

Not By Spending Alone:
The Case For A Comprehensive Tax Review

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by

Dr. Rana Roy
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1 Introduction: not by spending alone

This paper argues the case for a Comprehensive Tax Review to complement the 2004 Comprehensive Spending Review. Critical changes to the structure and levels of taxes and charges are required to solve the urgent problems afflicting our infrastructure. These changes will also deliver large and continuing gains to society as a whole.

HM Government has explicitly recognised the need for such reform. Witness for example:

- the Ministerial endorsement of the ECMT document, *Reforming Transport Taxes and Charges*,¹ incorporating the findings of *Optimal Transport Pricing*,² and therewith the principle of raising taxes on externalities and economic rents up to the optimal level;
- its positive judgement on the London congestion charge³ and its continuing work on the introduction of national road-user charging for lorries,⁴
- the commissioning and publication of the Barker Review,⁵ its proposal for a new tax to extract part of the economic rent in land use, and the Chancellor's explicit call for consultations on the issue of this "unearned increment in land values".⁶

The call for a Comprehensive Tax Review to assemble the requisite information for optimising taxes and charges is thus in continuity with the Government's own stated *policy* – even as it demands a change from current *practice*.

It is current practice – the compartmentalisation of spending and taxation, of investment and pricing, of infrastructure and land use, as if these twins were unrelated to each other – that conflicts with policy. And it is current practice that needs to change.

Spending alone is incapable of delivering what is required to provide the infrastructure that the country requires. An exclusive reliance on the spending side is inadequate not only because of present and foreseeable limits to spending but also because of its inherent limitations.

On the first point, it is clear that public investment remains the Cinderella of public spending. Building upon last year's paper, *Postponing the Future*,⁷ we show, in Chapter 2, that this year's Budget decisions and projections do not succeed any more than last year's in fulfilling

¹ European Conference of Ministers of Transport, *Reforming Transport Taxes and Charges*, Report to the Council of Ministers, CEMT/CM(2003)3/FINAL, Paris, May 2003 (hereafter ECMT 2003a).

² Rana Roy, *Optimal Transport Pricing*, Final Report of the ECMT/EC DG-TREN research project comparing current transport taxes and charges with an optimal pricing benchmark, London, February 2003 (Roy 2003a). Following Ministerial endorsement of the May 2003 document, the full ECMT report was published as *Reforming Transport Taxes*, OECD Publications, Paris, 2003 (ECMT 2003b) – with the May 2003 document as its Executive Summary, and an expanded version of *Optimal Transport Pricing*, Revised Final Report, London, June 2003 (Roy 2003b), as its Chapter 2.

³ Initially as early as May last year in *The Government's Response to the Transport Committee's Report on Urban Charging Schemes*, Presented to Parliament by the Secretary of State for Transport, May 2003 (DfT 2003) – and most recently at the Council of ECMT Ministers in May this year. See *Charging for the Use of Infrastructure: Policy Note and Recommendations*, Report to the Council of Ministers, CEMT/CM(2004)4, Paris, May 2004 (ECMT 2004a).

⁴ See for example *Modernising the taxation of the haulage industry: lorry road user charge*, *Progress Report 3*, HM Treasury, March 2004 (HMT 2004c).

⁵ Kate Barker, *Review of Housing Supply: Securing our Future Housing Needs, Interim Report – Analysis*, HM Treasury, December 2003 (Barker 2003), and *Review of Housing Supply: Delivering Stability: Securing our Future Housing Needs, Final Report – Recommendations*, HM Treasury, March 2004 (Barker 2004).

⁶ Chancellor of the Exchequer's Budget Statement, 17 March 2004 (HMT 2004b).

⁷ Rana Roy, *Postponing the Future: A critique of short-termism*, Report for the Railway Forum, London, June 2003 (Roy 2003c).

the Government's stated aim of correcting the legacy of under-investment. The cumulative investment shortfall remains.

Hence, an obvious benefit from optimising taxes and charges in relation to infrastructure is that doing so could generate new revenues to fund investment and thus permit a higher level of investment spending that is currently obtainable from the tug-of-war with the current budget. But this is by no means its only benefit. It can also achieve a range of outcomes that spending, however plentiful, cannot.

Optimal charging in any sector acts directly to solve a range of problems within that sector and does so more speedily than new investment. By changing the profile of demand, it also changes the composition, location, scale and timing of investment required – and can indeed reduce the required level of investment spend. Moreover, it generates new revenues far above what is required for new investment and thereby permits the reduction of distortionary taxes in its sector as well as elsewhere in the economy. The result is that, for any given level of public expenditure, the requisite revenues are raised maximally from *welfare-neutral* or *welfare-increasing* taxes and charges – and correspondingly minimally from *welfare-reducing* ones.

Box 1: A tripartite classification of taxes

[From Chapter 2, European Conference of Ministers of Transport, *Reforming Transport Taxes*, OECD Publications, Paris 2003.]

Chapter 1 set out the principles of efficient taxation. Its starting point is a tripartite classification of taxes as follows:

- taxes that enhance overall social welfare – taxes on externalities;
- taxes that are welfare-neutral – taxes on economic rents;
- taxes that reduce welfare – taxes on final consumption, on capital and labour, and, *a fortiori*, on intermediate products.

It follows that, other things being equal, revenues forgone as a result of the failure to tax externalities and economic rents will require recourse to revenues from welfare-reducing taxation.

It is important to note this point at the outset of this chapter. For the benefits of optimising transport pricing by means of taxes on externalities do not accrue only within the transport sector in the form of a reduction in the levels of congestion, pollution and accidents. They also accrue to the larger society. The new revenues from externality taxes can be put to use to reduce the level of welfare-reducing taxation for any given level of public expenditure – or to increase the level of socially beneficial public expenditure for any given level of taxation.

Chapter 3 sets out the argument in general terms. Chapter 4 spells it out in relation to inland transport, with the aid of evidence from the first year of congestion charging in London as well as modelled results from *Optimal Transport Pricing*. Chapter 5 does so in relation to land use, and specifically as a response to the Barker Review, and Chapter 6 provides an estimate of the long-term gains from optimal taxation of land – the results of new modelling from the US – and draws out its implications for the UK. Finally, drawing upon the material of

the preceding chapters, the Conclusion provides a bullet-point statement of what is achievable in the next six months.

The aim informing this call for a comprehensive *review* – namely, the development and implementation of a comprehensive *reform* – is ambitious, and will require time and effort to achieve. But the need for a review itself should be common sense and its execution should not be uncommonly difficult. After all, a process of reform is already under way, and various proposals for partial corrections here and there are already under consideration. The calculation of optimal values provides the benchmark against which to judge the partial corrections on today's agenda. Such a benchmark has now been provided for inland transport. It can and should be provided across the board.

2 The correction to investment: postponed

Twelve months ago, *Postponing the Future* highlighted two features of Budget 2003 that were indeed a recurring pattern of successive budgets. The same pattern may be observed anew in Budget 2004.

