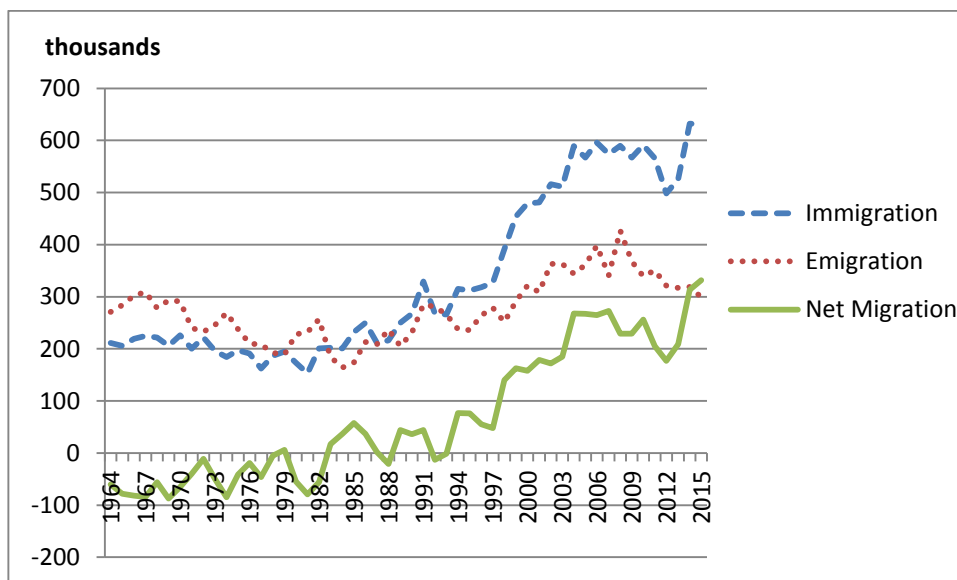# Using administrative sources for statistics on migrants and their socio-economic characteristics – A UK perspective

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1   Introduction

1.1   International migration has been a topic of considerable political and public debate for many years in the UK. In 2010, the government introduced a target to reduce net migration to the *tens of thousands* levels seen in the 1990s. Net migration has been between 158,000 and 332,000 since 2000 (Figure 1) and continues to receive a lot of attention by policy departments and the media. Immigration was one of the main issues debated in the lead up to the UK's referendum on EU membership.

Figure 1 – Long-term migration to and from the United Kingdom, 1964 to 2015

2   Current data sources

2.1   The UK predominantly measures international migration flows using a border survey. The survey interviews approximately 700,000 passengers per year passing through airports,

seaports and the Channel Tunnel. This is out of a total of around 120 million passenger journeys into and a similar number out of the UK each year. The results from the survey are supplemented with administrative data on asylum, land border crossings into and out of Northern Ireland; and a statistical adjustment for people who change their migration intentions.

2.2   These sources are adequate for measuring migration flows and producing statistics on a number of characteristics such as age, sex, nationality, reason for migrating and occupation.

3   The evidence gap

3.1   There has been increasing interest in the characteristics of migrants who reside in the UK, their impact on the economy and society; and how this may change as a result of the UK's departure from the European Union. Another topic of considerable interest is international student migration and its impact on overall net migration levels. Available data sources only go so far in meeting the needs of the public, media and policymakers (Figure 2)[i]

Figure 2 ONS view on how well current data sources can provide data and analysis on different aspects of international migration stocks

Immigrants living in the UK (stocks)

Section	RAG rating	Topic Area	RAG rating
Working (2,3,4)	Amber	Industry sectors (3)	Amber
		PAYE (7)	Red
		Benefits received (8)	Amber
Studying (2,5,9)	Green	Higher Education (5)	Green
		Further Education (10)	Amber
		Skills (3)	Amber
Other reasons (2,3,9)	Amber		
Where immigrants are living (6)	Green	Using services - schools, health, housing, etc (10)	Red

Age structure of migrants (6)	Green	Split by nationality	Amber
Visa status (2)	Green	Valid visas (non EEA) (2, 10)	Green
		Without valid visas (10)	Red

Current Data Sources (shown in brackets)

(2) Home Office: Visa statistics; (3) ONS: Labour Force Survey; (4) DWP: NINo statistics; (5) Higher Education Statistics Agency; (6) ONS: Population Estimates; (7) HMRC: PAYE system; (8) DWP: Benefits and Income Data; (9) ONS: Census; (10) No data available

3.2   In the short-term we want to make better use of existing data sources held by government departments such as tax and benefits' data, the visa system and education data sources. However, the real power of using administrative data will be realised by securely linking different data sources together. This will provide a much richer combined data source where we can drill deeper into the data to provide more detailed analysis and at smaller levels of geography. We plan to work with data providers to build up a much better picture of a migrant's "journey" such as when they immigrated, their initial occupation or studies, further skills and occupations, the areas in which they have lived and interactions with services such as healthcare, housing or education.

