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Settlers and Guests – Determinants of the Plans of Return Migration from UK and Ireland to Poland in the Period 2007-2009

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Abstract

According to the Polish Central Statistical Office estimates, after the year 2004, in which Poland joined the EU, more than 1 million Polish citizens moved to other EU countries. The recent economic crisis that influenced Poland asymmetrically as compared to the main migrant destination countries created an opportunity to observe how rapid changes in economic incentives can influence decisions about return migration. This paper has two aims: (1) identification of the strategies adopted by Polish emigrants that can explain their returns to the home country and (2) the verification of two major migration theories (the classical approach versus the "New Economics of Migration" approach).

The analysis is based mainly on data coming from a unique three-edition survey of Polish emigrants conducted by the National Bank of Poland in the United Kingdom and in Ireland in 2007, 2008 and 2009. The discrimination between migration strategies is performed with the use of ordered logit models using extensive information from the survey.

The results of the analysis show that, assuming that the plans regarding the migrants' duration of stay abroad reflect their migration strategies, the strategies are diverse and significantly correlated with the personal characteristics of emigrants. The intensity of outward migration flows can be explained by the classical theory but the results support the "New Economics of Migration" approach in the explanation of simultanous return migration flows.

1 Introduction

According to the Polish Central Statistical Office (CSO) estimates more than 1 million Polish citizens moved to work in other EU countries after Poland joined the EU in 2004. Most Poles migrated to the UK and to Ireland as these countries were among the first three 'old' EU member states to open their labour markets for workers from the new member states. This huge outward migration wave had a serious impact on the Polish economy in the post-accession period. For instance, it created labour shortages in some sectors of the Polish economy and contributed to the mounting wage pressure. It also raised fears about its impact on future potential GDP growth in Poland should migration prove permanent. Therefore, the question about the possible pace and magnitude of future return migration of Polish workers after some time spent in the UK or in Ireland appears to be of crucial importance for Poland's economy and the labour market.

An important question is how large and how permanent these outward and subsequent return migration flows of Polish workers could be. Earlier studies of return migration in Polish history show that the phenomenon of return migration was always present and the decisions about return were mainly connected with political reasons (e.g. the collapse of the communist regime) or better career perspectives in Poland (Górny, Osipowic (2006), Duszczyk(2007a)). This is in turn linked to the question of motives for recent emigration and eventual return. A better understanding of these motives could help to predict the future behaviour of Polish emigrants. Therefore, based on the data from the NBP survey we try to shed more light on this issue. History tells us that earlier waves of migration from less affluent to wealthier European countries usually ended in return migration to the home country. For instance, Italian workers who migrated to other EEC countries in the 1950s returned home in the 1970s, Greek workers who migrated in the 1970s returned in the 1980s and Spaniards who migrated right after Spain's EU accession in 1986 re-emigrated several years later. Given the above, the return migration of Poles seems inevitable and we will try to identify the mechanisms governing the process and to evaluate the scale and character of (return) migration in the context of the Polish labour market's performance. We will also try to find out how far migration strategies are polarized, in particular between those willing to settle down abroad permanently and those who treat migration as a temporary way of increasing one's income. Finally, the ambition of the authors is to cover, to a certain extent, the gap in the empirical literature as far as return migration analysis is concerned. The article is based on a regular survey initiated by the National Bank of Poland in 2007 among Polish migrants working on the British Isles. The paper is organised as follows. In the second section data on emigration from Poland as well as its macroeconomic context are presented. Furthermore, the current situation is compared to the observations from previous migration waves in Europe after World War II. Section three presents introduction to theories that explain return migration and classification of reasons for return migration. The fourth section is devoted to the empirical analysis of migration strategies. The fifth section concludes the paper.

2 Polish return migration in the European context

Recently the return migration of Poles from the British Isles has been widely reported and expected as a consequence of the financial and economic crisis in both the UK and Ireland. In this section we run an overview of data on return migration, describe its macroeconomic context and compare it to earlier waves of return migration in Europe that occurred after World War II.

2.1 Recent evidence

When the financial and economic crisis hit Ireland and the UK the returns of Poles from these two countries received considerable coverage in the mass media, Polish, British and Irish alike. It was reported that many Poles decided to move back to the home country whose macroeconomic situation was much more favourable than that of the two destination countries mentioned. As time passed more reliable data on Polish migrants in the UK and in Ireland became available. Indeed, data from different sources confirm the decreasing number of Polish citizens abroad. According to the official estimates of the Polish CSO the number of Polish citizens abroad decreased in 2008 for the first time since 2002 when the last Census was held (Table 1). This decline was mainly due to a significantly lower number of Poles on the British Isles at the end of 2008. The CSO estimates show that in comparison to 2007 the number of Poles in Ireland decreased by 20 thousand (10 %) and in the UK by 40 thousand (6 %).

Table 1: The number of Polish citizens abroad - total and in selected countries at the end of each year of the period 2004-2008 (in thousands)

	NSP 2002	2004	2005	2006	2007	2008
Total	**786**	**1000**	**1450**	**1950**	**2270**	**2210**
Ireland	2	15	76	120	200	180
Netherlands	10	23	43	55	98	108
Germany	294	385	430	450	490	490
United Kingdom	24	150	340	580	690	650

Source: Polish Central Statistical Office estimates

Figure 1: The number of Polish citizens abroad according to LFS data
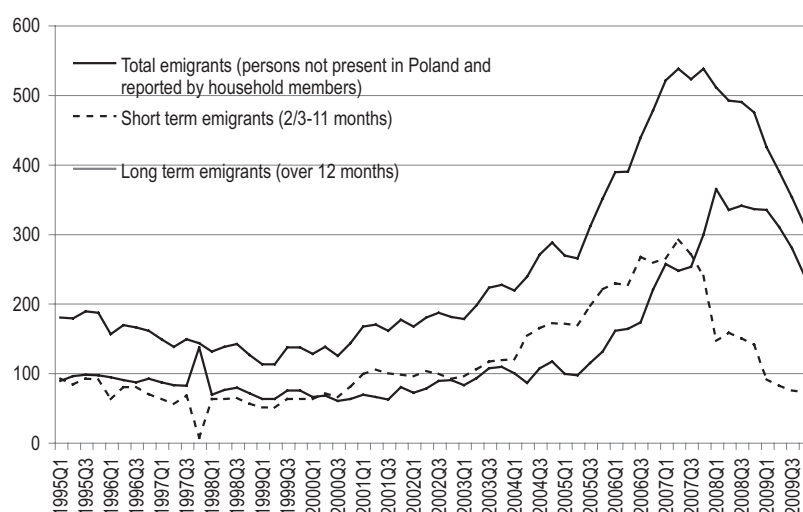
Source: Polish Labour Force Survey

The Labour Force Survey (LFS) data show that in 2009 and 2010 the decrease in the number of Poles abroad accelerated (Figure 1). These data suggest that the outflow of new emigrants was reduced greatly in 2008 but the decrease in their total number was relatively small, because most emigrants stayed in their host countries. The sharp decrease of the total number of emigrants was observed in LFS data since the beginning of 2009. This can be explained as a wave of return migration due to worsening economic conditions or as a consequence of reduced emigration flows together with natural comebacks after one or two years of staying abroad.

In the case of the UK and Ireland the decreasing inflow of new workers from Poland in 2008-2010 is also reflected by data on registrations of new workers from Poland on the British Isles. The number of new registrations dropped by about 70% in the UK and over 90% in Ireland between the beginning of 2007 and the beginning of 2010. (Figure 2).

2.2 Macroeconomic context

The returns of Poles to the home country occurred within a specific macroeconomic context, namely the global economic crisis, which probably amplified the role of economic factors in the migrants' decision-making process. Both the UK and Ireland were hit by the global economic crisis harder than Poland and recorded recessions in 2008 and 2009. Poland, on the other hand, managed to maintain fast economic growth in 2008 and was the only EU country with positive GDP growth in 2009. It seems that this factor could have played an important role in convincing many Poles to return to the home country. Moreover, the sharp decrease in demand radically increased unemployment in the host countries (Figure 3). In the case of Ireland the unemployment rate shot up and exceeded the unemployment rate observed in Poland.

In addition, due to the appreciation of the Polish zloty against the British pound, and to a lesser extent, the euro (Figure 4), work in the British Isles with the aim of saving for future investment or consumption in Poland could have become much less appealing. This supposition is supported by surveys of Polish migrants to the UK and to Ireland conducted after 2004 and before the global crisis, according to which the wage factor was the most important driver of Polish migration to these countries (Ciżkowicz et al. 2007).
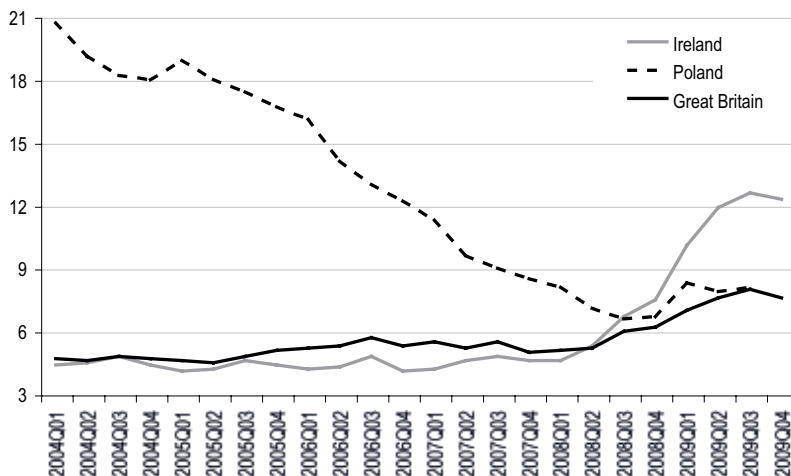
Figure 2: The new registrations of Polish citizens to work in United Kingdom (WRS) and Ireland (PPS)
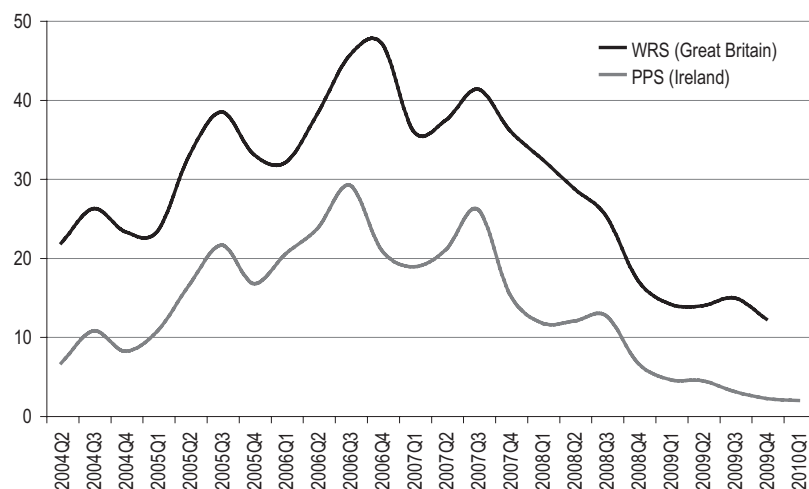
Source: UK Border Agency, Department of Social and Family Affairs of Ireland

Figure 3: Changes in Unemployment: Poland, UK and Ireland

Source: Eurostat

Although the fact that the global economic crisis was much more severe in the UK and in Ireland than in Poland could have convinced many Poles to return to the home country, the discrepancy in per-capita incomes between Poland and the two host countries is still wide, despite the catching-up process (Table 2). This discrepancy can still attract new immigrants from Poland to the British Isles once solid economic

Figure 4: Changes in exchange rates: EUR/PLN and GBP/PLN
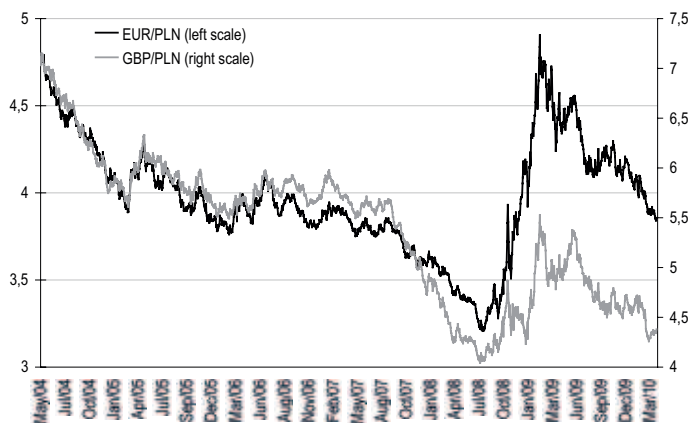
Source: NBP

growth is back there and unemployment rates decline. The differences in GDP per capita are also confirmed by differences in wages (purchasing power adjusted) in Poland and in the UK and in Ireland (Table 3). For instance, the average wage in Poland (in Purchasing Power Standard) represented about 40% of the average wage in the UK and Ireland in 2009, although it increased by 4 percentage points since 2004. As emigrants often receive wages close to the minimum wage it is more useful to compare wages possible to receive in Poland to minimum wages in the UK and Ireland. For persons that received minimum wages both in Poland and UK the difference was still wide in 2009 and had not narrowed significantly over the previous 5 years. The average wage in Poland (in PPS) was also still lower than the average of minimum wages in the UK and in Ireland in 2009.

