NEW ECONOMICS FOUNDATION

FORECASTING A BETTER FUTURE

THE CASE FOR A 'BUCKET APPROACH' TO FISCAL MULTIPLIERS AND MORE

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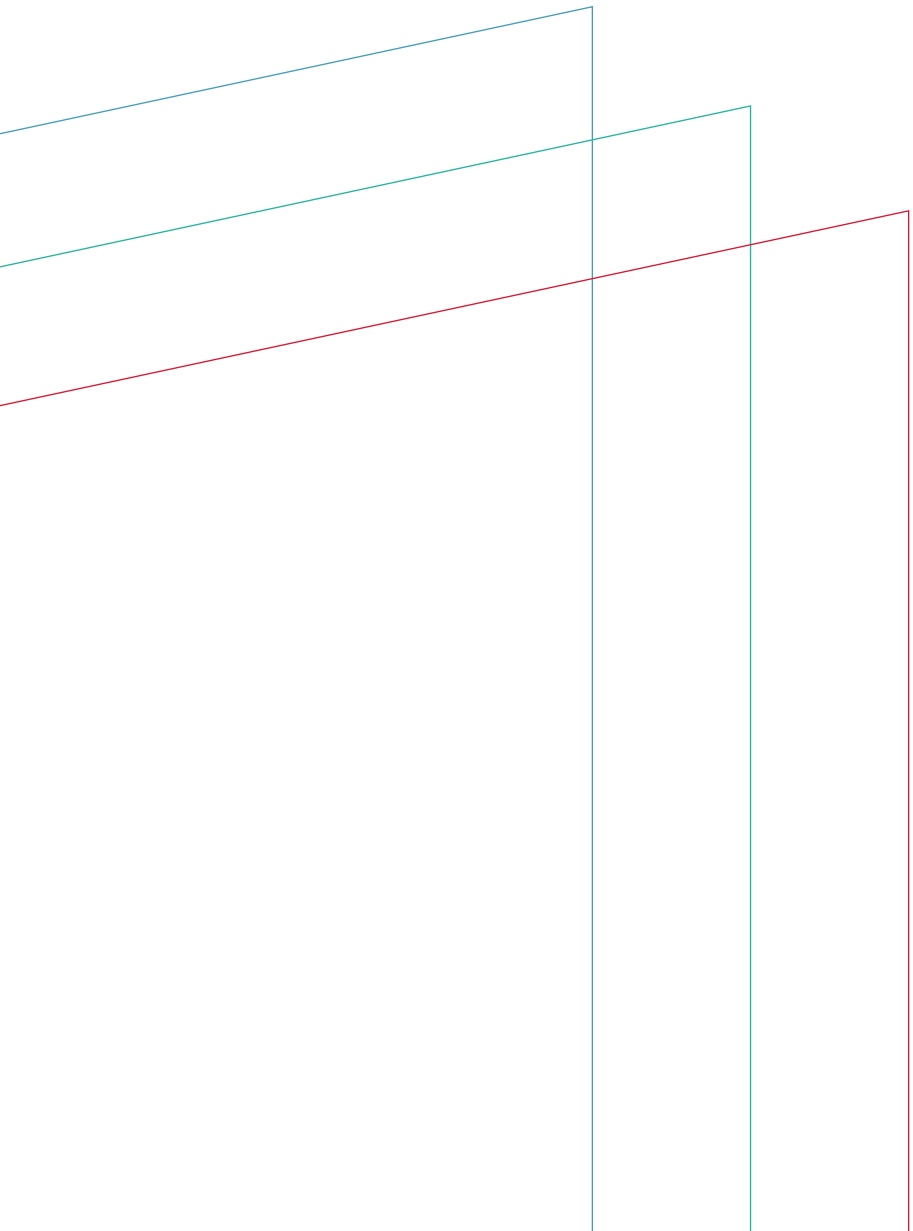

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EXECUTIVE SUMMARY

Fiscal forecasting in the UK currently relies on rigid fiscal multiplier assumptions that constrain effective government policy. Fiscal multipliers, which measure the impact of government spending on gross domestic product (GDP), are central to economic forecasting but are applied too narrowly, limiting the perceived benefits of public investment. This is particularly so in areas essential for long-term growth like public services, green infrastructure, and social equity. This static, one-size-fits-all approach restricts the scope for targeted government intervention, reinforcing a cycle of low investment and low growth while undervaluing policies that address critical structural issues such as climate change, inequality, and economic resilience. The result is a forecasting model that inherently favours fiscal restraint, discouraging investment that could foster a more sustainable and equitable economy.

In this report, we present a brief assessment of the Office for Budget Responsibility's (OBR) analysis of the 2024 Autumn Statement, where significant public investment was projected to yield only a 0.15% GDP growth by 2029–30. Despite the government's planned 2.2% GDP increase in spending, the OBR's assumptions – based on narrow multiplier applications and limited long-term impact – predicted minimal economic gains, emphasising crowding-out effects over potential productivity and demand-side benefits. This conservative approach devalues public spending's potential, limiting the perceived returns on investment even in sectors with high multipliers, such as green technology or social infrastructure. By embedding low multiplier effects in its analysis, the current model prioritises short-term fiscal targets over the longer-term economic and social gains that targeted government spending could achieve.

To address these limitations, the report proposes a new 'bucket approach' to fiscal multipliers, providing a more flexible and context-sensitive model. This method, inspired by International Monetary Fund (IMF) practices, categorises policies based on specific characteristics rather than applying blanket multipliers. Policies are assessed on factors known to influence multiplier effects, including the likelihood of stimulating consumption among those with high marginal propensities to spend, creating demand in industries with significant domestic supply chains, and generating immediate economic activity through direct government expenditure rather than tax cuts. This approach also accounts for policies that could encourage private investment, expand or improve the productive capacity of the economy, and reduce barriers to productivity growth.

Based on these characteristics, policies are grouped into multiplier 'buckets' that correspond to estimated ranges, with adjustments for economic context. For example, high-scoring policies are allocated higher multiplier ranges to reflect the broader, more enduring impacts they are expected to generate. By contrast, policies with lower scores fall into lower multiplier ranges, capturing their limited potential to stimulate the economy. This scoring system captures the varied economic impacts of different types of government spending and allows for a dynamic approach to multipliers, where adjustments can be made based on how current economic conditions are judged, such as the size of the output gap or changes in monetary policy stance. In periods of economic slack, for instance, multiplier effects can be scaled up to reflect the greater potential for government spending to drive growth.

This approach increases transparency by clarifying the basis for each policy's multiplier and ultimately enables more informed public debate. By allowing adjustments to multiplier ranges based on policy characteristics and economic context, we minimise the risk of misrepresenting impacts, reducing reliance on outdated averages that may not capture present realities.

More up-to-date multiplier assumptions will invariably create greater fiscal space, enabling more extensive public investment in vital areas, from public services to green transition initiatives, even within restrictive fiscal rules. Furthermore, this flexibility could encourage replacing fixed fiscal rules with a more holistic system of fiscal referees[1]

whose judgments could usefully discern if the economic effects needed for a policy package to avoid debt sustainability risks were realistic. Moving beyond rigid multipliers, the bucket approach helps align fiscal planning with broader social and environmental goals and acts as a tool to better manage uncertainty, something that a mission-led government needs to consider more seriously.

1. INTRODUCTION

In the next decade, it is critical that governments use economic policy to tackle the many social and environmental crises of our time. Yet a reliance on fiscal rules that limit public borrowing decisions and try to cap government debt is likely holding us back from making progress. Furthermore, the fiscal forecasters who decide if these rules are met operate on outdated assumptions about how government spending impacts the economy – making it impossible to even forecast ourselves out of low growth.

In fact, at her first budget as Chancellor, Rachel Reeves may have already had a taste of this. Despite announcing a package of taxes and £372bn extra spending on public services and investment until 2030 – an increase in spending of 2.2% of gross domestic product (GDP) by 2029–30,[2] the Office for Budget Responsibility (OBR; the UK's fiscal forecaster) only forecast this to increase GDP in 2029–30 by 0.15% compared to if no spending had taken place at all. The OBR assumes the effects of tax measures worth 1.1% of GDP and investment crowding out drag GDP down by 0.26%. This meant that the total effect of government policy by 2029–30 for the economy was to be 0.11% smaller than if no policies were implemented at all.

Such a result isn't necessarily surprising, as we wrote at NEF before the budget.[3] The outdated assumptions the OBR uses necessitated any large increase in spending to only be seen as a temporary sugar rush.[4] Yet, it is worth reflecting that when previous governments announced austerity measures, which Labour's plans do not even fully reverse,[5] the OBR's forecasts were much rosier. Therefore, one must hope the OBR is wrong again and, instead, Labour's investment in our public services will make a material difference to our lives and the economy, making the case for even more spending to finally make austerity a thing of the past.

Since the budget, the OBR's forecasts have caused a stir, with many arguing that it is likely underestimating the growth impact of investment.[6,7] In fact, the problem might be even wider-ranging than what is traditionally considered investment. For example, NEF research has shown how scrapping the two-child limit and benefit cap on welfare payments could lower the cost of child poverty by £3bn a year.[8] Yet if the OBR's standard assumptions are applied then the economic effect of providing support to those in the most acute poverty would be assumed to fade after five years. Saying this, it is important to reflect that economics is not a science, and the OBR's judgment of the economic literature could be entirely different. Yet the OBR does not seem to robustly justify itself and key assumptions are left unexplained and unjustified. Therefore, this report tackles this question: How can forecasters be more transparent in their assumptions and best reflect current evidence?

At the heart of this debate is the fiscal multiplier. That is, how much of an effect a change in government spending (fiscal policy) can have on GDP. The larger the fiscal multiplier, the more government policy affects GDP. This is important because when fiscal forecasters make assumptions about the size and longevity of the fiscal multiplier, they bake in certain outcomes. For example, many governments have fiscal rules that limit their debt-to-GDP ratios. Yet when governments borrow to spend they affect both the level of debt by how much is borrowed and the level of GDP through the multiplier on spending. We calculate that if the OBR used higher multiplier assumptions it would have allowed the chancellor to spend up to £15.6bn more per year without the debt-to-GDP ratio rising.

We must challenge the economic orthodoxies head-on as the assumptions forecasters make may be a fruitful area where small changes can make a big difference. This is especially true at a moment when the economy needs to make unprecedented levels of investment to protect the planet from climate change.[9] At this moment, it feels as if the past will be a particularly bad guide for the future. Yet we don't have to go into this moment completely blind. By learning from the most effective economic policies of the past we can make good guesses of how policy might affect the economy while embracing the fundamental uncertainty at the same time. If the possibility of government spending and investment making a significant difference to the economy is devalued, then it will be harder

for governments to act on ambitions even with democratic mandates. To escape this doom-loop[10] we must find a framework that is flexible enough to see the upsides of government spending and honest enough to see the uncertainty.

To explore whether a better forecasting framework is possible, this report is set out as follows. Chapter 2 looks at the theoretical foundations of multipliers and explores contemporary empirical evidence. Chapter 3 looks at the use of multipliers in practice by different government forecasters. Chapter 4 proposes a bucket approach to multipliers inspired by a method practised by the International Monetary Fund (IMF). Chapter 5 sets out additional ways to improve forecasting frameworks, and Chapter 6 concludes.

