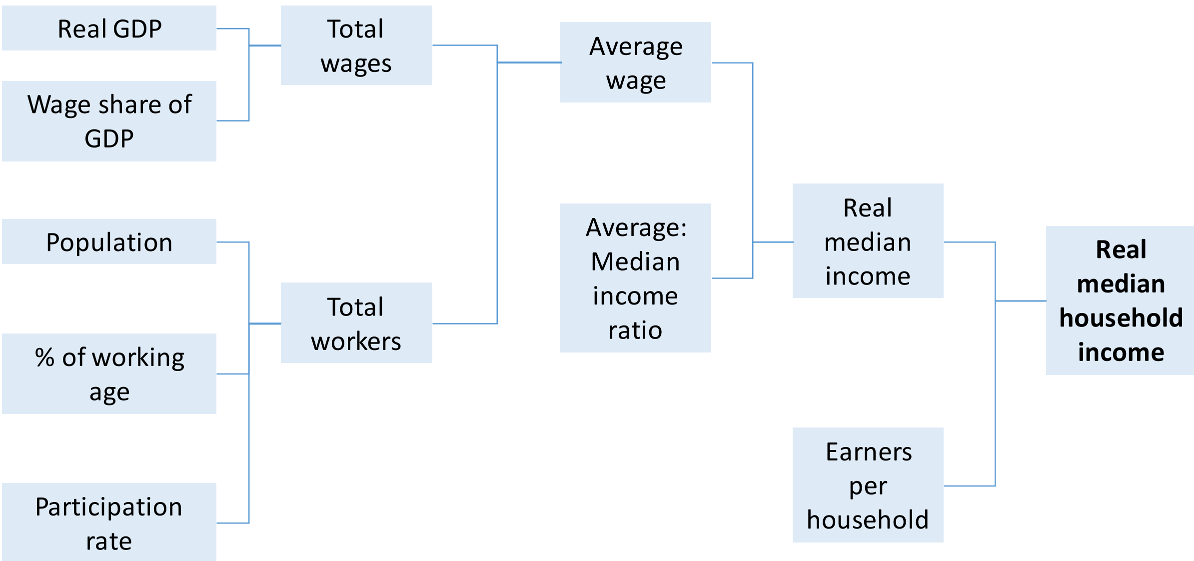
Appendix III
Mass Impoverishment

This appendix provides the statistical detail behind the analysis of the drivers of mass impoverishment in the UK and US presented in Chapter Three.

