THE GROWTH COMMISSION

The Growth Challenge

The decline in GDP per capita growth in advanced economies

First report of The Growth Commission

July 2023

THE GROWTH COMMISSION

The Growth Challenge

The decline in GDP per capita growth in advanced economies

First report of The Growth Commission

July 2023

The Growth Commission

The Growth Commission is a non-partisan group of international economists analysing public policy and regulatory proposals and how they will affect GDP per capita growth in the medium to long term.

Current membership

Douglas McWilliams (Co-Chairman)

Shanker Singham (Co-Chairman)

Alden Abbott

Barbara Bowie-Whitman

Tyler Cowen

Stephen J Entin

Akira Igata

Julian Jessop

Christine McDaniel

Eduardo Pérez-Motta

U. Srinivasa Rangan

Ewen Stewart

Naohiro Yashiro

Authorship

This paper was originally drafted by Douglas McWilliams but has been helped by contributions from Shanker Singham, Julian Jessop, Ewen Stewart, Stephen J Entin, Christine McDaniel, Naohiro Yashiro, Srinivansa Rangan and Barbara Bowie Whitman, as well as by discussions with the Commission itself.

Contacts

The Commission's email address is contact@growth-commission.com

For media enquiries contact media@growth-commission.com

You can follow The Growth Commission on Twitter using @TheGrowthComm

The Growth Commission is supported by The Growth Initiative Ltd, company no. 14785841.
Registered address 71-75 Shelton Street, Covent Garden, London, United Kingdom, WC2H 9JQ.

Contents

Executive summary

The UK and other developed economies are experiencing crises of economic growth which have been building in recent decades, and which threaten to undermine the progress made on quality of life for millions over the past century.

The best way of comparing economic growth between different countries is to look at GDP per capita and its direction of travel, since it provides the clearest indication of economic trends that affect people's prosperity.

The Growth Commission has been set up to investigate the causes of the slowing down in GDP per capita growth worldwide, with an initial focus on the UK, and to analyse the impact of different policies on growth.

This initial paper sets out several key findings, in particular how:

- Growth measured as GDP per capita in the advanced economies is slowing down
- The slowdown is even more dramatic in Western European economies
- In the post-Covid period, the UK is one of the few international economies where GDP per capita is actually falling

Increasing GDP per head is vital not only to keeping the public finances healthy for the provision of public services but is even more important in terms of securing higher incomes for families, providing them with more spending power and thereby increasing living standards.

Higher GDP per capita driven by productivity gains usually means higher wages and allows people to work fewer hours for higher pay. Higher productivity also generally allows economies to grow and living standards to increase without using more natural resources, so it is environmentally beneficial too.

In recent years Europe has fallen back relative to the US. UK GDP per capita has fallen from around 77% of the US figure in 2017 to about 70% today. Over the same period, German GDP per capita has fallen from around 89% of the US figure to around 83%. One of the tasks before the Commission is to understand why European economies have performed less well than the US economy during this period.

As of today, UK GDP per capita is £36,568, compared to £52,996 in the US. The average American is earning a third more than the average Briton, roughly a £10,000 gap in annual spending power between the two, which represents a difference of £24,000 between the average household in the UK and the US. How many extra home improvements are Britons' transatlantic cousins able to afford each year? How more regularly are they able to buy new cars and other consumer durables, take holidays or eat out together?

If over the next two decades the UK economy could achieve annual GDP per capita growth of 3% – as was achieved in the UK in 1950s and is currently being achieved in a country like Poland – the economy would be 65% bigger by 2040. This translates in today's money to nearly £15,000 more for each person to spend each year; and additional tax revenues of £670 billion. These are revenues which can be spent on public services or provide the fiscal headroom for a Chancellor to cut taxes by around two fifths against current levels. Either, or more likely a combination of these, would represent a substantial improvement in our lifestyles.

The Asda Income Tracker shows that after paying for essentials, the average UK household's disposable income fell by £36 a week during 2021 and 2022; but this loss (of £1,900 a year) would be dwarfed by the gains achieved if the economy returned to growth, relieving the cost of living pressures faced by families.

A significant element of the Growth Commission's work will be building a suite of dynamic models that analyse the long-term impact of policy decisions on growth and tax revenues over 5, 10 and 20 years, first in the UK, with a view to expanding to other advanced nations.

The analysis produced by these dynamic models will then be used in our pre- and post-fiscal event reports.

The Growth Commission will also produce regular research publications looking at specific policies – e.g labour, housing, health, trade and competition – to establish how growth is impacted by decisions made in these areas. In addition, the Commission will look at:

- the size of government, and taxes and spending, to see the extent to which the rise in the size of government has contributed to the stagnation of growth
- how demographic trends have impacted growth
- the different trends in productivity in individual sectors, including public services
- the extent to which changes in productivity trends can be explained by structural changes; and
- the impact on growth of regulations (both environmental and otherwise) and market distortions

The Growth Challenge

1. Introduction

An economy can only grow by increasing its labour inputs or by increasing the productivity of these inputs (for example by adding other inputs such as capital or by utilising resources better, all of which translate into higher labour productivity).

Increasing the labour inputs can be useful, particularly if highly skilled workers can be attracted. But every country is trying to attract such people and for the world as a whole it is a zero-sum game.

There is also a moral issue about whether relatively high-income economies in the West which are already privileged should deprive emerging economies of their most entrepreneurial and talented people.

Our focus therefore is on raising GDP per capita, which is strongly driven by increasing productivity, and which better informs how each citizen will feel that the economy is performing.

To put the contemporary issue of poor economic growth into a suitable context, this paper reviews the data on changes in the growth of GDP per capita in the OECD area since 1970 and in the G20 area since 1990.

The evidence is stark:

- Growth as measured by GDP per capita in the advanced economies is slowing down
- This slowdown is even more dramatic in the Western European economies
- In the post-Covid period, the UK is one of the few international economies where GDP per capita is actually falling.

This paper presents the data, analyses it, draws conclusions and sets out the role of the Growth Commission.

It provides some illustrative calculations of the consequences of a continuation of very slow growth in GDP per capita specifically for the UK and by contrast the implications if the trend were reversed.

If the UK economy could return to the GDP per capita trend it actually achieved in the 1950s this would mean by 2040:

- The economy would be 65% bigger
- Consumers would each have nearly £15,000 more to spend in today's money – which would amount to nearly £35,000 for every household in the UK
- There would be additional tax revenues of £670 billion in today's money to be spent on schools, hospitals, policing and defence or to cut most taxes by two fifths

We then propose a research programme to investigate the underlying causes of this extremely weak growth in GDP per capita in most of advanced economies.

2. The centrality of GDP per capita

Our chosen metric is GDP per capita and its growth.

This is obtained by dividing the level of GDP or real (i.e. price-deflated) GDP by population. GDP is the main accepted measure of total national output.

The four biggest criticisms of the concept are that it excludes many items that contribute to welfare; that it fails to take account of depletion of environmental resources; that it includes public sector GDP which is hard to measure and value accurately; and that it fails to take account of distribution of income.

These criticisms are valid but higher GDP is still highly correlated with other measures of welfare like better health, longer life expectancy and lower infant mortality[1] and the analysis below shows that higher levels of GDP per capita tend to be correlated with lower levels of emissions per unit of GDP. In addition, although the evidence here is less compelling, there is some correlation between higher levels of GDP per capita for similar economies (i.e. excluding those dependent on exploitation of natural resources) and lower income inequality.

Some argue against economic growth because of its impact on the environment. Yet higher GDP per capita normally is associated with falling emissions. It is no coincidence that Europe's lowest greenhouse gas-emitting countries per unit of GDP are Switzerland, Sweden and Iceland[2], countries with amongst the highest GDP per capita in Europe[3] or that UK emissions have fallen dramatically in absolute terms as the economy grew[4]. Technologically driven growth in GDP per capita generally seems to be associated with lower, not higher, emissions.

No measure other than GDP has the same level of acceptance or usability for international comparability.