2. WHAT ARE FISCAL MULTIPLIERS?

Ideally, governments make spending decisions that improve people's lifelong wellbeing. When governments make spending cuts, they can sacrifice our wellbeing by dismantling safety-nets, reducing the quality of the services we rely on, and jeopardising long-term prosperity by failing to provide the infrastructure and skills needed for the future. Therefore, it begs the question: What is the extent that government spending decisions affect our lives?

There are myriad ways we could measure the impact of government spending, but a good place to start is the work of renowned economists Richard Kahn and John Maynard Keynes in the 1930s.

Kahn sought to quantify the tangible benefits of government investment, building on the long-standing economic observation that investment decisions often directly lead to the creation of new job opportunities, which helps move people onto higher incomes or transition from unemployment to employment.[11] This increase in income can generate secondary indirect effects, as this new spending travels down supply chains, for example, affecting not just the bricklayers but the brickmakers too. Together, these workers spend their newly acquired wages, thereby generating additional income for others who can then spend their own increased earnings inducing effects across the wider economy, potentially creating jobs in areas entirely unrelated to the initial investment. Equally, if investment just causes people to change jobs or people do not spend their new wages then there may be little direct, indirect, or induced effects to be seen. Kahn set out the case that when the economy has sufficient spare capacity, for people to consume more or move into employment, then the number of jobs created by the investment can be greater than the jobs directly employed by the new investment itself.

In turn, Keynes described this as the multiplier effect, capturing the fact investment can multiply through the economy to create an effect larger than what was initially spent.[12] Keynes suggested that the size of this effect would depend on the marginal propensity to consume (MPC), ie how much of their new income people would spend. The higher the MPC, the higher the multiplier. This is the case as the more money people pass on at each stage, the larger the induced effects of the investment are and the larger the total effect will be.

Michał Kalecki, an often-forgotten Polish economist, independently wrote about many of the same ideas as Keynes,[13] with an extra focus on how the distribution of income can affect the MPC. His concern was that an increase in business income (profits) would have a much lower MPC than household income (wages/transfers)[14] – therefore, how a policy affects the distribution of profits and wages can be a key determiner of how large the multiplier effects of a policy are. How different factors affect the size of multipliers is discussed in Section 2.2.

2.1 HOW CAN WE MEASURE MULTIPLIERS?

When Kahn and Keynes talked about investment effects on income, the modern-day concept of gross domestic product (GDP) had yet to be invented.[15] Their analysis simply focused on employment and income outcomes. Kahn's analysis was solely focused on the additional employment generated from an initial public works investment or employment scheme. Keynes developed this further by looking at the effect on total income. Today, multipliers still measure the impact of additional spending on specific metrics – like consumption, household income, employment, or private investment. However, as GDP has risen in significance in economics and policymaking,[16] a shift to measuring the impact of spending on total market output, as GDP tries to measure, has occurred. This has been to the detriment of how household activities, mainly carried out by women, have been valued. Going forward, we will focus on multipliers that look at the response of GDP but note that alternative frameworks are needed to understand the economy holistically and properly value unpaid activities.

Fiscal multipliers are calculated as the difference in GDP caused by a change in policy divided by the cost of this policy. If the government spent £1bn on investment, which led to GDP being £2bn higher than it otherwise would be, then the multiplier would be 2. In this sense, the size of a multiplier can be seen as a measure of bang-for-buck, a multiplier of X means for every £1 you spend the economy is £X larger.

The timeframe a multiplier is measured on matters. For example, the impact of a policy in a year compared to how much was spent is often referred to as an impact multiplier. If £1bn is spent on a policy in 2024, which means 2024 GDP is £1.5bn higher than it otherwise would be, then the impact multiplier is 1.5. Alternatively, if a policy change is permanent, ie a £2bn a year increase in a public service budget, you may calculate the cumulative multiplier – that is the total amount spent over a specific period versus the total amount added to GDP each year because of it. If a policy costs £10bn over five years and after those five years the total difference in GDP each year sums to £12bn then the cumulative multiplier is 1.2. Note that the difference in GDP each year and the cost of policy can vary, allowing for different impact multipliers each year. Sometimes economists may be interested in which year the impact multiplier is at a maximum, called the peak multiplier. Throughout this report, we will specify the type of multiplier we are referring to, as this can change from study to study.

Being able to directly measure how GDP would look if a policy was or wasn't implemented is impossible. We are only able to observe what actually happens. Furthermore, we live in a complex world, such that when a policy is implemented many other factors can influence how it turns out. Therefore, trying to isolate the effect of the policy, especially on such a broad metric as GDP, is very difficult. Economists use many different methods to try to calculate multipliers, all with particular strengths and weaknesses. For example, some methods may take very detailed data to provide good estimates, whereas others may use simpler data but need to make heavy assumptions about the nature of economic relationships to get results. Some estimation techniques may automatically place restrictions on how long multiplier effects can last.[17] Different methods have been found to give different results for the same data and therefore all should be considered, understanding their limitations.[18,19]

There is certainly more to say about how multipliers are estimated[20] but, importantly, acknowledging the weaknesses in multiplier estimation does not mean we should ignore estimates. Instead, it allows us to critically engage with these measures and understand their limitations. Going forward, we focus on significant and repeatable results, trying to give multiple sources for similar claims.

So far, we have spoken of multipliers in terms of policies that increase government spending and therefore have a positive impact on the rest of the economy. However, fiscal multipliers can also be measured in the opposite direction: how decreases in government spending multiply into harmful effects in the wider economy. These multipliers are still positive as the change in government spending and the change in the size of the economy go in the same direction. Such effects are important to understand how austerity/fiscal consolidation causes the economy to contract.

Also, changes in taxes alter how much money the government takes out of the economy and directly affect people's disposable incomes, so tax changes can also be considered to have multiplier effects, despite referring to spending changes thus far.

2.2 WHAT AFFECTS THE SIZE OF MULTIPLIERS?

Given the wide range of ways governments spend their money and the vast possibilities of potential reactions, the possible sizes of multipliers vary. In general, we might assume that multipliers will be higher the more money that is spent domestically. This is sometimes described as there being fewer 'leakages' from the domestic economy via savings, taxes, or spending on imports. Furthermore, as GDP is made up of public and private spending, multiplier effects will be larger when private spending reacts positively to public spending. Lastly, as we are measuring multiplier effects through changes in GDP, policies that focus on boosting economic output will likely have higher multipliers too.

Therefore, different characteristics can be identified that lead to spending with higher multipliers. In turn, these characteristics will help us design a framework that can give a rough idea of the

expected size of the multiplier for any given policy. We now outline properties of policies that have been associated with larger multiplier effects in the literature, giving theoretical explanations of these phenomena. These characteristics are referenced in Chapter 4 where we suggest a new framework to assess multiplier effects.

1. Marginal propensity to consume
The marginal propensity to consume (MPC) defines how much someone will pass on when they receive extra income. Therefore, the higher the MPC, the more income someone will pass on and the higher the multiplier will be. Each time income is passed on, it may be to people with different MPCs, but so long as income is passed on enough that the sum of transactions outstrips the initial increase in income, the multiplier would be above 1. In general, poorer individuals are found to have higher MPCs.[21,22]

Empirical evidence shows that multipliers are higher in economies where a larger proportion of households are liquidity-constrained or live hand-to-mouth, spending all their income as they receive it. For example, across European economies, the average multiplier increases by 20% when a country has 25% more individuals living with liquidity constraints.[23] In Latin American economies, where 60% of households live paycheque-to-paycheque, the multiplier is 0.6 higher than in western economies, where only 23% of households are in such a position.[24]

2. Input-output multipliers
Kalecki speculated that the MPC out-of-profit was lower than the MPC out-of-wages.[25] Therefore, it is important to pay attention to what businesses may receive extra income because of a policy, as some may have higher MPCs than others leading to a higher multiplier. A way to proxy this is by looking at input-output multipliers which measure how interconnected an industry is to the rest of the economy.

Industries that rely heavily on domestic inputs tend to have higher multipliers. Spending in these industries circulates through multiple sectors, leading to greater economic impacts. In contrast, industries with higher import content see more money leak out of the domestic economy, reducing the multiplier effect.

Input-output multipliers can't be used as direct fiscal multipliers as they are calculated in a different way[26] that ignores how the whole economy might respond to such a change, instead focusing on just the specific industry. However, they can be used to suggest spending in certain industries may lead to higher multipliers than others.[27]

For instance, spending in green sectors has been shown to have higher multipliers compared to more carbon-intensive sectors.[28] This reflects Office for National Statistics (ONS) calculations that the crude oil industry, for example, has an input-output multiplier of 1.6, while the electric power generation industry has an input-output multiplier of 3.1.[29]

3. Direct government expenditure (non-tax or transfer)
Government consumption and investment directly stimulate the economy in the first round but increased disposable income from tax and benefit changes do not. Government consumption and investment are directly spent on goods and services, whereas tax and benefit changes will only lead to increased economic activity once the new disposable income is spent and, in some cases, might not be spent but saved instead. Therefore, changes in taxes and benefits are likely to have more leakages from the economy in the form of savings and lags in delayed spending, whereas expenditure and investment are expected to see an immediate impact on the economy.

A meta-analysis of over 1,000 different multiplier estimates[30] shows that government consumption multipliers are generally close to 1, while public investment multipliers are typically higher, around 1.5. By comparison, tax cuts and benefit transfers have lower multipliers, averaging between 0.6 and 0.7.

4. Crowding-in or crowding-out effects
The size of the fiscal multiplier will also be influenced by its effect on private-sector spending. Other than the classic effects of how new spending is passed around the economy, new government spending may also encourage or discourage private spending.

An example of why government spending could discourage private spending is investors may make decisions between investing in government bonds or other private investments, if government borrowing increases (ie more government bonds are issued) then private investment may fall as a result.[31] Furthermore, some suggest that households may expect increased taxes because of increased government borrowing and lower their expenditure as a result.[32,33] These factors are often described as public spending 'crowding out' private spending.

However, there are also reasons private spending may increase in response to increased government spending – called crowding in. Some assume crowding in happens when government expenditure lowers the cost of private consumption or investment,[34,35] or the public sector takes on risks that the private sector is unwilling to,[36,37] ie due to a new technology being unproven. This leads to higher multiplier effects as the initial spending can encourage other spending through a change in the economic environment.

An International Monetary Fund (IMF) study shows that public investment can lead to significant crowding-in effects, especially when it is targeted at infrastructure.[38] In such cases, multipliers can exceed 1.4 in the medium term. A European Central Bank (ECB) study shows that in countries where public debt has high amounts of foreign ownership multiplier effects are larger,[39] likely due to decisions to hold bonds not coming at the cost of private investment but holding other foreign debt making crowding-out effects less likely. Countries with high foreign ownership see multipliers £1–£2 higher for every £1 spent.

5. Changing stock of capital/size of workforce
The size of the capital stock (ie the equipment we use to create goods and services) and the number of people in the workforce also play a significant role in determining multiplier effects. Policies that increase capital (eg through investment into new equipment and technology) or the size of the workforce (eg by encouraging labour market participation) tend to have higher multipliers because they enhance the productive capacity of the economy. A larger pool of capital and labour means the economy can produce more output in response to government spending.