Table 2: GDP per capita in Poland as a percentage of GDP per capita in Ireland and UK (in %)

	% GDP in Ireland	% GDP in UK
2004	35	43
2009	43	52

Source: Own calculations on the basis of GGDC data

2.3 European return migration in retrospect

A historical overview of migration flows in Europe after World War II provides evidence that intensive emigration waves were typically followed by subsequent returns to the home country. Among the migrant nationalities that could serve as representative examples of the return migration phenomenon after World War II one could include Italians, Greeks, the Spanish, the Portuguese, and the Irish. In each of these

Table 3: Purchasing power of wages in Poland as a percentage of purchasing power of wages in Ireland and UK (in %)

	(PL min) / (UK-IRL min)	(PL avg) / (UK-IRL avg)	(PL avg) / (UK-IRL min)
2004 h1	31	36	86
2009 h1	34	40	93

Source: Own calculations on the basis of Eurostat data

cases the fundamental 'push' factor was the initial gap in economic and social welfare between the sending and the receiving country. As soon as the economic distance between the 'poorer' and the 'richer' country had been reduced, incentives to work abroad mostly vanished too, which often resulted in a wave of returns or even in the emigration country's transformation into an immigration country.

In 1995, before Ireland became a destination country for many Poles and other non-Irish nationals it was still a net emigration country. As a result of severe economic conditions in the 1980s, marked by a high unemployment rate reaching 17%, a significant number of Irish workers decided to emigrate. However, after the economic upturn in the mid 1990s thousands of these workers as well as Irish emigrants from earlier migration waves (the 1960s) or their children returned to Ireland. In 1996 persons who returned from emigration constituted about 13% of the whole Irish population (Grabowska-Lusińska 2009). Moreover, they usually came back to the same regions of Ireland they stemmed from.

Migration processes, consisting of both the phase of emigration and the subsequent return, have been an indispensable element of the economic landscape of South European countries since the early 1950s. Nearly 200 thousand Italian workers who had massively emigrated to Germany, France and Switzerland in search of jobs in the 1950s and the 1960s, returned home in the mid-1970s in view of more favourable conditions on the Italian labour market. Eventually, Italy transformed from an emigration to an immigration country. Similarly, Greek workers constituting approx. 10% of Greek labour force who emigrated in the 1970s to other EEC countries, predominantly to Germany, returned in the 1980s after Greece joined the European Communities (1981). Many Spaniards who moved to 'old' EU member states right after Spain's accession in 1986 also returned home several years later. In the 1980s alone almost 200 thousand Spanish returnees showed up again on the Spanish labour market, whereby one of the most crucial determinants of their return turned out to be the real property left behind as well as the social security system in the country of origin (Uścińska 1999). It was in the early 1990s, when the labour market situation improved and unemployment rate declined, that Spain and its neighbouring country, Portugal, noticed a clearly positive balance of migration flows. However, above 100 thousand Portuguese workers returned home already in the 1980s (Duszczyk 2007).

Notwithstanding the recent economic crisis, all of the instances recalled above bear a striking resemblance to each other, and also appear to resemble the migration processes affecting the Polish labour market. Initially, Poland also had to face a huge gap in economic development compared to the 'old' EU members, and experienced the problem of high structural unemployment. Therefore, we find it is reasonable and legitimate to think about the returns of Polish workers in this context.

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3 Reasons for return - classification

Migration is a complex phenomenon explored by various disciplines, from demography to political science. As a result, multiple theories exist explaining migration flows as well as their features and consequences, each focusing on specific aspects of interest for the relevant field. We will, however, confine our discussion of return migration to the purely economic perspective. This is not to say that other explanations are not important. However, when discussing incentives we rather seek to focus on the economic aspects of labour migration.

3.1 Theories of return migration

There are no distinct theories of return migration. Returns are considered a part of the migration process. Hence, they follow from and are analysed within the theories of migration.

Economic theory provides two major explanations of migration flows between regions/countries: the neoclassical theory of migration (Sjaastad 1962; Todaro 1970) and the so called New Economics of Migration (NEM), an important part of which is represented by the theory of relative deprivation (Stark, Yitzhaki 1988; Stark, Taylor 1989, Stark 1991). Each of the the two theories provides a different set of reasons for possible return migration (Cassarino 2004).

Neoclassical theory sees migration flows as a means of maximizing individuals' income. Migration takes place when some destination can provide an individual with a higher (stream of) net income(s)[1] than his/her host country does (it relates also to the subsequent migration/moves). According to this theory, a migrant's strategy is to move and settle permanently together with his/her family (household). From this perspective return migration must be a consequence of either a failure in reaping the benefits of migration or an adverse change of the relation of wages in the sending and receiving countries which originally triggered the migration decision.

On the contrary, Stark's relative deprivation approach considers migration as a means to improve the relative standing of the household or to alleviate the risks the household faces. From this perspective, migration is a strategy, with return "being a natural outcome of a successful experience abroad during which migrants met their goals (i.e. higher incomes and accumulation of savings) while remitting part of their income to the household" (Cassarino 2004, p. 255). Savings brought back or remittances sent back home are a necessary element of the strategy, contrary to the neoclassical theory, and may constitute an explanatory variable in the return decision, together with the attachment to the home country (Cassarino 2004, p. 256). From this perspective the return is a part of the plan, and must reflect the achievement of goals.

3.2 Explanations in empirical studies

According to international databases (OECD 2008) usually 20-30% of immigrants leave within five years after their arrival, either to return home or, in the case of secondary emigration, to move on to a third country. In addition, return rates appear to differ remarkably with respect to age and education level reaching highest values at the extremities of the spectrum. In response to this, contemporary empirical research attempts to identify the main determinants of migrants' decisions to return, contrary to some standard theoretical approaches being unable to explain the phenomenon of return migration from richer to poorer countries, without abolishing the premise of income maximisation.

In systematizing the variety of international empirical literature with respect to determinants of migrants' return decisions we follow the OECD (2008) which in our view provides an excellent summary of the majority of existing explanations. Accordingly, at least five groups of reasons for a migrant's return could be distinguished in the recent empirical literature, namely:

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[1]It uses net income to account for various kinds of costs that a migrant needs to bear upon migration (also non-pecuniary).

a) failure of migration;

b) macroeconomic change in the sending country;

c) specific consumption patterns and preferences;

d) achievement of a savings objective;

e) opening of new employment opportunities in the home country thanks to the human capital formation abroad.

While the first two sets of arguments focus mainly on determinants which to a large extent are independent from a migrant's activity alone, the latter three refer to the migrant's preferences and his/her implicit decision.

Studies emphasizing the first group of motives conceptualize return migration as a failure to integrate into the host country and its society. The failure or success depends on the information about the destination country available to a migrant before their leaving their home country. The poorer a migrant's initial information about the receiving country, the more likely the return. Because of imperfect information before the arrival, emigrants tend to underestimate the living costs and to overestimate their potential earnings. First contributions representing this line of argumentation appeared already in the 1970s (Yezer, Thurston 1976, Allen 1979) and referred to internal migration in the United States. A recent study on migration between Finland and Sweden carried out by Rooth and Saarela (2007) tries to explain return migration empirically as a failure in the evaluation of the shape of the host country's relative income distribution. Other works concentrate either on the ability of the migrants to achieve success in the host country labour market (Constant, Massey 2003) or on the access to the social security system (Jensen, Petersen 2007).

The second strand of literature refers to changes in macroeconomic circumstances which take place in the home or host country and may significantly affect a migrant's decision to return. The analysis conducted in the last SOPEMI Report (2008) delivered unambiguous evidence for the existence of a positive correlation between the likelihood of a return and the unemployment rate in the receiving country.

The third group of studies try to reveal the mechanisms of return migration by identifying migrants' consumption patterns (life cycle models). As consumption utility of migrants turns out to be higher in their home countries compared to the receiving countries, many of them postpone their decision to spend their earnings on consumption while abroad until return. They limit their stay abroad while optimising the relation between the length of their stay and income maximization. Such a line of argumentation has been pursued in the study by Dustmann (2003) on migrants in Germany.

Migration may also be seen as a means of running an investment project to be financed from migrants' savings. Contrary to consumption, an investment objective is to a greater extent restrained by the age of returnees planning an investment undertaking (Dustmann, Kirchkamp 2002). In fact, a "migrant entrepreneur" must be able to launch their business before retirement. In the context of a savings and investment objective Yang (2006) and Reyes (2004) also raise the question of the impact of host country currency depreciation on the migrant's decision to return using the cases of the Philippines as well as of Mexico and the US.

Finally, there is a strand of literature aiming to identify the determinants of return migration from the viewpoint of the human capital formation theory. As migrants tend to increase their human capital during their stay in the host country at a relatively higher pace then at home (see: Güngör, Tansel 2006), they have to choose an appropriate moment to return in order to take advantage of the acquired skills and allocate them in their home country. Some of the empirical findings show greater propensity to return at the two extremities of the education spectrum (Nekby 2006).

In conclusion, there is no one uniform conceptual framework – either in the theory or in empirical research – identifying the determinants of return migration which would encompass all of the aspects accentuated by individual authors. Moreover, as

the possibility of relatively intense labour flows from the 'old' EU countries to the EU New Member States (NMS) has emerged only recently, there is still a scarcity of studies which would take account of the specificity of the Central European region. We hope to narrow this research gap. In what follows we seek to fit somewhere within the first three groups of articles.

3

4 Empirical analysis

4.1 Empirical strategy

The aim of this paper is to find out how well the classical theory and the New Economics of Migration (NEM) approach perform in explaining the migration flows between Poland and the British Isles. The two approaches differ from each other but are not mutually exclusive. In fact the NEM theory can be seen as a micro-focused application of economic optimization that is probably better suited to short-term decisions while the classical theory to a larger extent considers macroeconomic premises. Simplicity is an advantage of the latter approach which omits many factors that could be important especially in the short run but also in the long run. As outlined in the previous section in light of the classical theory migration flows are mainly determined by economic factors. Return migration is mainly connected with a migrant's lack of knowledge, experience, etc. In such a case a return can be seen as a migrant's failure. On the other hand, the new migration economics is based on the assumption that the migrants' return intentions are a result of their migration strategies. The strategies may entail a different length of stay abroad or level of remittances sent back home but these two elements are an inseparable part of the plan. In this case, a return can be seen as a measure of success.

The empirical analysis presented in this paper focuses on the search for arguments for and against the classical and NEM explanations of the recent migration of Poles to and from the UK and Ireland. In our analyses we used the data about emigrants from the three editions of the survey conducted by the National Bank of Poland among Polish emigrants in UK and Ireland. Our analysis consists of two parts: the descriptive analysis on the basis of the cross-tabulation of the results and the conclusions based on the results of ordered logit regressions constructed to explain the determinants of the emigrants' plans of further stay. The regression models are useful to measure the simultaneous influence of different factors on plans concerning further stay

The results of the analytical part are used to verify empirically the occurrence of events that can be assumed as the consequences of the two theories mentioned earlier. The first hypothesis assumes that the emigration flows observed in the period after Poland entered the EU can be sufficiently explained by the classical theory, according to which changes in migration flows are due to changes in economic incentives. Return migration despite a lack of changes in economic incentives is possible but rare and results from a lack of correct information. In order to verify whether this hypothesis holds for the Polish post-EU-accession migration flows we compare the information about changes in economic incentives with changes in the duration of stay and further plans of emigrants. We also assess how good in explaining the expected duration of stay are economic factors declared by emigrants as reasons for emigration. On the contrary, the theory of relative deprivation (an example of the NEM approach) assumes that factors other than the difference in income earned at home and abroad are also important, for instance a comparison with the situation of the migrant's reference group. Instead of a better living standard abroad the ultimate goal of migration could be a relative improvement in the social status of a migrant's family in the home country or collecting savings to improve the migrant's status after the return home. This means that the choice of the length of work abroad is a part of the decision about emigration. If this hypothesis is correct, declarations of duration of stay are a result of the original decision and reflect a migration strategy that corresponds with a migrant's individual characteristics. To test this hypothesis we use information about the actual duration of stay and expected duration of further stay to show if the declarations can be confirmed.

4.2 Summary of survey data

The data used in the empirical analysis in this paper come from the surveys of emigrants carried out by the National Bank of Poland [2] in the United Kingdom and

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[2]The survey was performed by interviewers of private market research firms.

in Ireland in the years 2007, 2008 and 2009 (Table 4). In 2009 two more countries, the Netherlands and Germany, were covered by the survey but those countries were omitted in the analysis because of the lack of data from 2007 and 2008. Each survey (face-to-face interviews) was conducted on a sample of Polish citizens at the age of between 18 and 65 residing in the host country for at least 3 months. Due to the methodological problems with random sampling [3], stratified sampling was employed in all surveys. Interviewees were selected within geographical regions (strata) and in line with *a priori* set restrictions on age, the share of women, the share of employed, as well as professions of the employed to keep the sample as varied as possible with respect to these features. It is noteworthy that due to differences in organisation of the surveys by different companies the results may not be fully comparable between the survey editions. The main difference noticed by authors is a much higher percentage of remitting persons in 2008 and 2009 which could be to large extent the artifact of the differences in approaches to sampling used by both research firms. However, the questionnaires and specification of the survey remained the same in the whole period.

