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A radical proposal to achieve a step-change improvement in the UK's growth rate: Submission to the IPPR Economics Prize

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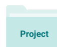

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Deep-rooted institutional changes can promote public capital and cut down on international capital

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Summary

A radical plan for the UK cannot be about raising taxes here and cutting them there, redistributing some income, altering government spending, carrying out some foreign currency interventions or modifying the regulation of the private sector. Instead, this analysis shows that growth rates in the UK are low because of excessive international capital inflows and insufficient public capital. Both these developments are caused by two long-standing errors that require radical game changers.

A radical plan requires separating the helpful from the harmful institutions. It must uncover logical and political reasons for distorted policies. It must find actionable measures that are unilaterally advantageous and do not fall victim to the pressures of protracted international coordination and competition. It must also embrace parts that interact and integrate into a consistent overall plan.

The UK's business dynamics undermines the foundation of its own success

The Institute for Public Policy Research (IPPR 2018) has made a first wave of radical proposals, involving for example industrial policies, improved employment rights, better corporate governance and devolved public institutions. The point of departure for my plan differs in a variety of respects. First, it identifies how the UK's business dynamics undermines the foundation of its own success. Economic conditions for individual businesses in the UK are among the best in the world, but these individually beneficial conditions are dismal on an aggregate scale. This implies focusing reform on two measures that are essential to stop this erosive development and will work as game changers: Limits to capital inflows and high levels of public investment.

Trusting public capital rather than international capital is the key to growth

For a long time, the idea has prevailed that openness to international capital boosts growth. It has been assumed that capital inflows translate into local investment and technology transfers, this way bringing jobs and high-quality growth to the UK. This was wrong largely due to a 'fallacy of composition'*:* measures that are individually advantageous can be detrimental at the aggregate level. The fact that capital inflows do not lower the aggregate costs of borrowing and induce an overvalued currency that impedes the UK's industry has been overlooked. My radical plan strips shell companies in tax havens of their legal capacity, effectively hindering capital inflows.

For a long time, the view that markets are superior to government planning has guided politics. Government has been cut down and services contracted out to private companies. This policy did not fully recognise the size of transaction costs. It has failed because it did not take advantage of the UK's institutional strength, namely its public sector that is free of corruption. It has failed because it hindered public investments. My radical plan enables higher employment in key areas of the public sector and cost-plus contracts with private companies, both of which render public investments politically and economically more attractive.

Many economists have not fully understood these two dismal developments. For one, they have been preoccupied with a focus on high-powered extrinsic incentives of open capital markets and the private sector, failing to observe how financial openness can backfire and downplaying the role that a strong public sector can play. Second, they lost sight of the deep-rooted institutions that are responsible for aggregate effects. This has withheld identification of private sector institutions that are harmful and public institutions that perform superior.

My radical plan ends the legal capacity of shell companies and increases public employment

This document identifies shell companies in tax havens as the harmful institutions that should be abandoned . These should be stripped of their legal capacity, which will achieve two advantageous effects at once: limiting capital inflows and at the same time fighting tax evasion and avoidance. This has two favourable consequences. First, the British pound will depreciate, supporting British industry and exports. Second, it will increase tax revenues. These tax incomes allow the government to take advantage of a sector that promises high productivity gains, the public sector. Public institutions must be reorganised and the idea that investments can be completely planned in advance and contracted out at fixed prices must be abandoned. This will ensure that politicians find it attractive to promote public investment rather than selling Britain to international capital.

Public institutions are also at the heart of decarbonisation and growth rates that respect the environment. Much has been achieved by cooperating with the private sector, but coordination failures have recently caused setbacks . The government must substantially increase public investments in order to overcome this failure. It must build up an infrastructure that enables environmentally sustainable production.

Under the radical plan, Britain will abandon institutions that enable large capital inflows and foster those of the public sector. The plan seeks to devalue the British pound by 20 per cent and increase public investments from the currently meagre 2.5 per cent to 4.5 per cent of GDP. As a consequence of the plan, I project annual growth to increase in the long-run by 0.5 per cent of GDP and expect a one-time 20 per cent boost to GDP without increasing the government's debt to GDP ratio.

1. Diagnosis of the UK's economic problems

GDP growth in the UK has not been satisfactory recently. Figure 1 assembles data for the 17 largest countries by GDP and population and shows growth rates of GDP between 2000 and 2017. The UK obtains a sobering level of 2 per cent annual growth. This falls short of the growth rates achieved in the 12 other selected countries. Measures of GDP per capita correspond to this moderate level of growth. Adjusted by purchasing power, the World Bank's Development Indicators report 44,000 International $ for the UK, comparable to France and Finland but substantially below Germany (50,700), The Netherlands (52,900) or Switzerland (65,000).

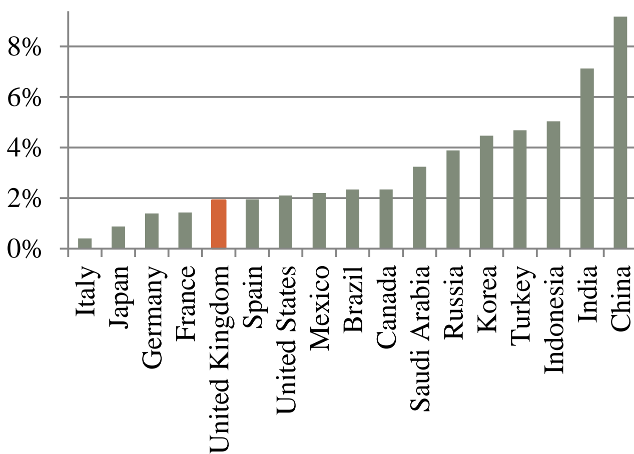

FIGURE 1. GROWTH OF GDP, 2000-2017
SOURCE OF DATA: WORLD DEVELOPMENT INDICATORS

A longitudinal analysis regarding per-capita growth rates also provides disillusioning evidence. While in the 1950s the UK's real GDP per capita grew annually by 3 per cent, this has now come down to a meagre 1 per cent, as shown in figure 2.

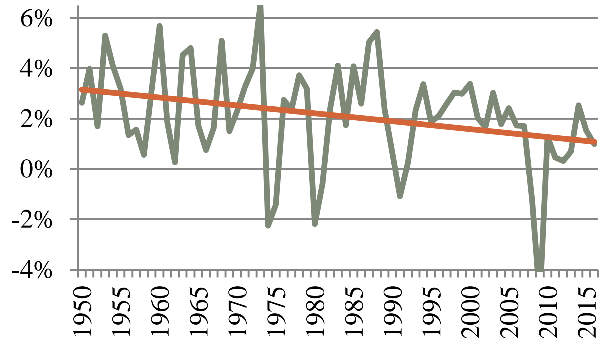

FIGURE 2. REAL GDP PER CAPITA, ANNUAL GROWTH
SOURCE OF DATA: ROSER (2019)

Such an aggregate analysis might appear excessively discerning. The 12 countries that perform superior in respect to the growth of GDP are partly low-income countries in which physical capital is scarce and enjoys high returns, thus supporting growth. These are the countries that can replicate the production methods, technologies, and institutions of developed countries and will enjoy a catch-up effect. In the UK, to the contrary, physical and human capital is abundant and suffers from diminishing returns. There is thus a natural tendency for high-income countries to grow less strongly. From this perspective, the UK might justifiably be satisfied with its average level of income and growth.

On the other hand, the data can be criticised for being excessively optimistic. It fails to capture poverty, growing inequality, lack of social mobility, climate change and tax evasion.

Another important omission relates to the geographical divide within the UK. The Office for National Statistics publishes data on disposable income per head across regions, see figure 3. In 2016, income per head amounted to more than £27,000 in London and only £15,800 in Wales. This discrepancy becomes even more worrying when considering that the (nominal) growth rates between 1997 and 2016 have been markedly higher in London compared to other regions, inducing an increasing divergence in the standard of living. Further, according to Eurostat regional statistics, the differences in production (not income) per head are even more pronounced. In 2017, they ranged from £200,000 in Inner London – West, by far the highest value in the European Union, to only £21,000 in Lincolnshire and Cornwall.

Recent poverty reports are equally worrying. The Social Metrics Commission (2018) highlights that income and wealth are distributed unevenly and that these tendencies are not well captured by aggregate data on income and GDP. Overall, 7.7 million people in Britain live in poverty and this is most persistent among those who live in families in which all members are unemployed and in families with a disabled person. The increasing costs for housing are another

FIGURE 3. GROSS DISPOSABLE INCOME PER CAPITA IN BRITISH POUND AND ANNUAL NOMINAL GROWTH RATES 1997-2016
SOURCE OF DATA: OFFICE FOR NATIONAL STATISTICS

problematic factor, in particular because they often represent costs to low income households while benefitting those with higher income.

Unreported income is another substantial contributor to growing income inequality and tends to fly below the radar of official statistics. Some high-income households find loopholes and manage to avoid recognition as a beneficial owner, for example for income that accrues to shell companies in tax havens. Henry (2016) estimates that 10-15 per cent of global financial wealth is held unrecorded in or through offshore havens, money that belongs to the top 0.1 per cent of the richest households and is kept out of the reach of official statistics.

1.1 Conditions for growth

The UK's performance regarding GDP growth can be seen from the perspective of traditional growth theory. This theory considers investments into physical capital central for fostering growth. Growth requires such investments both from the private and the public sector and a high share of total investment to GDP is thus believed to be crucial. Figure 4 shows data on the share of investments relative to GDP (see also figure 17 on page 23 for quantitative association of the impact on growth). With a current level of only 16 per cent, the UK belongs to the countries with the lowest levels of investment, ranging similarly to countries such as Brazil and Italy, which have a reputation for being less attractive to investors.

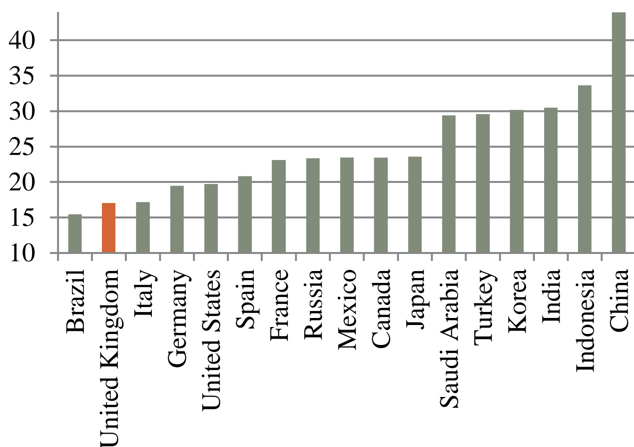

FIGURE 4. INVESTMENT IN PER CENT OF GDP, 2017
SOURCE OF DATA: WORLD DEVELOPMENT INDICATORS

A country's capacity to induce welfare and growth is also related to competitiveness, which captures the quality of institutions and policies. Countries with a tradition for secure property rights, openness, transparency, policies that enhance competition and low levels of corruption will attract global investors and promote local investments. The UK continues to hold top positions regarding competitiveness as measured by the World Economic Forum. Across the last 20 years, the UK has defended a ranking among the top ten most competitive countries. The World Economic Forum (2017: 300) states: "Currently the country performs very well on technological

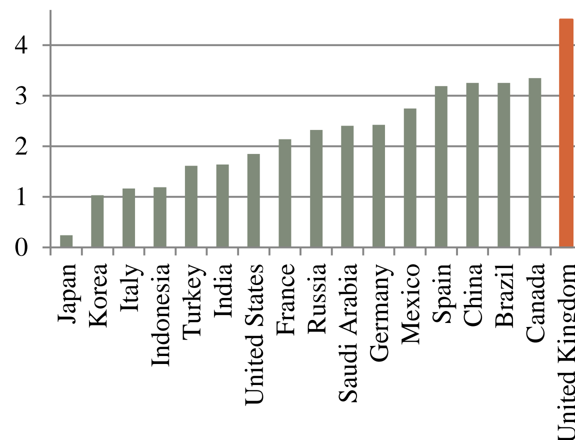

FIGURE 5. FOREIGN DIRECT INVESTMENTS 2000-2017 IN PER CENT OF GDP
SOURCE OF DATA: WORLD DEVELOPMENT INDICATORS

readiness and the sophistication of its business sector." This corresponds to the UK being the global leader in the prevalence of foreign ownership (rank 1 among 137 countries). Similarly, in 2018, the report (p. 28) welcomes "very well-functioning markets (rank 4), a top innovation ecosystem (rank 7) and vibrant business dynamism (rank 7)." This is reflected by the good protection of property rights, including intellectual rights, the efficiency of the legal framework in settling disputes and the strength of investor protection (World Economic Forum 2017; 2018).

In this spirit, private investors herald the UK for its openness to investment. Within the European Union, the UK accounted for more than half (227,000) of the 420,000 incorporations of foreign businesses into the commercial registers between 1990 and 2015. Second-placed Estonia only registered a fraction of this number (33,500), followed by Romania (30,000) and France (27,000), see Mucciarelli et al. (2016: 43). The openness is also shown by data from the World Development Indicators, which reveal that the UK obtains a top position among the largest economies regarding foreign direct investments (FDI), see figure 5.