For instance, policies that get people out of long-term unemployment can raise output significantly, especially when focused on equalising opportunities. One study in Europe finds that every extra one percentage point reduction in female long-term unemployment grows the economy by €10 per capita.[40] An IMF study calculates spending on green technology to have a cumulative multiplier of around 1.1–1.5 which does not decrease over five years.[41] Another paper finds heightened effects for green technology calculating a peak multiplier of 4.2.[42]

6. Improvements in the quality of capital or skills of the workforce
Policies that lead to improvements in the quality of capital or skills tend to generate larger multipliers over time. Policies like education, training, and health measures can improve the efficiency of the workforce while investment in new technologies can improve the efficiency of the capital stock. Together this allows for more effective use of resources and higher overall output in response to government spending. This characteristic can be differentiated from quantity changes as it should reflect the composition of the capital stock or workforce. When newer technologies replace old ones and people move into more productive jobs, this doesn't necessarily increase the size of the capital stock or workforce but does improve the quality.

For example, measures that increase education levels tend to have positive effects on growth. Education grant support to low-income students in the USA was found to have a cumulative fiscal multiplier of 2.4 after two years.[43] An extra year of schooling is found to increase lifetime earnings by 9%[44] and closing educational gaps between countries could yield permanently higher GDP by 5% for the countries catching up.[45] Measures that encourage technological innovation have been found to have very high multipliers. Public R&D multipliers are found to be as large as 20; a $1 increase in spending translating to an increase in GDP of $20 after six years. This means a long-term increase in public R&D spending of 1% could permanently increase GDP growth by 0.25%.[46]

7. General productivity enhancements
Policies that lead to greater productivity are not restricted to things that affect the quality of capital or skills of the labour force. Any policies that better enable consumption, production, and connections in the economy to take place can also improve productivity. It may be useful to make separate considerations of public capital/infrastructure in this characteristic because it can often be embedded in other production processes. For example, providing transport, energy, and communication infrastructure can make supply-chain interactions more efficient and provide businesses with more customers. Investments into infrastructure are found to have cumulative multipliers up to 1.4 by the IMF[47] and up to 2 in a study by University College London (UCL) academics.[48]

Furthermore, relieving frictions in the economy that stop people from using their skills in the best way and enabling people to follow their ambitions without barriers can also lead to improved output. For example, closing gender gaps in education and employment in Middle Eastern, North African, and South Asian countries could boost GDP growth by 2% a year.[49] Furthermore, social infrastructure which provides equalising opportunities by employing proportionally more women is calculated to have roughly double the impact on employment than physical infrastructure.[50]

2.3 HOW DOES ECONOMIC CONTEXT AFFECT MULTIPLIERS?

The effectiveness of fiscal multipliers varies depending on the broader economic environment. At the country level, this is well-studied.[51] Trade openness and exchange rate flexibility are both related to lower multipliers as they are often related to a higher prevalence of imports in the national economy, and therefore a larger source of leakages for multiplier effects.

Furthermore, the economic policies a country has in place will affect the size of multipliers too. Countries with stronger automatic stabilisers, policies that lead to increased government spending (or decreased tax collection) in economic downturns and decreased spending (or increased tax collection) in upturns, tend to have weaker multipliers.[52,53] Logically, if a change in government expenditure changes incomes, the automatic stabilisation should dampen the effect. For example, when incomes start to rise (because of an increase in government spending) people will start to pay more tax or lose eligibility for benefits. When incomes start to fall (because of government cuts), people will pay less tax or have their lost income compensated by social security schemes.

Lastly, multiple studies conclude that countries with higher public debt can have lower multipliers.[54,55] However, these studies often include developing countries where borrowing constraints can be much more real with more debt denominated in foreign currencies.[56] In fact, despite the USA having a high level of public debt internationally, the IMF suggests that this sort of finding does not apply,[57] as it is more about the safety of public debt and market reactions to extra borrowing that drive these results. In general, these studies highlight the more markets react to higher government borrowing with higher interest rates the lower multiplier effects will be, as higher interest rates will likely reduce private consumption and investment.

Therefore, while some country-level factors influence multiplier estimates, the studies we reference have mainly drawn on evidence from the UK or comparable economies. This means these factors shouldn't necessarily need to be adjusted for the above results to be interpreted in a UK context. However, we now look at some more time-specific factors that should be adjusted for, for our multiplier estimates to be relevant to the UK economy. This will help inform how we adjust multiplier estimates based on economic context in the new framework we propose in Chapter 4.

Position in the economic cycle
Where an economy is in the economic cycle can significantly affect the size of the multiplier. During recessions, fiscal multipliers tend to be larger because there is more unused capacity in the economy. People are more likely to experience financial constraints meaning they spend more of any additional income, especially in a financial crisis.[58]

According to a meta-analysis of 1,800 multiplier estimates, spending multipliers are typically 0.7 to 0.9 higher during economic downturns compared to normal periods.[59] Other studies show the direction of government spending may matter, with austerity measures much more harmful (and therefore exhibiting higher multipliers) in

downturns than stimulus measures are effective (with multipliers not necessarily changing during recessions).[60] However, this result is contested by a different study suggesting stimulus can have increased multipliers in recessions, but what sort of policy is best depends on whether the downturn is driven by insufficient demand (where transfers are effective) or supply constraints (where tax cuts are more effective).[61]

Responsiveness of monetary policy

Another important factor influencing multipliers is the responsiveness of monetary policy. The impact of fiscal policy on the economy depends on how central banks adjust interest rates in response to changes in government spending. When central banks raise interest rates in response to fiscal expansion, they can offset the stimulus by encouraging a reduction in private consumption and investment. However, when interest rates are at or near the zero lower bound (ZLB), fiscal multipliers tend to be larger because monetary policy is less able to counteract the effects of fiscal expansion. Furthermore, explicit monetary-fiscal coordination means central banks could purposefully not respond to changes in government spending when they believe this is aligned with monetary policy objectives.

In such cases, fiscal policy has a stronger impact on GDP. One study shows under ZLB conditions, cumulative fiscal multipliers can reach up to 1.5 over four years.[62] Another study looking at the monetary policy position in general finds multipliers can be high as 2 when monetary policy is accommodative to the fiscal stance.[63]

2.4 HOW LONG DO MULTIPLIERS LAST?

In general, most modern studies of fiscal multipliers focus on their short-term effects, often limited to a timeframe of less than five years. The common assumption is that fiscal policy impacts GDP in the short run but has no lasting influence on long-term output, even when changes are permanent. This stems from the belief that while government spending can boost demand in the immediate aftermath of its implementation, its effects on output diminish over time. After a period, typically five to ten years, these impacts are assumed to fade as private spending and monetary policy are assumed to respond in such a way that nullifies the impact of additional spending. The prevailing view is that long-term GDP is determined by supply-side factors, such as the amount of labour and capital employed and productivity. We now look at some other factors that can also influence how long multiplier effects last. We use these in Chapter 4 where we suggest a new framework to assess multiplier effects.

Supply-side factors

This idea that only supply-side factors determine GDP in the long term has a strong influence on how long the effects of policies are expected to last. For example, economists often calculate measures of potential output (ie the maximum level of GDP deemed sustainable in the long term) based solely on supply-side factors. From this, output gaps are calculated which show the difference between actual GDP and potential. However, it is important to note that there is little agreement on the size of the output gap,[64] how it is calculated,[65] when it will close,[66] and if the output gap and potential output are coherent measures at all.[67] Therefore, whether a policy is considered to have long-term effects will often depend on whether it is included in calculations of potential output. Despite this, it can still be useful to understand there are a limited number of resources in the economy and the government can only expect to have long-term effects if it stops a long-term underutilisation of resources, can permanently make resources be used more efficiently, or can increase the levels of resources available in the economy.

In this report, we purposely use the term multiplier more generally to cover any change in GDP caused by a change in government expenditure, as this can be measured over any timeline if needed. Therefore, such supply-side factors may still be useful to recognise if a policy may have longer-lasting multipliers. As referenced in Section 2.2, (5)–(7) could be seen as the characteristics of policies that affect the supply side. Therefore, in these cases, policies are often found to have permanent or long-lasting effects: a permanent 1% increase in public R&D expenditure focused on technological improvement could permanently increase GDP by 0.25%[68] while closing educational gaps between countries could yield a permanently higher GDP by 5% for the countries catching up.[69] Public infrastructure sees stable cumulative multipliers of around 2 after six years of implementation.[70]

Persistence of the policy
When a policy isn't deemed to have supply-side effects, how long it has an impact is often assumed to depend on how long the policy is implemented and when the output gap is assumed to close. A temporary change in policy, such as a one-time increase in government spending or a short-term tax cut would often be assumed to only have effects on the policy's implementation. A review of seven macroeconomic models used in western economies[71] suggests that this is how temporary measures are commonly modelled and this does not change for policies with higher multipliers.[72]

The impact of a longer-term or permanent change in policy is often assumed to fade over time – having a zero multiplier when the output gap is closed, often five to ten years after implementation.[73,74] This is because if a policy is not considered to have supply-side effects it will not impact the potential output. As the potential output is seen as the maximum GDP the economy can sustain, it would be assumed monetary policy and prices would adjust such that private-sector spending balances out public spending to meet the potential output by the time the output gap closes. Interestingly, when the output gap closes is often a pre-set feature of a model[75] and therefore isn't usually seen as dependent on fiscal policy decisions, despite recent research suggesting permanently targeting a positive output gap (GDP above potential) could have permanent positive effects.[76,77]

The responsiveness of monetary policy
As explained, how monetary policy reacts is a key to when the output gap is assumed to close. When central banks are accommodative, typically by keeping interest rates low, the positive effects of fiscal expansion can persist for a longer period. Not only does the responsiveness of monetary policy affect the size of multipliers but how quickly or slowly it responds will affect how long multiplier effects last, too. In general, this can be seen as monetary policy limiting or speeding up crowding-out effects; the more responsive monetary policy is to changes in government policy the more it may affect private spending decisions. In both papers referenced in Section 2.2, the higher multipliers associated with accommodative monetary policy last as long as monetary policy stays accommodative.[78,79]

Demand effects and hysteresis
Although not necessarily included in mainstream models, there may be ways to justify policies without direct supply-side effects having more long-term multiplier effects through their effect on demand. For example, even within an output gap framework, one might believe a permanent change in fiscal policy could lead to a long-lasting positive output gap[80] that monetary policy and private activity might not be expected to fully respond to. This at least suggests that the timing of when the output gap closes could be intertwined with fiscal policy decisions.

