

WORKING PAPER

Investment in the UK: Longer term trends

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Abstract

The question of low investment in the UK has increasingly gained attention in research and policy circles. Low investment is often discussed as an important contributor to the UK's low productivity growth: capital deepening increases labour productivity, while investment is the way much technological progress is embodied and used in the economy. This descriptive study looks at the longer-term trends (1980 to 2022) in UK investment relative to comparator economies in the G7. Our focus is on the traditional national accounts definition of 'investment', and specifically Gross Fixed Capital Formation (GFCF). This includes investment in fixed assets and capitalised intangibles by both UK and foreign-owned firms but excludes uncapitalized intangibles. We consider investment in total, both by sector and by type of asset, as a share of GDP. We also look at sectoral investment as a share of the sector's own GVA, to take into account the shift from manufacturing to other activities which invest more intensively in human capital and uncapitalised intangibles over this period of 40-plus years.

1. Introduction

This note is a description of trends in UK investment – Gross Fixed Capital Formation (GFCF)¹ – as a step toward addressing the question: why is UK investment so low? Low investment is often discussed as an important contributor to the UK’s low productivity growth (see for example Wilkes 2022, Resolution Foundation 2023). Capital deepening increases labour productivity, and investment is the way much technological progress is embodied and used in the economy. Like other countries, the UK will need to invest in substantial amounts for the zero-carbon transition as well as to benefit from other new technological innovations such as additive manufacturing or the use of sensors to implement process improvements. The question we ask is whether UK investment is indeed low either by past standards or in comparison to other countries, and if so what parts of total investment are driving the trends – where should attention be focused?

This paper explores the traditional national accounts definition of ‘investment’. In 2020, the UK’s traditional fixed capital assets constituted only about 15 percent of the entire inclusive capital stock, whereas other measured non-financial assets (including human and natural capital) accounted for more than 50 percent.² The UK economy is also weighted towards services activities such as ICT and finance which more intensively invest in human capital and uncapitalised intangibles, which are not accounted for in national accounts measures of fixed capital formation. Nevertheless, there is considerable policy interest in what is seen as a problem of low investment in fixed capital (traditional non-financial assets), and the perception that the UK does lag behind some comparator economies on this measure. This type of investment will be necessary if not sufficient for productivity improvements.

¹ Gross Fixed Capital Formation is a component of Gross Capital Formation that only includes fixed assets. GFCF includes: land improvements; plant, machinery, and equipment purchases; the construction of roads, railways, etc, including schools, offices, hospitals, private residential dwellings, and commercial and industrial buildings. Note that this is the current SNA definition; it excludes uncapitalised intangibles, but includes others such as software, R&D, mineral exploration, entertainment originals, etc. It includes fixed capital formation in the UK by foreign-owned firms.

² ONS (November, 2022). Inclusive capital stock, UK: 2019 and 2020. <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/articles/inclusivecapitalstockuk/2019and2020#>

Our interest is in the long-term trends. We begin with total GFCF and compare the UK to the rest of the G7, confirming the perception of lagging behind at this headline level. Then we turn to different disaggregations of the UK data, looking at institutional categories (including the distinctive UK definition of ‘Business Investment’), and at the public and private sector distinction. We next look at asset type and industrial sectors. Having narrowed down the focus to key sectors/assets, we then return to the cross-country comparison at this level of disaggregation. Unless otherwise stated, we present the data as ratios to GDP or GVA in current prices. In most cases the trends are similar if (when available) chained volume measures (CVM) or constant prices are used instead; we highlight the instances where there are noteworthy differences. There are two data-related reasons for not using chained volume measures throughout. One is availability, as the longer run series across countries are not available for all breakdowns or all countries.³ The other reason is that they are not additive before the base year; using current price values is standard for shares data (Whelan 2002). Where there are differences, this may be a signal to explore the deflators used in more detail. While the price trends may well differ between investment and GDP as a whole, divergence is a useful signal.

This descriptive exercise underlines the importance of investment by manufacturing industry and in plant and equipment assets (including ICT equipment); but also finds relative UK underperformance in the finance and ICT industries. In these latter cases, gross fixed capital formation has risen as a share of GDP but declined as a share of the industries’ own GVA, so the former increase reflects their growing share of the economy (while part of the manufacturing investment decline as a share of GDP is due to its shrinkage as a share of the economy). Finance and ICT are also near the bottom of the G7 ranking on this latter measure. Although generally thought to be among the best performing sectors of the UK economy, this finding is consistent with their large contribution to the post-2008 productivity growth slowdown (Coyle & Mei 2023, Goodridge & Haskel 2023).

³ CVM data for institutional sectors in the national accounts and GFCF supplementary tables only begin from 1997, as against 1987 for current price data. The total CVM data shown in the national accounts and the GFCF supplementary tables by construction do not match with the actual total of the different categories from 1997 to 2019.

Data

This note draws on several data sources. For the UK data, we use the latest national accounts time series published by the Office for National Statistics (ONS) (including a supplementary table⁴ updated in January 2023 and the UK Economic Accounts⁵ published in March 2023). These latter go back only to 1997 for some of the categories, although data for the total and some asset categories go back to 1987. These latter two datasets are the only fully national accounts-consistent data for years pre-1997. The ONS has also published a dataset covering GFCF by industry and asset since 1997,⁶ as well as a historical series for business investment.⁷ For earlier data we use the most recently published experimental capital services dataset, which provides GFCF data that are largely but not entirely consistent with the national accounts data. In addition, we use the OECD GFCF data (asset, sector and industry), the World Bank's World Development Indicators database, and the EUKLEMS & INTANProd data, for cross-country comparisons. These datasets do not all cover the same years. Specific sources are shown in the footnotes below.

2. Total investment: UK and G7

As a first step we ask: is the UK investment indeed low? The answer to this over time and in terms of benchmarking against comparable economies is set out in Figure 1: total investment in the UK is lower as a share of GDP than in other G7 economies and has been for much of the post-1980 period; fell more sharply than in these other countries in the slowdown (in some cases recession) of the early 1990s; stayed lower when their investment began to recover in the late-1990s; and (along with Germany, Italy and Japan) has never regained its pre-1991 level as a share of GDP. There have been some common patterns across the G7, both in cyclical movements and a downward trend for four of the seven; and some specific aspects – Japan and the UK stand out.

⁴ ONS (January 2023). Gross fixed capital formation supplementary tables:
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/compendium/unitedkingdomnationalaccountsthebluebook/2022/supplementarytables>

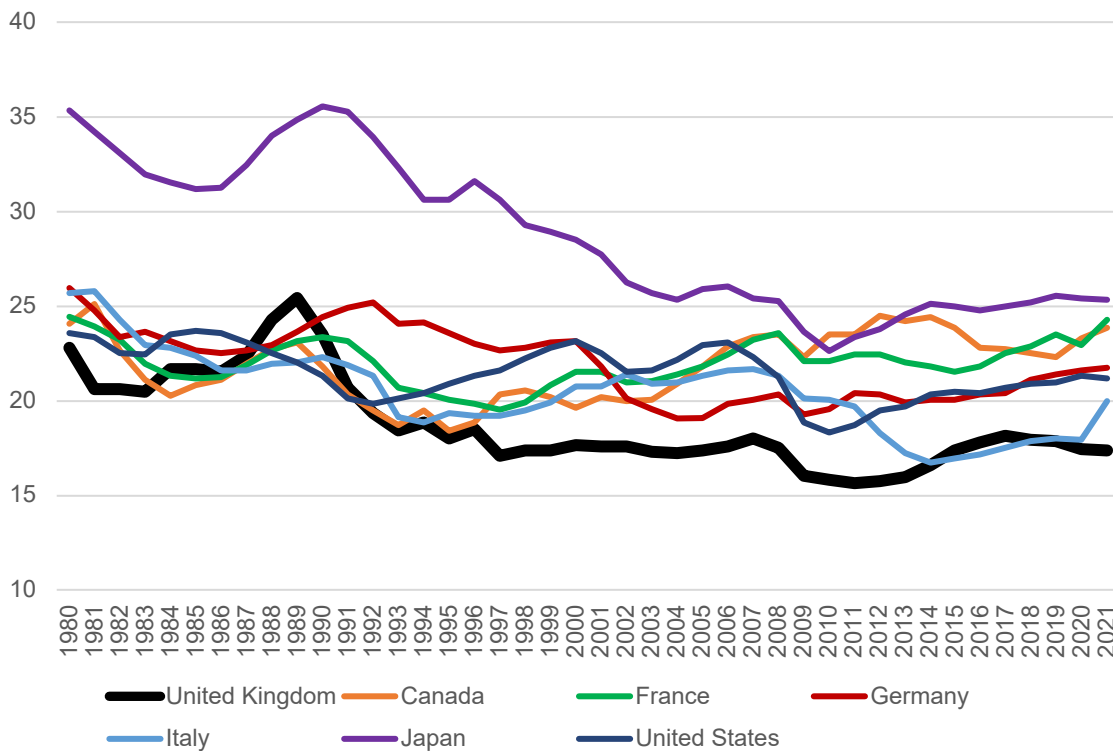
⁵ ONS (March, 2023) UK Economic Accounts - Main aggregates:
<https://www.ons.gov.uk/economy/nationalaccounts/uksectoraccounts/datasets/unitedkingdomeconomicaccountsmainaggregates>

⁶ ONS (October, 2021). GFCF by Industry Dataset.
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/annualgrossfixedcapitalformationbyindustryandasset>

⁷ ONS (March, 2023). Business investment headline data pre-1997:
<https://www.ons.gov.uk/economy/grossdomesticproductgdp/datasets/businessinvestmentheadlinedatapre1997>

We next focus more closely on the UK experience but return later to cross-country comparisons in discussing possible hypotheses for the observed patterns.