Moreover, where fiscal and public spending issues are relevant, GDP is an acceptable measure of the potential tax base and therefore the basis for financing public spending. Leisure, happiness, love and friendship are wonderful things and more important than many of the items that get included in GDP but they can't easily be monetised to pay for spending on health, education or defence.

It is hard to avoid using GDP as a measure even though we need to be aware of its defects.

Using GDP per head of population additionally avoids the most heavily relied-on method in recent years to increase the UK's GDP, namely by increasing immigration[5].

There are increasingly other measurement problems with looking only at GDP. For example, online shopping, which replaces personal collection of goods with a delivery service, can often appear to reduce measured GDP per capita because the value of having the goods delivered

---

1 See for example https://cepr.org/voxeu/columns/hooray-gdp-gdp-measure-wellbeing
2 https://w3.unece.org/SDG/en/Indicator?id=28
3 Micro economies are excluded. https://worldpopulationreview.com/country-rankings/gdp-per-capita-by-country
4 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1134664/greenhouse-gas-emissions-statistical-release-2021.pdf
5 The members of the Commission almost certainly have different views about ideal rates of immigration. One view is set out in Commission member Douglas McWilliams's book *The Flat White Economy* which argues that creativity, the key raw material in a knowledge economy, is enhanced by migration, both from its direct impact of taking people out of their comfort zones and from its impact on helping create a diverse labour force where problem solving is easier when people think in different ways.

is not properly measured as a boost to GDP. In the UK about two thirds of software investment is expensed by companies and so is excluded from GDP when it ought to be included[6].

The Bean report on UK statistics[7] argues that:

'Assuming that the opportunity cost of time is given by average hourly earnings, and making the (conservative) assumption that the opportunity cost for the non-employed is zero, then one finds that the average annual growth rate over the period 2005-2014 would have been based on the value of time savings to average 0.66 percentage points higher if a third of digital products are already accounted for within the official statistics, falling to 0.35 percentage points if two thirds are already accounted for. While only a rough illustration of the possible economic contribution of this sector, it does serve to highlight its potential importance.'

A detailed study of the US economy argues that GDP growth (and hence GDP per capita growth) in the US from 2007-2011 would have been raised by 0.75% per annum had the welfare benefits of free products obtained from the internet been included in GDP[8].

Although it is not impossible to tax free products, governments have been trying to do so and are finding it difficult. In general, therefore, it is probably appropriate to treat such products as not part of the potential tax base. This means that even if the GDP per capita figures understate the welfare benefits of growth, they can still be taken as a proxy for the growth in the potential tax capacity of an economy.

One of the tasks of the Commission is to investigate whether the measurement issues are on such a scale as to alter the conclusions that emerge from analysing the raw data.

3. Demographic issues

One of the factors affecting growth in different countries is demographics. In many countries, especially Japan, the population of working age is growing even more slowly than the total population. One of the Commission's members[9] has pointed out the influence of this on GDP per capita growth:

> *'First, the aging of the labor force will deteriorate the labor quality, particularly digitalization. Second, the decline in the labor force will lead to higher capital-labor ratios. This will lower the return on capital and discourages new investment. Third, an increasing share of older workers will lower labor mobility, negatively affecting total factor productivity.'*

Comparing countries, Japan is especially badly affected by this, though China is expected to be affected in the coming years.

---

[6] For a discussion of this see 'Measuring the Flat White Economy' by Douglas McWilliams, *Journal of Economic Measurement* (forthcoming).

[7] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/507081/2904936_Bean_Review_Web_Accessible.pdf

[8] Brynjolfsson, E., and Oh, J., (2012). 'The Attention Economy: Measuring the Value of Free Digital Services on the Internet,' AIS Electronic Library

[9] Naohiro Yashiro

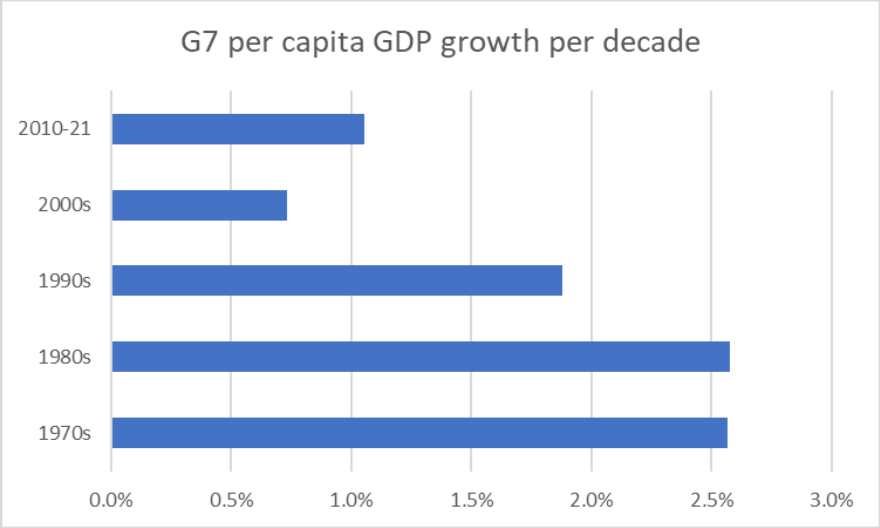
4. The raw data

We have used two data sources. For the initial analysis we used OECD data[10]. But because this excludes some economies of interest we have also investigated the IMF data[11]. This data covers all the economies in the world (with minor exceptions when data is unavailable) and also includes forecasts to 2028.

Background and data: GDP per capita in the G7, OECD and G20

There is accessible data on GDP per capita for the G7 area back to the 1970s and for the OECD area to the beginning of the current century. Excluding Russia (for which consistent data only became available in 1993) there is G20 data easily available since 1980.

Figure 1 GDP per capita growth by decade in the G7 gives the OECD data for GDP per capita growth for the G7 by decade since the 1970s. Growth in GDP per capita for the G7 area was 2.6% per annum in the 1970s and the 1980s. It fell to 1.9% in the 1990s, to 0.7% in the 2000s and recovered slightly to 1.0% in the 2010-21 period.



Some might argue that the high growth rates of the 1960s and 1970s were because of dramatic falls in tariffs due to the GATT system and the creation of transnational firms. But in the 1960s and 1970s the GATT only covered industrial goods and the bigger trade openings in services etc came in the mid-1990s and should have been reflected in rising GDP per capita in the 2000s. Instead, we see the reverse[12].

---

10 https://stats.oecd.org/index.aspx?DataSetCode=PDB_LV Downloaded 17/04/2023

11 Technically we have used the IMF World Economic Outlook April 2023 database. https://www.imf.org/en/Publications/WEO/weo-database/2023/April From this we have constructed series for GDP per capita for all the G20 nations (19 countries since the G20 includes the EU) and a chained link weighted series for the G20 as a whole. As part of its Article IV consultations with the UK published on 23 May 2023 https://www.imf.org/en/News/Articles/2023/05/22/mcs052323-united-kingdom-staff-concluding-statement-2023-article-iv-mission and with Germany https://www.imf.org/en/News/Articles/2023/05/16/mcs051623-germany-staff-concluding-statement-of-the-2023-article-iv-mission published on 16 May 2023 the IMF upgraded its UK forecasts significantly and slightly downgraded its German forecasts. These adjusted forecasts have been incorporated in the analysis.

12 Trade theory suggests that trade gains can get distributed unevenly. The richer countries may gain less than poorer ones as trade barriers fall, and trade expands. Also, economic growth from trade is dependent on whether or not countries allow shift of resources across sectors. If countries enshrine factor mobility rigidities instead, this may lead to less gain from trade and thus lower its contribution to economic growth. The Growth Commission may have to take a deeper look at this issue as we move forward in our work.

GDP per capita growth in the 2000s for the OECD area was slightly higher than in the G7 area at 1.2% in the 2010-21 period.

Figure 2 shows the annual growth in GDP per capita for the G20 countries. It demonstrates the annual variability and shows why the choice of starting and end dates is important. It includes the IMF forecasts to 2028.