Table 4: The number of Polish respondents in the NBP surveys conducted in the UK and in Ireland in 2007-2009.

	2007	2008	2009
United Kingdom	800	1500	1500
Ireland	800	1000	1000

Source: NBP Migration Survey data

From the perspective of the research hypotheses investigated in this paper the most important survey questions were those about the duration of actual stay prior to the survey (Table 5) and the plans of further stay in the host country (Table 6). The percentage of short-term emigrants in the survey was relatively high in both countries in 2007 but in 2008 and 2009 the percentage of migrants who stayed in the host country for over 3 years increased significantly.

Table 5: The structure of answers to the question about the duration of stay until the moment of survey in Great Britain and in Ireland (in %)

	Great Britain			Ireland		
	2007	2008	2009	2007	2008	2009
3-6 months	29.0	10.1	10.7	21.0	10.7	5.6
7-12 months	16.3	20.6	12.3	17.1	21.4	17.7
1-3 years	40.6	46.1	37.6	51.8	44.4	45.0
Over 3 years	14.1	23.2	39.4	10.2	23.5	31.8

Source: NBP Migration Survey data

The answers to the question about the declared length of further stay in the host country are more important in the analysis of decisions about return migration. The answers to that question should be treated with caution, however, as they merely represent the plans of emigrants, which is a crucial caveat in verifying migration theories. The fact that the NBP survey was conducted in the host countries, as opposed to the home country, probably increases the reliability of migrants' answers about their planned length of stay abroad as their answers are based on actual experiences abroad rather than on expectations. However, in the NBP survey respondents were simply forced to select one of the answers while many of them probably did not have a plan. Answers of those persons were treated as most probable but it can be a source of bias. Another important caveat is that attitudes and plans can also change with time for many reasons, both economic and non-economic. Unfortunately, the

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[3]Statistically representative information about the size and structure of the population of emigrants is unknown. As migrants are mobile it is very difficult to construct a database with data on their places of residence. A more detailed description of the sampling procedure and selected questions from the survey are presented in Appendix 1.

respondents that took part in earlier editions of the NBP survey were not tracked in the following editions. Therefore it is impossible to check directly to what extent their declarations about intended length of stay in the host country are reliable and consistent with their actual future decisions.

Table 6: Declarations about the duration of further stay (in %)

	Great Britain			Ireland		
	2007	2008	2009	2007	2008	2009
Less than 3 months	13.2	3.8	7.4	10.0	1.5	2.6
3-6 months	6.0	3.1	6.8	5.9	2.9	3.7
7-12 months	6.0	6.6	7.4	7.4	6.8	13.3
1-3 years	21.4	46.3	31.3	33.9	51.1	52.3
More than 3 years but not forever	28.3	29.0	28.2	31.2	29.6	20.1
Forever	25.1	11.3	18.8	11.5	8.1	8.0

Source: NBP Migration Survey data

An additional value of the NBP survey in comparison to other sources of information is that it allows a simultaneous analysis of the decisions of respondents and a large range of information about their characteristics. However, as the NBP survey is not representative we decided to check its reliability by comparing the marginal distributions of the variables obtained in the survey with other data sources. The basic descriptive statistics of the variables (Table 7) from the survey samples show that beside the controlled variables such as sex and age [4] some other uncontrolled variables such as the education level of Polish migrants had structures close to those observed in other data sources such as the Polish Labour Force Survey and Social Diagnosis 2009 (Czapinski and Panek 2009).

The above comparison of the structures of populations with respect to selected features shows that the structures were relatively stable, although some irregularities can be observed in 2008 data (e.g. significantly higher than in the other years percentage of emigrants registered), possibly due to changes in methodology in that year. In all three editions of the NBP survey the majority of Polish migrants surveyed originated from rural areas or cities of below 100 thousand inhabitants. This result is consistent with the results of Social Diagnosis 2009 and shows that incentives for emigration were relatively stronger for people in those areas. This could perhaps explain why despite the changes in the economic situation the percentage of persons that declared low wages or unemployment in Poland as a reason for emigration was relatively stable. The percentage of persons registered in the British Worker Reqgistration Scheme (WRS) as well as of those with an Irish Personal Public Service (PPS) number was high. Some variables have changed monotonically in the analyzed period. At first the percentage of new migrants among respondents was decreasing in each year both in Ireland and the UK and the percentage of emigrants with savings decreased. It should also be mentioned that relatively high and increasing were percentages of persons that have sent remittances to Poland during the year. The question about earnings abroad and net wages in Poland before emigration were also included in the survey in the year 2009. The results from 2009 confirm that in

Table 7: Survey results: selected descriptive statistics (%)

Name of variable:	United Kingdom			Ireland		
	2007	2008	2009	2007	2008	2009
Sex *(male)**	57.2	52.0	54.0	56.0	58.0	55.0
Age*:						
18-24	42.8	42.9	28.9	43.0	42.8	32.1
25-34	39.4	39.1	46.2	39.1	39.0	47.5
35-64	17.8	18.0	24.9	17.9	18.2	20.4

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[4]The age and sex structure of Polish respondents in the NBP survey were assumed on the basis of data from the Polish Labour Force Survey (PLFS). The differences from PLFS results are within acceptable limits. See: Appendix 1

Education:

tertiary	23.6	23.7	40.9	30.2	22.5	37.3
secondary	59.6	62.0	44.8	53.4	61.6	43.6
vocational basic	14.9	13.1	11.8	15.0	15.6	18.2
basic	1.9	1.1	2.4	1.4	0.3	0.9
Size of the place of residence in Poland:						
rural area	16.7	56.9	23.1	15.5	57.5	31.6
urban area, population of less than 100 thous.	42.4	23.6	44.9	49.0	28.3	51.6
urban area, population of 100-500 thous.	28.0	10.5	16.2	19.0	5.6	11.3
urban area, population of over 500 thous.	12.9	8.9	15.8	16.5	8.6	5.6
Registration in PPS/WRS *(yes)*	67.2	80.7	76.6	97.4	98.9	90.3
First stay in the UK/Ireland *(yes)*	67.2	39.1	31.6	65.5	40.7	46.4
Have or plan to have real estate abroad *(yes)*	18.8	12.5	18.6	10.7	7.1	7.8
Brought family to the UK/Ireland *(yes)*	58.5	52.1	51.2	57.0	52.7	50.3
Remittances *(yes)***	40.2	62.7	64.0	51.9	73.0	72.2
Savings *(yes)*	70.0	70.2	81.0	77.6	83.1	91.3
Reason of emigration: low wage in PL	39.3	39.0	36.8	46.9	43.0	29.7
Reason for emigration unemployment in PL	21.3	15.3	22.3	15.3	19.4	20.5
Percentage of employed in the sample*	97.0	94.5	93.7	95.6	93.3	91.5

Source: Own calculations on the basis of NBP Migration Survey data

* Structure forced in the sampling procedure
** 2008 data are biased by performing persons that sent remittances in the sample

comparison to the wage distribution in Poland persons with relatively lower wages were more likely to emigrate, especially to Ireland (Table 8). A comparison of the migrants' net wages in Poland before emigration and net wages in Great Britain and Ireland before emigration shows that earnings of the lowest earners in Poland improved the most after migration. In 2009 in the group of persons with wages close to the Polish minimum wage in Poland the median expected wage in Great Britain was over four times higher and the median wage in Ireland about 7 times higher. For persons that declared a net wage in Poland of between 3500-5000 PLN the relative gain from emigration was lower because the median net wage in this group was 50 % higher in Great Britain and about 130% higher in Ireland. The percentage of persons that had no work in Poland before emigration was slightly higher in Ireland (35.2%) than among emigrants to Great Britain (30.4 %). It should be added that higher net wages before emigration were positively and significantly correlated with net earnings abroad (Table 9).

Table 8: The average ratio of the wage abroad (recalculated to PLN at average yearly GBP/PLN and EUR/PLN exchange rates) in 2007 to the wage received in Poland before emigration, grouped by the level of the net wage earned in Poland (in PLN)

	Lower than 1000	1000-1500	1500-2500	2500-3500	3500-5000	5000-10000
United Kingdom	4.5	3.4	2.4	2.3	1.5	1.0
Ireland	7.5	4.8	4.4	3.2	2.3	1.3

Source: Own calculations on the basis of NBP Migration Survey data

Table 9: Relationship between net wage in Poland before emigration and wage in the host country (UK or Ireland)

	Cramers V Chi2 test	Kendals tau-b	Kruskals gamma	Linear correlation
United Kingdom	0.212***	0.349**	0.439**	0.452***
Ireland	0.292***	0.402**	0.522**	0.470***

Source: Own calculations on the basis of NBP Migration Survey data

4.3 Descriptive analysis of the duration of stay

One of the methods of the empirical verification of the classical and NEM theories could be the comparison of the conclusions about the possible variants of the total duration of stay of individual migrants predicted by both theories with declarations

of the duration of actual stay in the host country and plans of further stay observed in the NBP survey. For the simplicity of analysis emigrants in the NBP survey are here clustered into three groups with respect to their total length of stay (until the survey plus planned in the future) in the host country: short-term (less than one year in the host country), long-term (over three years in the host country) and medium-term migrants (between one and three years in the host country).

According to the classical theory persons with the shortest duration of actual stay and shortest plans of further stay in the host country represent a group of 'failure' emigrants. The declarations of immediate return to the home country (notwithstanding the duration of actual stay in the host country) can also be considered as the reaction to changes in macroeconomic conditions. The persons who declare that they want to stay in the host country for good seem to exhibit typical behavior assumed in the classical theory, when economic conditions in the host country are considered to be better than in the home country. Those emigrants move in response to better career or wage prospects and either do not think about the return (which, however, remains an option) or intend to stay permanently in the host country. They typically have no family obligations in the country of origin or take their family with them, and are more inclined to search for better-paid employment consistent with their qualifications than the short-term circular migrants.

On the other hand, according to the NEM theory persons who want to return to the home country after a relatively short total stay in the host country are considered as 'circular' emigrants. Those persons usually treat migration as an additional source of income that allows them to increase their consumption in their country of origin. They migrate abroad repeatedly for short periods of time in order to earn and save money and remit it or bring it with them upon return to the home country. In the context of NBP survey data this group typically includes persons, usually from small towns, who work in the UK and in Ireland in low-skilled (including language skills) occupations. Repetitive returns are a part of a successful migration strategy (see Stark 1991, pp. 147). The medium-term emigrants can be also considered as behaving in line with the predictions of the NEM theory because their plans suggest that emigration is temporary despite the incentives that attract emigration. Medium term emigration would probably be typical of persons that save money in order to invest it in the home country or to send remittances. To conclude, if emigration is chosen as an opportunity to earn money but only with a view to improving the economic status of a migrant in the home country, the emigration spells will probably be short or medium because individuals will need to come back to the home country in order to fulfill their consumption plans or to compare their status with their neighbours in Poland.

Combined information about the duration of stay before the survey and about intended further stay is presented in Figures 5 and 6 – each bar represent the share of a group by duration of stay and expected duration of further stay in the total sample (thus, all bars sum up to 100%). For example the first white bar from the left in the first panel of the Figure 5 shows that in 2007 the percentage of emigrants who spent 3-6 months in the UK and wanted to spend another 3 months or less was about 11% of all emigrants, and the percentage of those who spent over 3 years and wanted to stay forever (first black bar from the right) amounted to 7% of the total number of emigrants.

A simultaneous analysis of the time already spent abroad and the planned length of further stay shows that there is a strong positive correlation between these two variables in all observed periods and countries, but the declarations of a very long or permanent stay abroad were in most cases less frequent than declarations of a stay shorter than 3 years. In addition, the group of persons that were abroad for a relatively short (3-6 months) period of time and planned to return in less than three months was relatively large in 2007 both in the UK and in Ireland but almost disappeared in 2008 and 2009. On the other hand, there was a group of persons who stayed abroad for at least one year and declared that they wanted to stay forever. This group as a percentage of total population was relatively stable through time in the UK but shrank in Ireland probably because of the huge influence of the crisis on the longer term prospects for Polish migrants. The largest group was the group of

Figure 5: Structure of the duration of stay - United Kingdom
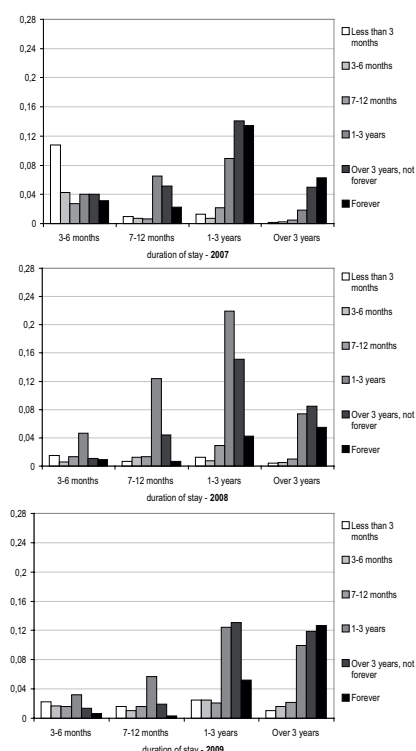
Figure 6: Structure of the duration of stay - Ireland
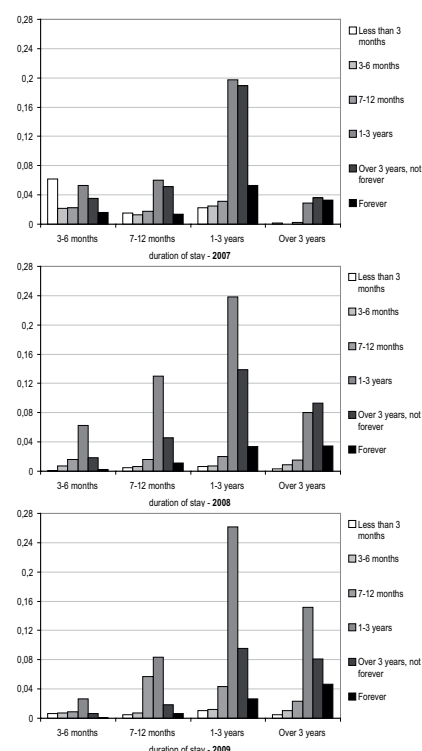
persons who spent at least 6 months abroad and wanted to spend another 6 months to 3 years.