The UK takes pride in its excellent universities and research institutions, a view that is shared by business people. The World Economic Forum (2017: 300) assigns the UK rank 2 with respect to the quality of scientific research institutions. On the downside, the World Economic Forum (2018: 29) observes that the UK is not well prepared for technological change and lags behind in the adoption of information and communications technology. Innovations are often not translated into marketable products. This is reflected by the curricula chosen by students, shown in figure 6. Compared to other countries across the world, only few students graduate from a major in fields that immediately increase production of goods (for example engineering, manufacturing or construction) or novel services (such as information and communication technologies). There is thus a gap between excellent research and an educated workforce that can implement innovations. A potential explanation is that the financial openness renders jobs in business, finance,

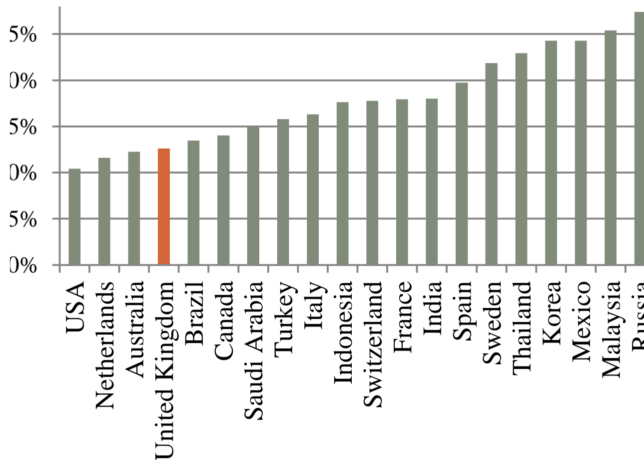

FIGURE 6. GRADUATES IN ENGINERRING, MANUFACTUNG, CONSTRUCTION, INFORMATION, COMMUNICATION AND TECHNOLOGY. PERCENTAGE REL. TO TOTAL
SOURCE OF DATA: UNCTAT

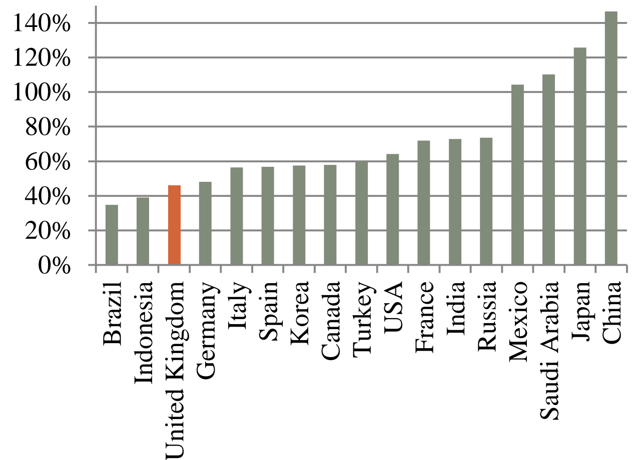

FIGURE 8. PUBLIC CAPITAL STOCK RELATIVE TO GDP
SOURCE OF DATA: INTERNATIONAL MONETARY FUND (2017)

accounting and legal services particularly attractive. Murphy, Shleifer, and Vishny (1991) examine related data and infer that the selection into 'non-productive' jobs is averse to growth.

1.2 Lost opportunities in the public sector

The businesspeople surveyed by the World Economic Forum (2017) were also asked which factors they perceive to be problematic for doing business in the UK (see figure 7). In line with the previous observations, foreign currency regulations are seen to be unproblematic and thus feature at the bottom of the list, as shown in figure 7. But inefficient government bureaucracy, an inadequately educated workforce and an inadequate supply of infrastructure are identified as impediments to growth (alongside taxation, about which business tends to have a biased view). This highlights the role that the public sector plays in supplying public goods and corresponds to cross-country data supplied by the World Economic Forum (2018). In the UK, primary education (rank 25) and the infrastructure (rank 27) are not among the world's best, the quality of maths and science education is only average (rank 41) and tertiary education suffers from low enrolment (rank 48).

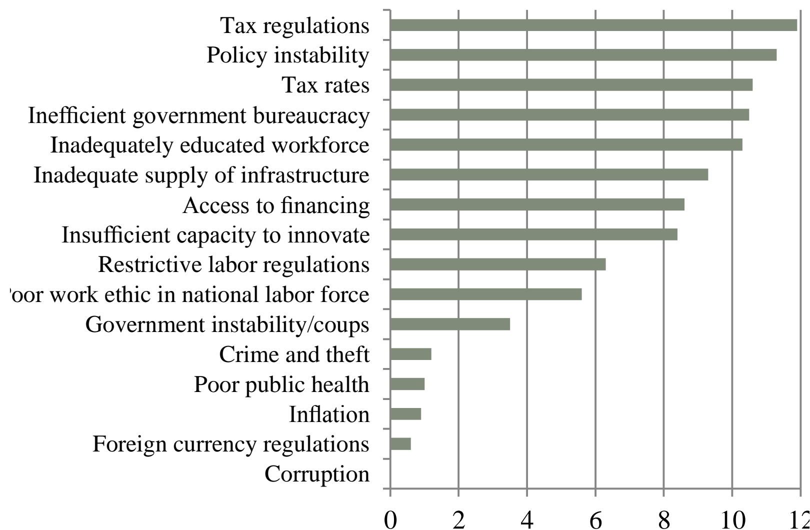

FIGURE 7. MOST PROBLEMATIC FACTORS FOR DOING BUSINESS
SOURCE OF DATA: WORLD ECONOMIC FORUM (2017)

The International Monetary Fund (2017) recently assembled an insightful aggregate measure of the public capital stock. This measure cumulates public investment of physical assets over time (economic infrastructure, roads, airports, electric utilities) and social infrastructure (state schools, hospitals, prisons). It takes into account annual depreciations and compares the aggregate across years to the current GDP. As shown in figure 8, levels of public capital are low in the UK compared to other large economies. Public capital amounts to less than 50 per cent of GDP, way below levels achieved in China, Japan, France or the USA. Only Indonesia and Brazil have accumulated lower levels of public capital. Kamps (2006) investigates the development of the UK's public capital over time. He reports that levels of public capital were above 70 per cent of GDP before 1970. With a current level of 46 per cent, the UK does not only perform poorly today but exhibits a considerable deterioration over time. This is worrying, given that Gupta et al. (2014) find a strong correspondence between the public capital stock and economic growth.

One potential economic justification for this low level of public capital would be a high level of corruption. Bribery and favouritism tend to reduce the productivity of the public sector (Lambsdorff 2007: 76-78). Downsizing the public sector would then be a rational consequence. But, as reported by businesspeople (see figure 7), corruption is not at all seen as a hindrance in the UK. Another

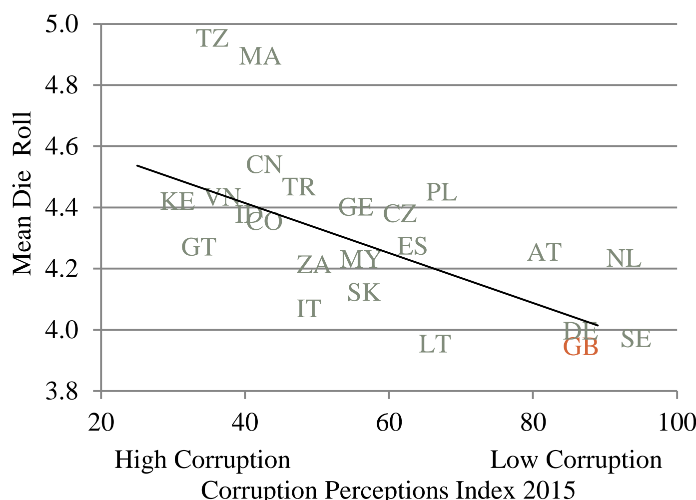

FIGURE 9. RESULTS FROM DIE IN THE CUP EXPERIMENTS AND CORRUPTION. MEAN DIE ROLL 3.5=TRUTHFUL, 6=DISHONEST. SOURCE OF DATA: ADJUSTED FROM GÄCHTER AND SCHULZ (2016)

indicator can be found in the Transparency International Corruption Perceptions Index (Lambsdorff 2007). In Transparency International's latest publication, the UK ranks 8th of 176 countries in the index on the absence of corruption and performs much better than many other large economies. Public investments can thus be carried out in the UK without leakage of funds, at reasonable prices that are not influenced by favouritism and with levels of quality that are not corruptly distorted through bribes. Officials refrain from misusing their power and are guided by a spirit of serving the public rather than serving narrow interests.

This piece of evidence is corroborated by related studies. For example, the Transparency International Global Corruption Barometer reveals that less than 5 per cent of respondents paid a bribe when they came into contact with a public service, placing the UK among the group of best-performing countries (Transparency International 2017). Results from surveys have lately been supported by experimental evidence. Recent data on intrinsic honesty are insightful in this respect and show a strong correspondence to the Corruption Perceptions Index.

One method for measuring intrinsic honesty employs a die-in-the-cup experiment. Participants are supposed to roll the die and insert the rolled number in an input field on a computer. After the experiment, they are paid corresponding to the number they insert. This tempts them to cheat by inflating the number they observed. A "6" could mean that a subject rolled the highest number and honestly inserted it but could also mean also that a subject cheated. It is reasonable to assume that a "1" is only inserted by honest participants. The average number inserted by subjects will equal 3.5 if they behave honestly and 6 if they cheat to the utmost extent. Inserting numbers below 6 reveals, at least to some extent, a sense of honesty that is motivated purely intrinsically. Extrinsic types of motivation such as the fear of sanctions or loss of reputation are effectively excluded, because the experimenter cannot detect the true number that was rolled by an individual participant.

This type of experiment has proven effective in measuring intrinsic honesty across the globe. In a recent experiment, Gächter and Schulz (2016) ran a variant of this experiment in 23 countries and showed that the UK (country code GB) belongs to the most honest countries, revealing only minor levels of cheating. Much higher levels were found, for example, in China (CN), Morocco (MA), Poland (PL), Tanzania (TZ), Turkey (TR) and Vietnam (VN). Figure 9 shows a scatterplot for all 23 countries for which data was collected and relates it to the values these countries obtain in the Corruption Perceptions Index. High values on the index indicate low levels of corruption. The figure reveals that intrinsic honesty is closely related to low levels of perceived corruption.

The data thus confirms the prevalence of high levels of integrity in the UK. It is thus unlikely that public investments would suffer from unethical behaviour. Rather, the findings point to a substantial asset and reveal a competitive advantage for the UK. While countries with high levels of public-sector corruption, such as China or India, should find ample reason to give more room to the private sector, this is not true for the UK. The low levels of corruption and the high intrinsic honesty imply that public capital is likely to be particularly productive. This implies that opportunities for productive public investments remain underexploited. This underinvestment is complemented by the extensive focus on international capital.

2. How we got it wrong with capital inflows

Two misunderstandings have contributed to excessive capital inflows: First, the idea that these are beneficial to the economy and, second, the notion that they are unavoidable. There is another noteworthy correlation that has not been well identified: Fighting tax evasion is likely to reduce capital inflows and both effects are beneficial.

2.1 Growth-reducing capital inflows

In a variety of economic models, capital flows are treated purely as a residual that corresponds to trade flows. In this perspective, capital inflows would allow an economy to compensate shocks such that times of low income do not induce a major drop in consumption. A country that suffers from a temporary shock, such as a natural disaster, would increase the import of goods and services and finance this with such capital inflows. Also, an ageing society would run trade surpluses and build a buffer for future pensions (Forbes, Hjortsoe and Nenova 2017). None of these arguments corresponds to the UK. The UK has neither experienced an economic shock, nor has it built up surpluses from which an aging society can live. Quite to the contrary, the UK is a net debtor to the rest of the world.

Other types of economic models relate capital inflows to investment. From the perspective of an individual business, capital inflows are beneficial because they provide alternative forms of borrowing. A business can maintain its competitive edge if it finds creditors from abroad, willing to provide loans or to purchase shares and securities at favourable conditions. Access to global capital markets can be seen as a method for allowing cheap capital to enter the UK and for reducing financing costs for debtors. Forbes (2005: 153), as one example among many others, states: "Liberalization was expected to have widespread benefits. It was predicted to increase capital inflows, thereby financing investment and raising growth." In a study for the Bank of England, Hoggarth et al. (2016) state that financial openness is beneficial to the economy, one reason being that debtors find alternative sources of borrowing. A more promotional tone is used by Ernst and Young (2017), who announce: "Foreign Direct Investment: a US$1.52 trillion blessing for the world" and claim "1 million jobs created by FDI between 2012 and 2016" in Europe. This viewpoint implies a warning against capital controls. Forbes (2005) argues that capital controls reduce the supply of capital and thus raise the costs of financing. Financial capital is regarded to be a scarce resource such that any limitations on capital inflows increase the costs of capital for debtors.

Lately, this viewpoint has come under attack from empirical research. Kose et al. (2009) do not find macroeconomic evidence that financial openness increases growth. More recently, many publications have defended the overall advantages but contend that an excess of volatile capital inflows can become dangerous by increasing the risk of a financial crisis (Ghosh et al. 2016; Beutel et al 2018: 20). Phases of exaggerated optimism and bubbles alternate with those of excessive pessimism and capital flight, inducing extreme ebbs and flows of capital (Jeanne et al. 2011: 21-23). As a consequence, these studies have been mildly in favour of capital controls and macroprudential policies, which has also been the IMF's new policy since 2009 (Rafferty 2017).

In light of this, the Bank of England has taken an increasingly sceptical view towards capital inflows. It sees these as implying a "reliance on foreign financing" and, as stated by Governor Carney, requiring the "kindness of strangers" for financing the deficit (Forbes 2016). Forbes, Hjortsoe and Nenova (2017) argue that "historical experience and academic evidence on current account deficits… suggests that they are often not benign."

