Self-employment: switching and sector concentration

Introduction

The MAC commissioned HMRC to conduct analysis on self-employed workers in the UK. The MAC is particularly interested in gaining an insight into the behaviours of self-employed migrants, looking at switching between working as an employee and self-employment. This is important as the new immigration system which is implemented in January 2021 will not have a route for self-employed migrants to immigrate to the UK. The analysis also provides insights into switching between sectors, for both employees and self-employed workers.

Methodology

The analysis aims to identify the cohort of individuals who were active in the UK labour market in tax year 2014/15 and then follow their employment status throughout the following four years, covering a total five-year period. This can be broken down into three stages:

- Identifying the cohort (those who earned income in the tax year 2014/15);
- Determining the nationality and other characteristics of individuals within the cohort;
- Tracking the individuals' activity in the UK labour market across years.

The analysis uses Pay As You Earn (PAYE) Real Time Information (RTI) data from 1 April 2014 to 31 March 2019, and Self Assessment (SA) returns data from the 2014/15 tax year to the 2018/19 tax year.

Identifying the cohort

The first stage involves identifying individuals who, in the 2014/15 tax year, had either employed income in the PAYE RTI data or trade or partnership income in the SA data. These individuals form the cohort for the analysis. Individuals who are active in the UK labour market in subsequent years following 2014/15 but were not in this cohort are excluded from the analysis. Note that the people in this 2014/15 cohort include both recently arrived migrants and people who have been in the UK for many years.

Earnings data from PAYE RTI and SA are gathered for the subsequent four tax years for this cohort. Any individual in the cohort who is inactive in the UK labour market for a full tax year is removed from the cohort in subsequent tax years. An individual cannot re-enter the dataset once they have been removed from the analysis.

The cohort is then split into three categories based on which form of income they have in each year (employed as an employee, self-employed or both).

Determining the nationality and other characteristics

The cohort is joined up with other HMRC data sources to determine characteristics.

The Migrant Worker Scan (MWS) dataset provides the individuals' nationality at the point of NINo registration. From this, EEA and non-EEA nationalities can be determined for all individuals who reported their nationality at the time they registered for a NINo as part of the adult registration process.

Sector of work is determined differently for each type of income. If an individual is employed, then the Standard Industry Classification (SIC) code submitted to Companies House by their employer is used. If an individual is self-employed, the business description submitted in the SA form is converted to a SIC code.

Sometimes an individual records multiple business descriptions for different trades or partnership incomes on their SA return. In these cases, if they do not match, then they are given a different identifier to record them as having multiple SIC codes. Likewise, if an employee has employments in several sectors in a given tax year, they are recorded as having multiple SIC codes. If someone has both employed and self-employed income where the SIC codes are the same, then they are assigned that SIC code. If they are not the same then, again, they are treated as having multiple SIC codes.

Tracking the individuals between years

Only those workers in the 2014/15 cohort are tracked throughout the five-year period. The 2015/16 earnings data are joined with the 2014/15 earnings data to determine whether individuals from the cohort that have remained active have changed either their employment status or their sector of work between the two years.

The changes are recorded by two indicators. The first is for the change in employment status and the second is the change in sector. Each indicator is set to "yes" if there is a change. Once an indicator is set to "yes", it cannot be changed again for the remainder of the five-year period. This process is repeated for every year over the five-year period. The analysis does not track multiple changes. As a result of this, the analysis records whether or not a worker has changed employment status or sector at least once between 2014/15 and 2018/19. If a worker in the cohort is inactive in the UK labour market for a certain tax year, they are removed from the analysis for that and future years.

Key Assumptions

Throughout this report, the nationality of employees is based on what has been reported by individuals when they register for a National Insurance Number (NINo) through the adult NINo registration process. If an individual has subsequently naturalised or changed nationality that is not reflected in these statistics. Based on analysis from other sources, this is most prevalent in the non-EEA grouping, where a higher proportion of those who have non-EEA nationality when they come to the UK eventually get UK nationality. In these cases, HMRC's data will continue to categorise the individual as having a non-UK nationality.

The EEA grouping contains those with nationalities in all the member states of the EU plus the 3 EEA non-EU member states Iceland, Liechtenstein and Norway plus Switzerland. Switzerland is in neither the EU nor the EEA but is part of the single market which means Swiss nationals have the same rights to live and work in the UK as other EEA nationals. The UK and Republic of Ireland (RoI) has been omitted from this grouping.

This analysis focuses on migrants already in the UK and who have come to the UK over a long time period. EEA migrants who are living in the UK by 31 December 2021 are eligible for the EU settlement scheme. Therefore, this does not represent the potential future 'flow' of migrants. These are important limitations of the analysis and should be kept in mind when interpreting the findings. It is not an assessment of the

impact of the future immigration system in which migrant workers can come through the main work visa route but may also come through other visa routes including as family or dependents.

