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THE MIRRLEES REVIEW: A PROPOSAL FOR SYSTEMATIC TAX REFORM

James Mirrlees, Stuart Adam, Tim Besley, Richard Blundell, Stephen Bond, Robert Chote, Malcolm Gammie, Paul Johnson, Gareth Myles, and James Poterba

Based on the best available theory and evidence, the Mirrlees Review sets out a comprehensive set of proposals for tax reform. While focused on the UK, its analysis and conclusions bear directly on the policy debate in other developed countries. The Review proposes a move to a more neutral tax system. Key ingredients include adjusting the personal tax and welfare system to achieve redistribution more efficiently, imposing VAT on a broader base of consumption at a single rate, targeting environmental externalities more accurately, and aligning tax rates across all income sources while exempting the normal return to saving from tax, and introducing an allowance for corporate equity into the corporate tax system.

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Sir James Mirrlees: Department of Economics, University of Cambridge, Cambridge, UK (jam28@cam.ac.uk)

Stuart Adam: Institute for Fiscal Studies, London, UK (s.adam@ifs.org.uk)

Tim Besley: Department of Economics, London School of Economics, London, UK (t.besley@lse.ac.uk)

Richard Blundell: Department of Economics, University College of London, London, UK and Institute for Fiscal Studies, London, UK (r.blundell@ucl.ac.uk)

Stephen Bond: Economics Department, University of Oxford, Oxford, UK and Institute for Fiscal Studies, London, UK (steve.bond@nuffield.ox.ac.uk)

Robert Chote: Office for Budget Responsibility, London, UK (robert.chote@obr.gsi.gov.uk)

Malcolm Gammie: One Essex Court, London, UK (mgammie@compuserve.com)

Paul Johnson: Institute for Fiscal Studies, London, UK (paul_j@ifs.org.uk)

Gareth Myles: Department of Economics, University of Exeter, Devon, UK and Institute for Fiscal Studies, London, UK (g.d.myles@ex.ac.uk.)

James Poterba: Department of Economics, Massachusetts Institute of Technology, Cambridge, MA, US (poterba@mit.edu)

I. INTRODUCTION

Tax by Design: The Mirrlees Review (Mirrlees et al., 2011), hereafter the Review, was a multi-year project that aimed to "identify the characteristics that would make for a good tax system in an open economy in the 21st century; and to suggest how the British tax system in particular might be reformed to move closer to that ideal" (Mirrlees et al., 2011, p. v). It was carried out under the auspices of the Institute for Fiscal Studies in London, and was timed to roughly coincide with the 30th anniversary of the celebrated Meade Report (Institute for Fiscal Studies, 1978) on the UK tax system. The Review sought to fill an important gap by offering a comprehensive economic analysis of the appropriate direction for tax policy in the United Kingdom, with both broad strategic direction as well as specific reform suggestions. It was carried out by a group of academics, working independently of government, with the hope that its analysis and conclusions would influence tax policy in the United Kingdom and perhaps more widely.

This paper summarizes the main findings of the Review. It describes the framework that underpins the proposals and some of their most important features. It is based closely on the concluding chapter of the Review, which presents the Review's conclusions. It makes reference to only a small part of the key evidence that underpins those conclusions, provides a brief update on very recent developments, highlights some of the possible implications of the Review for tax policy design in the United States, and concludes with a short overview of the many issues where we believe more evidence is required.

II. A PROGRESSIVE, NEUTRAL TAX SYSTEM

The Review tried to address the challenge of how to design a tax system that can raise the revenue that government needs to achieve its spending and distributional ambitions while minimizing economic and administrative inefficiency, keeping the system as simple and transparent as possible, and avoiding arbitrary tax differentiation across people and forms of economic activity. It motivated the proposals by suggesting that a useful benchmark should be a progressive, neutral tax system. Each of the three key words of that formula — "progressive," "neutral," and "system" — is important, and is suggestive of three of the key findings of the Review. First, policy makers need to think of the tax system as just that — a system. The way that different taxes fit together matters, as does being clear about the role of each tax within the system. Second, redistribution plays a central role in the tax and benefit system, as the trade-off between redistribution and efficiency is at the center of many debates about tax policy. The extent of redistribution will be determined by society's preferences and the impact of the system on efficiency. Third, neutrality is an important attribute. While neutrality is not always desirable, it is often valuable and will always be an important benchmark for assessing the tax system.

A. Thinking About the Tax System as a Whole

The simple directive to consider the system as a whole is often ignored in practice. Thinking of the system as a whole has at least three important consequences. First, it implies that it is the overall effect of the system on, for example, redistribution or polluting activity that matters. Not every tax needs to be "greened" to tackle climate change as long as the system as a whole does so. And not all taxes need to be progressive as long as the overall system is. In general, the right tools for achieving distributional objectives are direct personal taxes and benefits. Since tax rates and benefits can be adjusted to achieve the desired degree of progressivity, other aspects of the tax system can be focused on achieving efficiency. Second, thinking of the tax system as a whole should lead us always to consider how the different parts of the system work together. Too often policy on corporate taxes, personal income taxes and taxes on savings are designed almost in isolation. The result is inefficiency, complexity, and opportunities for avoidance. Third, a good tax system should be structured to meet overall spending needs. Earmarking of revenues for particular purposes should be avoided. It is very difficult to justify linking spending on particular items to receipts from particular taxes. And, as explained in an Institute for Fiscal Studies report, earmarking of revenues that does not impose a binding constraint on spending is empty rhetoric — "an exercise in deceiving voters that their tax payments [control] government spending in a way which they simply will not …" (Davies et al., 1993, pp. 64–65).

B. Tax Neutrality

A neutral tax system is one that treats similar activities in similar ways. For example, a system that taxes all consumption goods at the same rate would achieve neutrality over choices that people make about what to consume. A system that treats all income in the same way achieves neutrality over the choice of the form in which income is received. A system that taxes all forms of savings in the same way achieves neutrality over the form in which households save. A system that imposes the same present value of tax on consumption now and consumption in the future will be neutral with respect to the decision to save or consume out of current income.

A neutral tax system in general minimizes the welfare loss associated with distortions in household behavior. In a non-neutral tax system, people and firms have an incentive to devote socially wasteful effort to reducing their tax payments by changing the form or substance of their activities. The tax system in the United Kingdom, like that of most modern economies, is full of non-neutralities that are difficult to justify and are likely to create welfare losses. It distorts choices between debt and equity finance, between capital gains and other forms of capital income, between owner-occupied housing and other assets, between different forms of remuneration for work effort, between different forms of carbon emissions, and between different forms of business organization. These distortions create complexity, encourage avoidance, and add costs for both taxpayers and governments.

A tax system that treats similar economic activities in similar ways for tax purposes will tend to be simpler, avoid unjustifiable discrimination between people and economic activities, and help to minimize economic distortions. But a neutral tax system is not always distortion-minimizing: in some cases the efficient policy must discriminate between different activities. Important examples are taxes on alcohol and tobacco and on activities that damage the environment. In such cases, there is a compelling case that people left to their own devices will behave in ways that harm themselves and others. Moreover, there is ample evidence that the individual behaviors in question can be influenced by tax policy. Similar exceptions apply to pension saving and research and development (R&D), where society wishes to encourage behavior that may have high social returns.

There are somewhat subtler arguments applying to goods associated with work (such as childcare), where there is a case for a more lenient tax treatment in order to offset the disincentive to work created by the tax system as a whole. But such arguments must be treated with healthy caution. Even if a theoretically compelling case can be made, the advantages of departing from neutrality must be weighed against the disadvantages of complicating the tax system. Defining and policing boundaries between differently taxed activities is fraught with difficulty: it increases administrative and compliance costs, and creates perverse incentives to label one kind of activity as another. Hence, the hurdle for departing from neutrality should be high, requiring a strong and clear justification. This test is likely to be passed by relatively few items, such as environmentally harmful activities, "sin taxes," pensions, R&D, educational investments, and childcare. This is a far narrower list than the exceptions that we observe in practice.