Figure 2 GDP per capita growth by year in the G20

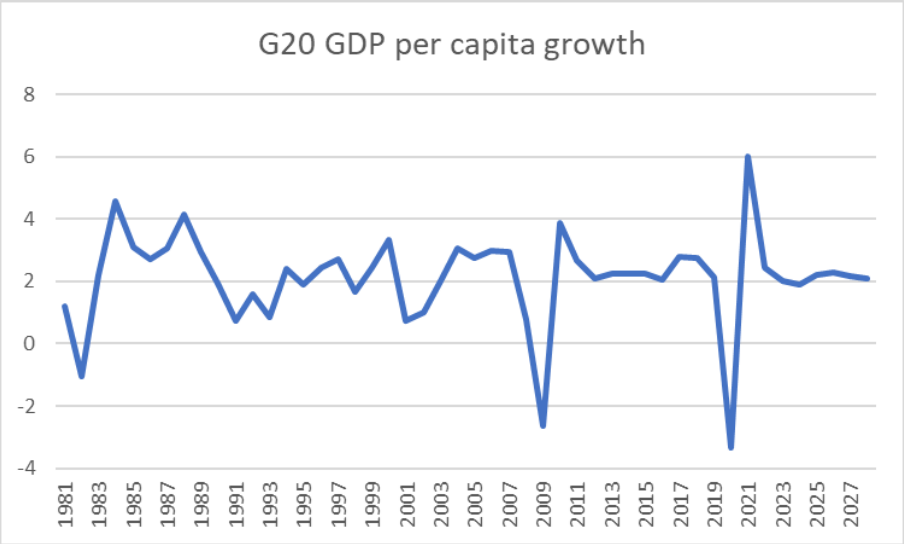
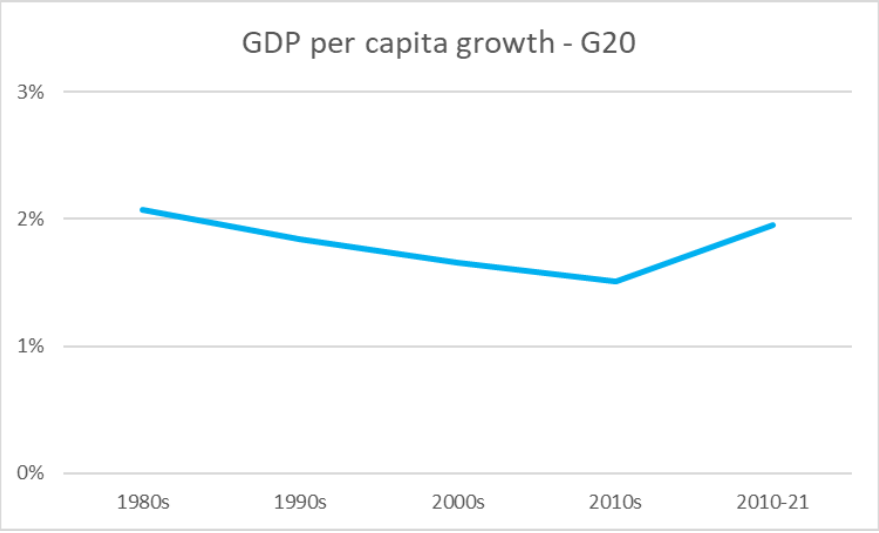


Figure 3 shows the GDP per capita growth by decade for the G20 countries. Note that for this group of countries the bulk of the observed decline in GDP per capita for the G7 countries has not taken place at a G20 level.

GDP per capita in this region has kept close to 2% through the period, averaging 2.1% in the 1980s and 2.0% in the 2010-21 period.

The analysis of the results for the individual economies, which shows entirely different trends between the advanced economies and the two most important emerging economies, goes far to explain the difference between the world looked at from a G20 perspective and that considered from a G7 or OECD perspective.

Figure 3 GDP per capita growth by decade in the G20



5. Country analysis

Having examined the country aggregates we turn now to individual countries.

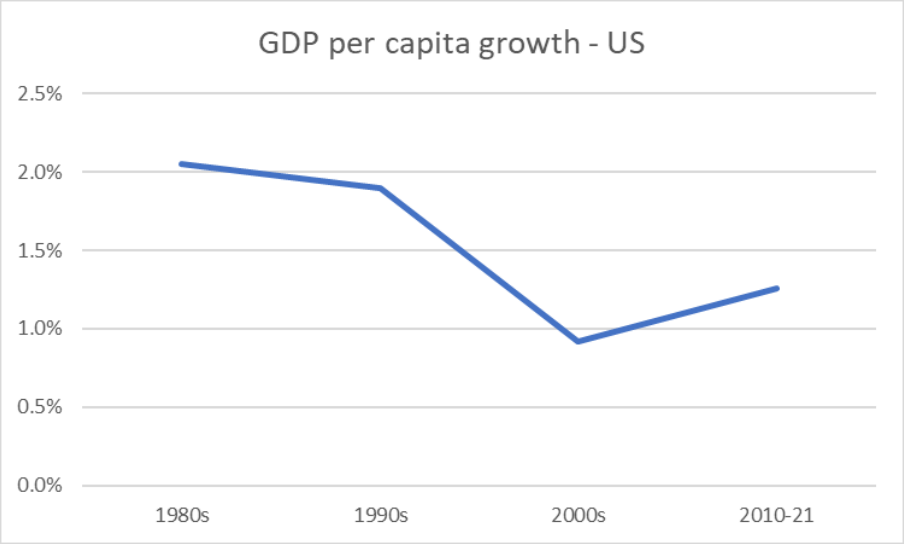
We look here at eight countries:

- two non-European advanced economies, the US and Japan;
- four major European economies (Germany, France, the UK and Italy); and
- the two emerging mega-economies of China and India.

The analysis shows that the worst performance has come from the UK and Italy, while the emerging mega-economies, with obvious advantages of much more scope for catch-up, have performed much better. Interesting is the US, where although GDP per capita fell to new lows between 2000 and 2010, there appears to have been some recovery since then. One of the areas to study is the reasons for this better performance in the US.

(i) The US

Figure 4 US GDP per capita growth by decade (source: IMF)



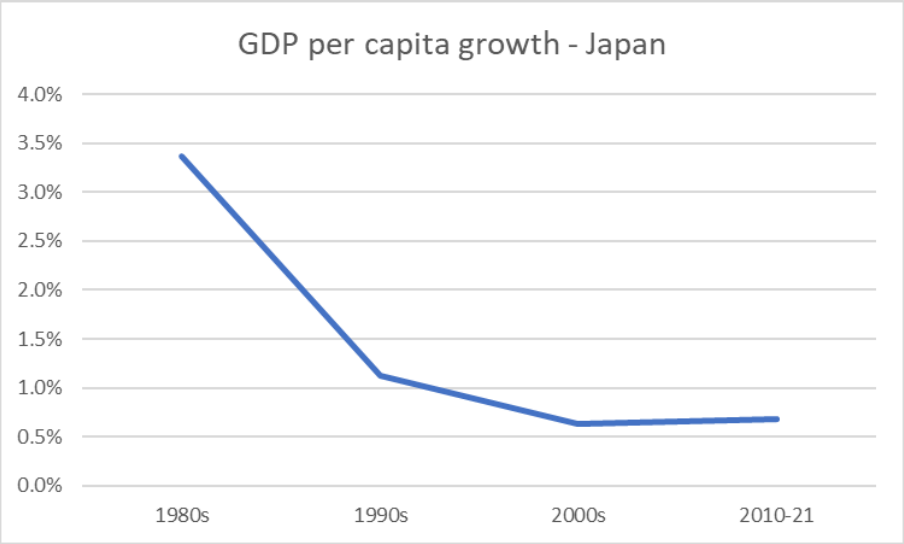
The US data shows a sharp slowing down in GDP per capita growth from 2.1% in the 1980s to 0.9% in the 2000s. One would have expected growth to have been higher not only because of the impact of the Uruguay Round, but also the entry into the international economic system of the economies from the former Eastern bloc and Russia as well as the emergence and growth of India and China. This suggests there must have been a powerful growth retardant at work. Unlike most European economies, growth in this metric recovered in the 2010s to 1.3% in 2010-21. A task for the Growth Commission is to investigate the causes of this recovery[13].

