

Public-Sector Investment and Britain's Post-War Economic Performance: a Case Study of Roads Policy*

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This article examines the factors influencing the allocation of government investment expenditure in Britain during the period from 1945 to 1960, in the light of institutional theories regarding the causes of Britain's poor post-war economic performance. It takes the example of road infrastructure investment – an area where Britain clearly lagged behind other European countries. Despite a general consensus that the level of investment in Britain's road network was sub-optimal, and that there were investment opportunities offering a high rate of return, road development received a level of funding which was historically low and which compared very poorly with that of other industrial nations. Expenditure on railways was also kept to a very low level. Britain's neglect of transport infrastructure investment is shown to have stemmed from the government's overriding emphasis on macroeconomic stabilisation, Treasury opposition to – even remunerative – government expenditure, and the low priority given to infrastructure investment, and other growth-orientated policies, compared to areas considered more politically important, such as defence, housing and agriculture.

1. Introduction

The causes of Britain's poor post-war growth relative to other West European economies have long been the subject of considerable economic debate. Much recent discussion has focused on 'institutional' explanations. Olson's influential thesis explains Britain's malaise in terms of its long-term political stability, which has allowed narrow distributional coalitions to grow in power and inhibit changes

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perceived to disadvantage them. While in Continental Europe the war-time trauma of totalitarianism, instability and occupation weakened the power of established interest groups, by contrast "with age British society has acquired so many strong organizations and collusions that it suffers from an institutional sclerosis that slows its adaption to changing circumstances and technologies."¹

Booth, Melling and Dartmann have highlighted the lack of any systematic analysis of the role of the state in Olson's model.² The state plays a much more central role in another influential thesis explaining British decline, Corelli Barnett's 'New Jerusalem' prognosis. Barnett's thesis has some similarities with that of Olson. He argues that, in contrast to France, Germany and Japan, Britain's victory in the Second World War masked the truth that the 'Audit of War' had revealed regarding the weaknesses of its economy.³ However, unlike Olson, the priorities and motivations of government are central to Barnett's explanation. He argues that the state was captured by 'New Jerusalem' reformers who sacrificed Britain's post-war economic reconstruction on the altar of creating the welfare state and maintaining Britain's Great Power status. Expenditure in these areas crowded out investment of greater economic importance, including transport and communications infrastructure.⁴ Barnett's thesis has been subject to severe criticism regarding both substantive and methodological shortcomings.⁵

¹ M. Olson, *The Rise and Decline of Nations: Economic Growth Stagflation and Social Rigidities*, (New Haven 1982), p. 78.

² A. Booth, J. Melling and C. Dartmann, 'Institutions and economic growth: the politics of productivity in West Germany, Sweden and the United Kingdom, 1945-1955', *Journal of Economic History*, 57, 2 (1997), pp. 416-44.

³ C. Barnett, *The Audit of War: The Illusion & Reality of Britain as a Great Nation*, (London 1986), p. xi.

⁴ C. Barnett, *op. cit.* (1986), p. 246.

⁵ D. Edgerton, 'The prophet militant and the industrial: the peculiarities of Corelli Barnett', *Twentieth Century British History*, 2 (1991), pp. 360-79; *idem*, 'Liberal militarism and the British state,' *New Left Review*, 185 (1991), pp. 138-69; J. Harris, 'Enterprise and welfare states: a comparative perspective', *Transactions of the Royal Historical Society*, 5th ser., 40 (1990), pp. 175-95; R. Middleton, *Government Versus the Market. The Growth of the Public Sector, Economic Management and British Economic Performance c. 1890-1979*, (Cheltenham 1996), pp. 526-7; Jim Tomlinson, 'Corelli Barnett's history: the case of Marshall Aid', *Twentieth Century British History*, 8, 2 (1997), pp. 222-38.

However, the attention it has received from both hostile and sympathetic reviewers is testament to the deep resonances which his arguments evoke.

Marxist analysis of British decline has produced arguments with some similarities to Barnett's regarding the subjugation of industrial development to other priorities. Anderson's long-run model of British decline stemming from its uncompleted bourgeois revolution stresses the absence of major shocks induced by the two World Wars. As a result the British state continued to be strongly influenced by financial, commercial and imperial interests. Thus supporting sterling and maintaining Britain's overseas defence commitments assumed greater importance than infrastructure investment or industrial finance.⁶ Similar arguments regarding defence and sterling have also been put forward by non-marxist commentators.⁷

This paper examines the neglect of government infrastructure investment identified by Barnett and Anderson, focusing on road infrastructure. Road development provides a particularly interesting case-study with respect to the above arguments. Despite a wide measure of consensus that there were major investment opportunities offering a high rate of return, expenditure was drastically restricted. This is shown to have resulted from the Treasury's drive to hold down public expenditure, together with a system of allocating resources according to the political strength of spending ministries rather than any overall assessment of long-run economic priorities.

The next section examines roads policy prior to the Second World War, illustrating that public underinvestment in infrastructure is a long-term characteristic of the British state rather than being peculiar to the post-war period. The subsequent sections discuss roads policy under the 1945-51 Labour governments and the Conservative administrations of the 1950s. Roads expenditure over the period 1945-60 is then examined quantitatively, compared both internationally and with reference to the interwar years. The concluding section

⁶ P. Anderson, 'The figures of descent,' *New Left Review*, 161 (1987), pp. 20-77.

⁷ For example, A. Shonfield, *British Economic Policy Since the War*. (Harmondsworth 1958).

assesses what lessons can be learned from roads policy regarding the motivations and constraints influencing public sector investment during this period and their implications for Britain's long-run economic performance.

2. Road development before the Second World War

By international standards, the British state has traditionally avoided a major role in infrastructure development. Anderson has highlighted underinvestment in transport infrastructure during the nineteenth century as part of a three-fold absence of activity (together with Britain's lack of military conscription and its late establishment of state education) which distinguished the British state from its European counterparts.⁸ Michie has gone further, arguing that during the late Victorian/Edwardian period government restrictions, designed to protect vested interests, inhibited the development of new infrastructure so severely as to constitute a major impediment to Britain's growth.⁹

Road modernisation proposals date from the time the automobile first became more than a mechanical novelty; as early as 1900 the Prime Minister, Balfour, had advocated 'great highways constructed for rapid motor traffic and confined to motor traffic'.¹⁰ The road system required substantial modernisation. Highways had been neglected during the railway age and were often of unsuitable width for motor vehicles. In 1909 the first step was taken towards a national roads policy, with the establishment of the Road Board and a Road Fund, financed from motor vehicle taxes, from which the Board could make grants for road construction and improvements.