The distinction between circular migrants (NEM explanation of short term migration) and persons who want to return to Poland after a relatively short emigration spell because of the failure of their expectations (classical explanation of short term migration) can be made with the use of two types of information. First, persons who spent in the UK or in Ireland less than 3 months were excluded from the survey. It means that persons who realized that emigration was a mistake and decided to return to Poland before the end of the third month of stay were not even interviewed. Second, the declared length of stay can be combined with the information on previous experience abroad (see Figure 8). Lets assume that persons who experienced emigration in the past can not make a mistake because of the lack of knowledge. The higher percentage of inexperienced emigrants who want to return home after a 3-6 month stay can indicate 'failure' emigrants. But this is not the case. The percentage of experienced emigrants that spent 3-6 months abroad and wanted to return in less than 3 months was even higher (about 10% of the population) than the same category of emigrants without previous experiences (about 8%). The lack of clear differences in the distributions of duration of stay between persons with and without migration experiences confirms that the lack of information was relatively unimportant in the decisions of emigrants, so the short term emigration can be considered as circulatory emigration. If we assume that all short term migrants (total stay shorter that one year) are circulatory emigrants the share of circulatory migrants in the total number of emigrants was close to 12% in 2007 but shrank to 2% in 2008 and 3% in 2009.

In this section we also analyze the correlations of selected features (previous emigration experiences, remittances sent back home and wages earned abroad) with the duration of stay to confirm the expectations regarding different strategies of emigrants.

According to the classical theory the length of actual stay seems to be unimportant in the decisions about the future if we assume that persons know what their expected wages and possible wage growth abroad are. Therefore, we should expect

migrants to declare plans of a very long stay abroad if the economic conditions are stable or declarations of immediate return if the continued work abroad is less profitable than work in the home country. But we observe that the actual length of stay and the plans of further stay abroad were strongly positively correlated. The explanation proposed in this paper assumes that emigrants are heterogeneous. Some of them prefer short-term contracts which allows them to visit the home country on a regular basis. Those emigrants are characterized both by a short duration of stay in the host country and plans of a short further stay. Other emigrants prefer longer stays which allows them also to receive a premium in wages because of the long term cooperation with employers abroad. The group of persons that do not take into account a return to Poland is described by very long plans of further stay in the host country and usually by relatively longer duration of stay abroad before the survey. Such emigrants can have the highest average wages because they are fully focused on a career in the host countries.

The expected positive correlation between average wages and the duration of actual stay in the host country is confirmed by the NBP survey data. The average level of wages increases with the duration of stay (see Table 10). There is also a positive correlation between the plans of further stay in the host country and average wages. However it is a result of relatively low wages of persons that want to return in less than 1 year. The differences in declarations of further stay beyond 1 year seem not to be correlated with wages.

The relatively high share of emigrants that remit can be seen as evidence of NEM theory's validity. Remitting or bringing back to Poland a part of an individual's income is an intrinsic feature of the migration strategy as advocated in the relative deprivation theory, and has no rationale according to the classical theory. If we

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Figure 7: Structure of the duration of stay - First stay abroad
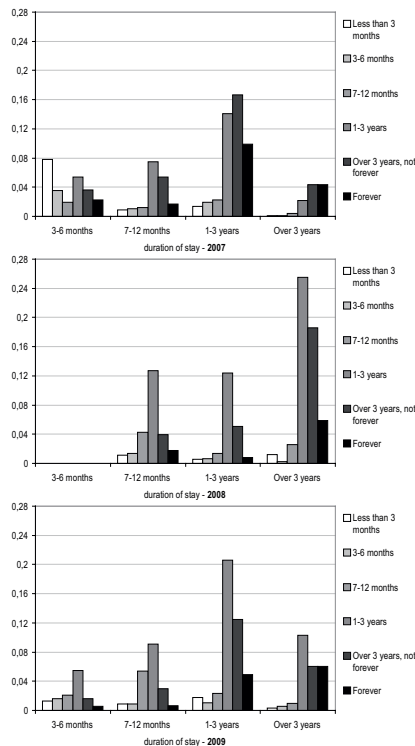
Figure 8: Structure of the duration of stay - Have previous experience abroad
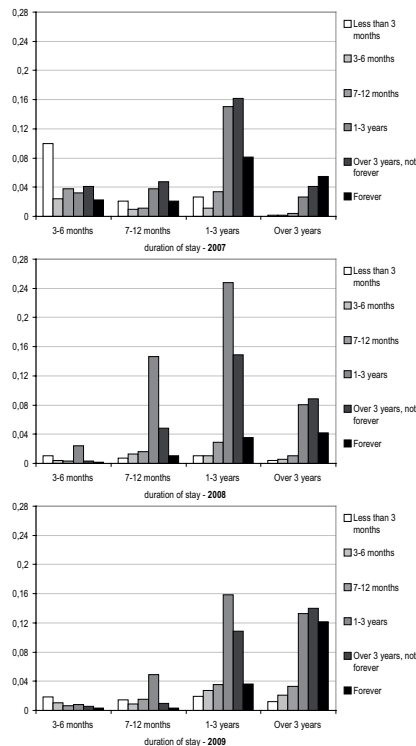
Table 10: Wages by the intended length of stay and the duration of stay

| Duration of stay | Intended length of stay | | | | | | |
	less than 3 months	3-6 months	7-12 months	1-3 years	over 3 years, but not forever	forever	Total
	Wage of emigrant as percentage of average of emigrants in the country (in %)						
3-6 months	76.4	80.1	77.8	84.8	89.3	77.6	80.5
7-12 months	87.8	92.5	90.6	96.3	94.3	96.8	94.4
1-3 years	101.0	95.2	105.5	106.5	107.1	105.2	105.7
over 3 years	111.0	97.4	108.9	133.8	118.7	125.9	123.3
Total	81.7	86.7	93.3	103.1	104.5	106.5	

Source: NBP Migration Survey data

assume that emigrants are heterogeneous we should expect that the share of remitters should first grow together with the duration of stay and then decline. This is because for the shortest stays (such as a few months) both the propensity and ability to remit could be low. The propensity could be low because when migrants plan their return within a few months it is more likely that they will bring the money with them rather than use costly or uncertain channels to transfer it home before the return. The ability, in general, should grow with the time the emigrant has spent in the host country but their propensity to remit beyond a certain point may decrease again – the classical theory seem to be more plausible. This could be because after some time abroad an emigrant settles down and his bonds with the family back home tend to relax. The data presented in Table 11 reveal the relatively high average percentage of persons who send remittances and the non-linear character of the relationship between remitting and the duration of stay. The percentage of persons who remit increases with the duration of stay in the group of persons that plan to come back in less than 3 years, but is relatively low in the case of persons that have spent abroad more than a year and want to spend at least another 3 abroad.

Table 11: Remitting by the intended length of stay and the duration of stay

| Duration of stay | Intended length of stay | | | | | | |
	less than 3 months	3-6 months	7-12 months	1-3 years	over 3 years, but not forever	forever	Total
	Percentage of persons remitting (in %)						
3-6 months	22.2	21.6	35.0	41.9	33.3	42.1	30.6
7-12 months	50.0	43.7	47.3	50.0	53.7	55.2	51.1
1-3 years	46.4	61.5	54.8	57.5	51.7	40.3	51.7
over 3 years	100.0	100.0	83.3	68.4	44.9	36.8	48.7
Total	29.7	37.9	47.6	54.1	48.7	41.1	42.8

Source: NBP Migration Survey data

The data seem to reflect a considerable change in the character of migration between 2007 and 2009. The economic crisis, which adversely influenced the migration prospects (by hitting the labour markets in the UK and in Ireland) appears to have also revised the migrants' strategies, downsizing primarily the short term circulatory movements (see Figure 5 and Figure 6). The circular migrants were readily visible in the 2007 survey edition but in 2008 and 2009 those migrants constituted a very small fraction of the sample. The data from 2008 and 2009 show in general the very low further emigration from Poland that is confirmed by the Labour Force Survey and registration of new workers. The results of the 2007 survey suggest that a relatively large share of migrants (29% in the UK and 21% in Ireland) were persons who spent 3-6 months in the host country. The respective fractions fell to below 11% and 6% in 2009. In 2007 persons intending to return home within 3 years comprised about 47% of all migrants in the UK and 57% in Ireland. About 25% of emigrants in the UK and 23% in Ireland wanted to return within a year. The crisis caused the changes in the plans of emigrants. In 2008 the share of emigrants who declared to return in a period shorter than three years increased to 60% of emigrants in UK and 62% in Ireland. In 2009 these shares amounted to 53% in the UK and 72% in Ireland. The higher share of declarations of return from Ireland in the short or medium term was probably a result of the deep recession in the Irish economy.

Observations presented in this section seem to confirm that even a general analysis allows one to show the heterogeneity of plans of emigrants that can reflect differences in emigration strategies. The classification of Polish emigrants in the UK based on their strategies was proposed by Eade et al. (2006). In their paper the authors divide emigrants into four groups. The first group, deemed 'storks', consists of circular migrants who work in the UK but visit Poland frequently and use this strategy to improve their economic status with reference to the economic situation in Poland. They are usually employed in low-paid occupations. The authors estimate the share of this type of emigrants at close to 20%. In our study the share of emigrants with expected total duration of stay in the UK of up to one year amounted to 16% in 2007, but the percentage of emigrants with total duration of stay up of to 1.5 years was exactly 20%. The second group, called 'hamsters', are emigrants who emigrate for longer periods of time with the aim to raise capital and to use it after coming back to Poland. The third group, 'searchers', consists of persons who are flexible in terms of the settlement decision and emphasize unpredictability of their migration plans. This attitude seems to be independent of occupational characteristics. 'Hamsters' and 'searchers' are difficult to distinguish in terms of expected total duration of stay in the host country. In the Eade et al. (2006) paper their share in the population is about 58%. According to the NBP survey, in the UK the share of persons that cannot be classified as circular nor permanent emigrants was close to 60% in 2007. The last group, 'stayers', consists of persons that have spent some time abroad and are determined to remain for good. Those persons compare their economic situation with that of other persons in the UK and have strong social mobility ambitions. Eade et al. estimate this group at about 22% of all emigrants. In the NBP survey carried out in 2007 a similar group of emigrants, who spent at least 1 year in the UK and declared that they wanted to stay forever, amounted to about 20% of respondents.

To conclude, the observations from the NBP survey are consistent with other data sources and confirm that a sharp decrease in the emigration flow from Poland to the UK was the most important reason for the decrease in the stock of emigrants. The NBP survey data on the duration of actual and plans of futher stay in the host country also confirm the heterogeneity of emigrants observed in other research papers. Furthermore the NBP survey data indicate that the differences between emigrants in terms of their duration of stay are correlated with their attitudes to remit and with their average wages. This can be considered as evidence on different emigration strategies chosen by different types of emigrants. The crisis influenced different types of emigrants in different ways. The results of the survey show that circular emigrants responded by staying in the home country. Medium-term emigrants in the UK and in Ireland shortened their plans concerning the duration of further stay. The same reaction was observed among long-term emigrants in Ireland where even persons determined to stay permanently could have had problems to survive in the local labour market. However, the percentage of long-term emigrants increased in the UK during the crisis. It was probably a result of the choice of those persons who managed to endure the crisis and still wanted to stay permanently in the host country.

4.4 Regression models

Due to the specific character of the survey data and having considered all the pros and cons of various discrete choice models[5] we decided to apply an ordered logit model (ordinal logistic regression) in our quantitative analysis. The most prominent argument speaking for that method was its ability to capture additional, compared to the standard logit, information about migrants' duration of further stay with help of a categorical dependent variable consisting of several ordered categories.

4.4.1 Definitions and formal specification

An ordinary logistic regression employs maximum likelihood[6] estimation and uses

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[5]Greene(2003).