Drivers of Mass Impoverishment in the US

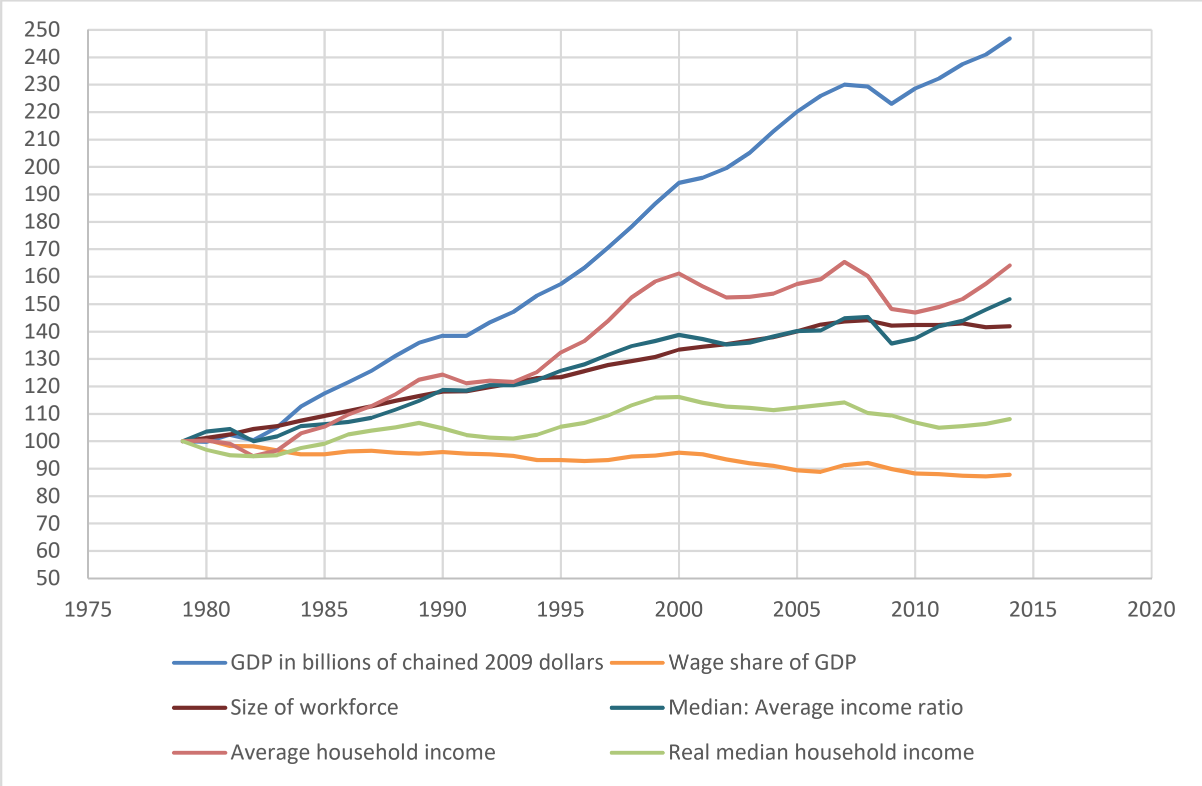
As the diagram in Figure 103 below makes clear, there are a number of factors in addition to the growth of real GDP which have an impact on real median household income. Of course, if all of these other factors remain constant, then any growth in real GDP will automatically translate into increased income for that normal family. But if not, then we could see other patterns, including mass impoverishment – where real GDP grows, but the normal family gets poorer.

Figure 20: Factors affecting real median income



By looking at the development of each of these factors, we can get a sense of their relative importance in driving the phenomenon of mass impoverishment.

Figure 21: Factors driving US real median household income



Source: BEA[35], St Louis Federal Reserve[36], Bureau of Labour Statistics[37], Census Bureau[38]

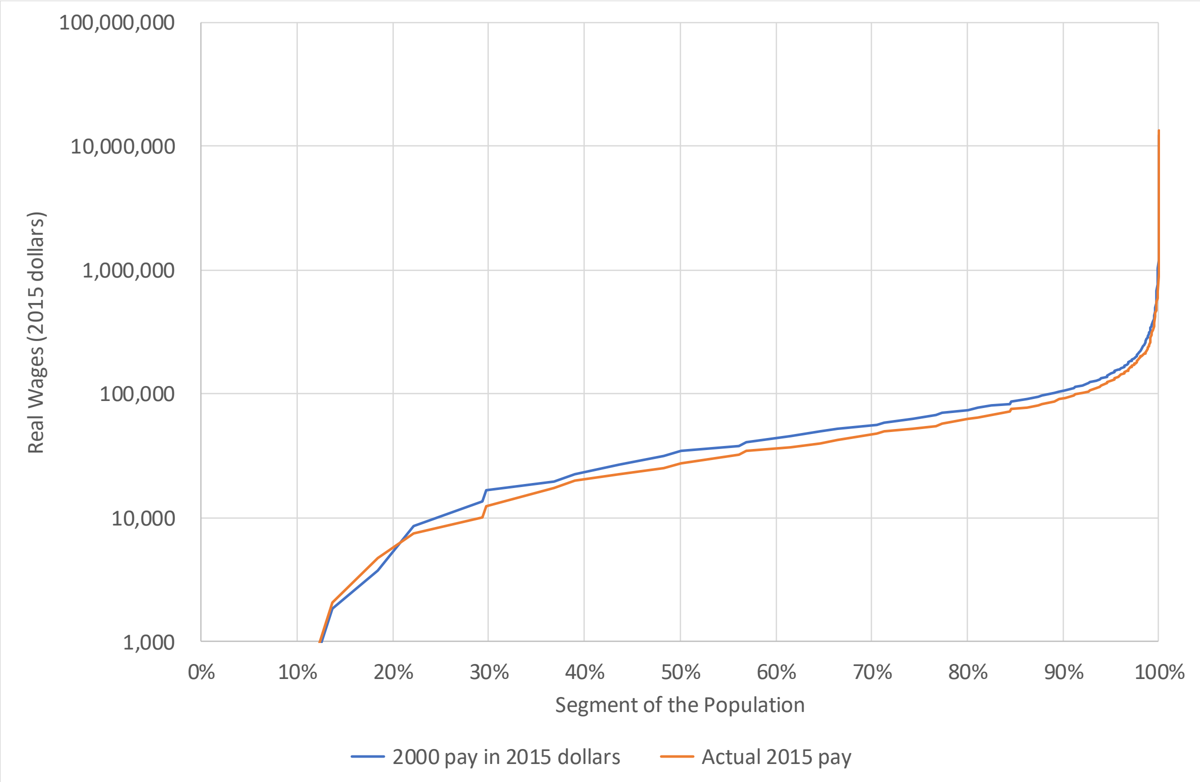
First of all, in Figure 104, we can see that real GDP has grown over the period by almost 150%. Since 2000, despite the enormous disruption from the Global Financial Crisis, the economy has continued to grow strongly overall. Real median household income, however, has grown by less than 10% over this 35-year period and has actually declined since the year 2000 – in other words, there has been a decade and a half of mass impoverishment. We can also see that a big part of the problem is that much of the GDP growth is driven simply by growth in the size of the workforce, rather than by productivity, and that the additional GDP has therefore to be shared amongst the much larger number of workers. Furthermore, we can see that the wage share of GDP has declined by just over 10% over the period, so that less of the GDP will be going to wages and salaries at all. Perhaps the most striking factor, however, is that average household income (which is affected by incomes of the top 1%) has risen by over 60% over the 35-year period, and continued to rise since the year 2000,