Year upon year, the Chancellor confounds those of his critics who predict that he will break his two fiscal rules, the first or golden rule requiring the current budget to be in balance over the cycle – so that, over the cycle, we borrow only to invest – and the second requiring overall public sector net debt to be held below 40% of GDP. Year upon year, the Chancellor confirms his success in meeting these fiscal rules.⁸

Pari passu with this success however there appears another result. Year upon year, the increase in public investment – in outturn and projection – is less than predicted in the previous year. Hence, year upon year, the correction to the legacy of under-investment that was announced as an explicit objective and the predicted outcome of the golden rule⁹ is postponed. Thus:

Table 1: The course of public investment from Budget 2002 to Budget 2004

<i>Net public investment as a percentage of GDP:</i>			
	2001-02	2002-03	2003-04
Budget 2002	1.2	1.4	1.8
Budget 2003	1.0	1.2	1.7
Budget 2004	0.9	1.0	1.5

Source: HMT 2002, Table C5; HMT 2003 Table C5; and HMT 2004a, Table C5, and Table C25 for the 2001-02 figure.

To be sure, from 2001-02, net public investment has climbed from the historical trough of 0.5% of GDP achieved in the two preceding years, 1999-00 and 2000-01. And Budget 2004 projects a continuing climb to a peak of 2.25% of GDP, “as the Government seeks to rectify historical under-investment in public infrastructure”.¹⁰

Nonetheless, the postponement to date of the requisite correction means that public infrastructure continues to be afflicted by the burden of the past, a contraction and deterioration of the asset base, and continues to perform below the expectations of users and the requirements of the country. Unsurprisingly, the transport sector, being the major sector reliant on public investment, has been the main victim in this.

To indicate the scale of the damage done by the unbroken decline in net public investment from 2% of GDP in 1992-93 to the trough of 0.5% at the end of the decade – and hence to indicate the scale of the task of correcting it – *Postponing the Future* constructed a measure

⁸ This success has been foreseeable to those who read the Treasury papers carefully and was indeed foreseen in this series of papers – for reasons that have been spelt out and do not need to be discussed anew. Briefly: these include the cautious character of the central forecasts on growth, the additional precaution of adopting a 0.25 percentage point margin of error for planning purposes, and the greater sophistication in forecasting implicit in the development of the category of core debt.

⁹ See *Stability and Investment for the Long Term*, Economic and Fiscal Strategy Report 1998, HM Treasury, June 1998 (HMT 1998).

¹⁰ *Budget 2004 – Prudence for a purpose: A Britain of stability and strength*, Economic and Fiscal Strategy Report and Financial Statement and Budget Report, HM Treasury, March 2004 (HMT 2004a), p. 253.

of the “cumulative shortfall”.¹¹ We supposed a scenario in which net public investment across all sectors had simply been maintained at its 1992-93 level in real terms through the decade whilst being allowed to slide as a percentage of GDP. By comparing the actual record of investment against this hypothetical “constant investment scenario”, we found a cumulative shortfall of £65 billion in real terms over the course of this lost decade. Updating the series to 2002-03 prices, we find:

Table 2: The decade-long decline in public investment from 1992-93

1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
<i>Net public investment as a percentage of GDP</i>									
2.0	1.6	1.5	1.4	0.8	0.7	0.7	0.5	0.5	0.9
<i>Net public investment in £ billions (2002-03 prices)</i>									
15.9	13.0	12.8	12.4	6.8	6.3	7.0	4.5	5.3	9.8

Source: HMT 2004a, Table C25.

Table 3: The cumulative shortfall in public investment to 2001-02

1992-93	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	1999-00	2000-01	2001-02
<i>Constant investment scenario: cumulative net public investment in £ billions (2002-03 prices) assuming constant 1992-93 level in real terms</i>									
15.9	31.8	47.7	63.6	79.5	95.4	111.3	127.2	143.1	159.0
<i>Actual cumulative net public investment in £ billions (2002-03 prices)</i>									
15.9	28.9	41.7	54.1	60.9	67.2	74.2	78.7	84.0	93.8
<i>Cumulative shortfall in net public investment in £ billions (2002-03 prices) relative to the constant investment scenario</i>									
0	2.9	6.0	9.5	18.6	28.2	37.1	48.5	59.1	65.2

Source: HMT 2003a, Table C25, with annual net public investment flows fixed at 1992-93 level, and with *ceteris paribus* applying to all other factors.

And by tracking the outturns and projections for public investment from 1997-98, the first year of the Government’s tenure, against the constant investment scenario, we can judge the success of the attempt to rectify the legacy of under-investment. The outturns and projections available in Budget 2004 show that the £28 billion cumulative shortfall inherited in 1997-98 has now risen to £70 billion. Moreover, and despite the large increases projected over the next four years, the cumulative shortfall from 1992-93 will stand at £38 billion at 2007-08, at the end of this Government’s first decade. The attempt has not been an unqualified success:

¹¹ Roy 2003c, Section 2. As noted *ibid.*, the fiscal year 1992-93 is an appropriate reference year since it postdates the main wave of privatisations but precedes the privatisation of rail. Given the techno-economic characteristics of rail infrastructure, there is an enduring economic justification for public support for rail. And given past under-investment, there was no obvious justification for a fall in the real *level* of public investment in rail as distinct from its *share* of overall rail investment.

Table 4: The correction and the shortfall: 1997-98 to 2007-08

1992-93	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	
<i>Constant investment scenario: cumulative net public investment in £ billions (2002-03 prices) assuming constant 1992-93 level in real terms</i>												
15.9	95.4	111.3	127.2	143.1	159.0	174.9	190.8	206.7	222.6	238.5	254.4	
<i>Actual cumulative net public investment in £ billions (2002-03 prices)</i>												
(Outturns)							(Est.)	(Projections)				
15.5	67.2	74.2	78.7	84.0	93.8	104.4	120.6	141.8	164.8	189.5	216.0	
<i>Cumulative shortfall in net public investment in £ billions (2002-03 prices) relative to the constant investment scenario</i>												
(Outturns)							(Est.)	(Projections)				
N/a	28.2	37.1	48.5	59.1	65.2	70.5	70.2	64.9	57.8	49.0	38.4	

Source: Tables 1-3 above, and HMT 2004a, Table C3 for 2002-03 Money GDP (bottom row) and projected GDP growth in real terms (top row) and Table C5 for projected net investment as a percentage of GDP.

Rail's share

Against this background, there is a view that rail has been treated *too* generously by the Treasury.¹² As a general thesis applying to the overall plan for rail – as distinct from a comment on “value-for-money” or the cost-effectiveness of spending¹³ – this view rests partly on a misreading of the evidence but mainly on a misunderstanding of the policy objectives informing the Government’s plan in the transport sector as a whole. It would be as well to deal with this issue briefly so as to clear the path to the main argument on the changes now needed for a successful pursuit of these objectives.

