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# Using Survey Data to Identify Migration Patterns

## **Abstract**

This briefing focuses on the difficulty in obtaining the information needed to identify patterns of (temporary) migration, which appear to have become more diverse in recent years, facilitated by developments in transportation and increased globalisation. It is mainly concerned with examining how survey data may be used to shed further light on the issue. It appears that the migration questions that have recently been added to the UK Labour Force Survey (LFS) are not that helpful in this respect. However, utilising the panel element of the LFS is likely to provide a far more fruitful avenue for future research. Some interesting patterns can be identified in the basic application of this approach but more refined analysis is required in order to overcome some of the complicating factors that arise.

## **Keywords**

Migration Patterns, Survey Data, Quantitative Methods, Labour Force Survey.

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## Introduction

Despite its continued popularity, the view that immigrants make a one-off utility maximising decision of where best to locate (Sjaastad, 1962) does not seem to be consistent with the migration patterns that have recently been observed in the UK and in many other countries. In particular, the notion that immigrants will permanently move to (or at least stay for a substantial length of time in) another country with the hope of achieving a higher standard of living or some other objective is increasingly becoming outdated. Rather, contemporary movements of workers across boundaries can be thought of as constituting a wide variety of migration patterns, ranging from very short work-related stays to permanent settlement. Such temporary migration flows include seasonal migration, circular migration and short-term return migration. Many migrants do not know for how long they will stay on entering a new country and will instead adopt a wait-and-see approach, which is often connected to uncertainties within the labour market. Some of these patterns are related to issues connected to the new economics of labour migration (Stark, 1991) but these trends have also been facilitated by changes in transportation, increased globalisation and transnational connectedness across countries, which means migrants and migrant communities may live across two or more nation states (Basch *et al.*, 1994; Vertovec, 1999).<sup>1</sup> Of most significance for the UK has been of the removal of barriers to entry for workers from Central and Eastern Europe that followed EU enlargement in 2004. This led to a huge increase in migration flows from the new member states (often known as A8 migrants), which many UK data sources have been able to highlight, as discussed below. However, analysis of these data typically provides only a very partial picture of recent migration trends to the UK. This briefing therefore seeks to address some of the gaps by focusing on how survey data can be used to try and identify migration patterns, especially by using the panel information available in the Labour Force Survey (LFS).

As noted above, it is currently quite difficult to examine migration patterns to the UK from a quantitative perspective because of a lack of information on migrants' length of stay. Administrative sources such as the Worker Registration Scheme (WRS) and National Insurance Numbers issued to foreign nationals (NINo) are only really able to record when a new migrant/worker registers in the UK and cannot identify when or if they return to their home countries. A question on migration intentions appears on the WRS questionnaire and this reveals that a very high proportion only intend to stay for a short period since around 60% registering in the UK for the first time reported that they intended to stay for less than 3 months and about a further quarter were not able to say. Although this confirms the short-

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<sup>1</sup> These changes include the advent of relatively cheap tickets and the availability of more frequent and a wider choice of modes of transport, as well as the relaxation of some mobility restrictions between different European countries.

term nature of many migration stays by A8 migrants, this question is not particularly helpful in identifying migration patterns. This is because attitudes towards living in a new location will change as migrants become more familiar with their surroundings. Furthermore, people may answer the question in a particular way, especially since it forms part of a government register. The question also assumes that every individual will have a rationally conceived strategy of the amount of time they will spend in the host country. However in a modern flexible labour market, value is placed on mobility and responsiveness to the opportunities that become available, and therefore *not having* specific time-framed plans may also be a rational strategy. In these circumstances, 'not knowing' how long they will stay reflects a strategy that is adapted to fast changing market conditions. This has been termed as 'intentional unpredictability' by Eade *et al.* (2006) and in the case of Ireland as 'deliberate indeterminacy' by Moriarty *et al.* (2010). Pollard *et al.* (2008) also use the WRS, by combining information from there on inflows with data on migration stocks from the LFS to estimate that around a half of post-enlargement migrants from the new member states had returned to their home countries between 2004 and 2007. The International Passenger Survey does contain information on the outflow of migrants from the UK but it is not suited to analysing migration patterns because its sample size is fairly small and it only includes long term migrants (those intending to stay for over one year).

There are some existing papers that use survey data to examine types of temporary migration. For example, Constant and Zimmermann (2007) analyse panel data from Germany to identify circular migrants. The coverage and duration of the German Socio-Economic Panel Survey allows them to model the factors affecting the probability of being a circular migrant. However, given that circular migrants are identified using annual observations, this may not be as useful for analysing short-term or frequent movements of workers between countries. Lozano and Sorensen (2008) use the Current Population Survey to examine hours of work of Mexican immigrants in the US and utilise the data in such a way to enable them to discuss seasonal patterns of migration. For the UK, Dustmann and Weiss (2007) use information on time of arrival and the stock of immigrants from the LFS to examine return migration patterns for different groups. However, their sample covers the period 1992-2002, thus pre-dating EU enlargement as well as their main focus being on longer-term return migration.

