad (3)$$

where:  $\pi$  – profit before tax of individual  $i$ ;  $t_1$  – profit tax;  $\sigma$  – discount rate;  $w$  – wage earnings of migrant  $i$ ;  $u$  – unemployment rate;  $B$  – unemployment benefit;  $t_2$  – personal income tax;  $C_i$  – cost of initial investment for self-employment,  $T$  – life-time.

Based on this model, at time  $t=1$  a person compares the expected earnings from self-employment activities and salaried employment. For the self-employment activities person needs to extract profit taxes to be paid from the earned profit and discount this sum with an appropriate rate (e.g. calculates present value of the net profit). In addition, individual should reduce net profit by the costs of initial investment into self-employment activities. Afterwards, a person counts expected earnings that one could earn as salaried worker, bearing in mind the unemployment rate that also influences choice of becoming salaried employee, and extracts income taxes. Then individual, similarly to previous calculation, finds the present value of potential earnings with a discount rate. The final

decision on occupation choice follows to basic comparison of two received results by extracting expected earnings from self-employment and wage employment activities. If  $I_i > 0$ , s/he decides to become self-employment; if  $I_i < 0$ , s/he decides to work as a salaried employee.

Lianos and Pseridis (2009) described in their paper, the decision on occupational choice is not a life-time decision and its could be easily switched after some time due to new opportunities or by the influence of other external factors. Therefore, decisions on occupational choices are decisions with a limited time horizon, e.g. for a period and the decision between two possible occupational choices we could re-write simpler:

$$I_i = \pi(1 - t_1) - [w(1 - u) + uB](1 - t_2) - C_1 \quad (4)$$

Formally, the model that was discussed above could be written as follows:

$$\begin{cases} E = 1 \text{ if } E^* > 0 \\ E = 0 \text{ if } E^* \leq 0 \end{cases} \quad (5)$$

where  $E^*$  is a latent variable measuring the pay-off from becoming an entrepreneur after return. We will use the model that have been described before and assume that  $E^* = X_i\beta + u_i$ . We have included into the empirical model the number of variables that are associated with the parameters of the theoretical model. We expect that several variables will have a correlation with being self-employed after return. For instance, we predict that older people (e.g. older than 40 years) will be more associated with self-employed activities due to their experience and accumulated knowledge, as well as married individuals and single males. The same applies to people with higher education and those who were self-employed abroad. Furthermore, we expect that Poles who had more than one job abroad or worked longer hours also are more closely associated with self-employed activities upon return due to accumulated savings.

Based on our dataset, we will introduce five blocks of independent variables. The first block includes demographic characteristics of the migrants such as age, nationality, marital status, gender, place of residence and existence of kids. The second block includes three education dummies reflecting educational background of the returnees at the time of the survey, namely lower (primary and lower secondary education), medium (upper and post-secondary non-tertiary education) and higher (including short-cycle tertiary education and university education) educational level.

The third block includes five dummies on industry where returnees are involved: primary sector, manufacturing, construction, business services and public services. A fourth block

of determinants comprises controls for the occupational status of the migrant during the migration. The idea is to find out whether being an entrepreneur during migration affects the probability of taking up this occupation upon return once socio-demographic characteristics of the returnees and conditions of their return are accounted for. Last of all, a fifth block of independent variables includes working conditions of the return migrants during their time abroad such as existence of more than 1 job, size of firm where person was occupied, number of weekly working hours, and immigration country.

We will use for the estimation the probit versions of a discrete choice econometric model where the dependent variable is a dummy variable taking the value 1 if the individual has become an entrepreneur since return, and 0 otherwise, e.g. individual has become a salaried worker, using the restricted definition for the self-employed individual. We have estimated 3 types of probit models for each group. First one is a general probit model where we are checking how personal characteristics influence the occupational choice of the whole dataset including additional dummy variables for returnees, migrants and stayers. Second type of models presents the influence of personal characteristics on the occupational choice of returnees, migrants and stayers. Finally, we used probit models with the interactions of tested variables and dummies for return migrants, current migrants, and non-migrants separately. Very often adding interaction terms to a regression model can greatly expand understanding of the relationships among the variables in the models and allows more hypotheses to be tested.