C. Tax Progressivity

Any desired degree of tax progressivity should be achieved as efficiently as possible. The Review takes no stance on the desirable degree of progressivity within the tax (and welfare) system, but at its heart is an analysis of how to manage the inevitable trade-off between redistribution and work incentives and hence how to design the system carefully to minimize the efficiency loss associated with achieving progressivity. One key conclusion is that it generally makes sense to rely on the direct tax and welfare system to achieve progression. Using differential consumption taxes or taxes on capital is usually an inefficient means of achieving redistribution.

To achieve redistribution efficiently implies having a rate schedule that reflects knowledge of the shape of the income distribution and the responsiveness of people to taxes and benefits at different income levels. It also implies taking into account decisions over both whether to work (including when to retire) and how much to work in addition to other responses such as tax avoidance and migration.

It also makes sense to design the rate schedule to take into account other observable characteristics that reflect labor supply incentives, potential earning power, or needs. For example, mothers of school-age children and people around retirement age are particularly responsive to work incentives. They should, therefore, all else equal, face lower effective tax rates than others. There are, of course, limits to how tax and benefit payments might be conditioned on characteristics, with some constituting unfair and illegitimate discrimination. And being more generous to people with certain characteristics can create an undesirable incentive to acquire those characteristics. There is also some tension here with seeking neutrality and, as a consequence, the hurdle for such departures should again be high.

The Review devoted substantial attention to how one should think about and measure progressivity. Nearly all popular discussion, and much academic work, focuses on the effect of taxes on people's current incomes. Ideally, though, we should try to assess the progressivity of the tax system in terms of people's lifetime resources, not just as an annual snapshot. One way of getting closer to doing this is to consider the distribution of consumption expenditure and not just the distribution of income. Lifetime income and lifetime expenditure will be very similar (the main difference being bequests made or received), but annual income and annual expenditure will differ much more as people borrow and save to reflect fluctuating incomes and varying needs over their life cycle. In the absence of perfect measures of lifetime resources, shorter-term measures of income and expenditure can therefore provide complementary indicators of lifetime resources and should be considered carefully in combination with each other; some people are constrained in how much they can borrow, however, in which case a snapshot of current income is more relevant.

Of course, there are other generally desirable features of a tax system, and the Review in particular discusses the roles of simplicity, stability, and transparency. Simplicity — to the extent that such a concept can sensibly be applied to something as complex and unwieldy as a modern tax system — is in any case likely to be closely related to the idea of neutrality. But the concept of a progressive, neutral tax system is a powerful one. In the next section we show how this general concept translates into a more specific set of recommendations for tax policy.

III. GUIDELINES FOR A "GOOD" TAX SYSTEM

Two of the most important revenue sources in the United Kingdom are the income tax and the value added tax (VAT), and the Review devotes substantial attention to developing guidelines for each. With regard to income taxation, the Review argues for keeping things simple: a single tax on income with an allowance and two or three rates, combined with a single benefit to support those with low income and/or high needs. The design of the rate schedule should reflect the best available evidence about the responsiveness of people with different incomes and demographic characteristics. With regard to the VAT, the central recommendation is to broaden the base and to move toward equalizing the rates on different goods and services.

Central to the Review's recommendations is the proposition that *income from all sources should be taxed according to the same rate schedule* but that all the costs of generating that income should be deducted. This approach avoids taxing riskless returns on various investments. Applying different tax rates to different income sources complicates the system, unfairly favors those taxed more lightly, distorts economic activity towards lightly taxed forms, and facilitates tax avoidance. Taxing income from all sources equally does not just mean taxing fringe benefits in the same way as cash earnings. It also means applying that same rate schedule to self-employment income, property income, savings income, dividends, and capital gains.

It makes sense to tax most business income before it leaves the company, through the corporation tax. But the personal tax rates on corporate-source income (dividend income and capital gains on shares) should be reduced by the same amount to reflect the corporation tax already paid. The *combined* rates of corporate and shareholder taxation should equal the tax rates levied on employment and other sources of income.

This single rate schedule should be applied to income after allowing deductions for the costs incurred in generating income, such as work-related expenses and inputs to production. This principle also applies to saving and investment. Generating future income requires sacrificing current consumption. In that sense, saving and investment are costs associated with generating future income. This can be recognized in one of two ways. First, cash saved or invested can be treated as a deductible expense when it arises. This is effectively how personal saving in the case of pension contributions, and business investment in limited cases where 100 percent first-year allowances are available, are treated in the United Kingdom. Alternatively, a deduction could be given each year for the opportunity cost of capital previously saved or invested. This is the rate-of-return allowance (RRA) treatment of saving and the allowance for corporate equity (ACE) treatment of business investment, neither of which has ever been used in the United Kingdom although both are now used in other countries. For assets where only the risk-free (normal) rate of return is likely to be earned, this approach can be simplified, and returns on such assets can be tax free. Timing aside, these two treatments are equivalent. With stable tax rates, the stream of allowances given each year under the second approach has the same present value as the up-front deduction given under the first approach. In both cases, the normal rate of return to savings/investment is tax exempt. And, in both cases, any excess returns above this will be taxed in full.

This approach helps to resolve a conundrum that policymakers around the world have struggled with for decades: the tension between preventing tax avoidance on the one hand and minimizing disincentives to save and invest on the other. Eager to encourage saving and investment, policymakers have sought to reduce tax rates on capital income, but wary of opening the door to widespread conversion of labor income into capital income, they have also sought to keep tax rates as closely aligned as possible. The result has usually been an awkward compromise, with capital income taxed at reduced rates, and often different forms of capital income taxed at different rates, leaving some disincentive effects and some scope for avoidance. Taxing capital income in full *while giving a full deduction for capital costs* addresses both problems.

Attempting to tax capital income without giving a deduction for capital expenditure causes a number of problems. In practice, most systems tax capital gains only when assets are sold, not when the increase in value occurs, although one could design systems that tax accruing gains. Taxation at realization can give rise to inefficient lock-in effects. Saving and investment will be discouraged more at some times than others unless full indexation for inflation can be achieved. And investment in some assets will be discouraged more than in others unless deductions for depreciation match true economic depreciation, a very high hurdle for tax policy design. Not only do standard capital taxes discourage saving and investment in general, they also (perhaps more importantly) penalize different forms of saving and investment to different degrees, and therefore distort the form that saving and investment take.

The Review recognizes that despite the general desirability of achieving neutrality between different forms of saving and investment, there may be a good case for treating pension saving more generously. Behavioral evidence suggests that people do not always make decisions in far-sighted and rational ways. Individuals with inadequate retirement savings are also more likely to draw on costly state benefit programs in retirement. Encouraging them to save in a pension plan when young makes this less likely.

A tax on income that exempts a normal rate of return to capital, as the Review proposes, is broadly equivalent to a tax on expenditure. Of course, there are other ways to implement a tax on expenditure, notably through a VAT. The starting point for a VAT is the presumption that it should be applied to all final consumption expenditure by households, but that expenditure on business inputs should be untaxed (which a VAT achieves by allowing traders to reclaim VAT charged on their inputs). This means avoiding zero and reduced rates of tax on sales, as well as avoiding exemptions, which prevent deduction of input costs. If it is difficult to impose the VAT in the usual way on certain goods and services — notably financial services and housing — then economically equivalent taxes to substitute for the VAT on these items should be sought. The tendency of government to adopt different tax rates across commodities frequently comes from failing to look at the tax system as a whole to see that the rate schedule of personal income taxes and benefits is the instrument best suited to achieving redistributive ends. Taxes levied on income without deducting the costs of generating that income, or levied on sales without deducting input costs, or levied directly on business expenditures, are in general grossly inefficient and have no place in a good tax system. This leads to a presumption against all kinds of transactions taxes, input taxes, and turnover taxes.

Basic economics also of course tells us that pure economic rents can, in principle, be taxed without creating an economic distortion. In practice, it can be difficult to pinpoint rents but the Review makes a strong case for levying a land value tax, which is a tax on pure rent. Given that there is a case for levying a consumption tax on the value of domestic property, the practical issue of valuing land separately from the buildings on it would be acute only for business land.

Taxes used to correct market failures can also justify a non-uniform rate structure. Raising the price of activities that cause social harm can be an efficient way to discourage them because it ensures that reductions occur among those who find it easiest to make them. The major environmental problems that ought to be priced are carbon emission and congestion. There is also a good case for taxing tobacco and alcohol because of the harm to others and unforeseen harm to themselves caused by smokers and drinkers.