Figure 1: G7 Gross Fixed Capital Formation as a share of GDP (current prices)



Source: World Bank (n.d.) *World Development Indicators Database*.⁸

The next step is to look at GFCF by broad institutional sector (public, private, household), and in subsequent sections by asset type (plant & equipment, buildings etc), and by industry to see how these breakdowns inform the aggregate pattern. The investigation of the trends and comparison with other countries over the longer term is hampered by some gaps in older (pre-1997) data for the UK and some lack of comparability in definitions between countries.

⁸ World Bank (n.d.) *World Development Indicators Database*, based on countries' national accounts data. <https://databank.worldbank.org/reports.aspx?source=2&series=NE.GDI.TOTL.ZS&country=#> (Accessed 24/04/2023).

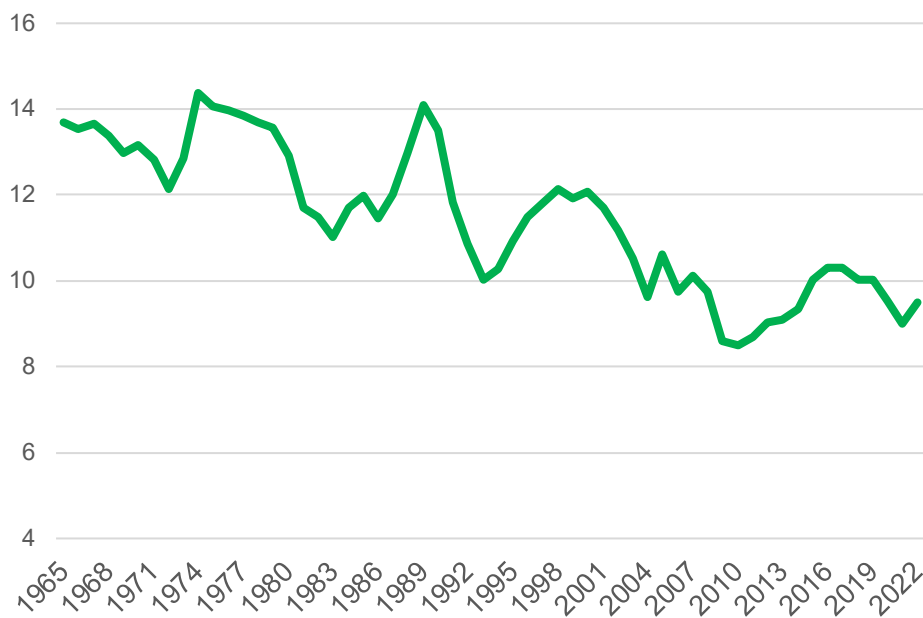
3. UK investment by institutional sector

Business investment

We begin, briefly, with business investment, a definition specific to the UK including both public and private corporations, but excluding government. It excludes investment in dwellings, land and costs associated with the transfer of ownership of non-produced assets. Although not useful for comparative purposes, there is a longer run of data. A newly-published ONS series splices pre-1997 data onto the 2022 Blue Book-consistent data and thus covers a longer period. For 1997 onwards, the data is consistent with the 2022 Blue Book, but the pre-1997 data does not account for the methods changes contained in the accounts (e.g. the capitalisation of R&D spending from 2014) or deflator changes – which may have under/over-stated growth rates in R&D pre-1997. With this note of caution, Figure 2 suggests a consistent downward trend, followed by a brief pickup at around 1989, after which – with an obvious cyclical pattern – business investment has amounted to about 9-10% of GDP. It saw a steep decline during and after the early 1990s recession and has yet to recover to its pre-1990 levels. One hypothesis about the improvement of about 1 percentage point of GDP in the late-1980s would be that it reflected increased investment by newly privatised state corporations. For example, one study (Florio 2003) found a significant switch from labour to capital and hence increased investment by British Telecom. Improving investment and productivity, when free from government control, was one of the rationales given for privatisation. But we have not been able to find any systematic assessment for the whole group of privatised corporations. The decline in business investment in Figure 2 is consistent with the overall decline in UK GFCF shown in Figure 1 (Department of Trade and Industry, 2006; Wilkes, 2022, p.4).

Looking at the data in Chained Volume Measures (CVM) suggests a different story (see Figure A2 in Appendix). Reflecting trends in the price of some investment goods, in CVM, investment appears to have increased in the post-1980 period, dipped briefly in the early 90s, picked up shortly after and has remained relatively stable, except for the clearly expected dips during the financial crisis and Covid.

Figure 2: UK business investment as a share of GDP (current prices)



Source: ONS (March, 2023) - Business investment headline data pre-1997

Private vs public sector

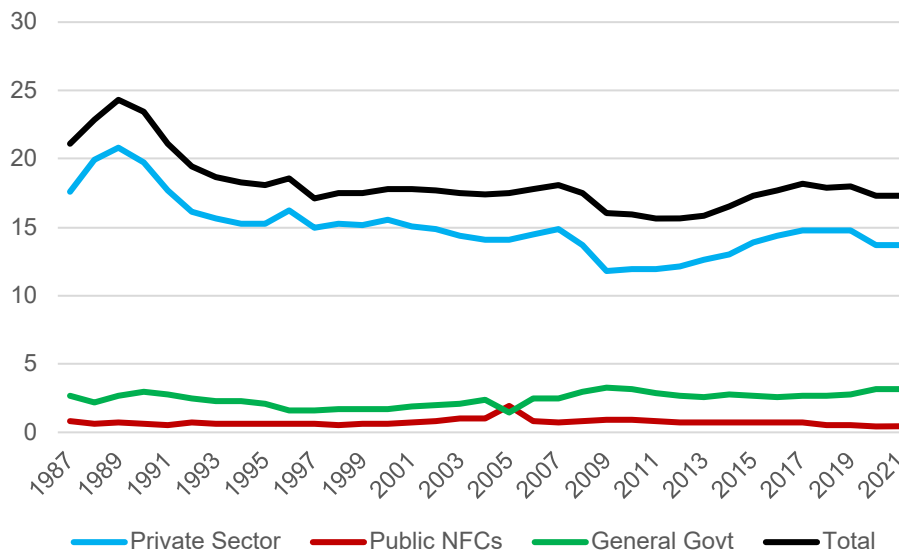
The next breakdown we explore is that between private and public sectors. (Note that private sector investment is not the same as 'business investment'.) Figure 3 shows UK private and public (public corporations and general government) sector investment as a share of GDP, from 1987 to 2021.

The private sector portion (which includes privatised corporations, household investment and investment by non-profit institutions serving households) is much larger and dominates the overall profile. Again, the cyclical effect is clear, with dips during the early 90s recession, the Global Financial Crisis (GFC), and the pandemic. There may be a compositional effect due to the transfer of former public corporations such as water and electricity companies to the private sector, as the transferred entities have a much lower level of investment. Nevertheless, the decline in private sector investment in the UK in the early 1990s is clear, especially when compared with other countries (see Figure 4);⁹ and is consistent with the declining business

⁹ The OECD's categorisation of 'private sector' investment does not include 'household investment', whereas the ONS groups these two together, alongside investment by 'non-profit institutions serving households (NPISHs)'. This is why there is some difference between Figures 3 and 4 in the UK's profile.

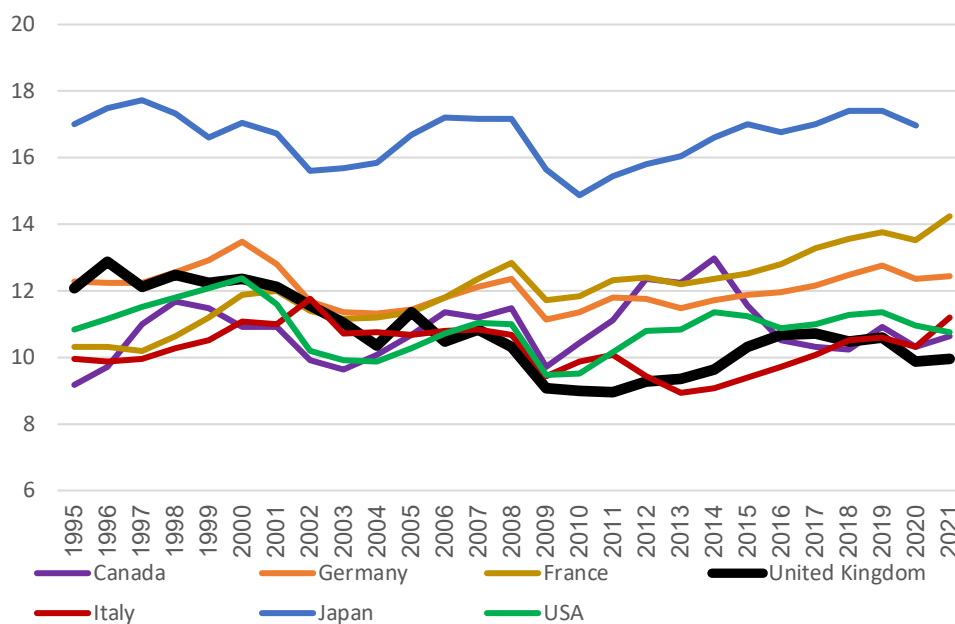
investment pattern noted above. The private sector component also includes dwellings, however – we return to this below.

Figure 3: UK GFCF by institutional sector as a share of GDP (current prices)



Source: ONS (January, 2023) - GFCF supplementary tables; ONS (March, 2023) UK economic accounts main aggregates.

Figure 4: G7 Private sector investment as a share of GDP (current prices)¹⁰



Source: OECD (n.d.)– Investment by sector (accessed 26/04/2023)¹¹

¹⁰ The spike for the UK manufacturing in 2005 (Figure 4), and in the public NFCs in Figure 3, relates to the BNFL’s crystallisation of its assets.

