1 Changes in Hours Worked

This document computes annual changes in hours worked, both weighted by a country of birth's share of total earnings and unweighted. Figure 1 shows this from 2008 to 2016. There is generally not much difference. I show the region-level weights (more on this below) for two years in Figure 4. The UK vastly dominates, although this has become slightly less so with time (while the EU weight has grown), which I would imagine is why the Tornqvist Index is so similar to the unweighted growth. I had some issues matching some of the ONS headline statistics for some of the hours worked variables, so as a check I also generated the equivalent growth rate of total actual hours worked from the official ONS time series in Figure 3. There is a difference in 2012, but otherwise the graph is very similar, which is reassuring (I would not expect them to be identical because there are 10+ hours variables and it is not clear what combination of them the ONS is using).

Figure 1 ends in 2016 because from 2017 onwards the LFS dataset stopped providing country of birth and provided broad regions instead (for disclosure reasons). This means that I cannot weight at the country level from 2017 onwards. There are 14 such regions, and they are not defined precisely anywhere (and I don't have the country breakdown within each one), so as a check on Figure 1 I also classified the countries pre-2017 into the same categories. This was quite a rough process both because it involved guesswork and because I just put many small countries and islands into "Other". With that said, Figure 2 thus shows the same chart done at the region level, which allows me to plot it from 2008 to 2018. The pattern is more or less the same. I note that the 2016-2017 intersection should be treated with caution because that is when the change in definition happens.

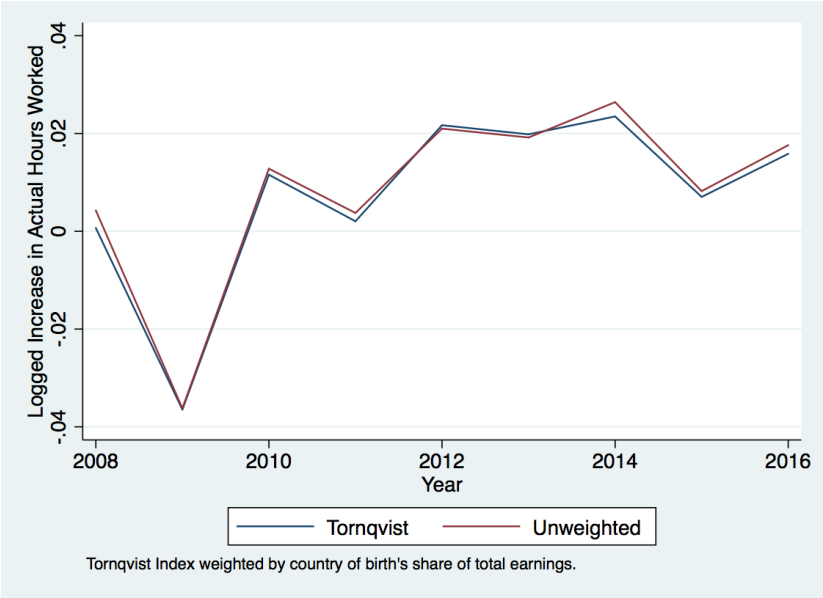

Figure 1: Change in total hours actually worked. The Tornqvist Index refers to a change in total hours weighted by an individual country's share of total earnings in that year. The time series begin in 2008 as prior to 2007 the ONS used a completely different coding system for countries. The time series ends in 2016 as in 2017 the ONS removed individual countries from the LFS for disclosure reasons (they replaced it with broader regions). Data are all from the Jul-Sept wave of the QLFS and comparisons are annual to avoid the need to de-seasonalise.

