



Kent Academic Repository

Caswell, Ben, Millard, Stephen and Pabst, Adrian (2026) *Reforming the UK fiscal framework*. National Institute Economic Review . pp. 1-7. ISSN 1741-3036.

Downloaded from

<https://kar.kent.ac.uk/113354/> The University of Kent's Academic Repository KAR

The version of record is available from

<https://doi.org/10.1017/nie.2026.10088>

This document version

Publisher pdf

DOI for this version

Licence for this version

CC BY (Attribution)

Additional information

Versions of research works

Versions of Record

If this version is the version of record, it is the same as the published version available on the publisher's web site. Cite as the published version.

Author Accepted Manuscripts

If this document is identified as the Author Accepted Manuscript it is the version after peer review but before type setting, copy editing or publisher branding. Cite as Surname, Initial. (Year) 'Title of article'. To be published in **Title of Journal** , Volume and issue numbers [peer-reviewed accepted version]. Available at: DOI or URL (Accessed: date).

Enquiries

If you have questions about this document contact ResearchSupport@kent.ac.uk. Please include the URL of the record in KAR. If you believe that your, or a third party's rights have been compromised through this document please see our [Take Down policy](https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies) (available from <https://www.kent.ac.uk/guides/kar-the-kent-academic-repository#policies>).

ARTICLE

REFORMING THE UK FISCAL FRAMEWORK

Ben Caswell¹, Stephen Millard¹ and Adrian Pabst^{1,2} 

¹National Institute of Economic and Social Research, London, UK and ²School of Politics and International Relations, University of Kent, Canterbury, UK

Corresponding author: Stephen Millard; Email: s.millard@niesr.ac.uk.

Abstract

This paper argues that the current UK fiscal framework fails to support growth-enhancing public investment while inadequately restraining debt accumulation. Frequent changes to fiscal rules, their short horizon and incentives that prioritise current spending over long-term investment have undermined economic stability and productivity growth. We propose a reformed framework centred on clear fiscal objectives, enhanced OBR analysis of long-run sustainability and a target for the primary surplus consistent with maintaining stable debt. A supplementary investment rule would ensure adequate public capital formation. Together, these reforms aim to raise productivity, support resilience and improve living standards.

Keywords: Fiscal policy; Fiscal framework; Fiscal rules; Debt sustainability; Public investment

JEL classification: E61; E62; H54; H63

1. Introduction

The overriding objective of fiscal policy is to improve the conditions for stronger economic growth, increases in productivity and higher living standards while ensuring the provision of public goods. More widely, the role of economic policy is also to absorb shocks and reduce uncertainty, providing a safety net for the poorest members of society. That, in turn, requires clear guiding principles, a comprehensive and credible policy programme as well as a set of independent institutions such as the Office for Budget Responsibility (OBR) and parliamentary select committees that can scrutinise policies and hold decision-makers to account for their choices.

At the same time, the government—like any private-sector individual or firm—faces a budget constraint: government debt cannot keep rising forever as eventually lenders (i.e., the financial markets) will only lend at increasingly high interest rates and, in the limit, will not lend at all. Indeed, with UK government debt currently standing at around 100 per cent of GDP, UK bond yields have already risen above the rates suggested by models based on past yields (Davies and McEvoy, in this volume) and by the end of 2025 were the highest in the G7. It is important that a country's fiscal framework encourages governments to reduce debt when they are not faced with large negative shocks so that they will then be able to increase borrowing when they need to act to absorb such shocks.

In its current configuration, the UK fiscal framework fails to encourage an emphasis on growth-enhancing public investment while also failing to put the brake on the accumulation of government debt. In particular, the fiscal rules that were revised at the time of the 2024 Autumn Budget only require debt to fall in the fifth year of the forecast, which allows debt to rise over years one to four and finish at the end of year five at a higher level than it started. At the same time, the rule continues to constrain public investment on which growth, productivity and living standards depend (Caswell, 2024; Chadha, 2024b; Millard, 2024) since at the point governments act to rein in spending to hit their target for government

debt, they find it politically easier to postpone or cut investment projects (e.g., a new motorway) rather than to cut current spending (e.g., on healthcare). And, given the fiscal rules are limited to a 5-year horizon, they will not consider the positive longer-term effects on GDP and welfare of public investment in, for example, infrastructure projects.