[6]We maximize the value of likelihood function, which is the probability function expressed as the function of parameters while observed explanatory variables remain fixed.

the logistic probability function in order to model the relationship (expressed as probability) between the binary response variable and independent variables. As already mentioned, the main difference existing between ordinary and ordered logit model is that the response variable in the latter case allows for more than two (ordered) response categories. The probability function applied in the ordered logit model may be expressed as follows[7]:

$$P(Y_i > j) = f(X_i'\beta) = \frac{\exp(\alpha_j + X_i'\beta)}{1 + \exp(\alpha_j + X_i'\beta)}, j = 1, 2, ..., M-1$$

where Y is the value of the response variable for the i-th individual given a fixed set of explanatory variables X, α corresponds to j cutpoints (threshold points) and β to the vector of estimated coefficients. It is vital to remember that ordinal logistic regression is based on one presumption. It assumes namely that the coefficients that describe the relationship between the lowest versus all higher categories of the response variable are the same as those that describe the relationship between the next lowest category and all higher categories, which is called *Proportional Odds* or alternatively *Parallel Regression/Lines Assumption*. In other words, only constants (cut points) may differ across response variable categories whereas Betas are supposed to remain the same. However, given that β parameters in fact vary significantly across separate categories of the response variable the ordered logit coefficients may prove to be distorted.

A recommended alternative is, then, to change the model type and to use a multinomial or a generalized ordered logit (so called *gologit*[8]). As there is a loss of information concerning ordinality of the response variable in the multinomial type we will tend to use the latter one. The following formula depicts the *gologit* probability density function:

$$P(Y_i > j) = g(X_i'\beta_j) = \frac{\exp(\alpha_j + X_i'\beta_j)}{1 + \exp(\alpha_j + X_i'\beta_j)}$$

Hence, the probabilities Y will take on each of the categories are equal to:

$$P(Y_i = 1) = 1 - g(X_i'\beta_1)$$
$$.....$$
$$P(Y_i = j) = g(X_i'\beta_{j-1}) - g(X_i'\beta_j), j = 2, ..., M-1$$
$$.....$$
$$P(Y_i = M) = g(X_i'\beta_{M-1})$$

The formula for the ordinal logistic regression, constrained by the parallel lines assumption, differs from the unconstrained gologit only in Betas, which are the same in the first type of model but vary across response variable categories in the latter type. We should keep in mind that both models have some limitations, including restrictiveness of the assumptions in the case of ologit and potential difficulties to interpret a high number of generated coefficients in the case of gologit. That's why it may be advisable either to interpret them collectively or to use the Partial Parallel Regression (PPR) which preserve the assumption only there where it is neccessary. As we found the first solution to be less vulnerable to some technical imperfections related to the automated selection procedure of the unconstrained variables (performed by STATA gologit2 ado-file), both ologit and gologit are discussed in the core text and the results of PPR are presented in the appendix only for reference purposes.

4.4.2   Estimation

In view of the modern theoretical approaches concerning migration, as well as on the basis of accessible empirical studies we consider return migration as an effect of

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[7]According to the definition used by Williams(2006).
[8]Fu(1998).

a rational, though not ever profit-maximizing, strategy of an individual. We would like to identify what type of strategy Polish migrants follow, as well as what factors determine their decisions. For this purpose we run a regression based on data from the NBP survey. A natural candidate for the possible measure of the individual's strategy appears to be the length of their planned stay abroad, which will serve in our regression model as a response variable. The higher values it takes the more long-term seems to be the individual's migration strategy. Furthermore, we expect to obtain a significant influence on the duration not only of traditional economic factors such as the level of wages or job availability, but also of some personal characteristics. Following the main thought of the theory of relative deprivation it is also very likely that the impact of relative wages in the current environment of a migrant may be gaining in importance within the course of time spent abroad compared to other economic determinants, assumed of course they succeeded in finding a job.

Accordingly, three basic groups of factors affecting migrants' decisions about their further stay or leave have been taken into consideration: (1) general background qualities comprising gender, age, level of education, class of the township of origin in Poland, (2) determinants emphasized especially in the neoclassical theories of emigration such as low wages in Poland or unemployment in Poland as an emigration motive, former migration experience abroad, duration of the hitherto stay abroad, as well as (3) factors providing some information about migrants' intended strategy and socio-economic arrangements such as possession of real property abroad, having their closest on site, savings, remittances to Poland. Besides that, we consider whether a person performs a job with a higher occupational status than previously in Poland. Due to some technical limitations of the underlying survey we quietly assume every leave automatically means a return to Poland.

At the beginning, for each destination country separately, an ordered logit has been estimated with the 6-categorical response variable 'Duration of planned stay abroad' and with the range of explanatory variables described above[9]. In the further step, the base specification (i) has been extended by two additional variables describing the relative wages of migrants abroad and previously in Poland (specification (ii)). To keep the convention of regression relatively simple we have not addressed the problem of possible endogeneity between the response variable and some of the regressors[10]. The selected regression results[11] for both specifications display the tables 12 and 13.

With regard to the Proportional Odds constraints, the Likelihood Ratio and Brant Tests have been carried out, which indicate that the assumption of proportionality has been violated[12], in particular in the case of the following binary variables: 'Property owner', 'First stay abroad' and 'Savings'. It means the level of coefficients for these three variables must have varied significantly across 6 categories of the response variable. Referring to that fact, generalized ologit was carried out afterwards,

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[9]For more detailed description of the variables see table 7 in the part 4.2 (page 15).

[10]On the one hand, we have found in the literature a number of essays dedicated to migration issues which neglect the problem of endogeneity in the case of discrete choice models. Zaiceva & Zimmermann (2008) examine, for instance, determinants of international migration running a multinomial logit for a panel of countries. Without incorporating potential endogeneity between the decision to migrate and 'homeownership' they find the latter variable clearly significant. De Grip et al. (2009) use as an explanatory variable 'living with a partner or spouse' for the purpose of European science and engineering graduates' migration analysis. They use multinomial logit regression without introducing any endogeneity or mismeasurement correction. On the other hand, Dong & Lewbel (2010) propose the so called Special Regressor Method to tackle this issue, while implementing an auxiliary exogenous regressor, which has to satisfy, however, some additional assumptions (see also: Lewbel 2004, Allcott & Woźny 2010). Applicability of such methods seems to be conditional, however, on the construction of the original model and of the sample itself. Moreover, the choice of the possible correction procedure remains, to a certain degree, arbitrary and has to be made with care. Thus, we left it out in this working paper, although we bear in mind that there might be room for further improvement of the econometric framework in future work.

[11]The full set of ologit estimates in the Appendix.

[12]However, specification link test for single-equation models indicates no specification error (insignificant linear predicted value squared).

Table 12: Selected estimation results of ologit for UK (odds ratios)

Year	2007		2008		2009	
Specification of equation	(i)	(ii)	(i)	(ii)	(i)	(ii)
Gender (female=0)	1.123	1.123	0.895	0.884	0.932	0.839
Age 25-34 (18-24 years = 0)	1.386*	1.410*	1.470**	1.540***	1.393**	1.467**
Property owner	3.852***	3.730***	2.888***	3.229***	3.901***	3.803***
Family on site	1.659***	1.654***	1.556**	1.519**	1.513***	1.440***
Migration motive: low wages	1.325	1.307	0.684***	0.694***	0.734**	0.644***
Migration motive: no job	1.120	1.116	0.644**	0.559***	0.639***	0.603***
Hitherto stay: 7-12 months (3-6 months = 0)	3.976***	3.948***	2.245***	2.375***	1.588*	1.826**
Hitherto stay: 1-3 years (3-6 months = 0)	7.853***	7.803***	3.536***	3.435***	3.085***	3.667***
Hitherto stay > 3 years (3-6 months = 0)	10.47***	10.14***	5.991***	5.700***	6.455***	6.635***
Savings	0.474***	0.465***	0.310***	0.283***	1.070	0.867
Net income abroad (in relation to the mean of the pool)		1.072		1.272		2.239***
Net income in PL (in relation to the mean of the pool)		na	0.627***		0.961
No. of observations	790	784	1494	1403	1461	1298
Pseudo R2	0.138	0.137	0.0918	0.106	0.0951	0.105

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Own calculations on the basis of NBP Migration Survey data

Table 13: Selected estimation results of ologit for Ireland (odds ratios)

Year	2007		2008		2009	
Specification of equation	(i)	(ii)	(i)	(ii)	(i)	(ii)
Gender (female=0)	0.704*	0.656**	1.178	1.129	0.915	0.841
Age 25-34 (18-24 years = 0)	1.375*	1.426*	0.776	0.796	1.220	1.144
Property owner (no=0)	5.352***	5.638***	5.882***	4.196***	14.27***	10.93***
Family on site (no=0)	2.124***	2.079***	1.392	1.482*	2.367***	2.581***
Migration motive: low wages	0.987	0.977	0.988	0.953	0.998	0.961
Migration motive: no job	1.519*	1.552*	0.735	0.788	0.851	1.059
Hitherto stay: 7-12 months (3-6 months = 0)	2.590***	2.707***	3.669*	1.691	1.103	1.042
Hitherto stay: 1-3 years (3-6 months = 0)	3.551***	3.784***	4.075**	2.182	2.344**	2.357*
Hitherto stay > 3 years (3-6 months = 0)	6.845***	7.324***	3.308*	2.028	3.050***	2.580*
Savings (no=0)	0.601**	0.612**	0.153***	0.102***	2.864***	1.962
Net income abroad (in relation to the mean of the pool)		0.795		1.555		4.932***
Net income in PL (in relation to the mean of the pool)		na	1.018		0.870
No. of observations	792	788	992	934	984	875
Pseudo R2	0.0970	0.0983	0.0785	0.0868	0.103	0.120

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Source: Own calculations on the basis of NBP Migration Survey data

which again confirmed the variability of coefficients across response variable categories. The introduction of the new type of model contributed to the improvement of goodness of fit (higher McFadden's R squared), too. Selected results[13] of the gologit have been depicted in the Table 14.

4.4.3 Discussion of results

Both some limitations of the survey methodology[14]and violation of the proportional odds assumption should be borne in mind while analyzing the regression results. Nevertheless, those deficiencies do not distort the final interpretation dramatically. At first glance, the countries do not appear to behave fully homogenously, as far as regression results are concerned. The role of particular types of factors is also changing over time of analysis. By and large, however, general background qualities such as gender, age or education played rather a minor role in the migrant's decision-taking process compared to the factors reflecting an intended strategy and socio-economic arrangements in the host country such as possession of property abroad, having their family on site or possessing own savings. Relative net income in relation to the mean of the sample also played an important role. To a lesser extent did the so-called neoclassical determinants (such as low wage and high unemployment level in the sending country, migration experience in the third country or duration of the hitherto stay abroad) contribute to the migrant's decision concerning their return. Meaningless for the duration of stay appeared also to be the fact, whether a person is remitting their earnings to Poland or not.

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[13]For a complete set of gologit estimates with no constraints as well as gologit with partially relaxed constraints see tables 18 and 16 in the Appendix.

[14]These are i.a. differences in methodology of carrying out survey's subsequent editions esp. some additional restrictions put in the sample selection process with regard to remittances in 2008.

Contrary to some earlier empirical findings (OECD 2008) neither gender nor educational level influenced considerably migrants' declared length of stay. Only in the case of Ireland in 2009 did having tertiary education increase the odds of planning a longer stay by approximately 1.6 times compared to leaving the destination country earlier. Thus, we were not able to find sufficient evidence of migrants' greater

Table 14: Selected estimation results of gologit models (odds ratios)

		UK			IR		
		2007	2008	2009	2007	2008	2009
Property owner	ologit	3.852***	2.888***	3.901***	5.352***	5.882***	14.27***
Intended stay abroad							
< 3 months	gologit	0.426	0.259	1.600	1.707	9E+30	0.00731***
3-6 months		1.634	0.338*	1.068	10.39**	7.288	1.5E-08
7-12 months		3.199**	1.116	2.300***	5.748***	3.539	7.298**
1-3 years		5.052***	1.764**	3.639***	6.194***	3.151***	9.129***
> 3 years but not forever		4.276***	5.755***	5.300***	6.346***	6.738***	182.4***
Family on site	ologit	1.659***	1.556**	1.513***	2.124***	1.392	2.367***
Intended stay abroad							
< 3 months	gologit	1.549	1.513	1.279	1.518	3E+42	77.92***
3-6 months		1.618	0.712	1.625**	2.378***	22.18*	1.974
7-12 months		1.587*	1.348	1.627***	2.409***	1.349	1.938***
1-3 years		2.432***	1.757***	1.550***	2.089***	1.281	3.007***
> 3 years but not forever		1.714**	2.025*	1.569**	1.742	2.035	2.879**
First stay abroad	ologit	1.337*	1.001	1.331**	1.157	0.999	1.290
Intended stay abroad							
< 3 months	gologit	4.107***	1.052	3.321***	2.390*	4E-22	69.93***
3-6 months		0.939	1.304*	2.234***	0.516*	1E+00	2.022
7-12 months		1.537*	1.001	2.189***	1.343	1E+00	1.736*
1-3 years		1.049	1.001	1.074	1.04	1E+00	0.944
> 3 years but not forever		1.078	1.001	0.881	1.057	1E+00	1.945
Savings	ologit	0.474***	0.310***	1.070	0.601**	0.153***	2.864***
Intended stay abroad							
< 3 months	gologit	0.251**	10.53***	2.735***	0.137***	8E+20	1.466
3-6 months		0.385**	0.728	1.617*	1.228	25.31***	2.144
7-12 months		0.372***	0.781	1.512*	1.043	0.753	2.457**
1-3 years		0.545**	0.354***	0.97	0.735	0.252***	1.264
> 3 years but not forever		0.576**	0.0655***	0.545**	0.443**	0.0154***	0.224*
Pseudo R2		0.215	0.198	0.138	0.174	0.237	0.210
BIC		2700.7	4033.4	4773.2	2719.8	2581.6	2778.5
N		790	1494	1461	792	992	984

Source: Own calculations on the basis of NBP Migration Survey data

propensity to return at the two extremities of their education scale, which has been indicated by other authors (Nekby 2006). Also age, especially in the UK, appeared to be significant and tended to increase chances of planning a longer stay by Polish immigrants. The diagrams illustrating probabilities predicted on the basis of the ologit model (Figure 9 and 10) seem to demonstrate the relationship in the most convenient manner. Accordingly, all the predicted probability lines, except for the group declaring duration of stay of 1-3 years, are positively sloped. In the case of Ireland in 2009 the relation between age and the probability of a longer stay was converging to a constant.

