

The Missing Link: Modelling Potential Output at the OBR¹

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Summary

- Since 2010 the Office for Budget Responsibility (OBR), along with most other forecasters, has been consistently optimistic about the supply side of the economy, specifically with persistent overpredictions in the scale of productivity improvements.²
- These errors were largely driven by the statistical quirk of expecting a return to the mean rate of growth, rather than a structural analysis of emerging productivity trends.
- These forecast errors have contributed to misses in the fiscal targets, with debt-GDP not falling in line with plans, and to some loss of credibility in the fiscal framework.
- It has also introduced a deflationary bias in fiscal policy, as successive Chancellors have then tried to tighten fiscal policy in order to hit a(n arbitrary) target for lower Debt-GDP.
- Tightening has tended to focus on public investment, where net fixed capital formation has averaged some 1% of GDP (this century) and infrastructure, which ironically would do most to raise productivity.³
- I suggest that public investment is excluded from the calculations on the accrual of Debt to GDP, perhaps in conjunction with a more considered analysis of the whole of the government balance sheet in terms of liabilities and assets.
- And that the OBR adopts a practice by which public expenditure can more clearly impact structurally on the supply side of the economy over a longer policy horizon and support fiscal sustainability, which may require reform of the existing legislation.

¹ I am grateful for comments and conversations with Bart van Ark, Charlie Bean, Willem Buiter, Neil Lakeland, David Miles, Stephen Millard, Adrian Pabst, Issam Samiri, Tony Venables and Simon Wren-Lewis. Any views expressed are mine alone, as are any remaining errors.

² Office for Budget Responsibility, Forecast evaluation report – January 2023, <https://obr.uk/forecast-evaluation-reports/>.

³ See Office for Budget Responsibility, Economic and fiscal outlook – March 2020. <https://obr.uk/box/public-sector-net-investment/>.

Outline

This note outlines the missing link in macroeconomic analysis of fiscal policy. While the Office for Budget Responsibility's (OBR) remit does allow it to judge whether the effects of fiscal (or other economic policies) on potential output are material, such judgements will matter little for the horizon over which it is being asked to assess whether the government will meet its fiscal rules. Even if there is a material permanent increase in public investment, for example, as in the 2020 March Budget with a commitment to step from 2% of GDP to 3% of GDP, it takes a long time before it cumulates to a sufficient impact on the stock of public capital and on potential output to make a significant difference to the fiscal denominator. The absence of such a link is a clear example of **short-termism** in policy making as the fiscal rules effectively give no credit for the beneficial effects from today's policies that will be manifested primarily beyond a 5-year horizon. There is therefore a danger that any Chancellor will have an incentive to scale back on public investment in order to meet a debt target and hence ultimately undermine growth. It is therefore of some interest to gauge the magnitude of the impact of the effect, if any, since the OBR was established in 2010.

The OBR's role

I will not rehearse here the reasons why we have an OBR. After the events of last Autumn that is self-evident.⁴ And NIESR is in full support of the OBR as an independent body charged with assessing fiscal policy. What I would question seriously is the modelling approach, which to an extent is constrained by their remit.⁵ The OBR rather must assess whether the medium outlook for public debt, given fiscal policy as stated at a "fiscal event", is on a sustainable path given projections of tax receipts, debt financing costs and likely size of the tax base. That the OBR's forecast also has a shorter run objective as it provides the basis for the Chancellor's judgement as to what fiscal impulse is appropriate at a fiscal event given the expected path for the economy and the public finances, as well as the risks around them, is important but, in my view, secondary to medium- and longer-term issues. As a by-the-by, those fiscal events should be set on a fixed a long-term timetable, such as one followed by the MPC, which would allow for a more thorough deployment of scarce resources at OBR and other independent bodies focussed on the scrutiny of economic policy.