A useful concept to understand is hysteresis when the economic effects of a policy or a crisis can persist even after that initial policy or crisis is no longer present. For example, unemployment can have hysteresis effects, as the longer someone is unemployed the harder it may be to find a job, among other explanations.[81] This sort of logic can be applied to why the austerity measures implemented in Europe after the 2007–08 global financial crisis seemed to have such long-lasting effects. The unemployment and economic scarring caused by austerity measures had long-lasting effects even after spending cuts were stopped or reversed. In 2012, the IMF said the impact of austerity was underestimated with low multiplier estimates to blame.[82] More recent research has shown that austerity's longevity was underestimated, too, with permanent multipliers around 1.2–1.5[83] and potential output measures being revised down because of it.[84]

Preventive policies, such as investments in climate change mitigation like flood defences, provide another example of how fiscal policy can generate long-term benefits. By averting future crises, these policies prevent future losses in GDP, effectively extending the life of the fiscal multiplier. For example, investments in flood defences can reduce the economic damage caused by natural disasters, leading to higher GDP in the long run. Recent analysis from the USA's Congressional Budget Office suggests for every $1 spent on flood defences, $2–$6 in damages are averted.[85] In this context, the multiplier effect is not just about stimulating demand in the short term, but about preventing future output losses, thereby creating a lasting impact on the economy.

Lastly, demand effects may be productive. It can be hard to neatly separate the effects of supply and demand. Additional demand in the economy increases transactions which can reduce frictions in markets that slow down activity, thus increasing productivity. How long this effect lasts depends on what path the activity would have taken without additional demand. Recent research from the National Bureau of Economic Research (NBER) has shown demand increases (measured by an increase in the time people spend shopping) can lead to higher measured productivity.[86] Moreover, productivity, as it is usually measured, tends to be lower in economic downturns and higher in upturns.[87] Both these results together suggest there is a role for demand management that leads to consistently higher GDP through effects on productivity.

3. HOW DO GOVERNMENTS FORECAST THE IMPACT OF FISCAL POLICY?

When governments make economic policy decisions, they provide forecasts that estimate the costs and benefits of the policy over time. This helps them understand how affordable a policy is and gives people and businesses within the economy confidence in its path. In recent times, growing numbers of governments have tried to use independent forecasters for this job,[88] such that forecasts aren't overly optimistic and marred by political influence. However, this has put the power of forecasting into technocratic hands. The assumptions they have made have excluded certain possibilities, which is arguably just as much of an ideological exercise but one that is protected through a veil of neutrality.[89] This matters, as not only do economic forecasts show the path governments will take, but they also influence the policy choices they make in the first place.

When making policy decisions, politicians will look at forecasts to decide what policies are best and where they want the economy to end up. For example, many of these independent forecasters calculate whether a country will meet its fiscal rules, ie targets of public debt and borrowing levels. If the fiscal rules are binding, policy will be adjusted until these rules can be satisfied; policies with more favourable assumptions around their impact on growth may be easier to adopt within such a self-imposed framework. Therefore, the assumptions forecasters make are an important determiner of not only what forecasts look like but also the policies that get adopted. As we focus on the effects of fiscal policy, the fiscal multiplier will be important. We now go over case studies on how different countries treat changes in fiscal policy in their models.

3.1 CASE STUDIES OF FISCAL FORECASTERS

To showcase the range of assumptions employed by different forecasters, we look at five different case studies from the UK (Office for Budget Responsibility; OBR), Netherlands (Centraal Planbureau; CPB), EU (European Commission; EC), USA (Congressional Budget Office; CBO), and Canada (Office of the Parliamentary Budget Officer; PBO). Here we give an overview of the assumptions about how multipliers are applied, their size, and how long multiplier effects last.

How are multipliers applied?
The OBR, EC, CBO, and PBO all publish tables of the multiplier assumptions they use for policies. In the UK, the OBR's multiplier assumptions only cover four different types of policies: taxes, welfare, public spending, and public investment. This means there is no differentiation between, for example, types of public spending when new policies are announced. In Canada and the EU, the multipliers are applied at a slightly more detailed level. In Canada, the PBO distinguishes housing, infrastructure, and business investment while also looking at the difference between personal and corporate tax measures. The EU provides a level of further detail with additional multipliers for consumption taxes, targeted vs general transfers, and property taxes. Lastly, the USA's CBO provides multiplier estimates bespoke to the policy being analysed. Significantly, the CBO tends to provide ranges for its multiplier estimates to reflect uncertainty over the size of its multiplier estimates.

In contrast, the CPB in the Netherlands does not calculate the direct multiplier effects of policies. Instead, it uses a macroeconomic model that relates economic variables through rules of thumb and empirical observation.[90] However, it does detail the response of gross domestic product (GDP) to changes in certain policies, namely value added tax (VAT), personal taxation, social transfers, and general government consumption. These can be loosely interpreted as multiplier effects assumed within the model.

All the fiscal forecasters seem to have separate capacities to calculate the economic impact of policies with supply-side impacts. At the OBR, this is done on a case-by-case basis when a policy is deemed eligible; it tends to be transparent with what it assumes in its published forecasts.

However, the other fiscal forecasters are less clear on what policies are assumed to have supply-side effects and when policies are selected for bespoke modelling. Because a combination of models can be used in the final published forecast it should be noted that the multiplier effects published in methodologies may not see fruition in published forecasts.

What size are multiplier assumptions?
Multiplier assumptions range greatly in size across the different fiscal forecasters. This reflects the large range of results on multipliers in the empirical literature but also the lack of consensus over their value. EU and US fiscal forecasters seem to make assumptions around multipliers at the higher ends of the literature with the EC seeing its largest multiplier assumption at 1.5 and the CBO at 2.2. Interestingly, in the EC, the larger estimate is driven by a focus on the type of policy (with investment subsidies seen as the most effective and having the highest multiplier) whereas the CBO's high multiplier has to do with uncertainty over the output gap in the modelling. Therefore, even when fiscal forecasters agree on the size of multipliers their justifications will not necessarily be the same. The UK's and Canada's estimates of multipliers are more towards the middle of the literature, potentially underestimating the impact of investment. In both cases, the maximum first-year multiplier is 1 for investment measures and the minimum first-year multiplier is 0.33 in the UK and 0.1 in Canada, both reflecting the multiplier assumptions of tax policy.

Lastly, the CPB in the Netherlands has some estimates which imply negative multipliers. A negative multiplier implies an increase in government spending could lead to a fall in output. This happens under social transfers in the CPB's model. Negative multipliers are not necessarily at odds with the literature[91,92] but such findings often have contradictory results elsewhere in the literature[93,94] and tend to focus on overall government spending rather than specific policies. In the CPB's case, higher social transfers are assumed to lessen the number of people in the work force and increase unemployment numbers leading to a negative effect on GDP. Therefore, it is interesting to note not only do forecasters disagree over the size of multiplier effects but sometimes the direction of them, too.

How long do multipliers last?
Fiscal forecasters at the OBR and the EC both assume the output gap closes within five years. For the OBR, this means all multiplier effects diminish to zero in this time. Although the EC is less clear on how this directly effects how multipliers are applied, it probably means policies do not last longer than this. However, in both cases, supply-side policies can have longer-term effects. For example, a 2010 report from the EC suggests government investment and corporate tax policies have been modelled to have longer-term effects. As mentioned before, the OBR also does this on a case-by-case basis. Interestingly, in recent publications, the OBR has shown while it believes a 1% increase in public investment could increase growth by 2.5% over a 50-year time horizon, the impact of public investment is actually at its minimum by the end of the five-year forecast the UK bases its fiscal rules on.[95]

Despite the CBO having some of the largest multiplier estimates, it also thinks the effect of fiscal policy is the most short-term. CBO multiplier estimates last between one and five quarters (where ranges also cover uncertainty over how long a multiplier effect lasts). However, this may be because the CBO tends to look at temporary measures for its multiplier estimates and uses other methods for policies with long-term effects. Furthermore, the CBO is the only fiscal forecaster where the output gap is not guaranteed to close during its forecasts. This potentially allows permanent policy changes to have permanent effects, if output gaps are not deemed to close otherwise. How this adds up in final forecasts is unclear and there is a lack of transparency around assumptions here.

Interestingly, both the PBO and the CPB seem to show permanent effects of fiscal policy with Canada's PBO's assumptions increasing over time. However, this may be because the multiplier assumptions it publishes state it is assuming no monetary policy response. Therefore, how the estimates are affected by assuming a monetary response is unclear. In the Netherlands' CPB's case, policies all have permanent effects on GDP. However, it is stated that the CPB's model where such effects are taken from is only used for 1–5-year forecasts, meaning such results might not be meant to be taken literally. However, it does show

most policies having effects on GDP after five years which is not necessarily the case for any of the other forecasters.

Overall, again there is much variation in how fiscal forecasters approach the long-term effects of fiscal policy with some having effects that diminish after five years (or shorter) whereas others assume effects are permanent. Furthermore, there is a general lack of clarity on how supply-side measures are considered but these are likely done on a more ad hoc basis across forecasters.

3.2 THE IMPOSSIBLE NEUTRALITY OF FISCAL FORECASTERS

The different country examples in Section 3.1 give an idea of the diversity of approaches to multipliers and economic forecasting across independent forecasters. This shouldn't be a surprise, as choices of economic assumptions for forecasting reflect judgment calls across a wide-ranging literature. When fiscal forecasters land on multiplier assumptions, they take a stance in a way that is not readily presented or transparent. Judgments can themselves be influenced by loyalty to certain economic schools of thought which can be aligned with different political traditions. Even if this is not their intention, the multiplier assumptions forecasters choose to apply reflect an endorsement of certain types of papers and directly impact what effect fiscal policy can be expected to have.

For example, we can look at when forecasters assume multipliers below 1. For a multiplier to be below 1, the final impact on GDP must be less than what was spent by the government. For this to happen, some private spending must decrease in response to the increase in government spending. Therefore, baked into assumptions of multipliers below 1 are theories of crowding out. However, how and when crowding out happens is not overwhelmingly agreed upon[96] and it has certainly been an area where conflicting and contradictory results can be found.[97,98]

It could be said that as their multiplier assumptions are always 1 or below, the fiscal forecasters in the UK and the Netherlands (the OBR and the CPB, respectively) always assume crowding out happens. As mentioned, this takes a stance on crowding out that is not necessarily unanimous in the literature, yet little justification is provided for why the OBR or the CPB may believe crowding out is always relevant. Instead, fiscal forecasters may justify themselves by suggesting their assumptions are evidence-based and represent a neutral 'middle of the literature'. Yet even if they are correct that their assumptions reflect the middle of the literature then this still endorses a finding that is controversial among the literature and is therefore non-neutral. Importantly, these assumptions pre-determine the effects of government policy in these forecasters' economic models. In this case, crowding out will make government spending look more costly, especially to politicians concerned about the debt-to-GDP ratio, and this can indirectly encourage such spending to be cut.

Furthermore, the absence of hysteresis effects from most of the forecasters we have discussed is also not a neutral judgment. In some ways, this is more surprising, as hysteresis effects are more widely accepted across mainstream economics.[99] Yet economists tend to rely on solely supply-side models to understand long-term determinants of growth. This excludes the possibility of government policy that doesn't explicitly affect the supply side having any effect on long-term growth, meaning any debt-funded policy without supply-side effects will just increase public debt indefinitely, discouraging its adoption.

Once this idea that only supply-side policies can have long-term effects is embedded, it leads to dismissiveness of even the possibility that forecasts could be wrong for failing to account for demand deficiency. For example, in 2012, the OBR reported that its multiplier assumption would have to be 1.3 in both 2010 and 2011, roughly double what it assumed on average, to explain its forecast errors during austerity which underestimated the negative impact on GDP growth.[100] The idea that multipliers could be this high for this long was simply dismissed by the OBR, replaced by alternative supply-side explanations like the financial and eurozone crisis permanently altering productivity.