Methodological limitations

If an individual has not had any income for a tax year, they are removed from the cohort from that year onwards. An individual cannot re-enter the sample once they have dropped out. Even if an individual receives income later on in the duration of the analysis they are not included. Migrants are therefore more likely to drop out of the sample, as they are more likely to leave the UK and therefore not be active in the UK labour market. Other reasons for not being active in the labour market include retirement, career breaks and undertaking full time education.

The analysis does not determine whether an individual returns to their original employment status or sector from 2014/15. It only records whether or not an individual has changed either their employment status or sector at some point in the duration of the analysis.

When determining the sector an individual works in, they are assigned a SIC code. In cases where an individual has multiple SIC codes in different sectors, they are assigned a different category which is not in either sector. This is to avoid double counting individuals, however it does mean that sectors will be undercounted.

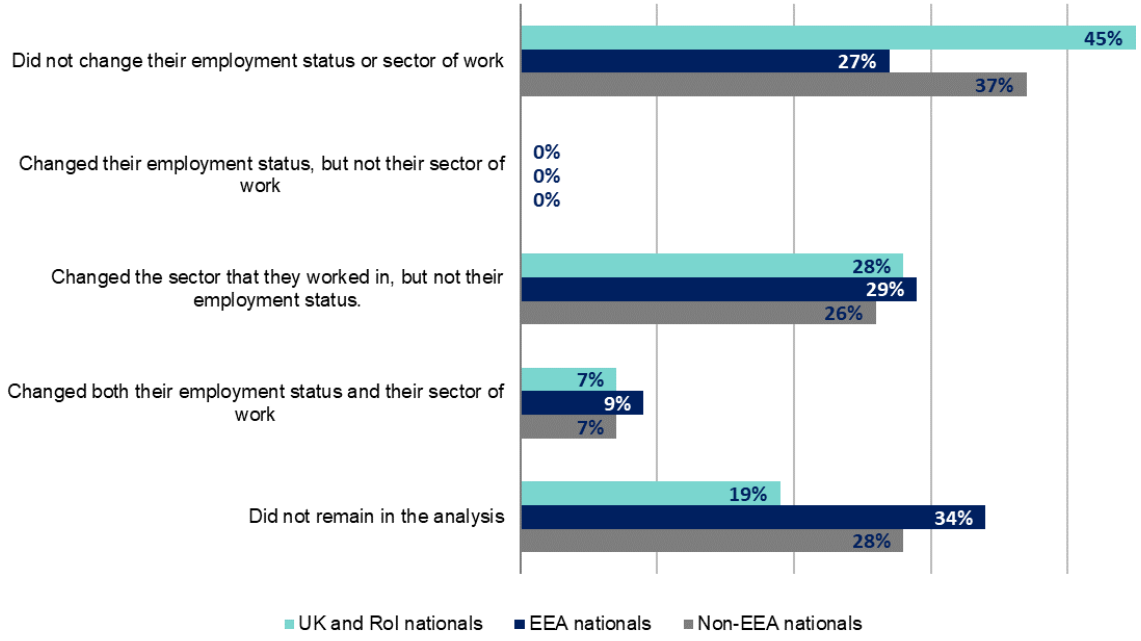
Results and discussion

The UK labour market

The cohort represents those who were active in the UK labour market for any given amount of time in the tax year 2014/15. In the sample, 21% of the cohort dropped out by the final year, 2018/19, due to inactivity in one or more tax years. Inactivity can include unemployment or leaving the UK labour market, or anything else that means an individual was not active for a full year.

Employment status tells us whether an individual is employed (as an employee), self-employed or both. Over the five-year period 28% of the cohort changed sector of work but not their employment status, whilst 7% of the cohort changed both their employment status and their sector of work. 44% of the cohort did not change their employment status or their sector of work during the period. Relatively few people changed their employment status but continued to work in the same sector.

Figure 1: Breakdown of cohort at the end of the analysis, by nationality and employment status, 2018/19



Source: HMRC analysis

As seen in Figure 1, the rate at which workers switch sectors that they work in is similar across nationalities. EEA migrants are most likely to switch sector with approximately 38% of the cohort switching at some point during the five-year period, followed by UK and RoI nationals at about 35% and other nationalities at about 33%.

EEA migrants are however more likely to leave the UK labour market for any given period of time than non-EEA migrants. Approximately 34% of EEA nationals were not included in the final year of the analysis as they were not active in the UK labour market for at least one year of the five-year period that the analysis takes place. This compares to 28% of non-EEA workers. Only 19% of UK and RoI nationals were not included in the cohort by the end of the analysis, showing that migrant workers are more likely to drop out of the sample as would be expected. A potential reason could be that migrants who have been in the UK for a shorter period are more likely to emigrate, and EEA migrants have typically been in the UK for less time than non-EEA migrants. However, it is not possible to confirm this based on the cohort analysis as it includes all migrants who arrived in the UK before 2014/15.