The main difference between lifetime income and lifetime expenditure is gifts and bequests. There is a good case for taxing such transfers of wealth, particularly to the next generation. This has the potential to reduce the inequality of life chances between different children that arise by accident of birth, at a fairly low economic cost. To achieve this, the Review leans towards a tax on lifetime receipts. Efficiency and equity are best served if this is a tax on all receipts — all kinds of assets, whether transferred upon death or during the donor's lifetime. There are, though, inevitable practical difficulties associated with trying to tax such transfers. If these difficulties mean that much wealth that is transferred cannot be taxed, then a good tax system may be caught between two very much second-best situations — either leaving these transfers permanently untaxed, or trying to capture them by introducing limits to the tax exemption of normal returns to savings, with all the attendant problems of taxing capital income.

Table 1 summarizes the Review's conclusions about the objectives that a tax system should strive to achieve, along with a view of how the UK system stacks up against these criteria. A jumble of tax rates, a lack of a systematic coherent vision of the tax base, and arbitrary discrimination across different types of economic activities are all hallmarks of the current system.

IV. ANALYSIS AND RECOMMENDATIONS

While the Review stresses the importance of considering the system as a whole, it inevitably makes a series of recommendations for each element of the tax system. On many dimensions of reform, a number of different options could achieve similar objectives. For example, there are a number of ways to exempt the normal return to saving from taxation, or to move toward greater equality in the corporate tax treatment of debt and equity. Auerbach (2012) and Gordon (2011) note in their commentaries how there are often attractive and limiting features of each option. In this section, we focus on several of the key recommendations from the Review, and summarize the analysis underlying them.

A. Earnings Taxation and Work Incentives

The personal tax and benefit system should be progressive, coherent, and designed to reflect what we know about the shape of the income distribution and how different groups respond to work incentives. The UK system lacks coherence in at least two important respects. First, the structure of welfare benefits — both to those who are out of work and to those who are working — is hugely complex, imposes considerable administrative and psychic costs, and is built around numerous different benefits with different administrative systems, different income definitions, and different bases for assessment. The current structure of multiple benefits with an array of overlapping means tests leaves some people facing effective marginal tax rates (EMTR) of over 90 percent. The system is complex, inequitable, and inefficient. It should be simplified and integrated. Indeed the UK government is currently embarked on such a reform. The Review does not, though, recommend integration between the tax and welfare systems. The differences in periods of assessment (weeks or months for benefits, a year for tax)

Table 1

A Good Tax System and the Current UK Tax System

A Good Tax System	The Current UK Tax System
Taxes on Earnings	
A progressive income tax with a transparent and coherent rate structure	An opaque jumble of different effective rates as a result of tapered allowances and a separate National Insurance system
A single integrated benefit for those with low income and/or high needs	A highly complex array of benefits
A schedule of effective tax rates that reflects evidence on behavioral responses	A rate structure that reduces employment and earnings more than necessary
Indirect Taxes	
A largely uniform VAT – with a small number of targeted exceptions on economic efficiency grounds – and with equivalent taxes on financial services and housing	A VAT with extensive zero-rating, reduced-rating, and exemption – financial services exempt; housing generally not subject to VAT but subject to a council tax not proportional to current property values
No transactions taxes	Stamp duties on transactions of property and of securities
Additional taxes on alcohol and tobacco	Additional taxes on alcohol and tobacco
Environmental Taxes	
Consistent price on carbon emissions	Arbitrary and inconsistent prices on emissions from different sources, set at zero for some
Well-targeted tax on road congestion	Poorly-targeted tax on fuel consumption
Taxation of Savings and Wealth	
No tax on the normal return to savings – with some additional incentive for retirement saving	Normal return taxed on many, but not all, forms of savings – additional but poorly designed incentives for retirement saving
Standard income tax schedule applied to income from all sources after an allowance for the normal rate of return on savings – with lower personal tax rates on income from company shares to reflect corporation tax already paid	Income tax, NIC, and capital gains tax together imply different rates of tax on different types of income — wages, profits, capital gains, etc. – some recognition of corporation tax in dividend taxation but not in capital gains tax
A lifetime wealth transfer tax	An ineffective inheritance tax capturing only some assets transferred at or near death
Business Taxes	
Single rate of corporation tax with no tax on the normal return on investment	Corporation tax differentiated by company profits, with no allowance for equity financing costs
Equal treatment of income derived from employment, self-employment, and running a small company	Preferential treatment of self-employment and distributed profits
No tax on intermediate inputs – but land value tax at least for business and agricultural land	An input tax on buildings (business rates) – no land value taxes

and in the unit of assessment (household for benefits, individuals for taxes) makes any such integration seem too complex.

Second, taxes on earnings lack basic coherence in two important ways. First, there are often patterns of marginal income tax rates that are very difficult to rationalize. For example, the marginal rate rises from 40 percent to 60 percent at £100,000 of income before falling back to 40 percent at £112,950. Second, and more importantly, because there is also a separate system of National Insurance Contributions (NICs) there are effectively two separate taxes on earnings with different sets of rules and exemptions, pointlessly increasing administration and compliance costs and making the system less transparent. NICs are a left over from a time when the United Kingdom tried to run a true social insurance scheme; there is now almost no link at all between contributions paid and benefits received. NICs are just another tax on earnings, and the current system invites politicians to play games with NICs without acknowledging that these are essentially part of the taxation of labor income. The two systems need to be merged. This is actually a crucial element in the Review's proposals to apply the same rate schedule to income from all sources. The fact that NICs are not applied to other forms of income — or only partially applied in the case of self-employment income — is one of the main reasons that there is often an incentive to disguise labor income. Integration would be a good opportunity to, in effect, broaden the base of NICs to cover self-employment and capital income in full. Since alignment of rates must include employer NICs, either employer NICs must be integrated along with employee NICs and the income tax or else an equivalent tax would have to be levied on non-employment income. This is one of several recommendations of the Review that would not, of course, be easy to implement politically.

The Review also spends some time considering the appropriate rate structure for taxes on earnings. A central concern of the UK policy debate in the past few years has been the issue of the optimal — or at least revenue maximizing — top income tax rate. This debate follows the introduction in 2010 of a top rate of 50 percent on incomes over £150,000. This rate affects one per cent of income tax payers in the United Kingdom, a group which pays more than £1 in every £4 raised in income tax. Work for the Review by Brewer, Saez, and Shephard (2010), based on changes to top income tax rates in the United Kingdom during the 1980s, estimated a taxable income elasticity for this group of 0.46, implying a revenue maximizing top rate for this group of 56 percent which, once indirect taxes and NICs are considered, implies a top rate of income tax of around 40 percent.

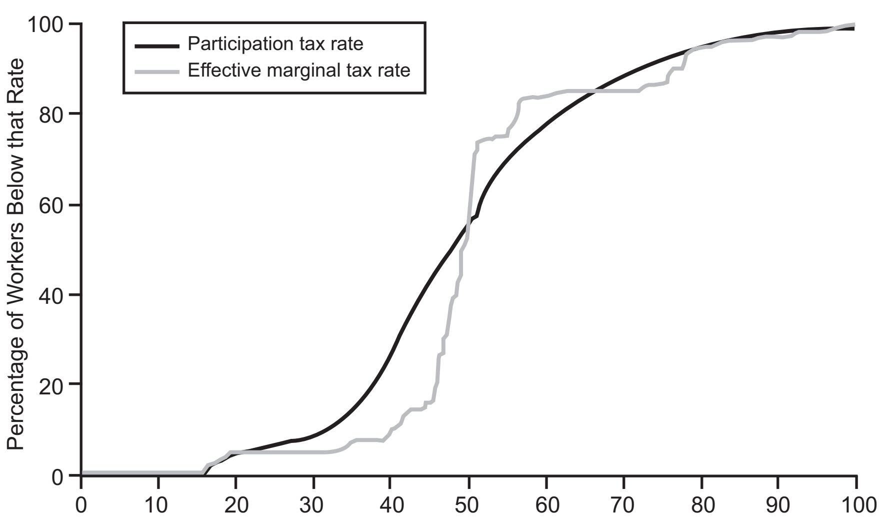
Since the publication of the Review the UK government has published its own analysis of the revenue effects of the 50 percent rate based on tax return data in its first year of operation (Her Majesty's Revenue and Customs (HMRC), 2012). Using a similar method to that employed by Brewer, Saez, and Shephard (2010) they come up with a remarkably similar central estimate: an elasticity of 0.45, though their analysis is complicated by the extraordinary amount of forestalling evident in the data. The forestalling occurred because the introduction of the 50 percent rate was announced 12 months in advance, giving taxpayers plenty of opportunity to take income early. Despite the considerable and inevitable uncertainty in the analysis, both HMRC and the independent Office for Budget Responsibility (OBR) concluded that little or no revenue would be lost by reducing the top rate to 45 percent, a policy announced in March 2012. As Robert Chote, head of the OBR, memorably put it, there is much uncertainty about exactly what the revenue maximizing rate is, but it is pretty clear that ". . . we are strolling across the summit of the Laffer curve" (Chote, 2012, p.10).

