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# Public spending reforms, austerity and trust in government: a synthetic control analysis of the EU-28

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## Public spending reforms, austerity and trust in government: a synthetic control analysis of the EU-28

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#### Abstract

Public spending reforms, especially when they influence the welfare state, aim to support macroeconomic stability and maintain good living standards. It is also politically important that citizens trust the institutions responsible for fiscal reforms. I analyse how trust in national government and the EU was affected by expenditure-based austerity interventions during the financial crisis and sovereign debt crisis. With a comparative case study approach covering the EU-28 member states, my findings from synthetic control models suggest that trust in the national government is considerably more sensitive to fiscal consolidation measures than trust in the EU. I also suggest that decisive reductions in the debt-to-GDP ratio are an important precondition for public trust in austerity. Furthermore, I do not find any effects of austerity on GDP growth. These results suggest that upcoming fiscal consolidation strategies in the post-Covid age should give high priority to macroeconomic stability while ensuring a favourable medium-term trajectory of household living standards.

**Keywords:** austerity, fiscal consolidation, public spending, political reform, welfare state retrenchment, trust in institutions

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#### Introduction

"We all know what to do. We just don't know how to get re-elected once we have done it."

Jean-Claude Juncker (2007), Prime Minister of Luxembourg and President of the Eurogroup. Juncker later served as President of the European Commission (2014-2019).

Maintaining a high level of trust from the general, voting public is essential for the political survival of democratic leaders. Trust becomes all the more important during times of crisis and uncertainty, when the decisions facing political executives may resemble a choice between the lesser of two evils. Decisions on public spending, and welfare state spending more specifically, undoubtedly create winners and losers – and the 'losers' in particular tend to move towards populist and anti-establishment parties (Baccini and Sattler 2024). Making the right decisions at the right time, and communicating them well to the public, is important for avoiding or managing the discontent that may arise among population groups experiencing short-term losses from these decisions.

Public spending in European Union (EU) member states is ultimately governed by the debt and deficit limits of the Stability and Growth Pact (SGP), which have been re-activated after their temporary suspension during the Covid-19 pandemic.<sup>1</sup> In member states exceeding or coming close to the 60% debt-to-GDP and 3% annual deficit thresholds, socially and politically heated discussions over budgetary austerity have been reanimated. Is it better to reduce public spending today, to avoid an even larger spending cut in the next year? Does the reduction of public debt as a percentage of gross domestic product (GDP) even *require* budget cuts, or can governments rely on GDP growth to keep the ratio constant?<sup>2</sup> How do government spending choices interact with public debt, GDP, and the incomes and living standards of citizens whose work and investment contributions make up that GDP? And finally, how do citizens – at both national and EU levels – judge the institutions responsible for these spending choices?

In this paper I assess how public trust, macroeconomic stability and living standards in the EU-28 countries were affected by expenditure-based austerity interventions applied between 2008 and 2016. Through the use of several European datasets including the Eurobarometer, EU-AMECO and EU-SILC, I apply synthetic control models to evaluate how public spending cuts during recessionary conditions influenced trust in the national government and the EU. My findings suggest that expenditure-based austerity influences trust in government through two channels: macroeconomic stability reflected in the debt-to GDP ratio and GDP growth, and household living standards measured as real disposable incomes. I find that trust in government is highest when expenditure-based austerity has a favourable impact on the trajectory of public debt to GDP: in

<sup>&</sup>lt;sup>1</sup> Communication from the Commission to the Council on the activation of the general escape clause of the Stability and Growth Pact, Brussels, 20.3.2020, COM(2020) 123 final.

Communication from the Commission to the Council on Fiscal policy guidance for 2024, Brussels, 8.3.2023, COM(2023) 141 final.

 $<sup>^{2}</sup>$  In the Report on the Future of European Competitiveness (Draghi 2024:19), the author makes the case that a substantive increase in productivity is required to re-invigorate GDP growth and therefore maintain domestic public debt on a sustainable trajectory.

member states such as Ireland, Latvia, Lithuania, the Netherlands and Sweden, fiscal consolidation measures successfully halted or reversed an expected growth in the debt-to-GDP ratio. In these countries, high trust in government was achieved despite short-term losses in real disposable household income at the median and bottom deciles: additionally, the short-term losses were offset by real incomes growth exceeding the counterfactual in the mediam term, approximately 2-5 years after the intervention.

My findings also suggest that trust in the national government is considerably more sensitive to expenditure-based austerity interventions than trust in the EU. Furthermore, I do not find any effects of austerity on GDP growth – either positive or negative. The overall implication is that governments planning their public spending strategies in the post-Covid age should give high priority to stabilising the debt-to-GDP ratio and ensuring a favourable medium-term trajectory of household incomes.