Taking into account the group of determinants related to classical motives of migration processes including unfavourable labour market situation in the sending country, reflected mainly in low wages and high unemployment, the impact was rather moderate. Only in the UK did migrants who left Poland due to too low wages or a lack of job have significantly smaller odds of prolonging their stay abroad. In Ireland and the rest of surveyed countries the influence was insignificant. On the other hand, a relatively long hitherto stay abroad favoured prolongation of the migration stay in the future.

Most variables reflecting a migrant's strategy turned out to be significant, which seems to confirm some of the findings of previous research on migration determinants. Similarly to Zaiceva & Zimmermann (2008), who run a multinomial logit for a panel of EU countries, homeownership turned out to be significant. Owning property increased the odds of staying longer than leaving by 3.9 times in the UK in 2009

and over 14 times in Ireland in the same year[15]. Living with their family on site also strengthened migrant's plans to stay longer abroad, by ca. 1,5 times in Ireland and over 2 times in the case of the UK. Nonetheless, migrants bringing their own families with them does not necessarily imply that migrants settle in the destination country ofr good, but only increases the chance of prolonging their stay, mostly up to three years, as already indicated in the descriptive part of the analysis. Interestingly, while having own savings decreased the chances for a longer stay only in the years 2007 and 2008, in 2009 the sign of this interdependence became positive. We can interpret this change as follows: before the economic crisis of 2008 most persons saving their money were inclined to spend it after their return to Poland. During the recession period only those migrants who planned to save and spend their money abroad might have decided to stay longer.

<table>
<tr><td>Figure 9: Probabilities of the planned stay duration predicted on basis of the ologit model estimated for the UK</td><td>Figure 10: Probabilities of the planned stay duration predicted on basis of the ologit model estimated for IE</td></tr>
</table>
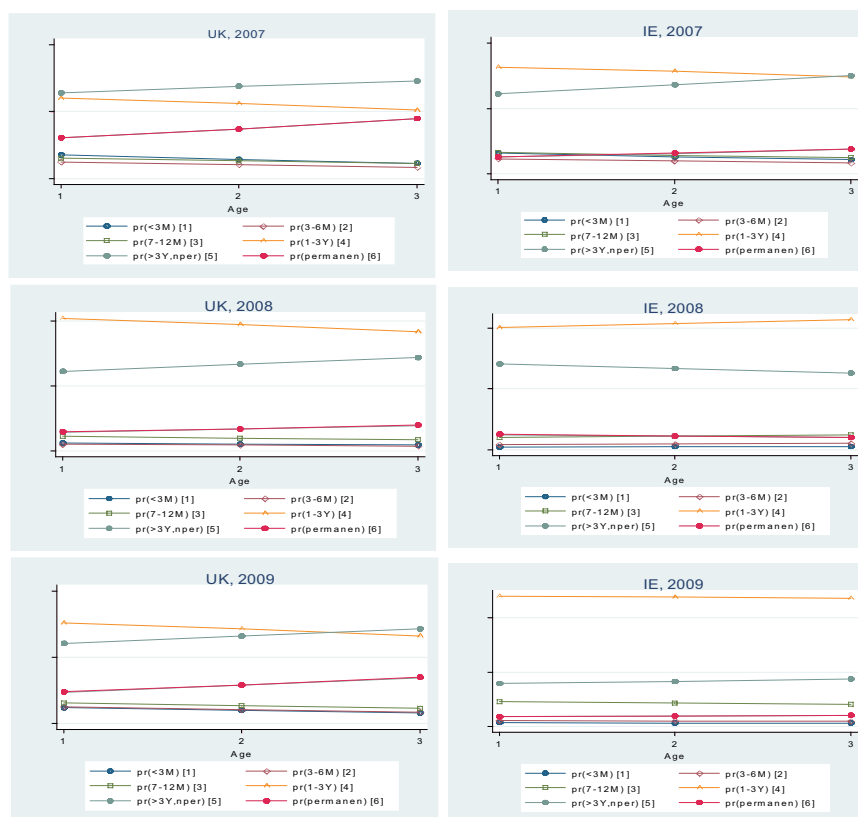
Those persons who turned out to be the most successful abroad, and aimed at long-term residence, stayed. Besides that a rapid appreciation of the Polish zloty in the second half of 2009 might also have contributed to the decision of some persons to postpone their departure. On the other hand, in our regression remitting money from abroad to Poland turned out to be generally insignificant as a determinant of a declared duration of stay.

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[15]De Grip et al. (2009) deal with migration decisions of science and engineering graduates. The authors underline the role of social and family context proving the significance of such explanatory variables as 'living with a partner' or 'having a child'.

In the context of the NEM theory an important finding appears to be a significant (p-value < 0.001) and positive impact of the migrants' relative[16] income level obtained abroad on their future plans in the case of all the countries analyzed, though solely in the year 2009. Unsurprisingly, a generally negative influence has been observed in the case of the relative net income migrants used to earn before they left their home country. Nevertheless, the latter variable was significant for the UK only in 2008 and for Ireland not at all. These results mirror an important role of the relative deprivation mechanism within the group of post-accession wave migrants and suggest that Polish migrants gradually change their reference income group within the course of time they spend abroad. They pay more and more attention to the relative wage level prevalent in the host country and much less to the relative wages they had been able to obtain in the country of origin.

Summing up, there is enough evidence congruent with some elements of the NEM theory, in particular with the mechanism of relative deprivation in migration decision taking or diversification of migrants' strategies. Those strategies change over time towards a medium-term pattern which, however, does not usually lead to a permanent stay in the host country. In fact, settling down forever in the UK or Ireland is rather rare among Polish migrants at the moment, although it may change in the near future. Remarkable differences in regression estimates for the subsequent years of observation before and after the economic crisis may suggest that changes in macroeconomic conditions, similarly to the group of determinants related to socio-economic arrangements, might also have mattered.

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[16]Relative to the mean of the survey sample.

5   Conclusions

The great wave of emigration from Poland after the EU accession is a phenomenon that has influenced both Poland and the two major destination countries: the UK and Ireland. The emigration flows have slackened in recent years due to the economic crisis which turned out to be much more severe in Western Europe than in Poland. The past experiences of different countries also suggest that almost all great waves of emigration were followed by return migration. The reasons for return migration are different at the micro level but the knowledge of the most important trends seems to be important in the predictions of future population and labour force changes, and in the verification of the reliability of different migration theories. This paper had two aims, first, to analyse empirically the determinants of plans of the return to Poland of emigrants in the UK and in Ireland and, second, to verify the reliability of the classical theory of migration versus the new economics of migration in the explanation of the migration flows of Polish emigrants.

The empirical analysis of emigration was based on several sources of information, of which the most important was the micro-dataset from the survey carried out by the National Bank of Poland in the years 2007-2009. The observations suggest that the decreasing number of emigrants observed after 2007 was mainly due to a sharp drop in short-term emigration that reflects flows from the home to the host country. This observation was confirmed by data on new registrations of Polish workers in the British Isles and is consistent with the results of the survey that suggest also a drop in the number of short-term emigrants (up to one year) while the distribution of the plans of further stay of long-term emigrants has not changed dramatically despite the crisis.

The results of the survey show that the choice of emigration in comparison to work in Poland was relatively more profitable for low-income earners and those persons emigrated relatively more frequently. But there was also a positive correlation between wages in Poland before emigration and abroad declared by the same persons. What is also important, the longer the duration of the stay was, the higher was the average wage and the longer was the declared period of further stay. This could be a result of information increasing with time, more time to search for a better job and an auto-selection of emigrants (the low-paid simply could return earlier). In 2007, the emigration peak year, circular migration as well as declarations of permanent emigration were relatively frequent. The share of circular migrants amounted to about 16% in the UK and 10% in Ireland, and the share of permanent emigrants (longer than three years) to about 53% in the UK and 43% in Ireland. The influence of the crisis reduced the share of emigrants that declared permanent emigration to 47% in the UK and 28% in Ireland but the circular migrants also almost vanished (their share dropped to less than 5% in the UK and to less than 2% in Ireland) due to a very low flow from Poland to the British Isles. The changes in the economic situation had an immediate impact on the circular migrants who adjusted by staying in Poland but the persons who used to declare permanent emigration and invested in their settlement in the British Isles needed time to reconsider their strategy and usually declared a long-term but not permanent stay.

The results of the empirical analysis were used to verify the frequently used theories that explain migration. The classical theory is usually referred to in macroeconomic analysis and is easy to implement in the environment of macro variables. The new economics of migration pays more attention to the context of emigration and to the understanding of the individual preferences of emigrants.

The main result of this study suggests that there are differences in the factors that influence simultaneous emigration and return migration flows. The differences in wages and labour market conditions between countries seem to explain emigration outflows relatively well. The economic crisis in the British Isles clearly deterred emigration outflows from Poland. However, the decisions about the duration of stay in the host country which determine return migration are more connected to the individual characteristics of emigrants than to the changes of economic conditions. The changes in the economic situation influenced the distribution of declarations about further stay relatively less in comparison to emigration outflows. The influence of

variables like savings and young age shortens the plans of stay in each year in the period 2007-2009. A relatively long period of actual stay abroad before the survey, plans regarding property and family in the host country as well as signs of success like relatively high wages and professional status abroad were strongly correlated with plans of longer further stay. The empirical analysis also confirmed the importance of phenomena not explained by the classical theory: significant circular short-term emigration and declarations of return of most emigrants in the short or medium term. All these findings suggest that in the perspective of one to three years return migration flows seem to be less vulnerable to changes in economic conditions and to depend more on strategies already adopted by emigrants. This conclusion supports the approach represented by the "New Economics of Migration" as more useful in the analysis of return migration.

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Appendix 1

Survey methodology - sampling procedure and selected questions from the questionnaire

Stratified purposive sampling was chosen as the method of including in the sample design information about emigrants from other data sources. The method also served as a tool of diversification of the sample. The following rules were applied in the sampling procedure:

- The survey was conducted in the places of residence of emigrants (not in the places where they worked) by Polish-speaking interviewers. The questionnaires were filled in by respondents.

- There were restictions regarding interviewing only one person in each place of residence. The interviews in large emigrant communities as well as interviews with the relatives of respondents were also forbidden. One interviewer was allowed to carry out no more than 60 surveys.

- Only emigrants who had already spent at least 3 months in the host counry were interviewed.

- The target group were persons aged 18-65, the proportions of age groups (18-24, 25-34, 35-44, 45-65) were implied separately in each of the host countries on the basis of information from the Polish LFS survey.

- The samples were distributed between regions in each country on the basis of information from registration from registration schemes. In the UK the sample was distributed between 8 regions and in Ireland between 6 regions.

- There were also limitations concerning the minimum and maximum percentage of females in the sample and minimum percentage of respondents employed in low- and high-skill occupations, and in main sectors of the economy.

The questionnaire consisted of about 40 questions. Only some of them were used in the analysis. The more extended questions in which wording is important for the interpretation of the results of the analysis carried out in the paper are presented below (Table 15) together with additional information about the variables in which they were used.