The problem with this is it acts as if our understanding of how economic policy affects the economy is certain, and all uncertainty comes from how the economy evolves uncontrollably. If forecast errors can only be explained through changes in economic circumstances, then there is simply no role for economic policy to improve conditions. Yet this entirely removes the possibility

of how the economic context we find ourselves in and the economic policies we adopt are often interrelated. At the very least, one might expect a neutral forecaster to consider how both unexpected economic shocks and the relationship between economic policy and growth could plausibly explain errors in their forecasts. However, because the latter is ingrained as having no effect in the long term, such explanations as differing multipliers are simply ignored.

It is worth noting that the idea that only changes to the supply side of the economy can have long-term consequences came about in direct opposition to traditional Keynesian points of view.[101] Therefore, how supply-side policies have been considered has often excluded the use of government expenditure, instead focusing on tax cuts, deregulation, and trade liberalisation. While New Keynesian economics has tried to synthesise these points of view together, it has done so by assuming that the demand side can only have short-term effects with supply-side measures winning out in the long run. Therefore, far from being neutral, the OBR adopts a New Keynesian framework[102] and this framework influences how it models policies and responds to new data.

For example, while the OBR may be happy to model the long-term effects of government investment, there seems to be much less room to consider how other government expenditures could have effects on productivity. For example, the health and skills of the population or the state of education and equality can have long-term effects too, as described in Chapter 2, and this is often spearheaded by government expenditure.

Strict categories that separate government capital investment from government day-to-day spending mean higher multipliers for education and health policies won't be considered. Significantly, this can reproduce gender inequalities as it means social infrastructure (like health and care services) can often be devalued in comparison to physical infrastructure – despite some evidence finding higher multipliers in social sectors.[103] Therefore, not only do the underlying assumptions forecasters make limit what they see as economically possible, but the theory behind such policies can implicitly define how policies are assessed. In the OBR's case, its New Keynesian framework encourages policies to be split into their short-term demand effects and long-term supply effects. While any policy could be argued to have supply-side effects, closely following New Keynesian literature might mean only specific policies are considered to have long-term effects, the result being a framework that is actively hostile to considering some policies to have long-lasting effects.

Another reason forecasters might not want to use differing multiplier effects is they require a higher standard of evidence. Yet, this requirement for evidence can mean that innovative policies might just be modelled as having the same effects as historical averages, even when such averages might not be a good fit. While forecasters have the option to do their own ad hoc analysis or judge policies by distilled characteristics, they may be cautious and simply choose to use their default assumptions when modelling new policies. For example, such thinking might be why the OBR has failed to model the impact of net-zero investment as having supply-side effects[104] and instead relied on its default multipliers. Evidence of green projects having higher multipliers[105] and the prospects of green growth[106] has only come out in recent times and they may be wary of adopting new results.

However, it is worth noting that the requirement for a high standard of evidence is not necessarily equally applied. For example, the OBR has published a paper that shows how it measures the potential output and that the supply side of the economy is an inherently subjective process which requires careful judgment.[107] Therefore, again, the reason multiplier effects might not get such careful consideration is that the New Keynesian framework the OBR uses means such effects do not matter in the long term anyway, so little attention can be paid without much consequence for the model's results.

Obviously, not every multiplier assumption is determined in line with a given ideology. We understand forecasters have to decide on a set of multiplier assumptions. However, when multiplier assumptions are made, they should be justified and their implications explained. Forecasting bodies shouldn't just refer to what the evidence shows or doesn't show; they should explain the mechanisms and theories that produce those assumptions, with their relevance outlined. For example, if green investment is assumed to have a multiplier below 1, then it should be justified why crowding out applies in this situation. In Chapter 2, we introduced

how different factors affect multipliers, while explaining the theory or logic behind such findings. Understanding not just the result but the reason a result comes about, should help forecasters and readers understand if an assumption is convincing.

3.3 THE INTERACTION WITH FISCAL RULES

This all matters because fiscal forecasts serve a purpose. They are used to guide government decision-making and assess the feasibility of economic plans. The implications of different economic assumptions can alter the decisions made. In the Netherlands and Canada, fiscal forecasters provide estimates of policies during elections.[108,109] This likely affects both what political parties offer to the electorate and also how the electorate responds to what political parties offer. Much more directly, in the UK and the EU, fiscal rules limit debt and borrowing levels over the forecast, and therefore what assumptions are made can directly impact how much fiscal space, ie room to spend, a government has.

Therefore, when the fiscal forecasts favour certain types of assumptions they favour certain types of outcomes. For example, low and short-lasting multiplier estimates will inherently devalue public spending and mean decisions to cut government spending will be modelled to have short-lived effects. Whereas when multiplier effects are high and long-lasting, cutting spending is costly and public spending is inherently seen as more valuable.

This is important to acknowledge, as if there is any uncertainty over the actual measure of a multiplier of a particular policy then landing on a particular estimate may give it an inappropriate evaluation. This evaluation matters as it can make or break whether a policy is adopted, especially when it comes to fiscal rules. For example, say a policy costs £10bn. How much it adds to debt will depend on whether equivalent taxes are raised or whether it adds to borrowing, which will be implicit in the policy decision. However, how much it adds to GDP will depend on the forecaster's estimate of the multiplier. As fiscal rules commonly set limits around the debt-to-GDP ratio, what multiplier is assumed could even decide if the fiscal rules are met or not.

For example, recent research by academics in the EU[110] shows that the application of the EU's new fiscal rules rests on the assumption of a 0.75 multiplier being applied to any budget adjustments. This is especially strange given the fact the EU's other modelling allows for more varied multiplier effects and the paper it references to justify the 0.75 multiplier concludes an average multiplier of 0.8–0.9.[111] The paper referenced also importantly makes a distinction between multipliers from government expenditure (between 1 and 1.4) and from tax measures (0.5 and below). In fact, applying this paper's other conclusions of multipliers up to 1.4, along with allowing for multipliers that are more persistent, the academics find that the pathways of debt-to-GDP could be significantly different than the EU currently assesses. As the EU is expected to recommend countries cut their budgets from 2025, this research shows that differing multiplier assumptions could render this exercise futile, ultimately continuing the trend where austerity has led to higher, not lower, debt-to-GDP. If spending cuts are only successful at reducing debt under certain multiplier conditions, care must be taken to acknowledge this and see what alternative measures could be taken. With higher multipliers, it's possible that declining debt could be achieved via upfront investment rather than cuts.

Furthermore, a key way multiplier assumptions can affect decision-making is how room to spend is defined under fiscal rules. In the UK, the fiscal headroom is often described as the chancellor's room to spend without breaking her fiscal rules. For example, if debt could increase from 89% to 90% of GDP before breaking the fiscal rules, the headroom would be worth 1% of GDP. However, this conception assumes that 1% of GDP is added to debt with no changes to GDP, implying a multiplier effect of zero. If instead a positive multiplier is assumed, the increased spending that adds to debt would also increase growth, allowing for higher levels of debt before reaching the 90% limit of the fiscal rules. Before the October 2024 budget, NEF analysis showed that the chancellor's spending power could increase by over £8bn by simply altering the multiplier assumption while maintaining the same level of debt.[112] Therefore, what multiplier assumptions are assumed can drastically change the envelope politicians allow themselves to spend and therefore careful consideration should be made if multiplier effects are being unnecessarily restrictive.

Many have suggested reforms to fiscal rules that would put a better focus on quality;[113] for example, making exceptions for green investment – sometimes described as a 'green golden rule'.[114] Under the current assumptions forecasters make about multipliers, an International Monetary Fund (IMF) study shows that increased green investment could lead to debt being forecast to grow unsustainably,[115] defeating the argument for a green golden rule based on debt sustainability. However, the study also suggests that differing assumptions for multipliers of green spending could change this outcome. Therefore, despite Rachel Reeves's recent reforms to the fiscal rules, the OBR's multiplier effects may still limit her ambitions, especially when these seem low compared to the potential of new policies.

4. THE CASE FOR A BUCKET APPROACH TO DECIDE FISCAL MULTIPLIERS

Is there a better system to incorporate the use of multipliers in forecasts? An improved system should be able to encourage up-to-date thinking on multipliers, while also allowing independent forecasters to justify themselves in a way that acknowledges the implicit assumptions they make about economic policy. It should also allow them to confront uncertainty head-on, especially in a future which demands unprecedented policy changes.

4.1 THE IMF'S BUCKET APPROACH BY COUNTRY

To create something akin to this system, we take inspiration from work by the International Monetary Fund (IMF). In 2014, the IMF published a paper detailing"a simple method to compute fiscal multipliers".[116] This method was created to address the lack of evidence of multiplier effects in many national economies. Not because these effects did not exist, but because they simply hadn't been studied or the data that would facilitate such research was limited. In fact, this paper addressed the exact problem we mentioned in Section 3.2: without an evidence-base, economists may simply ignore the effects a policy might have. It was one of the first to offer practical guidance on how to estimate multipliers when empirical estimates are not readily available.

The approach described in the IMF paper was dubbed the"bucket approach". The approach first evaluated countries by characteristics that had been found to have significant relationships with multiplier effects in the empirical literature. These characteristics included low trade openness, small automatic stabilisers, a fixed exchange rate scheme, and a low/safe level of public debt as mentioned in Section 2.3. Furthermore, the IMF suggested countries with stronger labour unions/regulations and better public expenditure management may also have higher multipliers. However, we did not reference these characteristics in Section 2.3 as the relationship between multipliers and labour union/regulations has not necessarily been held in the literature[117,118] and the latter criterion about public expenditure management is not an empirical finding but more a logical inference. Such results may imply that the IMF's bucket approach needs updating but as it stands these are the six criteria currently used.

Once a country has been evaluated for each characteristic, it scores one point for each time it is deemed to meet a criterion for a maximum score of six. Then, dependent on this score, a country will be assigned to a certain bucket. As the characteristics were chosen due to their relationship to multiplier effects, a high score should imply a country being associated with higher multiplier effects. Countries with higher scores are assigned to a high multiplier bucket and countries with lower scores to a low multiplier bucket.

Once countries are grouped into buckets, they can be assigned a multiplier range; for example, a country in the higher bucket may be assumed to have a default multiplier effect between 0.7 and 1.0. This range gives an approximate estimate of how changes in fiscal policy will impact gross domestic product (GDP). After the initial estimate, adjustments are made for temporary factors like the position of the economy in the economic cycle and the responsiveness of monetary policy.

The IMF's bucket approach provides a neat heuristic for estimating multiplier effects. This method can be cross-checked on countries that do have data on multipliers to show that its conclusions are sensible. The main advantage of this system is its inherent flexibility and that it allows for subjective adjustments of policies. Such flexibility is needed in uncertain economic contexts to make sure multipliers aren't rigidly based on outdated assumptions or historical averages – making clear the judgment inherent to the process.