### **Examining Migration Patterns Using the LFS**

The main focus of this briefing is to use information from the LFS to examine the migration patterns of recent migrants to the UK. The LFS is the largest regular government survey in the UK and has been used quite extensively by economists and other social scientists to

analyse issues connected to immigrants in the UK, especially with regards to their experiences in the labour market. The LFS is a representative sample but response rates have been declining and immigrants in particular are thought to be under-sampled.<sup>2</sup> Drinkwater *et al.* (2009) include a discussion of the sampling issues that are likely to affect information on recent immigrants in the LFS. In particular, recent migrant workers are less likely to be included in the sample, especially if they reside in communal establishments, employer-provider or temporary accommodation.

One of the reasons why the LFS has been widely used to examine the position of immigrants in the UK is because it has regularly asked a question on the year of first arrival in the UK (*cameyr*).<sup>3</sup> This is very useful for migration researchers since it allows them to compare different cohorts of entrants and to test theories connected to assimilation. More recently, the LFS has also included a question on the year, and month, of most recent arrival in the UK (*cameyr2* and *camemt*).<sup>4</sup> These questions are only asked to respondents who reported that they had not lived continuously in the UK (*contuk*).<sup>5</sup> Therefore, in theory, it should be possible to use these questions to identify migration patterns of recent entrants to the UK. Unfortunately, in practice, this does not appear to be the case, as shown in Table 1.

The sample used to examine these variables is obtained by pooling information from four quarters of LFS data. In particular, all five waves of respondents are included from the July-September quarter in 2009, together with wave 1 respondents from October-December 2009, January-March 2010 and April-June 2010.<sup>6</sup> The sample is further restricted to include only immigrants who entered the UK after 2003, so that it just covers those arriving around and after enlargement. The sample is based on individuals aged between 16 and 64 and excludes full-time students. Eight migrant groups are identified, largely based on continent of origin, which have been constructed using information from the respondent's stated country

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<sup>2</sup> See <http://www.esds.ac.uk/government/lfs/> for further information about sampling and other issues connected to the LFS.

<sup>3</sup> This contrasts with the Census since only in 1971 was a question on year of arrival in the UK asked to immigrants. However, this question was included again in 2011, as well as more questions related to immigration, such as expected duration of stay in the UK.

<sup>4</sup> According to the LFS User Guide, these questions were first asked in the final quarter of 2007 but this information was first included in the End User Licence LFS quarterly files that can be downloaded by registered users from the Economic and Social Data Service (ESDS) in the July-September 2009 dataset. These variables have been available in Special Licence Annual Population Survey data since 2008 but these require users to become approved researchers with the Office for National Statistics (ONS).

<sup>5</sup> The actual question that is asked is: "Apart from holidays and short visits abroad, have you lived in the UK continuously since then (*your year of first arrival in the UK*)?"

<sup>6</sup> Each individual is meant to remain in the LFS for five periods or waves after they are selected for interview. Successive quarters of LFS data have been pooled to increase the sample size but these particular waves are used to ensure that there is no double counting of individuals. More details on the panel aspect of the LFS is provided later in the briefing.

of birth. There are four European categories: Poland, A7, EU14 and Other Europe, in order to be able to separately analyse the countries that joined the EU in 2004. In Table 1 only the percentage of respondents from these countries who stated whether or not they had lived in the UK continuously is reported. This is because it is only those individuals stating that they had not who were asked the supplementary questions on year and month of most recent arrival.

**Table 1: Percentage of continuous and non-continuous residents by migrant group for recent immigrants to the UK**

	Continuous (%)	Non-continuous (%)	N
Polish	98.56	1.44	901
A7	94.94	5.06	336
EU14	96.98	3.02	364
Other Europe	96.85	3.15	222
Asia	97.68	2.32	1034
Australasia	93.81	6.19	97
Americas	95.29	4.71	255
Africa	99.05	0.95	527
All recent immigrants	97.46	2.54	3736

Source: Authors' calculations from the LFS, ONS.