## 6. Results

Firstly, before turning to the return migrants and the characteristics associated with the self-employment activities for them, we will discuss the general influence of mapped characteristics on the probability of being self-employed for the general dataset from the table 4.<sup>7</sup>

**Table 4 – Probit of being self-employed for the general dataset (marginal effects)**

Characteristics	All groups	Males	Females
<b>Age [ref. is up to 24 years]</b>			
<i>25-39 years</i>	0.0228***	0.0290***	0.0373***

<sup>7</sup> We used two comparable groups for this model to distinguish whether some variables are differently associated with becoming self-employed upon return to Poland for males and females. Based on the previous studies, several personal characteristics have an opposite impact on males and females in terms of their occupation after return (Lianos and Pseitidis (2009); Hundley (2000)).

	(0.001)	(0.001)	(0.001)
<i>40-59 years</i>	0.0437***	0.0534***	0.0567***
	(0.001)	(0.001)	(0.001)
<i>60+ years</i>	0.0763***	0.0728***	0.178***
	(0.001)	(0.002)	(0.003)
<b>Marital status [ref. is widowed / divorced]</b>			
<i>Single</i>	-0.0186***	-0.0284***	-0.0204***
	(0.001)	(0.002)	(0.001)
<i>Married</i>	0.00887***	0.0134***	0.0205***
	(0.001)	(0.002)	(0.001)
<b>Place of residence [city is ref.]</b>			
<i>aTown</i>	0.00175***	0.00264***	0.00679***
	(0.001)	(0.001)	(0.001)
<i>Rural</i>	-0.00572***	-0.00463***	0.00410***
	(0.001)	(0.001)	(0.001)
<b>Presence of children [ref. is none]</b>			
<i>1-2 children</i>	-0.000758	0.00176**	-0.00183*
	(0.001)	(0.001)	(0.001)
<i>2+ children</i>	-0.00244***	0.000317	0.0111***
	(0.001)	(0.001)	(0.002)
<b>Education level [ref. is higher]</b>			
<i>Medium</i>	-0.0719***	-0.0962***	-0.0471***
	(0.001)	(0.001)	(0.002)
<i>Lower</i>	-0.0440***	-0.0552***	-0.0275***
	(0.001)	(0.001)	(0.001)
<b>Industry [ref. is primary sector]</b>			
<i>Manufacturing</i>	-0.0172***	-0.0187***	-0.748***
	(0.001)	(0.002)	(0.002)
<i>Construction</i>	-0.0197***	-0.0139***	-0.633***
	(0.001)	(0.002)	(0.006)
<i>Business services</i>	-0.0260***	-0.0213***	-0.640***
	(0.001)	(0.002)	(0.003)
<i>Public sector</i>	-0.0508***	-0.0620***	-0.765***
	(0.001)	(0.002)	(0.002)
<b>Existence of second job [ref. is no]</b>	0.00118	-0.00265**	0.00404**
	(0.001)	(0.001)	(0.002)
<b>Number of working hours on current occupation [ref. &lt;30]</b>			
<i>30-40</i>	-0.200***	-0.301***	-0.0553***
	(0.001)	(0.005)	(0.001)
<i>&gt;40</i>	0.174***	0.070***	0.142***
	(0.002)	(0.002)	(0.002)
<i>Return migrant dummy</i>	0.00493	0.00897	0.0575***
	(0.001)	(0.011)	(0.021)
<i>Current migrant dummy</i>	-0.0586***	-0.0553***	-0.194***
	(0.01)	(0.013)	(0.023)
<i>Non-migrant dummy</i>	0.0136	0.0211	0.0254
	(0.011)	(0.014)	(0.026)
<i>Pseudo R2</i>	0.4575	0.4043	0.4609
<i>Number of observations</i>	690,555	370,120	423,652