¹¹ <https://data.oecd.org/gdp/investment-by-sector.htm#indicator-chart>

4. Investment by asset type

Next, we look at investment by asset type. The asset hierarchy is shown in the Appendix, Figure A1. Figure 5a shows the proportions of different asset types making up total fixed investment, in current prices, from 1987 to 2020. The category Equipment, machinery and weapon (including ICT equipment) made up the largest share, at around one-third to one-quarter in the late 1980s, but began to decline in the mid-90s, and stands now at about 16% of the total. The category Other buildings & structures¹² currently makes up the largest share, at around 25-27%, followed by Dwellings and Intellectual property products, which each constitute about 20-24% of the total. The share of intellectual property products has increased substantially over time to reach almost a quarter of the total.¹³ This has not occurred at the expense of any other single category.

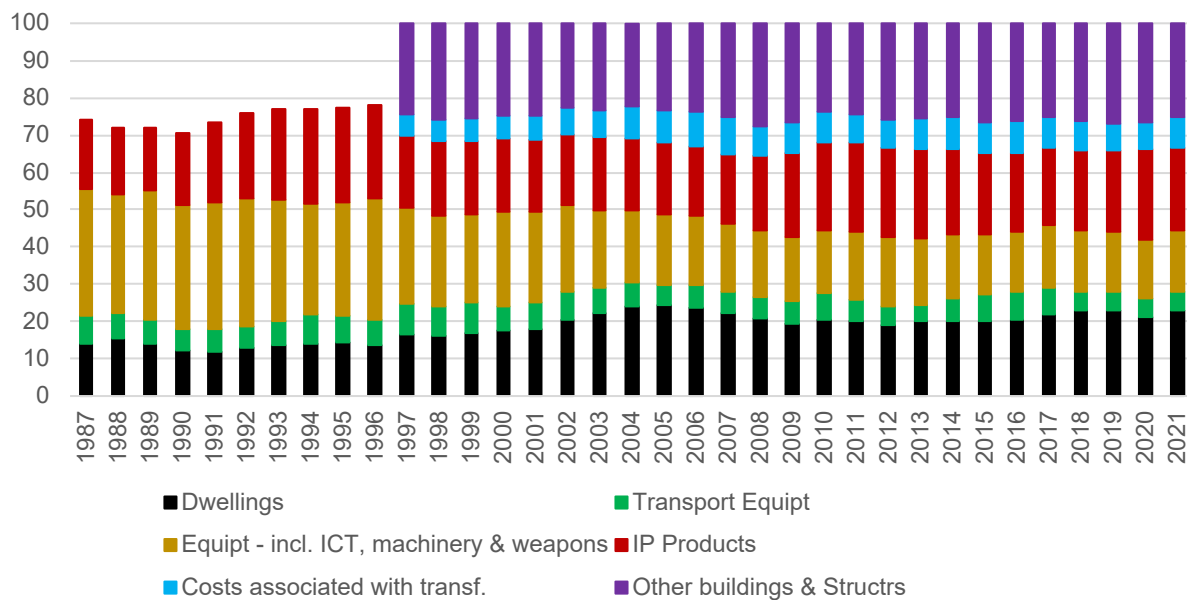
However, a breakdown of this data in CVM shows a slightly different picture of both trends and shares, reflecting differential price movements (see Chart A3 in Appendix). As opposed to equipment, machinery and weapon (including ICT), the category 'other buildings & structures'¹ makes up the largest share in the CVM breakdown – at around one-third to one-quarter, while dwellings account for another 20-25% of the total – both more than equipment, plant and machinery which makes up roughly 12-20%. CVM measures of investment in IP products shows a similar trend as with current prices.

Figure 5b shows the same data as a share of GDP over time. This suggests a story of two parts. The sharp fall in the early 1990s is most striking in the categories of Equipment and machinery, and to a lesser extent Dwellings. Investment in Equipment and machinery has not recovered since, while Dwellings witnessed a temporary rise during the housing boom, soon cut short by the global financial crisis. On the other hand, investment in nearly all asset categories, with the exception of equipment and machinery, has remained relatively flat since the financial crisis.

¹² Other buildings include commercial buildings, industrial buildings, and buildings used to provide public services (for example, schools and hospitals). Other structures include for example, transport (roads, railways, runways, ports), energy and communications infrastructure.

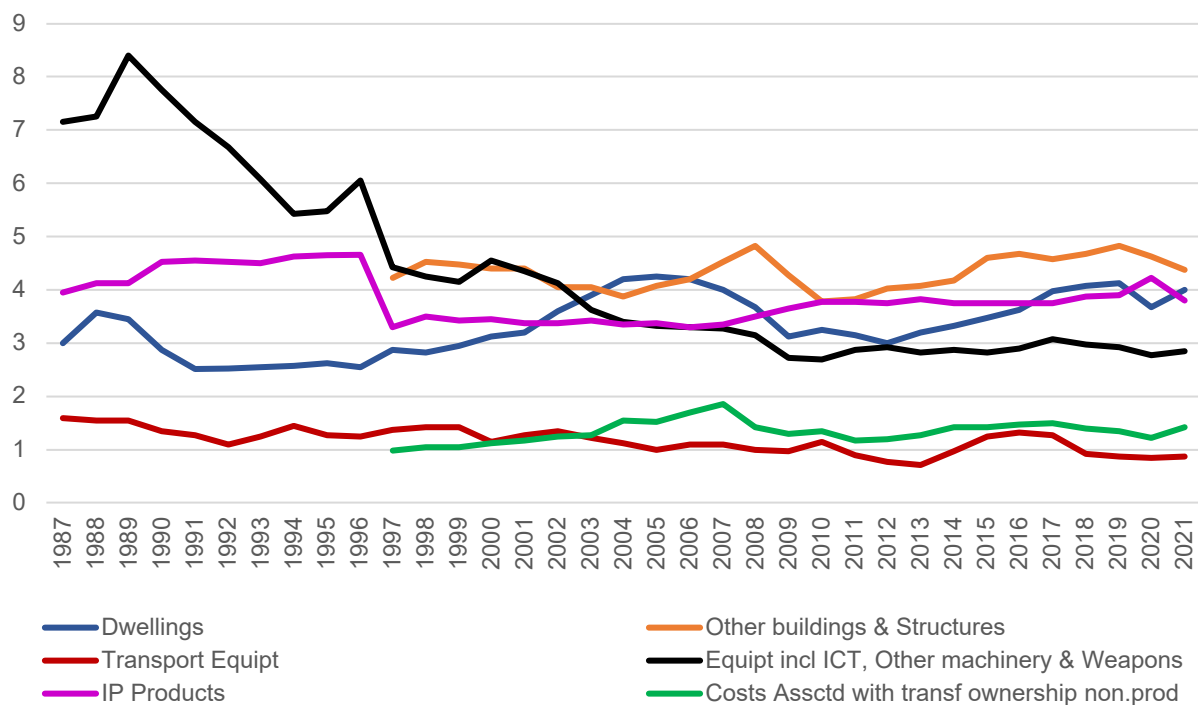
¹³ Note the data discontinuity in 1997. The intangible assets that are not currently capitalised in the UK National Accounts include branding (purchased and own account), design (purchased and own account), financial product innovation, organisational capital (purchased and own account), and firm-specific training. When these uncapitalized intangibles are included, the proportion of intangibles is closer to a half than a quarter.
<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/investmentinintangibleassetsinthekbyindustry/2019>

Figure 5a: UK GFCF by asset types, as % of total GFCF (current prices)



Source: ONS (January, 2023) - *GFCF supplementary tables*. The categories “Other buildings & Structures” and “Costs associated with transfer of ownership of non-produced assets” start only in 1997.

Figure 5b: UK GFCF by asset types, as a share of GDP (current prices)



Source: ONS (January, 2023) - *GFCF supplementary tables*

The slight improvement (2015-2018) in Transport equipment investment seems to be linked to imports of aircraft or aircraft leases.¹⁴ This breakdown by asset types also seems to display the same pattern of a post-1990 decline seen in business investment and overall GFCF, suggesting that those were likely mainly driven by the sharp drop in Equipment and machinery. Although the business investment data are not constructed on the same national accounts basis, the emerging disappointing story is consistent.

A different pattern is evident in the CVM data – shown in Chart A4 in the Appendix. It shows a higher share for investment in dwellings throughout, although a similar profile, likely due to some extent to rising prices for these assets; and much lower investment share for equipment before 1997 and therefore not the steep share decline shown in Figure 5b above, likely to some extent reflecting falling prices for some types of asset. Post-1997 the current price and constant value shares for this category are similar.

5. Investment by sector

Turning to investment by different industries, the current national accounts data are available only from 1997 (see ONS, 2021 as in footnote 6). While a longer historical time series is available from the recent experimental capital services estimates,¹⁵ the data for some of the sectors (Construction and Real estate) does not match the standard national accounts data for 1997 onwards.