In practice, the fiscal rules as operated in the United Kingdom have reduced the ability of government to absorb negative economic shocks such as weaker-than-expected economic growth without having to raise tax or cut spending.¹ To illustrate, the Chancellor decided to leave herself with ‘fiscal space’ of only £9.9 billion both at the time of the 2024 Autumn Budget and the 2025 Spring Statement. In each case, this headroom was quickly wiped out by a combination of slower-than-expected growth and lower-than-anticipated tax receipts.

Worse still, this approach of leaving little fiscal headroom has exacerbated uncertainty as a result of the endless speculation between fiscal events around which taxes might rise, or which component of public expenditure might fall. This tends to bring about economic damage for businesses and households as well as political damage to the government’s credibility.

The question for this article is can we design a fiscal framework that will support public investment while still ensuring that the government takes seriously the need to reduce debt.

2. Fiscal rules

Since the 2008-09 financial crisis and its aftermath, the UK fiscal framework has consisted of a set of ‘fiscal rules’—set by the government itself—which underpin the government’s choices over tax, spending and borrowing, with the independent OBR assessing the government’s adherence to these rules. As we said earlier, the fundamental idea of such rules is to ensure that the government acts to reduce public-sector debt when they are not faced with large negative shocks so that they will then be able to increase borrowing when they need to act to absorb such shocks.

In 2010, the fiscal rules stipulated that the deficit to GDP ratio should be falling in every year over the 5-year forecast horizon and that it should have fallen to half of its level by the third year, and that the debt to GDP ratio should be falling by the fifth year. Over the past 15 years, the rules have changed eight times, reflecting how difficult successive governments have found it to adhere to the rules (Chadha *et al.*, 2021; Hourston *et al.*, 2024). In the Budget on 30 October 2024, the Chancellor introduced two fiscal rules: the ‘stability rule’ stipulates that the current budget should be balanced or in surplus by the fifth year of the forecast period, while the ‘investment rule’ stipulates that public debt, as measured by public sector net financial liabilities (PSNFL), should be falling as a share of GDP by the fifth year of the forecast period. We can note that neither of these rules mentions public investment, though the ‘stability’ rule means that net increases in public investment do not require an automatic increase in taxes, since they do not worsen the current budget deficit. Indeed, the increase in public investment announced in the October 2024 budget suggests that moving to a current budget balance was partly to enable this increase to happen.

But there are problems associated with the way UK fiscal rules have been announced and applied. First, the rules are based on a forecast of what will happen over the next 5 years. This makes them subject to electoral calculations or assumptions about the business cycle. Amid both domestic and international uncertainty (Kay and King, 2020), these assumptions determine to a significant extent what policy-makers think the underlying fiscal position might be. Beyond that, it also means that the government can promise ‘Augustinian’ fiscal policy: ‘we will bring the debt down, but not yet.’ Often, the fiscal rules have been met via promised reductions in spending and/or increases in taxes in years four and five of the forecast that are simply not credible. Second, the fiscal rules have not created an incentive for public investment. Indeed, successive governments have tended to postpone or reduce public investment projects rather than cut current spending to meet the budget deficit or public debt targets, given that it is politically easier to do this. The current rules still fail to incentivise public investment since boosting

¹That said, the fiscal rules can be suspended if the OBR ‘declared the UK was in an economic crisis’.

public investment—e.g., on infrastructure—will add to government debt (and PSNFL) immediately but will not increase GDP for a few years. Even though the OBR now includes the positive effects of public investment on GDP in its projections, it is still the case that the current PSNFL rule will not incentivise any investment project taking longer than 5 years to generate higher GDP. Third, the fiscal rules have reduced the fiscal policy debate to speculations about the size of the government’s ‘fiscal space’, rather than whether the government is achieving its objectives or, indeed, whether the public finances are in a sustainable position. In turn, this has diverted attention from a frank assessment of the failures of policymaking, including a persistent structural deficit and deep disparities of wealth, health and living standards (Pabst, 2025).