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Generally, age has a positive correlation with probability of individuals to be self-employed (e.g. the older you are, the biggest is chance to be self-employed), even for a people under 60 years old. This finding is also in line with results of Marchetta (2012), who argues that older people due to their larger professional experience and holding more connections have higher probability of being self-employed. Married individuals have more chances being self-employed in comparison with single and widowed or divorced groups. This finding is similar to what Dustmann and Kirchkamp (2002) concluded in the case of Turkish returnees, i.e. being married decreases the chances of non-participation in the labour market and increases the chances of being self-employed after the return. Having more than 2 children negatively influences the chances to become self-employed, however having 1-2 children has a different correlation for males and females, with a positive association of being self-employed for males and opposite for females. We found this result as a contradiction to Hundley's research (2000), who discovered that the increasing number of children has a positive and insignificant effect on male self-employment.

In regards to the respondents' places of residence, males from the rural areas have a smaller chance to become self-employed in comparison to individuals from cities, even though working in the agriculture is associated with the highest chances to be self-employed. This result surprised us as around 60% of Poles reside in rural areas and more than a half of them are involved in the primary sector. One possible explanation for such findings could be the situation when Polish individuals living in the cities own their small farm businesses, which are located outside of the cities. It is important to note that females have a positive association of living in rural areas and being self-employed.

We also could see that individuals with higher education have more chances to be self-employed, which supports several previous studies that proved that higher education increase chances to be self-employed (Hamdouch and Wahba, 2012; Gubert and Nordman, 2011). Regarding the working conditions, we could see that working longer hours is more closely associated with a self-employment activities, and it is not surprising considering higher responsibility and often larger involvement of business owners in day-to-day operations compared to salaried workers.

Secondly, we will describe the correlation between personal characteristics and self-employment activities for Polish returnees, including several variables on the working

conditions of returnees during their time abroad, which gives us a broader overview on the association between former working experience and chances to be self-employed after returning to Poland.

**Table 5 – Probit of being self-employed for return migrants (marginal effects)**

Characteristics	All	< 39 years old	40+ years old
<b>Marital status [ref. is widowed / divorced]</b>			
<i>Single</i>	-0.0162 (0.026)	-0.0164 (0.037)	0.0142 (0.043)
<i>Married</i>	-0.0134 (0.022)	0.00252 (0.036)	-0.0349 (0.029)
<b>Gender [ref. is male]</b>	-0.0176 (0.016)	0.0129 (0.021)	-0.0555** (0.027)
<b>Place of residence [city is ref.]</b>			
<i>Town</i>	-0.00355 (0.016)	0.0137 (0.022)	-0.0211 (0.023)
<i>Rural</i>	-0.00395 (0.013)	0.00184 (0.018)	-0.00803 (0.017)
<b>Presence of children [ref. is none]</b>			
<i>1-2 children</i>	-0.0109 (0.012)	-0.0113 (0.02)	-0.0157 (0.015)
<i>2+ children</i>	0.0238 (0.016)	0.0146 (0.026)	0.0223 (0.021)
<b>Education level [ref. is higher]</b>			
<i>Medium</i>	0.00861 (0.022)	0.0153 (0.029)	0.0113 (0.035)
<i>Lower</i>	-0.0102 (0.016)	-0.0111 (0.02)	-0.00509 (0.025)
<b>Industry [ref. is primary sector]</b>			
<i>Manufacturing</i>	-0.143*** (0.017)	-0.152*** (0.025)	-0.129*** (0.023)
<i>Construction</i>	-0.114*** (0.015)	-0.103*** (0.02)	-0.119*** (0.02)
<i>Business services</i>	-0.0850*** (0.014)	-0.0736*** (0.02)	-0.0898*** (0.02)
<i>Public sector</i>	-0.191*** (0.036)	-0.146*** (0.054)	-0.202*** (0.047)
<b>Occupational status abroad [ref. is salaried worker]</b>	0.302*** (0.039)	0.264*** (0.058)	0.346*** (0.052)
<b>Existence of second job abroad [ref. is no]</b>	-	-	-
<b>Number of working hours abroad [ref. &lt;30]</b>			
30-40	-0.0408 (0.04)	-0.0477 (0.04)	0.00644 (0.014)
>40	-0.0442 (0.04)	-0.0460 (0.04)	-
<b>Size of firm abroad [ref. is &lt; than 10 employees]</b>	-0.0104	-0.0125	-0.00159

