THEME 2:

THE POLITICAL CHALLENGES OF ADDRESSING POVERTY AND INEQUALITY IN A POST-GLOBALISATION WELFARE STATE

THE COGNITIVE TAX OF POVERTY: IMPLICATIONS FOR POLICY DESIGN

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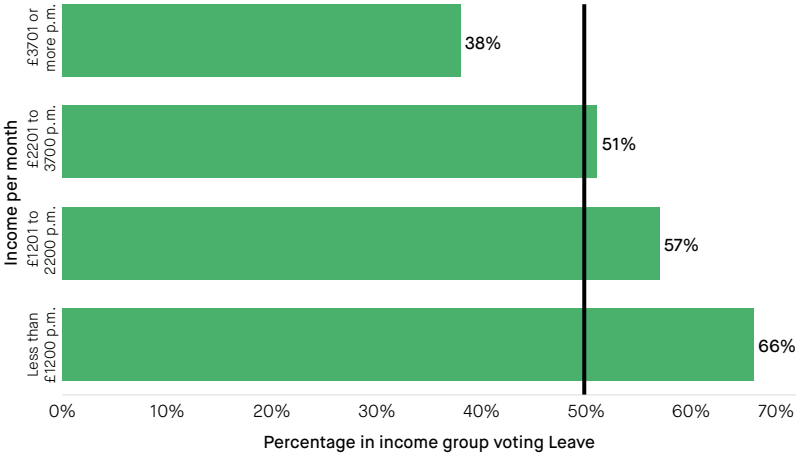
The UK vote to leave the EU raised questions about the UK's politics, economy and society, and about Brexit itself. Many of those questions were asked after the referendum. Google searches for 'What is Brexit?' peaked on 24 June 2016 – the day after the vote. That fact, and subsequent events, suggest that many people did not pay enough attention to the implications of leaving the EU before they voted.

Among the reasons identified for the vote, deprivation in terms of income, education and employment has been found to be key (Becker et al., 2017). By one account, 66 percent of people with a monthly income below £1200 voted for Brexit.

Figure 1: Leave vote by income



Source: NatCen Social Research (2016) Understanding the Leave vote

Base: all adults who voted in the EU Referendum, aged 18+

Whatever the merits or demerits of the Brexit vote expressed by the poor, poverty has been found to be correlated with many 'bad choices.' For instance, the poor pay less attention to their children, from the number of conversations they have with them to monitoring how much television they watch. Relative to the non-poor, they are less conscientious about preventive health measures, such as vaccinations for their children or washing hands, and tardier at keeping appointments (Mani et al., 2013).

Given that many of these choices are not directly linked to a lack of money, many people wonder whether people remain stuck in poverty because of these kinds of bad choices. This opinion is expressed so often that the idea that some people are deservedly poor seems to have taken firm root in parts of politics and the media.

But could the causality run in the other direction? Rather than bad choices leading to poverty, could there be something about the state of poverty that pushes people towards some of these choices? Mani et al. explored this question by investigating the link between poverty and mental attention. The authors designed several experiments to test whether the financial anxiety that comes with being poor makes a person less intelligent by depleting his or her mental bandwidth. Participants in these experiments were exposed to IQ tests and cognitive tasks that measured their mental bandwidth.

Shoppers in a US mall were primed to think about their financial concerns before taking these tests. Sugarcane farmers in India were tested before and after harvest, when their financial situation went from bust to boom. The authors also tracked the responses of drought-ridden farmers in Brazil over the course of a full rain season as weather uncertainty unfolded, and examined test outcomes and financial decisions of farmers in Kenya around the timing of their cash grants.

Having low incomes or uncertain incomes reduces a person's IQ considerably. In the case of the shoppers and sugarcane farmers, financial anxiety reduced IQ by between 10 and 13 points, which is equivalent to the effect of losing a full night's sleep or going from age 45 to 60. In other words, the results suggest that those blaming the poor for their bad choices appear to have got it the wrong way around. Why might this be?

Being poor means juggling expenses against low and uncertain incomes all the time, trading one difficult option against another, such as whether to pay the electricity bill or for childcare so that you can work. Routinely having to make such tough choices and deal with emergencies takes up a lot of mental bandwidth. And there are more emergencies, for example, missed GP appointments because of lack of access to transport turn into emergency room visits. In this sense, poverty is a double whammy. It is not just about lower material resources: it leaves a person with fewer mental resources (attention) to deal with things that are important in the long term but not urgent – like parenting, health or political engagement.

It has been well known for some time that poor people engage less with politics than those who are not poor. A recent study from the US that builds on the research described above supports the idea that financial anxiety contributes to lower political engagement among the poor, because of how it reduces their mental bandwidth (Denny, 2016). It shows that the experience of financial pressure correlates strongly with a 'good intentions gap,' where a person planned to vote but did not end up doing so. It finds that the main reason for this gap is forgetfulness – and not a lack of interest or civic-mindedness among the poor, or other structural factors that are known to hinder their access to voting facilities. The study also finds that being primed about financial anxiety has an adverse effect on political engagement among the poor, unless it is something that is salient and immediately urgent.

How are these findings relevant for UK public policy? Especially, how could they be applied to the benefit of the poorer people who were most likely to reject the political status quo by voting for Brexit? The broad takeaway here is to acknowledge that complexity in rules and regulations created for public administration can themselves be a form of cognitive taxation. In fact, at least in some areas the mental burden of such complexity is highly regressive, falling much more heavily on the poor than the rich. Simplifying some of these eligibility rules and procedures for welfare payments alone may help the poor make better decisions. We discuss more specific domains for policy intervention below.