The key horizon here is "medium-term". We need to focus very carefully on that when we read of any projected changes in the current prospects for growth this calendar year alone. The

⁴ See my letter to the Treasury Committee, dated 27 September 2022, <https://www.niesr.ac.uk/publications/monetary-and-fiscal-co-ordination-part-ii-letter-treasury-select-committee?type=letters-written-submissions>

⁵ The OBR's fundamental *raison d'être* is neither to provide short term good or bad news on the economy; for over 60 years that has been NIESR's responsibility, and we relish our role as a critical friend to Government and Opposition alike.

current fiscal rule, and there have been many, sets the following targets for debt and for deficits:

“Government debt is, broadly speaking, the stock of government’s past borrowing. The target for government debt is for debt to be falling, as a % of GDP, by the fifth year of the OBR’s forecast. The target focuses on public sector net debt excluding the Bank of England, which is usually described as the government’s underlying debt. If the Government wants to spend more than it raises from taxes and other sources of income, it borrows. The borrowing target is for government borrowing to not exceed 3% of GDP by the fifth year of the forecast period.”⁶

The Target

Because the OBR's short-term forecasts are also inputs into the Chancellor’s fiscal decision making, the OBR may need to form a judgement on current spare capacity, as that is one element in deciding how much room to grow there is up to the medium term forecast horizon. But conceptually the medium-term target means that short run news should essentially wash out of the forecast horizon. Most any shock that has led to a revision in the fiscal policy path would therefore have largely dissipated after 20 quarters and so there is much less need for the OBR to allocate its time to nowcast, that is to spend time analysing higher frequency events, as there is for the MPC at the Bank of England. Indeed, in any short run assessment, the OBR would do well to co-ordinate with the Bank of England and the MPC more transparently.

This is an important distinction, while the Bank of England is concerned more with short run demand management in which case the view on the current economic speed limits (however uncertain) may matter significantly for the setting of policy rates which are concerned with demand nudging over supply. To that extent the revision down of capacity or potential growth by the MPC in February is instrumental.⁷ The Bank revised down its estimate of potential supply growth in the medium term to around 0.7% pa down from 2.7% pa in the Long Expansion of 1992-2007. And this estimate of capacity places a constraint on demand growth as it seeks to in order to meet the inflation target.⁸

⁶ House of Commons Library, The UK’s fiscal targets, Research Briefing, 16 February 2023. Accessed from: <https://researchbriefings.files.parliament.uk/documents/CBP-9329/CBP-9329.pdf>.

⁷ The Bank of England, Monetary Policy Report, February 2023, Monetary Policy Report, see Table 3A. <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2023/february/monetary-policy-report-february-2023.pdf?la=en&hash=3287B2776224357589E44744759EC62351A3DCE4>.

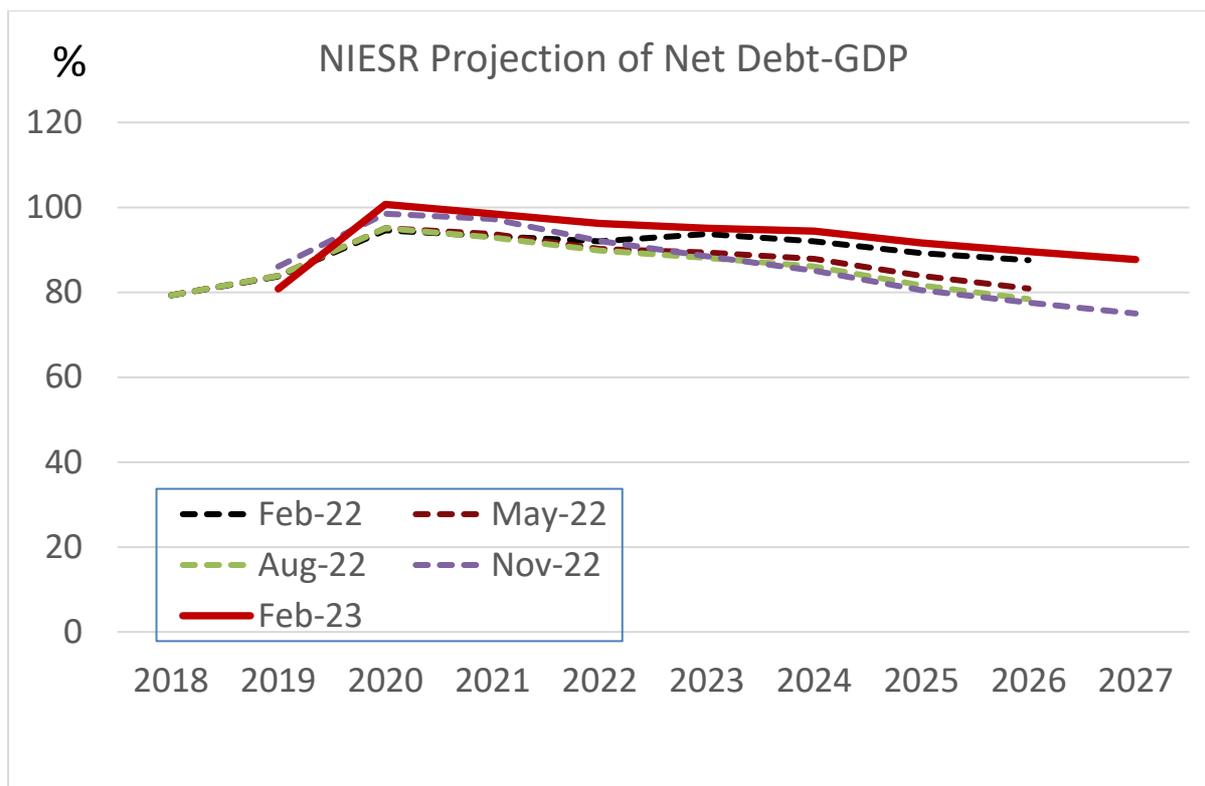
⁸ Chadha, J., A. Crystal, J. Pearlman, P. Smith, S. Wright (Eds.). (2016). “The UK Economy in the Long Expansion and its Aftermath” Cambridge: Cambridge University Press.