4   Building better evidence

4.1   Recently (June 2017), the UK Parliament passed the *Digital Economy Act[ii]*. This provides a path through legislation that enables ONS to have much greater access to administrative sources. Eventually, we are aiming for a statistical system that links many different sources together to provide a rich evidence base and we have researched similar statistical systems in New Zealand and Australia. However, in the UK, we have some way to go and need to start by linking pairs of data sources together.

4.2   In 2016, comparisons with official immigration figures for work were made with the numbers of new National Insurance Numbers (NINo's) issued to foreign nationals[iii]. Critics suggested that the official figures must be wrong since they were lower than the NINo's and suggested that more immigrants were arriving to work in the UK than officially reported. The

most obvious explanation for the difference was that short-term immigrants (excluded from the official 'long-term immigration figures) were included in the NINo figures. As part of this work, ONS worked with the Department for Work and Pensions (DWP) and Her Majesty's Revenue and Customs (HMRC) to link the tax database with the NINo registration system. This linkage identified periods of activity in the tax system combined with the date upon which a person was allocated a NINo. This information helped to identify long-term and short-term migrants (Table 1).

Table 1 Definitions of Immigrant durations determined by HMRC records

Category	Definition
Long-term	12 consecutive months of payment records, where at least one month falls within the 2014/15 tax year
Short-term	Between 2 and 12 months of payment records (not necessarily consecutive) during the 2014/15 tax year
"Very" short-term	One month for which there was a payment record within the 2014/15 tax year
Not known in HMRC tax records	Not known either in 2014/15 tax year or at all

4.3   We looked at cohorts of EU nationals by year of registration to measure their interactions with HMRC systems. This work

- helped provide independent reassurance;

- provided proxy indicators for non-UK nationals' presence in the UK during the tax years 2011-12 to 2014-15; and

- identified what proportion of the NINOs that were issued were "actively used" and for 2014-15 broken down by how long they were used for (to identify short-term and long-term migrants)

4.4   International students are a particular migrant group for where there is a lack of evidence in existing data sources for what they do after their studies. Non-EU students who either extend their study visas or switch to another visa type (such as work) are easily identified in the visa system. However, for EU students who currently are not subject to immigration control, there is limited data.