35 (Bureau of Economic Analysis, 2015)
36 (St Louis Federal Reserve Bank, 2015)
37 (Bureau of Labour Statistics, 2015)
38 (U.S. Census Bureau,, 2015)

even though median income (which is not) has been almost flat. This divergence between average (technically, arithmetic mean, which is heavily influenced by very large incomes at the top) and median incomes reflects the growth in inequality over that period.

The Office of the Chief Actuary, part of the Social Security Administration, has compiled detailed information on wages at different levels, though unfortunately not all the way back to 1980. The picture they show since the year 2000 looks like this.

Figure 22: US real wage growth by segment of the population



Source: Office of the Chief Actuary[39]

Although the richest are better off[40] and the bottom 20% have been protected, most of the US population are around 20% worse-off in real terms today than they were in the year 2000. (It doesn't look like that, because I had to use a logarithmic scale to get the extremes of income onto the same chart, but for illustration, a wage-earner at the 30th percentile is 24% worse off, at the 40th

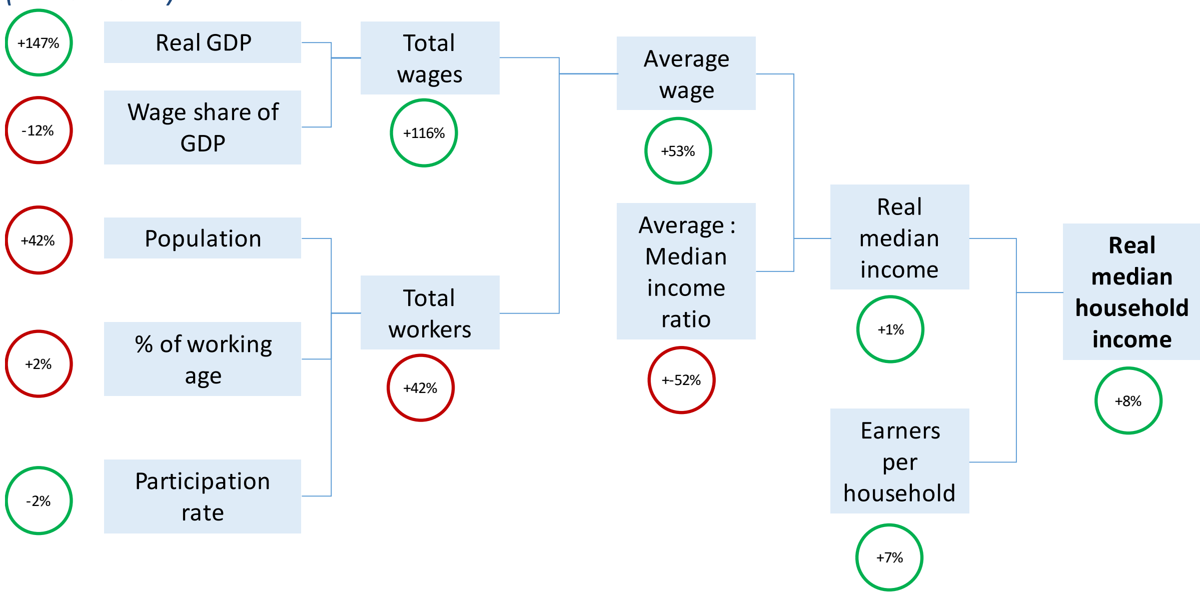
39 (Office of the Chief Actuary, 2018)
40 Actually, they have done better than this chart suggests – the chart includes only wages, but most wealthy people receive a lot of their income in the form of dividends and capital gains