Looking at the national accounts GFCF data first, Figure 6 shows the investment expenditure for eight sectors (as share of GDP) from 1997: mining, manufacturing, energy, construction, transportation, information and communications, finance, and real estate.¹⁶ Investment is flat to declining in all cases, with the exception of real estate, which experienced continual increase up until 2007, but has been broadly flat since. A peak in manufacturing is also seen in 2005, connected with British Nuclear Fuels (BNFL)'s crystallisation of its assets.¹⁷ In any given year

¹⁴ The shares will be the same in current price and CVM terms only in the reference year. See ONS (2019, March 29). 'Business investment in the UK: Analysis by asset' <https://www.ons.gov.uk/economy/grossdomesticproductgdp/articles/businessinvestmentintheuk/analysisbyasset>

¹⁵ ONS Capital Services Estimates (April, 2022). <https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/capitalservicesestimates>

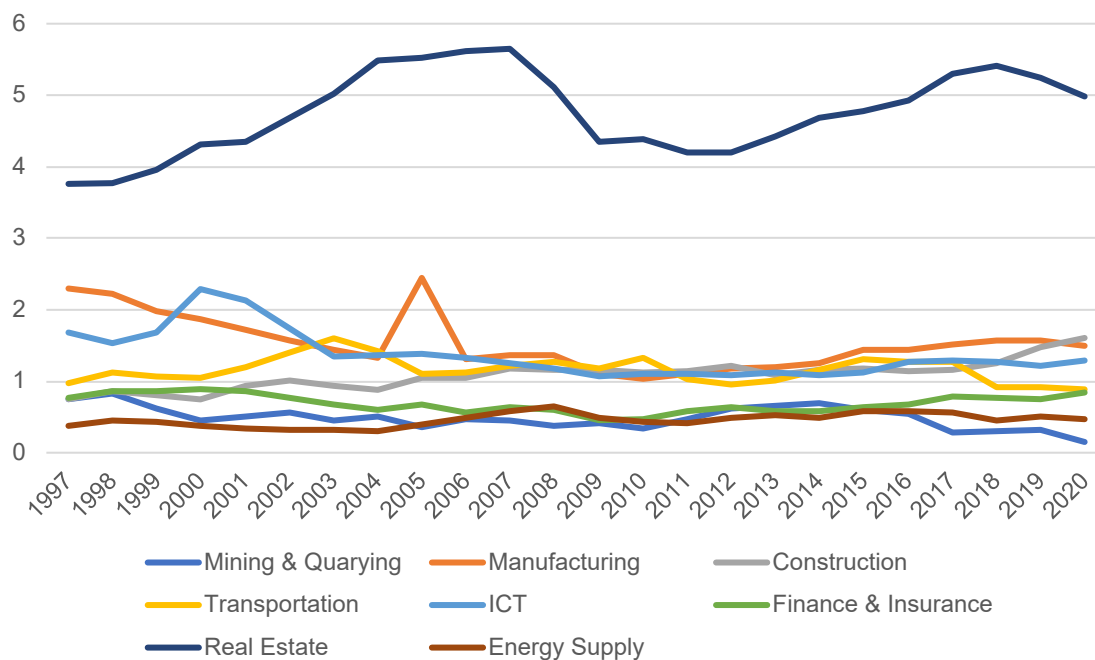
¹⁶ SIC codes B, C, E, F, H, J, K, L

¹⁷ <https://publications.parliament.uk/pa/cm200405/cmselect/cmtrdind/466/466we02.htm>

though, real estate accounts for the largest share of investment, at least 30-40% of the total for these eight. It is generally followed by manufacturing and then ICT.

As noted, there is no longer-run national accounts consistent time series,¹⁸ but Figures 7a-7c, based on the ONS 2022 experimental capital services estimates,¹⁹ respectively show historical data (in current prices) for GFCF in manufacturing, ICT and finance sectors as a share of GDP. For manufacturing, the series shows several sharp declines during recessions without a subsequent recovery, in the 1960s, the 1980s, and the early 1990s. Post-1997, it has a similar profile to the national accounts data.

Figure 6: UK GFCF by selected industries as a share of GDP (current prices)



Source: ONS (October, 2021) - GFCF by industry dataset

¹⁸ For example, the latest ONS' annual GFCF by industry dataset used for Figure 6 runs from 1997-2020, whereas the capital services dataset contains the same information on GFCF by industry for a longer time series, from 1950 to 2021. Both datasets are largely comparable for most sectors, (with very negligible difference in the figures for some sectors, e.g. Finance); however, 2 industries (construction and real estate) in the *Capital Services Estimates* are not comparable with the *Annual GFCF by Industry dataset*.

¹⁹ ONS Capital Services Estimates (April, 2022).

<https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/capitalservicesestimates>

The decline in manufacturing investment over time therefore looks like a strong candidate as a driver for the overall disappointing UK investment picture. This decline tallies with the structural decline of manufacturing and corresponding rise in the share of other industry sectors, which have a lower level of investment. When we look at investment by services sectors such as Finance and ICT as share of GDP over the same time period (see Figures 7b and 7c noting the different Y axis scales), the profile of investment is increasing over time up to the early 1990s. Yet, all three sectors have seen a decline in their investment to GDP ratio since around 1990, so the structural decline of manufacturing is not the whole story.

Figure 7a: UK fixed capital formation in manufacturing as a share of GDP (current prices)

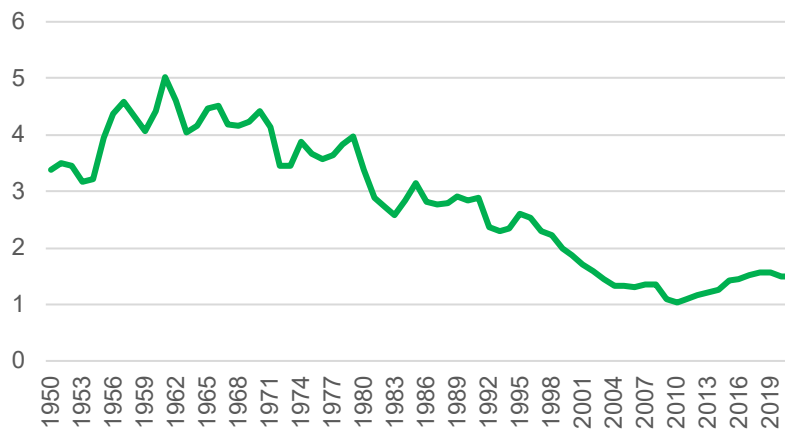


Figure 7b: UK fixed capital formation in ICT as a share of GDP (current prices)

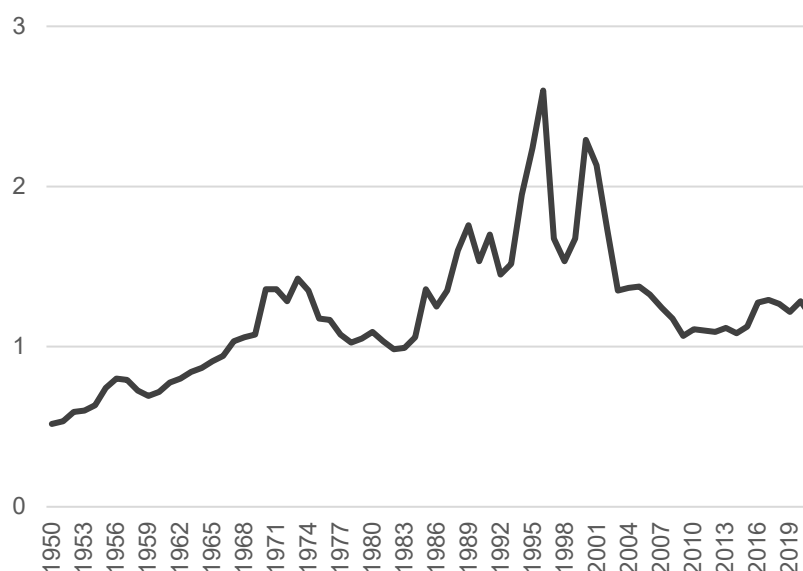


Figure 7c: UK fixed capital formation in finance and insurance as a share of GDP (current prices)



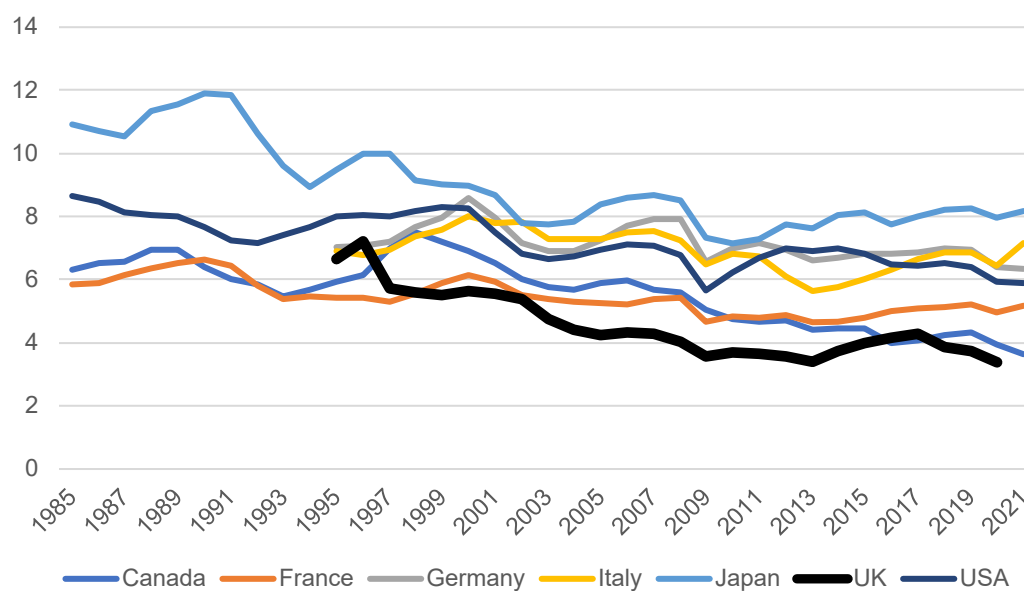
Source: ONS (April, 2022) *Capital services estimates*.

6. Cross-G7 Comparisons

How have these different slices through the data helped explore the UK's investment performance? They suggest the following questions where cross-country comparison would be useful. First, is the UK investment in equipment (including ICT equipment, machinery and weapons) and in other buildings and structures, the two largest components, in line with its peers; what is the profile of investment in these two asset categories in other countries over time?

Beginning with equipment (Figure 8), based on the OECD data, national accounts for the UK, Germany, and Italy begin in 1995, while the USA, Canada, Japan and France provide data back to 1985. Compared to its peers, in the late 1990s to the early 2000s, the UK saw the steepest decline in investment in this category, in which it continues to have the lowest level of investment in the G7 as a share of GDP.