Designing policies that help the poor

One specific area for policy reform based on these findings is the time interval for welfare payments under the Universal Credit system. Unlike earlier schemes, in England Universal Credit is paid on a monthly basis. The rationale of the policy designers was that welfare recipients should develop the same budgeting and planning skills and habits as salaried workers who are also paid monthly. Yet Universal Credit recipients are much more likely to be experiencing poverty-related cognitive impairment than the typical monthly salary employee, given their lower incomes.[2] An approach to Universal Credit that acknowledges the effect poverty can have on cognition might move policymakers to revert to fortnightly payments, as remains the case in Scotland.

A second policy innovation based on these research findings would be the use of prepaid payment cards, or other novel payment techniques, that allow users to pre-commit funds before they become available for spending. Such pre-commitment could reduce the likelihood of worse financial choices made under conditions of depleted mental resources. It is true that such schemes sometimes face accusations of paternalism or dictating to the poor. To address such concerns, participation could operate on the basis of default participation. Opt-in defaults have been used with some success to nudge millions of UK workers, many on low incomes, to save into occupational pension schemes – presumably because some of those workers lacked the cognitive bandwidth to make an active choice favouring their long-term interest. Automatically enrolling benefits claimants into prepaid card schemes (and giving them the right to then exercise the option to receive payments in the traditional manner) could be one way to reflect insights about cognition and poverty in policy.

[2] In fact, US evidence suggests that monthly welfare payments are associated with other adverse effects such as higher crime rates (Foley, 2011) and reduction in calories consumed under food stamp programmes (Shapiro, 2005), relative to more staggered payment cycles.

Third, greater appreciation of the cognitive effects of poverty might also be the basis for policy innovation in the regulation of consumer markets. UK regulators currently place particular focus on vulnerability. For example, Ofgem defines this condition as:

> "When a consumer's personal circumstances and characteristics combine with aspects of the market to create situations where he or she is **significantly less able than a typical consumer to protect or represent his or her interests** in the energy market and/or significantly more likely than a typical consumer to suffer detriment, or that detriment is likely to be more substantial." (Our emphasis)

A deeper understanding of the link between poverty and cognition explains why companies may be particularly able to take advantage of consumer inattention among low-income consumers. Appreciating this double whammy of poverty on material and mental resources offers a rationale for more effective regulation of providers in markets that serve many poor consumers.

A fourth area of policy relevance is education. Education has been shown to be a useful predictor of voting behaviour, especially in the Brexit referendum. According to polling by Ipsos Mori, 68 percent of university graduates voted to remain in the EU, while 70 percent of those with no formal qualifications voted to leave. Higher education remains skewed away from the poor. Only 16 percent of children eligible for free school meals (a reasonable marker of low-income status) went on to higher education in 2016, compared to 33 percent for non-FSM state-school pupils. Children from poor homes are more likely to pursue further and technical education than those from wealthier homes. They are also more likely to have time-poor bandwidth-impaired parents who, in any case, lack higher educational qualifications and thus the ability to help their children navigate the education system.

Poor and wealthy children are likely to experience educational systems of differing complexity. Young people moving from school to higher education face relatively simple choices and a relatively simple application and admission regime. A-levels are a widely understood qualification. The centralised UCAS application system is clear and well-established. By contrast, the options for continuing to study and train after the age of 16 are almost bewilderingly complex for those taking the technical and vocational route.

The education system offers simplicity to wealthier families who are best-equipped to deal with complexity, and complexity to poorer families who are most likely to experience the cognitive pressures that make them least able to respond to it. This suggests that significant simplification of the non-academic pathways available to school-leavers is overdue, perhaps starting with the single UCAS-style portal recommended by the Commons Education Select Committee in 2018, but also possibly including targeted careers support and guidance for low-income children. Help with the college application process may be helpful to poor families too.[1]

A final observation arising from that US study concerns the political system itself. If poverty and financial anxiety impose a cognitive burden that impedes a person's ability to take part in the political process by registering to vote and voting, that may strengthen arguments for compulsory voting, for reforms to remind, encourage and nudge low-income people to register and vote, or for new forms of voter registration and voting technology.

While none of these policy measures will individually be enough to eradicate poverty, they could go some distance in mitigating its adverse impacts on the choices poor people make. It may even nudge the better off among us to refrain from blaming the poor for their choices.

[1] In the US, help with filling in college financial aid forms increased college attendance among poor families by 8 percentage points from 28 percent to 36 percent (Bettinger et al., 2012).

REFERENCES

Becker, S. O., T. Fetzer and D. Novy. "Who Voted for Brexit? A Comprehensive District-Level Analysis." *Economic Policy* 32:92 (2017): pp. 601-650.

Bettinger, E. P., B. T. Long, P. Oreopoulos, and L. Sanbonmatsu. "The Role of Application Assistance and Information in College Decisions: Results from the H&R Block Fafsa Experiment." *The Quarterly Journal of Economics,* Volume 127, Issue 3:1 (2012): pp 1205-1242.

Denny, E. "The Good Intention Gap: Poverty, Anxiety, and Implications for Political Action." SSRN. September, 2016: https://ssrn.com/abstract=2839926

Foley, C. F. "Welfare Payments and Crime." *Review of Economics and Statistics* 93, no. 1 (2011): 97-112.