#### Context: stagnating growth and the squeeze on public spending

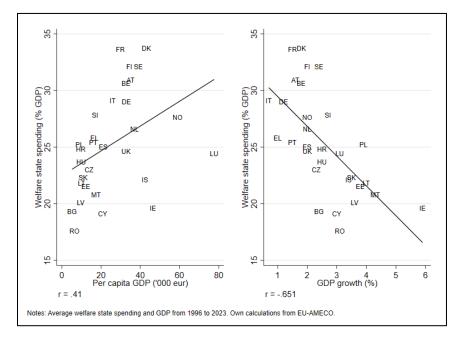
The basic functions of any government are to collect and spend revenues for the good of the population. I refrain from an exhaustive listing of government functions but note that one of the largest expense categories, especially in the European social market economies, is the welfare state. In 2023, public expenditures in the 'social/welfare state spending' category in the EU-28 ranged from 12.5% of GDP in Ireland to over 33% in Belgium, Finland and France.<sup>3</sup> Projected trends in fertility and ageing suggest ever-further upward pressures on the welfare state, as the ratio of people in working (and taxpaying) age to dependents will further deteriorate (European Commission 2023).

Authors remain optimistic that despite these pressures, the fiscal sustainability of welfare states can be guaranteed through the dual pillars of robust economic growth and extended working lives (European Commission 2023: 61ff.). However, in a time when prospects for growth are anything but certain, it is crucial that the existing mechanisms of social protection do not create a financial burden. The EU strongly supports the idea of active social policies, following the principles of 'social investment': strategically re-allocating parts of social expenditure, or providing new income sources for instance through the post-Covid Recovery and Resilience Facility (RRF), towards reforms that are expected to produce long-term advantages through high labour market participation and lower need for conventional income protection (Corti and Vesan 2023). In this sense, welfare state spending should *contribute* to economic progress and competitiveness. As the recent argument goes, the European social market economy is not complete without strong and dynamic welfare states (Hemerijck and Matsaganis 2024).

Figure 1 reaffirms the strong positive correlation between per capita size of the economy and the welfare state. Especially if leaving out Luxembourg whose GDP is somewhat skewed by the number of high-turnover companies headquartered in the small city-state, the high-income

<sup>&</sup>lt;sup>3</sup> Welfare state spending peaked in 2020-2022 due to the Covid-19 pandemic, energy crisis and cost-of-living crisis, but the numbers from 2023 have largely returned to an alignment with the pre-pandemic trends.

countries of Northern and Western Europe lead the way with up to a third of GDP devoted to social spending. However, the right panel of Figure 1 suggests that these countries have had the lowest rates of economic growth since the late 1990s. In Central and Eastern Europe (CEE), countries with low incomes and small welfare states have been catching up. But the established, high-income and high-spending welfare states have had less space for growth.



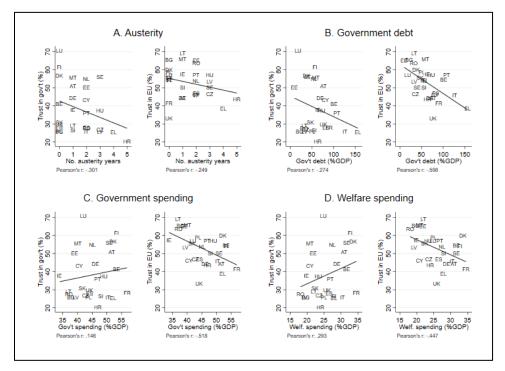
**Figure 1.** Welfare state spending, per capita GDP and annual growth in European countries, long-term averages from 1996 to 2023. Own calculations from EU-AMECO.

The apparent trade-off between the size of the welfare state and economic growth has been highlighted in the famous and well-versed argument of 'permanent austerity' (Pierson 1998; Horn and Jensen 2017). Welfare states are simultaneously facing two structural pressures: on the one hand, low or stagnating economic growth limits the fiscal space to increase public spending, or even to maintain it at present levels. On the other hand, population ageing requires further public or private spending on the welfare state, specifically on pensions and old-age care (European Commission 2023). If the demands for welfare state spending grow at a faster rate than the fiscal capacity of governments to raise revenues, the mathematical truth is that something has to give. Either the government has to make unpopular choices on refraining or cutting back public expenditure – the general strategy of austerity (Blyth 2013) – or they need to make up the deficit with borrowing, which adds to government debt.

Complicating the dilemma even further, government spending in EU member states is limited by the fiscal governance regime, chiefly the debt and deficit limits in the Stability and Growth Pact (SGP). Maintaining debt below 60% of GDP and annual government deficits under 3% of GDP are seen as important thresholds to maintain the fiscal stability of governments in the short and medium term. However, there is no shortage of academic, political, economic or public criticism to these rules. The great financial crisis and sovereign debt crisis in Europe demonstrated that tight adherence to the SGP during recessionary conditions can be as harmful as an excessively lax

approach towards public debt and deficits. Excesses on fiscal policy in either direction risk creating negative macroeconomic feedback loops that are challenging to break free from, especially for indebted member states using the euro (De Grauwe and Ji 2013).

When an unexpected crisis hits, low debt levels allow a sufficient buffer for governments to follow the basic Keynesian principle of counter-cyclical spending: running public-sector budget deficits and increasing public debt to maintain aggregate demand as the private sector runs cold. However, this pressure release valve may not be available for excessively indebted countries as creditors express doubts over their creditworthiness. Often the only choice left in this situation is expenditure-based austerity, as a strategy to reduce the debt-to-GDP ratio back to more manageable levels (De Grauwe and Ji 2013).



**Figure 2.** Scatterplots of trust in government and EU over austerity interventions, government debt to GDP, government spending and welfare state spending, averages from 2004 to 2023. Own calculations from Eurobarometer and EU-AMECO.