	(0.014)	(0.019)	(0.021)
More than 10 employees	-0.0118	0.0405	0.0134
	(0.475)	(0.059)	(0.053)
<b>Country of destination [ref. is Germany]</b>			
<i>Netherlands</i>	-0.0290*	-0.0589**	0.00299
	(0.0166)	(0.0235)	(0.0232)
<i>Norway</i>	-0.0325	-0.112	-0.0139
	(0.0258)	(0.0711)	(0.0309)
<i>Austria</i>	-0.00494	-0.0198	0.0158
	(0.0232)	(0.0304)	(0.0354)
<i>Other countries</i>	-0.0109	-0.0106	-0.00781
	(0.0115)	(0.0163)	(0.0164)
Pseudo R2	0.4719	0.4719	0.4828
Observations	2,444	1,127	1,262

Standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

Regarding the industries of occupation, we found that Polish returnees from such industries as manufacturing, construction, business services, and the public sector a lower chance to become self-employed in comparison with people from primary sector. As discussed before, returnees mainly have lower and medium education and usually are employed primary sector occupations that do not require highly skilled and qualified labour force in comparison with other more knowledge based industries such as business services or manufacturing<sup>8</sup>. A similar result was found by Ilahi (1999) in the case of Pakistani returnees. Interestingly, return migrants who have been self-employed abroad have a positive correlation with being self-employed as well in their home country, regardless of their age. We assume that returnees who have previous self-employment experience abroad, also have a better chance to develop and implement their business ideas in Poland. This finding is similar to what Gubert and Nordman (2008) concluded in the case of Algerian, Maroccan and Tunisian returnees, as well as was found by McCormick and Wahba for Egyptian returnees. Also, results show that return migrants that came from Germany have a higher chance to become self-employed compared to returnees from the Netherlands. We assume that due to Poland's proximity to Germany, Polish returnees may visit their homelands more often, which in turn assists with not losing connections with their local community. Other than that, we are not able to discuss influence of other variables as they are not statistically significant.

Last of all, we will examine the estimates of the model with the interactions of personal characteristics and dummies for each group of individuals (Appendix E). There we could

<sup>8</sup> Please note that business services and manufacturing industries are rather heterogenous in terms of knowledge intensity.

find several interesting findings. Generally, people older than 24 years have more chances to be self-employed compared to younger ones, however Polish return migrants older than 40 years have lower chance in comparison with younger returnees (e.g. up to 24 years old). Considering the tough working conditions abroad for many return migrants (including long hours, existence of second job, and being occupied in the construction field), we could assume that some of them after return have poor health abilities to be involved in self-employment activities as it requires significant work and time commitment. A similar finding was described by Kupets (2011) for Ukrainian returnees, a large part of whom was not economically active after returning due to poor health conditions.

While males generally are more often self-employed, surprisingly we found that Polish female returnees have a higher chance to become self-employed after coming to Poland. This result is in sharp contrast with the results discovered by Areunis and Minitti (2005) for self-employed individuals from 35 countries worldwide, who proved that males usually have a higher tendency for being self-employed. We also found that self-employed returnees from cities have a higher probability to be self-employed in comparison with Polish return migrants from rural areas, while the general dataset holds an opposite result.

Regarding education, we discovered that Polish returnees with a medium or lower level of education have a higher probability to be self-employed after the return in comparison with a higher level of education, while the results for the general dataset is adverse. It goes along with the findings discovered by Kupets (2011) for Ukrainian returnees, that due to the lack of experience and necessary skills, returnees could not fit the requirements of the labor market as salaried employees and had to become self-employed. Finally, while people from primary sector more often are self-employed, Polish returnees employed in the occupation in other than a primary sector industry (e.g. construction, manufacturing, business services, and public sector) provided a higher probability of being self-employed in their home country. One possible reason for such pattern could be that returnees may have lost social networks at home and with a smaller integration in their hometowns it is harder to set-up their own activity which relates to access to the natural resources and connections with the local communities (e.g. activity in primary sector). Therefore, we think that for the Polish return migrants it is easier to launch self-

employed activities in industries which require less developed social networks within their neighborhood. We assume that for Polish returnees, the movement out of agriculture could be the vehicle of development in terms of increasing the number of non-agricultural self-employed Poles and implementing business ideas in non-agricultural industries. Such assumptions go along with findings discovered by Matti Saryimäki and Roope Uusitalo for Finnish forced migrants, who 25 years after resettling were 10-16% more likely to be employed into a non-agricultural industry and earned 11-28% than a comparable group of non-forced migrants (Saryimäki and Uusitalo, 2016).