Figure 8: G7 - GFCF, equipment, machinery and weapons as a share of GDP (current prices)



Source: OECD (n.d.) - *Capital formation by activity*²⁰

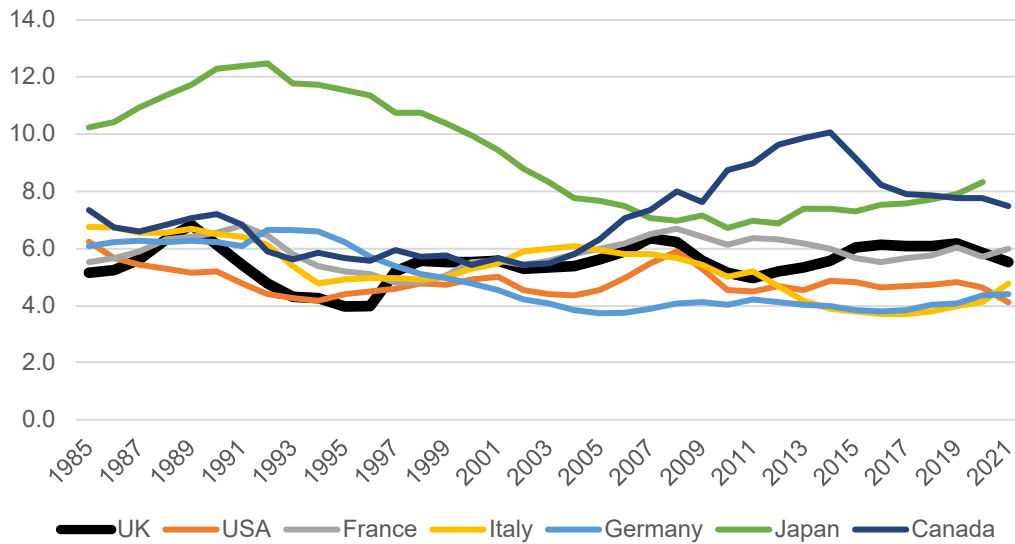
The picture in investment in other buildings and structures is not much different (Figure 9). All G7 economies experienced a fall in this category in the early 1990s, with the strongest effects in Germany and Japan (although Japan still has the highest investment share here despite also seeing the largest decline since 1993). Canada experienced a decade of recovery and fast growth between 2002 and 2014, but the share has continued to decline since. Investment in the UK follows the same downward trend as other countries, but is also the lowest among its peers – closely trailed by Italy.

Turning to investment in dwellings (Figure 10), since the early 90s all the G7 except Canada have seen a flat or declining profile (the decline in the US began post-financial crisis). However, the UK's investment in dwellings has been the lowest among G7 countries in the last three to four decades; it remained flat for the period 1991 to 1998, witnessing a temporary increase between 2001 and 2007 due to the housing boom of that period. Post-2008, investment in dwellings in

²⁰ OECD (n.d.). Investment by asset data
<https://stats.oecd.org/index.aspx?r=450380#> (Accessed 11/09/2023).

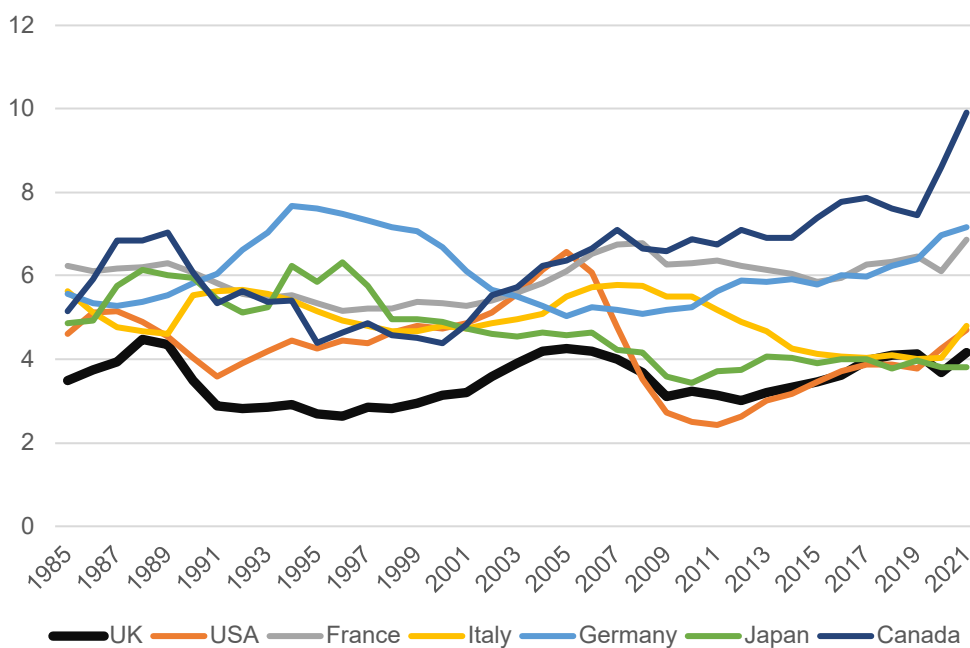
the UK is now at similar levels to pre-1990. The US shows a similar profile, albeit harder hit by the financial crisis; its investment in dwellings stands at a similar share of GDP as the UK.

Figure 9: G7, GFCF in other buildings and structures as a share of GDP (current prices)



Source: OECD (n.d.) - *Investment by asset data* (Accessed 26/04/2023)²¹.

Figure 10: G7 GFCF in dwellings as a share of GDP (current prices)

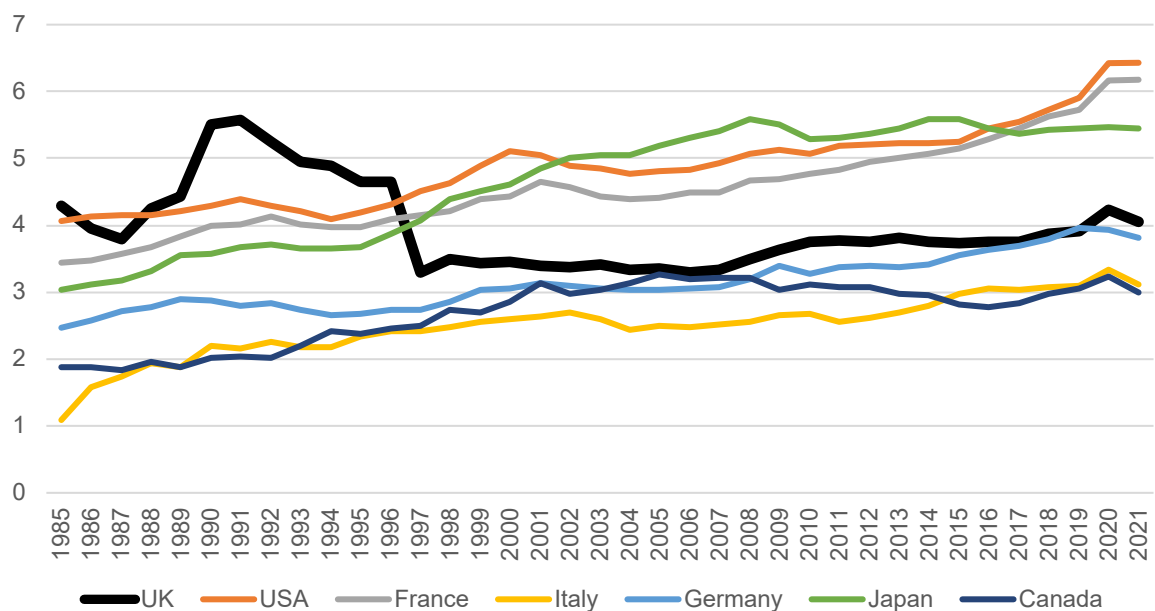


Source: OECD (n.d.) - *Investment by asset data*.

²¹ OECD Investment by Asset (Current Prices) <https://data.oecd.org/gdp/investment-by-asset.htm#indicator-chart> (Accessed 26/04/2023)

The picture for IP products (Figure 11) is somewhat distinct: the UK started out as having the highest investment as a share of GDP among the G7 from the mid-80s up until the late 90s, then fell and remained relatively flat until about 2006, when it began to slowly pick up again (see Figure 11). However, the sharp discontinuity in the data series for the UK in 1997 looks distinctly odd so not too much should be read into this. In contrast, other economies have seen a steady increase since this period, with the slight exception of Canada which showed increased investment for a while but began to decline from 2009. Here too the constant value measure shows a slightly different pattern, with a weaker increase over time in these investment shares (Appendix Figure A5). This suggests IP products have seen increasing relative prices, which is puzzling and worth exploring, as this seems to differ from other countries.

Figure 11: G7 GFCF in IP products as a share of GDP (current prices)



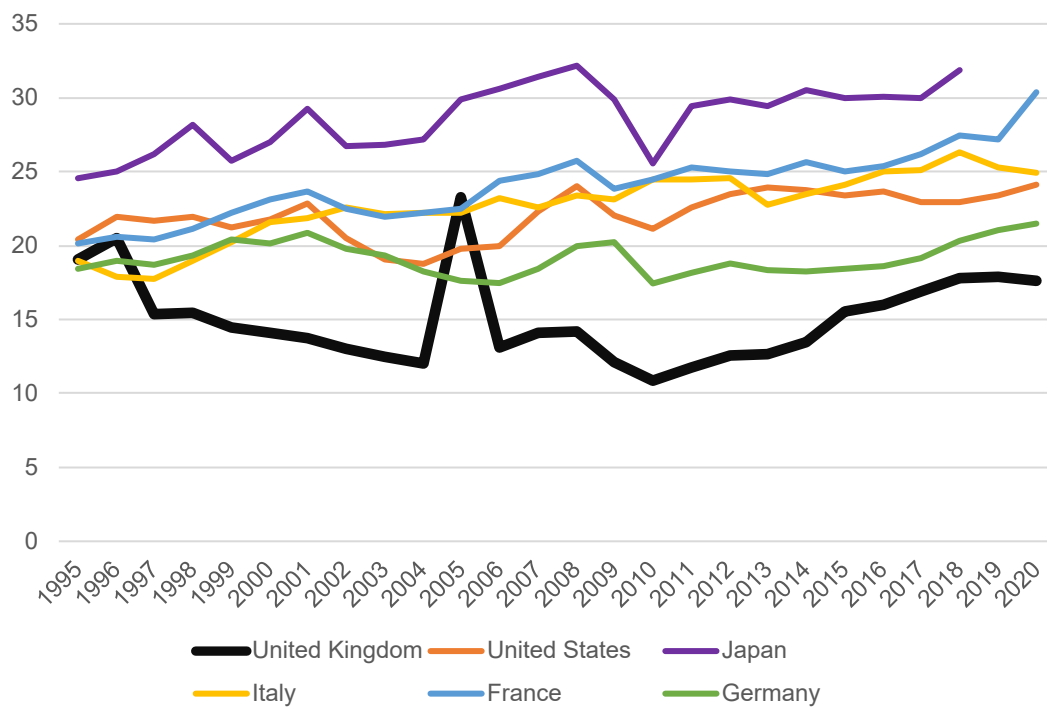
Source: OECD (n.d.) - *Investment by asset*.