The Road Board's record was disappointing. Up to the end of March 1920 the Fund received £16.15 million but spent only £7.13 million, less

⁸ P. Anderson, *op. cit.* (1987).

⁹ R. Michie, 'The finance of innovation in late Victorian and Edwardian Britain: possibilities and constraints', *The Journal of European Economic History*, 17, 3 (1988), pp. 491-530.

¹⁰ J. Drake, *Motorways*, (London, 1969), p. 34.

than £1 million of which was on new roads and bridges.¹¹ While this was partly due to war-time cutbacks, the Board interpreted its powers narrowly and largely confined its activities to providing grants to local authorities (which retained primary responsibility for road development). The Road Board's Secretary, Rees Jeffreys, later attributed its limited activity to hostility from parliament and the Treasury, together with managerial problems (its chairman, the railway magnate Sir George Gibb, was said to have restricted the Board's activities so that they did not threaten the railways).¹² Jeffreys claimed that the Treasury was strongly biased against government capital expenditure regardless of its productivity or desirability, particularly if it might continue and grow,¹³ echoing Keynes's comment regarding the Treasury's willingness to curtail expenditure, 'no matter how productive and desirable in itself', in pursuit of its macroeconomic objectives.¹⁴ The Treasury was also vehemently opposed to the principle - which underpinned Road Board finance - of earmarking taxes for particular uses.¹⁵

In 1919 the Road Board was wound up and its powers transferred to the newly-created Ministry of Transport (MoT). This had been prompted by Sir Eric Geddes' belief that removing road development from close Treasury control was necessary if sufficient construction was to be achieved to fulfil the government's demobilisation objectives.¹⁶ Wide-ranging Cabinet discussions regarding post-war trade and social policy had assumed that transport, labour, and commodity agreements would take centre stage in the reconstruction process.¹⁷ However, the government's rapid move away from active reconstruction in favour of a deflationary strategy aimed at resurrecting pre-war 'normalcy' led to a substantial downgrading of transport planning and policy.

The government established a new Road Fund in 1920, to reduce

¹¹ R. Jeffreys, *The King's Highway*, (London 1949), pp. 60-62.

¹² R. Jeffreys, *op. cit.* (1949), p. 37.

¹³ R. Jeffreys, *op. cit.* (1949), pp. 22-83.

¹⁴ J. M. Keynes, *Essays in Persuasion*, (London 1951), p. 129.

¹⁵ R. Jeffreys, *op. cit.* (1949), p. 37.

¹⁶ K. Grieves, 'Sir Eric Geddes, Lloyd George and the transport problem, 1918-21', *Journal of Transport History*, 13 (1) (1992), pp. 23-42.

¹⁷ K. Grieves, *op. cit.* (1992), p. 31.

post-war unemployment and war-time maintenance arrears.¹⁸ By the end of the decade considerable sections of some major roads had been renovated and a number of new roads had been built. Nevertheless, Road Fund receipts continued to outstrip expenditure. In 1926 Winston Churchill launched the first of several 'raids' on the Road Fund, diverting £7 million into general tax revenue. After March 1937, following several further raids, proceeds from motor taxation went directly to the Exchequer.¹⁹ Despite these raids, between 1920 and 1930 annual roads expenditure by central and local government rose from £26.6 million to £65.5 million.²⁰ However, roads expenditure remained below 1930 levels for most of the next decade. The 1931 financial crisis resulted in postponement of all schemes not actually started and work in progress was curtailed; less than half the work originally contemplated was completed. It was not until the late 1930s, when the Ministry became directly responsible for 4,505 miles of roads under the Trunk Roads Act, 1936, that further major schemes were initiated.

A notable feature of Britain's interwar roads programme was the absence of motorway development. The earliest motorways were the Italian *autostrade*, developed from 1924; by 1934 Italy had 330 miles of motor roads. Germany began developing its autobahn network from 1928; by the start of the Second World War it had over 2,300 miles of autobahnen. The United States had begun to develop motor-only roads from the 1920s, while Belgium, the Netherlands, and Canada had also initiated motorway programmes before the Second World War.²¹

Proposals for motorway development in Britain had been advanced prior to the First World War.²² Such calls became more vocal during the 1920s, though proposed legislation was blocked by "frantic opposition from the railway interests".²³ The railways actively opposed major road

¹⁸ R. Jeffreys, *op. cit.* (1949), p. 93.

¹⁹ C. I. Savage, *An Economic History of Transport*, (London 1959), p. 150.

²⁰ D. J. Dyos and D.H. Aldcroft, *British Transport: An Economic Survey from the Seventeenth Century to the Twentieth*, (Leicester 1969), p. 368.

²¹ J. Drake, *op. cit.* (1969), pp. 27-61.

²² P. S. Bagwell, *The Transport Revolution from 1770*, (London 1974), p. 275.

²³ J. Drake, *op. cit.* (1969), p. 35.

projects, lobbying both at parliamentary and local authority level.²⁴ The rail unions also lobbied against road developments which might threaten railway interests.²⁵ A Lancashire County Council motorway scheme was under active government consideration during the late 1930s, though no action was taken before war intervened.²⁶

Throughout the interwar years, roads expenditure failed to keep pace with the growth of traffic; a mere 4 per cent was added to Britain's road mileage over the period 1899 to 1936. Road conditions deteriorated markedly in relation to traffic volumes; in central London average motor vehicle speeds were lower in 1938 than for horse vehicles 30 years earlier.²⁷ Treasury restrictions had severely limited road development, while the retention of considerable powers and responsibilities for road construction at the local authority level inhibited the development of an integrated national roads policy. The low calibre of the Ministers of Transport and the frequency with which they were removed from office constituted a further obstacle to an active policy. Furthermore, the factors determining the level and character of road development during this period tended to be non-road-related political considerations such as unemployment, the financial situation and opposition from railway interests.²⁸

3. Policy during the Attlee years

A substantial road development programme, including motorway construction, was included in the wartime Coalition government's reconstruction planning.²⁹ The following Labour government developed what was, on paper, a substantial roads programme. In

²⁴ R. Jeffreys, *op. cit.* (1949), p. 112; United Kingdom, The National Archive (hereafter TNA), RAIL 418/102, memorandum to LMS Directors from Executive Committee, March 1929.