Yet, the pieces of the puzzle have not yet been assembled into a comprehensive picture of capital imports. There is some recent recognition that capital inflows, even the less volatile type, might not be beneficial at all, and may even have detrimental effects. In a nutshell, they neither lower the costs of borrowing, nor are they a necessary requirement for financing investments in the UK. They contribute to an overvaluation of the British pound that puts exporters at a competitive disadvantage and are the main driver of the large trade deficit.

1. There are no reduced costs of borrowing. The logic of an individual business does not translate to a macroeconomic level due to a 'fallacy of composition'. Choices that appear beneficial at the level of an individual business can be disadvantageous at the aggregate level. By securing finance, a business only obtains an edge compared to another business but it does not improve matters for a whole currency area. Contemporary macroeconomics, in spite of its diversity on many topics, has reached consensus that conditions for financing, in particular the interest rate, are governed by the central bank. In the UK, the Bank of England controls the London Inter-bank Offered Rate (Libor), the short-term interest-rate that banks are charged when they borrow from other banks. The Libor then influences the long-term interest rate for loans and corporate bonds. If some investors obtain low-cost financing from abroad, this would induce an expansion of production, the economy would run hot and inflationary pressure would build up. The Bank of England would then be likely to increase the Libor and thus worsen financing conditions for other investors. Overall, this results in a zero-sum game. The advantages for one investor will be balanced out by disadvantages for another.
2. Capital inflows are not required for the UK. No economic model would regard financial means as a scarce resource. This is most apparent for money, which is created without limit and without costs by

Box A: Modelling capital inflows

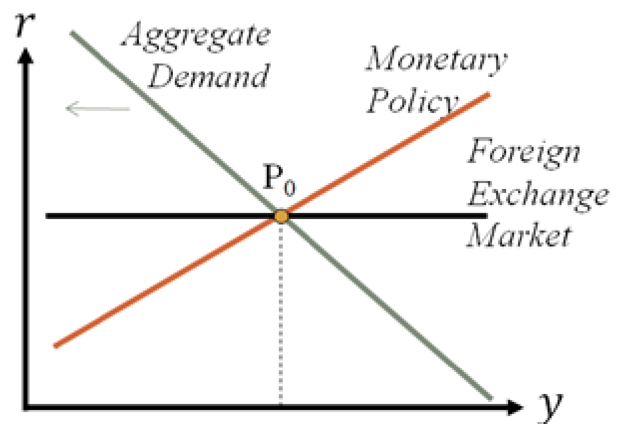

FIGURE A.1. EQUILIBRIUM WITH CAPITAL MOBILITY

The traditional model by Robert Mundell (1961) and Marcus Fleming (1962), a model that became a workhorse for economists and a standard for economic textbooks, can be used to illustrate the detrimental effect of capital imports. As shown in figure A.1, this model entails three relationships between production y and the interest rate r. While the model traditionally referred to the nominal interest rate, contemporary models establish a relationship with the real interest rate r, which subtracts consumer price inflation from the nominal interest rate. The curve on aggregate demand implies that production y is negatively affected by the interest rate. A higher interest rate raises the financing costs and renders purchases that require borrowing unattractive. This dampens demand for investments and consumption goods and, subsequently, production. Aggregate demand is also affected by the exchange rate. An appreciation of the domestic currency lowers demand for domestic goods and services and shifts the aggregate demand curve to the left (see arrow). The model entails a positively sloped curve for monetary policy, which means that the interest rate increases with production. The curve refers to a central bank that seeks to stabilise aggregate demand. For this purpose, it lowers the interest rate in a recession and increases it during a boom, where production is large. Finally, the model embraces the foreign exchange market as a horizontal line that is independent of production. Demand and supply for foreign currencies are affected by capital flows towards the countries that offer an attractive interest rate. The curve in Figure A.1 denotes an interest rate in the UK that balances supply and demand for the foreign currencies. A high interest rate above the curve would attract capital inflows, leading to excessive supplies of foreign currencies. The foreign currencies would then tend to depreciate and the domestic currency would appreciate. As a start, this model assumes an equilibrium in the point P_0.

If the domestic economy becomes persistently attractive to capital inflows, for example due to institutional conditions that foster openness towards incoming capital, a lower interest rate r would be required for a balance on the foreign exchange market. This is captured by a downward shift of the foreign exchange market curve, as shown in figure A.2. The three lines no longer intersect, indicating a disequilibrium. The interest rate set by the central bank at the point P_0 exceeds the one that balances the foreign exchange market.

The adjustment towards a new equilibrium starts on the foreign exchange market. An excess supply of foreign currencies induces the domestic currency to appreciate. The import of goods and services increases, exports become unattractive and overall the trade balance will be in deficit. This shifts the aggregate demand curve to the left. The low level of production corresponds to a recession, which induces the central bank to lower the interest rate. With this lower interest rate, a new equilibrium is reached in P_1, where the domestic currency has reached a permanently higher level. The point denotes a lower interest rate, reduced production and a persistent trade deficit that balances the higher capital inflows.

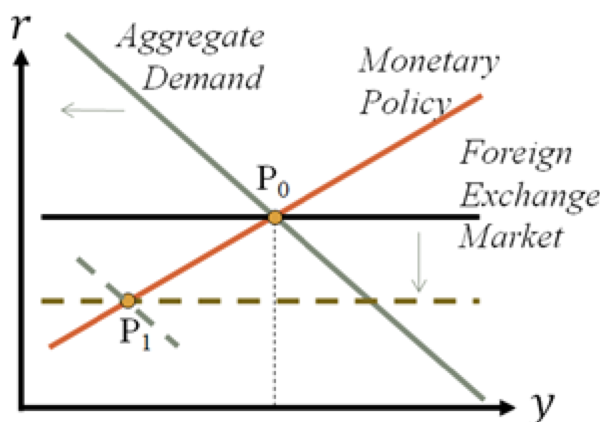

FIGURE A.2. IMPACT OF CAPITAL INFLOWS

This point may not denote the ultimate equilibrium. For example, the low production might reduce inflation and allow the central bank to reduce the interest rate further. Such a reduction is likely to increase aggregate demand, such that a central bank might ultimately succeed in overcoming the recession. But the disadvantages of capital imports remain substantial even in the long run: The trade deficit is persistent, the production of goods for export is reduced and, due to low interest rates, income is shifted from creditors (mostly private households) to debtors (mostly private investors) and consumption is excessively attractive relative to saving.

the Bank of England. There is no economic rationale for assuming that the Bank of England might limit the supply of central bank money if capital inflows end. Quite the contrary, if a UK business does not obtain financing from abroad, it will approach financial institutions in the UK. These will then increase their demand for central bank loans. There is no reason for the central bank to limit this access.

3. Capital inflows appreciate the British pound. The capital inflows that are advantageous for an individual business turn into an aggregate disadvantage when considering exchange rate effects. Whenever foreign entities purchase assets, shares or real estate in the UK, they do so in British pounds. This induces a currency appreciation, which deteriorates the competitive position of British manufacturers and hinders exports of goods and services. The overvaluation is then visible in the current account. The UK currently has the largest current account deficit relative to GDP among leading economies, as shown in figure 10. The individual company's advantage in having access to global capital is collectively detrimental from the perspective of a country that experiences capital inflows.

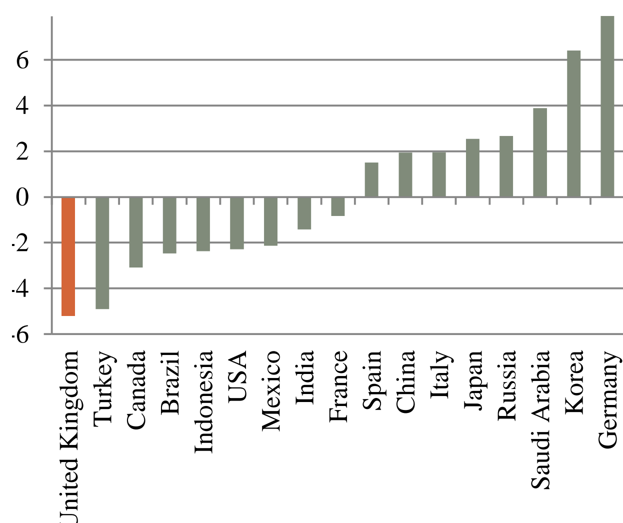

FIGURE 10. CURRENT ACCOUNT, AVERAGE 2013-2017 IN PER CENT OF GDP. SOURCE OF DATA: WORLD DEVELOPMENT

Box A supplies a stylised economic model on the described effect. In spite of its simplicity, the model's results are robust to variations, for example whether a more Keynesian or a more microfounded approach in the spirit of Clarida et al. (1999) or Woodford (2003) is chosen. The effect described in box A has lately been compared to the Dutch disease (Shaxson 2018; IPPR 2018: 42; 177-178). The discovery of oil reserves in the Netherlands induced large capital inflows and an appreciation of the currency, making Dutch products less competitive on the export market. This is an insightful comparison. In fact, the situation might even be worse for the UK. The Dutch profited from oil exports in subsequent years and were able to achieve a current account surplus. The current account deficit for the UK, instead, is persistent because capital inflows have been allowed at an unprecedented scale.

Some countries limit capital inflows through capital controls, such as China and India. Chinn and Ito (2008) assign both countries a score of -1.19 with respect to de jure financial openness. Among 46 countries ranked in this publication, China and India belong to those with substantial limits to financial openness and only three countries are ranked lower. Still, since 2003 these countries have achieved annual growth rates above 7 per cent, suggesting that financial openness has not been a prerequisite to growth. Mexico, to make an appropriate comparison, is financially more open and is assigned a coefficient of 1.08. But since 2003, the country has only achieved meagre growth rates of just about 2 per cent.

The data on China is suggestive of an asymmetric effect: Financial openness might be detrimental to growth particularly when it fosters capital inflows. China's capital controls impede inflows, which has kept the currency undervalued and exports attractive. This type of policy is often criticised as a 'beggar-thy-neighbour policy', underlining that hindering capital inflows increases the competitiveness of the own country at the expense of the competitiveness of other countries. The currency devaluation shifts aggregate demand away from imports to domestically produced goods. In the literature, even those who are most sceptical of capital controls thus take a more light-weighted position on such controls that limit capital inflows (Jeanne et al. 2011: 24; Forbes 2005: 156, 158). There is consensus regarding the asymmetric effects of financial openness. But the resulting consequences have not always been well identified: There is no benefit to capital inflows. Such inflows do not finance investments, they do not reduce the costs of borrowing and fail to increase growth.

This certainly does not mean that all types of capital inflows are equally disadvantageous. Greenfield investments are often singled out for their potential to induce growth (UNCTAD 2018). fDi markets (2018) estimates a gross value of greenfield investments in the UK of $33 billion, about 1.1 per cent of GDP. This is an amount that cannot be overlooked, but which falls substantially short of the values achieved by other types of capital inflows, such as loans and portfolio investments, which make up about 75 per cent of total capital inflows in the UK, as recorded in the balance of payments statistics (Office for National Statistics 2018). The disadvantages of these types of capital inflows are apparent, because there is no accompanying increase in physical investment. This is also true for foreign direct investments in the form of cross-border purchases of equity shares. These do not increase investment but only transfer assets from domestic to foreign owners. The relevance of these types of foreign direct investments can be seen when looking at the UK's four largest mergers in 2016, which had a combined value of $224 billion (UNCTAD 2018: 63). In addition, the plan presented here seeks to limit capital inflows from shell companies, who are not likely to have capacities for greenfield investment. Overall, the idea that capital inflows increase physical investment and competitiveness, contribute to growth and

create jobs is thus grossly at odds with economic reasoning and data. By enabling capital inflows, the UK engages in a 'prosper-they-neighbour policy'.

2.2 Institutions that facilitate capital inflows

Capital inflows are often seen to be unavoidable. This notion rests on the idea that capital is like water, flowing downstream to the places that promise high interest rates, low taxation and freedom from regulation. Capital is free to flow to the most attractive locations. In such a light, capital controls appear like an arduous uphill struggle against the natural tendency of capital to follow this downstream flow. Once capital starts flowing in, there appears to be little that the government can do about it.

Any struggle against capital inflows would be arduous because even a single loophole might allow capital to continue its flow. Regulatory standards are thus seen to fall victim to a race to the bottom. Closing all loopholes appears onerous in a competitive world where governments in overseas territories prefer to free-ride (Fowler 2018). Capital controls also face tricky banks, multinationals and facilitating entities that specialise in creating new loopholes.

But this notion of free capital being like a natural force is misleading, which has long been emphasised by institutional economists. Hodgson (1998: 182-3), for example, points out that markets require supporting institutions, without which they cannot exist. These range from secure property rights to governance structures, rules on information disclosure and legal recourse. The IPPR (2018: 65) states: "All markets today operate within a myriad of laws and regulations which constrain what firms and consumers can do. Company law, labour market law, consumer protections, environmental regulations, taxes, public services: all these help shape the behaviour of firms and consumers. It is misleading to talk about governments 'intervening' in markets, as if markets could somehow exist without them." Financial openness therefore does not refer to a natural flow of capital but to a system that is designed with substantial government support. The necessary rules are arduous to arrange and easily impeded by substantial transaction costs. Financial openness requires an institutional architecture and support by government regulation and laws that seek to lower these costs.

This implies that the term 'liberalisation' in the context of financial openness is actually a misnomer. International investors do not seek to be left alone in organising their transactions. They heavily rely on home and host governments to secure their property rights. The term 'capital control' erroneously assigns governments only the role as a hindrance to capital flows. But governments are heavily needed for allowing and enabling these. The biggest hindrance to capital flows are not capital controls but governments that are unwilling to secure property rights and provide legal recourse. Consequently, governments can exercise regulatory power in choosing which property rights to protect.