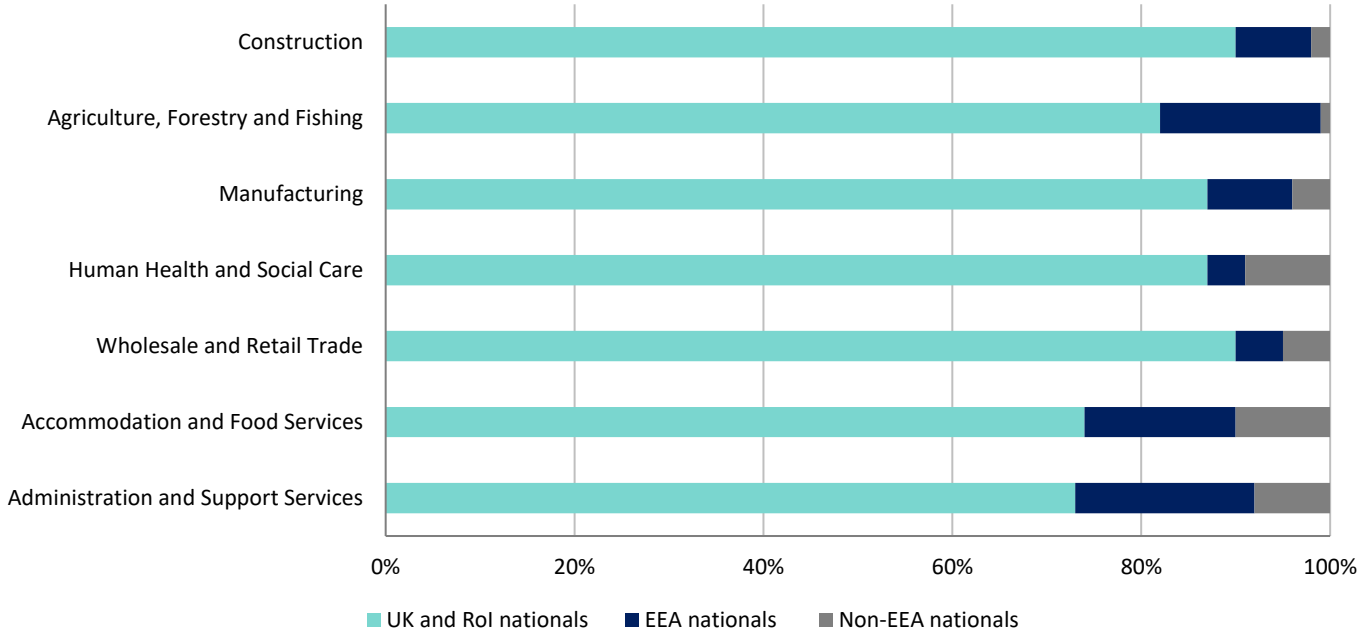
The analysis shows that there is little variation in the likelihood of switching employment status (between being an employee or being self-employed) between nationalities. EEA nationals are most likely to switch with 9% switching at some point between 2014/15 and 2018/19, whilst UK and RoI nationals and non-EEA nationals are slightly less likely to switch employment status or sector both at 7%.

The results also show it is extremely rare for a worker to change their employment status without also changing the sector that they work in, regardless of nationality. The number of people in the cohort who changed their employment status but continued working in the same sector is negligible. The cohort considers the entire UK labour market, so 0% could still be in excess of 100,000 people as a result of rounding. It is also is important to note that the HMRC processes used to assign SIC codes differ between

the SA and RTI data and could record sectors differently meaning this figure may be higher than it is shown.