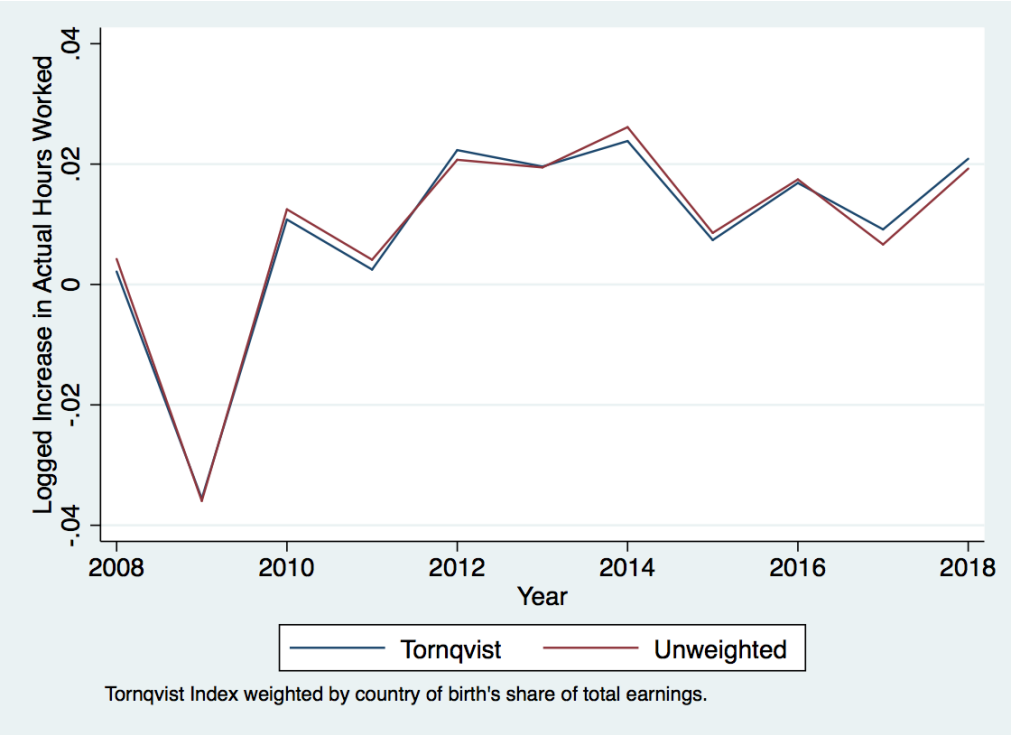

Figure 2: Change in total hours actually worked. The Tornqvist Index refers to a change in total hours weighted by a region's share of total earnings in that year. The time series begin in 2008 as prior to 2007 the ONS used a completely different coding system for countries. Rather than countries, the time series uses 14 broad regions. The regions come from the ONS names in 2017, so prior to 2017 I have manually allocated the countries to regions. Going from 2016 to 2017 is thus a complete shift in definitions, so should be treated with caution. Data are all from the Jul-Sept wave of the QLFS and comparisons are annual to avoid the need to de-seasonalise.

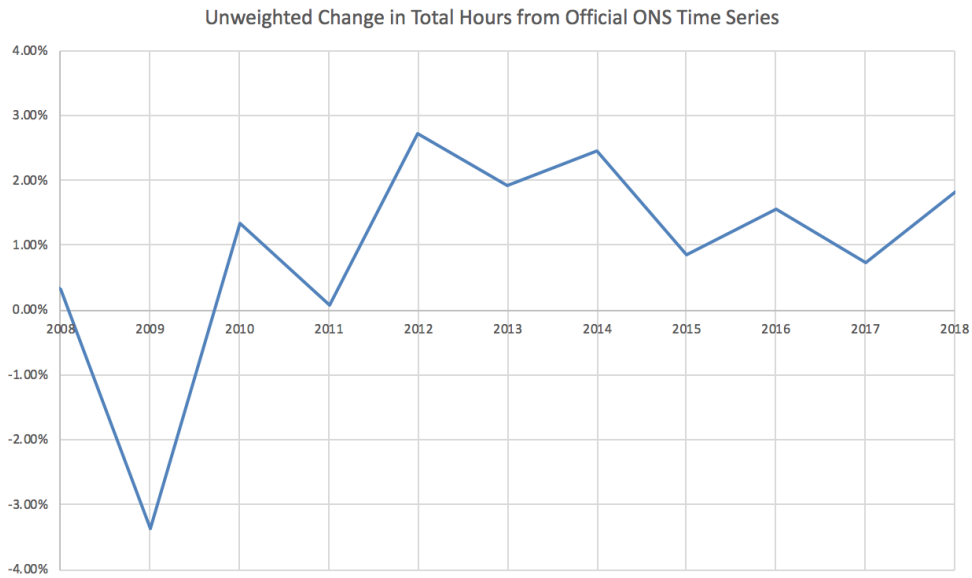

Figure 3: Equivalent chart of unweighted growth of actual hours worked calculated using the ONS official published time series statistics. Data downloaded from this link.