[13] Since the late 1990s, the United States has seen a dramatic change of its business landscape through the use of digital technology. It has given rise to new digital titans such as Google and Amazon as well as extensive transformation of businesses through the innovative digitisation of their activities. Witness, for example, the founding and growth of firms such as Tripadvisor, Airbnb, Netflix and Uber that have changed the way firms operate in even traditional businesses. It is possible that the institutional and legal frameworks in the US have been more flexible, allowing greater digital transformation than other countries, which could partly account for the higher growth that the US may have achieved. The Growth Commission may have to take a deeper look at this issue of how legal and institutional frameworks need to adapt to new technologies in order to promote economic growth as we move forward in our work.

(ii) Japan

The Japanese experience has some similarities with the US. Initially GDP per capita growth slowed even more dramatically, from 3.4% in the 1980s to 1.1% in the 1990s. It fell further to 0.6% in the 2000s and levelled off (rising slightly from 0.63% to 0.68%) in the 2010-21 period. The Japanese economy has been especially affected by demographic trends over this period.

Figure 5 Japan GDP per capita growth by decade (source: IMF)



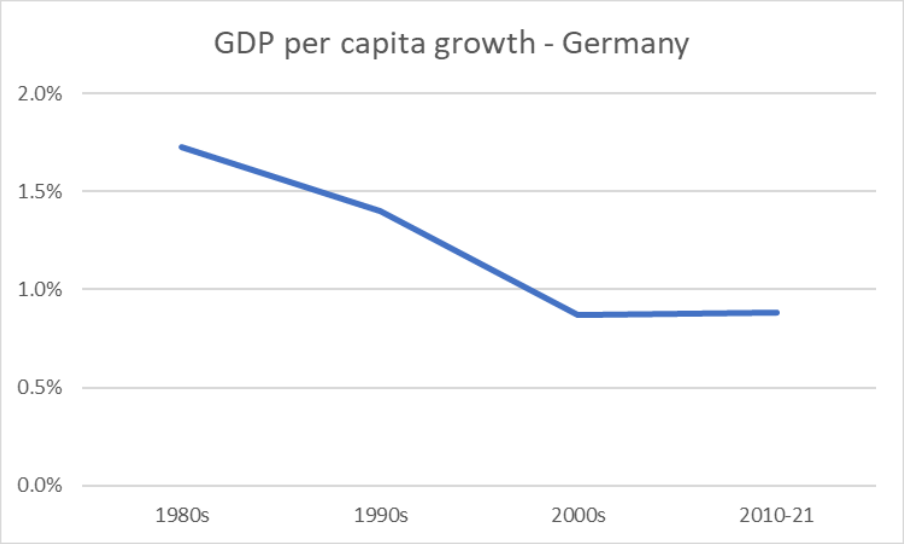
The European majors

The European majors show a worse trend in GDP per capita than the US. They range from Germany, where at least GDP per capita growth has remained positive, to Italy, where GDP per capita growth disappeared in the 2000s and went negative from 2010-21.

(iii) Germany

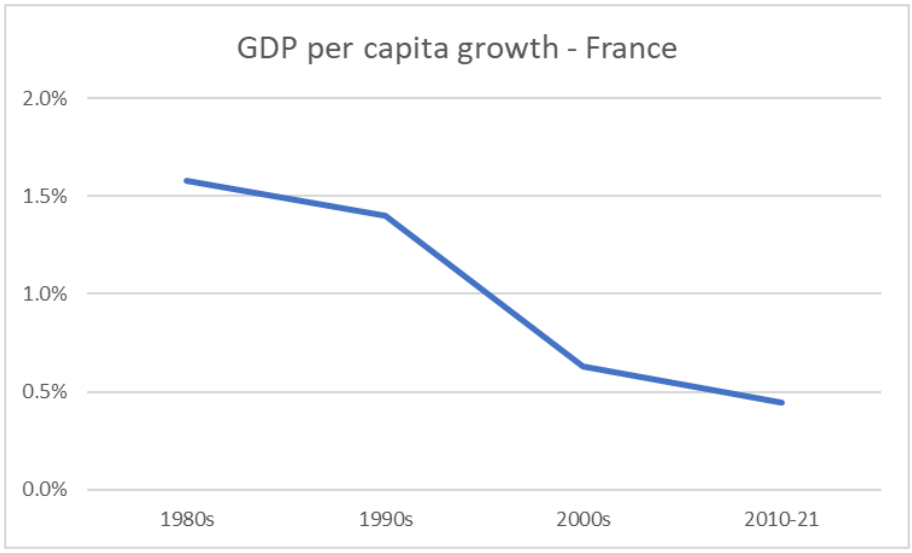
The German experience shows rather weaker GDP per capita growth than the US. Initially GDP per capita growth slowed gradually from 1.7% in the 1980s to 0.9% in the 2000s. It has levelled off (remaining at 0.9%) in the 2010-21 period.

Figure 6 Germany GDP per capita growth by decade (source: IMF)



(iv) France

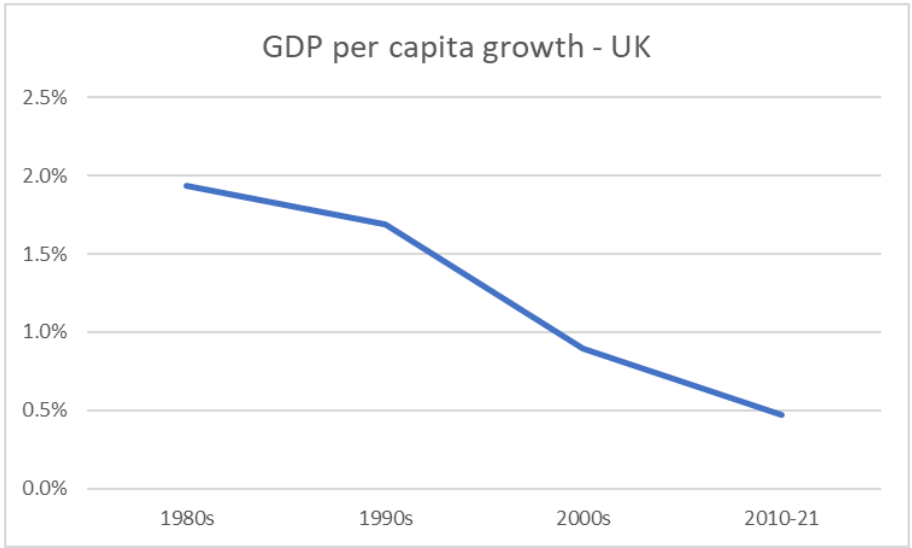
Figure 7 France GDP per capita growth by decade (source: IMF)



French GDP per capita growth has traditionally been slightly weaker than that in Germany. GDP per capita growth slowed from 1.6% in the 1980s to 0.6% in the 2000s and fell slightly further to 0.4% in the 2010-21 period.

(v) The UK

Figure 8 UK GDP per capita growth by decade (source: IMF)



The UK experience has been similar to that of France. GDP per capita growth slowed from 1.9% in the 1980s to 0.8% in the 2000s and has fallen further in the 2010-21 period to 0.5%. But the most recent information shows a further deterioration.