Maintaining a sustainable debt-to-GDP ratio is not only important to meet the letter of the SGP: evidence also suggests that citizens of more highly indebted countries are considerably less likely to trust their government or the EU, with a substantive loss of trust starting with the great financial crisis in 2009 (Foster and Frieden 2017). Figure 2 also confirms this picture, as a higher average debt-to-GDP ratio from 2004 to 2023 is strongly negatively associated with the share of citizens expressing trust in either their national government or the EU. Furthermore, citizens seem to express little trust for austerity as a debt-reduction strategy: in member states with a greater number of expenditure-based austerity interventions, defined here as a fiscal year with reductions in real government spending during negative GDP growth, trust in government and the EU is on average lower.

Austerity interventions and high debt-to-GDP ratios appear to have similarly negative bivariate associations with trust in both the national government and the EU. However, the picture is different when looking at the relationship between trust and government spending: in the bottom row of Figure 2, higher overall public spending and welfare state spending more specifically are associated with positive trust in the national government, but negative trust in the EU. This crossnational pattern of welfare Euroscepticism, driven by concerns related to downward social convergence, the division of member states into net contributors and net beneficiaries, and the strength of transnational solidarity in an evolving fiscal transfer union, is well corroborated by existing research (Chalmers and Dellmuth 2015; Baute et al. 2018; Eick and Leruth 2024).

The statistics laid out so far demonstrate that high debt-to-GDP ratios are unpopular. However, attempts at working down the debt ratio by expenditure-based austerity are also unpopular: especially if cost-saving measures impact the welfare state and its beneficiaries. Governments who find themselves in this scenario clearly face a choice between two evils: continuing on an unsustainable fiscal trajectory, or taking unpopular and uncertain saving measures in an attempted course correction. So, what does theory say about the effects of expenditure-based austerity on public trust in government, macroeconomic stability and living standards? Can we identify specific methods or socio-economic contexts where austerity is more or less likely to succeed? In other words, when and how should governments apply expenditure-based fiscal consolidation strategies to create the lowest possible number of socio-economic losers and minimise the loss of trust – or, even, to create the conditions for future growth and higher public trust following a successful implementation of reforms?

#### Welfare state reform under austerity: theory and hypotheses

Mark Blyth defines austerity as 'a form of voluntary deflation in which the economy adjusts through the reduction of wages, prices, and public spending to restore competitiveness, which is (supposedly) best achieved by cutting the state's budget, debts, and deficits' (Blyth 2013: 2). This definition highlights how even economists disagree on the causal relationships between the standard austerity measures – wage, price, and spending cuts – and their main intended outcome, the macroeconomic recovery from debt and deficit imbalances and the preservation of a favourable long-term economic outlook.

The intuition behind calls to exercise discipline in public spending is very straightforward: when public incomes and expenses do not balance out, either more taxes or less spending is required to achieve the 'black zero'.<sup>4</sup> Additionally, arguments in favour of 'expansionary austerity' suggest that excessive public spending risks eroding business confidence in the short-to-medium-run

<sup>&</sup>lt;sup>4</sup> The metaphor of the 'black zero', or the *Schwarze Null*, to describe government budgets that should never go into deficit, was a symbol of German ordo-liberal fiscal policy especially during Angela Merkel's chancellorship from 2005 to 2021. Following the emergency spending in 2020 and 2021 due to the Covid-19 pandemic, and the accession of Olaf Scholz as chancellor in late 2021, the German administration has however shifted its principles of debt and deficit aversion at both domestic and EU levels (Seelkopf and Haffert 2024).

economic prospects of a country, thereby crowding out private investment and harming economic growth (Alesina et al. 2015).

However, the aggregate effects of fiscal policy decisions in a political economy are rarely as straightforward as they may seem in theory. Public spending has direct effects on the aggregate economy: therefore adjustments to government incomes and expenses are rarely zero-sum calculations. Recent analytical work finds strong positive fiscal multiplier effects from public spending in the EU, particularly under recessionary conditions (Riera-Crichton et al. 2014; Deleidi et al. 2020). Poorly timed or targeted public spending cuts may therefore have greater negative spillover effects than the accomplished first-stage savings. Furthermore, savings from one part of public services easily result in greater expenditures further down the chain: for instance, providing less funding for preventative care or early screening of diseases demonstrably results in greater long-term healthcare expenditures when the funding gap leaves space for public health complications to develop further (Stuckler and Basu 2013).

Another important dimension in a political economy is public approval for government spending and austerity. According to economic voting theory, voters reward incumbent parties in a strong economic context, but withdraw their support when unemployment or inflation is high or economic growth is low (Fiorina 1978; Talving 2017). This leads to an analytical bias that must be accounted for. Since austerity is often implemented in an attempt to recover from an unfavourable economic situation, this implies that during the time when austerity measures are introduced, public opinion is likely to start off as critical towards the incumbent government, regardless of the degree of approval for austerity measures in themselves.