Table 1 reveals that, according to the question in the LFS on whether the respondent had lived continuously in the UK, the vast majority of immigrants had not left the UK and returned at a later date. For recent immigrants as a whole, 97.5% indicated that they had lived in the UK continuously. This seems unexpectedly high and may reflect how respondents interpret the question they are being asked e.g. if they regularly move between countries they may respond that they have lived in the UK continuously. Further confirmation that this information may not be that useful in identifying migration patterns is provided if responses are analysed separately by migrant group. This shows that the percentage reporting that they have not lived in the UK continuously is very low for each group but is actually highest, at just over 6%, for those recent arrivals from Australasia – which despite being based on the smallest number of respondents is the furthest from the UK and so may be thought to be least likely to involve circular or seasonal migration. Although the percentage stating that they had not lived continuously in the UK was second highest amongst recent A7 migrants, at just over 5%, it is extremely low amongst recent Polish arrivals, since over 98% of the 901 respondents in the sample indicated that they had lived in the UK continuously. This group has the second highest percentage of continuous migrants, after Africans, and this certainly

doesn't accord with the large amount of short-term migration amongst Poles that seems to have occurred, as highlighted in anecdotal evidence and qualitative research (Eade *et al.*, 2006). As a result of the very small proportion of migrants stating that they had not lived in the UK continuously, very few then answered the questions on year and month of most recent arrival, which makes analysis of this information rather limited, certainly from the perspective of trying to use it to identify migration patterns.

Despite the apparent lack of useful information from these questions, it might however still be possible to use the LFS to try and identify migration patterns. In the remainder of this briefing, we attempt to do this by making use of the panel information that is present in the LFS, in a similar way to the approach undertaken by Constant and Zimmermann (2007). In theory, this should be possible since the LFS is essentially a five-quarter panel dataset since respondents should stay in the survey for just over a year.<sup>7</sup> This should be long enough to identify migration patterns for some groups – such as Polish migrants – and to compare response patterns. This analysis is, however, complicated if there is non-response for other reasons and this is a limitation of the approach. In particular, we don't know for what reasons people have left the survey e.g. moved elsewhere in the UK, survey fatigue or become ill/too busy or died, rather than not being in the country. Nevertheless, the information should be of value in attempting to identify migration patterns, especially if migrant groups respond in different ways, which can be explained in the context of different migration strategies.

Table 2 contains the response patterns of recent migrants from a selection of countries from the groups reported in Table 1. These countries are Poland, Lithuania, Germany, USA, Australia and India, whilst Welsh born people living in other parts of the UK have been included for comparative purposes. Each individual in the latter group will have previously migrated but they differ from those in the other groups as it is likely that their move(s) will only have been in connection to the UK. Again the sample is restricted to non-students aged 16-64 but in order to achieve relatively large samples for each country, information has been obtained from 15 quarters of LFS data from the start of 2004.<sup>8</sup> The other restriction imposed is that it had to be possible, in theory, for each individual in the sample to have been present

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<sup>7</sup> In order to create a panel, the system variables in the LFS must be used. Information on the system variables is available in the LFS documentation and suitable statistical software such as Stata or SPSS can be used in order to merge data on individuals over time. The panel was constructed by the authors, especially as the information was required back to 2004. The ONS has also constructed some two and five-quarter panel data sets that can be downloaded from the ESDS. Panel data are also sometimes known as longitudinal data.

<sup>8</sup> A longer panel could have been created but this period was chosen because of the desire to capture people moving to the UK immediately after enlargement and also for the period to end prior to the start of the recession.



in all 5 waves.<sup>9</sup> Given that the last quarter used was July-September 2007, this means that all those in their first wave of interviews in October-December 2006 were excluded from the sample and so forth.

**Table 2: Response patterns (%) by migrant group for recent immigrants to the UK**

	<b>Poles</b>	<b>Lithuanians</b>	<b>Germans</b>	<b>USA</b>	<b>Australians</b>	<b>Indians</b>	<b>Welsh (in rest of UK)</b>
1 <sup>st</sup> wave only	11.8	16.2	10.5	6.3	15.2	6.9	9.9
Other single wave	30.5	29.6	17.5	21.1	23.9	24.7	5.9
1 <sup>st</sup> two waves	7.3	12.0	8.8	6.3	13.8	9.3	5.8
Other two waves	20.3	18.3	19.3	10.2	12.3	19.3	5.9
1 <sup>st</sup> 3 waves	5.0	2.8	7.0	4.7	4.3	5.1	5.9
Other three waves	11.1	9.9	19.3	15.6	10.1	10.8	4.2
1 <sup>st</sup> 4 waves	2.3	2.8	1.8	3.1	5.8	1.8	9.9
Other four waves	7.6	2.1	8.8	12.5	5.8	6.6	6.5
<i>All 5 waves</i>	<i>4.1</i>	<i>6.3</i>	<i>7.0</i>	<i>20.3</i>	<i>8.7</i>	<i>15.4</i>	<i>46.1</i>
N	879	142	57	128	138	332	1948

Source: Authors' calculations from the LFS, ONS.