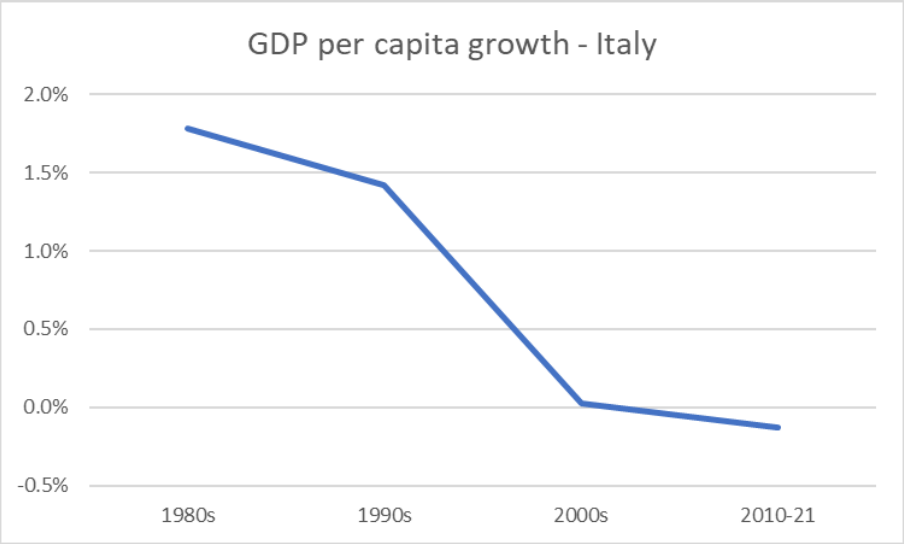
The IMF data points to GDP per capita in the UK remaining below the 2019 pre-Covid level in 2022, with the latest forecasts showing a further small decline in 2023 and it is only forecast to

return to the 2019 level in 2025[14]. A recent analysis by the Cebr looks at the performance of UK GDP per employee (not quite the same metric as GDP per capita but with many similarities) and draws attention to a range of factors and some measurement issues[15]. Only 5 out of the G20 countries had lower GDP per capita in 2022 than pre-Covid in 2019.

(vi) Italy

The Italian performance in recent years is by far the worst of the advanced economies. Initially GDP per capita growth slowed only gradually, from 1.8% in the 1980s to 1.4% in the 1990s. It then fell sharply to a standstill at -0.09% the 2000s and has deteriorated slightly further to -0.13% in the 2010-21 period.

Figure 9 Italy GDP per capita growth by decade (source: IMF)



[14] This is after adjusting for the May 2023 IMF growth upgrade for the UK; the April 2023 World Economic Outlook forecast suggested that UK GDP per capita would not reach pre-Covid levels until 2026

[15] https://cebr.com/reports/understanding-the-uk-productivity-collapse-the-bulk-of-the-shortfall-comes-from-online-shopping-and-the-government-sector/

The emerging economies – China and India

The trends in the two main emerging economies remain very different from those in the advanced economies. GDP per capita growth remains much higher, even if there has also been some slowing down recently.

Of course, these countries' growth rates have been very high because they are growing from a much lower place and there were significant gains to be had from liberalisation of the trading system. However, given that huge gains were made from a relatively small sectoral coverage of liberalisation, yet those gains have not been continuing at the same level, it suggests that quite a lot of potential growth is being left on the table in both developing and developed countries.

(vii) China

Chinese GDP per capita growth accelerated from 6.8% in the 1980s to 9.1% in the 2000s. It has slowed to 6.0% in the 2010-21 period.

Figure 10 China GDP per capita growth by decade (source: IMF)

(viii) India

The Indian experience has some similarities with China. Initially GDP per capita growth rose even more dramatically, from 2.6% in the 1980s to 5.7% in the 1990s. It has fallen back slightly to 4.1% in the 2010-21 period.

Figure 11 India GDP per capita growth by decade (source: IMF)

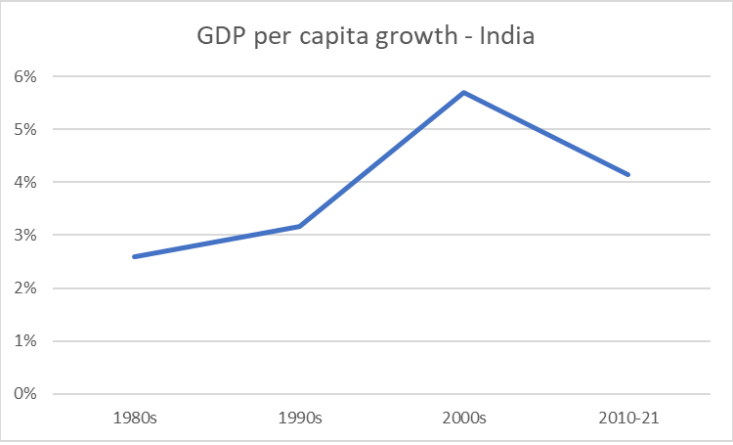
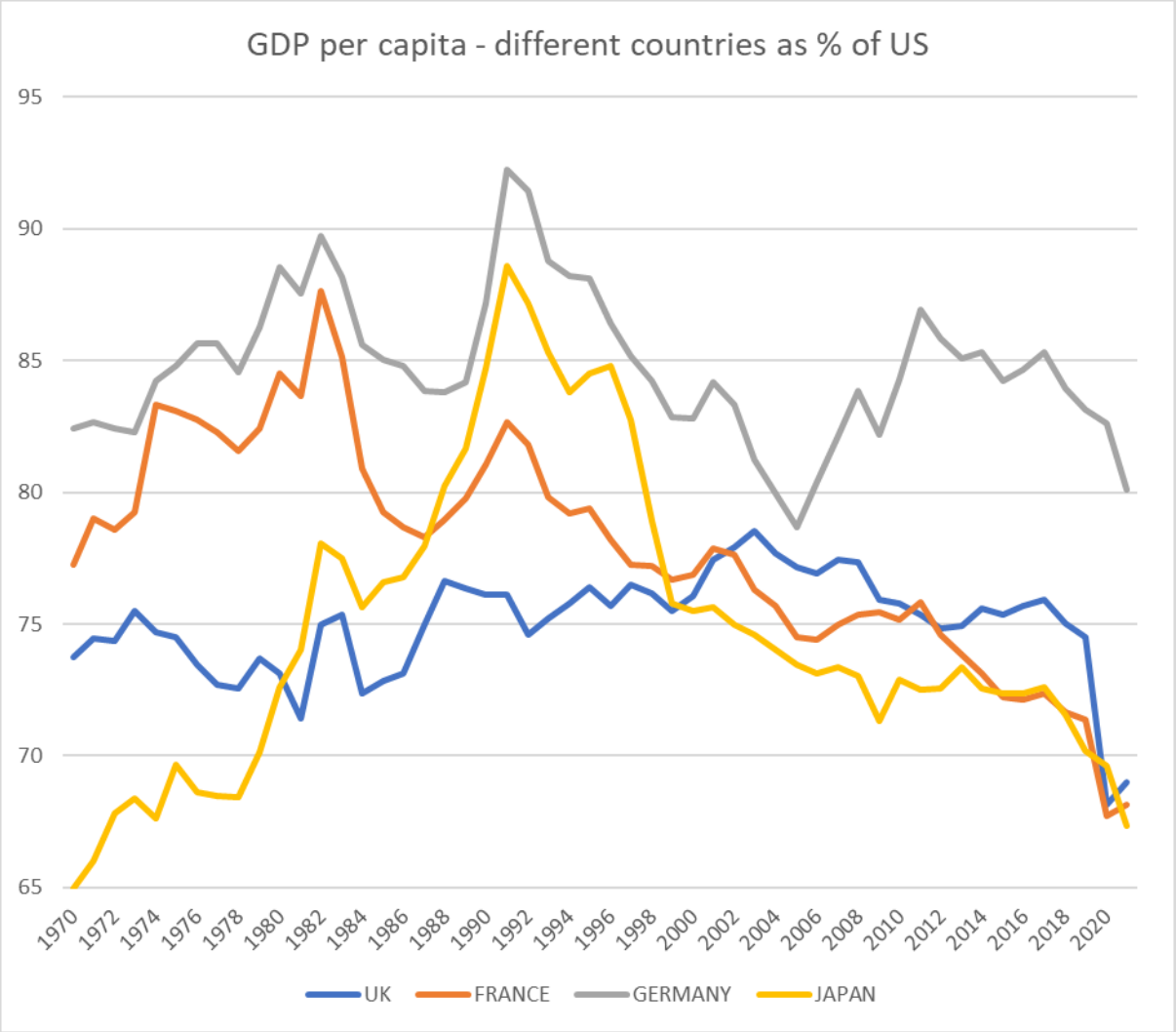


Figure 12 shows GDP per capita in the UK, France, Germany and Japan indexed to that in the US in the same year (2015 PPP values from the OECD). What it shows is how, after getting quite close to the US level at various points in the 1990s or early 2000s, these countries have since fallen back.