Various methods exist for organising capital inflows, for example for a US citizen who seeks to purchase shares or securities of a British company. The most rudimentary would be for the US citizen to open a bank account at a bank in London, open up a stock portfolio and order the respective purchase. This transaction involves the British government at many instances, for example in securing property rights for foreigners, including the right to sell the assets in the future, transfer the money back and using the assets as collateral. In case of a conflict, legal recourse may enable the US citizen to bring a case to court, for example if excessive taxes are levied, if stock market prices are manipulated, if minority shareholders rights are violated, if the British company misreports its earnings, or if the bank declares insolvency. Many rules are thus needed to organise the transaction and many more rules are required to comply with tax laws and avoid money laundering. Transaction costs are thus substantial. At the same time, the government finds ample opportunity to impose rules that assign liability, require accountability and impose regulatory requirements.

One method for lowering these transaction costs is by allowing US banks to operate in London. The US citizen could then instruct his house bank to carry out the transaction. The US government is then in a position to impose rules that provide a legal basis for the relationship between the US citizen and the respective bank. The bank, on the other hand, would have a London-based subsidiary that has legal capacity in the UK and might be able to sue on behalf of the American. Regulation by the UK would be substantially needed for the US bank to exercise such rights.

Another method for organising capital inflows and reducing transaction costs arises if the shares of the British company are traded in foreign countries and thus directly available to a foreigner. This can be achieved using American Depository Receipts (ADRs), which would allow US citizens to purchase the shares of a British company on the New York Stock Exchanges (NYSE). International banks such as JPMorgan Chase, Citigroup, or Deutsche Bank take physical possession of foreign securities through their subsidiary in London, and then issue receipts on these securities. The banks then organise receiving dividends, paying taxes, converting the proceeds into US Dollar, and passing the dividends on to the investors. The receipts are contracts between the respective bank and the investor and indicate the investors' claim on the underlying UK shares. If agreement is reached between the British company and an international bank and regulations imposed by the NYSE are fulfilled, the ADRs can be traded on the New York Stock Exchange (NYSE) and the American Stock Exchange (ASE) (Didia 2015). This unlocks access to a huge capital market, potentially reducing the financing costs for the British company. Yet, since London already provides access to a huge capital market, this approach is currently only used by larger UK companies. In the UK, Global Depository Receipts (GDRs) are a similar institutional arrangement, except that they induce capital outflows by enabling UK-based investors to purchase foreign assets. Once documents are submitted in line with the UK Prospectus Rules and

Listing Rules, shares of foreign companies in the form of GDRs can be traded at the London Stock Exchange.

Again, such ADRs and GDRs involve governments at various stages in securing property rights. The branch owns the physical assets, but can it use it as collateral? Can the property be pledged? Who is entitled to exercise the voting rights? Is the branch liable for the equivalence between physical assets and receipts? Who is the owner of the shares, is it the international bank, the branch or the issuing company? Who is thus entitled to bring a case to court? Which court is the place of jurisdiction? Answers to these questions require rules in various countries. This explains why governments require the branches of international banks and the issuing companies to register such transactions and to comply with specified provisions on foreign investment.

A final method that has become the major driver of financial openness runs via trusts (Shaxson 2011). Trusts are treated legally as private gift relationships where juridical and beneficial ownership are separated and not as juridical persons. As argued by Harrington (2017: 5), “they make it possible to move large sums of capital around the world at very low cost compared to more highly regulated structures, such as corporations”. A British company would form a trust, for example in the Cayman Islands, transfer some of its shares or securities to it and allocate juridical ownership to a trustee, for example located in the British Virgin Islands or in Bermuda. The trustee has the fiduciary duty to manage the trust to the benefit of the British company, for example by selling the shares to mutual funds that are abundant in the Cayman Islands. The proceeds from these sales would be passed on to the British company as the beneficial owner. This solution promises much lower transaction costs, no need to comply with stock exchange rules and no regulations on the transparency of ownership. Again, this unlocks access to a huge capital market.

The British company might also transfer ownership of some financial assets, real estate or physical capital stock to a ‘structured investment vehicle’. A trustee in a tax haven might then use this as collateral for obtaining loans that are passed on to the beneficiary. The Government Accountability Office (2008) writes that “These structures are also used to facilitate major capital inflows from foreign investors into the United States.”

A trust is a purely private relationship that can persist outside of the regulatory reach of the UK government. What is needed is a trustee who can indeed be trusted. The many financial and legal experts often tend to portray some professional ethics that seek to instil this type of trust among investors. But institutional investors request more than a good reputation. They require governments and institutions to be involved in securing this type of business. For this purpose, an institutional architecture must secure at least three things.

1. The shares, securities or ownership rights must be transferred to a foreign entity, which requires laws that govern the rights and liabilities on both sides, that of the purchaser and that of the seller.
2. Only ownership of the assets is transferred, but physically they remain in the UK. This is quite visibly the case for real estate and less visible when assets are held in a clearing house in London. This implies that the assets are still subject to laws that the UK enforces on its territory and a government that secures the property rights of a foreign trustee.
3. A trustee should be subject to rules on liability and the risk of a breach of trust should be minimised. The Overseas Territories enjoy a noteworthy privilege that helps minimise this risk. First, the Judicial Committee of the Privy Council (JCPC) in London is the final court of appeal (Tax Justice Network 2013). This provides investors in these countries with a guarantee of their property rights and settles disputes. The council’s website (https://www.jcpc.uk) lists all decided cases. Recent cases relate to diverse issues such as inheritances (British Virgin Islands), enforceability of loan contracts (Bermuda) as well as fraudulent misrepresentation and breach of trust (Cayman Islands). Investors are willing to operate in the Overseas Territories because they can ultimately appeal in London. This renders the Overseas Territories much more attractive compared to countries such as Vanuatu or Paraguay that grant even more privacy but lack legal resource to a reputable court.

Thus, even when it comes to the operation of trusts in the OCTs it would be misleading to assume that these capital inflows can be organised without substantial government involvement. Regulation can be imposed at the government’s discretion and such regulation is effective. The capital inflows emerge by design, not forced by a natural tendency.

2.3 Trusts and shell companies

Capital collected by shell companies and trusts in the OCTs “accounts for a sizeable and growing portion of the capital that flows into the UK” and a large fraction of this is held in British pounds, this way contributing to the currency appreciation (IPPR 2018: 184). Measurement of these flows is notoriously difficult.

A general feature of shell companies is the absence of real economic activity in the country of registration with no (or few) employees, no (or little) production and no (or little) physical presence (European Parliamentary Research Service 2018). Shell companies provide owners with the advantage of 1) anonymity, which facilitates tax evasion, corruption, money laundering and terrorist financing, 2) circumventing labour laws and social contributions on economic activity taking place elsewhere and 3) organising financing and holding activities that allow for aggressive tax planning. Shell companies can be either incorporated or organised as a trust.

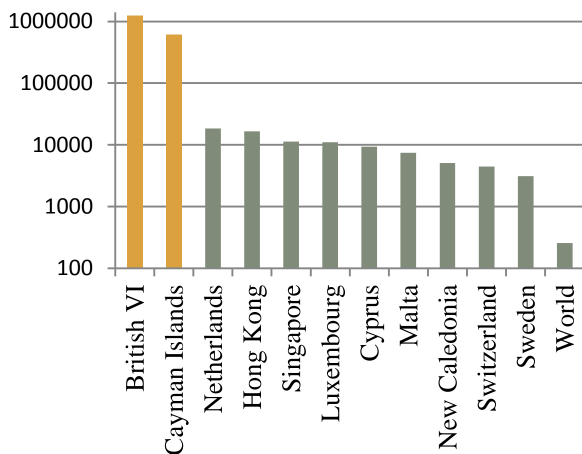

FIGURE 11. INCOMING FOREIGN DIRECT INVESTMENTS PER CAPITA
SOURCE OF DATA: WORLD DEVELOPMENT INDICATORS

Shell companies in the OCTs are likely to have a major influence on UK's economy but quantitative estimates are scarce. Due to their opaque nature, the number of shell companies in a country is difficult to determine, but it is assumed to correlate with a "high number of foreign-owned companies per inhabitant; foreign-owned companies being much more profitable than their local counterparts; an unusually high ratio of foreign direct investment against a country's GDP; a zero or low nominal or effective company tax rate, and zero or low withholding tax rates (dividends, interests, royalties)" (European Parliamentary Research Service 2018: 13). This correspondence between excessive foreign direct investments and tax evasion can be seen in light of section 2.2. When an asset such as shares or real estate is transferred to a trust in the OCTs, this implies a foreign direct investment there. We note in passing that this is commonly arranged as a method of aggressive tax avoidance because the profits are not taxed in the OCTs while the opaque beneficial ownership implies that income taxes also do not accrue elsewhere.

Currently, the EU only identifies American Samoa, Guam, Namibia, Palau, Samoa and Trinidad & Tobago as non-cooperative tax havens and the OECD lists only Trinidad & Tobago. But the mentioned indicators tell a different story. Figure 11 shows incoming foreign direct investments in 2017 in US Dollar per capita. While the world average amounts to $259, the British Virgin Islands top the list of recipients with $1,200,000, followed by the Cayman Islands with $600,000 per capita.

This corresponds to data from Garcia-Bernardo et al. (2017), who investigate more than 70 million global ownership relations between companies from the Orbis database (http://orbis.bvdinfo.com). They establish a measure on 'sink centrality', which indicates the per capita net value of ownership which stays in the country. Figure 12 again singles out the British Virgin Islands as the most disproportionate attractor of ownership.

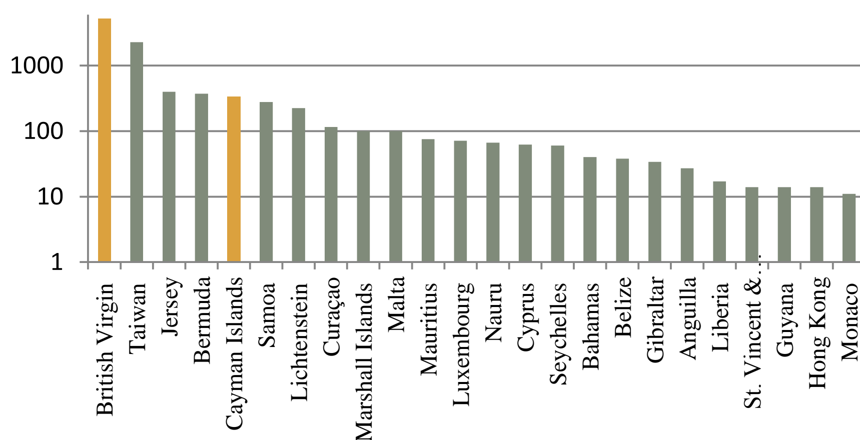

FIGURE 12. "SINK CENTRALITY" AS A VALUE OF NET OWNERSHIP PER CAPITA
SOURCE OF DATA: GARCIA-BERNARDO ET AL. (2017)

The Bank for International Settlement reports quarterly data on international banking activities. It identifies the amounts outstanding in cross-border positions as claims and liabilities of a country vis-à-vis the rest of the world. These positions are shown in figure 13. The left panel shows all outstanding claims, amounting to a total of $29 trillion. The right panel denotes all outstanding liabilities, which amount to $24 trillion. The United States and the United Kingdom unsurprisingly obtain the top positions. Both panels show the Cayman Islands on position 3. This is in stark contrast to the small population of the country with only 62,000 inhabitants, showing the extent to which international banks and funds have chosen the country for avoiding taxes and regulation. Fichtner (2016: 1051) reports estimates that 60 per cent of global hedge funds are domiciled in the Cayman Islands (another 14 per cent in the British Virgin Islands) as well as foreign capital (banking assets, direct investments and portfolio investments) of over $4100 billion, excluding the total stock held by trusts for which data is not available.

A common pattern is that ownership of assets (real estate, securities, shares and intellectual property) is located in the OCTs and is hardly taxed. Some owners hide behind complex structures, so that the property "sinks" into secret ownership and protects the owners from tax (and sometimes criminal) liability. International capital from all sources, corrupt and legal, finds an attractive harbour in these Overseas Territories. A high share of this capital flows back to the UK (Henry 2016; Foot 2009), which has made itself an attractive target for this capital. The capital from OCTs render the UK a net recipient of foreign direct investment, contribute to the large annual capital inflows and the appreciation of the British pound.