The Government’s 10 Year Plan was presented not only as “part of our programme to invest more of the country’s wealth in improving its infrastructure”¹⁴ but also as an attempt to correct the damaging imbalances within and between the main modes of transport. It set out a series of targets and indicators in its Annex 2,¹⁵ of which the first two were “to reduce road congestion on the inter-urban network and in large urban areas in England below current levels by 2010” and “to increase rail use in Great Britain ... from 2000 levels by 50% by 2010”. And it was attended by legislation permitting local authorities to introduce congestion charging – permitting thereby scope for additional modal shift from road to rail.

In view of these stated aims, it is unsurprising that Government should have sought to deliver a large increase in public investment in rail – that is, from the *zero and near-zero levels* obtaining from privatisation to the commencement of the Plan (1995-96 to 2000-21)¹⁶ – both in order to correct for past under-investment and in order to accommodate future growth.

¹² See Phil Goodwin, *What Future for Rail in the Ten Year Plan for Transport?*, Report to the All Parliamentary Rail Group, November 2003 (Goodwin 2003) for a wide-ranging discussion and criticism of this viewpoint.

¹³ On this point, it is indisputable that rail has a job of work to do in delivering better value for money. This requires not only and obviously the task of raising daily operational efficiency to its potential maximum but also the task of raising that potential itself through the intelligent application of new technology. See *Cost and Performance: Turning the Corner*, Railway Forum Information Sheet, June 2004 (Railway Forum 2004a) and *Transport 2015: A New 10 Year Plan for Transport*, Railway Forum Information Sheet, June 2004 (Railway Forum 2004b), respectively, for a statement of how the former task is being executed and what needs to be done to execute the latter.

¹⁴ *Transport 2010: The 10 Year Plan*, Department of the Environment, Transport and the Regions, July 2000 (DETR 2002).

¹⁵ *Ibid.*, p. 100.

¹⁶ *Ibid.*, Table A3.

However, as Phil Goodwin has stressed in his recent report to the All Parliamentary Rail Group, the headline figure of £60 billion to rail over the ten-year period, or one-third of the £180 billion Plan total, was always liable to mislead commentators. Over half the headlined £60 billion was anticipated private investment. Total projected public spend was no more than £26 billion, including £15 billion in investment and £11 billion in resource expenditure.¹⁷

Subsequently, there have been two important additions. The first was the decision by Government in 2002 to add £4 billion of public spend to the Plan total for rail.¹⁸ The second and most recent addition flows from the decision of the Regulator in 2003 to increase Network Rail's regulatory asset base and, with it, its revenue requirement.¹⁹ And here a warning of a potential misreading of *future* headline figures is appropriate. To the degree that Network Rail recovers its increased requirement from an increase in direct grants from Government rather than from higher access charges from operators which are passed on to Government *via* the agreed indemnity,²⁰ what would have been classified as increased resource expenditure will now be re-classified as increased public investment.²¹

That said, there is clearly a judgement to be made on the effectiveness of the current package of investment and other measures in fulfilling the Government's stated objectives. The judgement offered in this series of papers has been a sceptical one.²² But now is the time to move on from a critique of current measures to an exposition of the measures that *are* capable of fulfilling these objectives.

¹⁷ Goodwin 2003, pp. 11-15.

¹⁸ See *ibid.*, p. 15.

¹⁹ See *Access Charges Review 2003: Final Conclusions*, Office of the Rail Regulator, December 2003 (ORR 2003). It should be noted that the latter is not being allowed to rise in line with the former. As the Regulator puts it: "this return will need to be approximately £700 million higher in 2004/05 than the level that the Regulator allowed Railtrack. However, as a percentage return on the RAB, the return that the Regulator will allow Network Rail over the full five-year period translates to a return of between 6.5% and 7% per annum, a lower figure than that allowed for Railtrack. *Ibid.* p. 10.

²⁰ As proposed by Government and conditionally agreed by the Regulator: see p. 11 and ff.

²¹ The point holds whether or not one regards the former classification as the correct one.

²² Nor should this scepticism be controversial now that the Government has reported that the first two targets in the 10 Year Plan will not be met: see *Delivering Better Transport: Progress Report*, Department for Transport, December 2002 (DfT 2002) and the comment thereon in Roy 2003c.

3 The case for correcting taxes and charges

In the context of the prolonged decline in public investment in infrastructure and the failure as yet to correct it, it is unsurprising that the renewed interest in new forms of charging – congestion charges, parking charges, site value taxes and other methods of capturing the increase in land values generated by new infrastructure – is often motivated by an interest in the use of the new revenues to fund investment. Moreover, the framework created by legislation – with local authorities empowered to introduce charges and use the proceeds to fund improvements – reinforces just this nexus between charging, revenues and investment.

The generation and use of new revenues for investment is however only one of the many benefits resulting from a correction of taxes and charges. And, as is detailed in relation to transport and land taxation, a full correction will yield revenues far in excess of all urgent investment needs. Hence, the extent of the need for investment funds should not limit the extent of the correction attempted, let alone the decision to proceed with a correction.

It would be as well therefore to begin by setting out, however summarily, the larger case for correcting taxes and charges in any given sector.²³

Economic theory states²⁴ that the general welfare is maximised when each good or service is priced at its marginal social cost. When prices rise above this point or fall below it, *the gain to the winner is less than the loss to the rest of society*. The sum of welfare is thus reduced.

A simple caricature can help to illustrate the point. Imagine a perfectly competitive industry in a perfectly competitive economy, with many producers, minimal fixed costs and no barriers to entry. Its product is sold at a price equal to the marginal cost of the last unit produced. Below this price, it is not worth anyone's while to produce. Above this price, it is worth someone's while to expand supply so as to pocket the difference between price and marginal cost; supply is therefore expanded until there is nothing left to pocket. Consumption is at its feasible maximum. So too is the "consumers' surplus" – the difference between what they paid and what they were willing to pay.

Suppose now that the industry is turned into a monopoly, with an effective barrier to entry. The monopolist can charge the price at which his profit is greatest, safe in the knowledge that this additional profit cannot be competed away. He will gain by way of a transfer from the pockets of his customers to his own pocket. But in the process he will also drive away part of his custom. For every sale he continues to make, his gain is matched by his customers' loss: part of the consumers' surplus is transformed into additional profit. But he gains nothing in exchange for the loss suffered by his customers (or ex-customers) in those lost sales. Part of the consumers' surplus is simply eliminated by virtue of the elimination of a part of consumption. Thus, what he gains is less than what others lose. This difference is the "deadweight loss" that reduces the welfare of society as a whole.

The correction required in this caricature is simple enough: re-create competition. But the caricature helps to delimit the case of those markets where that answer cannot apply and where fiscal tools are required to suppress the welfare loss.²⁵

²³ We begin with "any given sector" as this is the framework within which Government is now examining proposals for tax reform. An alternative point of departure is to begin with the macro-economy and ask how best to meet public revenue requirements whilst minimising its distortionary impact. From either starting point, the answer one arrives at is the same: the fullest use of a relatively narrow list of welfare-neutral/welfare-increasing taxes.