GDP per capita is now about two thirds of that in the US in France, the UK and Japan and four fifths of that in the US in Germany. The most precipitous drop has been in Japan, where GDP per capita has fallen back from 88.6% of the US in 1991 to 67.3% in 2021. But the drop in recent years of the UK, where GDP per capita has fallen back by about a tenth compared with the US from as recently as 2017, is also dramatic.

Figure 12 Levels of GDP per capita – France, Germany, Japan and UK compared with the United States (source: OECD)



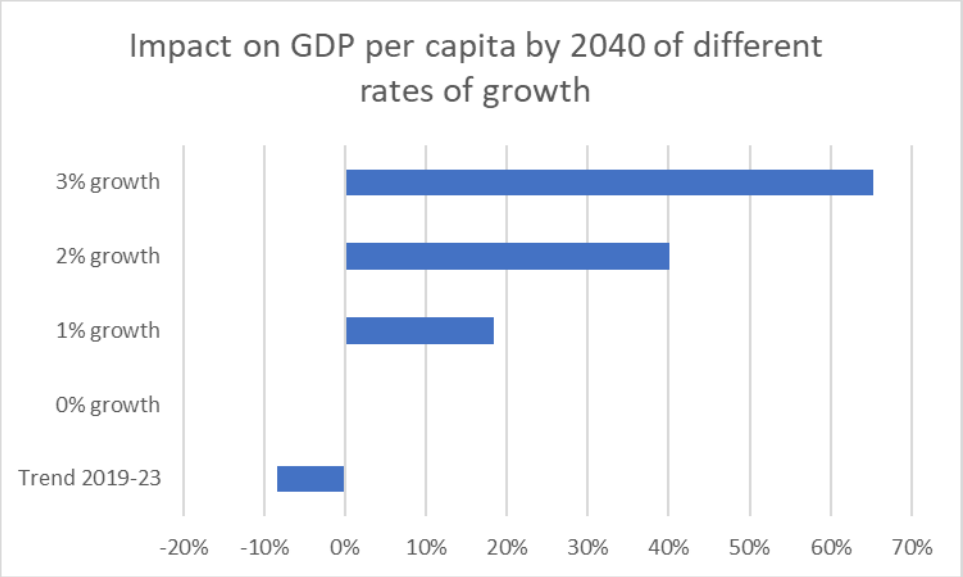
6. Consequences of continuing current trends and how they could improve

This section looks specifically at the UK and the consequences of a continuation of current trends. We have projected the IMF estimated trend in GDP per capita from 2019-23 and compared this with different rates of growth of GDP per capita.

First, it is worth examining the UK's starting position, particularly in comparison with the US

Measured in current day sterling prices, the UK's GDP per capita estimated for 2023 is £36,568. The equivalent figure for the US is £52,996. The gap is £16,428. This gap represents a difference in consumer spending per capita of £10,021 or per household of £24,051.

Figure 13 Cumulative impact of different rates of GDP per capita growth for the UK by 2040



Looking at the problem from a different perspective, we have taken the estimated trend for GDP per capita for 2019-23 (an annual decline of 0.67%) and compared the consequences for 2040 with growth at various different rates.

Is the trend for 2019-23 an appropriate baseline? The period was Covid-affected and it might be sensible to assume that there will be a degree of reversion to normal. On the other hand, the weakness of productivity, which has driven the slow growth of GDP per capita, has if anything intensified during the past year when most of the after-effects of Covid should be over. It is probably worth incorporating this baseline as what we hope to be a worst-case outcome.

We compare this baseline with zero GDP per capita growth. This would by most standards be considered an appalling performance but its GDP per capita consequence by 2040 would still be 8% better than the baseline.

We next look at the consequences of GDP per capita growth at an annual rate of 1%. This would still be well below the rates in the 1980s and 1990s but roughly in line with the rate in the 2000-10 period. This allows GDP per capita to grow by 18%.

We next look at the consequences of GDP per capita growth at an annual rate of 2%. This would still be in line with the rate in the 1980s. This allows GDP per capita to grow by 40%.

We next look at the consequences of GDP per capita growth at an annual rate of 3%. This may sound fanciful but is in line with the 3.0% rate which the UK achieved in the 1950s[16]. This allows GDP per capita to grow by 65%.

The difference between the worst outcome and the best is as much as 79%. Although the metric is GDP per capita, it roughly approximates to the proportionate impact on living standards.

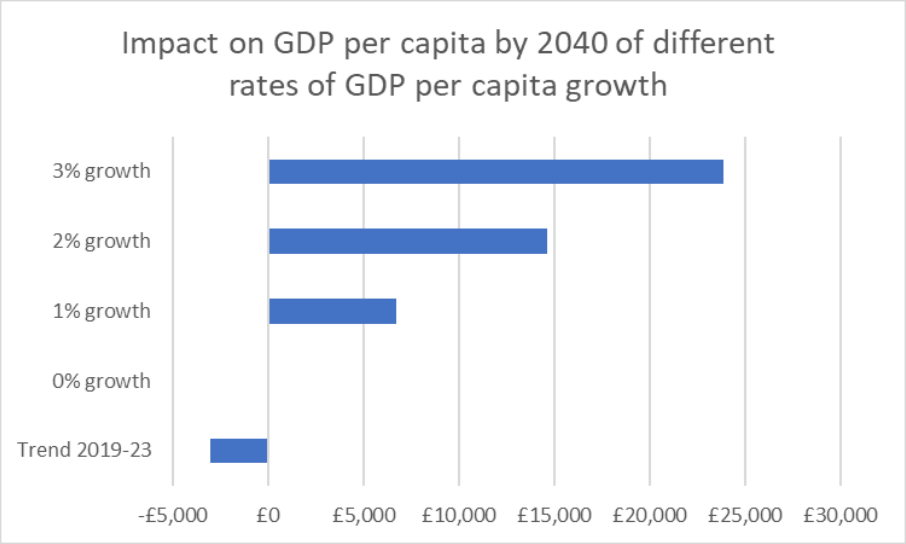
Now let us turn this into what the real-world impact is for people.

The impact of these rates of growth on the level of GDP in 2040 is shown in Figure 14. On current trends, real GDP will fall by just over £3,000 per person by that year in today's money. But if we can achieve 3% growth, we can get GDP up by £23,900 per person in today's money.

Obviously not all the increase in GDP is available for consumers' spending – higher GDP would require more exports and more investment. But assuming the current ratio of consumer spending to GDP of 0.61%, the impact on annual spending per person is shown in Figure 15. Current trends would mean a fall in spending per capita of about £1,900 in today's money, while 3% growth would mean a rise in spending per capita of £14,600, which translates to higher spending of approximately £35,000 per household. This is enough to buy a new electric car; a new kitchen (£7,000)[17] or an additional family holiday abroad (£5,000)[18] and still have enough left to take out an additional £300,000 mortgage or pay £1,800 a month more in rent[19]. This would mean a substantial improvement in lifestyles, relieving the cost of living pressures faced by families.

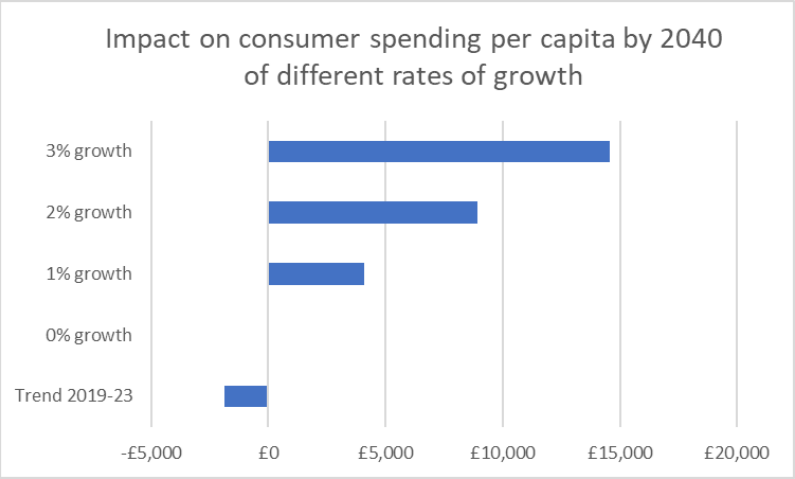
This puts into sharp relief the £1,900 a year fall in disposable income after paying for essentials shown by the Asda Income Tracker between Q1 2021 and Q4 2022[20].

