Do the MTO's Cyclically Adjusted Budget Balances Serve Their Purpose? An Analysis and a Reform Proposal

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Summary

The Stability and Growth Pact (SGP) is up for review. It is also in urgent need of reform if rule-based fiscal policy is to be maintained without impeding the recovery from the Covid crisis, without standing in the way of achieving the climate targets, and without undermining European sovereignty in an era of new geopolitical challenges. Yet, legislative reform faces significant challenges, given the position of countries such as Germany. Thus, we argue that a first reform step that is both viable within the current framework and supportive of economic recovery and growth could be a useful start.

In particular, we propose to update the method for estimating potential output to better reflect actual economic potential, instead of largely extrapolating from a past trend. This would not require legislative change, build on past efforts of the EU-COM to refine the potential output calculations and could yield fiscal space for the recovery from Covid as well as for climate, energy, and security investments. Finally, it would also help better to align the fiscal rules with European core values, in particular gender equality.

In what follows, we

- identify three problems with the current method for calculating potential output,
- put forward a concrete proposal for improving the method, and
- show the impact of this proposal for seven selected European economies.

1. Introduction

As EU-Commissioner Paolo Gentiloni recently said "we need [fiscal] rules that are enforceable"[1]. The current rules have proven far from that. Yet, given the stance of countries like Germany,[2] legislative change with regards to the SGP faces significant challenges. We propose changes that do not require adjustments to the underlying legal framework but do contribute to fiscal sustainability by refocusing efforts on full capacity utilisation in the labour market. Such an adaptation of the SGP not only helps to tackle the challenges of aging societies but also to mobilise people and resources for the Green Transformation and for the challenges of a new era of geopolitical competition.

To do so, we look at the cyclically adjusted general government budget balance, which forms a key component of the preventive arm of the SGP. It relies on estimating potential

[1] Own translation, original: „Wir brauchen Regeln, die man auch durchsetzen kann", Süddeutsche Zeitung, 5. 9. 21.
[2] See for instance Süddeutsche Zeitung, 10.9.21.

output. Our analysis of the current method for estimating potential output identifies three problems: (1) The method requires updating in order to align with state-of-the-art economic research. (2) It requires technical experts to make political decisions, straining their and the method's democratic legitimacy. And (3), at least in today's economic environment, the approach fails to serve its purpose, i.e. making public debt levels sustainable in the long-term.

In view of these shortcomings, we propose to continue in the spirit of recent reforms of estimating potential output[3], and to move further in the direction of proxying the actual potential of the economy rather than extrapolating from a past trend. Specifically, we argue for aligning the fiscal definition of potential output more closely with full capacity utilisation in the labor market. This helps to realign the current rules with fiscal sustainability: Full employment – both at the extensive and at the intensive margin – is key for ensuring fiscal sustainability in a world of secular stagnation, low interest rates and aging societies. Further, the proposed changes would reduce the democratic deficit inherent in the current method for potential output calculation by replacing discretionary choices with established and agreed-upon goals articulated in the EU treaties.[4] To ensure the incentive compatibility of our proposal, we also make the case for (qualitatively) linking potential output calculations to reforms included in Stability and Convergence Programmes.

2. The European method and its drawbacks

2.1 Commonly Agreed Method

The Medium-Term Budgetary Objective (MTO) set by the preventive arm of the SGP requires countries to limit their structural deficit. To calculate the structural deficit, the cyclical component of a budget must be identified. To that end, European governments implemented the Commonly Agreed Method (CAM)[5] for assessing the current cyclical position of an economy. In the following, we give a brief overview of the current method and identify three problems with it. The CAM is regularly updated and refined by the Output Gaps Working Group (OGWG), made up of experts delegated from the EU-COM and national governments.