Mani, A., S. Mullainathan, E. Shafir, and J. Zhao. "Poverty Impedes Cognitive Function." *Science* 30 Aug 2013: 976-980.

Swales, K. "Understanding the Leave Vote." NatCen. December, 2016. Available at: http://natcen.ac.uk/our-research/research/understanding-the-leave-vote/

Shapiro, J. "Is there a daily discount rate? Evidence from the food stamp nutrition cycle." *Journal of Public Economics* (2005).

THE RELUCTANT WELFARE STATE: POST-CRISIS SOCIAL SECURITY IN THE UK

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Social welfare as means and ends

By Continental European standards, the United Kingdom is a reluctant welfare state. Though more than 50 percent of UK tax revenue goes to social protection, health, and housing, measured by the share of social expenditures to gross domestic product, the welfare state remains smaller than its Continental European counterparts. At the same time, the UK appears to be a fragile welfare state. Private debt exceeds 150 percent of household income, with the vast majority of this debt coming from mortgages. However, consumption-related debt is also rising fast. This debt level seems to be just manageable in the current favourable economic conditions, but interest rates have begun to climb. A severe economic downturn would take many families to the brink of bankruptcy and ultimately poverty.

One potential solution to many of the economic problems the UK faces, preferred by the Labour Party among others, seems to be the widening and deepening – the Europeanisation – of the reluctant welfare state. Many politicians, not just on the left of the political spectrum, suggest that the next UK government should increase welfare expenditure and income redistribution. These voices are guided by the idea that a bigger welfare state is a better welfare state. But is bigger better or is it just more costly?

We undertake a comparative review of the UK's welfare system and its performance. By focusing not on the size of the welfare state but on its impact – on poverty, health, and social mobility – we raise doubt that more spending guarantees better outcomes. We get mixed answers, but one message is clear: higher social expenditures are not sufficient for a better, healthier and fairer life. Bigger is not better: only better is better.

Comparing the UK's welfare state

Social democratic parties have seen better days. In France, the Netherlands and Greece the vote share of social democratic parties has fallen below 10 percent, while in former social-democratic strongholds such as Germany, Sweden and Norway, the social democratic vote has roughly halved. The current crisis of social democracy has been foreshadowed by a severe weakening of trade unions. In most Western nations, union membership has reached historical lows (OECD: Labour statistics). Social democracy and the union movement are in a severe twin crisis.

Perhaps surprisingly, this twin crisis has few if any visible repercussions for the welfare state. In the 1990s many social scientists predicted the end of the social welfare state, because globalisation and tax competition would have constrained the ability of governments to redistribute income (Scharpf 1991, 1997; Rodrik 1997a,b, 1998). Since the early days of globalisation, the share of social expenditures to gross domestic product has increased in almost all Western European countries: in the UK from 15.6 to 21.5 percent, in France from 20.2 to 31.5 percent, and in Greece from 9.9 to 27 percent. A single country, the Netherlands, reduced social expenditures between 1980 and 2016, from 23.3 to 22 percent.[2] In other words, the welfare state does just fine.

Even in the UK the welfare state does not just linger. Between 1980 and 2015, the share of total social expenditures to GDP in the UK grew from 15.6 to 21.5 percent – despite Thatcher, New Labour and the financial crisis. Of course, rising demand caused by an ageing population partly explains the growth of welfare expenditure. Though the UK ages more slowly than most continental European welfare states, the number of people aged 65 or older grew by 1.7 million between 2000 and 2015 and the group of those aged 85 or older more than doubled in the last 25 years. This population ageing affects welfare state spending through increasing pensions and a growing demand for health care.

[2] OECD Social Protection and Wellbeing Database.

Table 1: UK Welfare Budgets (percentage share of GDP)[3]

	1980	2000	2013
Pensions	4.0	5.2	6.5
Health	4.4	5.3	7.1
Unemployment	1.2	0.3	0.3
Family	2.2	2.6	3.8
Housing	0.1	1.4	1.4
Total	**11.9**	**14.8**	**19.1**

Despite its recent growth, the UK welfare state remains small compared to its Continental European counterparts. Does that have to change? If Labour wins the next UK election, this could happen. In its 2017 manifesto, the Labour Party promised rising pensions, a lower pension entry age, a significant increase in active labour market policies and more generous unemployment allowances. The party also promised voters one million new units of social housing and a £30 billion increase in the NHS budget. According to Labour, all of these promises would be financed through higher income taxes on incomes above £70,000. Labour's social policy agenda would take the UK closer to continental welfare states, but even if these policies would cost the promised £50 billion, the social welfare budget of the UK would only increase from 21.5 percent to 24.3 percent – or from £384 billion to £434 billion. To match Germany's level of per capita welfare spending, the next UK government would have to increase welfare spending by £115 billion, to approximately £500 billion. Thus, even with Labour's agenda factored in, the UK welfare state would remain small. But would outcomes improve?

[3] OECD Social Expenditure Database.

Effectiveness and efficiency of the UK's welfare state

Welfare policies are means rather than ends. Everything else being equal, lower welfare spending and lower tax burdens are better, even though some parties and politicians find this difficult to believe – they would argue that better outcomes can only be achieved by more spending.

We assume here that welfare policies should target, among other goals, a reduction in poverty, a healthcare system that supports a healthy and long life for the majority of the population, and upward social mobility. Social scientists often measure poverty as the share of the population that lives from an income that is 50 percent lower than the mean (or median) income. Welfare states effectively reduce relative poverty through social transfers to the poor and a progressive tax system: progressive taxes and tax-free income thresholds reduce the median income more than lower incomes, and thus relative poverty declines. Accordingly, relative poverty de facto measures inequality, rather than poverty. In fact, any progressive tax system could eliminate relative poverty without reducing absolute poverty.