²⁴ The following text draws on a previous paper for the ECMT and now carried over into the first chapter of ECMT 2003b. See *ibid.*, Chapter 1, "Principles for Efficient Taxation", pp. 25-28.

²⁵ Of course, once distributional equity is taken into account, the welfare calculation becomes more complicated: a pound in the pocket of the rich and the healthy is not the same as a pound in the pocket of the poor and the sick. Hence, government intervention does need to be more extensive than that described here.

Infrastructure provision is, and especially so in the case of rail, characterised by certain techno-economic features, including a high ratio of fixed to marginal costs, such that the average cost of production is less than its marginal cost. Hence, other things being equal, even the most benevolent and technically efficient Railtrack PLC imaginable would be forced to price rail infrastructure far above marginal cost in order to cover its cost of production – thereby “pricing out” many trips where the benefit to the consumer exceeds the cost to society. Hence, too, intervention does take place, and transfers are provided to enable rail services to be priced at or close to marginal cost, “pricing in” beneficial consumption that would otherwise be excluded, and thereby increasing the general welfare.

At the same time, and especially so in the case of urban roads, the use of infrastructure gives rise to various externalities – uncompensated costs imposed by one party on others. These include pollution, accidents, and the external costs of congestion imposed by new users on existing users whenever the infrastructure is operating at or above capacity. Hence, intervention is required to “price out” those trips where the benefit to the consumer is less than the cost to society. And the tax by which this intervention is effected delivers to the public authority a new and strange surplus – in effect, a form of economic rent, now available for use by society as a whole.

Suppose however that ownership of the same roads were handed to a private monopoly. At the same optimal price, the same economic rent would be generated – but now for the exclusive benefit of the private owner. Such a scenario is not of course in prospect. But a similar phenomenon has long been prevalent. Not the scarce resource of urban road space but other scarce resources do belong to private monopolists and generate economic rent. Every site with a positive value above its next best use²⁶ offers a potential rent. If it is unused, the rent is no more than a potential. Put to its best use, it will yield its maximum rent. And since the most valuable sites put to use are often in private hands – including urban residential land – land generates a large flow of economic rent to its private owners.

On strictly economic grounds, there are two important reasons for intervention in this circumstance.

Taxes on income and consumption tend to create deadweight losses by delivering to government less than is what is lost by others.²⁷ In contrast, a tax on the economic rent of land is, in principle, welfare-neutral, inducing no change in producer or consumer behaviour but merely transferring a fortuitous gain from private owners to society as a whole. This is why economic theory has long regarded this rent as a suitable base for public revenues.

A second and in a sense more immediate reason is that the land market is far from being perfectly efficient. In particular, speculation in land generates inefficiencies in several ways. This is instanced most obviously in the non-use of land as a result of speculators hoarding land in the expectations of further rises in value. But it is also instanced in the poor use of land for the reasons spelt out by Nicolaus Tideman *et al* in a recent paper in *Public Finance Review*.²⁸ Taxation can therefore induce favourable changes in behaviour – reducing if not

²⁶ In principle, this applies to all land above marginal land in the Ricardian sense.

²⁷ In terms of the caricature drawn above: if government were to impose a sales on the good in question, its gain in revenues will be less than the loss in consumer surplus in much the same way as the gain in profit by the monopoly producer was less than the consumers' loss.

²⁸ Nicolaus Tideman, Andrew Johns, Ebere Akobundu, and Prapaiporn Wutthicharoen, “The Avoidable Excess Burden of Broad-Based U.S. Taxes”, *Public Finance Review* 30 (5), September 2002, pp. 416-441 (Tideman *et al.* 2002). Briefly: speculation in land requires holding it, and therefore managing its current use insofar as it used at all, but the expertise required for profitable speculation need not and generally does not coincide with the expertise required in efficiently managing current use. Moreover, speculation can be inexpert: the “winner’s curse” operates here, “the highest bid ... will come from the person who made the greater overestimate of its value” and the out-of-pocket winner ends up making poor use of his new asset.

eliminating speculation, bringing hoarded land into use and poorly used land into better use – thus producing not a welfare-neutral but a welfare-positive outcome.²⁹

Correcting taxes and charges in any sector acts directly to solve its specific problems, reducing inefficiencies and inducing thereby an increase in the general welfare. And it can do so more speedily than new investment. The contrast is most striking in relation to congestion, where charging can deliver the requisite de-congestion from the first day whereas the construction of new capacity can deliver it only after a relatively lengthy period.

Importantly, by changing the profile of demand, the correction of taxes and charges also changes the composition, location, scale and timing of investment required and can indeed reduce the required level of investment spend. The point is best illustrated with specific examples in the sector-specific discussion below but the general principle is easily stated: the efficient use of a given capacity reduces the need for additional capacity.

Possessed of the revenues from taxing externalities and economic rents, society can put these to use in a variety of ways: the expanded funding of various investment needs, and the funding of reductions in various welfare-reducing taxes, both within the particular sector from which the revenues are gained and beyond it. In turn, the new investments, by augmenting and improving the public capital stock, and the tax reductions, by inducing increased work effort and a higher rate of private savings and private capital formation, will generate a long-term flow of benefits in the form of a higher level of output and a higher level of welfare.

The benefits are many. Box 2 provides a summary.

Box 2: The benefits of correcting taxes and charges

Optimal charging by public authority imposes:

1. Optimal pricing → ↓ in external costs (↓ in consumption where costs > benefits); ↑ in consumption where benefits > costs; efficient use of scarce resources (supra-marginal land, road space, railtrack, runways, *etc.*)
2. Transfer of revenues from taxation of externalities and economic rents to society

which in turn permits:

3. Determination of investment on the basis of optimised prices (including avoidance of investment where costs > benefits)
4. Use of revenues for ↑ in investment where benefits > costs
5. Use of revenues for ↓ in welfare-reducing taxation
6. Continuing flow of benefits from ↑ in welfare-increasing investment and ↓ in welfare-reducing taxation

²⁹ This conclusion does not contradict the classification of taxation given at Box 1. If the welfare of society as defined as the sum of the welfare of its constituent members, the taxation and transfer to society of economic rent *per se* is welfare-neutral. The point rather is that an actual tax on land will do more than achieve this transfer.

4 Inland transport: results from London and *Optimal Transport Pricing*

Pricing works. This is the main lesson to be drawn from the first year of operation of London's congestion charge and the mass of evidence generated thereby.³⁰

All the earnest discourse on the "attachment" of motorists to their cars and the "aversion" to buses as the mode of the poor has been put to the test – and shown to be false. From a £5 cordon charge and an improved service provision for buses, London has obtained a reduction in car movements into the charging zone of about 30% and an increase in bus (and coach) movements of over 20%.³¹

In the same vein, the pattern of transport trends across the country since 1980³² – the 63% increase in car passenger kilometres, the 19% decline in local bus journeys – can largely be explained by the significant price changes over this period. Thus, whilst bus fares have increased by 33% in real terms, "*the overall cost of motoring (including purchase, maintenance, petrol and oil, and tax and insurance) has remained at or below its 1980 level in real terms* [emphasis added]."³³ There is no mystery here.