Cyclically adjusted budget balances aim at enabling governments to run countercyclical fiscal policies, while ensuring that the underlying structural fiscal policy remains sustainable. Therefore, one of the main challenges of fiscal surveillance is to distinguish the structural and cyclical components of observed output, as measured by potential output ($YPOT$) and the output gap ($Y - YPOT$). The cyclical adjustment of budget balances

[3] See Atanas et al. (2017).
[4] See Art. 2 and Art. 3 TEU.
[5] See Havik et al. (2014) and Mourre et al. (2014) for additional explanations of the method and its institutional background.

is then calculated as a fraction of the degree of under- or overutilisation, i.e. $\epsilon \times (Y - YPOT)$, where ϵ denotes the budgetary semi-elasticity. The budgetary semi-elasticity captures the quantitative effect of a deviation of GDP from its potential on a country's government budget balance.

Our main focus is on the concept of **potential output**. Like every unobservable variable, it must be estimated by means of an economic model and statistical assumptions. The current CAM makes use of a Cobb-Douglas production function, computing potential GDP in the following way: $YPOT = LP^{\alpha} \times K^{1-\alpha} \times SRK$. This means that potential output is obtained by combining labour potential (LP) with the stock of capital available (K), augmented by the trend of total productivity of both production factors (measured by the Kalman-filtered Solow residual SRK). The production elasticity of labour, i.e. α, is assumed to be 0.65, that of capital hence 0.35. Actual GDP is supposed to converge to potential GDP in the medium term.

Within this calculation, we zoom in on **labour potential**. In the CAM, labour potential is meant to provide an estimate of total hours worked in the economy within one year when the economy is on the extrapolated trend of past performance. This number is approximated by multiplying the size of the population at working age ($POPW$), the trend participation rate ($PARTS$), the fraction of employed workers ($1 - NAWRU$), and the trend hours worked per employee and year ($HOURST$). Mathematically, $LP = POPW \times PATS \times (1 - NAWRU) \times HOURST$. The NAWRU refers to the lowest unemployment rate that can be maintained without putting upward pressure on inflation. It is, like all trend variables, likewise derived from a statistical model relying on a range of mathematical assumptions.

2.2 Three issues with the current method

In the following section, we provide a brief discussion of the European method, and make three arguments why it should be updated. A more detailed discussion of the current method can be found in Schuster et al. (2021).

First, the method is at odds with the latest research. Although the CAM is frequently revised based on new insights from research, it has not yet incorporated several recent findings.

One reason for this is the basic economic model at the heart of the CAM. For instance, using a Cobb-Douglas production function for the estimation of potential output gives a solely supply-side based description of an economy's productive capacity. Demand-side elements are fully ignored. Yet, recent studies have revealed a substantial positive impact of demand stimuli, for example in the form of public spending or foreign demand, on long run potential output.[6]

[6] See e.g. Mason & Bossie (2020).

Moreover, its estimation relies on a measure of potential labour input, which, in turn, builds on a NAWRU estimate. However, there is empirical evidence showing that inflation does not necessarily accelerate when unemployment falls below NAWRU, and today NAWRU guides neither American nor Eurozone monetary policy.[7] Heimberger & Kapeller (2017) highlight the cyclical nature of NAWRU estimates, which makes it difficult to interpret the NAWRU as purely structural unemployment. They show that the CAM produces NAWRU values that are largely driven by cyclical variables like capital accumulation or real-estate prices. This finding is not surprising, given that the NAWRU, as well as participation rates, hours worked, and total factor productivity are currently projected based on their past trends, instead of capturing an underlying productive potential.

Second, the method fails to promote sustainable government finances. The purpose of cyclically adjusting budget balances is to allow for countercyclical fiscal policy while safeguarding the long-term sustainability of public finances. If working as intended, the adjustment allows for fiscal stimuli in bad times, while demand their withdrawal when the economy is running at or above potential.

The CAM however leads to *pro*cyclical fiscal policy: As it essentially averages recent historical GDP to calculate potential output,[8] potential output is larger following boom years and smaller following years of weak economic performance. That leads to more fiscal space when the economy is already performing well and less space when it is already weak. This contradicts the aim of countercyclical fiscal policy.