Figure 1 displays the association between relative poverty after taxes and transfers and social transfers.

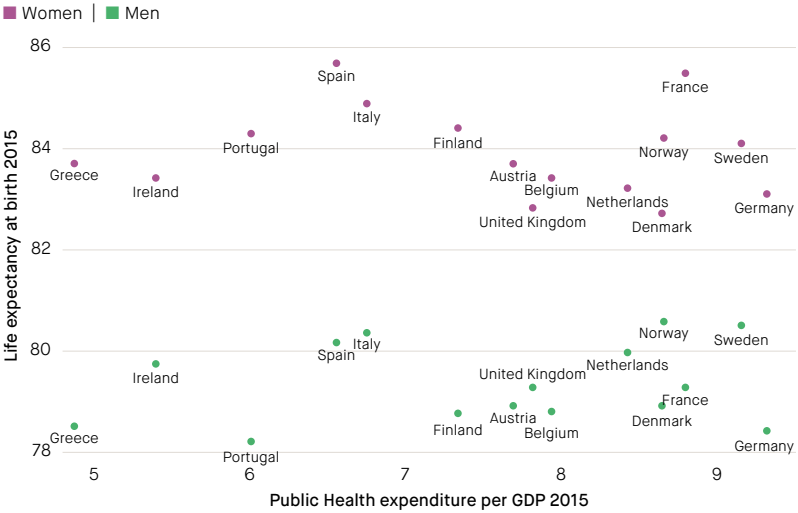
Figure 1: Poverty Gap and Social Transfers

Though the UK ranks second only to Ireland in the share of social transfers to GDP, the country has a low pre-tax relative poverty level and thus achieves a relative poverty level after taxes and transfers that is close to the average across Western European countries. Moreover, the correlation between welfare state generosity and relative poverty after tax and transfers remains weak. There are at least two possible explanations for this result: first, it may well be that governments reduce relative poverty not by transfers – by making the poor better off – but by taxes, which make the median income earner worse off. Second, it may also be that welfare state contributions increase labour costs and thus reduce demand for labour, and therefore contribute to the problem they are intended to solve.

The outcomes of health policies also do not immediately follow from government expenditure on health. Though public health expenditures vary between five and 10 percent of gross domestic product, life expectancy appears to be independent of health expenditures. In Europe, few countries spend more on health than Germany, but only Portugal has a lower life expectancy. Of course, the variation in spending partly depends on demographics, especially age. In Italy, Portugal, Germany and Finland more than 20 percent of the population is aged 65 and over. In the UK, the share of elderly is only 18.5 percent of the population. An ageing population drives health spending upwards, since 15 to 25 percent of health spending occurs during the last three years of life. As the share of the elderly increases, so too does the share of health spending in the national budget. From a comparative perspective, the recent performance of the NHS raises concerns. Most importantly, the life expectancy of women falls short of that in all other European countries but Denmark. In contrast, life expectancy for men is close to the average.

Figure 2 shows that the correlation between life expectancy and health spending in Europe remains weak. While the UK's public health expenditure is lower than in most other European countries (at least as percentage of GDP), other countries such as Denmark, Germany, and the Netherlands spend much more on health, but do not have a higher life expectancy. In at least one aspect of figure 2 remains puzzling: life expectancy for men appears to be weakly correlated with public health spending, while life expectancy for women does not seem to be associated with health spending.

Figure 2: Life Expectancy at Birth for Men and Women



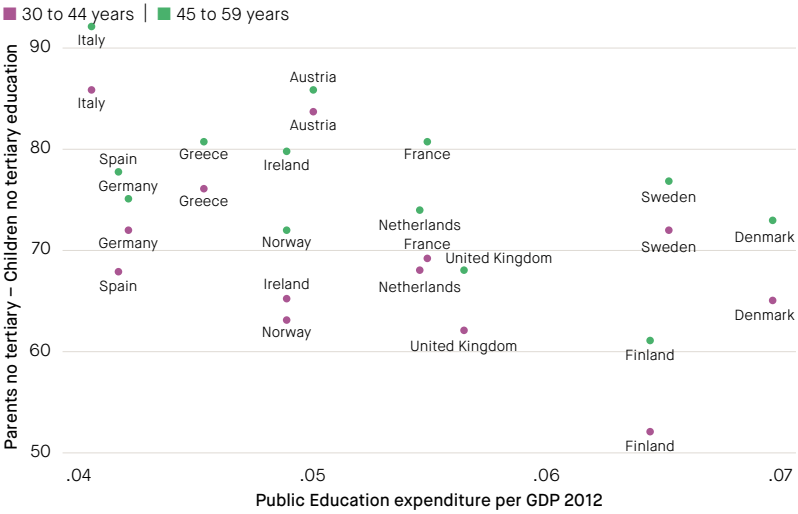
Our final comparison addresses the effect of public spending on education and the resulting social mobility. Admittedly, public investment in education does not always aim to increase upward social mobility. However, public education spending that does not address social mobility redistributes income to the top earners of the population.