²⁵ C. Stuart-Williams and E. Short, *Railways, Roads and the Public*, (London 1939), p. 130.

²⁶ J. Drake, *op. cit.* (1969), pp. 36-8.

²⁷ D.J. Dyos and D.H. Aldcroft, *op. cit.* (1969), pp. 369-70.

²⁸ D.J. Dyos and D.H. Aldcroft, *op. cit.* (1969), pp. 370-371.

²⁹ TNA: T228/219, memorandum on motorways, 24 July 1946; P. S. Bagwell, *op. cit.* (1974), P. 368.

February 1946 the Minister of Transport, Alfred Barnes, submitted two memoranda to the Lord President's Committee, proposing a major 10 year programme, concentrated on improving access to the regionally-assisted Development Areas.³⁰ These proposals were approved by the Lord President's Committee, subject to further consideration of individual projects. In May 1946 Barnes made a Commons statement outlining the programme, which included approximately 800 miles of motorways.³¹ Despite subsequent delays, powers to build motorways were eventually obtained under the Special Roads Act, 1949.

Labour's success in planning a motorway programme and providing the necessary legislation was in stark contrast to its record in actually developing roads. Total roads expenditure in 1949 was less in real terms than it had been in 1911, despite a more than 20-fold increase in the number of motor vehicles.³² The roads programme was subject to severe cuts following the Autumn 1947 Sterling convertibility crisis. The Cabinet's key Investment Programmes Committee (IPC) concentrated investment cuts on road and other infrastructure investment such as the railways, telecommunications and ports.³³ As a MoT official noted in September 1949:

In spite of urgent requests for additional funds for maintenance (to make good war time neglect and to prevent further deterioration which will be very costly to remedy) and for a minimum of improvements urgently required to increase safety and to assist industrial development and the production drive, our Estimates have been severely pruned by the Chancellor. The allocation in the current year for maintenance provided for work equivalent to only 70% of the pre-war level.³⁴

³⁰ TNA: CAB132/2, Lord President's Committee memoranda, 'Highway Programme,' and 'Highway Communications for the Development Areas,' by Minister of Transport, 4 Feb. 1946.

³¹ J. Drake, *op. cit.* (1969), p. 43.

³² K. M. Gwilliam, *Transport and Public Policy*, (London 1964), pp. 148-9.

³³ C. Barnett, *The Lost Victory: British Dreams, British Realities 1945-1950* (London 1995), pp. 257-71; M. Chick, *Industrial Policy in Britain 1945-1951. Economic Planning Nationalization and the Labour Governments*, (Cambridge 1998), pp. 44-6.

³⁴ TNA: T228/397, C.A. Birtchnell to Sir Edward Bridges, 6 Sept. 1949.

The Treasury realised that these cuts had adverse economic effects: "On... principle... the roads programme is not a good candidate for cuts... Roads are no doubt partly an amenity but also partly a section of our industrial equipment. In contrast to the new and expanded social services the real level of expenditure on the roads is below pre war..."³⁵ According to Chick the IPC appreciated the longer-term costs of restricting infrastructure investment, but decided that this was a price worth paying in view of the overriding immediate need to expand production for export.³⁶ However, there was also a strong political dimension to the allocation of resources, programmes which did not receive active political support often constituting the residual from where cuts were made. Housing and defence, which received strong political support, obtained generous investment allocations and were largely protected from cuts, as were some industrial programmes with which Labour Ministers had strong political sympathies, such as the coal industry.³⁷ The Attlee governments' Cabinets contained powerful representation for welfare, defence and housing, whereas industry was represented mainly by the Treasury, the very ministry seeking cuts.³⁸

4. Policy under the Conservatives

By the time the Conservative government came to power in October 1951 the road network had received no major improvement or construction work for over a decade. From the end of the Second World War to the middle of 1952 total real roads expenditure had averaged 50-60 per cent of the pre-war level, while real expenditure on new roads was about 25 per cent of that pre-war. Meanwhile industrial production and the number of motor vehicles had risen by 40-50 per cent.³⁹

³⁵ TNA: T228/397, note by E.C.R. Kahn, 10 Sept. 1949.

³⁶ M. Chick, *op. cit.* (1998), pp. 52-3.

³⁷ M. Chick, *op. cit.* (1998), pp. 24-46.

³⁸ M. Chick, *op. cit.* (1998), p. 18.

³⁹ TNA: T228/555, 'Roads,' memorandum by R. Armstrong, July 1953.

The Conservative government faced an economic situation which was rapidly improving compared to that confronting its Labour predecessor.⁴⁰ Furthermore raw material shortages, which during the 1940s placed a firm ceiling on British capital formation, became much less serious. An official memorandum of July 1953 noted that some increase in the roads programme was possible without a serious impact on materials or labour supply.⁴¹ However, road investment was subject to further drastic cuts. Major bridge and tunnel projects such as the Severn and Forth Bridges also faced continued postponement, depriving their hinterlands of good road communications. These cutbacks occurred despite evidence that road investment offered a high rate of return. In 1951 C.T. Brunner estimated that, on the basis of 1949 traffic volumes, a £550 million road programme would produce savings of £95 million a year from reduced accidents, journey times, fuel use, tyre, repair and maintenance costs.⁴² Brunner's conclusion that roads offered attractive returns was corroborated by official calculations made later in the decade, reviewed below.