The Review in fact spends rather more time on the incentives and behavioral responses of those nearer the bottom of the earnings distribution, focusing on the extensive margin — the decision over whether to work at all — as well as the intensive margin — the decision over how much to work. The importance of the extensive margin is stressed in the Review not least as an argument for low or even negative optimal tax rates for some low earners. In this context, the number of workers in the United Kingdom facing very high participation tax rates (PTRs) is striking. Figure 1 illustrates this, indicating that around one-quarter of UK workers have PTRs of 60 percent or more.

Drawing on a range of evidence, the Review shows how behavioral responses to work incentives vary by the ages of household members. In particular women with school age children and people around retirement age — say between ages 55 and 70 — seem to be very much more responsive to work incentives than men between ages 30 and 50.

Figure 1

The Distribution of PTRs (%) and EMTRs (%) among UK Workers, 2009–2010



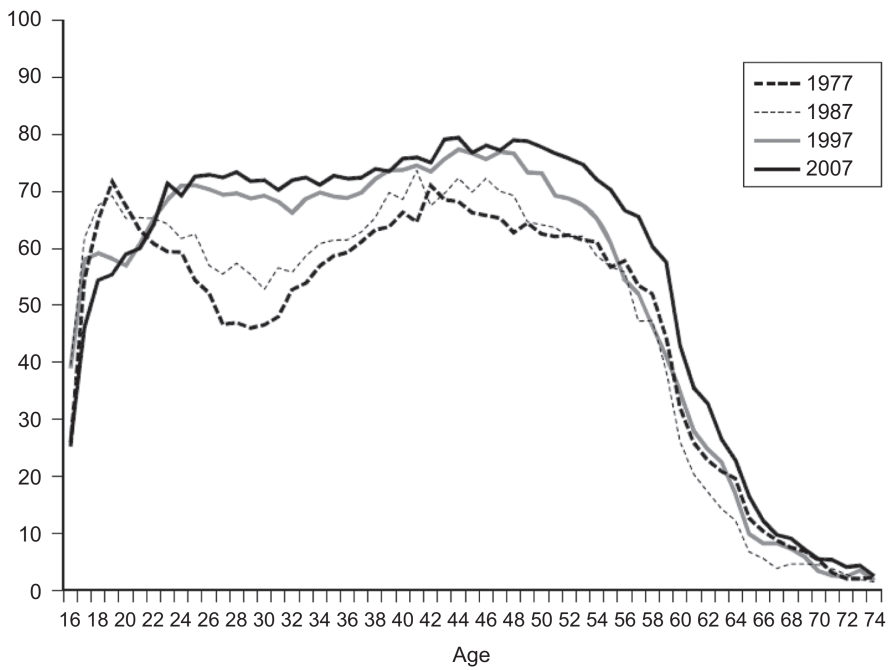
Source: Mirrlees et al. (2011, p. 84)

This is illustrated not least by the fact that the employment rates of the latter group are almost invariant across time and across countries, while employment rates both of older men and women with children are much more variable. Figure 2 shows the employment rate for women in the United Kingdom across time, while Figure 3 shows the employment rate for men in 2007 across the United Kingdom, the United States, and France.

Targeting incentives where they are most effective can improve welfare overall. Accordingly, the Review argues for a strengthening of work incentives for families whose youngest child is of school age and for those between ages 55 and 70, and illustrates ways this might be achieved. In the case of mothers with school age children it suggests making the means-tested child tax credit less generous, but with an offsetting increase in generosity for the much less responsive group of mothers with children of pre-school age. The idea is that over the lifecycle these changes should be close to distributionally neutral as well as fiscally neutral. For the older group the Review suggests a lower employment tax rate, a higher tax free allowance and a delay before they can access the

Figure 2

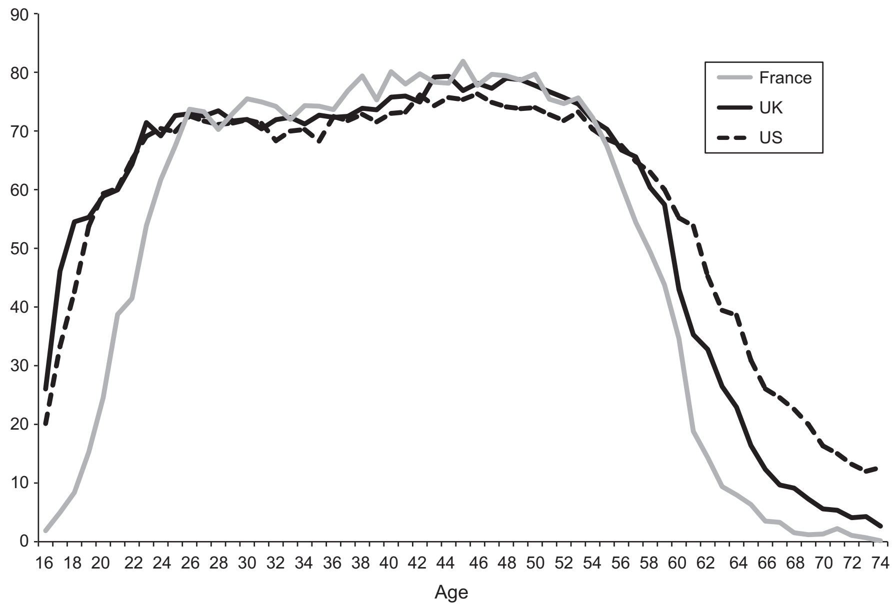
Women's Employment Rates (%) in the United Kingdom Over Time, by Age



Source: Blundell, Bozio, and Laroque (2011)

Figure 3

Men's Employment Rate (%) by Age in the United Kingdom, the United States, and France, 2007



Source: Blundell, Bozio, and Laroque (2011)

more generous means-tested benefits currently available in the United Kingdom from age 60. Again the cost of this reform could be recouped by a small increase in effective tax rates for younger, less responsive, age groups. Simulations suggest significant positive earnings and employment responses to such reforms.

B. Indirect and Environmental Taxation

The Review strongly supports a VAT as an effective way to tax consumption. Despite some issues of complexity and evasion, the VAT is appealing because it generally taxes only final consumption and is collected in stages throughout the supply chain. But its implementation still leaves much to be desired. There are particular problems created by the zero rating of exports, for example, but the key issues in the United Kingdom relate to the application of zero rates, reduced rates, and exemptions to large swaths of spending. These create a combination of administrative complexity, arbitrary distortions between different kinds of consumption, and inequitable treatment of consumers with different tastes. They also create opportunities for lobbying and often absurd political and legal arguments. This latter point was amply illustrated in the 2012 Budget which proposed applying VAT to certain sorts of food sold heated on retail premises, requiring legal definitions of what counts as warm (and indeed of what counts as bread) just as we already require a legal distinction between a chocolate-coated biscuit (subject to VAT) and a chocolate-coated cake (not subject to VAT). At the same time the VAT rate on ski lifts was cut from 20 percent to 5 percent. It just so happens that a senior Treasury minister of the time had the UK's main ski resort within his constituency.