Furthermore, not all policy decisions that fit under the broad label of austerity are the same. The design of austerity methods also has a strong impact on their socio-economic effectiveness and public approval. Alesina et al. (2019) distinguish between expenditure-based and tax-based austerity: budget cuts vs. tax hikes, in simplified terms. Their main conclusion is that expenditure-based austerity is generally more effective and more tolerated by a majority of voters. However, there are a number of qualifications and downright objections to this thesis. Budget cuts to the welfare state rather unavoidably have negative short-term effects on beneficiaries, and voters are less likely to agree with austerity when the effects on vulnerable households are covered by the media (Ciobanu 2024). Public approval for austerity is lower when unemployment is increasing or when pursued under the demand of external creditors (Bojar et al. 2022). However, parties that are ideologically consistent in their messaging about expenditure-based austerity before and after elections, providing a clear *ex ante* plan and economic justification for spending cuts, are much less likely to be electorally penalised for following through with their plan (Alesina et al. 2024a,b). In this paper I will focus exclusively on expenditure-based austerity.

It is clear from the literature that we should not underestimate the capability of voters to accept short-term losses for long-term gains: especially in a situation where the elected government presents a credible plan for implementing expenditure-based austerity reforms. Indeed, Bremer and McDaniel (2020) show that during the sovereign debt crisis, several governments were elected specifically on the promise of short-term spending cuts. In countries such as France, Germany and the United Kingdom, austerity was tolerated to avoid breaching the spending limits in the SGP,

and ultimately to safeguard public finances and the welfare state from external interventions such as the corrective arm of the excessive deficit procedure.<sup>5</sup> The central issue with austerity therefore became its *scale* and *design*, rather than the general *principle* of balancing the books: rejecting the idea of budget discipline during the immediate aftermath of the sovereign debt crisis would have failed to assemble a winning majority of voters, even for centre-left parties (cf. Giger and Nelson 2013). Similar cases can be found in other member states such as Finland, where analysts suggest the centre-left SDP lost the 2015 elections because it failed to clearly articulate an expenditure-based austerity proposal if its rather optimistic predictions of economic growth failed to materialise during the upcoming session of Parliament (Grönlund and Wass 2016: 85-6).

Lastly, I highlight that expenditure-based austerity may influence trust in the national government differently than trust in the EU. It is rather common for national governments to portray the EU as a scapegoat, allowing blame-shifting for controversial or politically unpopular decisions from the member states to Brussels (Sommer 2020). Following from Figure 2, we may expect different national and EU-level trust responses to public spending and welfare state reforms in particular. National governments are least likely to impose budget cuts on programmes with large numbers of beneficiaries or well-organised interest and lobby groups, largely in fear of a political backlash taking the form of electoral losses or protests (Genovese et al. 2016). This force of embedded interests explains why welfare state benefits and old-age pensions in particular, despite being some of the largest single categories of public expenditure, are so politically difficult to reform even for governments experiencing heightened fiscal pressure (Breunig and Busemeyer 2012).

Austerity interventions rarely involve fundamental reforms to the welfare state unless these are encouraged by powerful external forces. Guardiancich and Guidi (2022) suggest that during the sovereign debt crisis, cost-saving pension reforms were only implemented in those member states who were under pressure from the EU fiscal framework, financial markets and external creditors to reduce public expenditures. In these cases, compliance with EU fiscal rules to maintain solvency in the common market was not only a scapegoat, but arguably the main point of political-economic leverage for otherwise unattainable welfare state reforms. However, the perceived lack of democratic accountability came at a cost. It is likely that expenditure-based austerity reforms implemented exclusively for fiscal reasons or in response to creditor demands caused a much larger loss of political trust than democratically agreed reforms (Bojar et al. 2022). Rather unnervingly, Gabriel et al. (2024) suggest that pushing through with expenditure-based fiscal consolidation may cause an increase in voting for extreme and anti-establishment parties.

#### Hypotheses

As the literature review demonstrates, the methods and objectives of expenditure-based austerity are nothing short of controversial. Reforming public spending to maintain favourable debt-to-GDP ratios and facilitate economic growth and competitiveness imposes both inter-group and inter-temporal trade-offs, which in turn influence trust in institutions responsible for austerity. I therefore pose the research question: does expenditure-based austerity influence public trust in

<sup>&</sup>lt;sup>5</sup> Guardiancich and Guidi (2022) make a similar observation regarding the effectiveness of the EU fiscal framework in driving social policy reforms in member states.

government more when it is *effective*, or when it is *ineffective*? More specifically, how do the effects of expenditure-based austerity on macroeconomic stability and living standards separately and jointly influence trust in government?

I hypothesise that public trust in governments pursuing austerity is driven by two separate mechanisms: first, since the theoretical objective of austerity is to achieve an improved macroeconomic situation by reducing public debt and encouraging growth, I expect voters to reward governments for accomplishing these aims, or penalise governments for failure.