7. The role of structural shifts

All six of the G7 countries examined have experienced a decline in the manufacturing share of GDP, but to varying degrees (Canada is excluded due to lack of data). To take account of this varying pattern of sectoral shifts, we also examine investment in each sector as a share of its own gross value added. Figure 12 shows GFCF in the manufacturing sector as a share of its GVA,

rather than GDP.²² On this basis, investment in Japan’s manufacturing sector is the highest among the G7 countries. While investment as a share of manufacturing GVA in Japan, France, Italy and the USA has either seen a slight growth or remained stable, compared to their mid-1990s levels, the UK saw a more substantial decline in the 1990s when compared to its peers. The last ten years show a recovery, albeit to a level still lower than the late 1990s. As there was no recovery in UK manufacturing investment as a share of GDP in the last ten years, the larger decline in manufacturing’s share of GDP in the UK than elsewhere is evidently part of the story.

Figure 12: G7 - GFCF in manufacturing as a share of manufacturing GVA (current prices)



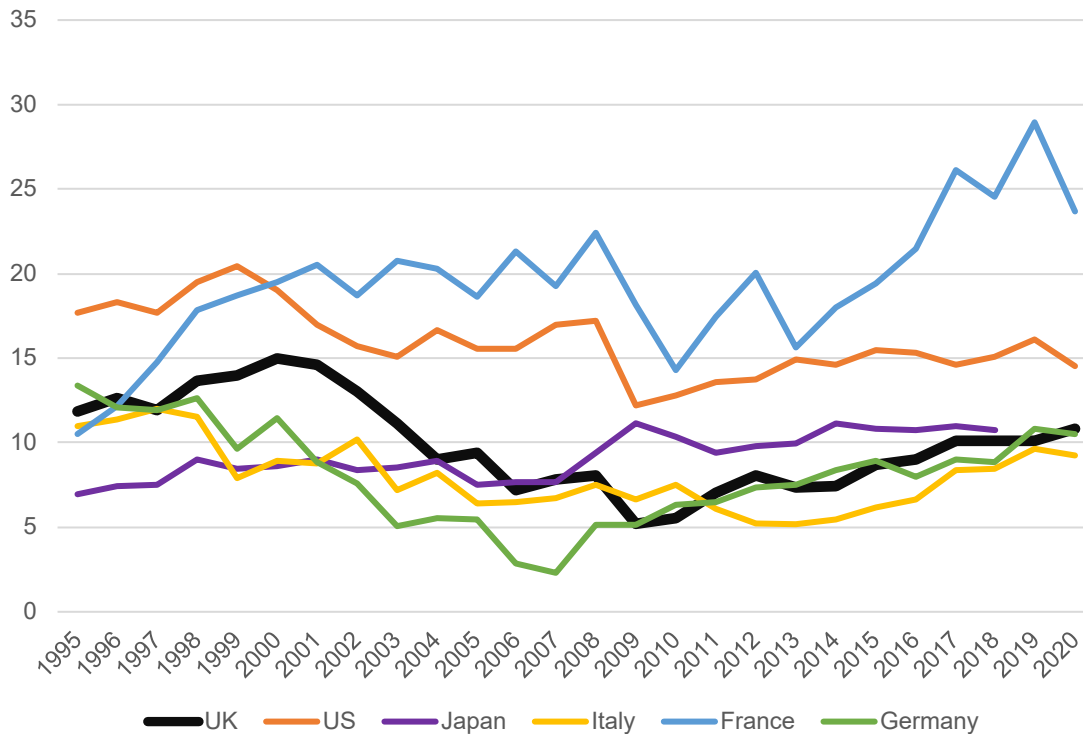
Source: EUKLEMS & INTANProd (2023). As before, the UK 2005 spike is due to BNFL.

How then does the UK compare to other leading economies in the two sectors whose share of the economy has increased as manufacturing has declined, finance, and ICT? Figure 13 shows investment in financial and insurance activities. In fact, investment in the sector declined or remained broadly flat across the whole period since 1995 in all of them except France. The smallest decline is seen in Germany and Italy. In the last ten years however, all countries, including the UK, have either remained flat or seeing some growth. Turning to ICT, in Figure 14,

²² From EU KLEMS and INTANProd Dataset (2023). This dataset does not include Canada. Although the OECD has the same dataset for all G7 countries (including Canada), the time period is different and quite inconsistent across countries, compared to the EU KLEMS data.

again there is a broad pattern of decline or broad stability in the investment share across all countries except France. However, the decline in the UK was larger and its path to recovery has been slower than the rest.

Figure 13: G7 - GFCF in finance and insurance as a share of finance and insurance GVA (current prices)

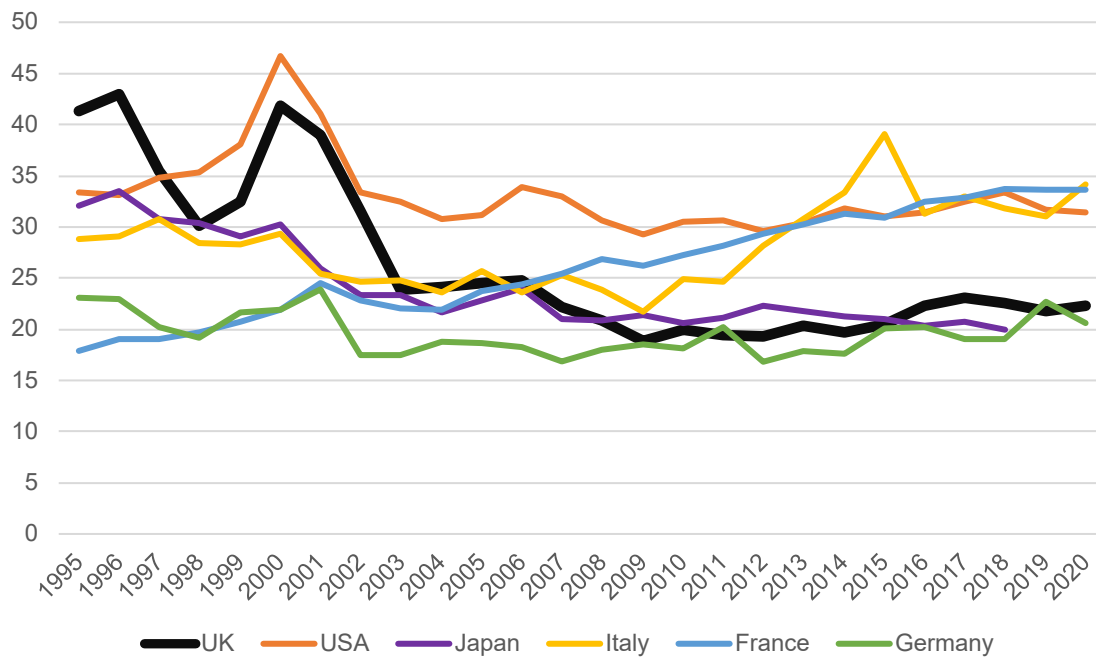


Source: EUKLEMS & INTANProd dataset (2023)

Figures 15 and 16 show investment shares of their GVA in two other industries: construction and real estate services. In these cases, the UK stands out for the rising trend 1995-2020, in contrast to flat or declining shares in the comparator economies. In the case of construction, the level is much higher than in the other countries, whereas it is at the low end of the pack in real estate, reflecting low investment in housing.²³

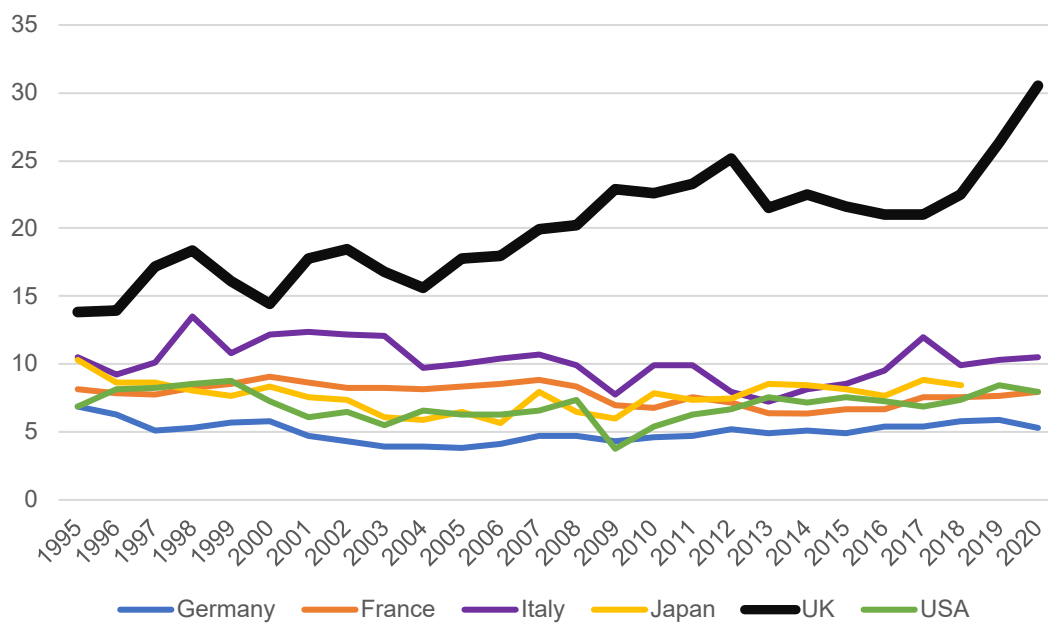
²³ In the UK, roadbuilding is allocated to the civil engineering industry.