The view of 0.7% per annum growth in potential growth comprised 0.1-0.2% pa in labour supply growth and around 0.5-0.6% pa productivity growth. But these are basically recent historical averages. The National Institute's NiGEM maintains a "trend growth rate" of 1.4-1.6% pa but we see little prospect of the economy reaching that trend this side of an election, on current policies. But then critically it is quite possible to ask which set of policies might help us move closer to that trend. The OBR is neither mandated to ask that question nor whether policy designed on that basis would be better for British households than simply whether debt is projected to fall relative to national income. Some attention to investigating the merit of alternative policies that might produce better outcomes and the presentation of those to the Chancellor or the broader policy-community would be of great normative service.

It turns out that hitting falling debt target in expectation is hardly much of a constraint at all. Over a 5-year horizon we can expect nominal GDP - the denominator in the target - to rise by some 15-20%⁹ which means under the first part of the rule the nominal debt stock can increase by some 15 to 20 minus epsilon over that period and still hit the target.¹⁰ Note that this is in expectation, so any large shock will still allow Debt to GDP to drift up and even accumulate shocks and ratchet up over time. Figure 1 shows both the almost inevitable extent to which Debt to GDP will be forecast to fall and that following the war in Ukraine it has nevertheless ratcheted up, as any exposition of optimal policy would suggest ought to be the case.

⁹ In our pre-Budget analysis, "Challenging Times: The Economy Ahead of the Spring Budget", 9 March 2023, we expected nominal GDP to rise some 25-28% over the five year window because of the 2022 inflation shock, <https://www.niesr.ac.uk/wp-content/uploads/2023/03/Challenging-Times-The-Economy-Ahead-of-the-Spring-Budget.pdf>.

¹⁰ To be clear the (present) fiscal rule says that the Debt to GDP ratio must be falling with greater than 50% probability in the 5th year only. But I take a broader view here.



The second, borrowing target, which is the total deficit to GDP includes interest payments on debt, which look like to hover around 3-5% and so implies that the fiscal path will be looking for a primary balance at the end of five years. Again that is in expectation alone and given the shocks dissipate, it simply says that we return to base.

That primary balance of fiscal policy though is misleading. It does not decompose public expenditure into government consumption or investment. It is rather like treating your monthly savings plans as additional current consumption rather than future consumption. While there is no clean way to allocate all government expenditure into one area or another, the process or allocation could be handed to, for example, the Office for Statistics Regulation or be decided by an independent Commission. There are two problems, a lot of public investment may be worthwhile but may not generate higher future output and taxes and may still need to be scored as consumption and there will be a huge temptation for governments to score as much as it can as investment so we will need an independent arbiter.

The Supply Side

In a valuable and helpful paper published last November,¹¹ the OBR outlined its thinking on how economic policy impacts on demand and potential output. On demand, the paper said:

¹¹ Office for Budget Responsibility, Briefing paper No.8, Forecasting potential output – the supply side of the economy, November 2022, https://obr.uk/docs/dlm_uploads/BriefingPaperNo8.pdf.