percentile they are 12% worse off, at the 50th percentile they are 21% worse off, and at the 60th percentile they are 17% worse off).

And this is despite the fact that real GDP per capita has grown by 17%[41] over that same period – in other words, most people have received a *less than 0% share* of the benefits of economic growth. When they might reasonably have expected to be 17% better-off, they have instead found that they are around 20% worse-off. That's a 37% difference over just 15 years.

The diagram in Figure 105 below illustrates the relative impact of each of the factors that drives median household income.

Figure 23: Relative change of each factor which influences median household income, (1979-2014)



Source: Data above

In the diagram above, factors in green are those which, all other things being equal, would represent a good outcome for the median household; and factors in red are those which would represent a bad outcome. Real GDP has risen by 147%, the pie has got bigger – and all other things being equal we would expect normal families to benefit. Unfortunately, the wage share of GDP has reduced by 12%, and therefore total wages have risen by only 116%[42]. Nevertheless, this is still a dramatic rise in total wages, which should be very good news. What has stopped the average family benefiting is two key factors: the growth in the working population, which has risen

41 (Federal Reserve Bank of St Louis, 2018)
42 This is correct, barring rounding: the final GDP is higher by a factor of 247%, but the wage share is only 88% of its previous value. 88% x 247% ~ 216%, i.e. there is a 116% increase.

by 42%; and an enormous change in the ratio of average income to median income, which has risen by 52%. The growth in the working population is such that the average wage, instead of rising by 116%, has risen by only 53%. But then 52% of this still considerable increase is eaten up by the change in the ratio of average income to median income – in other words, by rapidly increasing inequality. Real median income per worker, therefore, has risen by only 1%, and it is only because there are now 7% more earners per household than there were 35 years ago that real median household income has risen by 8%.