Second, I also expect the impact of austerity on living standards to matter. Here, the most relevant proxy for living standards is household incomes. As we saw from the literature review, whether austerity interventions have positive or negative short-term effects on household incomes is fiercely debated, and in any case likely to be unequally distributed across income brackets. Beyond low-income households whose disposable incomes may be directly affected by reductions in welfare state expenditures, household incomes at the median depend rather more on how austerity interventions affect labour markets and economic growth more generally. Additionally, the medium and long-term income effects may well be different from the short-term effects, for instance if short-term spending cuts or disciplinary wage-setting policy have a positive long-term impact on domestic competitiveness (Höpner and Lutter 2018).<sup>6</sup>

|                               |          |  | nic stability (public debt<br>? growth)    |
|-------------------------------|----------|--|--|
|                               |          | Positive (debt reduction)                  | Negative (debt increase)                   |
| living                        | Positive | A. Full trust in government/EU             | B. Short-term trust,<br>long-term distrust |
| Effect on living<br>standards | Negative | C. Short-term distrust,<br>long-term trust | D. Full distrust in government/EU          |

**Table 1.** Stylised theoretical framework, effects of expenditure-basedausterity on public trust in government and the European Union.

Table 1 sketches out the hypothesised causal mechanisms. In this two-dimensional framework, the effects of expenditure-based austerity on macroeconomic stability and household living standards jointly determine the effects on trust in government and the EU. Furthermore, I hypothesise that the effects on macroeconomic stability and living standards can be either mutually reinforcing

<sup>&</sup>lt;sup>6</sup> As several authors suggest, especially for Eurozone members who have given up monetary policy independence which would permit some degree of interest rate flexibility to assist with relative competitiveness, the only remaining tools for strengthening price competitiveness are fiscal consolidation or encouraging social partners towards wage moderation (Johnston and Hancké 2009; Rathgeb and Tassinari 2022). This is why expenditure-based austerity and wage moderation go hand in hand especially within the Eurozone – with, perhaps, questionable implications for political trust (Armingeon et al. 2016).

(both 'positive' effects), conflicting (one positive, the other negative), or in the worst case scenario (both negative effects), mutually undermining trust in government and the EU.

At the mutually reinforcing and undermining corners of the 2x2 table, I expect that the effects on trust are unconditionally positive (Group A) or negative (Group D): in other words, that citizens' evaluation of austerity does not change over time. These patterns are rather intuitive: if fiscal consolidation influences both macroeconomic stability and living standards in similar ways, there is very little room to argue whether the intervention has been successful or unsuccessful.

However, it is very likely that expenditure-based austerity interventions create some trade-offs between macroeconomic stability and living standards. Moreover, the full effects of austerity may be seen with a time delay: most characteristically, with a negative short-term shock to incomes or living standards followed by predicted long-term gains (Alesina et al. 2024a,b). In these situations, predicting how public trust is affected is less straightforward.

First, I hypothesise that austerity interventions which are unable to deliver long-term macroeconomic stability will not be trusted by the public, even if the short-term effects are favourable (Group B). The management of economic and fiscal policies is a continuous process: therefore, if interventions designed to alter the course of an unfavourable macroeconomic trajectory fail to do so in a given year, the fiscal pressure to plan further interventions will be even greater in the subsequent year. Empirically, the difficulty of bringing debt and deficit trajectories back within the SGP thresholds was reflected in several member states spending protracted periods in the 2008-2016 window under fiscal surveillance mechanisms such as the excessive deficit procedure (Appendix A1). This 'kicking the can down the road' dynamic explains the hypothesised long-term distrust in government.

Lastly, if expenditure-based austerity is associated with reduced living standards or household incomes while also improving the macroeconomic situation through debt-to-GDP reductions or a positive growth effect, I expect the public to react with initial distrust which turns into a positive trust effect in the medium to long term (Group C). In terms of Alesina et al. (2024a), this is the 'delay' with which the economic benefits from fiscal consolidation take effect. Of course, the empirical challenge with demonstrating medium and long-term effects is that these become more difficult to link with a past intervention. My research design tackles this challenge by constructing long-term counterfactuals, in effect comparing each affected country with its hypothetical self where expenditure-based austerity was not applied.

#### Data and methods

I will test the theoretical framework with a large-n comparative case study methodology, covering all instances of expenditure-based austerity in the EU-28 member states from 2008 to 2016. There are many alternative ways of operationalising the frequency and intensity of austerity interventions, but all operationalisations rely on the definition of expenditure-based austerity as a deliberate government strategy of cutting public spending in order to reduce government deficits or debt (Alesina et al. 2019: 1). The widely-used fiscal consolidation dataset of Alesina et al.

(2024b) is based upon the classification of government spending plans for 16 OECD member states covering the period from 1981 to 2014. However, this dataset is insufficient for my purposes as it lacks coverage of Central-Eastern European (CEE) member states and the most recent, post-austerity years. Therefore I construct my own indicators of expenditure-based austerity in the EU-28 from the most recently available European datasets, including EU-AMECO for macroeconomic variables, EU-SILC for household incomes as a proxy for living standards, and Eurobarometer for trust in government and the EU.

I operationalise expenditure-based austerity at the country-year level as a reduction in real government spending from the preceding year, conditional on zero or negative GDP growth. Since I only use government spending statistics, I cannot infer the *intention* of governments to implement a cost-saving programme which is possible with the Alesina et al. dataset. However, a year-on-year reduction in public spending is, by definition, a spending cut. I only include real spending cuts during negative growth conditions to exclude two alternative situations where public spending may decline for non-austerity reasons: first, spending cuts during periods of economic growth may simply reflect regular counter-cyclical spending adjustments when automatic stabilisers such as unemployment benefit payments or commissioned public works are drawn down. While it may be reasonable to refer to such patterns in public spending as fiscal consolidation, they are perhaps better seen as the reversal of emergency measures rather than spending cuts *per se*. Second, to identify years with genuine spending cuts, I measure the changes in public spending net of inflation. This is crucial because governments are known to use indexation delays or freezes to achieve *de facto* spending cuts in a relatively obscure manner (Green-Pedersen et al. 2012).