The detail of the outcomes of the London congestion charge³⁴ need not detain the present discussion. Suffice it here to note, as European Transport Ministers have noted, "The success of road pricing in managing congestion in the largest European urban area, London, has been greater than expected."³⁵

What is more pertinent to the present discussion is a second lesson from the London experience: modelling works.

If the 30% reduction in car movements is "slightly above the top end of TfL's expectations of 17 to 28 percent", it is clear enough that modelling can establish the order of magnitude of the main relevant impacts with reasonable accuracy. The modelled results from *Optimal Transport Pricing* can now be employed to indicate the main impacts of a more comprehensive correction, one that is not limited to the charging zone of Central London.

The study models an equilibrium outcome for a reference scenario designed to capture the state of affairs in year 2000 and an optimal scenario in which the final price of each trip in all modes of inland transport is aligned to its marginal social cost. The aim is to price out trips where costs exceed benefits and price in trips where benefits exceed costs. This requires a set of fiscal measures, including the institution of a new externality tax (best understood as a highly differentiated kilometre charge) and increases in parking charges – but also the

³⁰ See Transport for London, *Congestion Charging: 6 months on*, October 2003 (TfL 2003) and *Congestion Charging: Update on scheme impacts and operations*, February 2004 (TfL 2004)

³¹ See TfL 2004, pp. 9-10.

³² See *Transport Trends*, Department for Transport, April 2004 (DfT 2004).

³³ *Ibid.* Rail has accommodated a 45% increase in journeys despite a 38% real increase in fares. The point here is that, whereas bus passengers have had to absorb not only real increases in fares but also the rise in "generalised cost" for *all* road traffic (reflecting the increase in congestion), increasing road congestion has made rail more attractive. Correcting relative prices would make it more so.

³⁴ See TfL 2003 and TfL 2004 for the detailed evidence – of the successes but also of the outstanding issues and concerns.

³⁵ ECMT 2004a. London is not the only example of success. For a checklist of recent initiatives, see ECMT, *Charging for the Use of Infrastructure: Report on Charges*, Report to the Council of Ministers, CEMT/CM(2004)19, Paris, May 2004 (ECMT 2004b). And see Jeffrey Zupan and Alexis Perrotta, *An Exploration of Motor Vehicle Congestion Pricing in New York*, Regional Plan Association, New York, NY 2003 (Zupan & Perrotta 2003), for a summary of the current state of play in New York – where 22% of vehicles coming into Manhattan are already paying a toll, that is to say, roughly double the number of vehicles paying the cordon charge to come into Central London – and an exposition of alternative scenarios for the further development of congestion charging.

withdrawal of all other transport taxes (fuel tax, taxes on vehicles, insurance tax) and the provision of requisite subsidies to cover fixed costs. Capacity is assumed to be fixed.³⁶

The result is *inter alia* a sharp reduction in external costs. For Britain, this includes a 54% reduction in air pollution and CO2 emission costs as car traffic falls and motorists switch to the cleanest cars. It includes significantly reduced congestion in both urban and inter-urban roads. In Greater London as a whole, there is a 20% reduction in car traffic and large increases in ridership on public transport, both on buses and metro/rail, and despite the assumption of fixed capacity on metro and rail.

The limitation to inland transport – in particular, the exclusion of aviation and the role of price changes in the choice of between rail and air travel – provides a less than complete picture of transport choices under an optimal pricing system. But given the weight of the road sector as a carrier of traffic and as a generator of externalities, the detailed modelling of roads provides sufficient confidence in the order of magnitude of the result for revenues.

The result is a nation-wide *increase* in revenues of €39 billion *per annum*:

Table 5: Revenue gains from optimal transport pricing: Britain 2000

<i>Great Britain, calendar year 2000</i>	<i>In € billion per annum</i>
<i>Revenues:</i>	
Reference scenario revenues for all inland transport modes	59.84
Optimal revenues for all inland transport modes (including additional parking charges)	98.79
Net change in revenues	38.95

Source: ECMT 2003b, Chapter 2, Table 1.

Thus, a pricing system designed to maximise welfare rather than revenues³⁷ delivers *total* revenues of €99 billion *per annum* – and additional revenues of €39 billion *after* retiring €60 billion of sub-optimal taxes currently imposed on the transport sector.³⁸

Such a system, by changing the profile of demand, changes the profile of investment required – its composition, location, scale and timing, that is, the answers to the questions of what, where, how much and when.

It has been the consistent argument of this series of papers that social needs and technological possibilities will combine to accelerate the pace of introduction of road-user pricing. And if radical changes to the pattern of prices and demand are likely to emerge within the next ten years, it does not make good sense to remain within the bounds of a 10 Year Plan for investments with a 30-year economic life drawn up on the basis of *today's* pattern of prices and demand (plus some allowance for agreed and expected decisions on local charging schemes).

³⁶ For a fuller description and the full set of results, see ECMT 2003b, Chapter 2.

³⁷ The externality tax is modelled to stop at the point where the gain in revenues equals the loss in consumer surplus for the motorist. Any gain beyond this is deemed a net welfare loss and blocked.

³⁸ There is need for a caveat here. There is a strong case for retaining the use of fuel tax as the best instrument with which to tackle CO2 emissions and other energy externalities and reducing the level of the new tax correspondingly. Moreover, fuel tax, though a blunt instrument in tackling congestion and other transport externalities, is vastly preferable to no instrument, and should not be reduced so long as alternatives are not in place. For a fuller discussion and evidence, see House of Lords Select Committee on the European Union, *The Taxation of Fuel in the European Union*, Published by Authority of the House of Lords, London, May 2003.

Hitherto, however, the focus of this argument has been on the *inter-modal* effect of price changes. In particular, it has been argued that this correction, by prompting an overall modal shift from roads to rail and other forms of public transport, is likely to raise the overall level of investment required in rail and other public transport, even as it changes the detail of it.

New evidence on the *intra-modal* effect of price changes, particularly in road use, can now help to demonstrate a more general point: correcting prices can also help to reduce the need for investment even as it makes it easier to fund the investment that is needed.

The evidence of modelling for the Netherlands shows that the welfare gains from building additional road capacity falls sharply once prices are optimised.³⁹ Evidence from the experience of the Swiss heavy vehicle charge shows the same: the road haulage industry has registered strong productivity gains, and is now able to carry a given volume in ton kilometres in far fewer vehicle kilometres.⁴⁰ Improving capacity through new technology, or even simply the strengthening of road surfaces, become more urgent than adding to it.