## **7. CONCLUSIONS**

Our work contributes to the growing literature on the occupational choice of return migrants and entrepreneurship among them. We used a sample that included 3,933 return migrants collected by the Polish Labour Force Survey to describe demographic and professional background of Polish returnees and their self-employment activities. We also describe how 500 self-employed returnees from the general set of returnees and their comparable groups of current migrants and non-migrants.

Regarding the descriptive statistics, we found many similarities between both self-employed groups that have a migration experience: return and current migrants, including the age groups' distribution, nationality, gender specifics (e.g. having share of males), place of residence, existence of children, as well as their occupation during time abroad. However, return migrants were found to be more educated, more involved in other than construction industries (with 29.2% involved into primary sector, 37.2% - construction and 24.8% - business services), more often working in companies with up to 10 employees, and working less hours in comparison to current migrants.

In the analysis of personal characteristics, we discovered that younger Polish returnees have a higher chance to be self-employed compared to the Poles older than 40 years, even though the results for the general dataset are opposite as older people often have larger professional experience and hold more connections. Regarding the association of being self-employed after return with education, we found that Polish returnees with a medium or lower level of education have a higher probability to be self-employed after return in comparison with a higher level of education, while the results for the general dataset is adverse. We think that such findings could be explained with the low-skill jobs of Poles

abroad and losing their qualifications there, which combined with a lack of required experience to meet the labour market need, causes issues when attempting to become a salaried worker after returning to Poland.

Regarding the industries of occupation, we observed that Polish returnees from the primary sector have the highest chances to be self-employed compared to the returnees from others industries (e.g. manufacturing, construction, business services and public sector). We conclude that return migrants, who as mentioned earlier, are less educated and qualified after returning could enter primary sector occupations easier than others, as it less knowledge intense.

And finally, we found that return migrants who have been self-employed abroad have a positive correlation with being self-employed as well in their home country, with no concern of their age. We assume that returnees who have previous self-employment experience abroad, also have a better chance to develop and implement their business ideas in Poland.

To summarize, we see that a large part of the estimates is not significant for our returnees, however our results could be a good start in estimating potential adjustments to the policies related to return migrants and encouraging returning to Poland and setting-up their own activities there.

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**Appendix A – Demographic and personal characteristics of Polish returnees, migrants and stayers**

<b>Characteristics</b>	<b>Return migrants</b>	<b>Migrants</b>	<b>Stayers</b>
<b>Age (in years)</b>			
<i>Mean (in years)</i>	39	39.9	40.2
<b>Nationality</b>			
<i>Polish = 1</i>	99.6%	99.3%	99.9%
<b>Marital status</b>			
<i>Widowed or divorced</i>	5.1%	5.2%	12.1%
<i>Single</i>	23.5%	19.8%	38.4%
<i>Married</i>	71.4%	75%	49.6%
<b>Sex</b>			
<i>Male</i>	80.1%	83.2%	47.7%
<i>Female</i>	19.9%	16.8%	52.3%
<b>Residence</b>			
<i>City</i>	27.3%	22.8%	32%
<i>Town</i>	15.5%	15.4%	17.4%
<i>Rural</i>	57.2%	62.8%	50.6%
<b>Existence of kids</b>			
<i>No</i>	35.6%	31.8%	40%
<i>1-2</i>	53.1%	57.3%	45.8%
<i>More than two</i>	11.3%	10.9%	14.30%

Source: own calculations using Polish LFS for years 2002-2014.