We would argue that the UK fiscal rules are arbitrary, have not led to a reduction in debt and have not supported growth-enhancing public investment for four closely connected reasons. First, policymakers have tended to ‘move the goalposts’: since 1997, the fiscal rules have changed frequently, with the changes often coinciding with the prospect of missing targets. Chadha (2024a), for example, has argued, fiscal rules are ‘more honor’d in the breach than the observance’. Second, there has been an endless churn of both rules and policy. Since 2010, there have been eight different sets of fiscal rules and as many, if not more, ‘growth plans’ (Hourston *et al.*, 2024; Millard, 2025). Arguably, successive governments have fiddled with both rules and policy (Pabst and Westwood, 2021). Third, governments keep on making non-credible promises: the 5-year horizon of the UK fiscal rules means that governments can claim to meet targets via unrealistic tax and spending plans in years three to five. During the 2024 General Election campaign, none of the major political parties was transparent with voters or the markets about how it would combine the fiscal rules with tax and spending plans while also generating economic growth (Caswell, 2024). And fourth, the fiscal rules as they stand are ‘gods rather than guides’: from 2026 to 2027 onwards, the fiscal rules will bind in the third year of the forecast rather than the fifth year, further constraining the government’s scope for public investment, especially in the case of adverse conditions linked to domestic or international shocks.

The problem with a rule based on a short horizon is the lag between the decision to undertake a public investment project and the project generating a positive impact on economic growth. Ghaw *et al.* (2024) identify three types of lags: (i) between announcing a project and ‘spades in the ground’ when public money is finally spent; (ii) between launching and completing a public investment project; (iii) between investment project completion and the full impact on GDP. According to Ghaw *et al.* (2024), 20 per cent of spending on a public investment project has a positive productive impact in the first year after the start of the project, but the full effect usually takes 10 years. In this way, the current PSNFL rule has the effect of disincentivising investment projects whose time horizon to generate higher economic output exceeds 5 years (Millard, 2025).

Lower levels of public investment compared with other advanced economies have been one of the factors driving slow economic growth and flatlining productivity since the 2008 financial crisis (Carreras *et al.*, 2016; Chadha and Samiri, 2022; Pain *et al.*, 2018). Public investment, particularly public R&D but also infrastructure investment, can generate positive spillovers into the private sector, i.e., ‘crowding-in’ effects. In other words, there is significant potential for increased returns to business investment derived from the public provision of productivity-enhancing projects such as infrastructure, as well as from the government’s proposed planning reforms (Ghaw *et al.*, 2024).

3. Reforming the UK fiscal framework

An overhaul of the fiscal framework should start with a clear definition of objectives, which helps to determine the choice of the right instruments to pursue the goals.

The main objectives of fiscal policy are at least fourfold:

- Raising living standards through ensuring economic growth.
- Providing essential public services and infrastructure—i.e., public goods.

- Helping the economy absorb economic shocks.
- Reducing inequality.

But these objectives can only be met if the public finances are sustainable. That is, the public debt to GDP ratio is constant or falling in the long run.

To reduce the uncertainty created by an overemphasis on the fiscal rules, and to shift the emphasis towards the objectives of fiscal policy, we have long argued that the government commits to holding only one fiscal event annually i.e., a Budget held on a fixed date (e.g., the fourth Wednesday in October) and it is good to see that the UK government has now done this (though they did not fix the date of their November 2025 budget well in advance, which only added to the uncertainty surrounding this). It is important that the budget is accompanied by an OBR forecast, which we would expect to show that the public finances are sustainable in a way we will define later in this piece. The Chancellor would announce a set of policies specifically aimed at the objectives listed above, making use of all the available instruments. These instruments would include, among others, supporting the development of the supply side of the economy through public investment and other policy tools (e.g., skills formation, regional capital markets, industrial policy), crowding in private investment through targeted public investment projects (e.g., industry and energy policy) and improving the efficiency of the tax and benefit system (e.g., by switching from Council Tax to a Land Value Tax). Finally, the Budget would include an assessment of national progress and how changes to tax, spending and debt will help the country achieve higher welfare.

Between budgets (e.g., in April of each year), we would suggest that the Chancellor provide a ‘State of the Economy’ Speech instead of a quasi-second fiscal event, as with the Spring Statement (Chadha *et al.*, 2021, 2024). This speech would inject more accountability and transparency into UK fiscal policy by relating it to the economic and social performance of the United Kingdom, including the effectiveness of policy measures in meeting objectives. It would also be accompanied by an OBR forecast that concentrated on long-run fiscal sustainability and the risks to that. To summarise, the ‘State of the Economy’ speech would offer an annual official analysis of the UK economy that provides a reference point for policymakers and the public in their understanding of key economic choices.