It is often claimed that the required policies seeking to ensure a stable financial system and acting against tax evasion require international coordination. Strange (1996) has been prominent in arguing that governments become increasingly powerless and that transnational corporations act as political authorities

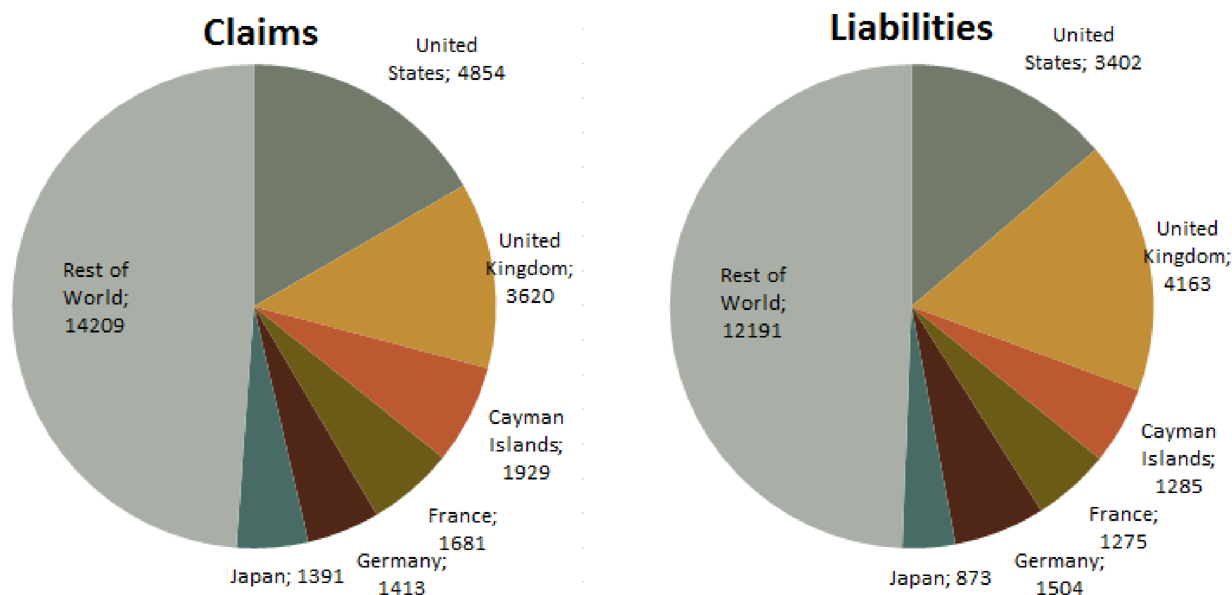

FIGURE 13. CROSS BORDER CLAIMS AND LIABILITIES IN BILLION $, Q3 2018, SOURCE OF DATA: BANK FOR INTERNATIONAL SETTLEMENT (2019: 9-13)

over a growing range of activities. These corporations are seen to no longer depend on the territorial state. When capital flows are global, politics must find global answers, cooperating multilaterally or through intergovernmental organizations. The resulting efforts to coordinate are then easily frustrated by multinational companies that successfully lobby for their interests. This point of view has thus aroused skepticism on whether solutions can ever be achieved.

But this view on the necessity of international cooperation may be misleading. The UK is not in a public goods game with the rest of the world, profiting from free-riding and hoping that only the others might contain tax evasion and avoidance. Rather, it would be advantageous for the UK to take unilateral steps against the transfer of assets into the OCTs, the accompanied organisation of tax evasion and the resulting capital inflows to London.

2.4 Limiting legal capacity

The Achilles heel of the current inflow of capital, in particular that originating in the OCTs, relates to property rights. Currently, a company in the British Virgin Islands or a trustee in Bermuda can own property in the UK and has the legal capacity to receive and hold these assets. The same applies to a trust that is domiciled in the OCTs. Such a trust is currently recognised in the UK. But limitations can be imposed on these rights.

There is debate on whether this guarantee of property also refers to juridical persons and whether these should be treated equally to natural persons. The institutional economic literature has not yet tackled this question. The juridical person itself has not been given much attention in the literature apart from some early contributions such as Alchian and Demsetz (1972: 787-8) and few more recent ones (Deakin et al. 2017). Hodgson (2016: 208-232) regards the juridical person as the key facilitator of modern capitalism. He concludes: “The ‘economic’ activities of the firm become possible because the firm has a legal status and powers enshrined in law” (Hodgson 2016: 222). Hodgson does not directly address the question in how far these powers should be identical to those given to natural persons. His position might be interpreted as support for the idea that juridical persons should enjoy a protection of property rights that is identical to the protection enjoyed by natural persons.

Berg (2007: 374) challenges this position and suggests that natural persons should be given priority: “natural persons are entitled to priority over juridical persons in a hierarchy of rights. This is not to say that juridical persons might not be granted equal rights with natural persons, but that such allocation of rights would have to be justified by the interests involved. In other words, natural persons function as the baseline against which other rights allocations are judged.” Khoury and Whyte (2016) take a similar position and argue that treating juridical persons equally would provide these with an asymmetric advantage. This would be the case because only natural persons can be held accountable for a variety of offences for which juridical persons cannot be held responsible. Grossman (2016: 698) cites early literature with the related idea that juridical persons have “neither bodies to be punished, nor souls to be condemned” and discusses the dissolution of a corporation as an alternative punishment. This punishment might be applied in cases of human rights violations, corruption, accounting fraud or permanent environmental damage (Hulpke 2017).

A similar question must be raised with respect to trusts. Should a trust deserve the same protection of property as a

natural person? Surely not. Trusts administered in foreign countries have only been recognised since 1989, following the 1985 Hague convention. The Recognition of Trusts Act 1987 Art.11 states: "A trust created in accordance with the law specified by the preceding Chapter shall be recognised as a trust. Such recognition shall imply, as a minimum, that the trust property constitutes a separate fund, that the trustee may sue and be sued in his capacity as trustee, and that he may appear or act in this capacity before a notary or any person acting in an official capacity." The subsequent Overseas Territories Order 1989 recognises "any other trusts of property arising under the law of the Territory or by virtue of a judicial decision whether in the Territory or elsewhere." Thus, recognition of a trust and the rights associated with this recognition have always been subject to governments' discretionary power (Harris 2002: 341). Whenever a trust is incompatible with public policy, it might be regarded void and unenforceable. The criteria for this tend to be quite narrowly defined, for example if human rights are violated (Moffatt 2005: 254-306). While the disadvantages of a currency appreciation are unlikely to qualify for this purpose, the legislation nevertheless underlines that the protection of rights for trusts is subsidiary.

Finally, the rights of foreigners to own property in a country are often limited. British law, in accordance with the high openness to foreign capital, does not treat foreigners different than locals in the acquisition of assets. Many other countries such as Canada, China, France, India, Japan, Malaysia and, when issues of national security are concerned, the United States do apply restrictions to the purchase of assets by foreigners (see the various country-specific contributions in Pfeiffer et al. 2009).

Putting these three issues together, there is an economic and a juridical argument for limiting the legal capacity of shell companies. As argued above, their purchase of UK assets is economically disadvantageous and may thus run counter to the rights of natural persons who are resident in the UK. Shell companies are not located within the UK and are either juridical persons or, mostly in the form of a trust, not even the beneficial owners. Thus, it is reasonable for them to take a low rank in a hierarchy of rights. Legislation might well discriminate between a natural, resident person and an overseas trust relationship.

A radical method to do this would be to deprive shell companies and trust from OCTs of their legal capacity. Without legal capacity, such corporations would no longer have legal recourse, neither as defendant nor as claimant under UK jurisdiction. This would render contracts with such entities unattractive because they are unenforceable in British courts.

2.5 Fighting aggressive tax avoidance

Lately, a variety of measures for tackling tax evasion and aggressive tax avoidance through shell companies has been discussed at an international level (European Parliamentary Research Service 2018: 33-37). The controlled foreign company (CFC) rules, for example, aim at deterring companies from shifting their profits to a tax haven by attributing the income earned there to the parent company such that the profit remains taxable. But this and similar measures will not be useful in tackling capital inflows. In addition, they only refer to subsidiaries but not to juridical persons or trusts in OCTs.

The Anti-Money-Laundering Directive seeks to ensure that corporate and other legal entities register their beneficial ownership in a central registry. This might mitigate the secrecy surrounding shell companies. But this directive targets only shell companies within the EU and its impact on taxation and capital inflows remains uncertain. Similar initiatives seek to separate the wheat from the chaff, the legitimate money from the dirty money that was laundered and hidden from taxation, the good international trusts from the bad ones (Hayton 2016: 1002), by demanding transparency from tax havens and obliging them to publish registers of the beneficial owners of offshore companies. But uncovering the ownership of multinational companies and tax evaders is like unbundling a Gordian knot, a task that cannot be fully accomplished.

The Conservative Party has started to take a tougher line on the purchase of UK equity shares. The party is worried in particular about tax avoidance by companies who transfer their profits to tax havens where they have located their intellectual property (The Economist, April 7th 2018). This, however, relates only to foreign direct investments and not to the major bulk of capital inflows in the form of loans and portfolio investments.

A more radical step against shell companies was introduced in Latvia in April 2018. The Law on the Prevention of Money Laundering and Terrorism Financing prohibits "to establish and maintain business relationship or to execute an occasional transaction with a shell arrangement" (see https://likumi.lv/ta/en/id/178987-law-on-the-prevention-of-money-laundering-and-terrorism-financing). Indeed, such a prohibition should also be discussed for the UK. At the same time, the law has its limitations. First, it refers only to banks, intermediaries and investment management companies and does not include others such as multinational companies. Second, the law refers narrowly to shell arrangements as having "no affiliation … to an actual economic activity", which is unlikely to embrace the many currently existing juridical persons and trusts that are responsible for the capital inflows to the UK.

My plan of stripping shell companies of their legal capacity has broader implications. It implies that any contract with such a shell company is not protected by law. Companies in the UK can no longer sign enforceable contracts with such shell companies. From a legal perspective, such contracts are null and void.

The plan takes a broad definition of shell companies, stating that any juridical person in the OCTs is to be regarded as a shell company with the exception of those with substantial local business in the OCTs. For example, in the Cayman

Islands companies must obtain a license for carrying out local business and must be majority-owned by Caymanians. Such companies might then qualify for legal capacity in the UK in order to enable regular trade. Furthermore, trusts in the OCTs, which are mainly responsible for capital inflows to the UK, shall no longer be recognised. Policy makers will have to discuss how to amend the Recognition of Trusts Act 1987 (Overseas Territories) Order 1989 in order to achieve this. They should also consider the possibility that none of the trusts from the OCTs will be recognised any longer.

A company that shifts its assets to a trustee in the Cayman Islands and retains beneficial ownership will find that the underlying contract fails to be enforceable. Transferred assets would be at risk in case of a legal dispute. While a few companies may try to base their future exchange with such a trustee on the vague expectation of professional ethics, the vast majority of companies will be forced to recognise that such contracts fail to convince external auditors and shareholders.

A second effect is that a UK company that transfers assets to an overseas company that lacks legal capacity will face problems with its tax declaration. There is no clear quid pro quo to such a transfer. There is no enforceable contract, no entitlement to a return. When, for example, patents or intellectual property are located at companies in the British Virgin Islands, UK companies may face external auditors and tax authorities that do not consider such a transfer and subsequent payments of license fees to be tax deductible. They would thus not be able to shift their profits to these foreign entities.

The capacity to register juridical persons is a state monopoly. Currently, it requires registration in accordance with the UK Companies Act 2006. The UK extends the definition of a juridical person to those registered in a foreign country when it enters into bilateral investment treaties (or when the EU does). It does so deliberately based on considerations of whether such treaties are advantageous and otherwise terminates an existing treaty. This sovereign decision will have to recognise that shell companies in the OCTs are not in the UK's interest and that unilateral action is required. In a similar move, the European Union (2013) has taken a moderate step against shell companies in Overseas Territories. In Art. 50 of its Overseas Association Decision, it states that "should the legal person have only its registered office or central administration in the OCTs, it shall not be considered as a legal person of the OCTs, unless it engages in an activity which has a real and continuous link with the economy of that country or territory". Denying foreign entities legal capacity is thus not uncommon.

3. How we got it wrong with the public sector

The UK's politics has been enthralled by the private sector's capacity to incentivise employees, to coordinate production, to innovate and foster growth. This has led to the widespread substitution of public servants by private companies. But the capacity of the public sector to deliver high-quality services and supply valuable public goods has been underestimated. At the same time, public investments are nowadays overburdened with requirements of planning, budgeting and risk mitigation. Jointly, these two effects are responsible for public investments being too low.

The public sector can in some areas rely on an intrinsically motivated workforce. At the same time, by its sheer size, the public sector is in a superior position to take on major risks and is thus ideal for carrying out very large investment projects. This implies that a larger public sector is not only needed for creating jobs and growth, but also for addressing climate change with investments that go beyond the capacity of private companies that, by their nature, are too small.

3.1 Underestimating the public sector

The failure of socialist systems and the victory of market economies have decided a long-term battle of systems. Markets succeeded against plans. This victory inspired more far-reaching ideas, for example that markets should replace many government functions, that only private companies are capable of innovation and that prices are the best method for organising production. Yet, the long tradition in institutional economics has supplied a warning against such a one-sided position. Even within the private sector, not everything is governed by markets and prices. Hierarchy is an alternative mode of organisation. Box B provides a simple model for these considerations. Hierarchies can be superior to markets in an uncertain environment because there is no need to identify all risks in advance, anticipate all contingencies, write lengthy contracts and pay risk premia (see box B). The government would bear all risks by choosing hierarchy. It would opt for 'make' by providing services with public employment or government owned companies.

Generally, the public sector is so huge that it might be affected by substantial internal transaction costs (placing it on the far right in the figure B.1). Employing the private sector to supply government services (and moving to the left in the figure B.1) may then have its merits. Prices and markets might then be superior and "buy" would be implemented by 'contracting out'. This has become the British model and it has been copied widely around the world. Contracting out involves fixed-price contracts that allocate all risks to the contractor, who is then faced with high-powered incentives to reduce costs and operate efficiently. It has become widespread in information, communication & technology, facilities, defence, construction and professional and industrial services (National Audit Office 2016). Yet, nowadays we have moved too far.