### Appendix B – Education and working experience of Polish returnees, migrants and stayers

<b>Characteristics</b>	<b>Return migrants</b>	<b>Migrants</b>	<b>Stayers</b>
<b>Education level</b>			
<i>Higher</i>	<i>15.3%</i>	<i>10.8%</i>	<i>15%</i>
<i>Medium</i>	<i>7.8%</i>	<i>6.9%</i>	<i>27%</i>
<i>Lower</i>	<i>76.9%</i>	<i>82.2%</i>	<i>58%</i>
<b>Economic activity</b>			
<i>Primary sector</i>	<i>12.9%</i>	<i>13%</i>	<i>18.2%</i>
<i>Manufacturing</i>	<i>23.3%</i>	<i>23.3%</i>	<i>19.3%</i>
<i>Construction</i>	<i>29.7%</i>	<i>36.3%</i>	<i>7.1%</i>
<i>Business services</i>	<i>27.5%</i>	<i>24.5%</i>	<i>35.3%</i>
<i>Public services</i>	<i>6.6%</i>	<i>3%</i>	<i>20.2%</i>
<b>Occupation abroad</b>			
<i>Self-employed</i>	<i>6.3%</i>	<i>7.8%</i>	<i>Not applicable</i>
<i>Employee</i>	<i>93.7%</i>	<i>92.2%</i>	<i>Not applicable</i>

Source: own calculations using Polish LFS for years 2002-2014.

**Appendix C – Working conditions of Polish returnees, migrants and stayers**

<b>Characteristics</b>	<b>Return migrants</b>	<b>Migrants</b>	<b>Stayers</b>
<b>Existence of more than 1 job</b>			
<i>No</i>	95.7%	97.1%	92.5%
<i>Yes</i>	4.3%	2.9%	7.5%
<b>Size of firm</b>			
<i>Up to 10</i>	22.7%	17.7%	29.3%
<i>More than 10</i>	77.3%	82.3%	70.7%
<b>Number of working hours (weekly)</b>			
<i>Up to 30</i>	4.5%	1.5%	4.8%
<i>30-40</i>	50.9%	52.2%	24%
<i>More than 40</i>	44.6%	46.2%	71.3%
<b>Monthly pay from main job (deciles)</b>			
<i>Between the 1<sup>st</sup> and 5<sup>th</sup> deciles</i>	11.8%	3.3%	40.9%
<i>Between the 5<sup>th</sup> and 9<sup>th</sup> deciles</i>	29.3%	22.7%	47%
<i>More or equal to the 9<sup>th</sup> deciles</i>	59%	74%	12.1%
<b>County of destination</b>			
<i>Germany</i>	<i>Not applicable</i>	48.6%	<i>Not applicable</i>
<i>Netherlands</i>	<i>Not applicable</i>	12.7%	<i>Not applicable</i>
<i>Norway</i>	<i>Not applicable</i>	6%	<i>Not applicable</i>
<i>Austria</i>	<i>Not applicable</i>	5.5%	<i>Not applicable</i>
<i>Czech Republic</i>	<i>Not applicable</i>	5.2%	<i>Not applicable</i>
<i>United Kingdom</i>	<i>Not applicable</i>	4.7%	<i>Not applicable</i>
<i>Belgium</i>	<i>Not applicable</i>	2.4%	<i>Not applicable</i>
<i>Sweden</i>	<i>Not applicable</i>	2.4%	<i>Not applicable</i>
<i>Denmark</i>	<i>Not applicable</i>	2.3%	<i>Not applicable</i>
<i>France</i>	<i>Not applicable</i>	2.2%	<i>Not applicable</i>
<i>Others</i>	<i>Not applicable</i>	8.2%	<i>Not applicable</i>

Source: own calculations using Polish LFS for years 2002-2014.