Our second proposal concerns the OBR forecast and analysis. Currently, the OBR is charged with forecasting the evolution of public-sector debt (more specifically, public-sector net financial liabilities) and deficits over the next 5 years and then evaluating the likelihood of the government adhering to its (arbitrary) fiscal rules. We believe that the OBR should not only provide this overview of the likely evolution of the government’s balance sheet in the medium run but should also provide an assessment of whether the balance sheet is sustainable. Indeed, the Budget Responsibility and National Audit Act (HMG, 2011) makes this role the overarching duty of the OBR.

When thinking about long-run fiscal sustainability, the obvious place to start is the government’s budget constraint. The evolution of public-sector net debt is given by:

$$B_t = (1 + i_{t-1})B_{t-1} + G_t - T_t \quad (1)$$

where B denotes government debt (in nominal terms), i denotes the effective interest rate on government debt, G denotes (nominal) government spending and T denotes (nominal) tax revenue. The primary surplus is defined as $T - G$.

We can rewrite equation (1) by dividing both sides by nominal GDP (equal to the GDP deflator denoted by P times real GDP, denoted by y) to obtain an equation for the evolution of the debt to GDP ratio:

$$\frac{B_t}{P_t y_t} = (1 + i_{t-1}) \frac{B_{t-1}}{P_{t-1} y_{t-1}} - \frac{P_{t-1} y_{t-1}}{P_t y_t} - \frac{\text{Primary Surplus}}{P_t y_t} \quad (2)$$

For the debt to GDP ratio to remain constant, we need:

$$\frac{\text{Primary Surplus}}{P_y} = \frac{B}{P_y} \left(\frac{1+r}{1+g} - 1 \right) \quad (3)$$

where $\frac{B}{P_y}$ denotes the steady-state debt to GDP ratio, r denotes the steady-state real interest rate (equal to the steady-state nominal interest rate less the steady-state rate of inflation) and g denotes the steady-state growth rate of GDP. This familiar equation states that if the real rate of interest is greater than the GDP growth rate then the government needs to run primary surpluses if public-sector debt is not going to get out of control.

The analysis above points to a way for the OBR to assess the long-run sustainability of public finances. Given the current debt-to-GDP ratio, and assumptions about the steady-state real rate of interest and growth rate of GDP, the OBR could use equation (3) to calculate the minimum primary surplus that the government needs to run for public debt not to increase. A more detailed approach might be to forecast all the components of equation (1) out for 5 years, say, fix the debt to GDP ratio at that level and interest rates and GDP growth at their assumed steady-state rates, and then use equation (3) to calculate the primary surplus that the government will need to be running from that point onwards. Either way, the OBR will want to consider different scenarios based on different assumptions about the paths of the real interest rate and the GDP growth rate. The OBR can then publish its findings in its *Financial Risks and Sustainability Report*, as it does currently.

Given the OBR's estimate of the primary surplus that it needs to run to ensure fiscal sustainability, the government will need to make sure that it is raising sufficient tax revenue to cover its spending. At the budget, the Chancellor could first lay out their spending plans based on the policies they needed to enact to achieve the objectives discussed above. They could then go on to discuss how much tax revenue was needed to achieve the primary surplus suggested by the OBR's analysis and how, specifically, they would raise this revenue. We would, of course, argue that this should be done in the most efficient—that is, least economically distortionary—way, though the government will likely also want to use the tax system to achieve some of its objectives, e.g., reducing inequality. As such, our proposal for the fiscal framework stops short of imposing the use of specific taxes to achieve fiscal sustainability; rather, our proposal is simply that fiscal sustainability is ensured through running large enough primary surpluses.

4. What about public investment?

One problem with this approach is that, in specifying a particular path for primary surpluses, we run the risk of discouraging public investment. As we said earlier, successive governments have tended to postpone or reduce public investment projects rather than current spending to meet budget deficit targets, given it is politically easier to postpone or cut investment projects (e.g., a new motorway) rather than to cut current spending (e.g., on healthcare). One way we could encourage public investment is to ensure that the OBR accounts for how public investment in physical and human capital affects the growth rate of GDP over the longer run (i.e., beyond the 5-year horizon of the current OBR forecast). This matters for the level of primary surpluses the government needs to be running for the public finances to be sustainable.