Now this outcome on the roads also has important implications for rail. Even assuming that all the ton kilometres now being carried on the Swiss roads are socially necessary, not all the vehicle kilometres that have been priced off need to be accommodated on rail: increased efficiency has simply made them redundant.⁴¹

Of course, in the quality of its infrastructure, Britain is certainly not Switzerland. Given the evidence presented in Chapter 2, there can be no question that there is a serious investment shortfall that needs to be addressed in *all* modes of transport. The new revenues can and should be used to address it.⁴²

But the evidence from modelling as well as from actual experience suggests that new and improved forms of charging can help to close the funding gap in investment *not only by providing new funds but also by reducing the need for funding*.

In any event, and even if there were no reduction in the total level of funding required, the present funding gap in transport investment, however large, is less than €39 billion *per annum*. It follows that some part of the €39 billion *per annum* revenue gain could indeed become available for reductions in welfare-reducing taxation *outside* the transport sector.

³⁹ See ECMT 2003b, Chapter 2, Section 5.

⁴⁰ Not only as a result of the increase in permitted truck weight to 40 tons but also in direct response to the new charge: see ECMT 2004b. This does not necessarily undermine the result, reported in ECMT 2003b and several other studies, that optimal pricing, by allocating scarce road capacity to its most urgent uses, will effect an intra-modal shift from passenger to freight traffic. But it does suggest the need to re-examine the extent of it.

⁴¹ Over time, ton kilometres carried will continue grow alongside economic growth, and further additions to capacity may need to be provided. But rail will need to demonstrate that it can carry through the innovations required to carry these ton kilometres more efficiently – that is, at a lower social cost, internal as well as external – than a road haulage sector re-energised by the whip of serious pricing.

⁴² Moreover, survey evidence as well as experience suggests that the use of new revenues plays a crucial part in winning public acceptance for charging and thus in obtaining the revenues in the first place. See *inter alia* ECMT 2004b. Important evidence in the case of Britain is also provided in the study by the RAC Foundation, *Motoring Toward 2050: an independent inquiry*, May 2002 (RAC 2002). The key finding is this: “Even if other taxes are not reduced but tolls are introduced as a package of better roads, public transport and traffic management, then 71% find this acceptable. (See *ibid.*, p. 6.)

5 Land use: a response to the Barker Review

Kate Barker's *Review of Housing Supply*⁴³ has provided a comprehensive mass of evidence of the problems afflicting the housing sector and a complex list of recommendations for tackling these. The problems highlighted include *inter alia*:

- a trend rate of increase in house prices in real terms over the last 30 years that outstrips every European country bar Spain and is more than twice the European average;
- a fall in housing affordability such that no more than 37% of new households could afford to buy in 2002;
- a backlog of households in need of subsidised housing, including around 100,000 households in temporary accommodation and around 100,000 single homeless people, hostel residents, etc.

Of the answers proposed, the three most relevant to the present discussion are:

- reform of the planning system to trigger the release of more land for housing development;
- the charging of a "Planning-gain Supplement" on the grant of planning permission to extract part of the landowner's windfall gains from development;
- additional investment to expand the supply of subsidised housing, with a cost estimated at up to £1.6 billion ("not all of which will be from Government").

In a pithy critique of the Barker Review in the *Financial Times*,⁴⁴ Martin Wolf has argued: "Asked the wrong question, the most intelligent analyst will fail to reach the right answer.... [T]he question posed by the Treasury was too narrow. It is not how to increase housing supply, but how to use the country's scarce land more efficiently."⁴⁵

Wolf's counter-proposal is a simple one: combine planning reform with site value taxation, thus ensuring that the incentive to use land at its best permitted use would obtain automatically.

Wolf's proposal is the correct one. But his judgement on the Barker Review is, in some respects, too harsh – the Review ranges well beyond the narrow terrain of how to increase the housing supply *per se* – and, in one important respect, too kind: the combination of planning reform and site value taxation could have emerged as the logical conclusion from the evidence presented in the Review. It can and should now be presented directly in response to the Review and to the Chancellor's call for consultations.

Barker treats of the issue of housing supply in terms of its impact on a series of variables, beginning with house prices and the affordability of housing.⁴⁶ And the direct impact of

⁴³ What follows draws from both Barker 2003 and Barker 2004.

⁴⁴ Martin Wolf, "Grounds for a new way to look at land use", *Financial Times*, Friday May 14, 2004 (Wolf 2004).

⁴⁵ *Ibid.*

⁴⁶ There is of course an argument to be had on whether it makes sense for government to concern itself with the affordability of *home-ownership* as distinct from the affordability of *housing*. The point is well made by John Muellbauer in "Housing, credit and the euro: the policy response", *Economic Outlook*, July 2003 (Muellbauer 2003). See also John M. Quigley and Stephen Raphael, "Is Housing Unaffordable? Why Isn't It More Affordable?", *The Journal of Economic Perspectives*, Volume 18, Number 1, Winter 2004, pp. 191-214 (Quigley & Raphael 2004) for a recent American contribution to just this argument.

increased build on prices and affordability is bound to be limited: “New supply only accounts for 1 per cent of the housing stock, and so even measures which change new supply significantly would not have much effect on prices were it not for the role of expectations.”⁴⁷ It is mainly by its impact on expectations and prices in regard to the *existing* stock of housing that proposals to elicit new supply, or any other proposals, impact favourably on affordability.

Clearly, a reform of the planning system that triggered the release of land for housing development in the circumstance of low and worsening levels of affordability would impact on expectations over and above its immediate effect in allowing new build.

In contrast, the charging of planning-gain supplements, being a tax on development, would tend to delay development and lower future expectations thereof. As Barker acknowledges: “holding all other factors equal, the amount of land coming forward for sale would decline in the presence of the tax.”⁴⁸ Hence, the proposal “only makes sense as part of the Review’s package of policy changes”⁴⁹ – that is, in combination with planning reform. It is put forward not as a means of increasing supply and securing affordability but rather as a means of pursuing the separate aims of transferring part of the economic rent from land to society as a whole and using the revenue to fund new policy initiatives and subsidies in housing.⁵⁰

The logic here is entirely reasonable but it is not the logic applied to the consideration of site-value taxation (or land value taxation, in the terminology of the Review).⁵¹ Rather, “given the nature of the planning process”, this is judged to be “of limited use in stimulating the supply of land for housing.” Its broader merits are fully acknowledged⁵² but said to lie “beyond the scope of the Review.” Like is not compared to like.

With or without planning reform, and whether the *size* of the impact is large or “limited”, the impact of site value taxation on supply, prices and expectations will be *in the right direction*. In principle, each site would be charged a tax calculated in relation to the value of its best permitted use. The non-use or poor use of a site would therefore carry a penalty – thus promoting the desired behavioural change, that is, bringing the site into use and best use.