In line with its general preference for simplicity and neutrality and the view that redistribution happens most effectively through the direct tax and benefit system, the Review argues strongly for a single uniform rate of VAT applied to almost all consumption. While recognizing the economic efficiency arguments for taxing time-saving goods less heavily, and goods that require leisure time more heavily, in order to offset the general disincentive to work that taxation creates, the Review argues that, with a few exceptions (notably childcare), the potential gains from introducing such differentiation are outweighed by its practical disadvantages. In any case there is no current correlation between those goods that are zero rated and those that one might want to zero rate for efficiency reasons.

International experience shows that a narrow VAT base is not inevitable. The United Kingdom zero-rates far more goods than almost any other country; for example, the United Kingdom and Ireland are the only European Union (EU) countries to apply a zero rate to most food, water, books, and children's clothes. New Zealand provides an excellent example of how it is possible to apply the standard rate of VAT to almost all goods and services. The costs of having a narrow VAT base are large. Considering just the distortion to spending patterns — ignoring the costs of complexity — simulations suggest that, if uniformity were optimal, extending the VAT at 17.5 percent to most zero-rated and reduced-rated items would (in principle) allow the government to make each household as well off as it is now and still have significant revenue left over.

The status quo persists largely because of a failure to consider the system as a whole. In a modern tax system, the VAT is a poor tax instrument to achieve redistribution. The VAT should therefore be extended to virtually all goods and services at the full rate, but this should be done in combination with an appropriate package of reforms to the personal tax and benefit system to address the distributional and work incentive effects of broadening the VAT base. The Review's core reform proposal involves broadening the VAT base to include goods and services that are currently subject to a zero or reduced rate — mainly food, passenger transport, books and other reading matter, prescription drugs, children's clothing, and domestic fuel and power. To offset the effects of this change on the welfare of low-income households, the Review illustrates one possible package of cuts in income tax and increases in means-tested and non-means-tested benefits that would, in combination with VAT base broadening, create a revenue-neutral reform.

Two features of this proposal, and the associated analysis, are particularly noteworthy. One is that it not only aims to be approximately distributionally neutral but also aims to avoid damaging work incentives. It is easy to design a reform that increases the incomes of poorer households, but much more difficult to design a reform that does not damage work incentives. The second feature relates to the way in which distributional neutrality is measured. Using an annual snapshot measure, the overall package looks progressive when measured against people's expenditure, but slightly regressive when measured against income. However, the reform is likely to be approximately distributionally neutral on average across people's lifetimes. This is a very good example of the limitations of looking at an annual snapshot of income and the importance of taking a lifetime perspective.

Two specific forms of consumption merit chapters of their own in the Review: housing and financial services. Housing is not currently subject to the VAT. Imposing the VAT on newly built housing would leave most housing unaffected for several generations. In the United Kingdom, it makes more sense to think of taxing people's annual consumption of housing services than to levy the VAT on new properties when they are built (or existing properties when they are sold). Such a tax, proportional to the current consumption value of housing, would be a big improvement over the UK's current regime for taxing housing. The current council tax is based on valuations that are 20 years out of date, is highly regressive with respect to property values, and gives a discount for sole occupancy — features that are unfair and encourage inefficient use of the housing stock. The stamp duty land tax is a highly inefficient transactions tax that discourages mobility and means that properties are not held by the people who value them most, and its "slab" structure — with big cliff-edges in tax payable at certain thresholds — creates particularly perverse incentives. Replacing these two taxes on a revenue-neutral basis with a simple proportional tax assessed on up-to-date consumption values of properties — essentially as a substitute for the VAT — is a much-needed step forward.

Financial services are VAT exempt. VAT exemptions are especially damaging since they prevent firms from reclaiming VAT paid on their inputs, distorting the pattern of production. Exemption makes financial services too expensive for businesses and too cheap for households (so that it is too difficult for firms to obtain finance but too easy for households to borrow). It creates a bias towards vertical integration and distorts international trade, as well as creating awkward boundaries between differently taxed activities. The way in which financial services are provided means that the VAT could not be applied to them in the standard way, but there are several ways in which a tax economically equivalent to the VAT could be applied. There is more work to be done to determine the details, but nothing in the Review suggests that any barriers are insuperable while the economic case for change seems extremely strong.

Of course the Review does not suggest complete uniformity in indirect taxation. The case for additional taxes on goods such as alcohol and tobacco is well known. The Review pays more specific attention to environmental taxes and in particular to taxes on greenhouse gas emissions and road congestion.

Taxation of gasoline and diesel is the most substantial excise tax in the United Kingdom, accounting for 5 percent of all tax revenue. But it is very poorly targeted at the main externality associated with driving, congestion, because the congestion externality imposed varies so dramatically by time and place of driving. The economic benefits associated with a move to congestion charges are likely to be very substantial indeed — up to 1 percent of national income according to some estimates. As cars become more fuel efficient, and eventually electric cars replace traditional vehicles — a change that may well have to happen if we are to meet targets for reducing carbon emissions — the current system of fuel taxation will become even less effective at limiting congestion. It will also raise less and less revenue from motorists, leaving less to offer in exchange for congestion charging.

Perhaps it is not surprising that taxes with a long history have developed in complex ways that often seem to impose welfare costs. One conclusion of the Review, however, is that even the new and recently designed elements of the tax system, such as that applying to greenhouse gas emissions, remain complex and often fail to advance systemic policy goals.

With an EU Emissions Trading Scheme (ETS) of rather limited coverage existing alongside a complex array of different and inconsistent domestic policies, effective taxes on greenhouse gas emissions vary dramatically according to both the source of the emission (the type of fuel, for example) and the identity of the user (domestic or business, for example). This is illustrated in Figure 4 which also shows that recent reforms have increased both the levels of carbon taxes and the disparities between the treatment of different sources with implicit carbon prices ranging from zero for gas used in domestic heating to over £60 per ton for electricity used by business and produced in gas-fired power stations. In addition, the reduced rate of VAT payable on domestic fuel consumption acts as an effective subsidy to the creation of carbon emissions. The Review recommends a consistent price on carbon emissions, encompassing both a reformed ETS and a simpler, more coherent system for taxing emissions not covered by the ETS.

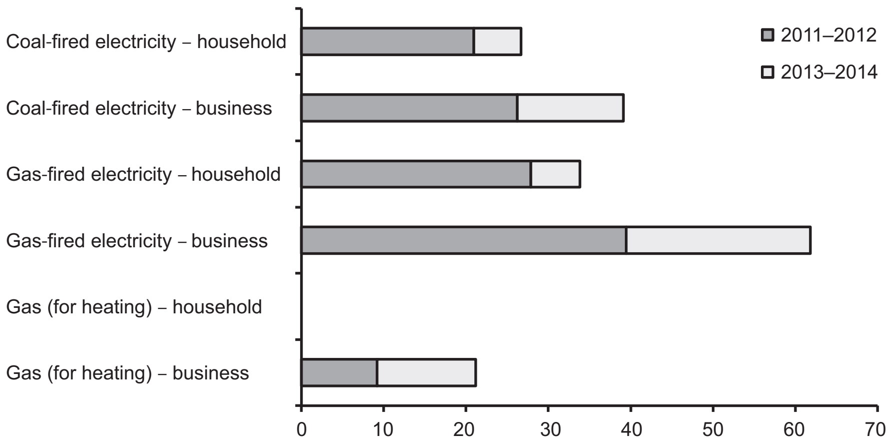
C. Taxing Saving and Wealth

The appropriate structure for the taxation of savings is an issue that is considered at length in the Review. Serious consideration is given to arguments for taxing the normal return to savings. Four issues in particular are considered. It may be that the decision to delay consumption tells us about someone's earning capacity. Those who are more cognitively able may be more likely to save. Savings-neutral taxation may distort decisions in favor of financial saving over human capital investment if there are credit constraints or if it is hard to measure and offset the full costs of human capital investment. It may be that taxing savings will increase the labor supply of those who have saved against the possibility of losing earning capacity but who find, ex post, that they didn't need to save for that reason. Or it may be that future consumption is a complement to current leisure. These arguments are explored in some depth by Banks and Diamond (2010) in a major contribution to the Review as well as in the second volume.

The key conclusion though is that the tax system should treat different forms of savings in broadly comparable ways, should not introduce important incentives for individuals to consume earlier rather than later in their lifetimes, and should not have effects that

Figure 4

Implicit Carbon Tax, £ per Metric Ton, 2011 Prices



Source: Advani, Levell, and Stoye (2011)

are unduly sensitive to the rate of inflation. Significant reforms are needed in the United Kingdom to reduce arbitrary differences in the tax treatment of different assets. These arbitrary differences are well exemplified by the effective tax rates presented in Table 2.