But this reform, on its own, might still not encourage sufficient public investment, given the externality generated by public investment that leads to higher GDP. So, we would propose the government set itself a 'supplementary investment' rule that specified a minimum level for the public investment to GDP ratio. This is analogous to the case of a positive private-sector externality, where the government would want to subsidise an increase in whatever was giving the positive externality.

Again, this minimum level of public investment could be based on OBR analysis. Suppose GDP is generated by the aggregate production function:

$$y_t = A_t k_{G,t-1}^\theta k_{B,t-1}^\alpha h_t^{1-\alpha} \quad (4)$$

where k_G denotes (end-of-period) public capital, k_B denotes (end-of-period) business capital, h denotes employment, A denotes total factor productivity and θ measures the size of the externalities generated by public investment. The social optimum for public investment would be the point at which the real cost of government borrowing (steady-state real interest rate, r) was equal to the marginal product of public capital, $\frac{\theta(1+g)y}{k_G}$. That is, the government should invest to the point where the ratio of public capital to GDP equals $\frac{\theta(1+g)}{r}$. Given the lack of incentive for public investment within the current fiscal rules, together with the currently high level of public debt, reducing the ability of the government to increase spending on public investment, it is likely that the current level of public investment is less than this.

The OBR could consider different long-run scenarios based on different assumptions about the paths of the public investment to GDP ratio, the real interest rate and technological progress and present this analysis as part of its annual *Fiscal Risks and Sustainability Report*. This would help the government assess whether the public capital stock was too low or too high, relative to where it needs to be. The government could then propose and follow a rule for a minimum level of public investment as a percentage of GDP over its term of office to get the public capital stock in the right place.

5. Avoiding pro-cyclicality in fiscal policy

One problem we have not addressed in our reforms is that, if the government religiously follows a path for its primary surpluses, the result could be pro-cyclical fiscal policy. Suppose the economy were hit by a shock that led to a reduction in activity. Tax revenues would fall as a result. So, to achieve a given primary surplus, the government would then have to cut government spending, potentially worsening the impact of the negative shock. Similarly, if the economy were hit by a shock that led to an increase in activity, tax revenues would rise and, to achieve the same primary surplus, so would government spending, again amplifying the effect of the shock.

To avoid this issue, we would suggest that, at the beginning of its time in office, the government commit itself to a path for government consumption spending that, based on the OBR's medium-run economic forecast and a set of tax rates that would apply throughout the parliament, would lead to the desired path for primary surpluses. If the economy were then hit by a negative shock, tax revenue would fall, but government spending, importantly including spending on public investment, would hold up; the government would increase borrowing to inject money into the economy at a time when it was needed. Similarly, if the economy were then hit by a positive demand shock, tax revenue would rise but government spending would not rise with it; this would act to push down on demand at a time when this was the right policy to pursue.

The path for government consumption expenditure to which the government committed would make sure that fiscal sustainability does not go way off track, while fiscal policy would still act countercyclically, i.e., in such a way as to stabilise the economy. At the same time, as discussed in [Section 4](#), the government would commit to the path for public investment laid out by the OBR, which would ensure that public investment was not cut to allow for additional government consumption or to make way for existing government consumption that would otherwise need to be cut.

6. Conclusion

In this paper, we have discussed why the current UK fiscal framework acts to discourage the public investment that is needed if the UK economy is to improve its poor productivity performance of recent years. In particular, the fiscal rules—which form the underlying basis of the current framework—require

the ratio of Public-Sector Net Financial Liabilities to GDP to be falling by the end of the current parliament, long before productive public investment (e.g., in infrastructure) would result in higher GDP.

We then go on to propose a new fiscal framework, where the emphasis would be on the objectives of fiscal policy—raising living standards and providing public goods—rather than on arbitrary rules. This framework would be based around three major reforms: committing to only one fiscal event a year, with a ‘state of the economy’ address providing an update of how policy is performing against its objectives; a target for the primary budget surplus that would ensure ‘public-sector net worth’ was rising over time (i.e., debt was falling), together with a supplementary investment rule specifying a minimum ratio of public investment to GDP, both achieved via a fixed path for government consumption spending; and a reemphasis of the analysis in the OBR’s ‘Fiscal Risks and Sustainability’ report, including scenarios, when thinking about the sustainability of public finances rather than emphasizing a 5-year-ahead forecast. We believe such a framework would encourage the government to carry out the public investment needed to raise the growth rate of UK productivity and, hence, living standards in the United Kingdom.