To be sure, where use and best use are blocked by sub-optimal planning, the scope for such gains will be limited. But given the fact of 300,000 long-term empty homes,⁵³ the non-use of which can hardly be blamed on the planning system, and which site value taxation would indeed help to bring into use, it is not clear why these “limited” gains are not worth having.

In contrast, the impact of the planning-gain supplement proposal on supply, prices and expectations will be *in the wrong direction* – even if, in combination with planning reform, the size of this negative impact is also limited and more than offset by the impact of more permissive planning.

⁴⁷ Barker 2004, p. 4. Muellbauer 2003, p. 8, spells it out thus: “National house price models ... suggest that ... an increase in the national housing stock of 1% results, other things being equal, in a fall in house prices of 1.4 to 2%. A 25% rise in new house building sustained over 4 years would increase the housing stock about 1% at the end of this period.”

⁴⁸ Barker 2004, pp. 88, Para 6.74.

⁴⁹ *Ibid.*, Para 6.75.

⁵⁰ *Ibid.*, Para 6.76.

⁵¹ *Ibid.*, pp. 71-73, Para 4.10 to Para 4.22.

⁵² *Ibid.*, and also in the more extended discussion in Barker 2003, Chapter 7.

⁵³ As reported by the Office of the Deputy Prime Minister, News Release, 19 May 2004 (ODPM 2004). The Government proposes to tackle the problem in the Housing Bill through direct intervention, including empowering councils with Management Orders “to step into an owner’s shoes” so as to bring empty homes into use. The economic incentives and disincentives provided by site value taxation would achieve the same outcome on an enduring basis.

In regard to their use as instruments for collecting part of the economic rent from land for the benefit of society, both proposals run in the same direction. But the size of the potential revenue gains from these is by no means the same.

Barker refrains from providing an estimate of the expected revenues from planning-gain supplements – and quite reasonably so, in view of the critical information gaps in the field. But given the cautious language in which the proposal is put, given the £1.8 billion estimate of another revenue option that is closely examined in the Review, namely, changes to the VAT regime, and given also the £1.6 billion estimate of requirements on the spending side, it may be that the expectations here are relatively modest.⁵⁴

Equally, it would be inappropriate to provide an estimate of the revenues from site value taxation in the absence of the requisite information, including especially a comprehensive register of land values.⁵⁵ But if research evidence from the US can serve to do duty, then the revenues from site value taxation could well be orders of magnitude higher.

The US research and its implications are examined in the next chapter. What needs to be said to conclude the present discussion is that, irrespective of the size of the impact, the logic of the choice between these two fiscal tools, site value taxation and the proposed planning-gain supplement, favours the former and not the latter – as is schematised below at Box 3.

Box 3: Planning-gain supplements versus site value taxation

PGS → ↓ supply, affordability, offset by planning reform → ↑ supply, affordability,

and → ↑ revenues *via* transfer of economic rent

whereas:

SVT → ↑ supply, affordability, enhanced by planning reform → ↑ supply, affordability

and → ↑ revenues *via* transfer of economic rent

⁵⁴ On the other hand, Barker illustrates the possibility of very large economic rents given the very large difference in value between agricultural and residential land in selected regions. See also Valuation Office Agency, *Property Market Report*, January 2004 (VOA 2004) for the latest index of residential building land values in England and Wales, which shows *inter alia* a greater than 100% increase since 2000 in several regions.

⁵⁵ Barker is right to note the clear need for such a register as a source of vital information whether or not government chooses to use it as the basis for land value taxation: see Barker 2004, Para 4.14.

6 US research on optimal taxation of land: implications for the UK

A serious estimation of the gains from a comprehensive tax reform would require as its minimum informational base at least four particulars – beyond the calculation of optimal tax values and revenue results for inland transport that has already been achieved. These are:

- production of usable values and results for a site value tax with the dual aim of reducing inefficiencies in land use and transferring economic rents to society as a whole – as an urgent answer to the Chancellor’s call for consultations on the issue;
- investigation of the scope for further optimisation of taxes on economic rents from other scarce resources on land, sea and air – though be it noted that a tax regime has long been in place for North Sea oil that compares very favourably to US practice and that the revenue gain from the auction of the 20-year G3 licences in the UK, at €39 billion, was a remarkable result, trumped only by Germany.⁵⁶
- extension of the work on optimal pricing beyond inland transport to the rest of the transport sector including especially aviation – both in order to tackle externalities in this sector and in order to map the true demand for rail in an optimised system;⁵⁷
- estimation of the long-term gains in output and welfare from a reduction of distortionary taxes made possible by the revenues from the new taxes.

It is the task of the Comprehensive Tax Review proposed in this paper – and not the task of the paper itself – to assemble this informational base. But some important insights on the first and last of these points can be derived from Tideman’s most recent research on the gains from optimal taxation of land in the US economy.⁵⁸

The research uses a dynamic general equilibrium model with three factors of production – land, labour, capital – to quantify the gains over a 28-year period from using the revenues from a maximum tax on land to effect a maximum reduction in the sum of distortionary taxes. The reform is made revenue-neutral at an aggregate level so as to compare the new mix of taxes with the old.

The value of land is defined as total household wealth as estimated by the Federal Reserve minus the government statistical estimate of the value of all capital. Hence, it covers a spectrum of assets over and above the base now being considered for new tax measures in the UK – for example, and in particular, oil. The land tax is calculated at what is deemed the feasible maximum of the taxable rent, a rate of 90%. A range of estimates is used for current inefficiencies in land use; the central scenario of 75% current efficiency is the one reported below at Table 6.

Following the tax reform, output and welfare rise as a result of efficiency gains in land use – and keep rising over a prolonged period, thanks to a better trade-off between work and

⁵⁶ See Fred Harrison, “Manna from Heaven: Radio Rent Windfalls and the Tax Conversion Fund”, *Geophilos*, No. 03 (1), Spring 2003 (Harrison 2003) for an exploration of the record of, and lessons from, the G3 auctioning process across the world.

⁵⁷ Planning for aviation and rail continues to proceed on separate tracks whereas there are both substitutions (high speed rail versus short haul flights) and synergies (rail links to new airports) to consider. The need to co-ordinate planning has assumed some urgency in the aftermath of the White Paper on Air Transport. See Rail Passengers Council, *The Future Development of Air Transport in the United Kingdom: A National Consultation. Rail Access to Airports: A Policy Paper from the Rail Passengers Council*, London 2004 (RPC 2004) and the Railway Forum Information Sheet cited earlier, Railway Forum 2004b.

⁵⁸ Nicolaus Tideman, “The Case for Taxing Land”, Virginia Polytechnic Institute & State University Working Paper, June 2004 (Tideman 2004). Whilst improving and updating the work of Tideman *et al.* 2002, the new work is also a customised modelling exercise in support of this paper that helps to shed light on the debate in the UK.

leisure, the result of a substantial reduction in labour taxes, and an increasingly higher rate of private savings and private capital formation, the result of reducing substantially the current tax on personal savings income and eliminating entirely the current tax on corporate income.