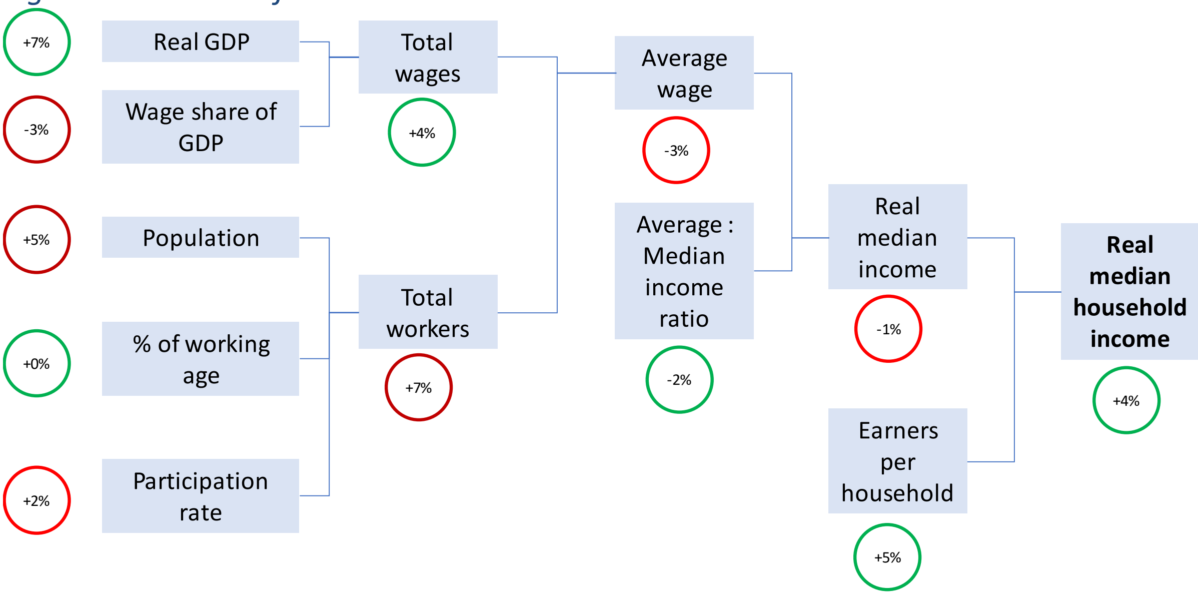
In the US, therefore, the two key factors which prevented the 147% growth in GDP being felt by the typical American were:

1. rising inequality: a falling share of GDP going to wages and salaries at all (the rest going to the owners of capital) and a dramatic rise in the average: median income ratio; and
2. lower productivity growth: 42% of that growth in GDP was simply a reflection of population growth.

Drivers of Mass Impoverishment in the UK

Mass impoverishment is, so far, a smaller issue in the UK than in the US. But as Figure 106 below shows, between 2007 and 2015, mass impoverishment began to take hold in the UK as well although for slightly different reasons than in the US.