Figure 14: G7 – GFCF in ICT as a share of ICT GVA (current prices)



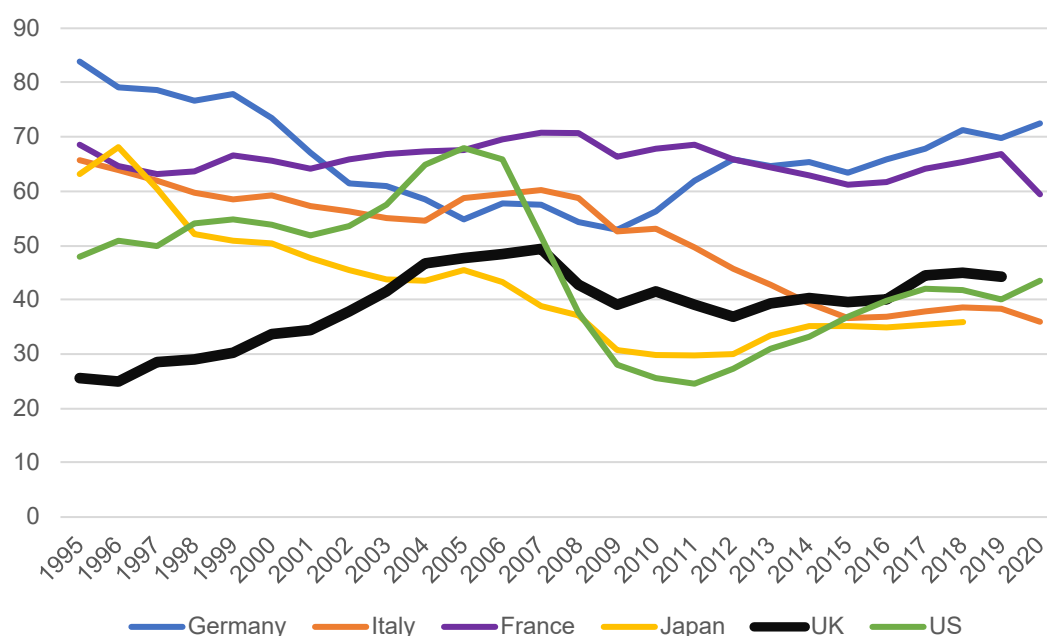
Source: EUKLEMS & INTANProd (2023)

Figure 15: G7 – GFCF in construction as a share of construction GVA (current prices)



Source: EUKLEMS & INTANProd (2023)

Figure 16: G7 - GFCF in real estate as a share of real estate GVA (current prices)



Source: EUKLEMS & INTANProd (2023)

8. Conclusions and hypotheses

This exercise confirms the existence of a fundamental and long-standing problem of low UK investment, compared to the past and to its G7 peers. All these countries experienced a decline in their investment-GDP ratio in the early 1990s, but the comparator countries generally experienced a lesser decline and a stronger recovery, whereas the UK investment ratio has remained lower than the others since the early 1990s recession.

Looking at different sectors and asset classes reveals the private sector, manufacturing industry, and plant and equipment assets, to be key drivers of the UK's investment under-performance. It would be useful to consider specifically the role played by the privatised industries, which were transferred from public to private sector with a relatively low investment level from the mid-1980s on; but this is unlikely to change the broad picture.

One hypothesis discussed here is that the disappointing UK aggregate pattern can be at least partly accounted for by a bigger structural decline in manufacturing and shift toward other, lower investment, industries in the UK than elsewhere. This is evidenced by the fact that a post-2010 recovery in investment in manufacturing relative to the sector's GVA is not matched by a recovery

in manufacturing investment relative to GDP. However, the UK has seen a relatively weak and declining investment performance relative to sectoral GVA across ICT and finance too.

Apart from the story of sectoral shifts, other hypotheses for the persistent and comparatively low UK investment figures could be:

- The abolition in 1984 of capital allowances for investment in plant and equipment. Although the capital allowances regime has changed many times before and since,²⁴ this previously favourable tax treatment particularly serving manufacturing has never been restored. The intention of the then-Chancellor, Nigel Lawson, was indeed to end the privileged tax treatment of manufacturing investment (Lawson 1992). Some studies have identified a clear effect of the 1984 corporation tax regime change in reducing investment (Neale & Hillyard 1986, Bond, Denny & Devereux 1993) but there does not seem to have been a recent econometric study of the regime and its many changes (but see Maffini, Ying & Devereux (2019) for a study specifically of accelerated depreciation allowances, finding a significant increase due to the reduced cost of capital). Business survey data does not highlight access to or cost of finance as important investment barriers, however (Lee et al 2020).
- Distinctive financial structures in the UK that discourage fixed investment with long-term returns, perhaps as opposed to returning profits to shareholders; or high leverage making repayments to bondholders a top priority (Christophers 2023); or unusually high hurdle rates of return related to the cost of capital. The interaction of corporate governance and financing structures is a principal focus of a recent analysis of low UK business investment since the mid-1990s, which recommends reform of pension legislation to enable funds to invest in riskier long-term projects and an enhancement of worker voice in company decisions (Resolution Foundation 2023).
- Inadequate complementary human capital, especially in the context of technological change and technological uncertainty. There is a large literature on skills shortages and

²⁴ HMRC Capital Allowances Manual <https://www.gov.uk/hmrc-internal-manuals/capital-allowances-manual/ca10040>

mismatches in the UK (see Nelles et al (2022) and Industrial Strategy Council 2019 for recent overviews).

- Other constraints such as inadequate complementary infrastructure, low quality management or poor corporate governance (Driver & Temple 2013). In some sectors (such as Finance) excess regulatory burdens have been blamed. Poor quality of management is another possible culprit (Bloom, Sadun & Van Reenen 2017).
- Policy uncertainty, given the UK's record of inconsistent supply-side policies (see eg Coyle & Muhtar 2023a), or due to macroeconomic uncertainty (Baker et al 2016; Davis 2019); and risk or returns affected by lack of policy co-ordination (Coyle & Muhtar 2023b). As the Resolution Foundation (2023) points out in a recent report, corporate taxation is another area where policy has been volatile and inconsistent; its central recommendation is a stable, long-term economic strategy to provide enough assurance to private businesses to make long-term investments.

Like a classic murder mystery with many culprits, the UK's poor investment (and productivity) performance is likely to be due to a combination of all or many of the above reasons, and given that they interact, econometric identification will be challenging but important for policy recommendations. It would also require longer run time series on a consistent basis, and across countries, for all the key variables. Qualitative research and management surveys could be useful sources of evidence to establish priors on the different possibilities.

In any case, there is little downside in addressing the issues in this list, whatever their role turns out to be in determining investment levels. Investment is a vote of confidence by people and businesses committing their money and effort to a better, more productive future at the opportunity cost of current consumption. Confidence in the UK's future by this metric is low and has been declining; it must be a high priority for any government.

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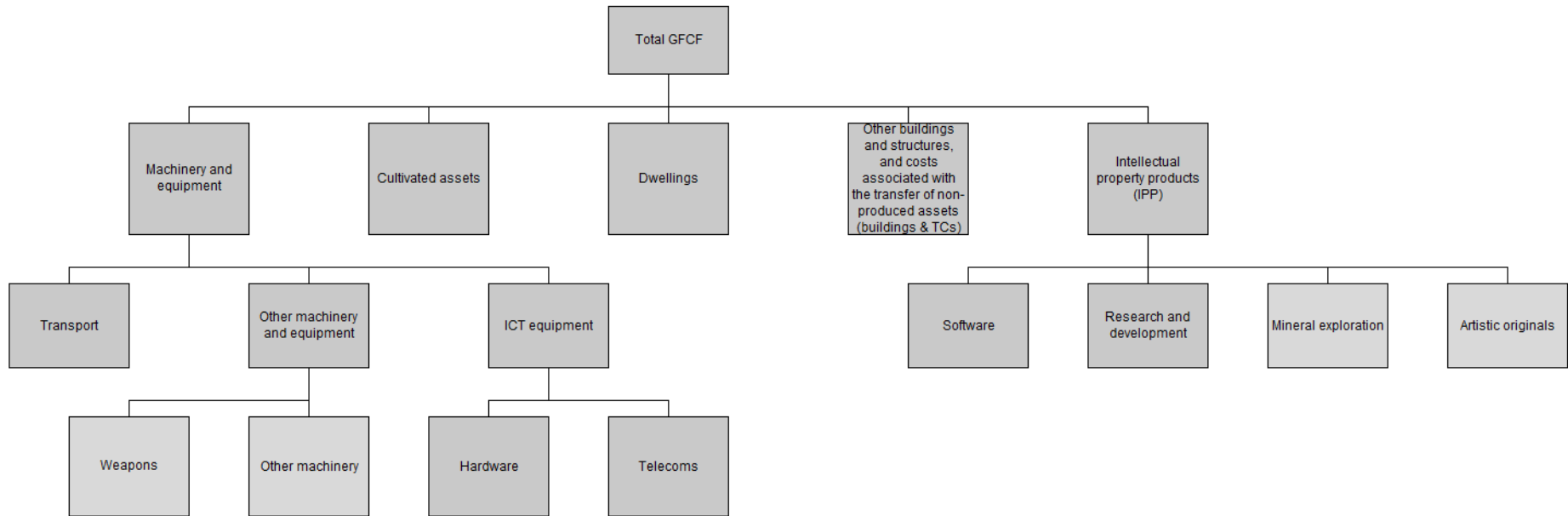
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Appendix