The neglect of road investment stemmed, in part, from the Conservatives' emphasis on the macroeconomy. Under R.A. Butler, the Conservatives' first Chancellor, who served for four years and set the tone for economic policy during the 1950s, demand management dominated government economic thinking, to the detriment of questions such as the problems of particular industries, research and technology, industrial training or other 'supply-side' issues.⁴³ Fiscal retrenchment to combat Britain's payments imbalance became a central goal of the Treasury, which increasingly focused its attention on the cost of expenditure programmes rather than their returns. Budgetary considerations drastically limited road development; pressed by the

⁴⁰ A. Seldon, *Churchill's Indian Summer: The Conservative Government 1951-55*, (London 1981), pp. 177-8.

⁴¹ TNA: T228/555, 'Roads,' memorandum by R. Armstrong, July 1953.

⁴² C. T. Brunner, 'The economic justification of road works,' paper presented at 9th Congress of the Permanent International Association of Road Congresses, Sept. 1951, reprinted by British Road Federation as *Road Pence, Road Sense: The Economic Justification of Road Works*, (London 1952), p. 195.

⁴³ S. Brittan, *Steering the Economy: The Role of the Treasury*, (London 1969), p. 118.

Select Committee on Estimates in 1952 to explain how views were formed regarding the correct level of roads spending, the Treasury representative stated that, so long as expenditure remained around 65 to 75 per cent of its 1938 level, it was satisfied that there was no extravagance.⁴⁴

The government's neglect of the roads soon precipitated the emergence of a vigorous campaign by interests associated with road use and development for a much more active programme. During 1953 the Minister of Transport received representations from the Federation of British Industry (FBI), British Road Federation (BRF), Association of British Chambers of Commerce, County Councils Association and the RAC on this issue.⁴⁵ In May 1953 the BRF submitted a memorandum to the Chancellor, arguing that investment in new long-distance roads offered high yields. It was also argued that poor roads had a significant adverse effect on the motor vehicle industry, encouraging:

cars and commercial vehicles of a smaller size and smaller engine power than are generally acceptable overseas. This necessitates manufacturers making different types for home and export, and raises costs of manufacture by anything from 10 per cent upwards... Road congestion, dimensional limitations and the lack of long-distance roads all militate against the motor industry. In addition, these factors have a dampening effect on home sales which means that the industry works below capacity even if it maintains a high level of export.⁴⁶

In June 1953 the FBI President wrote to the Chancellor, calling for a start to be made on a trunk road programme. An FBI press release was also issued. This move, a reversal of the FBI's previous policy of opposing increased government expenditure because of its tax implications, was prompted by "our conviction that a limit has been

⁴⁴ C. I. Savage, *op. cit.* (1959), pp. 199-200.

⁴⁵ TNA: T228/566, A. Lennox-Boyd to R. Butler, 26 Oct. 1953.

⁴⁶ British Road Federation Archive, London, British Road Federation, 'Memorandum on the case for increased expenditure on roads', 18 May 1953.

reached in deferring this question. Delays and high costs in... transportation... have become a shocking example of low productivity, affecting our competitive power and wasting manpower".⁴⁷ Road investment was also under active discussion, at the behest of industry representatives, by the National Production Advisory Council for Industry, who formed an Emergency Committee to examine the matter in November 1953. The newspapers had also begun to draw public attention to the government's neglect of transport infrastructure. In July 1953 *The Observer* called underinvestment 'an appalling tax on national welfare'.⁴⁸ In February 1955 *The Sunday Times* estimated that if government funds spent on 50,000 houses built during 1954 in excess of the 300,000 target had been diverted to transport, this would have covered the amount requested for the railways' entire capital programme during that year.⁴⁹

The MoT used this lobbying to push for higher expenditure. In a May 1953 Economic Policy Committee (EPC) memorandum it was argued that "There is a growing volume of criticism of Government policy in regard to roads. We are adding materially to costs of production... For many years our road system has remained static or worse and although it is an essential part of the machinery of production it is becoming increasingly obsolete".⁵⁰ In December 1953 the Minister of Transport, Alan Lennox-Boyd, announced an increase in Road Fund road improvement expenditure from £5 million a year to £14-15 million by 1957/8.⁵¹ However this was insubstantial in relation to the scale of the road problem.

The system of allocating government expenditure, essentially a political struggle between the various spending ministries and a Treasury attempting to curtail the growth of public expenditure,

⁴⁷ TNA: T229/686, H. Pilkington to Chancellor of Exchequer, 24 June 1953.

⁴⁸ *The Observer*, 12 July 1953, cited in A. Seldon, *op. cit.* (1981), p. 233.

⁴⁹ *The Sunday Times* 6 Feb. 1955, cited in A. Seldon, *op. cit.* (1981), pp. 233-4.

⁵⁰ TNA: CAB 134/848, 'Maintenance and improvement of roads', memorandum by Secretary of State for the Coordination of Transport, Fuel, and Power, and the Minister of Transport, for Economic Policy Committee, 18 May 1953.

⁵¹ TNA: T229/686, note of statement by Minister of Transport, 8 Dec. 1953.

militated against roads investment. Road interests within the public sector were extremely weak. Unlike the nationalised industries, the roads had no semi-autonomous board to advocate and plan development. Furthermore the MoT had little power within Whitehall. During the first four years of Conservative administration there were no fewer than four Ministers of Transport and the post continued to enjoy low status. Meanwhile the Ministry was starved of both resources and economic expertise, with no permanent trained economists prior to 1960.⁵² Given Treasury-constrained overall spending limits, roads investment was effectively crowded-out by other programmes deemed more politically important, such as defence, the government's massive house-building programme, which was central to the Conservatives' new populist agenda of fostering a 'property-owning democracy', and agriculture. As J. A. C. Robertson noted in April 1954:

Under the present financial arrangements it seems to me very likely that British roads will not get the increased investment they merit on grounds of economic and industrial priorities. National defence, the social services and British agriculture block the queue for increased Government expenditure; on the other hand electricity and coal, air transport and even the railways are revenue-producing enough to finance their own investment... Like manufacturing industry to-day, they may be destined always to be one of the Cinderellas of investment.⁵³

Motorways presented the government with a particular problem. They constituted expensive capital projects, but their absence in Britain (almost uniquely among industrialised nations) provided a stark illustration of the backward state of Britain's road system. A MoT working party had been established in March 1954 to examine the case for motorways. Its draft report recommended a £60 million programme over 10-12 years. Motorways were found to offer considerable benefits

⁵² S. Brittan, *op. cit.* (1969), p. 16.