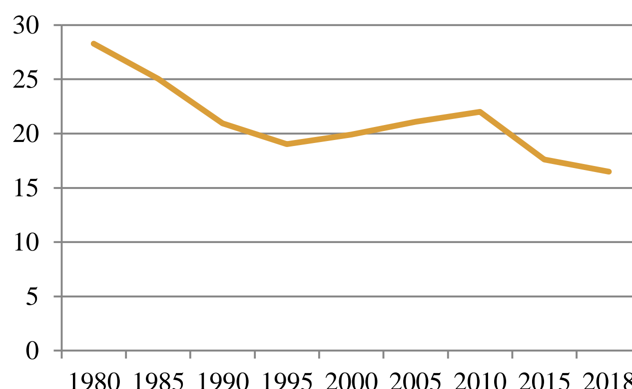

FIGURE 14. PUBLIC SECTOR EMPLOYMENT AS A PROPORTION OF TOTAL EMPLOYMENT
SOURCE OF DATA: OFFICE FOR NATIONAL STATISTICS; GROUT AND STEVENS (2003).
NOTE: DATA IS AFFECTED BY THE PRIVATIZATION OF ROLLS-ROYCE AND BRITISH STEEL AND NO LONGER CLASSIFYING HOSPITAL WORKERS AS PUBLIC EMPLOYEES.

The government spends about £240 billion a year on private and voluntary providers, particularly related to health, defence and justice. This exceeds the £194 billion the government spends on its own staff (National Audit Office 2016). Corresponding to this, employment in the public sector has fallen steadily (see figure 14). The substantial trend of cutting down public employment identified in the past (Grout and Stevens 2003) continues until today. In areas such as schooling, water supply or running prisons, the cost-cutting effect has been put into question (Economist 28th June 2018). Recent years have not documented gains from contracting out (Petersen et al. 2018) and problems with poor performance and insufficient value have long been identified (Grout and Stevens 2003; National Audit Office 2013: 10). Four reasons suggest that contracting out is currently not attractive.

1. The size of external transaction costs is easily underestimated. Contracts require costly legal advice and consultancy work, management of the tender procedure, selection of the winner, contracting, enforcement of the contract, inspection of quality, accounting and financial management. The substantial amount of these costs is illustrated by lengthy contracts between the government and its contractors that expand across 1000 pages or more. As shown in figure B.1, the curve on external transaction costs might have to be located further up, such that contracting out becomes unattractive.
2. Contracting out may go along with externalities. The management of the contracting process creates income for high-income people, for example legal experts, consultants, accountants, external auditors and technical inspectors. At the same time, the cost-saving effect often affects low-income workers, whose jobs are exposed to intensified competition and whose salaries are in consequence cut down. The alternative to contracting is supplying services with government owned companies and agencies that

Box B: A model on ‘make’ or ‘buy’

Ronald Coase (1937) pioneered the study of the optimal size of firms by taking a transaction costs approach. Firms face a choice between ‘make’ and ‘buy’, between an internal transaction and an external transaction. Imagine a firm that sells turbines for wind power and estimates its annual sales revenues to equal £100 million. It will consider the most cost-effective organisational mode of production, relating to the construction of the turbines, transport services and installation. It might purchase some of these services and intermediate products from independent suppliers or produce them itself. In the first case, it will use a system of competitive prices to ‘buy’ rather than the hierarchical power of command to ‘make’. The market is superior insofar as it gives the supplier high-powered extrinsic incentives (Williamson 1985). Competition between suppliers ensures that the motivated and smart companies obtain the contract. At the downside, the market transaction requires costs which arise at three stages: first, costs for searching for an appropriate supplier (advertising and organising a bidding process and picking the winner), second, setting up an enforceable contract with prices that include premia for all risks and uncertainties and, third, executing this contract by making payments correspond to the delivery, inspecting the quality and auditing the process. These external transaction costs can be avoided when the firm ‘makes’, by designing and producing turbines, running transport services and installation. The savings of costs is shown in figure B.1 by a horizontal line. Whenever the firm moves to the right of the figure by ‘making’ rather than ‘buying’, it saves a constant value of external transaction costs.

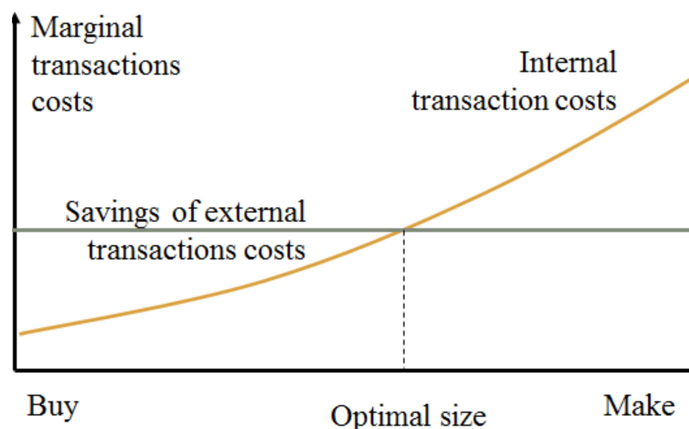

FIGURE B.1. MAKE OR BUY IN A TRANSACTION COST PERSPECTIVE

Using hierarchical power requires internal transaction costs. Workers within the firm face fewer extrinsic incentives. They do not earn a profit and must be motivated in a different way, for example by promising a bonus or a promotion or by threatening disciplinary sanctions or termination. Organising these incentives requires costly monitoring. When the firm buys most of its supplies, it is limited in size and employs only a small team of workers who monitor each other automatically when working together. Such a firm (to be seen on the left-hand side in figure B.1) thus requires low internal transaction costs. But when the firm grows larger by choosing ‘make’ (and moves to the right in figure B.1), it requires a more complex hierarchy of monitoring, command and sanctions. This suggests that internal transaction costs are increasing in firm size.

The optimal size of a firm is determined at the intersection of external and internal transaction costs. To the right of this intersection, firms are excessively large. This size involves a complex hierarchy of control that is required for securing effort and motivation among the workforce. Downsizing the firm by ‘buying’ more and ‘making’ less involves external transaction costs that are cheaper than the corresponding internal transaction costs. To the left of the optimal size, firms are too small. Workers within the firm are motivated to deliver effort and, rather than ‘buying’ from the market, the firm is better off ‘making’ some of its intermediate product.

The analysis can be amended by adding intrinsic motives to the extrinsic ones. Workers might gain satisfaction from exerting effort, may enjoy their task or obtain fulfilment from helping others. If intrinsic motivation is strong, internal transaction costs are lower. Graphically, this implies that the curve on internal transaction costs moves downward. As a consequence, the optimal size of a firm increases. To the contrary, if corruption is pervasive in a firm, workers can never be trusted and the curve on internal transaction costs shifts upward such that the optimal size of a firm decreases.

employ public servants. Paying secure and decent salaries to public servants is costly to the government, but at the same time has benefits that are easily overlooked, benefits that accrue not only to a British citizen who receives the salary, but also to his or her family and neighbourhood. These effects might well reduce costs to government in other areas, such as unemployment benefits (because the public servants might otherwise be unemployed), education (because public servants can afford schooling and university fees for their children) or health care (because salaries are used for better nutrition and healthier lifestyles).

3. The argument in favour of contracting out should be assessed taking into account the potential of private contractors to avoid taxation. The French contractor Atos pays no corporate taxes in the UK (National Audit Office 2013) while the three other major British contractors, Capita, G4S and Serco, have between 3 and 40 subsidiaries in the British Overseas Territories or Crown Dependencies (Guardian: "FTSE 100's use of tax havens – get the full list" 12 May, 2013). Unsurprisingly, the National Audit Office (2013) estimates that G4S paid no corporate taxes in 2012. While it is uncertain whether taxes were evaded, it is fair to argue that efficiency gains from contracting are difficult to measure if they possibly overlap with aggressive methods for avoiding taxation.
4. Intrinsic motivation can play a particularly important role in the public sector (Besley and Ghatak 2003). This embraces a variety of issues: The internal satisfaction or fulfilment, curiosity and desire to master a task, the interest in or enjoyment of the task, the satisfaction from helping others, and the enjoyment of self-control and autonomy (Titmuss 1971; Deci et al. 1999; Thomas 2009; Bowles 2008). Tying extrinsic incentives to performance assessments is rare in the public sector. Consequently, performance of employees in the public sector relies much more on intrinsic motivation (Burgess and Ratto 2003). The public administration literature thus provides broad evidence that more altruistic people sort into the public sector. This should be seen in the light of the capacity of the public sector to offer secure jobs, some level of autonomy and the opportunity to contribute to other people's welfare. Based on survey data, Dur and Zoutenbier (2015) provide evidence that altruistic workers are more likely to be employed in the public sector in Germany, particularly in the caring industries such as education and health services. Barfort et al. (2015) find that honest individuals are more likely to enter the public service in Denmark. Gregg et al. (2011) find evidence that employees in the UK's non-profit sector (central and local government; NHS or higher education; nationalised industry; non-profit organisation) are significantly more likely to do unpaid overtime. The public sector thus performs well in promoting an intrinsic motivation such that internal transaction costs are rather low, allowing governments to produce services rather than contracting them out.

Latest reforms have sought to give the Crown Commercial Service more flexibility in finding award procedures that go along with lower external transaction costs, moving away from open bidding and awarding to the lowest-price bidder (Crown Commercial Services 2016). These changes will simplify interaction with the private sector, allowing for various types of award procedures such as the competitive dialogue or innovation partnership. The introduction of more flexibility also reveals the high level of trust that the Crown Commercial Services enjoys. Its public servants are trusted not to misuse these procedures by colluding with contractors. At the same time, such changes are insufficient. Private companies' profit motive will force quality to remain questionable, will continue to lead to lengthy processes, excessive input from lawyers and consultants and overburdened control. Designing bidding documents and contracts will continue to go along with high external transaction costs.

3.2 Public underinvestment

As shown in figure 15, public investments amount to only 2.5 per cent of GDP, way below levels found in many other countries. The excessive process of contracting out has contributed to this low level for at least three reasons.

1. New spending programmes and public investment are often initiated by government departments and public servants. But employment has been substantially reduced. The capacities for identifying objectives and managing public investments have become scarce.
2. New public investments are no longer politically attractive, in particular when contracted out. If projects run well, the contractors will be given the merit. Politicians hardly receive any political dividends for their efforts. Ribbon-cutting ceremonies with politicians being heralded for their support are scarce, the same is true for gratitude in newspapers and social media. On the other hand, if projects fail, the failure will be attributed to politicians and departments.
3. Services that have been contracted out will require some investments, for example reinvestments to replace depreciated assets or new investments that expand capacities or use novel technology. But these investments are relation-specific: They have a value only within the contract and might be worthless once the contract ends. Contractors are reluctant to carry out these investments, in particular if the duration of the contract is limited or pressure to generate short-term profits is particularly large. If the government carries out the investments, these might profit a private company such that public money is used for private gain. The government will thus be equally reluctant to invest. Contracts that separate private and

public obligations are difficult to negotiate and involve excessively large transaction costs. The literature on incomplete contracts has thus inferred that such contracts cannot be enforced and that, as a consequence, total investments will be substantially below optimal levels (Aghion and Holden 2011).

Contracting out is only one reason for public investments being so low and for having deteriorated so markedly. Other institutional reasons relate to the excessive risk-aversion and unnecessary internal transaction costs that currently burden public administration. These are well illustrated by the HM Treasury's Green Book (2018), which provides guidelines for the management of any government policy, programme and project.

The document obligates all planning to be done in advance of any new project. Whenever public money is used, the document requires a rationale upfront for an "intervention [.. that] is necessary to identify the specific market failure" (p. 13) to define specific and measurable objectives and milestones during implementation. It states (p. 53) that "without verifiable and measurable objectives success cannot be measured, proposals will lack focus and be less likely to achieve Value for Money." The scope of a project must be fully determined and the required funding secured. It also requires an upfront choice on whether direct public provision, private sector provision or some type of partnership should be preferred (p. 15-16). These requirements are particularly dismal to complex investment projects with objectives that might be difficult to measure and verify.

Underinvestment is also caused by what is known as the 'planning fallacy': The psychological failure to correctly forecast the total work and input that will be required and the overconfidence and excessive optimism regarding the necessary time. This 'fallacy' is usually a reason for high levels of investment. But the HM Treasury's Green Book (2018) turns the 'fallacy' into the opposite, a warning that government projects will experience cost overruns and a requirement to adjust cost estimates upward to account for this bias. In case of cutting-edge technology projects, this adjustment can be as large as 200 per cent, tripling an initial cost estimate. Politicians and departments who initiate new public spending proposals will either report these high costs upfront. In such a case, a project already risks falling into disfavour at the outset. Alternatively, cost overruns are disregarded, which either forces cutting down on scope or quality or increasing funding at a later stage. This implies that politicians are held responsible for low quality or cost overruns during project implementation. Neither of these options is favourable to public investment.

Further, the Green book prescribes that all risks must be fully understood and managed, which "requires objectively-based estimates of the percentage likelihood of a risk occurring" (p. 31). All uncertainties shall be covered with adequate contingencies. Again, this provision biases government spending towards short-term services and against investment.

The HM Treasury requires all future benefits to be discounted by a (very high) time preference of 3.5 per cent. Benefits that arise 20 years in the future are then regarded as being worth only half. This biases the attractiveness of investments downward in cases in which the benefits accrue over a longer future horizon.

The cost-benefit analysis that is prescribed by the Green book is also likely to disregard that public investments tend to induce private investments. This effect is particularly strong when investments relate to public goods such as infrastructure, education, healthcare or environmental protection. The effects on private investments are not easily measurable and are likely to be disregarded.

Overall, it is unimaginable that Stonehenge, Buckingham Palace or Edinburgh Castle could have been built with all objectives being measured upfront, all risks being managed and with such little regard to the preferences of future generations. Today, even the employment of a single teacher might induce burdensome calculations and attempts to identify "verifiable and measurable objectives", for example regarding the additional future human capital, its valuation and the private investment this may induce. Simple rules of thumb for the planning of government projects would do a much better job and substantially simplify administrative processes.