“The impact of fiscal policy changes on our forecasts for aggregate demand is determined by fiscal multipliers’ drawn from empirical studies and periodically reviewed against the latest evidence. The scale and timing of these demand multipliers varies by policy instrument, though in all cases the impact tapers to zero by the fifth year of our forecasts as monetary policy is assumed to tighten or loosen to bring actual GDP back in line with potential. So fiscal policy only has a long-run impact on GDP if it affects supply potential.”

This assumption does not allow demand multipliers to affect potential supply. There is a question to be answered and researched as to whether elements of demand such as investment and exports may be exceptionally helpful in understanding future potential supply.¹² While not wishing necessarily to argue that the economy should be run “hot” to generate supply-side improvements, the possibility that demand may sustain supply or at least interact with it is a serious proposition in a constructive manner. While not wishing to advocate a Barber-style “Dash for growth” or the approach adopted by the Mini-Budget, it would be helpful to explore whether demand-side policies can support potential output, for example, the furlough scheme during the Covid crisis was in part a way of limiting the loss of firm-specific human capital.

And when we turn to understanding the direct impact of fiscal policies on potential output, the OBR use a high bar of four criteria: significant, durable, additional and evidence-based. The paper points to four examples of changes in views based on these criteria: the national living wage, the state pension age, departmental capital spending and the post-Brexit migration regime. And there are two issues here to consider. First that the OBR routinely allows short run effects to swamp the long run signal that could be transmitted from supply side policies, “[b]ut more significantly, the net effect of these policies on potential output has been more than offset by a set of wider, and mostly adverse, macroeconomic developments, in particular higher energy prices, interest rates, and inactivity levels, which may or may not ultimately prove lasting – and whose impact could prove larger or smaller than we have assumed (p.23).”

But secondly the maintained multiplier suggests that the elasticity of output to the public sector capital stock is not only low compared to more recent estimates but depends on a cross country survey from 2014.¹³ Many of the published estimates of fiscal multipliers turned out to be too low in the aftermath of the financial crisis, particularly as they did not control for the

¹² See, for example, Benigno, G and L Fornaro (2018), “Stagnation traps”, *Review of Economic Studies*, Volume 85, Issue 3, July 2018, Pages 1425–1470.

¹³ Bom, P., and J. Ligthart, (2014), “What have we learned from three decades of research on the productivity of public capital?”, *Journal of Economic Surveys*, vol 28 issue 5.

constraints that meant monetary policy was bound at the zero lower bound.¹⁴ The OBR perhaps should commission or undertake more up to date work to understand whether countries that have suffered a secular decline in productivity, which have accompanied a fall in capital investment, may have large potential multipliers. But also note that “given the lead time on public investment projects, we assumed that this boost would only be felt beyond our five-year medium term forecast horizon (p.25)”. And so the current treatment of public investment under the remit of the OBR simply does not help meet the policy target, as it increases public debt and deficits and does not lead to higher GDP. And may have actually acted, albeit unintentionally, to support policies that led to underinvestment in the public sector.

Conclusion

Persistent biases in forecasts can lead to persistent errors in policy and instrument choice. One priority for the OBR, if it is to advise Chancellors on more optimal setting of fiscal policy, is to develop a better understanding of the impact of fiscal policy on both demand and supply in the economy. And to publish the impact on both of alternative policy choices. For example, what if fiscal consolidation were effected by corporation tax or income tax, which would not only be better for the debt path but which might help us meet some other policy objective for a reduction in regional income disparity. The legislation for the OBR would have to be expanded or the Treasury encouraged to publish its own counter-factual analysis. Politicians are, of course, responsible for defining the social objective function. But we do not have one. In its absence, if we can all agree that productivity matters, if only for the tax base and the revenues, then why not refocus the efforts to understanding the impact of public and social investment on productivity by linking, for example, the work of the National Infrastructure Commission to the OBR’s analysis and allow us to make better fiscal choices? It seems plausible that the short run biases built into the fiscal framework is not fostering long run growth and national well-being.

¹⁴ Simon Wren-Lewis, (2015), “The Austerity Con”, *The London Review of Books*, Vol. 37 No. 4, 19 February 2015.