This operationalisation leaves me with 35 expenditure-based austerity interventions in the 2008-2016 window, taking place in 17 different member states (Table 2). With the dataset ending in 2023, I also observe 6 expenditure-based austerity interventions in 2022 and 2023 following the Covid-19 pandemic and cost-of-living crisis, including in Austria and Germany where no austerity interventions were observed during the mid-2010s. However, I exclude austerity interventions during the 2020s from the statistical analysis based upon synthetic control modelling, as this time-series methodology requires observations from a sufficient number of post-treatment years to identify medium- and long-term differences in outcomes between the treated and counterfactual scenario. I also exclude Croatia 2009 and 2010 from the analysis as certain control variables are unavailable for these years. The final number of expenditure-based austerity interventions included in the analysis is therefore 33.

| Country | Year with expenditure-based austerity |
|---------|---------------------------------------|
| (AT)    | (2023)                                |
| CY      | 2012 2013                             |
| CZ      | 2009 2012 2013                        |
| (DE)    | (2023)                                |
| EE      | 2009 (2022)                           |
| EL      | 2010 2011 2012 2016                   |
| ES      | 2011 2013                             |
| HR      | (2009 2010) 2011 2012 2013            |
| HU      | 2009 2012 (2023)                      |
| IE      | 2012                                  |
| IT      | 2012 2013                             |
| LT      | 2009                                  |
| LV      | 2009 2010 (2023)                      |
| MT      | 2009                                  |
| NL      | 2012 2013                             |
| PT      | 2011 2012                             |
| RO      | 2009 2010                             |
| SE      | 2008 2009 (2023)                      |
| SI      | 2012                                  |

**Table 2.** Expenditure-based austerity interventions in the EU-28, 2004 to 2023.

Notes: EU-28 definition including United Kingdom (data for UK available until 2019). Expenditure-based austerity defined as real government spending reductions during a year with negative GDP growth. Interventions in brackets are excluded from statistical analysis.

#### Identification strategy

The challenge for identification of causal mechanisms, as with any empirical case study, is how to isolate the effects of specific government policies or public spending decisions from the exogenous variation and noise introduced by time-specific economic context. I will apply the synthetic control method (Abadie et al. 2010, 2015) to present a credible counterfactual for what would have happened to macroeconomic stability, household living standards and trust in government and the EU if expenditure-based austerity did not occur. This analytical strategy involves assembling a balanced panel of country and year observations from a group of sufficiently similar reference countries, from which I let an algorithm<sup>7</sup> construct a 'synthetic control' designed to match the treated country during the pre-treatment window.

<sup>&</sup>lt;sup>7</sup> I conduct the synthetic control modelling with the *synth* package in Stata 17.0: for further details on the algorithm for selection and weighting of countries from the donor pool, see Abadie et al. (2015). Code for the analysis will be made available in an online repository.

My sample contains a total of 28 countries (i = 28).<sup>8</sup> Let us call the treated country (i = 1), in which case the first stage of the synthetic control analysis involves estimating a linear regression for the country as actually observed according to Equation 1:

$$y_{1t} = \sum_{k=2004}^{t-1} \beta_m y_{(1k)} + \beta_j X_{1t} + \gamma_t \delta_1 + \mu_t + \varepsilon_{it} \qquad (1)$$

Outcome variables y correspond to three outcome categories: macroeconomic stability measured as the debt-to-GDP ratio and GDP growth, living standards measured as the bottom-decile and median disposable household incomes, and the share of Eurobarometer respondents expressing trust in the national government and the EU in the standard, annual survey rounds. Vector X includes observed country-level characteristics such as welfare state spending, real compensation per worker, Okun's misery index (sum of unemployment and inflation), the employment rate and the age of the incumbent government measured in years.  $\delta_1$  and  $\mu_t$  account for unobserved country- and year-specific factors as fixed effects, and  $\varepsilon_{it}$  is the idiosyncratic error term. Following Abadie et al. (2010: 17), I also include the lagged mean value of  $y_{1t}$  during the pre-intervention period.

For the counterfactual, synthetic control unit, I let an algorithm estimate a weighted average of European countries across the covariates X following Equation 2, such that the linear combination best matches the pre-treatment trends for the treated country: in other words, to minimise the root mean squared prediction error between the treated country and its synthetic control for each year prior to the treatment (Abadie et al. 2015: 502). The weights  $w_i$  satisfy the two conditions  $0 \le w_i \le 1$  and  $\sum_{i=2}^{28} w_i = 1$ . It is also possible that some countries in the donor pool are not at all included in the synthetic control ( $w_i = 0$ ).

$$\sum_{i=2}^{28} w_i y_{it} = \beta_m \sum_{i=2}^{28} (\sum_{k=2004}^{t-1} w_i y_{ik}) + \beta_j \sum_{i=2}^{28} w_i X_{it} + \gamma_t \sum_{i=2}^{28} w_i \delta_i + \mu_t + \sum_{i=2}^{28} w_i \varepsilon_{it}$$
(2)