Beyond the specific issues with calculating potential output, it may generally be questioned whether an approach focused on no new borrowing in the medium term is still effective at limiting debt levels in a world where monetary policy hits the effective zero lower bound, government yields are very low and growth sluggish.[9] Against that background, Jason Furman and Lawrence Summers (2020) claim governments cannot afford *not* to undertake fiscal expansions today.

Third, the current CAM lacks democratic legitimacy. European fiscal rules and their implementation in national law constrain sovereign legislatures in one of their most fundamental rights, the right to determine the budget. As the German expert for constitutional law Stefan Korioth (2021) puts it: "Every decision for or against a new public debt issuance is a political decision that must be justified and substantiated"[10]. Thus,

[7] See Hazell et al. (2021) or Federal Reserve (2021). The US Federal Reserve has switched to a maximum employment goal, the ECB never committed to any particular estimate of potential output or of the natural rate of unemployment.

[8] Even though recent modifications have started to address this issue, for instance via the introduction of the NAWRU anchor.

[9] For more detail on this argument, see for instance Sigl-Glöckner et al. (2021).

[10] Own translation of the original: "Jede getätigte oder nicht getätigte Neuverschuldung ist eine politische Entscheidung, die begründet und verantwortet werden muss.".

whatever constraints are imposed on fiscal policy should have a scientifically robust justification and not rely on arbitrary assumptions or discretionary judgement by technical experts.

However, recent studies demonstrate that the current method is not robust: even small variations to the statistical models may have large effects on the resulting size of fiscal space.[11] With the current setup under the SGP, discretionary decisions on statistical parameters with significant impact on fiscal space are delegated to technical experts in national civil services and European authorities. In other words, the current fiscal framework requires technical experts to make political choices. This makes it non-trivial to reconcile the current procedure with the fiscal sovereignty of national legislatures.

This is not just a theoretical challenge. The current procedure contravenes national political priorities (as well as those of the EU): Article 3 (2) sentence 2 of the German constitution for instance requires the state to "promote the de facto realisation of equal rights between women and men" and to "work towards the elimination of existing disadvantages"[12]. Article 3 (3) TEU as well as Article 8,9 and 153 (1) (i) TFEU state a similar intent for the EU[13]. The CAM, on the other hand, defines output potential of the German economy as a state where female labour participation is nine points lower than for men. If the economy operates beyond this potential – for instance because female labour participation increases beyond the historical average – the government has to run a surplus to cool the economy down again, i.e. reduce employment. The CAM today is thus in conflict with agreed-upon political goals, without a robust justification for why this should be so.

Summing up, the European method suffers from three fundamental weaknesses: it is at odds with the latest research; via procyclicality it fails to promote sustainable public finances; and by forcing technical experts to make political decisions, it challenges the fiscal framework's overall democratic legitimacy. We address these drawbacks in the following section and propose a reform.

3. A way forward

Building consensus on a broad reform of the fiscal rules will take time. Yet, to enable a strong recovery from the Covid crisis, to facilitate climate, energy, and security investment, and to prevent a repetition of past errors (in particular overly tight fiscal space and uncertainty hampering economic recovery), it makes sense to take pragmatic first steps

[11] Marco Fioramanti (2016) shows that the Italian NAWRU would have been up to one percentage point higher in fall 2017 if the model had used the variance of 2014.

[12] Own translation, original: "Der Staat fördert die tatsächliche Durchsetzung der Gleichberechtigung von Frauen und Männern und wirkt auf die Beseitigung bestehender Nachteile hin".