Variation across sectors

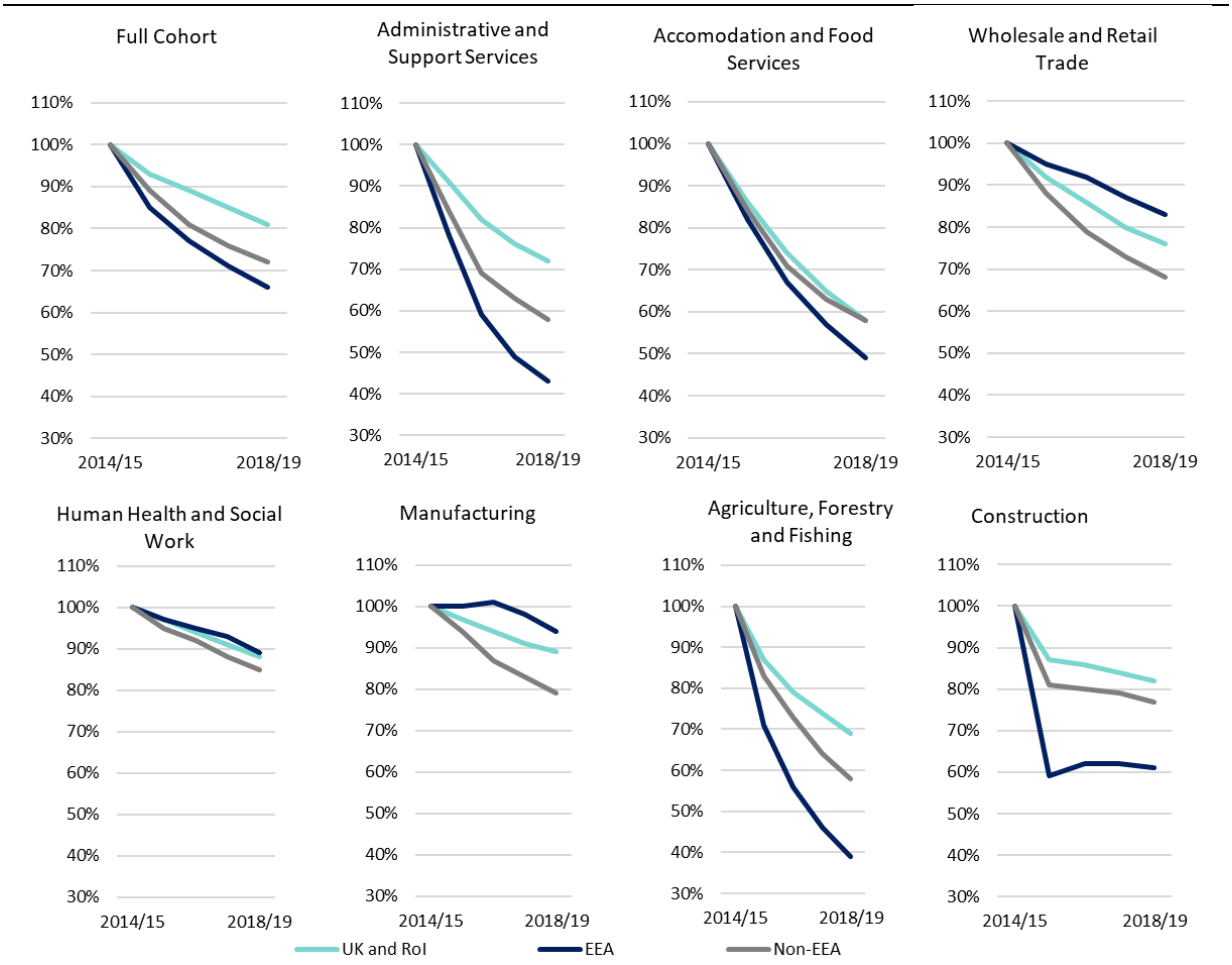
Figure 2: Breakdown of sectors by nationality, all employment statuses included, 2014/15



Source: HMRC analysis

In the study, seven key sectors were chosen to investigate further, based on characteristics including their size and proportion of migrant workers. Figure 2 shows that of the sectors chosen, the Administration and Support Services sector has the highest share of EEA migrants at 19%. This sector also has the highest proportion of migrant workers overall. Human Health and Social Care has the lowest proportion of EEA migrants working in the sector with only 4%. 9% of the workers in this sector are migrants from outside of the EEA, meaning that 87% of the workers are UK and RoI nationals. This is not the sector with the lowest proportion of migrant workers however, UK and RoI nationals make up 90% of both the wholesale and retail trade and construction sectors.

Figure 3: Workers from the cohort remaining in the seven chosen migrant sectors, by nationality