The unbiased treatment effect on the estimator of interest  $\theta$  can then be calculated as the difference between the observed, treated country and its synthetic control for any given year *T* following the treatment (so  $T \ge T_0$ ), in accordance with Equation 3.

$$\theta = y_{1T} - \sum_{i=2}^{28} w_i^* y_{iT} \quad (3)$$

For practical applications, the outcomes from synthetic control analysis are easiest to display graphically. This also serves as a validity check for the counterfactual unit: we would expect the time series for the treated country and the synthetic control to be identical prior to the start of austerity interventions at  $T_0$ , with post-treatment differences attributed to the effects of expenditure-based austerity (see eg. Armingeon et al. 2016; Rubolino and Waldenström 2020). Since the main hypothesis suggests that the effect of expenditure-based austerity on trust is conditional on the effects of austerity on macroeconomic stability and living standards, I will group the results from my 33 separate case studies in 17 countries according to these latter outcomes. This will allow me to assess whether the post-austerity trajectories of debt-to-GDP, economic

<sup>&</sup>lt;sup>8</sup> Data for the United Kingdom is available until 2019 inclusive; UK is excluded from the donor pool after 2020.

growth and household disposable incomes 'correctly' predict the trajectories of trust in government and the EU.

One key assumption for synthetic control modelling is that the countries in the donor pool are unaffected by expenditure-based austerity: thus allowing the construction of a valid counterfactual that predicts what would have happened to outcomes in the treated country in the absence of a treatment. While the counterfactuals in comparative case studies are rarely flawless, I try to construct a valid non-austerity donor pool by including all and only those EU member states without expenditure-based austerity interventions in either  $T_0$ , one year before or one year after. This allows me to increase the donor pool from the 10 member states without any austerity interventions in 2008-2016 to a range from minimum 15 ( $T_0 = 2011$ ) and maximum 27 ( $T_0 = 2016$ ), helping to reduce the root mean squared prediction error for several country cases.

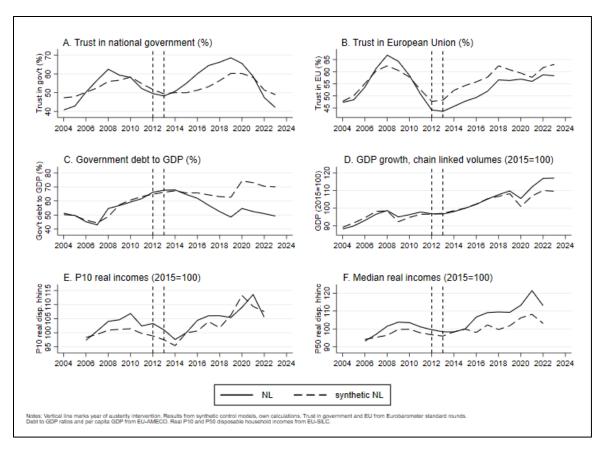
#### Results

Figure 3 displays the synthetic control model results for all of my six outcome variables in the Netherlands, as an illustrative country example. Due to space limitations, I will display the 'raw' results for the rest of my 17 treated countries in Appendix A2. Table 3 presents a summary of the key results from all 33 expenditure-based austerity interventions in 17 countries.

First of all, visual inspection of trends as exemplified in Figure 3 permits a graphical validity check for the synthetic control. The observed trend in the treated country (solid line) should be as close as possible to identical with the synthetic control (dashed line) during the pre-treatment period. The treatments, or expenditure-based austerity interventions, are displayed as vertical dotted lines. Given sufficiently similar pre-treatment trends, any plausible divergence between the solid and dashed lines in the post-treatment period may then be interpreted as the causal effect of the intervention (Abadie et al. 2015: 498).

In the case of the Netherlands, the most salient treatment effects are visible in panels A and C (trust in national government and the debt-to-GDP ratio). It appears that after two consecutive years of real spending cuts under recessionary conditions, the debt-to-GDP ratio stops increasing in 2014 before turning onto a downward trajectory stronger than that predicted by the non-austerity counterfactual. At the same time, trust in government rebounds after the second expenditure-based austerity intervention in 2013 at a rate exceeding the counterfactual, and remains elevated until the post-Covid-19 period. In panel D, the counterfactual trend in GDP growth matches the observed trend for the entire pre-Covid period: this would suggest that expenditure-based austerity had neither a positive nor a negative effect on growth, despite a favourable effect on the debt-to-GDP ratio.

Meanwhile, observed trust in the EU falls beneath the counterfactual just before the first expenditure-based austerity intervention in 2012. Both trends align after bottoming out in 2013, but the post-treatment trust remains at lower levels than the counterfactual until the end of observations. Nonetheless, both observed and counterfactual trust in the EU rebound in similar ways after the end of expenditure-based austerity in 2013.



**Figure 3.** Effects of expenditure-based austerity on trust, macroeconomic stability and household living standards in the Netherlands, results from synthetic control models.