Table 2: Educational attainment of children if both parents do not have tertiary education

Age	30-44	45-59	30-44	45-59	30-44	45-59
Country	Less than tertiary		Tertiary-type B		Tertiary-type A	
Austria	84	86	6	8	10	6
Denmark	65	73	19	18	15	9
Finland	52	61	15	23	32	16
France	69	81	15	8	16	10
Germany	75	72	11	14	14	13
Greece	76	81	10	7	14	12
Ireland	65	80	16	9	19	11
Italy	86	93	0	0	14	7
Netherlands	68	74	4	5	28	21
Norway	63	72	4	6	33	23
Spain	68	78	12	7	20	15
Sweden	72	77	7	9	22	14
UK: England	62	68	13	13	25	18
Northern Ireland	69	76	10	10	20	14

Table 2 reveals a relatively low level of social mobility for all countries except Finland. Social immobility remains strong in Italy, Austria, Germany and Greece. In contrast Finland, the UK and Norway reach significantly higher levels of social mobility. However, across all countries, social mobility appears to follow the money. Italy, with the lowest public contribution to education, also has the lowest social mobility. Finland, Denmark and Sweden spend more than Continental European countries on education and they reach a higher level of social mobility.

Figure 3: Social mobility and public spending on education



The correlation between public investment in education and the absence of social discrimination in education, however, remains weak. Sweden spends a lot on education and has made little progress on social mobility; Spain spends very little and has made significant progress in recent years.

Conclusion

Welfare state spending is weakly correlated with socially desirable outcomes. A bigger welfare state always means higher taxes, more debt or larger social welfare contributions (unless, of course, the welfare state falls like manna from heaven),[4] but the redistribution from the taxpayer to the government does not always mean that the social outcomes improve, relative to comparable countries which spend less on social benefits. While a larger welfare state, by definition, costs more, welfare state spending is often inefficient. Generous unemployment benefits may increase unemployment, generous health insurance schemes may contribute to demand for unnecessary health care, and excessive active labour market policies increase inflation and reduce private investment. The US has by far the most expensive health system in the world, but it generates mediocre outcomes for the majority of its citizens. The country with the second highest life expectancy in the world, Spain, spends 3 percent less of GDP per capita on health care than Germany, the European country with the worst return on health spending in Europe. This suggests that policy design is at least as important as policy funding.

[4] This expression alludes to the food (manna) that miraculously appears to feed the Israelites on their journey from Egypt to the Promised Land (Exodus 16:15).

REFERENCES

OECD Social Expenditure Database.
Available at: http://www.oecd.org/social/expenditure.htm

OECD Social Protection and Wellbeing Database.
Available at: https://data.oecd.org/socialexp/social-spending.htm

OECD Labour Statistics.
Available at: http://www.oecd.org/sdd/labour-stats/

Rodrik, Dani. *Has Globalisation Gone Too Far?* Washington D.C.: Institute for International Economics (1997a).

Rodrik, D. "Trade, Social Insurance, and the Limits to Globalization." NBER working paper 5905 (1997b).

Rodrik, D. "Why do more open economies have bigger governments?" *Journal of Political Economy* 106 (1998): 997-1032.

Scharpf, F. W. *Crisis and Choice in European Social Democracy.* Ithaca, NY: Cornell University Press (1991).

Scharpf, F. W. "Economic integration, democracy and the welfare state." *Journal of European Public Policy* 4:1 (1997).

HOW CAN FISCAL POLICIES BE DESIGNED TO PROTECT THE POOR? THE EQUITY-EFFICIENCY TRADE-OFF IN ENVIRONMENTAL TAXATION

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In the decade since the financial crisis, the majority of households have seen no growth in their earnings. Over the past 10 years, average (median) earnings have grown (in nominal terms) at 1.6 percent a year, lower than the increase in average prices (2.2 percent a year). Energy costs in particular have been rising, at 2.9 percent a year. This is especially problematic for poorer households: those with the bottom 10 percent of incomes spend £1 in every £10 on fuel, compared with those in the top 10 percent that spend less than £1 in £30.

In 2013, the then leader of the Labour Party, Ed Miliband, decried the "cost of living crisis facing families across our country." He pledged a freeze on household energy bills for 18 months, should his party win power. In response the Prime Minister, David Cameron, reportedly ordered his aides to "get rid of all the green crap" from energy bills. This "green crap" was a mix of policies designed to reduce carbon emissions. A period of stagnating incomes and rising inequality was apparently not the time to take action on climate change.

While the desire to lighten the burden on the poorest households is understandable, cancelling environmental policies is misguided. Not only are the costs of climate change action rising all the time, but there is also no need for such policies to be bad for poor households.

The obvious way to reduce emissions is to increase their cost. Policies that raise the cost of emitting carbon make it more expensive to use fossil fuels. These rising prices are what politicians fear, but most of these policies raise costs by charging taxes (or by selling permits), so can we use the money raised to compensate the poor?

The simple answer to this is: yes, in principle. Higher taxes would raise the cost for everyone, so poor and rich alike pay more. So, in essence, all a government needs to do is to hand back the cash, lump sum, to poor households. They will get back the money they paid in, and some of the money paid by richer households. The lump sum part is that while households paid a tax based on their energy usage, and purchase of goods and services that use energy, the rebate they get would depend only on their income or overall expenditure, not what they actually paid in tax.

For a government, this "in principle" argument is cold comfort; any government needs to know how to apply this in practice. If the tax impact depended only on incomes, compensation would be relatively straightforward. For example, among households with the same level of income, spend on food is relatively similar. So the amount of money needed to offset a tax on food is relatively similar for all households with the same income.