Figure 24: Drivers of UK Income – 2007-2015

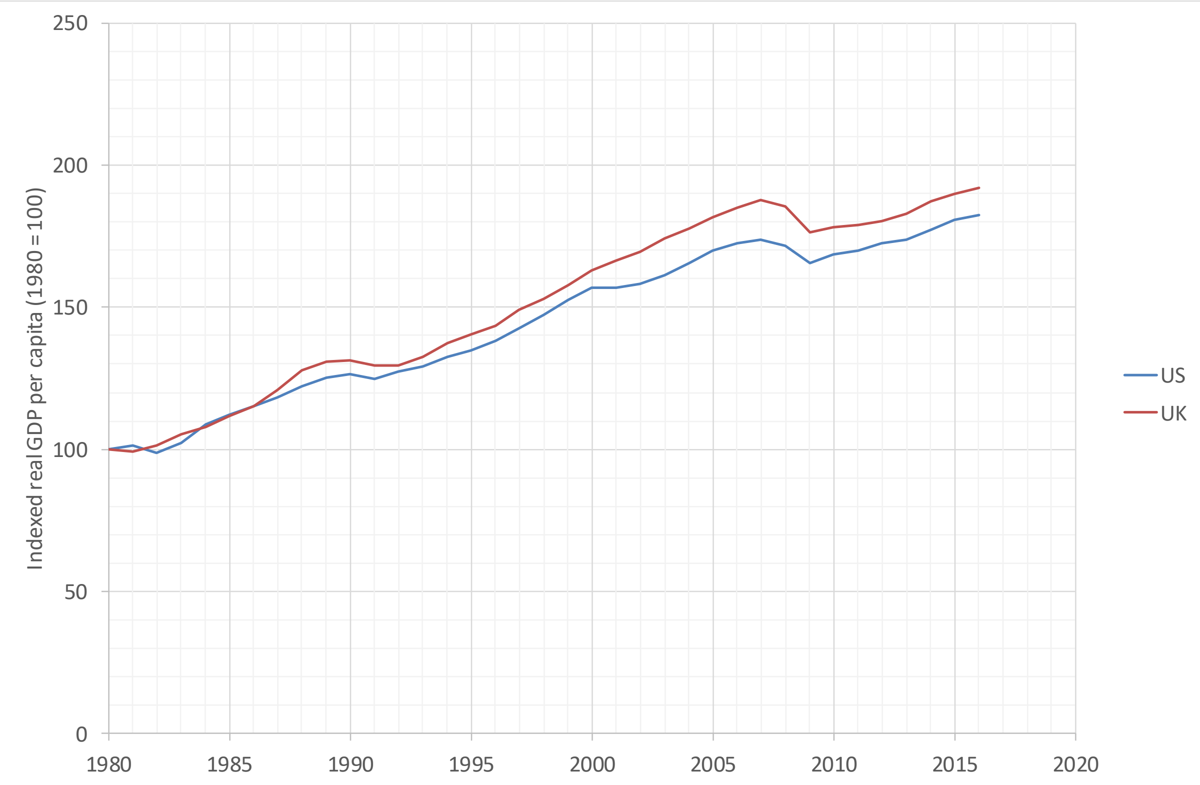


Source: ONS[43]

43 (ONS, 2015)

Since 2007, despite the Global Financial Crisis, real GDP per capita has grown a little – UK society as a whole is a little richer than it was a decade ago. In fact, taken as a whole, UK society is richer than it has ever been (as is the US). GDP per capita today in both countries is more than 80% higher than it was in 1980 – and in both countries it has risen above the pre-crisis peak.

Figure 25: How the pie is growing

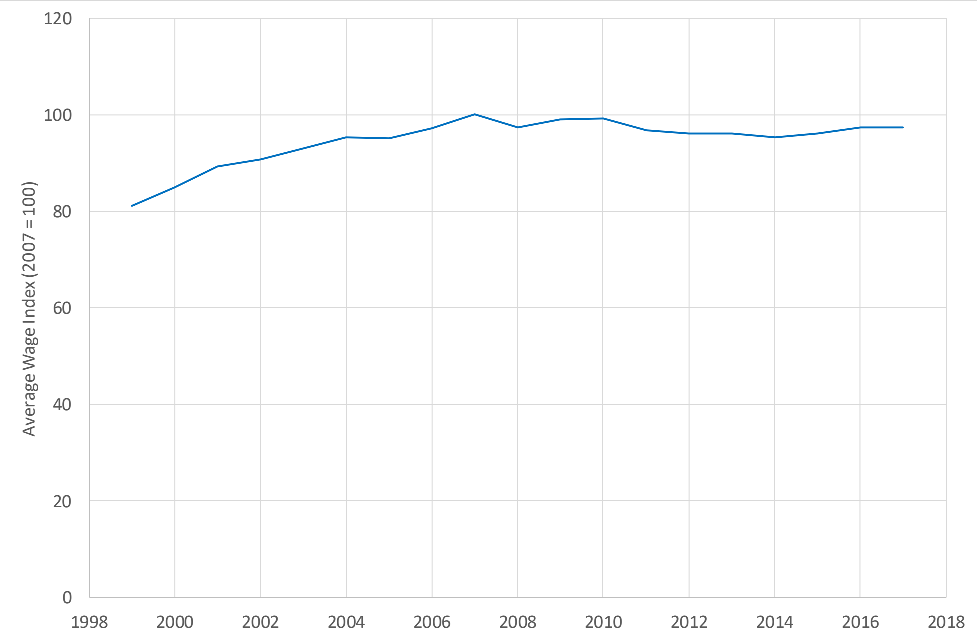


Source: World Bank[44]

But if you were to assume that just because the pie is bigger than it has ever been, all of UK society is richer, you'd be mistaken. The typical wage-earner actually takes home less today than they did in 2007; and it is only because there are on average 5% more earners per household that median household income has risen.

44 (World Bank, 2018)

Figure 26: Real wages in the UK



Source: OECD[45]

This is because, in the UK, the increase in the workforce has been approximately equal to the increase in GDP – productivity growth has stagnated – and the share of GDP which goes to wages has declined (and the share to capital has grown), so the average wage has also fallen. The two key factors in the UK are again rising inequality (but because of the falling wage share of GDP rather than wage inequality) and stagnant productivity.

The picture in the US is slightly different from, and certainly more serious than, the picture in the UK; but there are clearly no grounds for complacency in either country.

45 (OECD, 2018)