In contrast to Table 1, Table 2 reveals that there is substantial heterogeneity in the response patterns of migrant groups. Having said this, there are similarities between Poles and Lithuanians since over 40% of recent migrants from these countries stayed in the sample for only one period. The propensity to do this was generally much lower for the other groups in the table, although less so in the case of Australians. Less than 5% of Poles arriving immediately after enlargement stayed in for all five waves, with the next lowest proportion seen for Lithuanians. Less than 10% of recent German and Australian migrants stayed in for all five waves, whilst the percentage of Indians and Americans in this category was noticeably higher, reaching 20% for recent arrivals from the USA. The percentage within this category amongst the comparison group, the Welsh born living in other parts of the UK, was considerably higher since around a half were present in all five waves. In addition to different patterns of migration amongst the groups, some of the variations may be the result of household composition. This is because migrants from certain groups, particularly those intending to stay for relatively short periods, may be more likely to move between different addresses and hence may not be present in the same address for all of the waves, even though they may have lived in the UK continuously for over a year. Although it is difficult to

<sup>9</sup> This assumes that the individual was a resident at the address when it first entered the survey, which will not always be the case.

disentangle this effect from temporary patterns of immigration, the heterogeneity in the response patterns shown in Table 2 does appear to shed further light on the different migration strategies undertaken by recent migrants to the UK since EU enlargement. These patterns may also capture the employment opportunities that become available to individuals within different groups to a certain extent.

## **Conclusions**

It is important to be able to identify migration patterns amongst different groups of immigrants to the UK, especially in the light of changes seen to population movements since EU enlargement in 2004. However, whilst providing useful information on inflows of (first time) migrants to the UK, it is not possible to do this using administrative data sources such as the WRS and NINo. Therefore, this briefing explores the possibility of using survey data, specifically the LFS, to examine migration patterns. It is found that some recently added questions, which should hopefully provide a more complete picture of different types of migrants, are not that useful. This is primarily because such a high proportion of migrants reported that they had lived continuously in the UK - although it is not clear how this question has been interpreted by respondents. On the other hand, despite some limitations, it is argued that the panel element of the LFS provides potentially valuable information that could be used to identify important differences in the migration strategies employed by entrants to the UK from different parts of the world.

It should also be possible to further refine the approach taken here to increase the precision of the analysis. This might entail splitting the sample in different ways (e.g. by marital status, household size or age groups) or by using some non-migrant groups as controls in a more formalised way whilst attempting to abstract from other types of non-response. Once a more refined categorisation of migrant type has been constructed then it should also be possible to undertake multivariate analysis in order to identify the characteristics of the individuals that are most likely to fit into each of the migrant types. Finally, it should be possible to apply this approach, and that used by Constant and Zimmermann (2007), to other data sources. The release of the Understanding Society panel dataset, particularly after a few years of information become available, should lend itself well to such analysis, although it is unlikely to be able to pick up short-term migration patterns so well.

## **References**

Constant, A. and Zimmermann, K. (2007), "Circular migration: Counts of exits and years away from the host country", IZA Discussion Paper No. 2999.

- Basch, L., Glick Schiller, N. and Szanton Blanc, C. (1994), *Nations Unbound: Transnational Projects, Postcolonial Predicaments and Deterritorialized Nation-States*, Gordon and Breach, Langhorne, Pa.
- Drinkwater, S., Eade, J. and Garapich, M. (2009), "Poles apart? EU enlargement and the labour market outcomes of immigrants in the UK", *International Migration*, **47**, 161-90.
- Dustmann, C. and Weiss, Y. (2007), "Return migration: Theory and empirical evidence from the UK", *British Journal of Industrial Relations*, **45**, 236-56.
- Eade, J., Drinkwater, S. and Garapich, M. (2006), *Class and Ethnicity: Polish Migrants in London*, Research Report for the Economic and Social Research Council.
- Lozano, F. A. and Sorensen, T. (2008), "Mexican Immigrants, the labor market and the Current Population Survey: Seasonality effects, framing effects, and sensitivity of results", IZA Discussion Paper No. 3301.
- Moriarty, E., Wickham, J., Salomonska, J., Krings, T. and Bobek, A. (2010), "Putting work back in mobilities: Migrant careers and aspirations", Paper presented at the New Migrations, New Challenges Conference, Trinity College Dublin, July 2010.
- Pollard, N., Latorre, M. and Sriskandarajah, D. (2008), *Floodgates or Turnstiles? Post EU Enlargement Migration Flows to (and from) the UK*, Institute for Public Policy Research, London.
- Sjaastad, L. (1962), "The costs and returns of human migration", *Journal of Political Economy*, **70**, 80-93.
- Stark, O. (1991), *The Migration of Labor*, Blackwells, Oxford.
- Vertovec, S. (1999), "Conceiving and researching transnationalism", *Ethnic and Racial Studies*, **22**, 447-62.