[13] Consolidated Versions of the Treaty on European Union and the Treaty on the Functioning of the European Union.

to address the three issues identified above. Hence, the following proposal provides a temporary and immediate remedy to curb the most pressing shortcomings of the CAM. We suggest modifying three inputs to the calculation of potential output. Our suggestions are derived on the basis of the following three criteria:

(1) In the absence of unambiguous empirical evidence for certain inputs to the method, they should be decided upon through a democratically legitimated political process. Political decision-makers may be supported by an independent technical institution, which illustrates different options and their implications, but the numerical decision should rest with elected officials.
(2) Current research findings should be incorporated into the model. If new insights challenge fundamental aspects of the CAM as it currently exists, (1) applies.
(3) New inputs to the estimation should be in line with democratic consensus. Wherever such a consensus exists, it should be reflected in the method's input parameters, since fiscal law always stands in the service of a polity's democratically determined fundamental priorities.[14]

Since we do not propose any changes to the CAM's basic structure here and only call for a modification of some of its inputs, the proposed reform can be implemented within the current framework of the EU-COM for calculating the output gap. The quantitative implications of our proposal are illustrated by simulations for a selection of seven EU member states, representing different regions, as well as economic and labour-market structures (see below).

3.1 From NAWRU to full employment.

Given the difficulties associated with estimating the NAWRU, we suggest replacing it with an input that better approximates the objective of full employment.

A labour market whose capacity is fully utilized is the key to long-term sustainable government finances (see Sigl-Glöckner et al. 2021). As there is no commonly agreed-upon definition of full employment, we approximate this state by correcting the unemployment rate for the share of long-term unemployed people: While there will always be frictional, short-term unemployment in a market economy, under full employment there should not be people who are actively looking for a job, but permanently fail to find one. This may still be a conservative measure as the level of frictional unemployment also varies with the business cycle.[15] Figure 1 compares conventional NAWRU estimates to our measure of full employment and actual unemployment rates for seven EU member states. Full-employment unemployment rates turn out to be generally lower than the NAWRU. When comparing the grey and the blue lines in the seven charts below, note that quantitative

[14] See Korioth (2012).
[15] See Barnichon & Figure (2011).

underutilisation of the labour market is more pronounced in Southern member states. It plays less of a role in Germany, Lithuania, the Netherlands, or Poland.

Figure 1: Unemployment under full capacity utilisation (in %)