The Review recommends that the tax system should exempt the normal return on savings from taxation as far as possible, possibly subject to some limits, and make the system inflation-proof. Getting the taxation of savings right is also important in ensuring that the personal and corporate tax systems are well integrated.

These goals can be achieved by an approach that taxes only excess returns, and which exempts from taxation the component of income and capital gains earned on savings that corresponds to a risk-free or normal rate of return. The main recommendations for reform would accomplish this by making interest on ordinary bank and building society accounts free from taxation, and by providing a rate-of-return allowance (RRA) for substantial holdings of risky assets such as equities, which can provide higher returns. For simplicity, one would retain tax-free treatment of the returns from smaller holdings of equities and mutual funds, along the lines of UK equity individual savings accounts (ISAs).

The RRA would be calculated by applying a risk-free nominal interest rate to a cumulated stock of savings held in particular assets. No explicit indexation is required — the stock of savings just corresponds to past purchases of these assets, net of past

Table 2
Effective Tax Rates on Savings in Different Assets

Asset		Effective Tax Rate (%) for: Basic-rate Taxpayer	Higher-rate Taxpayer
Individual savings account		0	0
Interest-bearing account		33	67
Pension: employee contribution	– invested 10 years	–21	–53
	– invested 25 years	–8	–21
Pension: employer contribution	– invested 10 years	–115	–102
	– invested 25 years	–45	–40
Housing: main or only house		0	0
Rental housing	– invested 10 years	30	50
	– invested 25 years	28	48
Direct equity holdings	– invested 10 years	10	35
	– invested 25 years	7	33

Notes: The calculations assume a 3 percent annual real rate of return and 2 percent inflation. Calculations for rental housing and direct equity holdings assume that real returns accrue as rental income, interest or dividends realized at the end of the period in question, while capital gains match price inflation. Rental housing is assumed to be owned outright, with no outstanding mortgage. Calculations for employer pension contributions assume that the employee is contracted into the state second pension. The saver is assumed to be a basic- or higher-rate taxpayer throughout the period in question, to have exhausted the CGT exempt amount where appropriate, and to have no entitlement to means-tested benefits or tax credits.
Source: Wakefield (2009)

sales. Nominal income plus any nominal capital gains realized in the current year, in excess of the RRA, would then be taxed at the individual's marginal income tax rate. In cases where the RRA exceeds the return on these assets realized in a particular year, the difference would be carried forward to set against nominal returns in later years, marked up by the same nominal interest rate used to determine the RRA. Other than specifying this nominal interest rate, no more information is required to operate this system than is needed to tax capital gains on these assets under a conventional income tax. In most circumstances, the normal rate of return can be well approximated by a nominal interest rate on medium-term government bonds. A similar approach is used to tax dividends and capital gains on company shares in Norway.

As well as reducing the distortion in favor of current consumption over saving under a standard income tax, this RRA approach to the personal taxation of income from capital has important practical advantages. The taxation of capital gains raises major problems for a conventional income tax: taxing gains on realization rather than on accrual creates a lock-in effect, encouraging people to delay the sale of assets whose value has risen, and taxing purely nominal gains makes effective tax rates highly sensitive to inflation. Piecemeal attempts to deal with the latter problem by taxing nominal capital gains at preferential rates invite tax avoidance, favoring the conversion of earned income into more lightly taxed capital gains where this is possible. The succession of wholly unsatisfactory reforms to capital gains taxation in the United Kingdom over the last 15 years bears witness to these problems. The RRA approach addresses all of them. It also operates coherently with corporate taxation, an important ingredient of any well-designed system of savings taxation. The rate of personal tax on excess returns from company dividends and capital gains on company shares would be reduced, relative to those on other assets, to reflect tax on the underlying profits that is paid at the corporate level. Indeed, the RRA in the personal income tax is a natural counterpart to the allowance for corporate equity, our preferred scheme for corporate taxation.

There are theoretically equivalent ways in which taxation of the normal return on savings could be eliminated. As a practical reform proposal, the RRA has potential advantages over the pure expenditure tax approach recommended in the Meade Report (1978). The RRA collects tax revenue up front and provides tax relief only as returns are realized, making the transition to it comparatively straightforward. It also mitigates the risk of loss of revenue occurring as a result of those who did the saving avoiding future tax liability by moving abroad before they draw down their savings. In the context of increased international migration, this is an important consideration.

That said, for pension saving the current expenditure tax treatment looks broadly right because alternatives have the potential to be highly complex. Some additional tax advantage (above simple expenditure tax treatment) is probably justified to encourage, or reward, the tying-up of savings in a form that restricts access for a long period. There is, though, a strong case for rationalizing the current UK system of pension taxation, and changes should be made to eliminate the inconsistencies that make employer contributions substantially tax advantaged relative to employee contributions.

For most people, these proposals would reduce the tax they pay on the returns to their savings. The main exceptions would be those who make large returns in the form of capital gains or who earn very high returns more generally.

The tax treatment of savings plays a crucial role in ensuring that the tax system is efficient and equitable over an individual's life cycle. But there is a case for thinking differently about wealth that is transferred between people — especially as an inheritance between generations. Recent increases in wealth inequality, coupled with increases in housing wealth for particular groups, increase the case for taxing wealth transfers on both equity and efficiency grounds. The current UK inheritance tax is unfair in many ways — it fails to tax those who pass on gifts during their lifetime and benefits those who can arrange their affairs to escape taxation at death, while taxing more highly those (usually of more modest means) who cannot arrange their affairs to avoid taxation. It is inefficient because it creates many tax-driven behavioral changes and leads to some asset classes, such as agricultural and business assets, being tax favored for no clear reason except, presumably, the influence of the agricultural and family business lobbies. Logic drives one to prefer a tax on lifetime receipts over a tax on estates at death. But this is one area where the Review both recognizes important administrative and transition challenges that would need to be satisfactorily addressed before such a proposal could be brought to fruition.

D. Business Taxation

There are two substantial taxes on business in the United Kingdom, a corporate income tax and "business rates," which are a tax on the value of business property. Business rates create a number of distortions, as they discriminate between different sorts of business and discourage development of business property. Subject to confirming practical feasibility, they should be abolished and replaced with a system of land value taxation, thereby replacing one of the more distortionary taxes in the current system with a neutral and efficient tax.

The Review's two core proposals regarding corporation tax again flow from a concern for neutrality and a goal of treating different types of income similarly under the tax system. The first proposal concerns the treatment of small businesses and self-employment. The current system distorts choices over organizational form — the choice between employment and self-employment on the one hand, and the choice between running an unincorporated business or a small company on the other hand — as well as decisions over the form of remuneration — for example, whether the sole proprietor of a small company pays herself in the form of salary or dividends. These discrepancies are illustrated in Table 3 which reports overall marginal tax rates, accounting for both direct taxes and NICs, associated with a small increase in income (before both income tax and NIC) for employees, the self-employed, and small companies. The advantages of incorporation, especially for basic rate taxpayers, are evident.

Higher-rate taxpayers pay some personal income tax on dividend income,[1] which reduces the advantage of incorporation relative to self-employment.[2] Compared with employment, there remains a substantial net saving for either form of small business activity, principally in the form of lower NICs.

The Review recommends aligning the taxation of income from employment and self-employment, and increasing the NICs paid by self-employed individuals to match those

[1] Each £1 of dividends received carries a tax credit of £0.11. For higher-rate taxpayers, the grossed-up value of £1.11 is taxed at 32.5 percent, giving a tax liability of £0.36. The dividend tax credit is set against this liability, giving a tax payment of £0.25. For basic-rate taxpayers, the "grossed-up" value of £1.11 is taxed at 10 percent, giving a tax liability of £0.11 before the credit, and hence no tax payment.

[2] In 2010–2011, the marginal tax rate of 41 percent for a higher-rate self-employed individual is simply the NIC rate of 1 percent plus the income tax rate of 40 percent. The marginal tax rate for a higher-rate small company proprietor taking additional income in the form of dividends is 40.75 percent, obtained as $0.21 + (1–0.21)\times0.25 = 0.4075$, where 21 percent is the small companies' rate of corporation tax and 25 percent is the effective tax rate on dividend income.