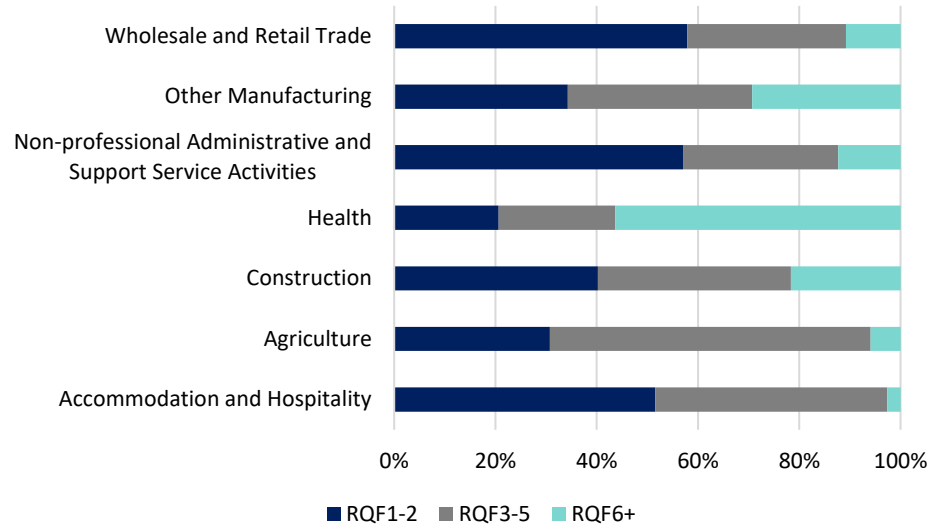


Source: HMRC analysis

Only workers in the original cohort (active in the UK labour market in 2014-15) are counted. If a person in this cohort stops being active in the labour market for at least one tax year, they are not counted in subsequent years. However, it is possible for a worker to move from one sector to another sector the next year, in which case they are counted in their new sector of employment meaning that the numbers employed in some sectors can increase year-on-year.

It is expected that we see different rates of switching between the sectors. Occupational mobility of labour is affected by the skills, education and training required. Sectors which typically have roles which require shorter training periods will have a larger potential pool of workers and it is likely that we see higher levels of switching here.

Figure 4: Breakdown of jobs within sectors by RQF skill level



Source: LFS 3-year APS

Figure 4 shows that the sectors with the highest proportion of lower training requirement jobs (RQF1-2) are wholesale and retail trade, administrative services and the accommodation sector. Accommodation and administrative services sectors see a steep drop off of active cohort members, particularly EEA migrants, in Figure 3. The health sector has the highest proportion of high skill jobs. Figure 3 shows that this sector also retained a very high proportion of the cohort's workers compared to the others.

Wholesale and retail trade however does not follow this trend, having a high proportion of lower training requirement jobs but retaining much more of the cohort's workers than the administrative and accommodation sectors. The Agriculture sector also lost many of the original cohort workers in the sector over the five-year period despite the most jobs in the sector being in the RQF3-4 category. This may be due to the seasonal aspect of the work.

Figure 3 shows that the behaviour of workers from the UK, RoI and the rest of the world is relatively consistent across sectors compared to EEA nationals. EEA migrants in the administrative services, accommodation and food and agriculture sectors however are more likely to leave their sector of work than other workers.

EEA workers also follow quite different profiles depending on the sector. By 2018/19, the number of EEA migrants from the cohort had fallen by over 50% in the following sectors: administrative services, accommodation and food and agriculture, forestry and fishing. The number of EEA workers relative to 2014/15 in these sectors falls more quickly than any other nationality group. However, in the manufacturing sector this number rises initially and remains consistently higher than all other nationalities.