The main difficulty with compensation for taxes on energy comes from differences in need. When households buy energy, what they actually want is a warm home or decent lighting. But the amount of energy needed to heat a property depends on differing factors such as the age of the boiler, the level of insulation, how well windows have been maintained and where in the country you are. Differences in the quality of housing, efficiency of heating and location mean that even among households with similar incomes, there can be a lot of variation in this cost.

Compensating poorer households

One option to tackle this would be to upgrade the heating and insulation technology for households, to reduce this variation. A government could then provide transfers based on incomes and geography that compensate for the increased costs due to taxes. Different approaches can be taken to such upgrading. A government could offer a rollout of free upgrading, paid for out of taxes. Or, as the UK has done, require energy companies to provide insulation and heating packages. The Energy Company Obligation (and many similar earlier schemes) provided insulation to households regardless of income, and free or subsidised boilers to households receiving some

kinds of benefit or tax credit. The cost of the policy is then recouped somehow by energy companies adjusting energy bills: the distributional effects of this are unclear.

An alternative would be offering loans, potentially subsidised, to do upgrades. These loans would allow households, even with low incomes, to borrow for the purpose of installing cost-saving measures. The Green Deal was such a programme. Loans were supposedly designed so that re-payments could be made from the savings in fuel costs that better energy efficiency delivered. This approach might be fairer than free upgrades, because people who have already paid for upgrades are not subsidising those who have not. However, because of the uncertainty about calculating potential savings, take up was much lower than anticipated. The loan was also attached to the property, rather than the individuals living there, so that people don't continue to bear the cost of upgrades even after they leave the house. This, however, may affect the sale of the property since the new owners would acquire the debt. These complications, plus the high interest rates that applied, meant that few households – around one in 2,000 – used the scheme. Of the £1.1bn allocated to the programme, only £50m of loans was made.

Absent the political will to upgrade household heating and insulation, compensation for poorer households relies on targeting both income and housing characteristics. While governments collect good information on incomes, they know little about the housing quality of individual households. Targeting compensation therefore requires the use of other data to see which characteristics predict high energy costs. For example, if older households tend to have higher costs then compensation can vary with age. Alternatively, since existing benefits already have targeting criteria and information is collected for them, the rates of these could be adjusted. Following the previous example, pensions could be adjusted to compensate older households. The ability to target is limited by only using existing criteria, but their use does create less administrative burden.

Advani et al. (2013) and Advani and Stoye (2017) test whether compensating the poorest is possible in practice in the UK. They begin by modelling

reforms to the existing set of carbon policies, to bring taxes on household energy use in line with prices faced by businesses. Current policy in the UK leads to different carbon costs for different users and for emissions from different sources. This is inefficient however: it would be more effective for some users to pay others to cut their emissions rather than reduce their own pollution. Not allowing this makes both sides worse off, with no gain for the environment. Additionally, households still indirectly face the costs of the policy since the tax affects the price of the goods and services they buy. The only reason for the current approach is not to introduce visible costs from climate policy on poorer households.

In the absence of compensation, introducing these costs does indeed make households worse off. On average, households need to increase their total spending by 1.5 percent to cover the cost of the additional taxes. For the poorest 10th of households, spending would need to increase by 3.7 percent. However, the tax also raises revenue. If households continued to purchase the same amount of energy, increasing the price of carbon for households would raise £8.2bn. However, by design, the policy will reduce energy use. Allowing for this the taxes raise only £7.5bn. The higher prices also reduce household carbon emissions by 7 percent.

One approach to compensation, sometimes described as "fee-and-dividend", is to split the money equally between all individuals. This would provide a compensation of £112 per person per year. Advani and Stoye (2017) show that this compensation, which is easy to explain and to administer, would on average make the poorest 20 percent of households better off, despite the higher energy prices. The next 10 percent of households would on average see little change. However, because of variation in energy spending *within* the poorest households, around a third of people in the poorest 30 percent would actually be worse off by more than £1 per week.

Implementing more targeted reforms that adjust existing benefit rates, Advani and Stoye (2017) show how the same money could be spent in a way that better protects the poorest. Under this kind of reform, less than one in five households among the poorest 20 percent are worse off. But among

the next 10 percent of households, targeting has little effect. This group includes many households where adults are working but on relatively low wages, who are relatively difficult to target with existing policies. This reform also creates more losers overall: looking across all households, 55 percent lose by more than £1 per week, compared to 44 percent under the fee-and-dividend approach. Which approach should be preferred therefore depends on who policymakers want to protect, as well as the effects of benefit changes on other behaviours.

Lessons

The main lesson from this exercise is that policies do not exist in a vacuum. Individuals and households are affected by the whole mix of taxes, benefits and other government actions. Rather than treating each of these separately, their effects should be considered together. The government has a legally-binding target to reduce carbon emissions. Achieving this will require households to use less gas and cleaner electricity. This can be encouraged by taxing carbon more heavily. Rather than avoiding this for fear of the negative effects on poorer households, government can use the money raised to compensate these households.

Given the information available, delivering compensation through the existing benefits framework will not reach all the households that lose out. A new transfer that takes into account geography and household demographics might do better, but it will still be imperfect. Providing subsidised efficiency measures will reduce the variation in need, but take-up will continue to be partial, so this will too not solve the problem. It is therefore important for government to think carefully about the trade-offs here. There are many options: using additional money for compensation, simply accepting compensation will be imperfect, introducing a smaller tax, or something else altogether. But ignoring the issue is a bad solution. The current approach is neither equitable nor efficient. Poor households are still harmed because they pay more for the other things they buy, and collectively the country is less productive. This cannot be the answer.