### Appendix D – Descriptive statistics of self-employed and salaried employment Polish returnees

<b>Characteristics</b>	<b>Self-employed return migrants</b>	<b>Salaried employment return migrants</b>
<b>Age</b>		
<i>Mean (in years)</i>	39	39,5
<b>Nationality</b>		
<i>Polish = 1</i>	97,4%	99,5%
<b>Marital status</b>		
<i>Widowed, divorced</i>	5,8%	4,6%
<i>Single</i>	19,2%	22,6%
<i>Married</i>	55%	72,8%
<b>Sex</b>		
<i>Male</i>	83,6%	80,8%
<i>Female</i>	16,4%	19,2%
<b>Residence</b>		
<i>City</i>	26,5%	27,3%
<i>Town</i>	12,8%	16,1%
<i>Rural</i>	60,6%	56,6%
<b>Existence of kids</b>		
<i>No</i>	33,8%	34,8%
<i>1-2</i>	50,6%	54,5%
<i>More than two</i>	15,6%	10,8%
<b>Education level</b>		
<i>Higher</i>	12,7%	16,6%
<i>Medium</i>	7,5%	6,2%
<i>Lower</i>	79,7%	77,2%
<b>Economic activity</b>		
<i>Primary sector</i>	29,2%	8,5%
<i>Manufacturing</i>	6,4%	26,7%
<i>Construction</i>	37,2%	29%
<i>Business services</i>	24,7%	28,3%
<i>Public services</i>	2,4%	7,5%

<b>Existence of more than 1 job</b>		
<i>No</i>	96,6%	95,1%
<i>Yes</i>	3,4%	4,9%
<b>Size of firm</b>		
<i>Up to 10</i>	92,2%	19,2%
<i>More than 10</i>	7,8%	80,8%
<b>Number of working hours (weekly)</b>		
<i>Up to 30</i>	8,4%	3,6%
<i>30-40</i>	30,4%	60,7%
<i>More than 40</i>	61,2%	35,7%
<b>Monthly pay from main job (deciles)</b>		
<i>Between the 1<sup>st</sup> and 5<sup>th</sup> deciles</i>	<i>Not applicable</i>	19,9%
<i>Between the 5<sup>th</sup> and 9<sup>th</sup> deciles</i>	<i>Not applicable</i>	29,1%
<i>More or equal to the 9<sup>th</sup> deciles</i>	<i>Not applicable</i>	59%
<b>Country of destination<sup>9</sup></b>		
<i>Germany</i>	58.4%	49%
<i>Netherlands</i>	8.1%	11.6%
<i>Norway</i>	2.8%	6.1%
<i>Austria</i>	3.6%	6.1%
<i>Others</i>	27.1%	27.2%

Source: own calculations using Polish LFS for years 2002-2014.

<sup>9</sup> In this table the country of destination is defined as host country where return migrants were employed while abroad.

**Appendix E – Probit of interactions between personal characteristics and dummies for 3 groups (coefficients)**

Characteristics	Return migrant	Current migrant	Non-migrant
<b>Age [ref. is up to 24 years]</b>			
<i>25-39 years</i>	0.354*** (0.006)	0.353*** (0.006)	0.198*** (0.061)
<i>40-59 years</i>	0.493*** (0.006)	0.491*** (0.006)	0.151** (0.061)
<i>60+ years</i>	0.943*** (0.009)	0.939*** (0.009)	0.170 (0.140)
Interactions (Dummy##Age <sup>10</sup> )			
<i>Dummy##up to 24 years</i>	0 (0)	0 (0)	0 (0)
<i>Dummy##25-39 years</i>	-0.116 (0.091)	-0.155** (0.077)	0.155** (0.061)
<i>Dummy##40-59 years</i>	-0.310*** (0.092)	-0.365*** (0.077)	0.341*** (0.062)
<i>Dummy##60+</i>	-0.812*** (0.219)	-0.762*** (0.161)	0.770*** (0.140)
<b>Marital status [ref. is widowed / divorced]</b>			
<i>Single</i>	0 (0)	-0.149*** (0.009)	-0.159 (0.101)
<i>Married</i>	-0.146*** (0.009)	0.0705*** (0.007)	-0.116 (0.088)
Interactions (Dummy ##Marital status)			
<i>Dummy##widowed / divorced</i>	0.0711*** (0.007)	0 (0)	0 (0)
<i>Dummy##Single</i>	0.0105 (0.153)	-0.0591 (0.123)	0.0105 (0.101)
<i>Dummy## Married</i>	-0.166 (0.135)	-0.261** (0.107)	0.187** (0.089)
<b>Gender [ref. is male]</b>			
	-0.120*** (0.004)	-0.124*** (0.004)	0.0572 (0.061)
Interactions (Dummy ##Gender)			
<i>Dummy##Male</i>	0 (0)	0 (0)	0 (0)
<i>Dummy## Female</i>	0.153* (0.086)	0.297*** (0.085)	-0.181*** (0.061)
<b>Place of residence [city is ref.]</b>			
<i>Town</i>	0.0470*** (0.005)	0.0467*** (0.005)	-0.190*** (0.06)
<i>Rural</i>	0.116*** (0.004)	0.117*** (0.004)	-0.238*** (0.046)
Interactions (Dummy##Gender)			
<i>Dummy##City</i>	0 (0)	0 (0)	0 (0)