⁵³ TNA: T229/686, J.A.C. Robertson to Mr Blaker, 8 April 1954.

in terms of safety and speed (though these were not deemed capable of estimation in monetary terms), together with the provision of a home market for motorway construction skills and techniques. A stimulus to national industry and trade was also anticipated but, again, deemed unquantifiable.⁵⁴

Treasury reaction to the Working Party's draft reveals both the perceived importance of the budgetary constraint and considerable anxieties among officials that, by neglecting road investment, the government was damaging Britain's long-run growth prospects. L. Pliatzky, of the Treasury's Trade and Industry division, criticised it for not taking account of expenditure constraints and the need to indicate budget priorities within the overall roads programme.⁵⁵ However, J.A.C. Robertson noted, regarding the report's claim that 'This country cannot afford to do without a motorway system if it is to be encouraged to prosper by its roads', that 'This view echoes that of Dr Jacoby with regard to the United States economy... that... expanding the national highways system was desirable, not as an anti-recession measure, but as an act of Government to unleash the forces of growth...'⁵⁶

The Economic Section criticised the report but acknowledged the case for an expanded roads programme. I.M.D. Little argued that the practicability of quantifying economic benefits was greater than the report allowed for.⁵⁷ J.A. Jukes, while also complaining about the lack of quantification, stated that its conclusions appeared to be right. However, he pointed out that a motorway programme could only be undertaken as part of a major increase in the general roads programme. He agreed with Robertson that such an increase was desirable:

There are many strong arguments in favour of it; the terrible waste caused by accidents could be seriously reduced... the expected increase in the revenue from taxation of road users is more than enough to pay for a much

⁵⁴ TNA: T228/424, 'Working party on motorways, draft report,' Sept. 1954.

⁵⁵ TNA: T228/424, L. Pliatzky to K. A. Heathcote, 16 Sept. 1954.

⁵⁶ TNA: T228/424, 'Working party on motorways', note by J.A.C. Robertson, 21 Sept. 1954.

⁵⁷ TNA: T228/424, 'Working party on motorways', note by I. M. D. Little, 30 Sept. 1954.

higher programme; over a tenth of our total national resources goes on road transport, while net investment in roads... is minute; if we are to have a prosperous and growing economy it must be based on an efficient and growing system of basic services including roads... we need... to try to quantify some of these arguments, so that, although ultimately the decision is necessarily a matter of political judgement, it will be based on something which gives at least an indication of the return expected... As the profitability of many projects which are now being turned down appears self-evident, one cannot help suspecting that the figures would show that the total expenditure should be of a different order of magnitude from that proposed at present.⁵⁸

However, Jukes went on to note that the need to limit government expenditure might act as a constraint. Robertson agreed that investment might be justified according to the finance it would produce, 'we do not have a clear statement of the investment demand for better roads, motorways etc., balanced by financial proposals for meeting that demand out of the pockets of those interests in the benefits of that investment. Ought somebody to put the Minister of Transport on this track?'⁵⁹ However, Pliatzky replied that:

... the last thing for the Treasury to do was to formulate proposals for additional Vote expenditure... when there is already tremendous pressure for expenditure in a particular direction and when at the same time there is a shortage of public funds to meet existing requirements, I should not have thought that it was for this Division to add to the pressure. We must after all have regard to the functions which we are intended to discharge.⁶⁰

Budgetary considerations therefore effectively detached roads expenditure from its projected earnings in Treasury eyes. This occurred despite the fact that the roads were a lucrative source of government revenue. A May 1957 Treasury memorandum conceded that 'roads pay for themselves, in the sense that vehicle tax and tax on petrol, etc.,

⁵⁸ TNA: T228/424, J. A. Jukes to J. A. C. Robertson, 1 Oct. 1954.

⁵⁹ TNA: T228/424, note by J. A. C. Robertson, 2 Oct. 1954.

⁶⁰ TNA: T228/424, L. Pliatzky to A. T. K. Grant, 6 Oct. 1954.

together bring in over £400 million, while total government expenditure on roads is still under £100 million.⁶¹ Ministers did consider linking road investment and revenue. In a 1954 EPC paper the Lord President argued that, as roads spending was constrained by budgetary stringency, and was clearly of a capital nature, there was a powerful case for loan finance, which might be serviced from vehicle taxes.⁶² However, this would amount to a return to the earmarked funds arrangement of the original Road Fund and as such was unacceptable to the Treasury.

By the mid-1950s Britain had fallen far behind other West European countries (many of which had faced much greater problems of physical reconstruction) in terms of road infrastructure modernisation, while proposed expenditure increases would not substantially close the gap. By 1955 West Germany was expanding its autobahn network; Holland had 200 miles of motorways, and most other West European countries possessed some motorways.⁶³ According to a contemporary Treasury estimate, the UK had the lowest proportion of investment in transport and communications of Western European nations examined, despite the fact that it had the highest traffic densities in Europe.⁶⁴ British road expenditure was found to be by far the smallest in Western Europe, both per vehicle and as a proportion of GNP. The railway system was similarly disadvantaged; officials calculated that UK railway investment was among the lowest in Europe, both in relation to GNP and railway revenue.⁶⁵ The railways were in such a poor state of repair that train speeds were considerably below 1930s levels.⁶⁶

⁶¹ TNA: T230/352, memorandum by A.T.K. Grant, 7 May 1957.

⁶² TNA: CAB134/852, 'Roads', Economic Policy Committee memorandum by Lord President, 12 July 1954.

⁶³ TNA: T228/560, 'Expenditure on roads', memorandum by Minister of Transport, 1 July 1955.

⁶⁴ TNA: T230/351, 'Economic survey of Europe in 1956 - part II European transport problems', Statistical Working Party on Long-Term Survey of Transport memorandum, 9 April 1957.