Acknowledgements. The authors would like to thank David Aikman and other NIESR colleagues, as well as participants at the NIESR workshop on ‘Fiscal Frameworks and Public Investment’ held on 14 March, 2025, for useful comments. That said the views expressed in the paper remain those of the authors.

References

- Carreras, O., Liadze, I., Kirby, S. and Piggott, R. (2016), ‘Quantifying Fiscal Multipliers’, National Institute of Economic and Social Research Discussion Paper, 469.
- Caswell, B. (2024), ‘It’s Time to Rewrite the UK’s Fiscal Rules’, *Comment Central*, 27 June, <https://commentcentral.co.uk/its-time-to-rewrite-the-uks-fiscal-rules>
- Chadha, J.S. (2024a), ‘A Consideration of Fiscal Targetry: A Note to HMT in Advance of the Budget’, 7 October, <https://niesr.ac.uk/wp-content/uploads/2024/10/Fiscal-Targetry.pdf>
- Chadha, J.S. (2024b), ‘Fiscal Rules: What Value if they Change Whenever Politically Convenient?’, *Economics Observatory*, 24 October, <https://www.economicsobservatory.com/fiscal-rules-what-value-if-they-change-when-ever-politically-convenient>
- Chadha, J.S., Küçüçük, H. and Pabst, A. (2021), *Designing a New Fiscal Framework: Understanding and Confronting Uncertainty*, NIESR Occasional Paper LXI, <https://www.niesr.ac.uk/wp-content/uploads/2021/10/Designing-a-New-Fiscal-Framework-Full-Report-4.pdf>
- Chadha, J.S., Millard, S.M. and Pabst, A. (2024), ‘Proposal: The State of the Nation’s Economy – An Annual Address by the Chancellor’, 25 October, <https://niesr.ac.uk/wp-content/uploads/2024/10/NIESR-Proposal-The-State-of-the-Nations-Economy.pdf>
- Chadha, J.S. and Samiri, I. (2022), *Macroeconomic Perspectives on Productivity*, TPI Working Paper 030, <https://www.productivity.ac.uk/wp-content/uploads/2022/12/WP030-Macroeconomic-Perspectives-FINAL-131222.pdf>
- Ghaw, R., Obeng-Osei, R., Suresh, N. and Wickstead, T. (2024), ‘Public Investment and Potential Output’, Office for Budget Responsibility Discussion Paper, 5.
- Hourston, P., Pope, O. and Sangha, S. (2024), *Fiscal Rules in the UK Since 1997*. Institute for Government, <https://www.instituteforgovernment.org.uk/explainer/fiscal-rules-history>
- Kay, J. and King, M. (2020), *Radical Uncertainty: Decision-Making for an Unknowable Future*, Vol. 2020, Boston: Little, Brown.
- Millard, S. (2024), ‘It’s Time for the OBR to Look Beyond the Fiscal Rules’, *The Times*, 26 August, <https://www.thetimes.com/business-money/economics/article/its-time-for-the-obr-to-look-beyond-the-fiscal-rules-8Zztspjpr>
- Millard, S. (2025), ‘Reforming the UK Fiscal Framework and Boosting Public Investment’, in van Ark, B., Millard, S., Pabst, A. and Westwood, A. (eds.) *Joining Up Pro-Productivity Policies in the UK*, NIESR Occasional Paper LXV, ch. 1, pp. 1–9.
- Pabst, A. (2025), ‘Raising Regional Productivity’, in van Ark, B., Millard, S., Pabst, A. and Westwood, A. (eds.) *Joining Up Pro-Productivity Policies in the UK*, NIESR Occasional Paper LXV, ch. 6, pp. 63–75.
- Pabst, A. and Westwood, A. (2021), *The Politics of Productivity: Institutions, Governance and Policy*, Working Paper No. 015, The Productivity Institute, <https://www.productivity.ac.uk/wp-content/uploads/2021/12/WP015-Politics-of-Productivity-FINAL-131221.pdf>
- Pain, N., Rusticelli, E., Salins, V. and Turner, D. (2018), ‘A model-Based Analysis of the Effect of Increased Public Investment’, *National Institute Economic Review*, 244, pp. R15–R20.