	Total Earnings Weight	
Country	2007	2016
EU15	2.9%	3.8%
EU8	1.0%	2.5%
EU2	0.1%	0.8%
East or SE Asia	0.9%	1.3%
South Asia	1.8%	2.5%
North Africa	0.1%	0.2%
North America	0.8%	1.3%
Cent. & S. America	0.4%	0.5%
UK	87.5%	82.0%
SSA	2.1%	2.3%
ME & C. Asia	0.3%	0.4%
Oceania	0.7%	0.6%
Other	1.5%	1.8%

Figure 4: Weights for the different regions in two years.

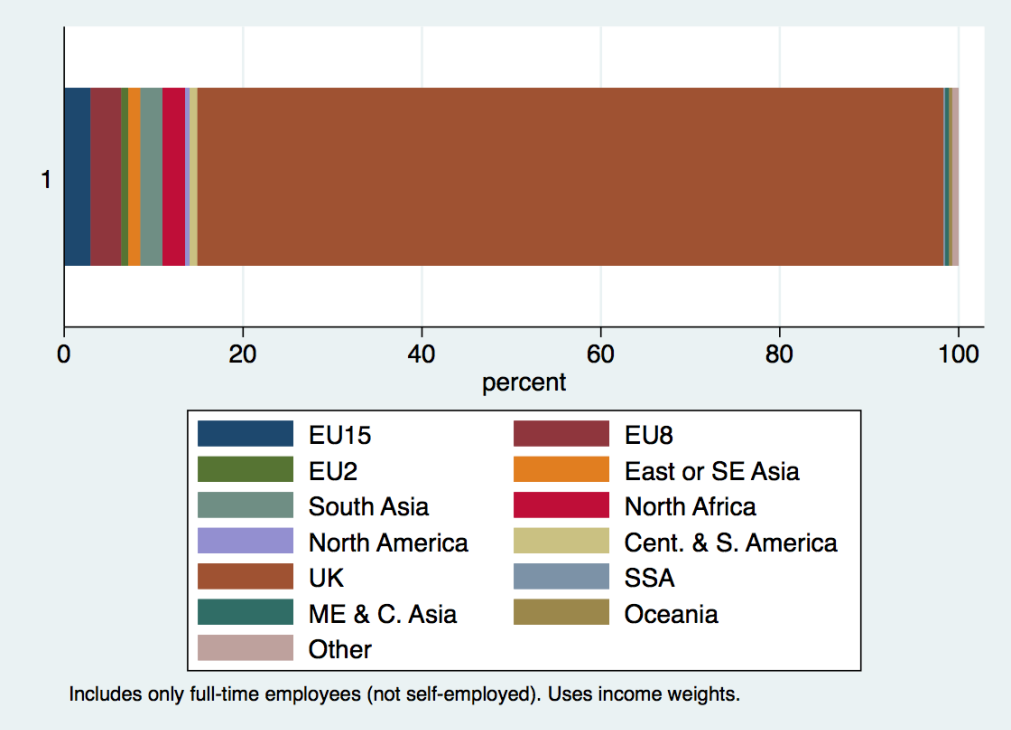

Figure 5: A breakdown of the share of gross weekly earnings among those full-time employed by region of birth in 2018, meant as a rough ballpark check on the weight presented in Figure 4. It seems broadly similar. There are some small differences, e.g. I have probably classified some countries in SSA that the ONS put in North Africa. From QLFS Jul-Sept 2018.