Figure 14 Impact on GDP per capita levels in 2040 at 2023 prices



[16] https://ourworldindata.org/grapher/GDP-per-capita-in-the-uk-since-1270
[17] https://www.homehow.co.uk/costs/new-kitchen
[18] https://www.evolutionmoney.co.uk/our-loans/holiday-loan/much-people-spend-holiday-advice
[19] https://calculator.halifax.co.uk/moving-home-rate-checker Obviously if everyone spent the money in the housing market prices would adjust so standards of living would not rise as much.
[20] https://corporate.asda.com/newsroom/2023/03/31/more-than-11m-households-dont-earn-enough-to-cover-essential-costs

Figure 15 Impact on consumer spending levels per capita in 2040 at 2023 prices



7. Implications for tax and spending

For the purposes of the current exercise we have assumed that in the first instance the tax to GDP ratio remained at its 2023/24 level of 41.1%[21]. On current trends this would produce a revenue shortfall of £86 billion at today's prices, equivalent to 8.2% of all projected tax revenues. Taxes would have to rise to pay for this (which itself might force taxes to have to rise further if it led to slower growth) or public spending would have to be cut. On the other hand, growth of GDP per capita of 3% would produce excess receipts of £669 billion at today's prices or 39.0% of projected revenues.

It is likely in reality that both the costs of current trends and benefits of additional growth would be shared between public spending and tax cuts. But simply to show the scale of the impact on public finances we have carried out an exercise where the fiscal benefits are spread across the board as equivalent cuts in all tax rates. The results of this exercise are shown in Table 1, showing that 3% GDP per capita growth could by 2040 allow all taxes to be cut by two fifths with the resulting rates shown in the Table.

Table 1 Implied UK tax rates for various taxes by 2040 assuming that increased potential revenues are used to cut taxes equally across the board

		Income Tax			
	VAT	Base	Higher	Additional	Corp Tax
Current rate 2023/24	20	20	40	45	25
Trend 2019-23	21.7	21.7	43.4	48.9	27.2
0% growth	20.0	20.0	40.0	45.0	25.0
1% growth	16.9	16.9	33.9	38.1	21.2
2% growth	14.4	14.4	28.8	32.3	18.0
3% growth	12.2	12.2	24.4	27.5	15.3

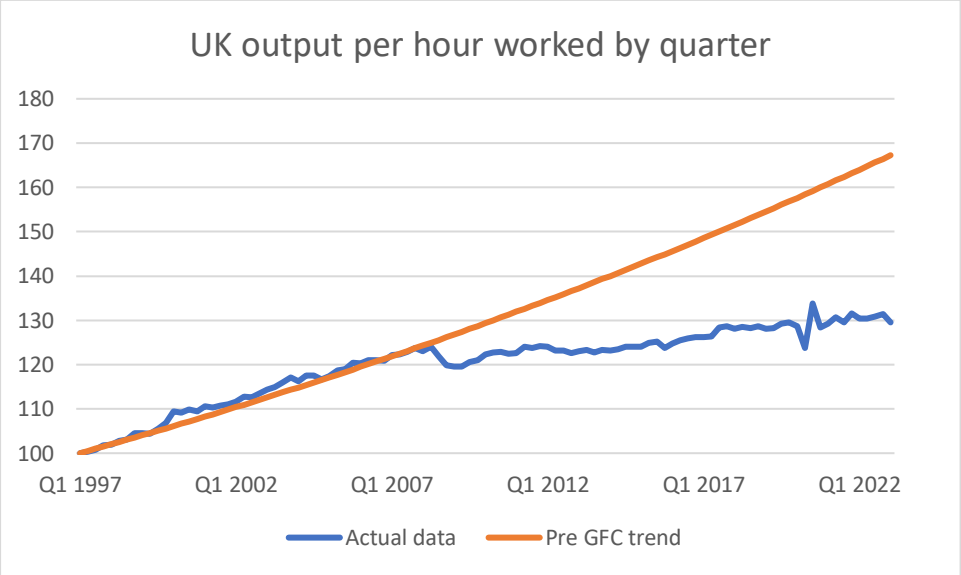
[21] Calculated from OBR Economic and Fiscal Outlook March 2023, Annex A Table A.2 and Chapter 4 Table 4.1

Yet another way of looking at this is to compare with the US. The IMF forecasts that US GDP per capita will grow at an annual rate of 1.3% from 2023-28. Extrapolating this to 2040, the analysis shows that in 2040, the continuation of the recent trend would bring the UK's GDP per capita down from its current level of 69.0% of the US level to 50.7%. If on the other hand 3% per annum growth were achieved, this would bring the UK's GDP per capita back to 91.4% of the US's; a level that has never been achieved since 1918.

8. The relationship between GDP per capita and productivity

GDP per capita is closely related to, but not quite the same as, productivity, which is commonly defined as output per hour worked. This is the basis of the 'productivity puzzle', or how to explain the break in the long-term upward trend in productivity which was observed in most advanced economies after the Global Financial Crisis of 2008-09. Figure 16 shows the latest data for the UK, with the actual data compared with the pre Crisis trend. The chart shows both the slowdown (from 2.0% to 0.3%) in the growth of output per person hour after the Global Financial Crisis and also the further slowdown since Covid.

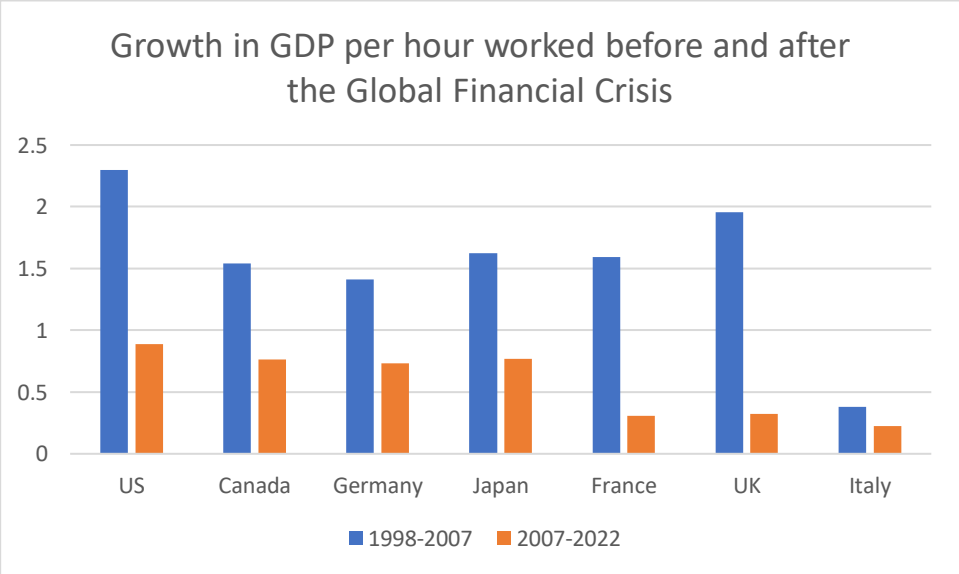
Figure 16 UK Output per Person Hour



Source: ONS

But the UK is far from alone. As with GDP per capita, other major economies have also suffered a sharp slowdown in productivity growth as can be seen from Figure 17.

Figure 17 OECD data on growth of output per hour worked by country



Source: OECD

Growth in GDP per capita is largely determined by growth in output per hour, but it is influenced by the amount of work done (an increase in labour force participation, or people working longer hours) and demographics (countries with ageing populations may see GDP per capita fall even if the productivity of those still working is unchanged).

9. Implications for research

The conclusions from this research are stark. Growth in GDP per capita has slowed and in some countries has gone into reverse.