4.5   We have linked data from the Higher Education Statistics Agency on course completions with the HMRC 'Pay as you earn' system. This enables us to identify if there is evidence of a student working in the UK after their studies. This work is still under development, but it should provide a rich source of information on how many international students remain in the UK to work after their studies have completed.
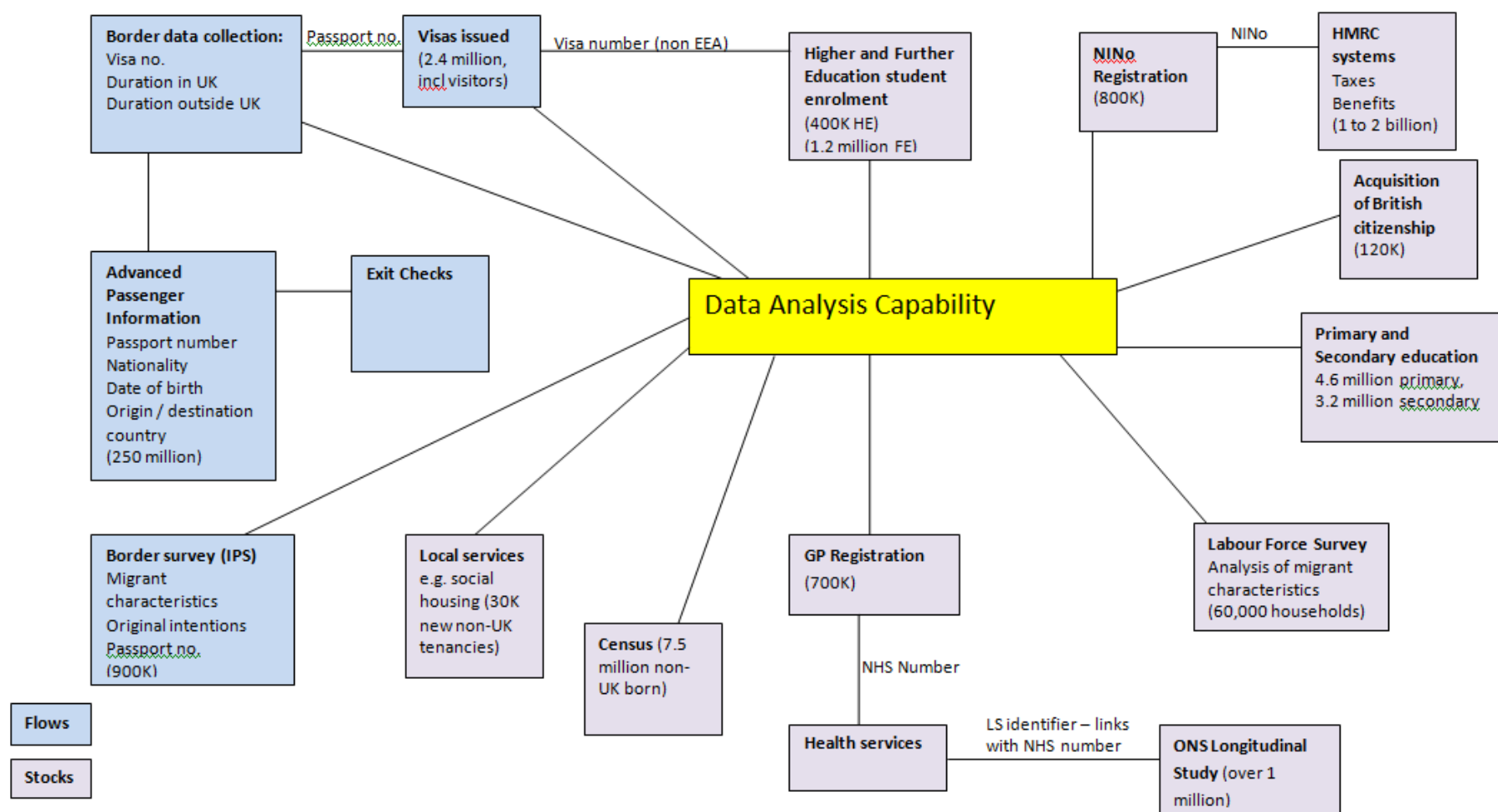
5. Future developments

5.1   ONS is undertaking a large programme of work developing a future population statistics system that is not dependent upon a traditional census. International migration is inherent in such a system and administrative sources will be fundamental in its development.

5.2   Linking administrative sources will provide additional information on socio-economic characteristics of migrants. Further linkage with survey sources such as the International Passenger Survey and Labour Force Survey will allow us to identify characteristics that are not always present on administrative sources that exist for operational purposes, such as drivers of migration and skill levels.

5.3   It is our aim to link as many administrative and survey sources together as possible so that we can create a rich evidence base. This will deliver our strategy to ensure that public and policy debate is based on evidence. We are still forming our vision of such a system, but we have begun by conceptually identifying which different sources we would want to include (Figure 3).

Figure 3 Linking sources together for migration analysis

Border data collection:
Visa no.
Duration in UK
Duration outside UK

Passport no.

Visas issued
(2.4 million, incl visitors)

Visa number (non EEA)

Higher and Further Education student enrolment
(400K HE)
(1.2 million FE)

NINo

NINo Registration
(800K)

NINo

HMRC systems
Taxes
Benefits
(1 to 2 billion)

Acquisition of British citizenship (120K)

Advanced Passenger Information
Passport number
Nationality
Date of birth
Origin / destination country
(250 million)

Exit Checks

Data Analysis Capability

Primary and Secondary education
4.6 million primary,
3.2 million secondary

Border survey (IPS)
Migrant characteristics
Original intentions
Passport no.
(900K)

Local services
e.g. social housing (30K new non-UK tenancies)

Census (7.5 million non-UK born)

GP Registration
(700K)

NHS Number

Labour Force Survey
Analysis of migrant characteristics
(60,000 households)

Flows

Stocks

LS identifier – links with NHS number

Health services

ONS Longitudinal Study (over 1 million)

NB The integrated system will result from linking the different data sources together. This may be based on an individual identifier, such as passport number or NHS number; or could be based on matching name, address and date of birth when no common identifiers are available.
The figures refer to the approximate annual number of person records and have been rounded.

i

https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/internationalmigrationdataandanalysisimprovingtheevidence/february2017

ii http://services.parliament.uk/bills/2016-17/digitaleconomy/documents.html

iii

https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/internationalmigration/articles/noteonthedifferencebetweennationalinsurancenumberregistrationsandtheestimateoflongterminternationalmigration/2016