<sup>10</sup>We estimated probit models with interactions of tested and dummy variables separately for each group: return migrants, current migrants, and non-migrants.

<i>Dummy##Town</i>	-0.217** (0.093)	-0.276*** (0.07)	0.237*** (0.06)
<i>Dummy## Rural</i>	-0.257*** (0.071)	-0.481*** (0.054)	0.355*** (0.045)
<b>Presence of kids [ref. is none]</b>			
<i>1-2 kids</i>	-0.0163*** (0.004)	-0.0153*** (0.004)	0.0158 (0.046)
<i>2+ kids</i>	0.0779*** (0.0068)	0.0782*** (0.007)	0.206*** (0.064)
Interactions ( <i>Dummy ##Gender</i> )			
<i>Dummy##none</i>	0 (0)	0 (0)	0 (0)
<i>Dummy##1-2 kids</i>	-0.0632 (0.069)	0.167*** (0.056)	-0.0308 (0.046)
<i>Dummy## 2+kids</i>	0.0460 (0.099)	0.212*** (0.078)	-0.128** (0.064)
<b>Education level [ref. is higher]</b>			
<i>Medium</i>	-0.339*** (0.008)	-0.343*** (0.008)	0.122 (0.09)
<i>Lower</i>	-0.205*** (0.005)	-0.205*** (0.005)	0.0491 (0.063)
Interactions ( <i>Dummy ##Education</i> )			
<i>Dummy##Higher</i>	0 (0)	0 (0)	0 (0)
<i>Dummy##Medium</i>	0.507*** (0.134)	0.427*** (0.118)	-0.466*** (0.091)
<i>Dummy##Lower</i>	0.219** (0.09)	0.333*** (0.082)	-0.254*** (0.063)
<b>Industry [ref. is primary sector]</b>			
<i>Manufacturing</i>	-2.282*** (0.006)	-2.295*** (0.006)	-0.721*** (0.074)
<i>Construction</i>	-1.512*** (0.007)	-1.521*** (0.007)	0.215*** (0.057)
<i>Business services</i>	-1.592*** (0.005)	-1.605*** (0.005)	-0.236*** (0.063)
<i>Public sector</i>	-2.672*** (0.007)	-2.687*** (0.007)	-0.344*** (0.114)
Interactions ( <i>Dummy ##Industry</i> )			
<i>Dummy## Primary sector</i>	0 (0)	0 (0)	0 (0)
<i>Dummy## Manufacturing</i>	0.949*** (0.107)	2.506*** (0.127)	-1.575*** (0.074)
<i>Dummy## Construction</i>	1.024*** (0.084)	2.795*** (0.113)	-1.737*** (0.057)
<i>Dummy## Business services</i>	0.884*** (0.091)	2.180*** (0.119)	-1.369*** (0.064)
<i>Dummy## Public sector</i>	1.471*** (0.165)	3.405*** (0.168)	-2.344*** (0.114)
Constant	0.459*** (0.011)	0.478*** (0.011)	-1.125*** (0.131)
Observations	945,971	945,971	945,971

Standard errors in parentheses  
 \*\*\* p<0.01, \*\* p<0.05, \* p<0.1

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Supervised by Jaan Masso

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