REFERENCES

Advani, A., P. Johnson, A. Leicester, and G. Stoye. "Household energy use in Britain: a distributional analysis," IFS Report 85 (2013).

Advani, A. and G. Stoye. "Cheaper, Greener, and More Efficient: Rationalising UK Carbon Prices." *Fiscal Studies* 38:2 (2017).

THE CHALLENGES OF FUNDING THE STATE WITH FAIR TAXES

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Following 10 years of austerity and against the backdrop of an aging population, there is growing pressure on UK public services (Johnson et al., 2017). UK voters face an important choice: raise more tax revenue to cover the growing demand for and cost of public services, or accept that services will not keep up with demographic and cost pressures.

We need to have informed debates about how much tax we raise, who we raise it from and how we spend it. The mechanisms for collecting revenue (e.g. income tax, national insurance contributions, VAT) are important, but the key question in debates about the size of the state is who i.e. which citizens should be contributing to tax revenue. Answers will undoubtedly vary and hinge on views of fairness. The 2017 Labour Party manifesto argued that fairness required businesses and high income earners to bear the cost of a larger state. There is also debate about whether older generations who, on average, benefited from strong labour markets and large gains in property values, should contribute more to tax revenues to ensure intergenerational fairness.

What makes a tax system fair?

People have different perspectives on tax fairness and these aren't characterised simply as the political right making efficiency arguments that favour lower, flatter taxes, while those on the left make equity arguments in support of higher, more progressive taxes. Judgements of fairness can be much more subtle and move far beyond comparisons of how much tax two similar people pay (horizontal equity), or how much tax the rich pay relative to the poor (vertical equity). For example, after the world wars there was a substantial increase in taxes on the rich. Much discussion of fairness revolved around the idea that those with riches were those who tended to be older and who hadn't fought in the wars, and that they should therefore contribute through higher taxes instead (Scheve and Stasavage, 2016). More recently, polls consistently reveal that most people, from across the

political spectrum, deem inheritance tax to be unfair. This is despite the fact that it is one of the UK's most progressive taxes: only 4 percent of estates attract an inheritance tax bill on death, and the revenue is raised from those at the high end of the wealth distribution. Perhaps more surprising is that a 2015 YouGov survey showed that 70 percent of those polled thought that cigarette duties – which are highly regressive – are fair (Shakespeare, 2015). These examples illustrate that views of fairness are not driven entirely by calculations of how much is paid by the rich vs the poor. Perceptions are shaped by multiple factors, including whether the activity being taxed is deemed desirable or undesirable and whether taxes are transparent and expected, rather than obscure or retrospective.

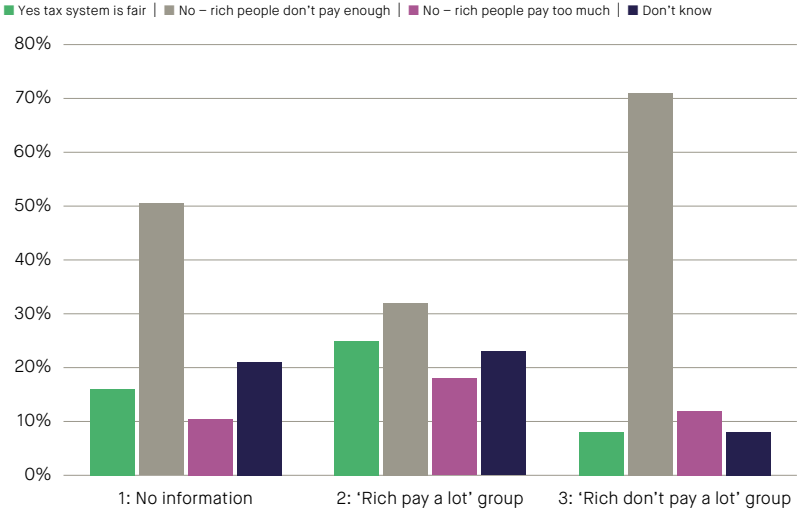
Information is powerful but often lacks context and can mislead

People have access to different information about who currently pays tax and this shapes their judgement. The IFS ran a straw poll in 2017 asking: 'Broadly, do you think the UK tax system is fair?' Participants were unknowingly randomly assigned to three different groups, the first of which received only the question. The second group were told, before answering, that "four in 10 UK adults pay no income tax while the top 10 percent of income taxpayers pay 60 percent of all income tax." The third group saw two different statistics highlighting that "the richest 10 percent of income taxpayers earn more income than the entire bottom 50 percent and that someone earning £45,000 faces the same marginal income tax rates as someone earning £145,000." All statistics are true (Miller and Roantree, 2017).

The poll revealed the power of even small changes in the information people have access to (Miller, 2017). The proportion of people judging the UK tax system to be unfair because the rich don't pay enough (50 percent in the control group) changed by around 20 percentage points in the two groups that received information (Figure 1). Other research supports the conclusion that information matters. A survey of 7,700 Vox readers also found that information – provided through a quiz – changed stated perceptions of tax fairness (Williamson, 2017). An experiment using US residents found that information had a large effect on people's stated concern about inequality and could be used to double the proportion of people supporting an estate

tax (Kuziemko et al., 2015). How information is framed – in particular whether statistics are given as percentages or in terms of absolute amounts of money – also affects stated preferences about how progressive taxes should be (Reimers, 2009).