The path of growth of output and welfare differs strongly for open and closed economies. In the former, the rise in savings is not inhibited by a fall in the interest rate since this is determined globally – though eventually the rise in US savings must feed through to the global interest rate. So, any realistic estimate must lie between the estimates for the open and closed cases.

The results show *inter alia* that, in the open economy case, the new land tax, instituted in 2002, raises \$1.5 trillion – over 51% of total revenues, 12% of the new and higher GDP that obtains following the tax reform, and equivalent to over 13% of the GDP that would have obtained with unreformed taxes. In the closed economy case, the outcomes are \$1.36 trillion, 46% of total revenues, just under 12% of the new GDP and equivalent to just over 12% of GDP with unreformed taxes. By 2030, in both cases, the land tax stands at 53% of total tax revenues, 12% of the new GDP and equivalent to 14% of GDP with unreformed taxes.

Of the many long-term gains, it is the welfare gain that is the most important. In the open economy case, the gain in welfare is \$1.3 trillion in the first year, rising to \$2.9 trillion after 10 years, to \$5.0 trillion by 2020 and to \$7.1 trillion by 2030. In the closed economy, the outcomes are \$1.0 trillion, \$1.7 trillion, \$2.3 trillion and \$2.7 trillion, respectively.

Table 6: The long-term gains from optimal taxation of land: US 2000-30

<i>United States, 2000-30</i>	<i>In \$ trillion per annum (2004 prices)</i>					
	<i>2000</i>	<i>2001</i>	<i>2002</i>	<i>2012</i>	<i>2022</i>	<i>2030</i>
Revenues from current land taxes	0.131	0.134				
Total revenues from current taxes	2.865	2917.6				
Current Gross Domestic Product	10.757	10.967				
Projected GDP with unreformed taxes			11.178	13.380	15.833	18.022
<i>Open economy case:</i>						
New GDP following tax reform			13.596	17.001	20.499	22.811
Revenues from new land tax			1.503	1.897	2.278	2.508
- as percentage of total revenues			50.59	53.66	54.54	52.71
- as percentage of new GDP			12.04	12.16	12.12	11.98
- as percentage of projected GDP with unreformed taxes			13.44	14.18	14.40	13.92
Welfare gain			1.291	2.858	4.959	7.104
<i>Closed economy case:</i>						
New GDP following tax reform			12.706	16.220	19.853	22.898
Revenues from new land tax			1.360	1.787	2.193	2.540
- as percentage of total revenues			45.79	50.53	52.48	53.37
- as percentage of new GDP			11.66	12.00	12.04	12.08
- as percentage of projected GDP with unreformed taxes			12.17	13.35	13.85	14.09
Welfare gain			1.008	1.694	2.280	2.695

Source: Tideman 2004.

If we focus on the *base* of the land tax rather than the *rate*, the comparison with the experience of land taxation in Denmark is striking.⁵⁹ Tideman's modelling implies an estimation of land rent at around 13.5% of the new GDP, equivalent to around 15.5% of the old GDP – which is then taxed at 90% to yield revenues at around 12% of the new GDP, equivalent to around 14% of the old GDP. Danish statistics on land rent show a fluctuation from around 5% of GDP to around 10% of GDP from 1965 to 1995 – taxed at relatively low rates. Given that Tideman's "land" covers far more ground than "land" in national statistics, the two sets are indeed within a tolerable range.

And if we now use the narrow definition of land and the lower or "Danish" estimate of 7.5% as the base for a possible site value tax in the UK, the maximum 90% tax rate gives us an interesting "guesstimate" of the upper bound of possibilities – at today's GDP, approximately £75 billion, around twice as much as necessary to eliminate the distortionary and regressive taxes currently levied on property, the Business Rate and the Council Tax.⁶⁰

It should be stressed that Tideman's results are not the upper bound of possibilities in regard to optimal taxation *per se*: whereas they do cover the taxation of rent from land in a more than narrow sense, they do not include any value for the optimisation of transport pricing through congestion charges, parking charges, and the other elements of the €99 billion estimate provided for the UK.

And if the long-term welfare gains from optimising taxes are indeed anything like these modelled results, it is difficult to conceive of any other policy initiative that could prove quite so beneficial. It is difficult, too, to conceive of any reason for not taking the first step toward that long-term future: a comprehensive review to assemble the necessary information.

⁵⁹ The merits of the Danish system are described in Meullbauer 2003 and also noted in Barker 2003.

⁶⁰ See 2004a for Money GDP and the tax-take from Business Rates and Council Tax.

7 Conclusion: an agenda for the next six months

As noted in the Introduction, it will take time and effort to effect a comprehensive tax reform and to begin to realise its many benefits. But the first step – the commencement of preparation for a Comprehensive Tax Review and the related changes to current practice to bring it into line with the new policy – can and should be taken now.

Specifically, an agenda for the next six months can and should include the following:

- simultaneously with or immediately following the publication of the Comprehensive Spending Review in July: a decision to undertake a Comprehensive Tax Review, with a remit including but not restricted to the taxation of externalities and economic rents in inland transport and land use;
- sufficient progress on the substantive elements of such a review by September to enable the Government to avoid making itself and society a hostage to fortune in its decision on the fuel tax scheduled for September – that is, to avoid making further long-lasting concessions on this front without offsetting adjustments to the planned lorry road user charge and other appropriate measures;
- as part of the revision to the 10 Year Plan scheduled for July or immediately thereafter: a decision to consider investment needs against an expanded range of pricing scenarios to 2015 including a full correction to transport pricing;
- as part of the on-going follow-up to the White Paper on Air Transport: the integration of aviation into the study and planning of tax changes, price changes, demand effects and investment needs for the transport sector as a whole;
- as part of the immediate follow-up to the Barker Review: an investigation of the scope for and potential gains from a site value tax, in parallel with the investigation of the scope for and potential gains from the proposed planning-gain supplements;
- to that end and also as part of the immediate follow-up to the Barker Review: the preparation of a comprehensive register of land values, the lack of which was noted in that Review as an impediment to effective taxation;
- as part of the follow-up to both the revision to the 10 Year Plan and the Barker Review: a greatly improved co-ordination between policy development and decision-making on transport on the one hand and policy development and decision-making on land use on the other, beginning with an integration of the results of the consultation process on each.

And if this *were* done, the Government would be equipped thereby to offer an enlarged perspective of economic and social progress for public consideration and judgement in 2005 and beyond.

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Note: This paper builds upon *A Plan for Growth? An analysis of the 10 Year Plan's perspective for rail*, The Railway Forum, London, 2001; *Beyond the 10 Year Plan: Reform and investment for the long term*, The Railway Forum, London, 2002; and *Postponing the Future: a critique of short-termism*, The Railway Forum, London, 2003. Hence, the 63 references cited in the earlier papers should be read as carried over, implicitly, to this paper. The list below includes 10 references from the earlier papers – the ones which are directly cited here – plus 27 new references, marked *.

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