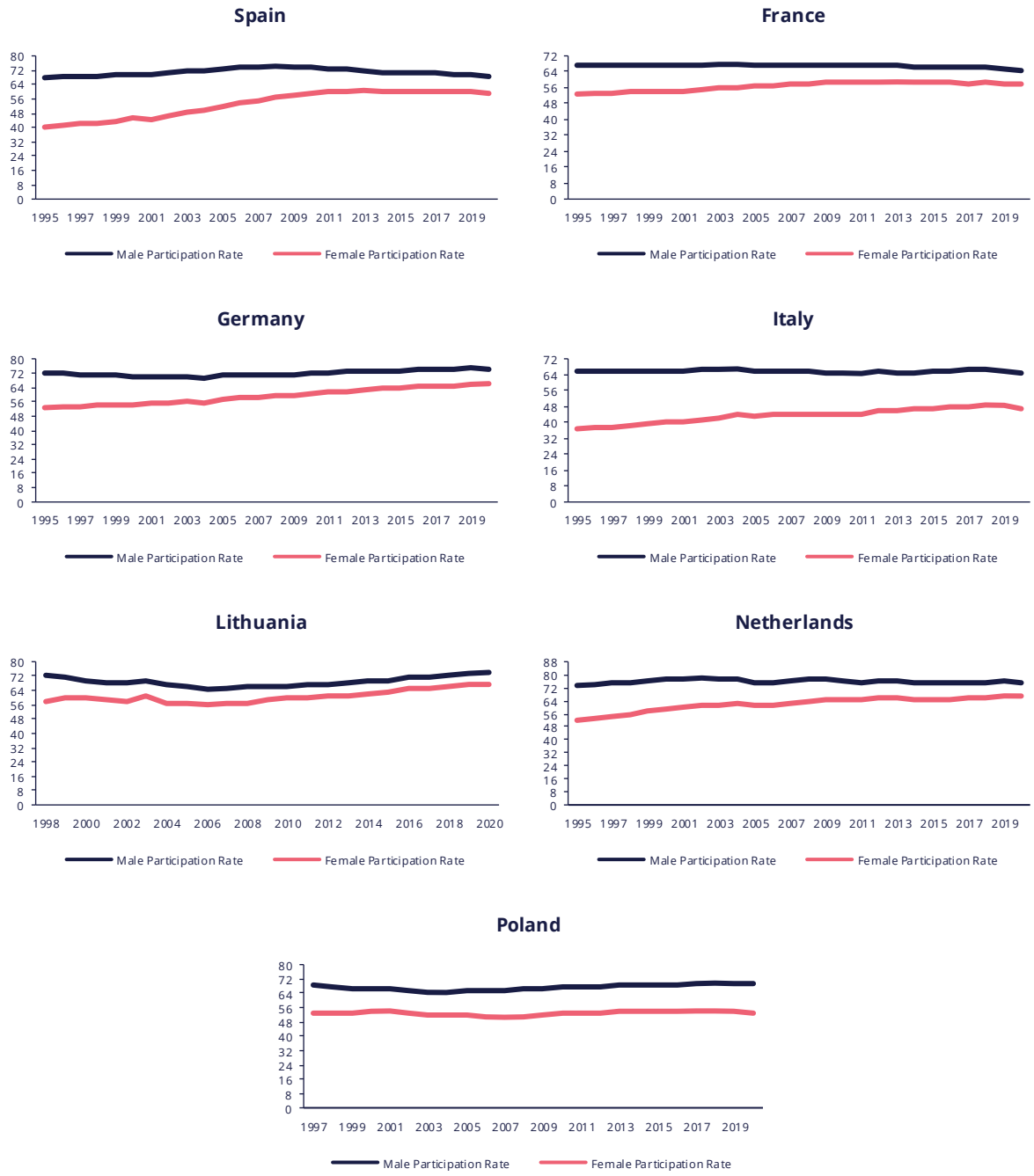
Source: Eurostat

3.2 Equal opportunities to participate in the labour market.

A second proposed quantitative modification relates to the differential in labour-market participation by sex. As mentioned, the TFEU obliges all European institutions to maintain and promote equal opportunities of men and women, encompassing the labour market.

Figure 2 shows male and female participation rates, i.e. the share of employed and unemployed men/women relative to their part of total population at working age (between 15 and 74 years), for seven countries. It is evident that, albeit generally converging, women still participate in the labour market to a lesser extent than men.

Figure 2: Participation rates by sex (in %)



Source: Eurostat

While the gap between participation rates in 2019 amounted to only 5.7 percentage points in Lithuania (like in other Northern European countries), it stood at 15.7 and 17.6 points in Poland or Italy, respectively. We propose that a country's labour potential should account for how much more could be produced if women were better integrated into the labour market. In order to keep the approximation moderate, we estimate potential GDP based on a closure of participation gaps up to a target of 5 percentage points, which is the average spread already achieved in Finland, Lithuania, and Sweden, the countries with the lowest values in 2019.[16]

3.3 Eliminate involuntary and unnecessary part-time work.

Finally, we consider hours worked. In 2019, almost 20 percent of EU employees worked part-time with an average of 20.8 hours per week.[17]