4.2 NEF'S BUCKET APPROACH BY POLICY

Taking inspiration from the IMF's bucket approach, NEF has designed a similar approach to estimate multipliers for different policies. Instead of looking at country-level characteristics, our bucket approach looks at policy characteristics. We can also

use our bucket approach to take a view on what sorts of policies will have multiplier effects that are higher but also longer lasting. One could even imagine combining the IMF's and NEF's bucket approach to get estimates of the multiplier effects of a particular policy in a particular country.

The first step in NEF's bucket approach, like the IMF's, is to judge a policy on its characteristics to get an initial multiplier category and a corresponding range of multiplier estimates. Here, we judge a policy by the characteristics laid out in Section 2.2. Table 1 could be used as a form to judge a policy, including space to justify why a policy meets that feature.

In this, we generally follow the IMF's categories and ranges (ie a low multiplier bucket between 0.1 and 0.3, a mid-range multiplier bucket between 0.4 and 0.6, and a high multiplier bucket between 0.7 and 1.0). However, we make a slight adjustment to how scores correspond to the multiplier ranges, given that having just one of the characteristics in Table 1 would probably mean the multiplier is not low. Furthermore, as our characteristics have been chosen due to their strong multiplier effects, satisfying many of the criteria would likely lead to multipliers above 1 so we added a category between 1.1 and 1.4.

TABLE 1: SCORING POLICIES FOR NEF'S BUCKET APPROACH

		Does the policy meet this criterion?	
	Is the policy....	**Yes/No**	**Justification**
1)	targeted at those with a high marginal propensity to consume?		
2)	targeted at industries with high input-output multipliers?		
3)	an expenditure measure rather than a tax/transfer?		
4)	likely to cause crowding-in effects?		
5)	likely to increase the stock of capital or the size of the workforce?		
6)	likely to improve the quality of capital or skills of the workforce?		
7)	likely to cause general productivity enhancements?		
	Total score		**(Yes = 1, No = 0)**

This set of criteria allows scores in the range of 0 to 7 and could be divided into buckets as follows.

Multiplier category	Score	Multiplier range
Low multiplier	0	0.1–0.3
Mid-range multiplier	1–2	0.4–0.6
High multiplier	2–5	0.7–1.0
Very high multiplier	5–7	1.1–1.4

The overlapping of scores in different categories is intentional, as further judgment should be used to narrow in on a certain category, or uncertainty can be embraced by applying a wider multiplier range. For example, a score of 5 could translate to both the high and very high multiplier buckets, allowing for an initial estimate range between 0.7 and 1.4. Furthermore, given the characteristics of a policy can be harder to directly measure than the characteristics of an economy, one could also imagine that the total score could be a range, too. Take a government public investment programme: This might be assumed to easily meet criteria (3) and (5), but whether it would have crowding-in effects to meet criterion (4) is uncertain. This policy could be scored at least 2–3. This would mean it fits the profile of both the mid-range and high multiplier buckets and therefore the multiplier range of 0.4–1.0 could be used. Leaving this approach open to flexibility is important as it provides a transparent way to deal with uncertainty and helps encourage sensitivity analysis in economic forecasting.

To see why NEF's bucket approach is a useful tool, we can apply it to general policy instruments to see if its results agree with the literature. For example, we could consider an untargeted tax/benefit change, a tax/benefit change targeted at the poorest, a change in government expenditure, and a change in government investment.

First, it is unlikely that an untargeted tax or benefit change would meet any of the criteria and therefore it would score 0 and be placed in the low multiplier bucket with an estimated range of 0.1–0.3. A targeted tax/benefit change would be very similar; however, it would be plausible to argue that such a policy would go to those with a higher marginal propensity to consume meeting criterion (1). It would then score 1 and be placed in the mid-range multiplier bucket, with an estimated range of 0.4–0.6.

A general increase in government expenditure would certainly meet criterion (3). Furthermore, it could be focused in an area with a high input-output multiplier, depending on the type of spending, or create jobs that add to the potential labour supply, satisfying criteria (2) and (5). This would score between 1 and 3 and give general government expenditure a range of 0.4–1.0.

Government investment would certainly meet criterion (3) and would likely satisfy (5) as well. Furthermore, investment may target a certain industry with higher input-output multipliers or areas where private investment wants to follow the government's lead, making criteria (2) and (4) a possibility. Lastly, if the investment is designed well, it would hopefully lead to quality improvements of labour/capital or bring about productivity improvements in general satisfying criteria (6) or (7). This puts investment as likely having a score between 2 and 6, putting it in the range of mid-range to very high multipliers at 0.4–1.4.

Overall, this means the bucket approach achieves a similar ordering of multipliers by fiscal instrument as the literature but the size of multipliers related to these instruments is also well reflected. Therefore, NEF's bucket approach can act as a quick way to assess the multiplier of a policy without having to rigidly categorise policies beforehand.

The next step of NEF's bucket approach is to adjust these multiplier ranges to reflect the economic context. In this instance, we do not differ from the IMF's approach in adjusting for the output gap and stance of monetary policy. The IMF suggests adjusting the multiplier up by 60% if an economy is experiencing a negative output gap (ie it is underperforming) close to its historical maximum. If the economy has a positive output gap close to its historical maximum, then the IMF suggests adjusting the multiplier down by 40%. However, we caution that how the output gap is calculated should be robustly argued. Potentially, if there is uncertainty over the size of the output gap, then a high and low adjustment could be made, with the range being extended appropriately. For example, if there is disagreement with how the output gap is measured, with some arguing the output gap is near to its maximum[119] (60% adjustment) and others arguing it is smaller[120] (20% adjustment), then the high multiplier range could be adjusted to the following: 0.84–1.6 (following a 20% adjustment on 0.7 and a 60% adjustment on 1.0).

Second, the IMF suggests adjusting the multiplier estimated upwards by 30% when monetary policy is at the zero lower bound (ZLB). If the policy is assumed to be slightly accommodative, an adjustment between 30% and 0% should be made, but this is left to the reader's judgment. Therefore,

once considering monetary policy and economic cycle adjustments, the first-year multipliers from NEF's bucket approach can range from just over 0 (0.1 adjusted down by 40% for a negative output gap) to just under 3 (1.4 adjusted up by 60% for a positive output gap and by 30% for monetary policy stance). This allows for multipliers at the very top end of the empirical literature to the very bottom. Notably, both the IMF's approach and our approach exclude the possibility of negative multipliers but, as these results are rarer for individual policy assessments, it can feel appropriate to ignore the possibility for now. Furthermore, given negative multipliers imply GDP moving in an opposite direction to the change in government spending, such a result would often be thought of as direct policy failure.

The last step of NEF's bucket approach is to also consider a policy on characteristics associated with its longevity. In this case, a scoring system is not used as the impact of meeting different criteria is more complex than just increasing how long the multiplier effect lasts. Instead, we ask questions that will motivate the use of longer-term multipliers when needed as seen in Table 2.

In this system, the judgment of (a) is the most important. As discussed in Section 2.4, the persistence of a policy is likely related to how long it lasts. Temporary policies are likely to have temporary effects. For example, a policy that last two years should also affect GDP for roughly two years and, in line with research, should decrease in size over its lifetime. By default, if the answers to (b) – (d) are all no, then our suggestion for how multipliers would persist is the same as the IMF's, which assumes a temporary policy lasts as long as it is implemented and a permanent policy change lasts around five years while declining to zero. However, when the criteria for (b) – (d) are satisfied, more interesting multiplier effects may occur.

For example, if (b) is true then multiplier effects may be permanent. How, if at all, the size of the multiplier should vary over time is less clear, as some models have multiplier effects that increase over time, whereas others have ones that decrease. If a policy is deemed significant enough for (b) to be true, then forecasters should pay extra attention to it. This could help foster a more specific estimate that could overrule the bucket approach suggestion.

When (c) is true, multipliers are likely to last as long as monetary policy is accommodative. Therefore, in these scenarios, the first-year multiplier could be extended as long as monetary policy is assumed to be accommodative. It could then decline as normal when monetary policy is active again. Given the theory behind such a relationship is due to reduced crowding out at the ZLB, one would imagine this effect would only be relevant along the timeline of the policy, experiencing a multiplier effect that doesn't drop off while monetary policy is accommodative.

TABLE 2: QUESTIONING POLICIES BY LONG-TERM POTENTIAL FOR NEF'S BUCKET APPROACH

	Is the policy...	Yes/No	Justification
a)	a permanent change?		
b)	a supply-side measure like criteria (5)–(7) in Table 1?		
c)	likely to be implemented under accommodative monetary policy?		
d)	likely to have hysteresis effects?		

Lastly, if (d) is true, then even a temporary policy change could have a long-lasting multiplier effect. As discussed in Section 2.4, mainstream economists often ignore the long-term effects of demand.[121] Given this could have a significant effect on the size and longevity of multiplier estimates, it should be an important part of setting multiplier assumptions. Including it in our bucket approach is a way to force policymakers to engage with this idea, even if they conclude hysteresis effects are unlikely. If hysteresis effects are likely, it may be because the economy is assumed to be in a state where such effects are likely or a policy may specifically have longer-term effects on demand (eg by avoiding crisis). If a policy is deemed to have hysteresis effects, it is unclear how multipliers should be adjusted over time in this light. However, like criterion (b), if hysteresis effects are deemed significant enough for (d) to be true, then forecasters could do bespoke modelling to work out how to treat this issue, which could ultimately override the bucket approach.

4.3 APPLYING THE BUCKET APPROACH: THE 2024 AUTUMN STATEMENT

To see how the bucket approach could work in practice, we can apply it to the 2024 Autumn Statement. In this budget, Rachel Reeves announced an increase in spending worth 2.2% of GDP by 2029–30.[122] Yet, the Office for Budget Responsibility (OBR) forecasts that the economy would only be 0.15% larger by 2029–30 than if the policies hadn't been implemented at all. In fact, the OBR assumes the effects of tax measures worth 1.1% of GDP and investment crowding out drag GDP down by 0.26%. This means the total effect of government policy by 2029–30 is for the economy to be 0.11% smaller than if no policies are implemented at all.

When applying the bucket approach, instead of policies being judged by their wider categories of public spending, public investment, tax, and welfare, it would mean policies are looked at, at a more individual level. Ideally, it would mean policies are separated finely enough so that every £1 spent for a particular policy has a distinct impact. Two good examples of policies that are specific enough to assess by themselves could be the investment into the National Wealth Fund and the freeze in fuel duty which we look at criteria (1)–(7) for.

The National Wealth Fund would meet criteria (3) and (4) of the bucket approach automatically. It is a spending measure designed to crowd in private investment for the green transition. Furthermore, a good argument could be made for criterion (2), that it is targeted in areas with high input-output multipliers, as this seems to be the case for green energy in general. Similarly, we could argue the case for criteria (5) and (6) where investments will likely increase the capital stock in the economy and the quality of that capital too. This would score the policy at least five points putting it in both the high and the very high multiplier buckets – a range from 0.7 to 1.4.

Alternatively, the freeze of fuel duty would not meet criterion (3) by definition. The freeze tends to benefit richer households more[123] and therefore does not target people with a high marginal propensity to consume, failing to meet criterion (1). Also, the Office for National Statistics (ONS) finds the industries related to the fuel duty, for example petroleum extraction,[124] to have low input-output multipliers so neither would criterion (2) be met. Furthermore, it seems unlikely that the freeze in fuel duty would crowd in extra private consumption or investment more than its cost, failing to meet criterion (4). It also seems unlikely that the cut in fuel duty would have any significant effect on the quantity or quality of the capital stock or labour force or any generalised productivity improvements, failing criteria (5)–(7). Together, this might lead one to score the fuel duty cut a zero, putting it in the low multiplier bucket – a range from 0.1 to 0.3.