The HM Treasury's Green Book (2018) entails the delivery of services by the public sector ('make') as one option, but for various reasons it places the contracting out to private contractors ('buy') at an advantage. The reason is that fixed price contracts with private contractors mitigate many of the risks and the bidding process assigns measurable prices to what would otherwise remain vaguely estimated costs. This again reinforces contracting out of government services as a

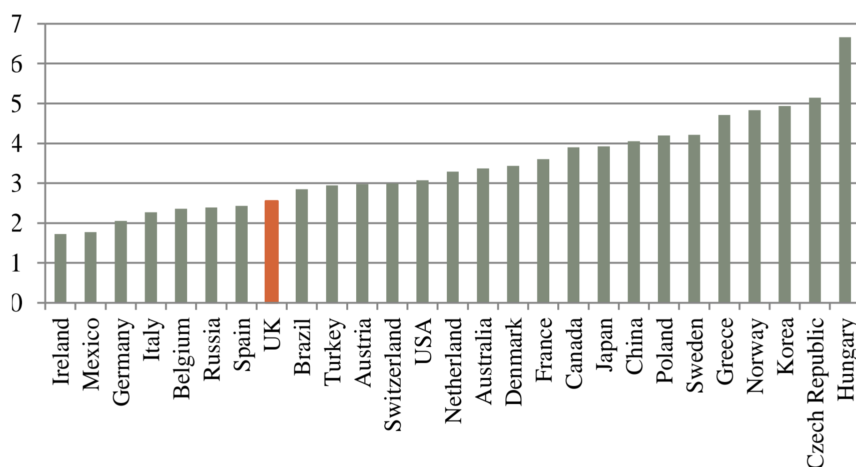

FIGURE 15. PUBLIC INVESTMENT 2015 AS A PROPORTION OF GDP
SOURCE OF DATA: OECD NATIONAL ACCOUNTS STATISTICS (SELECTED COUNTRIES).

widely used choice, which I have shown to feed back to reduced public investment.

3.3 Institutional adjustments

A radical plan must involve the redesign of the public sector. Calling for an increase in public investment is not novel. Such demands hit the nail on the head but they are futile at the same time. Public service must be reorganised in order to render investments politically attractive and the transaction costs of organising public investments must be reduced.

By now, privatisation and contracting out are widely regarded as having gone too far. Rail, mail, energy, water, health and education are sectors where the government will have to increase its role. The most visible signs are companies that have been sold to international investors who partly fail to invest, fail to deliver quality services, are understaffed, fail to pay decent wages and avoid paying taxes due to complex structures of ownership. The Labour Party (2017) concludes that "this is creating the space for a range of alternative models of ownership." This is an important way forward but this proposal entails two problems. First, many private companies that run government services are currently making losses. There is thus no need to change ownership quickly, at a speed where current owners will have to be compensated and losses will have to be burdened by the treasury. Rather than rushing matters, the government will face the future challenge of how to deal with the insolvency of these companies. Reorganising ownership through cooperatives, which are locally-led or under national ownership, will be one of the options then. Rather than pushing for alternative ownership immediately, the government is better off preparing for these challenges to come and to stand ready with solutions. Second, turning back privatisation does not solve the bigger problem of how to increase public investment. Rather than taking control of existing sectors, it is more important that new projects are planned and implemented. It will be important to identify areas for investment that promise future growth, innovation and environmental sustainability.

The radical reform that cuts through the Gordian knot must recognise how the procurement procedures by the Treasury have failed. Reform must identify well-working rules of thumb, without the necessity to measure in advance, to base decisions on objective and pre-determined criteria and to anticipate all contingencies. There is no need to cut all the public works and services into identifiable projects and to plan and evaluate them separately. The government should focus less on 'buy' and more on 'make', be willing to employ more staff and to reduce the share of projects that are contracted out. This way, the government can take advantage of a workforce that has a sense of honesty and integrity. Rules of thumb work particularly well when public servants can be trusted to use their discretionary judgment and experience free of corruption.

When the government relies on the private sector, it may hand out contracts on a cost-plus basis. This is a type of contract that is closer to 'make' than 'buy'. A contractor is paid for all its allowed expenses, plus an additional payment to secure a proportional profit. This type of contract has been criticised because some economists believe in the high-powered incentives of fixed-price contracts and fear collusion between bribe-taking public servants and contractors that engage in cost-padding. Also, it entails larger financial risks to the government. Yet, these worries are exaggerated for bribe-averse and civic-minded public servants. They can be entrusted with the discretionary power needed for handing out such contracts. Also, the state is by its sheer size best suited to bearing risks. Cost-plus contracts thus deserve to be given more emphasis in the many areas where planning in advance is arduous and quality-criteria difficult to govern. Cost-plus contracts entail many advantages:

- Cost-plus contracts have the advantage that the government shares the risks and gives the contractor better incentives to procure high quality (Tirole 2015; Kim and Brown 2017).
- Incentives to avoid cost overruns are sufficiently large because contractors seek to qualify for future transactions. This can be ensured by empowering procurement officials to use their experience on past contracts, rather than forcing them to base every decision only on objective and measurable criteria.
- Not all cost savings of fixed-cost contracts are aggregate savings. If a private company procures more cheaply but avoids taxes by using shell companies in tax havens or pays low salaries, governments and citizens will lose elsewhere.
- Cost-plus contracts substantially reduce external transaction costs because there is no need to budget all costs in advance and many risks and contingencies can be left out of the contract. As a consequence, incomes are shifted from high-income consultants and legal experts to workers and engineers.
- Cost-plus contracts give small businesses a better chance to participate in government procurement. Currently, public sector markets are dominated by a few large suppliers (National Audit Office 2018: 16). While the government has recently recognised this problem (Government Green Paper 2017: 71), it fails to identify the high external transaction costs and risks as a crucial hindrance to small and innovative companies.
- Cost plus contracts avoid underinvestment. From an institutional economic perspective, they are closer to 'make' than 'buy'. This implies that the government preserves incentives to carry out investments, which do not increase the contractor's profit but fully induce public benefit.
- Cost-plus contracts do not go along with politically sensitive cost overruns. As a result, public investments become attractive for politics again.

3.4 Confronting climate change

Any demand to increase public investments requires the identification of deserving public goods. A variety of such goals will have to be discussed, ranging from education and healthcare to infrastructure, innovation, housing and industrial strategies (IPPR 2018: 163-164). For example, Bom and Ligthart (2014) find that investments into infrastructure at a regional and local level of government are particularly productive. Such findings on productivity might be considered for the selection of investment opportunities.

Another focus for public investment must be on tackling climate change. Government, industry and civil society tend to agree that the risks of climate change are becoming increasingly visible and that the economic and societal losses will be tremendous.

A variety of necessary investments are currently not being implemented, because government projects focus excessively on the private sector. For example, the department of Energy and Climate Change was formed in 2008 and merged with the Department for Business, Innovation and Skills in 2016. The government assumes business to be best capable for addressing climate change. But business is overburdened. For example, a House of Common's Committee (Business, Energy and Industrial Strategy Committee 2018: 12 and 40) notes that "… car manufacturers do not have certainty about the types of vehicles they will be able to market in the UK in the near future, and charging infrastructure providers are less able to make assessment about future demand for their product...The Government cannot rely on expectations alone to deliver desired policy outcomes … There is a mismatch between the Government's ambition to develop national charging infrastructure and its decision to leave delivery largely to local authorities and private actors." Private companies will not be capable of burdening the immense risks of a major policy change. Thus, the government's more active role must include increased public investments, for example related to the charging infrastructure for electronic vehicles.

The UK has reduced CO2 emissions by 38 per cent since 1990, but the development towards zero emissions in 2050 has recently suffered some backlash. Environmentally oriented public investment will be needed to achieve the target. As detailed by the Committee on Climate Change (2018), this embraces diverse investments, including power lines for the transmission of green electricity and facilities for carbon capture and storage. Higher private investments are not impaired by a stronger government involvement. Quite the contrary, the willingness to substantially increase public investment in such areas will provide a framework that will enable private companies to supply complementary investments. The government should no longer shy away from owning infrastructure and, where it depends on innovative private companies, engage these with cost-plus contracts. Infrastructure has traditionally been owned, built and organised by the state and this is not different today with respect to confronting climate change.

4. A radical plan

The radical plan goes beyond raising taxes, altering government spending, or carrying out some foreign currency interventions. It focuses on deep-rooted institutions that currently impede growth in the UK: the high level of capital inflows and the low focus on public investments. The radical plan entails two major points: 1) Ending the legal capacity of shell companies as a method for limiting capital inflows and tackling tax avoidance and 2) shifting towards cost-plus contracts and self-production in public spending as a method for increasing public investment. As shown in figure 16, I will provide some quantitative estimates of the resulting consequences, make projections on government spending and debt and discuss complementary measures and the sequence of required actions. The estimates are vague and sometimes based more on plausibility rather than robust quantification. But based on findings in the literature as well as comparable events, I would argue that the projections are reasonable.

4.1 Quantitative projections

Overall, the plan is projected to increase annual growth of GDP by 0.5 per cent in addition to a one-off increase by 20 per cent (see figure 16). This projection is based on the combined effect of the two measures.

First, moving to cost-plus contracts and self-production will raise the attractiveness of public investment. A radical plan almost doubles public investment from the current 2.5 per cent to 4.5 per cent of GDP. This is by far more ambitious than the proposal of the IPPR of raising investment by 0.8 per cent of GDP (2018: 164). In comparison to other countries, however, such an increase is not disproportionate. Given a current nominal GDP of £2.1 trillion, my proposal amounts to a current increase of investments by £42 billion.

The literature has not come to a consensus on the effect of public investment on private investments. While some studies suggest that public investment crowds out private investment, my projection is more optimistic, arguing that public investments will trigger private investments. I defend this with recent evidence showing that crowding-in is more likely when public investments refer to public goods rather than private goods (Xu and Yan 2014). Private investments are then complements to public investments because improved government services or better infrastructure provide an improved environment and raise productivity. It is estimated for the UK that an additional £1 of public investments into research increases related private investments by between £1.13 and £1.60. Similar effects have been found for aggregate public investment (Economic Insight 2015). Taking the average projection of £1.36 and the envisaged increase in public investment of 2 per cent, we obtain an increase of private investment by 2.7 per cent of GDP.

Second, ending the legal capacity of shell companies will substantially devalue the British pound. It is not possible to base a projection on the size of the devaluation on available data. In my opinion, the best comparison is the abandonment of the gold standard in 1931. This radical political decision ended the convertibility of banknotes into gold coins. As a consequence, the British pound became unattractive to capital inflows because these could no longer be exchanged into gold. This induced the pound to depreciate by 25 per cent. The exit

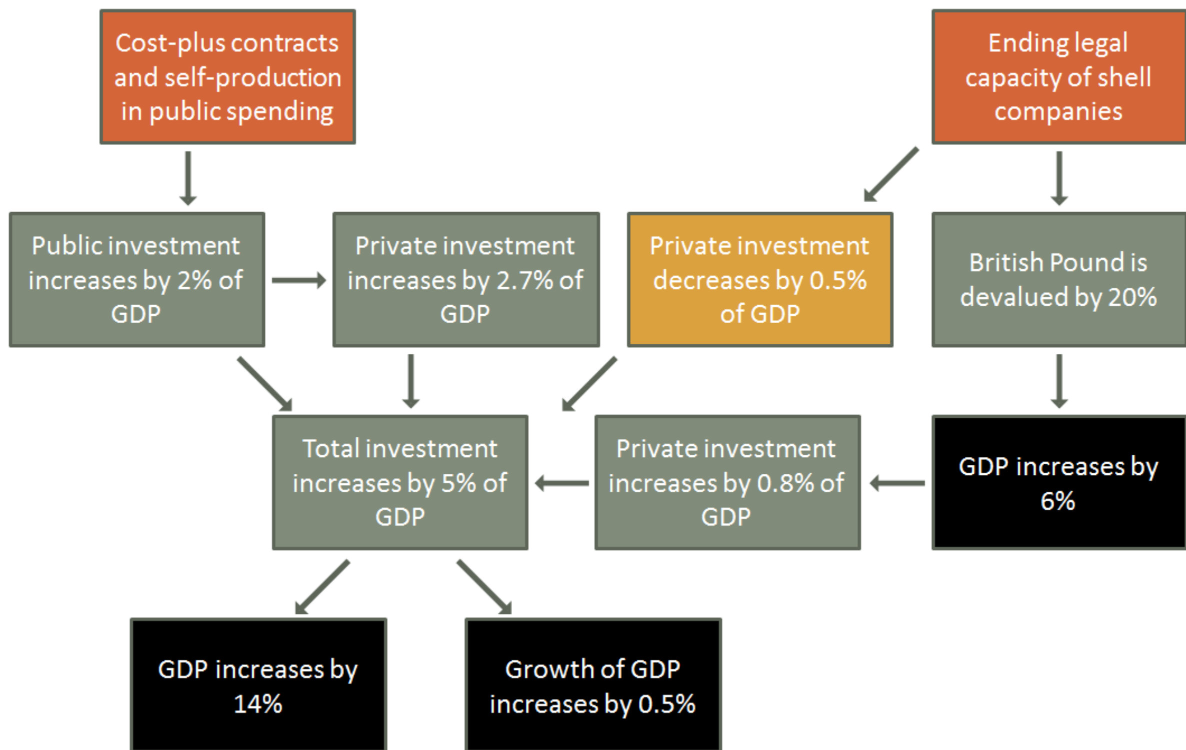

FIGURE 16. QUANTITATIVE ESTIMATES OF THE RADICAL PLAN

from the European exchange rate mechanism in 1992 can serve as another possible comparison. This ended convertibility into the German Mark at the previously fixed rate and thus reduced capital inflows into the UK, leading to a 20 per cent depreciation. While the comparison between these historical events and the current plan may be overemphasised, the two cases can serve as a benchmark for an approximation, which I project to be around 20 per cent. This devaluation renders exporting and import-competing firms in the UK more competitive.