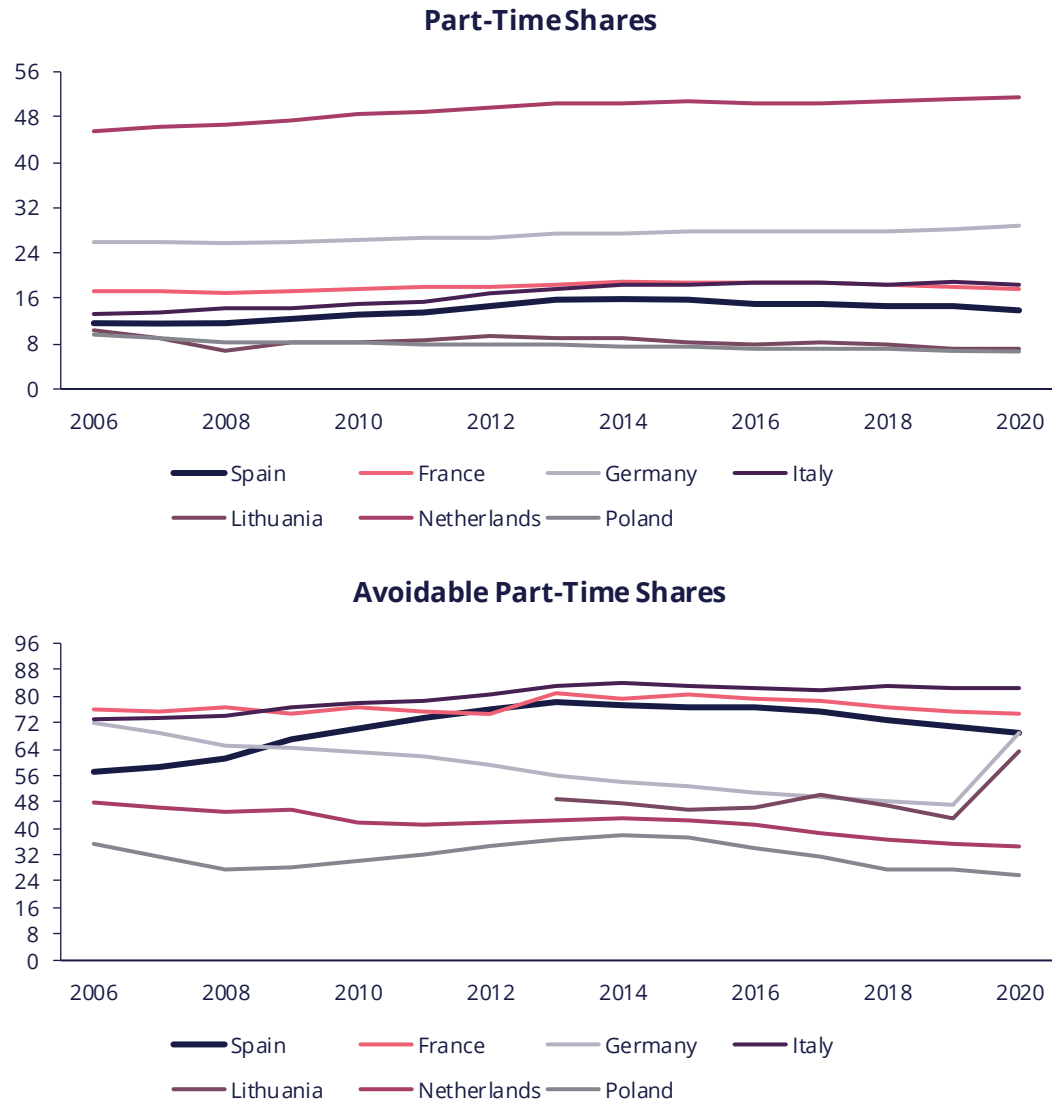
It is impossible to derive general results about the extent of underemployment in Europe. However, we may approximate this figure by means of reported reasons for part-time work from the labour force survey.[18] In this survey, respondents can indicate one of the following reasons for working part-time: unavailability of full-time jobs, looking after children or incapacitated adults, other personal or family reasons, undergoing education or training, illness and disabilities, or other. We consider the first three as representing involuntary or unnecessary – in short: avoidable – part-time work. Figure 3 provides an overview of the prevalence of part-time employment in general, and the avoidable share for the seven countries in our sample.