⁶⁵ TNA: T230/351, 'Economic survey of Europe in 1956 - part II European transport problems', Statistical Working Party on Long-Term Survey of Transport memorandum, 9 April 1957.

⁶⁶ A. Seldon, *op. cit.* (1981), p. 233.

Macroeconomic considerations continued to dominate; as a note prepared for the Chancellor in July 1955 argued:

Of course, it may well be true that industry is adversely affected by "the inflationary effect on costs of production of road congestion and delays." Equally, it would certainly suit industry well if we devoted a lot more money and resources to technical education. But the simple fact remains that industry will not like it at all if we have yet another severe balance of payments crisis, necessitating heavy import cuts which in their turn provoke retaliation abroad.⁶⁷

The MoT's advocacy of the economic case for roads was impeded by its absence of trained economists; road planning was largely undertaken by its engineering staff who did not 'talk the same language' as the Treasury economists who evaluated its proposals. This left road planning open to Treasury criticism regarding the lack of any clear economic criteria for assessing projects. Furthermore, there were fears that, in the absence of such criteria, increased roads spending would be largely directed to political, rather than economic, priorities:

most of us have the general feeling... that there is a sound economic case for more road investment if a proper way could be found of representing it: but that until some way could be found of measuring the value of individual projects, it seemed likely that some part of the money... would be spent on less paying projects and particularly on road projects whose value could be put in "political" terms, e.g. Crofter Counties Road Schemes.⁶⁸

The first published official cost-benefit analysis of British road development did not appear until 1960,⁶⁹ although a number of unpublished exercises had been undertaken. Some attempts were made by the Treasury's Economic Section during the mid-late 1950s to

⁶⁷ TNA: T228/560, note for Chancellor of Exchequer, signed E.C.G.B., 8 July 1955.

⁶⁸ TNA: T228/424, 'Road Investment', memorandum by C.C. Lucas, 21 April 1954.

⁶⁹ T. M. Coburn, M. E. Beelsey and D. J. Reynolds, *The London-Birmingham Motorway*, Road Research Technical Paper No. 46 (London, 1960).

quantify the welfare gains from increased road expenditure, but it was concluded that these had highlighted methodological difficulties rather than solutions.⁷⁰ A 1957 Road Research Laboratory report attempted to quantify typical rates of return on recent and projected road schemes; its calculations indicated that returns were generally high.⁷¹ A 1954 intersection-widening scheme in London was estimated to have saved about 50 per cent of its cost in the first year. A proposed motorway joining the St. Albans by-pass to the 'A' Ring near Marble Arch was estimated to save 9 per cent of its cost annually until its design volume was reached and a greater amount thereafter. Projects for a Slough by-pass, widening a one mile stretch of the A5, and straightening a mile of the B470, were estimated to show annual returns of 9 per cent, at least 11 per cent, and 24 per cent respectively. These were stated to be conservative estimates, which did not take all savings into account.

These estimates may be subject to upward bias. The subsequent development of road project appraisal techniques has drawn attention to indirect costs of new roads neglected by earlier estimates, such as negative environmental impacts and the ability of road improvements to generate new traffic, thus reducing any mitigation of congestion.⁷² However the archival evidence indicates that such factors were not anticipated by policy-makers, even implicitly, during the 1950s. The estimates therefore accurately represent contemporary perceptions regarding expected returns to road investment.

However, political pressure from the road lobby proved more important than improved economic analysis in increasing the priority given to roads. As the Minister of Transport, Harold Watkinson, informed the Chancellor, Harold Macmillan, in October 1956, 'the

⁷⁰ TNA: T230/366, 'The impact on the economy of inadequate road transport: a preliminary note', Economic Section, 2 Oct. 1957.

⁷¹ TNA: T230/352, 'The growth of congestion on the roads in Great Britain', confidential report by Road Research Laboratory, February 1957.

⁷² A. Collins and R. O'Doherty, 'Trunk road investment, environmental costs and bureaucracy', *International Journal of Transport Economics* XXIII (1996), pp. 187-203; P. J. Mackie, 'Induced traffic and economic appraisal', *Transportation* 23 (1996), pp. 103-19; SACTRA (Standing Advisory Committee on Trunk Road Assessment), *Trunk Roads and the Generation of Traffic* (London, 1994).

extensive propaganda campaign which the Roads Campaign Council and others are waging may yet do us a great deal of political damage. It will be increasingly difficult for me to rebut the charge that we are not doing enough on the roads, when I know that such a charge is very largely substantiated by the facts.⁷³

In March 1957 Watkinson wrote to the new Chancellor, Peter Thorneycroft, that 'there are a great many votes in roads... Every day I am shown publications and handouts produced by the British Road Federation, the Roads Campaign Council, motor car manufacturers and other vested interests, all of whom by inference criticise the Government for not building enough roads.'⁷⁴ The MoT had learned to use the road lobby as a weapon in its battles with the Treasury. At a meeting of FBI and MoT representatives in November 1958 the FBI delegation was informed that 'An approach [to the Treasury] by the Federation... stressing industry's need for a large road programme, would probably best help the Ministry, who themselves regard it as essential.'⁷⁵

In July 1957 the Minister announced a new four-year roads programme (for England and Wales) with an ultimate cost of £240 million.⁷⁶ The Secretary of State for Scotland (who took over responsibility for Scottish roads in 1956) also announced authorizations for the four years ending 1962 totalling £40 million.⁷⁷ These figures related to authorizations, actual expenditure being undertaken over a much longer period. During the following years Britain finally opened the first stretches of its motorway network - the Preston by-pass in December 1958 and the first part of the M1 in November 1959. Total expenditure on major improvements and new construction, which had fallen to only £5.4 million in 1953, was increased to £72.6 million in 1960 and £116.7 million in 1963.⁷⁸ Even so, the rate of motorway

⁷³ TNA: T228/497, Watkinson to Macmillan, 15 Oct. 1956.

⁷⁴ TNA: T228/562, Watkinson to Thorneycroft, 28 March 1957.

⁷⁵ Modern Records Centre, Warwick (hereafter MRC): MSS.200/F/3/E3/28/1, note of meeting of FBI delegation and Ministry of Transport representatives, 13 Nov. 1958.