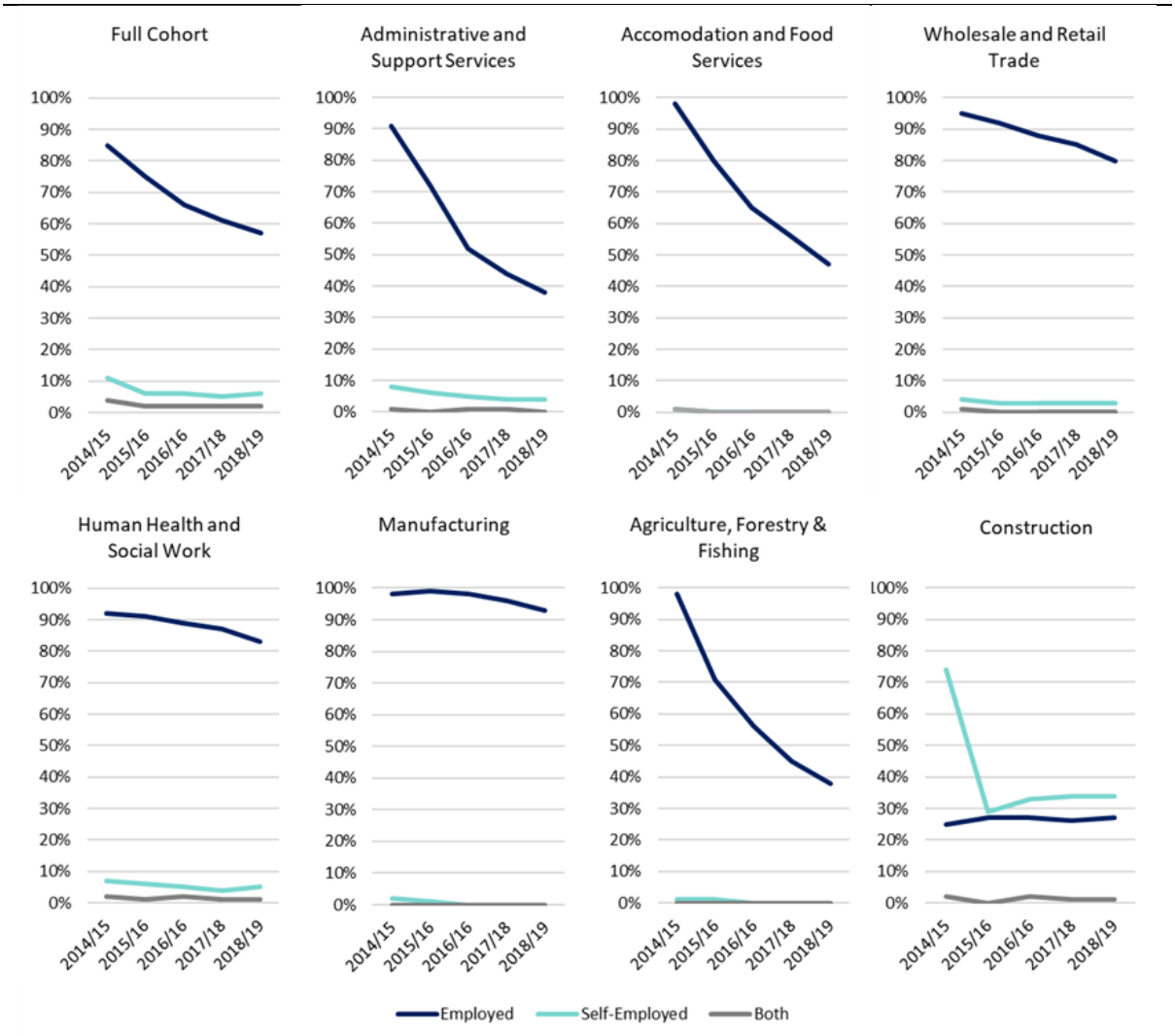
As seen with the manufacturing sector in Figure 3, the index for individual sectors, unlike the economy as a whole, can rise to over 100% of the labour market activity count. This would be due to individuals in the original cohort who worked in other sectors moving to a given sector and outweighing the total flow out of the sector. In 2016/17 the index for EEA nationals in the manufacturing sector is 101%, 1% higher than the 2014/15 baseline. This means that there were more EEA nationals from the original cohort working in the sector in 2016/17 than in 2014/15.

The data shown in Figure 3 may point towards an issue within sectors that show a high turnover rate for EEA migrant workers. As of 1st January 2021, the immigration rules for all migrants will change. EEA migrants will need to meet specific requirements in order to work in the UK. This will likely cause a drop in EEA immigration compared to freedom of movement. The sectors which show a high turnover rate of EEA migrants may have previously relied on EEA migration to replace workers who drop out of their sector. Therefore, it may be the case that they may be more likely to experience a shortage of labour following the new immigration rules if high staff turnover is coupled with a high proportion of EEA migrants in the sector.

Movements between employees and self-employed

Figure 5 shows the proportions of employment status of EEA migrants within sectors, compared to the first year of the study. Individuals who become inactive in the UK labour market and those who leaves the sector and change status both contribute to the drop in sector's percentages.