Part-time work does not play a major role in Southern Europe but is very prevalent in the Netherlands and Germany. Even so, more than two thirds of part-time employment in Spain, France or Italy is avoidable, mostly driven by the full-time jobs not being available. Care duties, in contrast, play a more prominent role in Germany and the Netherlands, leading to considerable amounts of avoidable part-time. In Poland, part-time work is both a minor issue and barely evitable. Admittedly, not all workers identified by this procedure are willing to increase their working time, but, given that more granular data is lacking, we believe this to be a reasonable first approximation. Moreover, we take the limitations in data availability into account by assuming, for those in avoidable part-time according to

[16] We suggest using a five percentage point gap instead of a three percentage point gap (which we put forward in our paper on "a new fiscal policy for Germany", Sigl-Glöckner et al., 2021) and on the cyclical adjustment of the budget (Schuster at al., 2021) as we use a different underlying age range due to better data availability (15 to 64 in our papers on Germany and 15 to 74 in the European context).
[17] Source: Eurostat (LFSA_EPGAED, LFSA_EWHUN2).
[18] We use data from Eurostat (LFSA_EPGAR).

our definition, an expansion of only five hours per week in the estimation of potential output.[19]

Figure 3: Part-time employment (in %)



Source: Eurostat

The three modifications just outlined replace questionable inputs that do not correspond with the goals of a consistent and sustainable fiscal policy yet feed into the current CAM. By replacing those inputs and thereby better reconciling the method with treaty-based EU

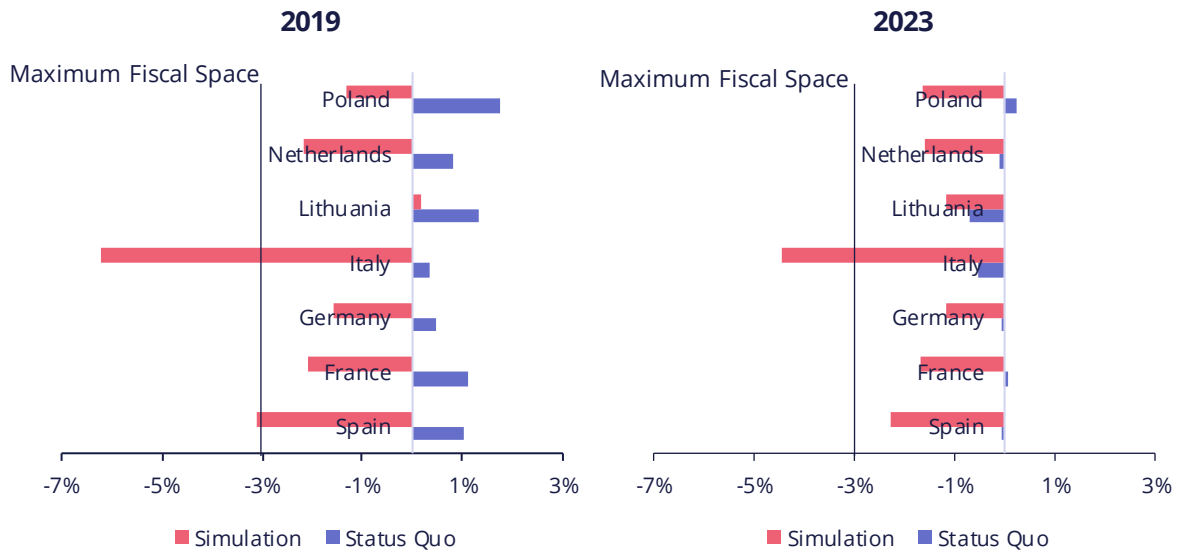
[19] We do not have European data on how many hours underemployed people would like to work more. For Germany, people who wish to work more hours, want to work for an additional ten hours a week on average (see Schuster et al., 2021).

political objectives, such as full employment and gender equality, we contribute to closing the gap between scientific evidence, coherent policy making, and the fiscal rules.

4. Quantifying our proposals' fiscal impact

Figure 4 shows the cyclically adjusted budget balances in percent of GDP resulting from the input modification for 2019 – the year prior to the Covid crisis – and 2023, when the fiscal rules are assumed to be active again. Using the current CAM, all countries' capacities were supposed to be fully, or even overutilized in 2019, so that fiscal space was highly constrained. By 2023, most countries are expected to have reached potential output again. If our measure of full labour-market utilisation is applied, by contrast, most of the member states were significantly below potential in 2019 and will continue to be so until 2023, which results in increased fiscal space. For our proposal to be compatible with the corrective arm of the SGP, we suggest capping fiscal space produced by the method at three percent of GDP.