Based on a time series analysis for the UK, I project that a 20 per cent devaluation will increase the trade balance by 6 per cent of GDP, thus ending the current account deficit. The trade balance enters the demand for goods and services by an equal amount, implying that such a demand-side impact increases GDP by 6 per cent, too. This increased demand for goods and services will require additional production capacities in the private sector. Assuming a constant ratio of capacities to GDP, the total capital stock will also increase by 6 per cent. To sustain this level, investments would have to increase by this percentage in the long run. Given that the rate of investments is currently at 16 per cent of GDP, private investments are projected to increase by 0.8 per cent of GDP.

Total investments will increase substantially. I argue in subsection 4.3 that investments will be dampened slightly by 0.5 per cent of GDP due to lower corporate profits and that the total increase amounts to 5 percent of GDP (see figure 16). This will have a long-run effect on growth. Figure 17 provides a scatterplot with data on investments (gross capital formation) and on growth for a cross-section of 123 countries. Using these data in simple bivariate regressions shows that an increase of investments by 5 per cent of GDP would increase growth by 0.5 percentage points. Such an estimate would remain unaltered when adding control variables (GDP per capita in 1980; mean birth rate). Some traditional studies arrive at similar conclusions (Barro and Lee 1993; Murphy, Shleifer and Vishny 1991). The estimate assumes that investment causes growth. Bond, Leblebicioğlu and Schiantarell (2010) have produced evidence in support of this causal effect. I thus project that annual growth of GDP will increase by 0.5 percentage points, for example from currently 1 per cent to 1.5 per cent.

The increased ratio of investment to GDP will not only affect long-term growth but also induce a one-time increase in GDP. I estimate an effect size of 14 per cent, given recent findings that public investments are particularly productive. Biven (2017) argues along this line with respect to infrastructure investments in the United States. Bom and Ligthart (2014) report that average output elasticity of public capital amounts to roughly 0.1. My plan would increase public investment by 80 per cent (2 per cent of GDP relative to the current 2.5 per cent), which induces an increase of GDP by about 80*0.1=8 per cent. Likewise, the increased private investments by 2.7 per cent of GDP will also increase output. Afonso and Aubyn (2019) estimate an elasticity of around 0.3 for the UK, suggesting that an increase of private investments by 20 per cent (2.7 per cent relative to the current 13.5 per cent of GDP) would increase GDP by 20*0.3=6 per cent.

The increased investments will boost spending and aggregate demand, which is likely to foster growth in the short run. On the other hand, the devaluation of the British pound reduces consumer's purchasing power and reduced consumption might dampen the boom. On balance, it appears reasonable to leave short-run effects out of the projection.

While the plan will hurt high-income tax evaders as well as some consultants, legal experts and accountants, the winners of the plan will be median and low-income households that have previously been left behind. Regions can compete with ideas on how to take advantage of a devalued British pound, predominantly in manufacturing and services. Others will profit from public employment opportunities. Median and low income households will also be most affected by improved public services. Society as a whole will benefit from contained exposure to environmental damage.

4.2 Central Bank policy

If financial capital no longer flows from abroad, one might worry that this induces a scarcity of financial means. As I have argued, this worry is unfounded. British manufacturers all depend on loans denominated in British pound, which do not become scarce when limiting capital inflows. The same applies to the concern that the costs of borrowing might increase. This is equally incorrect, because interest rates are effectively controlled by the Bank of England.

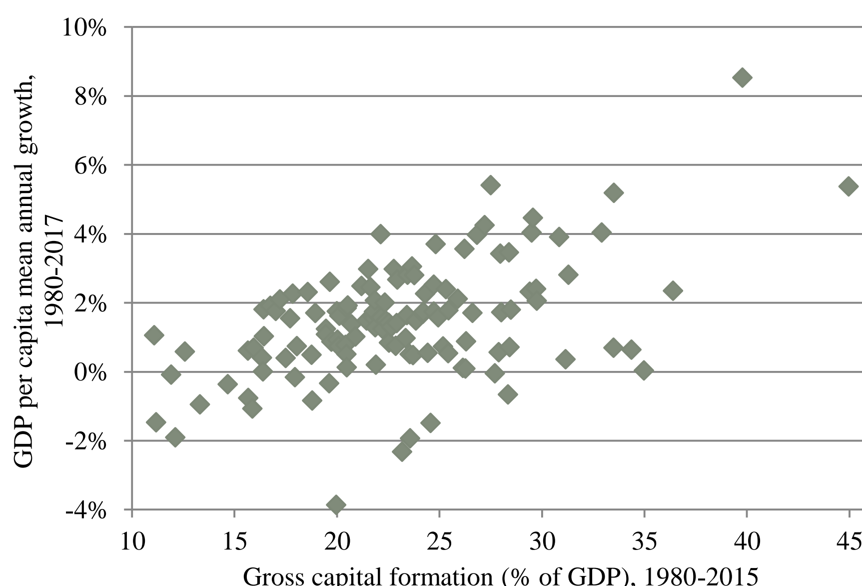

FIGURE 17. SCATTERPLOT GROWTH AND INVESTMENT
SOURCE OF DATA: WORLD DEVELOPMENT INDICATORS

But the Bank of England will have to consider some accompanying measures within its given mandate, for example by ensuring that banks have sufficient access to liquidity. Financial institutions will be urgently needed during transition in order to supply loans to businesses on a sustainable basis. This can be supported by adequate central bank facilities.

Also, the depreciation of the British pound will have to remain within reasonable limits and the Bank of England will have to undertake some interventions on the foreign exchange market to contain excess volatility.

The currency devaluation must also be analysed in the light of two potential risks. First, some corporations and financial institutions might be exposed to a currency mismatch. If they are net debtors in foreign currency while holding assets in British pounds, they would suffer losses. This tends to be particularly problematic for some less developed countries that cannot issue loans in their own currency and thus experience a currency mismatch at the aggregate level (Eichengreen and Hausmann 2003). This is not the case for the UK, where an aggregate balance sheet does not show a currency mismatch. The UK holds most of its debt in its own currency. At the disaggregated level, a currency mismatch would also generate advantages for those who are creditors in foreign currency. On balance, the pros and cons are likely to balance each other out. Still, the Bank of England will have to investigate individual cases of currency mismatches among banks and corporations and employ accompanying measures to avoid a spill-over of such an adverse effect to investors. Securing funding for investors that relied on loans from affected banks would be one such measure.

Second, devaluation will lead to imported inflation. This is commonly regarded as a one-time effect that has little influence on future levels of inflation. These future levels will remain moderate once prices for imported goods have stabilised at a higher level. The Bank of England targets inflation forecasts and will be well advised to 'look through' this short-term inflation. It thus has little reason to increase the interest rate.

4.3 Government spending and debt

As part of the plan, the government will incur an increased budgetary deficit but not a higher debt to GDP ratio.

A variety of studies have attempted to estimate the tax revenues lost due to tax havens. For the United States, Gravelle (2009) estimate an annual loss of $70 billion, roughly 0.4 per cent of GDP. Setser (2019) assembles data from the US Bureau of Economic Analysis to show that US companies' shift of profits to tax havens amounts to 1.5 per cent of GDP. With a tax rate of roughly 25 per cent, this would induce similar tax losses. Crivelli et al. (2016) estimate global revenue losses at around $650 billion and Cobham and Jansky (2018) arrive at a slightly lower value of $500 billion in 2013, which amounts to about 0.7 per cent of GDP. Crivelli et all. (2016) find tax revenue in OECD countries to suffer a loss of 2–3 per cent through tax evasion. With tax revenues amounting to 33 per cent of GDP in the UK, this would correspond to about 0.8 per cent of GDP. I base my estimate on the lowest of the values estimated in the literature, implying an increase in tax revenues of 0.4 per cent of GDP. I choose the lowest estimate because it is likely that not all forms of tax avoidance will be tackled by ending the legal capacity of shell companies. Assuming a share of 0.4 per cent for the UK would induce additional tax revenues of £8.4 billion. This projection appears reasonable and sober, even when recognising that any such figure is only a vague estimate.

A negative effect of increased tax revenues is that the resulting reduction in corporate net profits might prompt companies to lower their investments. In line with Gravelle (2009), I assume that only a minor fraction of the increased tax revenue of £8.4 billion affects individual income taxes, such that almost all additional tax revenues are paid by corporates. HM Revenue and Customs (2018: 28) report net corporate profits in 2016 of about £240 billion. An increase of £8.4 in taxes paid corresponds to an increase of the effective tax rate by 3 per cent. Djankov et al (2010: 47) estimate that a 10 percentage points increase in the effective rate of taxation reduces investments by 2.2 per cent of GDP. A 3 per cent increase would thus induce a reduction by 0.7 per cent of GDP. This estimate appears to be rather on the high side. Benefits of tackling tax avoidance would be disregarded, such as improving tax morale and equality in the treatment of tax payers. Still, some effect is likely to remain, inducing me to project private investments to decrease by 0.5 per cent of GDP.

The government's budget will profit from the increased tax revenues, but the increase by 0.4 per cent of GDP falls short of the increase in public investment by 2 per cent of GDP. As a result, the fiscal deficit will increase by 2-0.4=1.6 per cent of GDP. As part of the plan, this additional deficit will be maintained for the years to come. It will not be balanced by increased growth because all projections have been built on data relative to GDP. Currently, the deficit amounts to 1.8 per cent of GDP and it will increase to 3.4 per cent. This increase, however, is sustainable because it does not raise the debt to GDP ratio further than it would have increased without an intervention. Currently, the debt to GDP ratio amounts to 88 per cent. Using the current data, a 20-year projection with a constant GDP growth of 1 per cent and a deficit of 1.8 per cent of GDP implies an increase of the debt to GDP ratio to 103 per cent. The same level would be reached under my radical plan, with a 3.4 per cent annual deficit and increased growth of 1.5 per cent and a one-time 20 per cent increase in GDP. At the same time, the plan induces a higher public capital stock that serves to justify the debt. Thus, the plan does not run counter to fiscal prudence.

4.4 Sequencing and supporting measures

The radical plan will require thorough preparation both within the private and the public sector. Ending legal capacity for juridical persons in the OCTs is a major endeavour, the details of which require sound preparation as it will affect a variety of acts, ranging from the Recognition of Trusts Act 1987 (Overseas Territories) Order 1989 and the Overseas Companies Regulations (2009), to name only a few.

Many companies have built their business strategy relying on past government policies and legislation. They must start disentangling some business with OCTs, for example transferring beneficial ownership back to UK headquarters. Others will have to reorganise their financial inflows. By nature of the legislative process, any reform must respect old legislation and the trust that business has placed in its continuity. A transition period might be needed until the termination of legal capacity for shell companies comes into force. Additionally, the measure might differentiate between trusts and shell companies formed earlier and those that have been formed after an adequate reference date.

Another issue will also relate to the political ties with the OCTs. These have long resisted publication of beneficial ownership, making reference to their constitutional relationship with the United Kingdom and criticising interference by the UK as a type of colonialism. Under the plan, the OCTs are not forced to implement any legislation. Thus, the plan respects the level of independence granted to the OCTs. At the same time, the plan will most likely have an adverse effect on the OCTs offshore business, making it more difficult for them to sell financial services. Some compensatory support will most likely be advisable, for example relating to public investments in these regions.

Much more time will be needed for re-building public services. Well-educated applicants are likely to be scarce in some sectors. Some services that have been contracted out can be re-integrated or those employed by private contractors brought back into public employment. In other cases, more time will be needed for training and recruiting. Equally, it will take time to observe that public investments are politically attractive such that the plan finds broad support across general elections and party competition. A doubling of public investment will thus require a period of many years.

At the same time, the plan requires fine-tuning and re-adjustment. Financial institutions and investors might adjust in the expected way: by reducing capital inflows to the UK and by preferring to locate companies and trusts where they can be properly taxed. But they might just as well seek to secure legal capacity for some novel type of shell companies or employ the Crown Dependencies Guernsey, Jersey and the Isle of Man as alternative routes for bringing capital to London. The implementation will thus require constant monitoring. It will also have to involve Financial Services Authorities for ensuring that banks are not complicit in finding novel routes for capital inflows.

4.5 A vision

The UK can pull the plug on tax evasion and an overvalued currency ...

The focus on business as the sole driver of growth has undermined the aggregate conditions for a sustainable and equitable development. I have shown a path for changing this, along with actionable measures that can be swiftly implemented. By ending legal capacity for shell companies, the UK can simultaneously pull the plug on tax evasion and an overvaluation of its currency. The increased tax revenues can be used for expanding a re-organised public sector.

... and use the increased tax revenues for expanding the public sector.

The transition will need time. The more uncertain the transition period, the more a clear plan on rebuilding the public sector and placing limits on the inflow of international capital is needed, a plan that identifies the UK's core strengths: a strong and motivated public service and a society that is more than ever open to global ideas, innovation, services, motivation and products, but not to capital inflows from tax havens.

Some of the plan's spirit can already be found in early writings by John Maynard Keynes (1933): "Ideas, knowledge, science, hospitality, travel – these are the things which should of their nature be international. But let goods be homespun whenever it is reasonably and conveniently possible, and, above all, let finance be primarily national." This radical thought by the UK's most visionary economist inspired my radical plan that will bring the UK back on a path of growth, a plan to exit institutions that do not deliver welfare and foster those that create environmentally sustainable growth and equality.

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