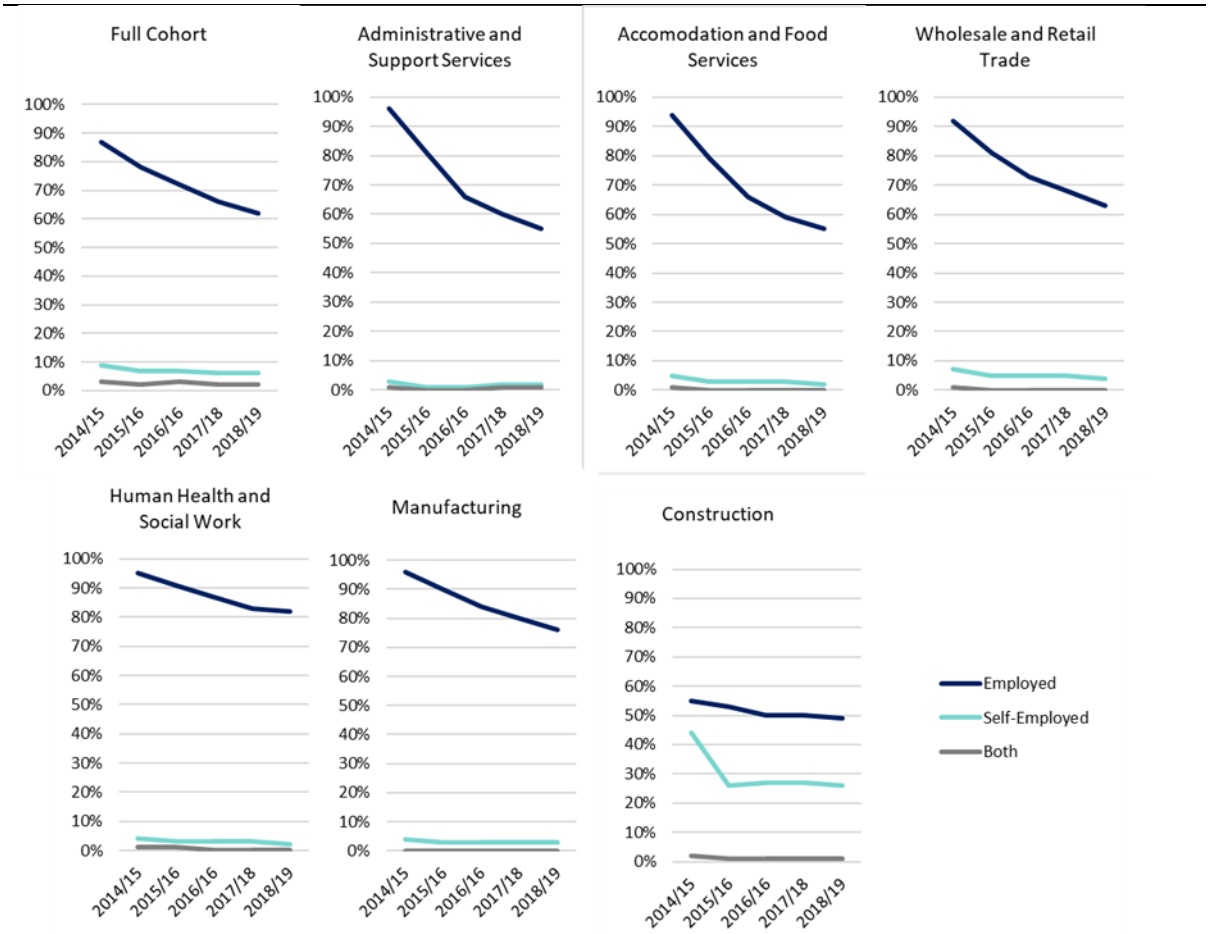
Figure 5: Proportions of employment status within sectors for EEA migrants



Source: HMRC analysis

Figure 5 focuses on EEA nationals and shows the differences of the employment statuses of workers over time between sectors, for the 2014/15 cohort. The construction sector is the only sector which has a higher percentage of self-employed workers than employed workers (i.e. those working as employees), which remained true for every year of the study. Figure Y also shows that this sector follows a different trend from the other sectors. There is a 45 percentage point fall in the number of EEA workers in the cohort working as self-employed in the construction sector after one year, from 74% to 29%. This may indicate a fall in the number of self-employed workers in this sector in 2015/16. Alternatively, it may indicate a high level of churn in the sector, with EEA workers from the cohort leaving self-employed work and being replaced by workers who were not in the 2014/15 cohort. In the future immigration system there will be no route for self-employed migrants, meaning that sectors such as construction, with a high proportion of self-employed migrant workers may be more impacted than sectors where workers are typically employees of a firm. As this data suggests there is high churn amongst self-employed EEA workers in this sector - it will be important to track patterns of self-employment across sectors as the new immigration system rolls out.

Figure 6: Proportions of employment status within sectors for non-EEA migrants



Source: HMRC analysis

Figure 6 above shows the proportions of employment status within sectors for non-EEA migrants. The agriculture, forestry and fishing sector is excluded from this graph as population of this group is relatively small therefore cannot be included due to data disclosure rules. This can be seen also in Figure 2, this

sector has few non-EEA migrant workers compared to EEA workers. The seasonal nature of the work in this sector and the current restrictions on visas for non-EEA seasonal agricultural work is likely the main driver of this.

There is a higher percentage of non-EEA workers who are employees in the construction sector than there are self-employed, which is different from in the EEA migrant case. This may be due to the restrictions on self-employed work for those on a work visa for non-EEA nationals. However, the sector does have a similar trend, with a sharp drop in self-employed workers in the sector after the first year. Overall, the sectors follow a similar trend to the EEA migrant cohort.

Conclusions

This analysis gives an insight into the behaviours of workers of different nationalities in various sectors and employment statuses. The data shows that the behaviour of individuals in different sectors varies between nationalities. UK nationals are usually more likely to remain active in their original sector of work. This is expected because migrant workers are more likely to leave the UK therefore being inactive in the UK labour market. However, in the retail and manufacturing sectors this is not the case. In these sectors EEA nationals are more likely to remain active where UK nationals drop out of the sector at a faster rate. Non-EEA migrants are however still more likely than UK nationals to leave the sector through switching or by leaving the UK labour market.