The application of the bucket approach already shows a slight departure from the OBR. Our estimate of the multiplier of the national wealth fund is a range (0.7–1.4) which includes the OBR's assumption in the middle (a multiplier of 1 for public investment) and our multiplier range for a fuel duty cut (0.1–0.3) would lie below the OBR's estimate (a multiplier of 0.33 for tax changes).

However, this is not the full story as our bucket approach requires adjusting these multiplier ranges for economic context. First, we would adjust for our position in the economic cycle – measured by the output gap. At the latest budget, the OBR predicted the output gap would be around 0.25% of GDP in 2024,[125] moving to a positive output gap (above potential output) from the policy measures

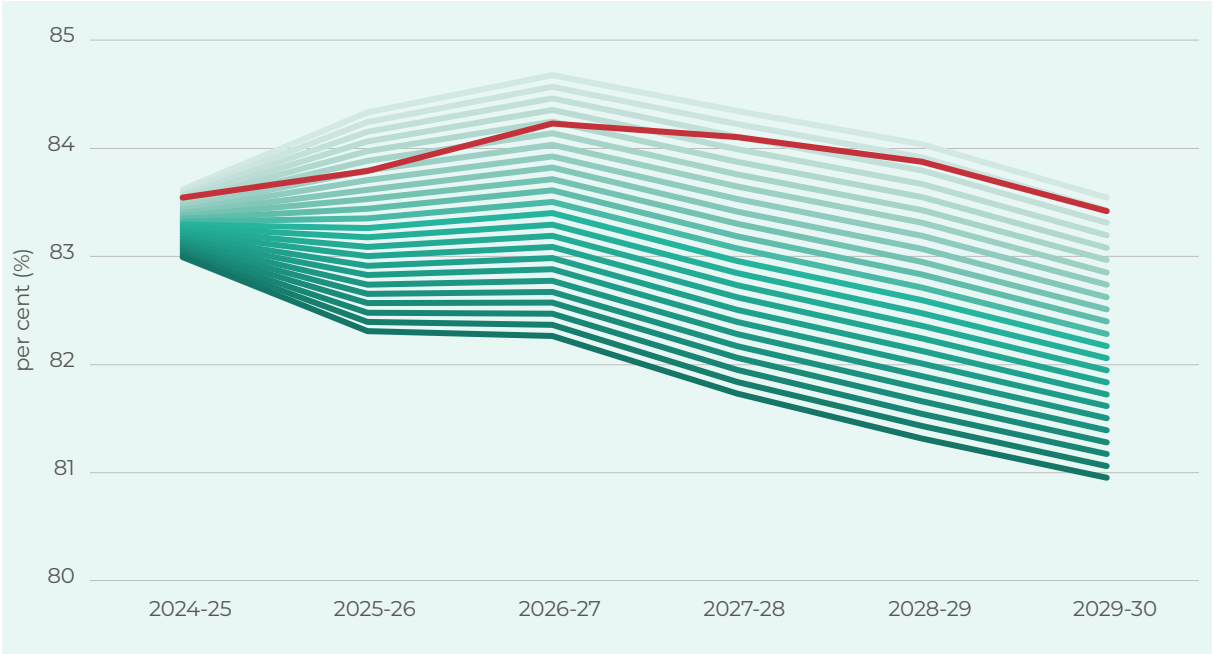
within the five-year forecast before falling to zero in 2030. However, even the OBR notes that there is significant uncertainty over the size of the output gap. Therefore, for simplicity, and to aid the example of the bucket approach's application, we assume the output gap could be anywhere between its historical maximum or minimum. This implies an upward adjustment of 60% and a downward adjustment of 30%, respectively. Therefore, the range of estimates for the National Wealth Fund would now include multipliers between 0.49 and 2.24 and for fuel duty would be 0.07–0.48. Next, we would adjust for the responsiveness of monetary policy. Given interest rates are relatively high and remain so throughout the OBR's forecast we decided to not adjust here.

Lastly, policies would need to be judged for their longevity with criteria (a)–(d). In the case of the National Wealth Fund, it is likely to be permanent and it also could be judged to affect the supply side. Meeting criteria (a) and (b) should encourage careful attention to how the policy's long-term effects should be modelled. On the other hand, the fuel duty freeze is supposedly temporary (despite this being pushed back almost every budget) and we find it unlikely to cause supply-side impacts. By default, the effect of such a policy might be expected to fade.

The last two criteria, (c) and (d), could also impact how long the policies last. Criterion (c) is unlikely to be met, as interest rates are relatively high and monetary policy is likely to be responsive. Whether criterion (d) is met can be harder to discern; it might be hard to suggest there are any particular hysteresis effects pertaining to either policy. One might argue the National Wealth Fund might invest in technologies that slow down climate change, avoiding future economic damages but this argument does not seem strong enough. However, one might judge the economy to be in a state susceptible to stimulus changing its long-term impact. We leave this question open for now, but it would make sense that the National Wealth Fund be modelled with longer-lasting effects than fuel duty – both due to its expected implementation time and supply-side effects. An example of how this could be modelled is by assuming the multiplier effect of the National Wealth Fund is constant over the forecast years whereas the effect of fuel duty drops off after the freeze ends.

FIGURE 1: FORECAST DEBT-TO-GDP MAY BE MUCH LOWER UNDER HIGHER MULTIPLIER ASSUMPTIONS

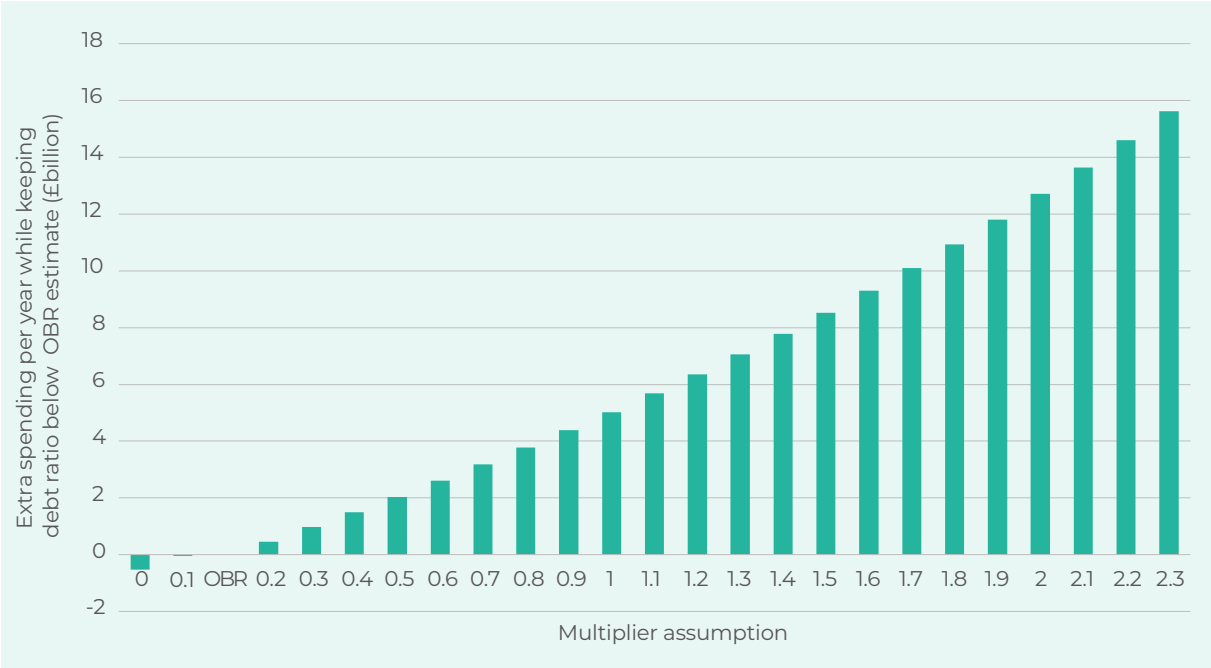
Public Sector Net Financial Liabilities (PSNFL) as a % of GDP, 2024–30, under different multiplier assumptions



Note: NEF's analysis of the OBR's October 2024 Economic and Fiscal Outlook. Green lines show multiplier assumptions from 0 to 2.3 incremented by 0.1. The red line shows the OBR's multiplier assumption.

FIGURE 2: HIGHER MULTIPLIER EFFECTS COULD ALLOW MUCH HIGHER SPENDING WITHOUT DEBT-TO-GDP HAVING TO INCREASE

Extra spending that could occur per year while PSNFL as a % of GDP remains below OBR forecast in 2029–30, under different multiplier assumptions.



Note: NEF's analysis of the OBR's October 2024 Economic and Fiscal Outlook. We assume the multiplier is fixed over the forecast period.

Therefore, as we see from our application of the bucket approach, we may judge multipliers to be between 0.07 and 2.24 for different policies with different time scales for how long these effects last. Figure 1 shows what impact different (constant) multiplier assumptions between 0 and 2.3 would have if applied to all government spending on the new fiscal rule for net financial debt. Of course, we have already judged two policies that would fall towards the bottom and top of this range so all spending is unlikely to average at the extremities, but it shows the impact multiplier assumptions can have. For example, constant multipliers as high as 1.1 would knock 1 percentage point off the debt-to-GDP ratio by 2029–30.

As mentioned in Section 3.3, the reason this matters is our fiscal rules influence how much the chancellor may allow herself to spend. In the OBR's forecast, net financial debt as a % of GDP ends up at 83.4% of GDP. Therefore, if the multiplier effect the OBR assumed was higher, the chancellor could potentially spend more while keeping the debt-to-GDP level the same. For example, we can see how much extra spending she could have made under different multiplier assumptions without even raising debt. As shown in Figure 2, if spending was assumed to have the highest multiplier persistently then the chancellor could have spent £15.6bn a year more without the fifth-year debt-to-GDP rising at all compared to the OBR's forecast.

Overall, NEF's bucket approach suggests that a wide range of possibilities are within the realms of realistic multiplier assumptions from the OBR. And even small changes in the multiplier assumption could unlock billions to spend without debt-to-GDP rising compared to the OBR's forecast.

4.4 THE BENEFITS OF THE BUCKET APPROACH

NEF's bucket approach is an easy way to assess a policy's multiplier when direct multiplier estimation is too hard or implausible. Furthermore, it provides a framework for forecasters to use to transparently justify their forecasting decisions. The bucket approach could encourage forecasters to use more up-to-date multiplier estimates, increase the transparency behind their economic assumptions while requiring them to think critically and more holistically about these assumptions, and highlight the importance of multipliers in determining policy outcomes.