Table 15: Selected questions

Questions	Answers	Comments
P7. Does any of the members of your family live curently in Great Britain/Ireland? (more than one answer is possible)	1. No, no one 2. husband /wife (spouse) 3. children 18 years and older 4. children younger than 18 years 5. parents 6. siblings 7. grandparents	Queastion used to prepare variable "Family on site"
P9. Is it your first employment emigration spell?	1. Yes 2. No	Question used to create variable: "First stay abroad"
P10. How long have you stay in Great Britain/ Ireland?	1. 3-6 months 2. 7-12 months 3. 1 year – 3 years 4. more than 3 years	Question from the survey in 2007, The surveys in 2008, 2009 contains information about period in moths, but were
P11. How long are you going to stay in Great Britain/ Ireland?	1.shorter than 3 monts 2. 3-6 months 3. 7-12 months 4. 1 year-3 years 5. more than 3 years but not forever 6. Forever	cumulated to be comarable with 2007 results.
P12. What was the most important reason for emigration to Great Britain/ Ireland? (please select the most important)	1. The lack of job in Poland 2. Unsatisfactory wage in Poland 3. Discontence over work in Poland because of factors other than wage (ex. better career prospects abroad) 4. Willingness to learn English language 5. Political climat in Poland 6. Family or friends abroad 7. Other	Answers used to create variables (1) "Migration motive:low wages" and (2) "Migration motive: no job"
P14. Please compare your current or last job in Ireland with the last job in Poland? (2007)	1. I have the same occupation as in Poland and consistent with 2. My occupation abroad is differnet than in Poland but consistent with my educational bacground 3. My occupation is differnt than my educational background but requires specific skills 4. My occupation doesn't require specific skills 5. I have not worked abroad until now	Question from 2007 used to create variable "Higher professional status abroad". In 2008 and 2009 this variable created by comparison of questions regarding specific occupations.
P.18 What sort of job have you had before emigration and P.19 What sort of job have you had before emigration (2008,2009)	1. High rank manager 2. Middle/Low rank manager 3. Selfemployed, own business 4.Specialist 5. Skilled worker 6. Basic works 7. char, babysitter 8.other 9. I have not worked	Questions used to create variable: "Higher professional status abroad in 2008 and 2009
P24. Have you collected any savings during your stay abroad?	1. Yes 2. No	Question used to creat variable: "Savings"
P26. Do you own any properties in Great Britain/ Ireland?	1.Yes, I own 2. No, but I'm going to buy proprty in the one year time 3. No, I'm not an owner and I'm not going to buy any property in one year	Question used to create variable: "Own Property"
T1. Do you send any remittances to Poland?	1. Yes 2. No	Question used to create variable: "Remittances to Poland"

Appendix 2

Table 16: Generalized Ordered Logit estimates with partial proportional odds constraints (Beta method)

UK

	gologit_UK2007autog		gologit_UK2009autog		IE gologit_IR2007autog		gologit_IR2009autog	
VARIABLES		_plan_pobyt	VARIABLES	_plan_pobyt	VARIABLES	_plan_pobyt	VARIABLES	_plan_pobyt
Beta			**Beta**		**Beta**		**Beta**	
_plec		1.115	_plec	0.921	_plec	0.755*	_plec	0.899
_I_age_2		4.413***	_I_age_2	1.980***	_I_age_2	3.014**	_I_age_2	6.266***
_I_age_3		1.483*	_I_age_3	1.498***	_I_age_3	1.339	_I_age_3	1.07
_I_wyksz_2		2.134	_I_wyksz_2	1.638	_I_wyksz_2	0.509	_I_wyksz_2	118900000
_I_wyksz_3		1.083	_I_wyksz_3	1.248	_I_wyksz_3	6.723***	_I_wyksz_3	0.498
_I_wyksz_4		0.921	_I_wyksz_4	1.043	_I_wyksz_4	2.978***	_I_wyksz_4	1.662***
_Own_property		4.123***	_Own_property	2.010*	_Own_property	5.882***	_Own_property	0.00858***
_wzial_rodzine		1.819***	_wzial_rodzine	1.548***	_wzial_rodzine	2.148***	_wzial_rodzine	54.14***
_PierwszyPobyt		2.806***	_PierwszyPobyt	3.191***	_PierwszyPobyt	2.345**	_PierwszyPobyt	30.96***
_I_klm3_2		0.626**	_I_klm3_2	1.072	_I_klm3_2	0.744	_I_klm3_2	1.105
_I_klm3_3		0.82	_I_klm3_3	0.961	_I_klm3_3	0.992	_I_klm3_3	2.934
reas_low_w		1.276	reas_low_w	1.147	reas_low_w	1.53	reas_low_w	1.04
reas_Unemp		1.062	reas_Unemp	1.041	reas_Unemp	0.772	reas_Unemp	6.390***
_I_Duration_2		4.231***	_I_Duration_2	1.704***	_I_Duration_2	7.637***	_I_Duration_2	4.284*
_I_Duration_3		7.948***	_I_Duration_3	3.440***	_I_Duration_3	13.34***	_I_Duration_3	0.819
_I_Duration_4		6.645***	_I_Duration_4	7.000***	_I_Duration_4	4.282***	_I_Duration_4	3.230***
_I_Professi_1		2.969***	_I_Professi_1	0.713***	_I_Professi_1	1.295*	_I_Professi_1	0.827
_Savings		0.488**	_Savings	2.589***	_Savings	0.194***	_Savings	2.133
_przekazuje_pieniadze		1.083	_przekazuje_pieniadze	0.775**	_przekazuje_pieniadze	0.923	_przekazuje_pieniadze	5.544***
Gamma_2			**Gamma_2**		**Gamma_2**		**Gamma_2**	
_I_age_2		0.695	_I_age_2	1.005	_I_age_2	0.842	_I_age_2	0.163***
_PierwszyPobyt		0.438***	_I_wyksz_3	1.282	_I_wyksz_3	0.182***	_I_wyksz_2	0.285
_I_Duration_2		1.527	_Own_property	0.73	_I_wyksz_4	0.486**	_I_wyksz_3	8.656
_I_Duration_3		1.728**	_PierwszyPobyt	0.743	_PierwszyPobyt	0.269***	_Own_property	0.00000272
_I_Professi_1		0.333***	_I_klm3_2	0.955	reas_low_w	0.388***	_wzial_rodzine	0.0367***
_przekazuje_pieniadze		1.817***	reas_low_w	0.789	reas_Unemp	1.327	_PierwszyPobyt	0.0638***
			reas_Unemp	0.754	_I_Duration_2	0.378***	_I_klm3_3	0.191**
			_Savings	0.686**	_I_Duration_3	0.255***	reas_Unemp	0.112**
					_Savings	5.197***	_I_Duration_2	0.423
							_I_Duration_3	4.937***
							_I_Professi_1	0.738
							_Savings	0.861
							_przekazuje_pieniadze	0.182***
Gamma_3			**Gamma_3**		**Gamma_3**		**Gamma_3**	
_I_age_2		0.394***	_I_age_2	0.928	_I_age_2	0.470*	_I_age_2	0.245**
_PierwszyPobyt		0.580***	_I_wyksz_3	1.883**	_I_wyksz_2	0.211***	_I_wyksz_2	1.6E-09
_I_Duration_2		2.158**	_Own_property	1.142	_I_wyksz_4	0.343***	_I_wyksz_3	2.504
_I_Duration_3		1.29	_PierwszyPobyt	0.693	_PierwszyPobyt	0.581	_Own_property	763.3***
_I_Professi_1		0.345***	_I_klm3_2	1.092	reas_low_w	0.871	_wzial_rodzine	0.0346***
_przekazuje_pieniadze		1.565*	reas_low_w	0.812	reas_Unemp	2.472***	_PierwszyPobyt	0.0556***
			reas_Unemp	0.725	_I_Duration_2	0.218***	_I_klm3_3	0.326
			_Savings	0.607**	_I_Duration_3	0.245***	reas_Unemp	0.189*
					_Savings	5.349***	_I_Duration_2	0.194**
							_I_Duration_3	2.944*
							_I_Professi_1	0.732
							_Savings	1.253
							_przekazuje_pieniadze	0.220***
Gamma_4			**Gamma_4**		**Gamma_4**		**Gamma_4**	
_I_age_2		0.252***	_I_age_2	0.644*	_I_age_2	0.398**	_I_age_2	0.222**
_PierwszyPobyt		0.410***	_I_wyksz_3	1.178	_I_wyksz_3	0.196***	_I_wyksz_2	0.000000017
_I_Duration_2		0.562	_Own_property	1.771	_I_wyksz_4	0.204***	_I_wyksz_3	2.281
_I_Duration_3		0.707	_PierwszyPobyt	0.341***	_PierwszyPobyt	0.435**	_Own_property	1.176***
_I_Professi_1		0.279***	_I_klm3_2	0.873	reas_low_w	0.529*	_wzial_rodzine	0.0540***
_przekazuje_pieniadze		0.936	reas_low_w	0.646*	reas_Unemp	1.666	_PierwszyPobyt	0.0315***
			reas_Unemp	0.488***	_I_Duration_2	0.241***	_I_klm3_3	0.544
			_Savings	0.379***	_I_Duration_3	0.184***	reas_Unemp	0.131**
					_Savings	3.592***	_I_Duration_2	0.326
							_I_Duration_3	3.319*
							_I_Professi_1	0.915
							_Savings	0.481
							_przekazuje_pieniadze	0.252**
Gamma_5			**Gamma_5**		**Gamma_5**		**Gamma_5**	
_I_age_2		0.237***	_I_age_2	0.553**	_I_age_2	0.373**	_I_age_2	0.131***
_PierwszyPobyt		0.366***	_I_wyksz_3	0.866	_I_wyksz_2	0.117***	_I_wyksz_2	0.000000105
_I_Duration_2		0.395*	_Own_property	2.589**	_I_wyksz_4	0.130***	_I_wyksz_4	7.141
_I_Duration_3		0.557	_PierwszyPobyt	0.265***	_PierwszyPobyt	0.466*	_Own_property	19.346***
_I_Professi_1		0.380***	_I_klm3_2	0.522**	reas_low_w	0.632	_wzial_rodzine	0.0639***
_przekazuje_pieniadze		0.756	reas_low_w	0.445***	reas_Unemp	2.840***	_PierwszyPobyt	0.0611***
Alpha			reas_Unemp	0.706	_I_Duration_2	0.197***	_I_klm3_3	1.672
			_Savings	0.203***	_I_Duration_3	0.110***	reas_Unemp	0.0760**
			Alpha		_Savings	2.170*	_I_Duration_2	0.832
					Alpha		_I_Duration_3	9.735***
							_I_Professi_1	0.339
							_Savings	0.0817***
							_przekazuje_pieniadze	0.140***
							Alpha	
_cons_1		0.617*	_cons_1	0.97	_cons_1	1.177	_cons_1	0.0831**
_cons_2		0.571**	_cons_2	0.704	_cons_2	1.818	_cons_2	2.299
_cons_3		0.343***	_cons_3	0.395***	_cons_3	0.551*	_cons_3	0.393***
_cons_4		0.284***	_cons_4	0.192***	_cons_4	0.286***	_cons_4	0.0402***
_cons_5		0.0713***	_cons_5	0.0730***	_cons_5	0.0649***	_cons_5	0.0165***
Observations		790	Observations	1,461	Observations	792	Observations	984
Log-likelihood		-1059	Log-likelihood	-2047	Log-likelihood	-1057	Log-likelihood	-1057
r2_p		0.183	r2_p	0.127	r2_p	0.149	r2_p	0.2