⁷⁶ MRC, MSS.200/F/3/E3/28/1, paper for FBI Transport Users' Policy Committee meeting, 12 Nov. 1958.

⁷⁷ MRC, MSS.200/F/3/E3/28/1, undated note c. Nov. 1958.

⁷⁸ C. I. Savage, *op. cit.* (1959), p. 200.

development was not rapid, only 194 miles being constructed by March 1963.

This expansion reflected, in part, the much greater priority given to economic growth by the Conservative government from the late 1950s and an admission that the earlier concentration on macroeconomic stabilisation had been detrimental to growth.⁷⁹ While economic growth had begun to enter the public rhetoric of Conservative ministers from around 1954, specifically growth-promoting policies had largely been limited to competition-enhancing measures such as reducing international trade barriers and domestic restrictive practices.⁸⁰ These had both a strong ideological appeal to the neo-liberal strand of Conservative thinking and no substantial expenditure implications that might conflict with other government priorities.

However, towards the end of the decade, concerns regarding Britain's poor growth record, together with the government's growing political unpopularity, precipitated a fundamental re-appraisal of economic policy, rejecting neo-liberalism in favour of targeting Britain's supply-side difficulties. This involved an increase in the priority given to investment with long-term productivity implications, such as technical education.⁸¹ Regional policy also received much greater emphasis. It was appreciated that under-investment in long-distance road infrastructure had exacerbated the problems of Britain's peripheral regions, contributing to a resumption of high regional unemployment.⁸² During most of the 1950s the Treasury had strongly resisted roads expenditure in regionally-assisted areas, in line with general Treasury opposition to regional policy. For example, a memorandum prepared for the Chancellor in October 1953 had argued that, 'Instead of proceeding as, on merits we should, to improve the roads where the traffic is already excessive..., for political reasons it is

⁷⁹ S. Brittan, *op. cit.* (1969), pp. 143-4.

⁸⁰ J. Tomlinson, 'Inventing "decline": the falling behind of the British economy in the postwar years', *Economic History Review* XLIX (1996), pp. 731-57.

⁸¹ J. Tomlinson, *op. cit.* (1996), p. 747.

⁸² P. Scott, 'The worst of both worlds: British regional policy, 1951-64', *Business History*, 38, 4 (1996), pp. 41-64.

suggested we should build roads not so much to deal with excessive existing traffic but in order to create it, e.g. in Wales and Northern Scotland. I really do not think this makes sense...'⁸³

Two major 1963 White Papers on the economic development of Central Scotland and North East England encapsulated the government's new emphasis on road development as an instrument of regional policy.⁸⁴ These emphasised the importance of considerably expanding road development and announced substantial investment increases. However, this expansion occurred too late, having a substantial impact on road communications only after these areas had experienced several years of continued decline. Underinvestment during the 1950s had been a significant deterrent to industrial movement into regionally-assisted areas; as a 1953 Treasury memorandum regarding unemployment in South Wales conceded, 'It is most unlikely that if nothing is done to improve... [road] communications new industry can be attracted into this area.'⁸⁵

5. Britain's road investment record

The previous section has demonstrated that roads expenditure was perceived to be suboptimal (in the absence of budgetary considerations) by civil servants, Ministers, and industry, a perception which received strong support from contemporary quantitative studies. An unusually low level of roads expenditure in Britain is confirmed by historical and international comparisons. Road transport increased markedly in importance over this period. Between 1946 and 1960 the number of vehicles per road mile in Britain rose from 17 to 48.⁸⁶ Meanwhile between 1938 and 1960 the volume of road freight increased from 8-10 thousand million ton-miles

⁸³ TNA: T228/566, note to Chancellor, signed 'T A R-C,' 26 Oct. 1953.

⁸⁴ The North East. A Programme for Regional Development and Growth (British Parliamentary Papers, 1963, XXVI); Central Scotland. A Programme for Development and Growth (*British Parliamentary Papers*, 1963, XXVI).

⁸⁵ TNA: T228/555, memorandum on road policy, 12 Oct. 1953.

⁸⁶ K. M. Gwilliam, *op. cit.* (1964), p. 148.

to 30.1 thousand million.⁸⁷ However, despite these large increases in utilisation, the share of Gross Domestic Fixed Capital Formation devoted to highways and bridges fell from over 3 per cent during the interwar years to 0.7 per cent or less during the late 1940s and early 1950s and was still less than two thirds of its interwar average at the end of the 1950s, as is shown in *Table 1*. Railway capital formation also experienced a considerable, though less severe, decline (from low interwar levels) in the late 1940s and early 1950s, though it returned to interwar levels during the second half of the decade.

British road infrastructure investment was also extremely low during this period compared to other European nations. Despite the fact that in 1954 the number of vehicles per road mile in Britain was by far the highest in Europe at 22.3,⁸⁸ in 1955 the UK spent 0.09 per cent of national income on roads, compared to 0.69 per cent by France and 0.75 per cent by West Germany.⁸⁹ UK annual per capita road investment during 1953-55 was £0.27, compared with figures for other West European countries ranging from £1.10 (Italy) to £5.40 (Finland).⁹⁰

Years	Highways and bridges	Railways	Total
1920-29	3.7	4.2	7.9
1930-39	3.2	3.5	6.7
1948-51	0.6	2.6	3.2
1952-55	0.7	2.3	3.0
1956-58	1.3	3.5	4.8
1959-60	2.1	4.3	6.4

Source: C. H. Feinstein, *National Income, Expenditure, and Output of the United Kingdom 1855-1965*, (Cambridge, 1972), Table 41.

⁸⁷ P. Scott, 'The growth of road haulage, 1921-58: an estimate,' *Journal of Transport History* 19, (1998), pp.138-55; United Kingdom, Ministry of Transport, *Survey of Road Goods Transport 1962: Final Results Part I* (London, 1964).

⁸⁸ J. Tetlow & A. Goss, *Homes, Towns and Traffic*, 2nd edn. (London 1968), p. 73.

⁸⁹ 'Speeding the Road Programme', *Financial Times* 30 April 1957.