Figure 1: Stated views on fairness change quickly with changes in information



Source: Institute for Fiscal Studies

These effects matter. People will often be exposed to small, cherry-picked chunks of information about a particular feature of the tax system and while information can be empowering, it can also mislead.

Who is paying for the UK state?

While it is interesting to consider the distributional effects of an individual tax, and this may inform incremental policy change, a broader perspective allows us to assess whether the UK tax system is fair. A well designed system will contain a mix of taxes with different distributional properties (Mirrlees et al., 2011). The UK tax system is progressive[1] (albeit not as income tax alone). The top 10 percent of UK households based on income contribute at least 30 percent of all tax receipts. This figure is an underestimate, in part because business taxes cannot straightforwardly be allocated to households but are likely to be progressive.[1] A business remits corporation tax revenues but ultimately it is a combination of shareholders, workers and customers that have less money as a result. Business cannot bear the incidence of any tax.

Considering how progressive the system is also requires consideration of benefits, which are a major tool for redistribution. Taking taxes and benefits together, the UK system decreases income for the richest 10 percent of people by 33 percent while increasing income for the poorest 10 percent of people by 27 percent.

Even considering all taxes, benefits and spending together gives an insufficient view of how the state redistributes resources between different types of people. That is because around 60 percent of redistribution is within people across periods of life, rather than across people (Levell et al., 2017). More broadly, it is important to consider the impact of a policy over longer periods. For example, VAT is regressive when compared with current income but mildly progressive when compared to expenditure. This is because people borrow and save to smooth out their living standards. Many people have a temporarily low income but maintain higher levels of spending, and therefore VAT payments). Lower VAT rates are a very poorly targeted way to help the poor.

[1] Calculations of the tax contributions of the top 10 percent rely on household surveys that under-report the income of the highest earners. Taxes which cannot be assigned include inheritance tax and capital gains tax, which tend to be more concentrated on the better off (Miller and Roantree, 2017).

It is important to consider how policies affect people in periods when they have low income, both for reasons of equity and because it speaks to how the government insures people against certain bad outcomes (like losing a job). But to accurately assess how a society redistributes from those who, over the course of their lives, have the highest ability to pay to those in most need, one needs to take a longer view.

Lessons for the policy debate

It is unrealistic to think that every policy debate will cover all aspects of the tax and benefit system, including how incidence can be shifted (from businesses to people or across different people) and how policies stack up when considered over a lifetime. But there is ample room for improvement.

As a start, debates should be built upon specific details about who pays tax. For example, if discussing whether the rich should pay more, it's important to be specific about who counts as rich. Someone earning £50,000 a year is in the top 10 percent of income taxpayers, making them rich by the standards of many but not all (Johnson et al., 2017). Debates stall if everyone agrees that the rich should pay more tax while defining the rich as someone else.

Progress can also be made by remembering that the government has many tax levers available and some are better suited for a particular task. All taxes come with trade-offs. Higher taxes can reduce work incentives, increase incentives to reorganise activities to reduce taxes, and affect choices like how much to save, what to invest in and what to buy. We need a debate that improves the understanding of the pros and cons of specific reforms and puts them in the broader context, to ensure that we implement policies that meet public expectations about tax fairness and secure funding for government services, while limiting efficiency costs.

REFERENCES

Johnson, P., R. Joyce, and B. Roantree. "If politicians talk about the rich, always ask who they mean." Institute for Fiscal Studies (2017). Available at: https://www.ifs.org.uk/publications/9193

Kelly, E., P. Johnson, and G. Stoye. "The NHS at 70." Institute for Fiscal Studies (2018). Available at: https://www.ifs.org.uk/publications/13097

Kuziemko, I., M. I. Norton, E. Saez, and S. Stantcheva. "How Elastic Are Preferences for Redistribution? Evidence from Randomized Survey Experiments." *American Economic Review,* 105 (4) (2015): 1478-1508.

Levell, P., B. Roantree, and J. Shaw. "Mobility and the lifetime distributional impact of tax and transfer reforms." Institute for Fiscal Studies (2017). Available at: https://www.ifs.org.uk/publications/9685

Miller, H. "Is our tax system fair? It depends..." Institute for Fiscal Studies (2017). Available at: https://www.ifs.org.uk/publications/10038

Miller, H. and B. Roantree. "Tax revenues: where does the money come from and what are the next government's challenges?" Institute for Fiscal Studies (2017). Available at: www.ifs.org.uk/publications/9178

Mirrlees, J., S. Adam, T. Besley, R. Blundell, S. Bond, R. Chote, M. Gammie, P. Johnson, G. Myles and J. M. Poterba. "Tax by Design" Institute for Fiscal Studies (2011). Available at: https://www.ifs.org.uk/publications/5353

Reimers, S. "A paycheck half-empty or half-full? Framing, fairness and progressive taxation." *Judgment and Decision Making,* 4(6) (2009): pp. 461-466.

Scheve, K. and D. Stasavage. Taxing the Rich: *A History of Fiscal Fairness in the United States and Europe.* Princeton, NJ: Princeton University Press (2016).

Shakespeare, S. "Voters in All Parties Think Inheritance Tax Unfair." YouGov.com; March 19, 2015; https://yougov.co.uk/topics/politics/articles-reports/2015/03/19/inheritance-tax-most-unfair

Williamson, V. "Perceptions of Tax Fairness: An Experiment." Tax Policy Center (2017). Available at: https://www.taxpolicycenter.org/publications/perceptions-tax-fairness-experiment/full