Table 3

Marginal Tax Rates (%), by Legal Form, 2010–2011

	Employment	Self-employment	Small Company
Basic rate	39	28	21
Higher rate	48	41	41

Notes: The table shows the additional tax and NICs payable on an additional £1 of income (before tax and NICs), expressed as a percentage of this additional £1.
Source: Mirrlees et al. (2011, p. 459)

paid by employers and employees combined in relation to employment (preferably in the course of integrating NICs with the personal income tax). To align the tax treatment of distributed profits with the tax treatment of income from employment, a minimal approach would increase the taxation of dividend income received by individuals by an amount broadly equivalent to the NICs paid by employers and employees on wages and salaries. Again, this could be done as part of the integration of the income tax and NICs. Capital invested by individuals both in business assets of sole proprietors and partnerships and in equity issued by companies would be eligible for the RRA described above. In both cases, this would remove the normal returns on these investments from personal taxation.

The second core proposal on business taxation is the introduction of an allowance for corporate equity (ACE) within the corporate income tax. The ACE provides an explicit deduction for the cost of using equity finance, similar to the existing deduction for the cost of interest payments on debt finance. This levels the playing field between different sources of finance. Like the RRA, the ACE can be designed to eliminate the effect of the corporate tax on the required rate of return for all forms of corporate investment. Different assets in which firms invest are treated equally, with no sensitivity of tax liabilities to the rate of inflation. With this form of corporate tax base, investment projects that just earn the minimum required or normal rate of return are effectively exempt from corporate taxation, and revenue is collected from those investments that earn above-normal rates of return, or economic rents.

Exempting the normal rate of return on capital from corporate taxation fits well with the proposal to exempt the normal rate of return on capital invested in the business sector from personal taxation — as would be achieved by a RRA for corporate equities and unincorporated business assets. Suitable alignment of tax rates on corporate profits, dividend income, capital gains on company shares, and other sources of personal income can then ensure that owner-managers of small firms have no tax incentive to pay themselves in the form of dividends rather than salaries, and achieve an equal tax treatment of income derived from employment, self-employment, or running a small company. Much complex anti-avoidance legislation would then become redundant.

Experience with the operation of an ACE-type allowance in Belgium and other countries suggests that this approach is both feasible and compatible with EU Treaty obligations. Some opportunities for international companies to shift taxable profits out of the United Kingdom would be reduced by the introduction of an ACE — notably the scope for using debt borrowed (and tax deductible) in the United Kingdom to equity-finance subsidiaries operating (and taxed) in other jurisdictions with lower corporate tax rates. Any purchase of equity in a subsidiary company would reduce the firm's ACE. Other mechanisms through which multinational firms can reduce their UK corporate tax liabilities, such as the manipulation of transfer prices, would remain. However, at a given corporate tax rate, these opportunities would be no greater than under the current corporation income tax.

The introduction of an allowance reflecting the underlying cost of using equity finance would have a significant revenue cost. It would be a mistake to recoup that by raising the corporate tax rate. The appropriate rate at which to tax rents earned in the corporate sector must balance the advantages of taxing sources of rent that are largely immobile against the disadvantages of taxing (attempting to tax) sources of rent that are highly mobile and that are likely to relocate to other jurisdictions should the UK tax rate become too high. Inevitably, this depends on corporate tax rates in other countries, which have fallen over the last three decades and which may well fall further with increased economic integration. Increasing the corporate tax rate would also increase incentives for multinational firms to shift taxable profits to lower-tax countries. If the current UK corporate tax rate is more or less appropriate, the implication is that by taxing the normal return on equity-financed investments, we are currently raising too much revenue from corporate taxation. Our recommendations are thus to introduce an ACE without increasing the corporate tax rate, to accept that less revenue will be collected from the corporate tax, and to rebalance the shares of revenue from corporate and other taxes as part of an overall package of reforms to the tax system as a whole.

In this context, the issues of tax incidence and who bears the costs of distortions introduced by the tax system are crucial. By raising the cost of equity-financed investment, the corporate income tax also tends to reduce the overall level of corporate investment. In an open economy, the cost of this distortion will largely be borne by domestic workers. Owners of capital can invest elsewhere. Lower investment in the United Kingdom implies less capital per worker and lower labor productivity. In the long run, this will be reflected in lower real wages, making domestic workers poorer. Taxing wages directly would allow the same revenue to be collected with more capital per worker and hence more output per worker — a more efficient outcome that would also leave domestic workers better off, notwithstanding the higher tax rate on labor income.

E. Summary of Key Provisions

Our main proposals, which are summarized in Table 4, represent a radical set of reforms aimed at creating a much more efficient and effective tax system. They would take the UK tax system much of the way towards being a progressive, neutral system. The combination of excluding the normal rate of return to capital from tax, aligning

Table 4

Main Recommendations and Explanations

Taxes on Earnings
Merge income tax with employee (and ideally employer) NICs
End the opaque practice of tapering personal allowances and move to a transparent, coherent rate schedule
Introduce a single integrated benefit, getting rid of the highest effective marginal tax rates (90% and more) faced by some low earners
Strengthen work incentives for those whose youngest child is of school age and for 55- to 70-year-olds relative to others
Indirect Taxes
Remove nearly all the current zero and reduced rates and, where possible, exemptions from VAT. Introduce a comprehensive package compensating the less well-off on average while maintaining work incentives
Retain a destination basis for VAT while ending the zero-rating of exports
Introduce a tax equivalent to VAT on financial services
Replace council tax and stamp duty land tax on housing with a tax proportional to the current value of domestic property, as a substitute for a VAT on housing
Environmental Taxes
Introduce a consistent price on carbon emissions, including a tax on domestic use of gas for heating through a combination of extended coverage of the EU Emissions Trading Scheme and a consistent tax on other emission sources
Replace much of the current tax on gasoline and diesel fuel with a national system of congestion charges
Taxation of Savings and Wealth
Exempt interest on bank and building society accounts
Introduce a rate-of-return allowance for substantial holdings of risky assets (e.g., equities held outside ISAs, unincorporated business assets, and rental property) so that only excess returns are taxed
Tax capital income and capital gains above the rate-of-return allowance at the same rate schedule as earned income (including employee and employer NICs), with reduced rates for dividends and capital gains on shares to reflect corporation tax already paid
Maintain and simplify the current system of pension taxation, ending the excessively generous treatment of employer contributions and replacing the tax-free lump sum distribution with an incentive better targeted at the behavior we want to encourage
Remove the most obvious avoidance opportunities from the inheritance tax and consider introduction of a comprehensive lifetime wealth transfer tax
Business Taxes
Introduce an allowance for corporate equity into the corporation tax to align treatment of debt and equity and ensure that only excess returns to investment are taxed
Align tax treatment of employment, self-employment, and corporate-source income
Replace business rates and stamp duty land tax on business property with a land value tax for business and agricultural land, subject to practical feasibility

tax rates on income from all sources, and significantly widening the VAT base would move a long way towards neutrality. Progressivity of the system as a whole should be maintained — or changed if desired — through using the personal tax and benefit system. It is important to combine this with reforms that simplify and rationalize the benefit system and that ensure that personal taxes and benefits are designed to take account of what we know about people's responsiveness to incentives. Where there is a strong case for deviating from neutrality — as where environmental externalities exist — such departures need to be better designed and more clearly focused on the externality created than at present. This should involve consistent pricing of carbon and charges for motorists that reflect the main externality they cause, i.e., congestion.

As with any major tax reform proposal there are serious issues of equity and transition that might stand in the way. Many of the reforms we have proposed, while distributionally neutral on average, undoubtedly would raise the tax burden on households in particular circumstances. While any substantial tax reform that alters the structure of the tax system is likely to face problems of this type, and while the right thing to do is to try to move to the better policy and associated equilibrium, the transition is a challenge.