⁹⁰ TNA: T228/621, 'Road investment in an expanding economy', memorandum submitted to Chancellor of Exchequer by British Road Federation, Nov. 1958.

Table 2 compares British road investment with seven other European countries, using three indicators that collectively provide some objective yardstick of road requirements; expenditure per motor vehicle, per capita, and per sq. km. of land, in 1955/6 and 1959/60. During 1955/6 Britain spent considerably less, both per capita and per motor vehicle, than any other country for which data are available. Its expenditure per sq. km. was also substantially lower than that for other countries with high population densities. Despite expenditure increases in the late 1950s, in 1959/60 Britain still spent less per motor vehicle than any other country and less per capita than any country except the Irish Republic. Thus other European countries continued to out-pace Britain in road development, having already established a long lead by this time.

6. Conclusions

During the early post-war years, British governments neglected road and other infrastructure investment, despite a general perception that current investment levels were suboptimal. The 1945-51 Labour government appear to have made a conscious

TABLE 2. Total expenditure on roads in the UK and seven European countries, 1955/56 and 1959/60 (U.S. dollars)

	1955/56			1959/60		
	Per motor vehicle	Per capita	Per 1,000 sq km	Per motor vehicle	Per capita	Per 1,000 sq km
Denmark	195	14.2	1.47	142	15.7	1.66
France*	115	12.5	0.99	97	14.1	1.15
W. Germany	279	13.0	2.59	285	22.9	4.87
Ireland	165	10.0	0.41	139	10.0	0.40
Norway	290	17.5	0.18	N/A	N/A	N/A
Sweden**	N/A	N/A	N/A	202	35.9	0.59
Switzerland*	259	16.6	2.03	218	21.1	2.67
UK	64	6.3	1.36	82	10.4	2.29

Notes: * Refers to 1956 and 1959. ** Refers to 1960.

Sources: United Nations, *Annual Bulletin of Transport Statistics for Europe* (various issues).

decision to postpone infrastructure investment, in order to prioritise spending that could improve Britain's trading position during a period of economic crisis. Whether, given the resources available to their Conservative successors, Labour would have continued to neglect road development is impossible to answer. However, Labour's road development legislation and their linking of road development with regional policy suggests that road modernisation did assume greater importance in Labour's economic strategy than it received during the 1950s.

The Conservatives further reduced roads expenditure during their early years in office and expanded road development only slowly during subsequent years, despite both the strong economic case for greater investment and vigorous lobbying from industry and road interests. The limited impact of this lobbying appears at odds with Olson's model of distributional coalitions distorting the economy in their favour. Following railway nationalisation the anti-road lobby was emasculated during this period, while there was both a broad coalition of industrial interests that would derive significant benefit from greater roads expenditure and a narrower, but still substantial, coalition of road-related interests which stood to gain considerably. However, Olson's thesis primarily concerns the ability of distributional coalitions to resist, rather than promote, change. The limited impact of the road lobby is not, therefore, a fair test of his argument, though it does illustrate the asymmetric nature of lobbying; governments often have considerable difficulty in imposing change in the face of opposition from powerful vested interests, but find it much easier to resist changes advocated by such interests.

Roads policy appears to offer some support to Barnett's broad thesis that economic growth was sacrificed to policies given greater political priority. However these policies cannot be characterised as being driven by any 'New Jerusalem' social agenda. As Harris and others have shown, British social welfare spending during the 1950s was lower than that of its West European neighbours.⁹¹ The main areas

⁹¹ J. Harris, *op. cit.* (1990).

of public expenditure to which Britain devoted a substantially higher proportion of funds than other European countries were defence⁹² and debt servicing.⁹³ Meanwhile expenditure regarded as being of major electoral importance, such as the Conservatives' ambitious target of building 300,000 new houses a year and agriculture (which was perceived to be vital to Conservative fortunes in a number of key rural marginal constituencies)⁹⁴ received generous funding. Thus transport infrastructure investment (and expenditure on other areas with important long-term implications for productivity – such as education) was sacrificed to defence expenditure and budgetary stringency in the face of Britain's recurring balance of payments problem, together with spending geared towards Conservative electoral success.

This order of priorities was in turn partly determined by the lack of emphasis on growth-promotion as a key economic objective. As Harris noted, during the early-mid 1950s the Conservative government was 'primarily concerned with administration rather than political ideas or long-term policy.'⁹⁵ Only towards the end of the decade were supply-side issues given greater priority, following widespread concern regarding Britain's slow post-war growth. Thus the combination of a government preoccupied with short-term administration rather than long-term growth, a spending Ministry with insufficient muscle to press its expenditure claims, and a Treasury eager to cut expenditure wherever possible, resulted in an allocation of resources to roads which all privately regarded as sub-optimal, but which proved expedient to both Treasury and Cabinet.

The evidence reviewed above therefore supports the view, reflected in the work of Olson, Barnett, and Anderson, that during the early post-war years the British state did not give over-riding

⁹² Accounting for 22.9 per cent of total public expenditure in 1955-7, compared to 17.6 per cent for France and 9.6 per cent for Germany and Italy.

⁹³ R. Middleton, *op. cit.* (1996), Table 11.4.

⁹⁴ B. A. Holderness, *British Agriculture since 1945*, (Manchester 1985), pp. 12-13.

⁹⁵ N. Harris, *Competition and the Corporate Society: British Conservatives, the State and Industry 1945-1964* (London 1972), p. 231.

priority to long-term economic growth and that investment opportunities that were perceived to offer high returns were crowded out by less growth-orientated priorities (the house-building programme alone received around four times as much public expenditure during the early 1950s as Britain's roads).⁹⁶ Britain's post-war road investment record points to a supply-side explanation of poor economic performance, providing one instance of the general neglect of investment in areas such as infrastructure and education which were of considerable long-term economic importance, but could be neglected in the short-term without serious immediate consequences. Macroeconomic considerations, defence commitments, and electorally popular expenditure were allowed to set the agenda of government policy, with microeconomic costs that only became fully evident after successive decades of neglect.

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⁹⁶ A. Seldon, *op. cit.* (1981), p. 499.

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