Table 17: Ordinary regression estimates

Specification Year	UK 2007 (i)	(ii)	2008 (i)	(ii)	2009 (i)	(ii)	IR 2007 (i)	(ii)	2008 (i)	(ii)	2009 (i)	(ii)
Gender (female = 0)	1.123 (0.80)	1.123 (0.78)	0.895 (-1.05)	0.881 (-1.12)	0.932 (-0.70)	0.839 (-1.60)	0.704* (-2.26)	0.656** (-2.62)	1.178 (1.26)	1.129 (0.88)	0.915 (-0.70)	0.811 (-1.23)
Age 25-34 (18-24 years = 0)	1.386* (2.08)	1.410* (2.18)	1.470** (3.17)	1.540*** (3.39)	1.393** (2.70)	1.467* (2.01)	1.575* (2.04)	1.426* (2.25)	0.776 (-1.75)	0.796 (-1.51)	1.220 (1.23)	1.11 (0.77)
Age 35-55 years (18-24 years = 0)	1.519* (2.43)	1.556* (2.13)	1.321 (1.88)	1.521** (2.70)	1.556** (3.02)	1.628** (3.09)	1.438 (1.82)	1.187* (1.98)	0.862 (-0.84)	0.793 (-1.19)	1.131 (0.62)	0.982 (-0.08)
Education: primary (highschool = 0)	1.022 (1.16)	1.895 (1.44)	1.951 (1.21)	2.971 (1.82)	1.709 (1.60)	1.186 (1.06)	0.565 (-1.00)	0.551 (-1.04)	0.298 (-0.86)	0.288 (-0.85)	0.682 (0.62)	0.506 (-0.78)
Education: vocational (highschool = 0)	1.112 (0.53)	1.106 (0.50)	1.162 (0.98)	1.215 (1.40)	1.170* (2.41)	1.195* (2.36)	1.372 (1.55)	1.318 (1.45)	0.926 (-0.42)	1.100 (0.50)	1.317 (1.72)	1.170* (2.09)
Education: tertiary (highschool = 0)	0.911 (-0.34)	0.933 (-0.41)	1.028 (0.21)	1.368* (2.22)	1.031 (0.30)	0.922 (-0.67)	0.811 (-1.12)	0.843 (-1.40)	0.905 (-0.61)	0.795 (-1.28)	1.661*** (3.45)	1.371 (1.81)
Property owner	3.832*** (6.92)	3.730*** (6.73)	2.888*** (6.41)	3.229*** (6.42)	3.901*** (9.68)	3.803*** (8.74)	5.832*** (7.01)	5.608*** (7.18)	5.882*** (6.62)	4.196*** (4.90)	4.127*** (4.30)	10.03*** (7.73)
Family on site	1.659*** (3.65)	1.651*** (3.61)	1.556** (3.03)	1.519** (2.76)	1.513** (4.46)	1.410*** (3.44)	2.121*** (2.40)	2.079*** (2.09)	1.392 (1.88)	1.182* (2.19)	2.367*** (6.51)	2.581*** (6.59)
First Stay Abroad	1.337* (2.01)	1.313* (2.04)	1.001 (1.01)	1.001 (0.94)	1.331** (2.71)	1.350** (2.69)	1.157 (1.02)	1.17 (0.96)	0.999 (-1.01)	0.999 (-0.98)	1.290 (1.77)	1.156 (0.93)
Class of town: countryside (small city = 0)	0.690* (-2.33)	0.659* (-2.34)	1.116 (1.02)	1.161 (1.08)	0.862 (-1.23)	0.890 (-0.90)	0.762 (-1.45)	0.782 (-1.31)	0.807 (-1.41)	0.789 (-1.48)	1.191 (1.21)	1.168 (0.97)
Class of town: big city (small city = 0)	0.815 (-1.06)	0.901 (-1.11)	0.856 (-1.10)	0.877 (-0.89)	0.977 (-0.17)	0.887 (-0.85)	0.981 (-0.11)	0.991 (-0.05)	0.550** (-3.04)	0.521** (-3.47)	1.150 (1.21)	1.518 (1.46)
Migration motive: low wages	1.325 (1.81)	1.307 (1.72)	0.684*** (-3.30)	0.694*** (-3.06)	0.731** (-2.73)	0.614*** (-3.66)	0.987 (-0.09)	0.977 (-0.16)	0.988 (-0.08)	0.953 (-0.33)	0.998 (-0.01)	0.961 (-0.23)
Migration motive: no job	1.120 (0.62)	1.116 (0.59)	0.614*** (-2.90)	0.550*** (-3.72)	0.639*** (-3.39)	0.603*** (-3.56)	1.519* (2.48)	1.532* (2.09)	0.735 (-1.67)	0.788 (-1.22)	0.851 (-0.91)	1.069 (0.30)
Hitherto stay: 7-12 months (3-6 months = 0)	3.976*** (6.55)	3.918*** (6.47)	2.245*** (4.25)	2.375*** (4.27)	1.588* (2.37)	1.826** (2.86)	2.500*** (4.13)	2.707*** (4.25)	3.600* (2.22)	1.001 (0.83)	1.103 (0.30)	1.012 (0.11)
Hitherto stay: 1-3 years (3-6 months = 0)	7.853*** (10.67)	7.803*** (10.48)	3.536*** (7.19)	3.485*** (6.55)	3.085*** (6.04)	3.667*** (6.46)	3.551*** (6.50)	3.781*** (6.61)	1.075** (2.81)	2.182 (1.47)	2.311** (2.65)	2.357* (2.27)
Hitherto stay > 3 years (3-6 months = 0)	10.47*** (9.46)	10.11*** (8.73)	5.991*** (9.09)	5.700*** (8.11)	6.155*** (10.58)	6.635*** (9.85)	6.845*** (6.54)	7.321*** (6.51)	3.308* (2.41)	2.028 (1.34)	3.050*** (3.42)	2.580* (2.50)
Higher professional status abroad	1.101 (0.68)	1.001 (0.60)	0.917 (-0.78)	1.131 (1.03)	0.685*** (-3.81)	0.693*** (-3.32)	1.322 (1.95)	1.375* (2.24)	0.955 (-0.34)	1.039 (0.36)	0.571*** (-3.42)	0.758 (-1.70)
Savings	0.171*** (-4.97)	0.165*** (-5.03)	0.310*** (-5.07)	0.283*** (-5.28)	1.070 (0.50)	0.867 (-0.91)	0.601*** (-2.96)	0.612** (-2.82)	0.133*** (-8.96)	0.102*** (-9.68)	2.861*** (2.86)	1.962 (1.50)
Remittances to Poland	1.073 (0.51)	1.072 (0.32)	0.891 (-1.01)	0.932 (-0.42)	0.770* (-2.50)	0.751* (-2.54)	0.909 (-0.23)	0.967 (-0.24)	0.996 (-0.03)	0.873 (-0.86)	1.118 (0.87)	0.951 (-0.29)
Net income abroad (in relation to the mean of the pool)		na		1.272 (1.45)		2.239*** (4.62)		0.795 (-1.59)		1.355 (1.94)		1.932*** (5.89)
Net income in PL (in relation to the mean of the pool)		na		0.627*** (-7.01)		0.961 (-4.76)		na		1.018 (0.16)		0.870 (-1.42)
of observations	790	781	1191	1103	1161	1298	792	788	992	931	961	875
Pseudo R2	0.138	0.137	0.0948	0.106	0.0661	0.105	0.0970	0.0983	0.0785	0.0868	0.103	0.120

t statistics in parentheses
* p 0.05, ** p 0.01, *** p 0.001

Table 18: Generalized Ordered Logit estimates with no constraints

	UK			IR		
	2007	2008	2009	2007	2008	2009
Gender (female=1)						
<3M	1.095	2.108	0.806	0.759	7.648E|41	0.707
3-6M	1.287	1.511	1.005	0.804	0.645	1.005
7-12M	0.906	0.729	1.043	0.832	1.553	0.962
1-3Y	1.222	0.883	0.89	0.693	1.113	0.925
>3Y,npermanently	1.072	0.885	0.901	0.941	0.863	0.591
Age 25-34 years (18-24 years = 0)						
<3M	5.744***	14.96***	2.175**	2.35	3.721E|60	6.786
3-6M	2.697**	0.721	2.202***	3.195***	0.00783***	0.954
7-12M	1.556	1.319	1.820***	1.391	0.587	1.474
1-3Y	1.037	1.388*	1.197	1.146	0.798	1.402
>3Y,npermanently	0.996	1.721*	1.175	1.188	0.696	0.93
Age 35-65 years (18-24 years = 0)						
<3M	1.308	14.94*	1.668	1.174	1.383E|61	0.847
3-6M	0.791	1.088	1.519	1.614	0.00656***	1.347
7-12M	1.572	1.683*	1.368	1.479	0.439*	1.058
1-3Y	1.329	1.115	1.392	1.176	0.989	1.026
>3Y,npermanently	1.573	0.899	1.714*	1.48	1.405	1.672
Primary (highschool = 0)						
<3M	0.147	6.46E-10	0.917	0.154	3.51E-18	188251913
3-6M	1.24E-06	8329816.1	0.81	1.04E-07	1	42775471
7-12M	1579909	1.022	1.597	1449979.1	101273036	0.194*
1-3Y	7.544*	1.224	1.716	0.418	1.207	2.186
>3Y,npermanently	5.108*	8.540***	1.816	0.515	4.56E-08	21.86*
Vocational (highschool = 0)						
<3M	3.003*	0.0925*	1.363	14.97**	7.53E-33	0.336
3-6M	2.03	0.377*	1.576	0.855	0.179	3.657
7-12M	1.455	1.2	2.422***	1.409	1.291	1.138
1-3Y	0.993	1.174	1.587*	1.305	0.939	1.28
>3Y,npermanently	0.839	2.271*	1.008	0.808	0.939	3.651**
Tertiary (highschool = 0)						
<3M	1.475	0.100***	0.941	4.904***	1.8E|28	1.058
3-6M	0.722	0.859	0.813	1.256	1.318	1.149
7-12M	0.859	0.799	1.05	1.019	0.837	1.3
1-3Y	0.698	1.167	1.193	0.594**	0.97	1.923***
>3Y,npermanently	1.051	1.975**	0.919	0.369**	1.137	2.471*
Property owner						
<3M	0.426	0.259	1.6	1.707	8.618E|30	0.00731***
3-6M	1.634	0.338*	1.068	10.39**	7.288	1.46E-08
7-12M	3.199**	1.116	2.300***	5.748***	3.539	7.298**
1-3Y	5.052***	1.764**	3.639***	6.194***	3.151***	9.129***
>3Y,npermanently	4.276***	5.755***	5.300***	6.346***	6.738***	182.4***
Family on site						
<3M	1.549	1.513	1.279	1.518	2.732E|42	77.92***
3-6M	1.618	0.712	1.625**	2.378***	22.18**	1.974
7-12M	1.587*	1.348	1.627***	2.409***	1.349	1.938***
1-3Y	2.432***	1.757***	1.550***	2.089***	1.281	3.007***
>3Y,npermanently	1.714**	2.025*	1.569**	1.742	2.035	2.879**
First stay abroad						
<3M	4.107***	1.052	3.321***	2.390*	4.49E-22	69.93***
3-6M	0.939	1.304*	2.234***	0.516*	1.293	2.022
7-12M	1.537*	1.001	2.189***	1.343	0.999	1.736*
1-3Y	1.049	1.001	1.074	1.04	0.999	0.944
>3Y,npermanently	1.078	1.001	0.881	1.057	0.998	1.945
Countryside (Small town=0)						
<3M	0.752	6.467**	1.2	0.665	2.22E|102	1.324
3-6M	0.651	0.876	0.967	1.237	11.92**	2.258
7-12M	0.724	0.663	1.159	1.098	0.766	1.307
1-3Y	0.603*	1.26	0.941	0.634	0.695*	0.916
>3Y,npermanently	0.521*	1.735*	0.578*	0.456	0.432*	1.434
Big city (Small town=0)						
<3M	0.555	3.728*	1.508	0.531	4.73E-26	4.529
3-6M	2.231	0.261***	1.261	1.781	0.226*	0.646
7-12M	1.443	0.342***	0.852	1.087	0.602	0.99
1-3Y	0.876	1.097	0.935	1.04	0.8	1.597
>3Y,npermanently	0.547*	1.572*	0.907	0.847	0.727	4.558*
Migration motive: low wages						
<3M	1.121	0.561	1.155	1.665	4.42E-08	0.929
3-6M	1.114	1.586	0.893	0.497*	2.01	1.002
7-12M	1.392	0.645*	0.954	1.316	1.087	1.421
1-3Y	1.484*	0.689**	0.743*	0.807	0.902	0.975
>3Y,npermanently	1.111	0.718	0.486***	1.039	0.643	0.545
Migration motive: no job						
<3M	1.055	0.0534***	0.98	1.202	2.362E|38	9.038*
3-6M	0.723	4.861***	0.761	1.053	0.442	0.633
7-12M	1.107	0.543**	0.733	1.641	0.648	1.206
1-3Y	1.126	0.706	0.521***	1.321	0.785	0.878
>3Y,npermanently	0.996	1.019	0.72	2.360**	0.581	0.473
Hitherto stay: 7-12M (3-6M = 0)						
<3M	4.301**	2.232	1.613	13.85**	3.42E|56	5.972*
3-6M	7.610***	1.365	1.943*	2.716**	8.89	2.267
7-12M	9.184***	2.357***	2.406***	1.716	0.784	0.799
1-3Y	2.033**	1.976**	1.158	1.605	5.800**	0.695
>3Y,npermanently	1.014	0.423	0.776	1.076	192847909.3	7.791
Hitherto stay: 1-3Y (3-6M = 0)						
<3M	11.86***	1.041	2.569**	19.03***	3.59E|135	1.945
3-6M	18.59***	3.872***	2.275**	2.919***	26.85	5.612**
7-12M	11.46***	4.090***	4.227***	3.294***	1.847	2.210*
1-3Y	5.007***	3.511***	3.349***	2.138**	2.534	1.368
>3Y,npermanently	2.641***	0.896	3.148**	1.105	106495137	10.30*

Hitherto stay>3Y, npermanent (3-6M = 0)						
<3M	170.6***	10.80**	7.533***	2.87E-08	1.75E | 107	12.22*
3-6M	16.86***	5.186***	6.301***	1677387.7	18.39	5.169**
7-12M	13.07***	4.794***	8.348***	14.78***	0.973	3.009**
1-3Y	7.324***	5.564***	6.428***	3.702***	2.12	1.537
>3Y,npermanently	3.008**	2.134*	5.934***	3.288*	154362170.9	1.169
Higher professional status abroad						
<3M	3.274***	0.353	0.74	1.197	9.98E-61	0.813
3-6M	1.114	1.396	0.618**	1.46	0.797	0.627
7-12M	0.866	1.063	0.561***	1.181	1.053	0.594*
1-3Y	0.769	0.865	0.757*	1.415*	1.042	0.781
>3Y,npermanently	1.186	0.838	0.809	1.093	1.695	0.292**
Savings						
<3M	0.251**	10.53***	2.735***	0.137***	8.282E | 20	1.466
3-6M	0.385**	0.728	1.617*	1.228	25.31***	2.144
7-12M	0.372***	0.781	1.512*	1.043	0.753	2.457**
1-3Y	0.545**	0.354***	0.97	0.735	0.252***	1.264
>3Y,npermanently	0.576**	0.0655***	0.545**	0.443**	0.0154***	0.224*
Remittances						
<3M	0.997	4.348*	1.263	0.495	2.698E | 22	4.672*
3-6M	1.853*	1.48	1.04	0.792	3.591	0.79
7-12M	1.424	0.885	0.878	1.067	1.526	1.18
1-3Y	1.003	0.734*	0.750*	0.86	0.984	1.408
>3Y,npermanently	0.826	0.955	0.657**	1.134	0.438*	0.849
Pseudo R2	0.215	0.198	0.138	0.174	0.237	0.210
BIC	2700.7	4033.4	4773.2	2719.8	2581.6	2778.5
N	790	1494	1461	792	992	984