Figure 4: Cyclical adjustments (in % of GDP)



Sources: European Commission, own calculations

At a country level, comparing Lithuania and Poland in 2019 highlights the difference between the current CAM and our approach: Lithuania was close to full employment, equal labour-market participation, and had little avoidable part-time work before the crisis, so our approach also only yields minimal additional space for deficit spending. For Poland on the contrary, a highly unequal integration of men and women into the labour market widens the output gap, even offsetting the effects of high employment and a low share of avoidable part-time.

Germany and the Netherlands both exhibit moderate shares of avoidable part-time employment and a moderate gap between male and female labour force participation in 2019, resulting in medium-size fiscal space close to two percent of GDP. For France, the

main drivers are excessive unemployment and the scarcity of full-time jobs. The latter applies even more so in Spain and Italy. Additionally, the Italian output gap is driven by a significant gap between male and female participation rates.

Looking forward, and as expected, our proposals result in more fiscal space than the current CAM for 2023 as well. However, comparing the 2019-vs-2023 differential internal to the simulation of our proposals with the differential internal to the current method is instructive. Under the current CAM, fiscal space for 2023 is larger than for 2019. In the simulation of our proposals, there is in fact less fiscal space for 2023 than for 2019 (with the exception of Lithuania and, to a small degree, Poland). The reason for this is the reduced procyclicality resulting from our proposals. In contrast, since the expected recovery after the Corona crisis – the EU-COM forecasts GDP growth of more than four percent per year in the EU until 2022[20] – increases potential output with the current CAM, output gaps appear to be larger, and fiscal space expands. The changes we propose would reduce this kind of procyclicality, both in downswings and in upswings.

Summing up, we argue that our proposal helps to reduce the impact of arbitrary statistical assumptions, reconciles fiscal surveillance with generally accepted objectives of national governments and the EU, and moves fiscal rules closer to effectively supporting sustainable government finances in the medium- and long-run by promoting full employment.

For our framework to be incentive compatible and produce more sustainable public finances, overall economic policies need to be aligned with achieving potential output. Hence, we also propose that governments in their Stability and Convergence Programmes need to lay out what they will do so their respective economies reach their potential. In case these explanations are missing or are not deemed to be convincing for certain input variables (e.g. why female labour-force participation should increase without any reform of the tax code or investment in child care), one could revert to extrapolating past trends for this variable.

In connecting potential output to policy, the preventive arm of the SGP would continue to enhance the link between fiscal rules and what actually makes government finances sustainable in the long term.

5. Conclusion

The current methodology for calculating cyclically adjusted budget balances suffers from a range of weaknesses. It does not reflect the most recent research insights; it suffers from procyclicality and hence undermines the medium- and long-run sustainability of public finances; and it forces technical experts to make political decisions that cannot be taken solely on the ground of technical considerations. Perhaps most importantly, the

[20] Source: Summer 2021 Economic Forecast, i.e. prior to the invasion of Ukraine and the concomitant downwards revision in growth expectations.

CAM as it stands is in conflict with accepted political goals such as full employment or equal labour market opportunities of men and women.

Responding to these weaknesses, we suggest an alternative specification of the method's labour potential input variable, via replacing NAWRU with full employment, past gender inequalities with a reasonable – if still imperfect – five percentage point gap, and filtering out involuntary and avoidable part-time. This represents no more than a small step in a longer reform process, leaving more fundamental issues untackled. But since no one knows the real potential output of the European economy, using an iterative procedure to approximate it may be the most suitable method. In addition, these proposals may help to provide a pragmatic answer to immediate reform needs for the European fiscal rules, until a consensus around more comprehensive reform, including possible legislative changes, has been achieved. Finally, it would also help better to align the fiscal rules with European core values, in particular gender equality.

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