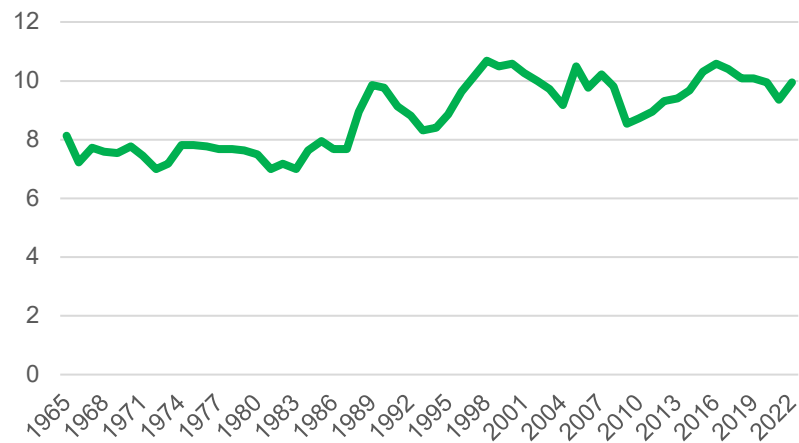
Figure A1: The asset hierarchy



Assets included in these tables
Assets not included in these tables

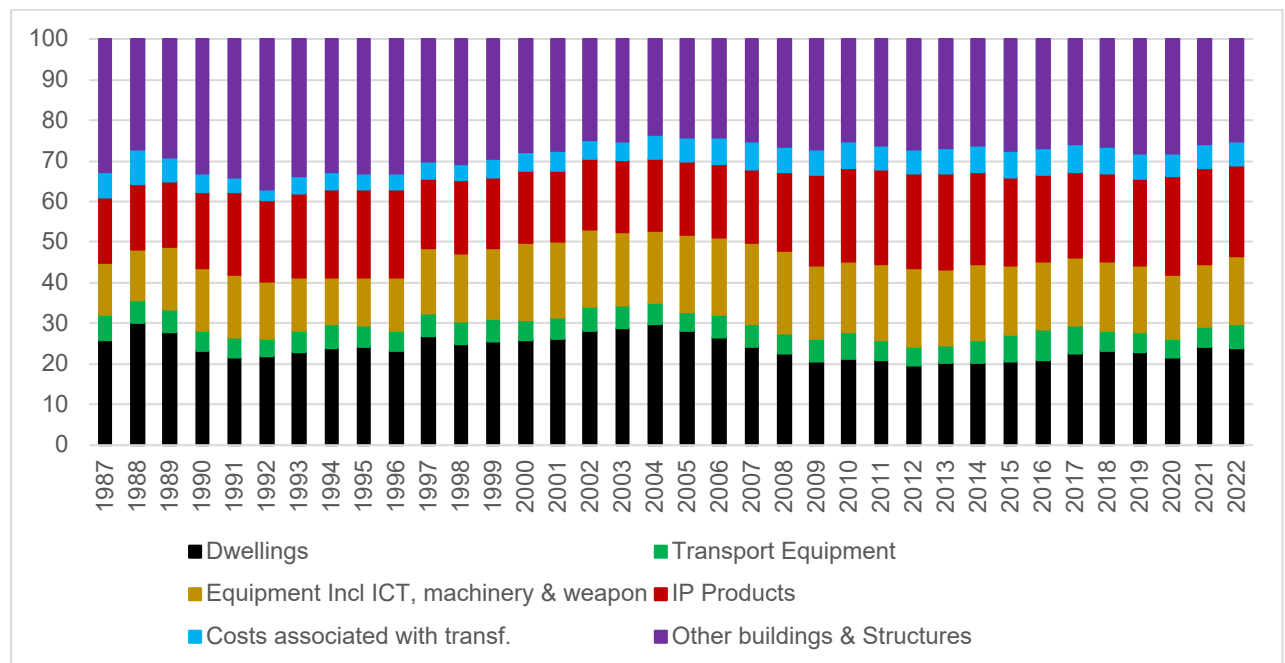
Source: ONS (2021)

Figure A2 - UK business investment as a share of GDP (Chained Volume Measures, 2019)
(Compare with Figure 2)



Source: ONS (March, 2023)- Business investment headline data pre-1997

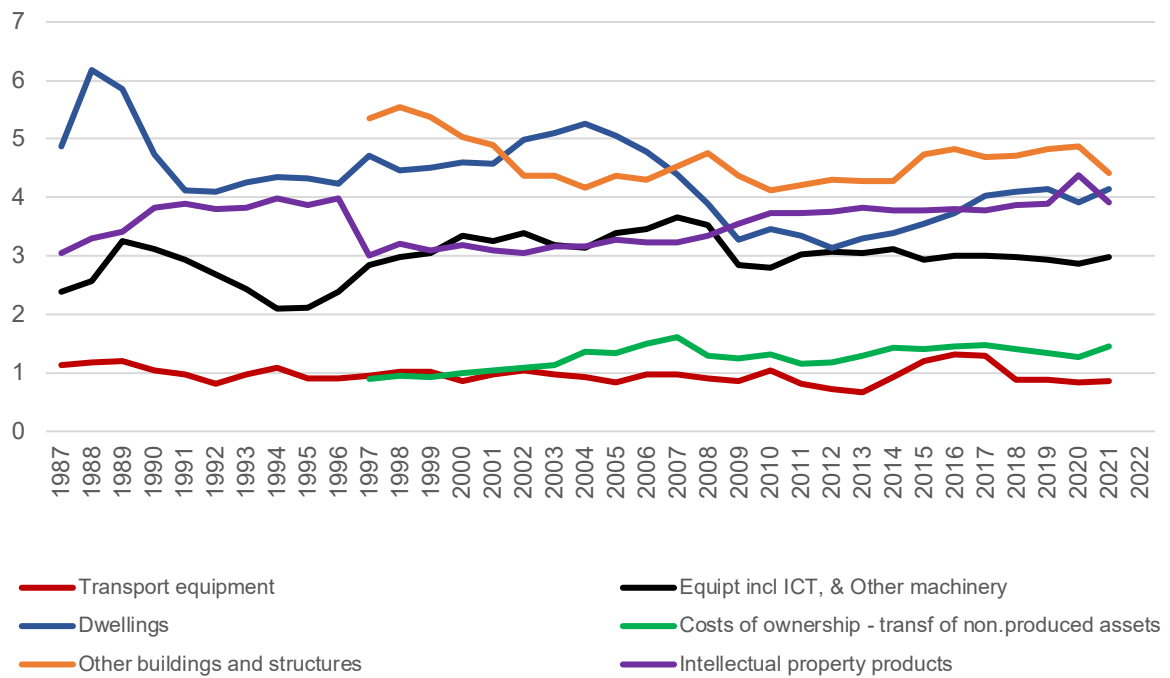
Figure A3 - UK investment by asset type UK GFCF by asset types, as % of total GFCF (Chained Volume Measures, 2019) (Compare to Figure 5a).



Source: ONS (January, 2023) - GFCF supplementary tables

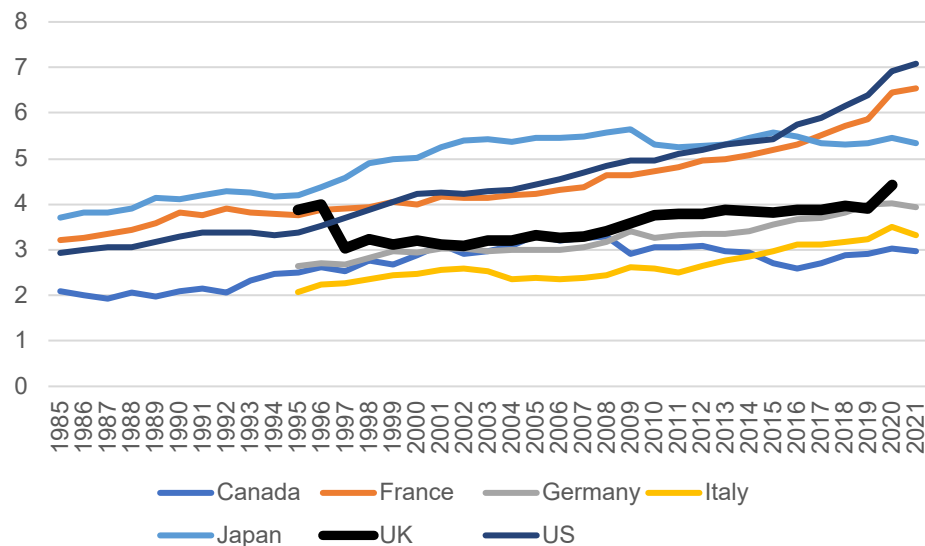
For 1987-1996, data for the category 'other buildings and structures' was not provided; it is calculated as the residual of the sum of other categories from the total.

Figure A4 UK GFCF by asset types, as a share of GDP (Chained Volume Measures, 2019). (Compare to Figure 5b)



Source: ONS (January, 2023) - GFCF supplementary tables

Figure A5: G7 GFCF in IP products as a share of GDP (constant prices, countries' national base year) (Compare to Figure 11)



Source: OECD (n.d.) - Capital formation by activity. Data for the UK, Germany and Italy only begin from 1995 for this series (constant prices).



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