Advanced economies are likely to slow further and may even shrink if these trends continue. This is especially true for Western Europe and within Western Europe even more so for the UK and for Italy.

It is therefore vital that we understand the causes of these trends.

The role of the Growth Commission

The Growth Commission will primarily investigate how low-growth economies can be transformed into high-growth economies. It will do this by researching the impacts on growth of various factors, including demographics, size of government, tax rates, market distortions, trade policy, competition policy, housing policy and other factors. It will also analyse the impacts of policy changes, using a suite of models that help analyse the long-term impact of policy decisions on growth, first in the UK, and ultimately covering other nations.

We aim to produce reports before and after major fiscal events focusing on the long-term impacts of policy decisions on economic metrics such as GDP per capita and longer-term tax revenues. We will especially focus on the impact over the longer term, looking 5, 10 and 20 years ahead.

Long-term modelling

One of the main tools the Growth Commission will use to inform our research and debate will be our models of the economy.

Our contention is that many official policy evaluation tools have an excessive short-term focus and take insufficient account of behavioural changes generated by the policy measures themselves.

Models that take fuller account of longer-term behavioural changes in the economy are often called dynamic models to distinguish them from the so-called static models of the economy.

Dynamic and static economic forecast models differ in how they incorporate the effects of changes in policy. Static models often only consider the direct effects of a policy change, with little attention given to how policies may alter the broader economic environment. In contrast, dynamic models attempt to capture these indirect effects by focusing in more detail on how policy changes might impact equilibrium economic behaviour, such as investment or consumption decisions over a longer time frame. Static modelling often overlooks or understates behavioural changes that result from policy decisions[22].

Dynamic models are generally considered to provide a more complete picture of the economic effects of policy changes. The Congressional Budget Office (CBO), the nearest equivalent to the UK's Office for Budget Responsibility (OBR), has since 2016 adopted dynamic scoring for certain types of legislation, such as tax reform proposals.

[22] For example, the House of Commons Committee of Public Accounts in its report 'Lessons from implementing IR35 reforms, Second Report of Session 2022–23' concluded: '*HMRC is not doing enough to understand the impact of the reforms on workers and labour markets. The complexity of the rules, and the perceived risk to hiring organisations of failing to comply with them, may lead to changes in behaviour by both workers and hirers. In some cases, contractors have reported that their last clients had stopped all use of PSCs, while some contractors have increased their rates or avoided work if it is within scope of the IR35 rules. Such behavioural impacts 6 Lessons from implementing IR35 reforms could have knock-on consequences for workers and labour markets, such as loss of work or ability to work flexibly. HMRC has not carried out research into these types of wider impacts, and it is not convinced by evidence provided by others even where this indicates there may be significant issues. HMRC is also too dismissive where a significant minority of people and businesses report being adversely affected*'.

Use and development of the models

The Growth Commission will use a suite of models for its analysis of the long-term effects of policy decisions on growth, as well as analysis of specific policy measures on key relevant metrics. Models used will include:

Dynamic General Equilibrium Model

A Ramsay Cass Koopmans model which can be used to analyse equilibrium impacts of policy changes

Elasticity model

An elasticities model, similar in some respects to conventional economic models, but with major adjustments to enable aspects of behavioural responses to policy changes to be analysed. These include an explicit monetary sector which shows how money affects asset prices and hence both inflation and other economic variables and the incorporation of relationships between tax changes and a range of economic variables of which business investment and the labour market are the most important. This will be used to help analyse the timing impacts of policy changes.

Distortions Model

A distortions model which analyses the impact of domestic economic distortions and of removing them on equilibrium levels of economic activity. It will be very similar to many trade models which examine the impacts of international distortions and of removing those but will focus mainly on the impact of reducing domestic distortions.

Other models

While the three models described above will comprise the Commission's initial analysis suite, it is likely that other models will need to be developed to help analyse policy changes that do not easily fit into such systems.

Membership of the Growth Commission

Structure

The Growth Commission is made up of a group of international commissioners, supported by analysts. The commissioners have varying subject specialisms, including trade, competition policy and forecasting.

Through our global network, we will leverage leading experts from various institutions and academia.

The Growth Commission's work will be enhanced in due course by an Advisory Council. The Commission will benefit from the strategic guidance of the Council's leading business figures, academics, policy-makers and others to assist in promoting the goals of the Commission.

Douglas McWilliams (Co-Chairman)

Douglas McWilliams specialises in forecasting. He founded Cebr, a leading think-tank known for its expertise in economic analysis. Today he is executive deputy chairman of the organisation. Previously, he was Chief Economic Adviser to the CBI, Chief Economist at IBM UK and chaired the economics committee of what is now called Business Europe.

Shanker Singham (Co-Chairman)

Shanker Singham is one of the world's leading international trade experts, providing trade and competition law and policy advice to governments and companies. He is the Policy Lead of the Trader Support Service Consortium and was a cleared advisor to the US Trade Representative and to the UK Trade Secretary.

Alden Abbott

Alden Abbott specialises in antitrust issues. He has served as the Federal Trade Commission's General Counsel, where he represented the Commission in court and provided legal advice to its representatives.

Barbara Bowie-Whitman

Barbara Bowie-Whitman specialises in trade policy, having previously worked in the US Department of State, where she served as Trade Policy Coordinator for the Western Hemisphere. She has been a senior State Department negotiator on free trade agreements with nine countries. She has a PhD in economics from George Washington University.

Tyler Cowen

Tyler Cowen specialises in economic growth, technological change, globalisation and the economics of culture. He is a Professor of Economics at George Mason University and has been recognised as one of the most influential economists of the last decade. He holds a PhD in economics from Harvard.

Stephen J. Entin

Stephen J. Entin specialises in tax policy and is currently a Senior Fellow Emeritus at the Tax Foundation. He was Deputy Assistant Secretary for Economic Policy at the Department of the Treasury in Washington. Before joining the Treasury, he was an economist with the Joint Economic Committee of the Congress, developing policies for tax rate reduction and savings incentivisation.

Akira Igata

Akira Igata specialises in economic security. He is a Project Lecturer at the Research Centre for Advanced Science and Technology at the University of Tokyo. He is also an Adjunct Senior Fellow at Pacific Forum, a US-based think tank, and a Non-Executive Director at the Inter-Parliamentary Alliance on China (IPAC). He advises the Japanese government and the private sector in various capacities.

Julian Jessop

Julian Jessop has worked at HM Treasury, HSBC, Standard Chartered Bank and Capital Economics. He was Chief Economist at the Institute of Economic Affairs (IEA) and now serves as an IEA Economics Fellow. At Capital Economics, he was a Director, Chief Global Economist and Head of Commodities Research.

Christine McDaniel

Christine McDaniel specialises in trade, globalisation and intellectual property rights. She has held several positions in the US government, including Deputy Assistant Secretary at the Treasury Department and senior trade economist in the White House Council of Economic Advisers.

Eduardo Pérez-Motta

Eduardo Pérez-Motta specialises in competition policy. He has served as the President of the Federal Competition Commission in Mexico, President of the International Competition Network and Mexico's Ambassador to the World Trade Organisation. He has also held several roles in government including Chief of Staff to the Minister of Trade and Industry.

U. Srinivasa Rangan

Srinivasa Rangan specialises in the areas of strategy, globalisation, alliances and entrepreneurship. He has had research and faculty positions at the IMD Business School, Harvard and Tulane University. He has advised the Indian government on development policies to ensure national competitiveness after economic liberalisation.

Ewen Stewart

Ewen Stewart specialises in the interaction of macroeconomics, politics and capital markets and advises major pension funds, asset managers and hedge funds. He is a City economist with over three decades of experience and runs the consultancy firm Walbrook Economics.

Naohiro Yashiro

Naohiro Yashiro specialises in ageing populations and healthcare and is currently a professor at the Faculty of Global Business at Showa Women’s University. He has worked with the Japanese Government’s Economic Planning Agency and the OECD. He is the former president of the Japan Centre for Economic Research and a member of the Council of Economic and Fiscal Policy.