We also find that in the administrative services, accommodation and food and agriculture sectors EEA migrant workers are far more likely to leave the sector than other workers. It is also the case that these sectors have a high proportion of EEA migrant workers compared to the others. The new immigration system may have implications on these sectors with high proportions of EEA migrants, especially if they work with a high turnover rate of EEA staff. When free movement of labour with the EEA ends it may cause issues for these sectors to replace the staff. However, the new system will make it easier for some non-EEA migrant workers to immigrate to the UK. It is not yet clear how some sectors may adapt to the new system and whether it will lead to changes in the employment structure of certain sectors such as Construction which historically have a high proportion of self-employed and EEA migrant workers. Firms may also adapt to the changes in ways unrelated to labour, such as changing what they produce or how they automate production.

The data also shows that there is little variation between workers of different nationalities when it comes to the rate at which they switch their employment status overall, however behaviours vary across sectors. Migrant workers in the construction sector for example are much more likely to have switched their status than other sectors. Another interesting insight when it comes to the behaviour of individuals is that a very small number of people change their employment status (between self-employment and being an employee) without also changing the sector that they work in.

Data sources

HMRC used administrative datasets to conduct the analysis. The two primary sources used were the Pay As You Earn (PAYE) Real-Time Information (RTI) and the Self Assessment (SA) data. Both data sources are

administrative data collected by HMRC. The Migrant Worker Scan (MWS) is matched to these datasets to identify nationality.

Self Assessment Data

The SA data is submitted to HMRC as part of the Self Assessment process. Sector is derived from an open text field in which individuals who fill out a SA form write a 'business description'.

Real-Time Information

HMRC's PAYE RTI system covers all employees in the UK. It is a rich dataset that enables detailed analysis of employees to be carried out, as it is the system that employers and pension providers use to deduct Income Tax and National Insurance contributions.

The PAYE RTI data only covers employees paid by employers. It does not cover income from other sources such as self-employment income, pensions, property rental and investments.

The Migrant Worker Scan

The MWS data is used to identify the nationality of individuals in the PAYE RTI data and Self Assessment data. The nationality of individuals is taken from National Insurance records and is only available for those who were allocated a National Insurance number (NINo) via the adult registration process. NINos are automatically issued to residents in the UK (including foreign nationals) when they turn 15 years and 9 months old. Any individual who is not allocated a NINo automatically (for example, those who migrated to the UK after the age of 16) must apply for one through the Department for Work and Pensions' (DWP) adult NINo registration process.

This process records nationality at the point of registration. Changes to nationality, naturalisation (UK citizenship) and multiple nationalities are not included. The information is logged with HMRC's National Insurance and PAYE service. The MWS contains information on NINos, nationality recorded at registration, UK arrival date and NINo registration date.

Data limitations

HMRC collect the data for tax purposes and the datasets are not designed with the purpose of analysing employment and migration in mind. Therefore, it offers a good coverage of the working population but is not able to address the full range of topics that data from other survey sources would be able to.

The quality of the administrative data also depends on the quality of the information submitted by those providing it. For example, the quality of the statistics on the number of individuals receiving pay from PAYE employment in this analysis depends on information submitted by employers. These statistics inherently do not cover any undeclared income. Additionally, it does not cover received income that is not declared as earned income, such as dividends.

In the analysis, it is assumed that a payment recorded in PAYE RTI corresponds to some form of employment activity within that month. Employers are still required to make PAYE RTI submissions, even if an employee is awaiting their NINo. These employments are assigned a temporary reference number by HMRC. Where these employments have not been linked to an individual in the statistical analysis, they have been excluded.

Employers register a Standard Industrial Classification 2007 (SIC) code for their business with Companies House when they register. The SIC is a system of classifying industries and provides a framework for

collecting and presenting data. This SIC code is what is used to assign employees to a sector, which covers the whole firm. In some firms, particularly larger ones, employees may work across multiple sectors.

The SA data is submitted to HMRC as part of the Self Assessment process. Sector is derived from an open text field in which individuals who fill out a SA form write a 'business description'. HMRC matches these descriptions to SIC codes, although this is not always a perfect match. Another limitation with the dataset is that the business description is not always filled it and an individual may work in several different sectors throughout the same year.

The MWS records migrants' nationality at the time of registration. It does not hold information on changes in nationality after the allocation of a NINo. Also, if an individual holds more than one nationality, only one is recorded. The individual chooses which is recorded.

The classification of EEA members in the MWS is based on current EEA membership. It is not based on EEA membership at the time of the NINo being issued, or when an individual arrived in the UK.