As briefly mentioned in Section 4.2, the bucket approach should be able to be overridden. NEF's bucket approach is a heuristic, not an exact method, and if there is good evidence to support a particular policy having a particular multiplier then this should be preferred. However, it is a starting point for policies that do not have good evidence or where that evidence is contradictory or wide-ranging. The characteristics chosen for NEF's bucket approach have a significant relationship to higher multipliers in the literature. To this extent, if future literature finds evidence of new characteristics associated with higher multipliers or contradictory evidence on current characteristics, then the bucket approach could be altered. However, when adopting new characteristics, such features should try to be as distilled and mutually exclusive as possible. For example, green spending has been found to have high multipliers in the literature. However, this seems to be because green spending is more investment intensive and as a newer technology it is easier to increase the quality of the capital stock. Therefore, including green spending as a separate category would be inappropriate, as the characteristics that make it have higher multipliers are already likely covered by other criteria.

Fiscal forecasters could also adopt the bucket approach to protect themselves from political criticism in an era of growing distrust of experts.[126] The Liz Truss mini-budget crisis was significant, as it showed how the government might want to avoid the OBR's forecast, in case it put desired policy in a bad light. However, the reason Liz Truss wanted to avoid the OBR in the first place was that it likely wouldn't have forecasted that a budget of tax cuts would lead to enhanced economic growth, using Treasury figures for this instead.[127]

What was reported as a stand-off between the OBR and the Conservative party was likely the OBR not wanting to back down on significant evidence that tax cuts do very little for economic growth.[128,129] However, because how the OBR makes assumptions is not readily publicised, such disagreements can occur without much explanation. Instead, if the OBR adopted NEF's bucket approach, it would have a framework that would allow others to more transparently understand why it is unlikely to assume that tax cuts lead to growth.

The greatest benefit of the bucket approach is how flexible it is. It transforms economic forecasting from something that can look exact and calculated to something that is uncertain and full of value judgments. Given the latter much more accurately describes the nature of economic forecasting, the architecture we present economic forecasts in should reflect this. The default output of NEF's bucket approach is a range of multiplier estimates, not a single value. This approach helps avoid excluding certain possibilities. In some cases, such an approach may be preferable to bespoke analysis that aims to provide certainty over new policies that are fundamentally uncertain. Furthermore, once a policy is implemented, it and its effects are more apparent. The qualitative nature of the bucket approach can help tell a story of why a policy may have been more or less successful by meeting more or fewer criteria.

The bucket approach opens new possibilities for the way some policies are assessed. Rather than assessing all day-to-day or capital spending the same way, by focusing on the characteristics of policies we can get estimates that reflect that some day-to-day spending (like that on health, education, and social care) may have higher multipliers than even some types of investment. Instead of fixed policy categories determining a policy's effects, the individual characteristics would be looked at. Ingraining such thinking in our forecasting frameworks may be useful, as an over-reliance on investment in traditional capital infrastructure may bring about GDP growth while further decoupling it from social indicators.[130] By explicitly allowing more flexibility in what policies can have longer-term effects we can open the door to policies that achieve growth and foster social cohesion.

Overall, the bucket approach could provide transparency in what is often a very opaque practice, and it would highlight the value judgment inherent to fiscal forecasting. Furthermore, it would allow for a diverse range of estimates to be justified without sacrificing an evidence-based approach, taking in a more holistic base of evidence by design. Most importantly, such a system could adequately respond to the fundamental uncertainty of the future by being flexible enough to estimate the impacts of new policies without having to rely on historical averages while also embracing uncertainty when needed. Together, this makes the bucket approach indispensable for assessing the policies of the future.

5. FURTHER RECOMMENDATIONS TO IMPROVE FORECASTING THE EFFECTS OF POLICY

Further improvements could be made to the world of fiscal forecasting so that it can better incorporate the bucket approach while also using all evidence available.

5.1 EMBRACING UNCERTAINTY WITH RANGES

First, as mentioned in Chapter 4, inherent to the bucket approach is results that give ranges rather than single-point estimates. This is important for the bucket approach to give flexible results that embrace the inherent uncertainty of economic forecasting. However, the current way economic forecasts are presented does not necessarily lend itself to using assumptions that have a range of estimates associated with them. This could, however, be fixed by embracing this uncertainty and taking a more liberal approach showing multiple possible outcomes.

One way to do this would be to use fan charts. Fan charts are graphs which show how a variable may deviate from its central values over time. If forecasters wanted to implement a recommendation from the bucket approach, they could use a fan chart to show the upper and lower bounds of a variable due to the different range of assumptions used. These upper and lower bounds would be split by a central estimate which could still act as a point estimate for the forecaster if needed. However, including the upper and lower bounds allows the forecast to be interpreted in a more flexible way and means that forecasts have sensitivity analysis built into their assumptions.

Furthermore, one could imagine if presenting the upper and lower bounds of an estimate was a more common practice, then fiscal rules could reflect this too. For example, instead of fiscal rules having to be met by the exact point estimate, qualitative statements could be made about the conditions under which fiscal rules are met for a particular policy package. It could be the job of the Office for Budget Responsibility (OBR) to judge if this were realistic. For example, it could be calculated what size and how long-lasting multipliers need to be for a particular spending package to be consistent with a particular fiscal rule. This would help move the conversation from what quantity of spending meets fiscal rules to what quality of spending is needed to meet those rules. Such a change would highlight the importance of the assumptions behind policies in forecasting while changing the conversation from scrutiny over debt and borrowing limits, to scrutiny over policy design – exactly what should be the priority of fiscal policy.

5.2 SEEING THE FULL BENEFIT WITH LONGER HORIZONS

Another way in which economic forecasters could provide a more detailed view of economic policy is by expanding the time horizons over which they evaluate policy. For example, in its forecasts for the government budgets, the OBR is limited to a five-year forecast. It only really matters to the government if they are meeting their fiscal rules, which look just five years ahead. However, this means that policies that have benefits over a longer period simply get ignored. For example, infrastructure projects,[131] education,[132] childcare,[133] and welfare[134] policies can all have long-term effects that last well after the expenditure related to the policy has been spent. In fact, the OBR has even admitted in the past that some policies it considers have strong evidence of long-term effects, but as these do not occur in their forecast period they are simply ignored.[135] Furthermore, one can imagine a situation where the opposite is true, ie a policy may have positive effects in the first five years but negative effects thereafter. By not forecasting effects outside the budget timeline, important details like this are overlooked.

This wouldn't necessarily need to be done by extending the full forecast into further years. Instead, requiring forecasters to comment when there are effects that are likely to exist outside of a forecast horizon and describe this qualitatively, or through presenting different possible scenarios, could be just as informative while preventing exact estimates that give a false sense of certainty. In

fact, a version of this was adopted in the October 2024 budget – with a 10-year horizon for assessing the growth impacts of policies.[136] In general, when and how forecasts should be extended should be flexible and based on the policies being modelled. Going forward, even a 10-year horizon may be too short, and focusing on growth effects may be too narrow.

5.3 A BUCKET FOR CLIMATE, INEQUALITY, AND MORE

Lastly, this report focuses on fiscal multipliers due to their controversial nature yet significant impact on economic forecasting and how fiscal rules are met. However, not all policies need to be justified by their effect on growth, as more gross domestic product (GDP) growth is not always the end goal. Indeed, when we decided to focus on fiscal multipliers that measure the response of GDP we noted how GDP's significance in economics has devalued certain economic activity, particularly women's unpaid work in the household. Our economic system requires a fundamental shakeup that includes how we measure and what we measure to track progress. Economic forecasters of the future should look at a wider range of metrics that reflect the quality of our climate, and the level of inequality in our societies, among a host of other metrics that truly reflect our livelihoods.

However, whether forecasters are looking at the impact of policy on GDP, climate, or inequality, forecasting will always be an inherently uncertain practice. Therefore, one could imagine bucket approaches being used in each of these areas. The general idea would remain the same. Policies would be assessed on their distilled characteristics, where these characteristics are chosen for their significant relationship to a desired outcome. For example, if one were to create a bucket approach for nature, one could assess policies by their potential to lower carbon emissions, reduce other pollutants, prevent natural disasters, revive natural environments, protect biodiversity, and more. This could be used to quickly assess the benefits to nature of a policy without having to do bespoke research– especially when such bespoke research would likely only provide a false sense of certainty.

Overall, there is definitely scope for economic forecasting to consider many more factors that matter for our quality of life. Yet, when economic forecasters venture into new realms, they are likely to be met with little direct evidence of the phenomenon they want to model. The bucket approach could become a powerful tool that gives forecasters no excuse to ignore the myriad effects of fiscal policy. In fact, its inherent flexibility might even make it a better tool than specific estimates which may provide too much certainty over a fundamentally uncertain phenomenon. Kahn and Keynes may have started by looking at how fiscal policy affects jobs and incomes, but today's economists should not be stuck in the past; they should use the environmental and social issues of our time to take this sort of analysis further.

6. CONCLUSION

This report highlights some significant differences between the effects of fiscal policy that government forecasters assume and those from the empirical literature. These differences can dramatically affect what policies are adopted, due to how policy measures meet fiscal rules or are assessed by a debt sustainability analysis, both of which depend on multiplier assumptions.

We propose a policy-level bucket approach, inspired by the International Monetary Fund (IMF) country-level approach, to assess policies by distilled characteristics associated with higher multipliers. Policies are given points if they meet characteristics, and policies with different points are assigned to different buckets, with more points implying higher multipliers. However, an important part of this process is justifying why a policy meets a certain characteristic, with both a theoretical and empirical justification where possible.

Even if the application of the bucket approach meant a forecaster like the Office for Budget Responsibility (OBR) did not change its assumptions, it would still represent an improvement, as it would require the OBR to answer questions about why it thinks certain policies do not lead to crowding-in effects, why they are unlikely to have longer-term effects on growth, and why a classical multiplier mechanism might not apply. This would increase transparency around the rationale behind assumptions, which is often not detailed.

Yet all this begs the question of who really has the authority to decide what is right or wrong when it comes to how government spending impacts the economy? It feels that in our current system, where the fiscal forecasters make fixed assumptions about how the economy works which lead to a fixed amount politicians can spend without breaking their self-imposed fiscal rules, it is exactly the wrong way around. Instead, one could imagine a system where politicians design spending packages around the issues important to them and the fiscal forecaster assesses what effects these packages must have to meet the fiscal rules. Then the forecaster could judge if the implied effects fell within a realistic range (perhaps in the same range as what the bucket approach implies), and if not, it would give politicians a better idea of how much they could raise taxes or what spending they could prioritise.

For some time, NEF has proposed scrapping fiscal rules and replacing them with fiscal referees[137] who can judge the economy on more holistic measures that reflect the complexity behind debt sustainability. Such an approach could fit in nicely with the bucket approach as it would give the referees a key point of judgment – whether the assumptions underlying government plans fall within a likely range. Under such a system, the government would always be able to disagree, with the requirement to explain itself, but the referee's judgment could become a much more effective guardrail that incentivises effective policy design. Instead, if we stick to arbitrary fiscal rules, borrowing and debt limits will continue to push back progress by incentivising cuts.

Overall, fiscal forecasting needs a shakeup, to reflect on its past mistakes that ushered in austerity and to make sure it isn't a blocker to the vital investment needed today to combat climate change, the decline in public services, and below-potential growth. The evidence explored in this report provides good motivation for change. Our bucket approach would be an effective methodology to implement. We can and must forecast a better future.

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