Two points with regard to the transition and the analysis of tax burdens warrant some discussion. First, over the life cycle, the effects of many of the reforms tend to offset. A rise in VAT and a fall in other taxes will harm people when their consumption is high relative to their income, and benefit them when income is high relative to consumption. An increase in benefits for families with young children and a cut in benefits for families with older children should, on average, cancel over a lifetime. Again, the "on average" is important — there will be winners and losers. But there is a different point as well. For someone who has older children, the fact that the reform will even out for the next generation is of little comfort. This effect can be obviated to some extent by phasing in the reform. It is more difficult to deal with the life-cycle effect of the VAT proposals. To the extent that older people have consumption high relative to their income, it is no comfort to the current generation of older people that they would have benefited from the new system when they were younger, had it been in place. But the reform package we illustrate does not, in fact, imply that pensioners lose out on average.

Second, the distributional effects of the reforms will be affected by capitalization. Reforms to capital taxation will affect the value of some assets, and therefore create windfall gains and losses for asset holders, in ways that some will consider unjust. For example, replacing the council tax and stamp duty land tax with a tax proportional to current property values will reduce the value of some properties and increase the value of others. Proposed reforms to the inheritance tax will presumably reduce the value of agricultural land and of unlisted businesses.

These are important issues, and real costs will be imposed on people. Change will have to be managed carefully and often phased in gradually. In some cases, that might make the transition easier. In some cases, particularly where the issue is about negatively affecting particular cohorts of individuals, it may be important to make the transition a gradual one. But many of the costs relative to the status quo are unavoidable. They need to be weighed on the political scales. Our view is clear, though: the long-term benefits of change far outweigh the transitional costs. We cannot forever succumb to the tyranny of the status quo.

V. LESSONS FOR OTHER NATIONS

While the specific limitations of the current UK tax system are institution- and context-specific, the broad recommendations of the Review have more general application. For example, the need to recognize that the tax system is just that — a system — is a key principle that should guide the analysis of tax reform in any nation. The presumption of neutrality in the absence of strong evidence to suggest an alternative policy also has broad application, as does the recommendation to consider tax incidence questions in a life-cycle setting. Choosing the structure of the income tax and the VAT, in particular the trade-off between the breadth of the base and the level of the rates, is also a nearly universal challenge in tax design.

Many analysts predict a substantial discussion of tax reform in the United States after the coming presidential election. It is therefore of some interest to ask whether there are particular features of the Review that are likely to offer lessons in the U.S. context. We identify four such issues.

First, the consideration of simplicity would suggest devoting particular attention to the current two-track structure of income taxes that pairs the federal individual income tax with the Alternative Minimum Tax (AMT). The latter computes tax liability using a somewhat broader definition of income and lower rates than the individual income tax, and subjects affected taxpayers to additional record-keeping and compliance costs. Moreover, the failure to index key provisions of the AMT for inflation has left tens of millions of taxpayers potentially exposed to the tax, an outcome that has only been avoided through a sequence of short-term fixes to the tax code. There are many other features of the federal income tax structure that contribute to complexity and that could be examined in a systematic discussion of tax reform.

Second, the non-neutralities that loom large in the discussion of the UK tax system are also present in the U.S. system. There has been increasing interest in reforming tax expenditures, the combination of exemptions, deductions, and credits that narrow the base for the federal income tax. The value of employer-provided health insurance is currently excluded from the definition of taxable income. Deductions for mortgage interest payments, state and local income tax and property tax payments, and for charitable donations also have substantial effects in reducing income tax revenues. The presence of exemptions and deductions not only encourages some activities at the expense of others, it also encourages these activities to a greater extent among high-income households who generally face higher marginal tax rates than their lower-income counterparts. There are a number of current proposals for capping total tax expenditures for each taxpayer, or for requiring deductions to be claimed at a fixed rate for all taxpayers. Such proposals would promote the neutrality objectives discussed in the Review.

Third, most of the issues with regard to corporate taxation that emerged in the Review also apply in the U.S. context. The current tax structure encourages debt relative to equity financing, and since investment income is taxed at both the corporate and (in many cases) at the investor level, it is important to consider the systemic burden of taxation and not just the tax collected from firms or from investors. The same challenges that arise when multinational firms have opportunities to locate their economic activities in different nations, and that place pressure on the top statutory corporate income tax rate, confront both U.S. and UK policymakers.

Fourth, the observation that there may be different behavioral responses to the tax system among different taxpayer subgroups, and that these should be reflected in the design of tax policy, is a broad lesson that applies in the United States, and many other nations, just as in the United Kingdom. This suggests attention, for example, to the effective tax rates on workers near retirement, and on mothers with young children, where prior research suggests that behavioral effects may be particularly large.

While there are more similarities than differences in the tax policy challenges confronting the United States and the United Kingdom, there are notable differences that underscore the importance of specific institutional context in any discussion of tax reform. The most notable is the greater reliance on income and payroll taxes in the United States than the United Kingdom, and "American exceptionalism" in the form of the absence of a VAT or national sales tax. A second is the closer linkage between payroll taxes and retirement benefits. While Medicare is universally available to those over age 65, with some means-testing of premiums, Social Security benefits are in part a function of an individual's earnings history. The extent of such "tax-benefit linkage" varies by income level and family status, and would need to be an input to any analysis of the integration of payroll and income taxes in the United States.

VI. UNANSWERED QUESTIONS AND FUTURE RESEARCH

The Review tried to draw where possible on the existing body of empirical and conceptual research in public economics. More than a dozen new research studies were commissioned during the course of the project, and the findings from those studies were integrated with other research to guide the broad recommendations. There remain, however, many unanswered questions with regard to the link between tax policy and household and firm behavior. These links are often consequential for policy design. We close by identifying three issues that we regard as particularly important directions for future work.

First, we need a better understanding of how tax burdens on firms and their investors, who may span many nations, interact to determine investment, the location of economic activity, tax revenues from the corporate sector, and long-term economic growth. It is difficult to carry out the "what if" calculation for companies because there are a small number of large firms and the wealth of data that supports analysis of how individuals respond to the tax system is often lacking. Yet under common assumptions about the incidence of the corporation income tax, this tax accounts for a significant share of the tax burden on high income households.

Second, there are important gaps in our understanding of life-cycle behavior. A number of studies suggest that when earnings are uncertain, carefully designed taxes on saving can be used in tandem with taxes on earnings to increase the efficiency of redistribution. This point is explored by Banks and Diamond (2010) and a number of papers referenced therein. The role of contributory-based social insurance is closely related. Linking contributions to benefits has the potential to improve efficiency. The role of these aspects of tax design will depend crucially on how individuals think about the future in making their earnings and savings decisions and the extent to which the tax system redistributes across the life cycle. There are also important issues about family structure: marriage and fertility choices are likely to be important margins for adjustment over the life-cycle. Behavioral effects operating through these channels could have important long-term ramifications for the generation of earnings and other economic as well as social outcomes.

Third, we need a better understanding of behavioral externalities and consumer decision-making. Take the case of the taxation of food. The Review argues for a uniform VAT on a broad base including food, arguing that redistribution can more effectively be carried out through the direct tax system. This assumes no direct relationship of food consumption with work and also rules out behavioral externalities. But some types of food, prepared food for example, are probably more complementary with work and may also have adverse behavioral externalities. These two arguments are likely to pull in opposite directions, with labor supply complementarity suggesting a lower tax and nutritional externality implying a higher tax. Without a clearer understanding of the nature of such complementarities and behavioral externalities, together with the implications for pricing decisions by the retail industry, it is difficult to derive specific implications for tax reform.

These are just three aspects of tax design where on-going and new research has the potential to result in significant improvements to tax policy design. Overall the Review took a rather cautious approach to the use of new theory and evidence, setting a high bar for its use in policy recommendations. There are a number of emerging issues in the field of behavioral economics, in particular the suggestion that the framing of taxes may matter for their impact on individuals and firms, that have not yet been developed fully enough to provide clear guidance for policy. That may be an important direction for future work. Similarly, the Review stopped short of tackling the difficult political economy questions of how to achieve a political and popular consensus to advance tax reform, or which institutions might enhance the durability of reform. One of the significant lessons of the Tax Reform Act of 1986 in the United States, and of other tax reforms around the globe, is that broad-reaching reform legislation itself is often subject to frequent and substantial reform. While this makes the study of taxation and its impact on households and firms a perennial subject of research interest, it makes long-term planning difficult and undermines the potentially favorable effects of hard-won tax reforms.

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