Lastly, the pre-treatment model fit appears weakest for household incomes (panels E and F). Observed incomes are rather more elevated than the synthetic control in the pre-treatment period, followed by post-treatment convergence at P10, and median incomes outperforming the counterfactual. This strong, medium-to-long-term performance in median incomes coincides with a reduced debt-to-GDP ratio and increased trust in government. Therefore it seems plausible for living standards to bounce back after a short-term shock associated with austerity: I will return to this conjecture when summarising the results from all country cases.

In Table 3, I summarise the results from all 17 country cases. I highlight whether the observed short-and-medium-term trajectories of the debt-to-GDP ratio, living standards and trust in the national government and EU are better, worse, or similar to the counterfactual trajectory constructed by the synthetic control. Results for GDP growth are omitted from Table 3 since nearly no medium-to-long-term effects are identified: I display and discuss this outcome further in Appendix A3.

Since the hypothesis suggests that trust in national government and the EU is conditional on the effects of expenditure-based austerity on macroeconomic stability and living standards, I compare the observed trust trajectories against how trust is expected to respond according to the hypothesis.

| Country <sup>T</sup>                        | Treatm.<br>year(s)                            | Econ. stability                       | Living stds.   | Group<br>(hypoth)                              | Trust<br>(hypoth)  | Trust (obs.)                                  | Aligns<br>with<br>hypoth? | Notes   |   |
|---|---|---------------------------------------|--|--|--|---|---------------------------|---|---|
| , CZ  | 09 112, 13                                    | better                                | worse -> better  | C -> A   | worse -> better  | worse -> better*                              | YES*                      | *Only short-term trust aligns with hypothesis. In the medium-term, observed trust increases faster than the counterfactual, but fails to catch up.                  | he medium-term,<br>I, but fails to catch        |
| EE  | 60,   | better                                | worse -> better  | C -> A   | worse -> better  | better  | YES                       | Only long-term trust aligns with hypothesis.  |   |
| , UH  | 21, 60.                                       | better                                | worse -> better  | C -> A   | worse -> better  | better  | YES                       | Only long-term trust aligns with hypothesis.  |   |
| , VI  | 01, 60,                                       | better                                | worse -> better  | C -> A   | worse -> better  | worse -> better                               | YES                       |   |   |
| Ε   | ,12   | worse -> better                       | worse -> better  | D -> A   | worse -> better  | worse -> better                               | YES                       |   |   |
| ,<br>N                                      | ,12   | worse -> better                       | worse -> better  | D -> A   | worse -> better  | better  | YES                       | Long-term trust strongly aligns with the hypothesis. In the short-term, trust in government improves even slightly before the debt reduction takes effect.          | In the short-term,<br>he debt reduction         |
| LT  | 60,   | worse -> better                       | worse -> better  | $D \rightarrow A$                              | worse -> better  | worse -> better                               | YES                       |   |   |
| SE ,  | 60, 80,                                       | better                                | worse  | C  | worse -> better  | better  | YES                       | Only long-term trust aligns with hypothesis.  |   |
| IS  | ,12   | worse                                 | no effect  | B/D  | worse  | worse   | YES                       |   |   |
| , CY  | ,12,13  | worse                                 | worse -> better  | $D \rightarrow B$                              | worse  | worse   | YES                       |   |   |
| , TI  | ,12,13  | worse                                 | worse -> better  | $D \rightarrow B$                              | worse  | worse   | YES                       |   |   |
| ,<br>,                                      | ,11,12<br>,13                                 | worse                                 | worse -> better  | D -> B   | worse  | national: worse<br>EU: better                 | YES                       | Only trust in national government aligns with hypothesis.   | lesis.  |
| , Tq  | ,11   | worse                                 | worse -> better  | $D \rightarrow B$                              | worse  | worse -> better                               | YES                       | Only short-term trust aligns with hypothesis.   |   |
| ,<br>ES                                     | ,11,  | worse                                 | worse -> better  | D -> B   | worse  | worse -> better*                              | YES*                      | *Only short-term trust aligns with hypothesis. In the medium-term, observed trust increases faster than the counterfactual, but fails to catch up.                  | he medium-term,<br>I, but fails to catch        |
| RO ,  | 01, 60,                                       | worse                                 | worse  | D  | worse  | worse   | YES                       |   |   |
| , ,<br>EL                                   | 11, 01, 12, 12, 11, 12, 12, 12, 12, 12, 12, 1 | worse                                 | worse  | D  | worse  | worse   | YES                       |   |   |
| MT  | 60,   | no effect                             | no effect/ worse   | none   | (no effect)  | no effect                                     | NO<br>EFFECT              | Successful debt-to-GDP reduction in 2011, without expenditure-based austerity, associated with strong positive trust effect: consistent with Group A of hypothesis. | expenditure-based<br>t: consistent with         |
| Group A<br>Group B:<br>Group C:<br>Group C: | A:<br>b: W<br>b: BF<br>BEF macr               | BETTER<br>WORSE macro<br>BETTER macro | macroeconomic stabi<br>macroeconomic stabi<br>macroeconomic stab | stability, BE<br>stability, BE<br>stability, W | Group A: BETTER macroeconomic stability, BETTER living<br>Group B: WORSE macroeconomic stability, BETTER living stands<br>Group C: BETTER macroeconomic stability, WORSE living stands<br>Groun D: WORSE macroeconomic stability. WORSE trust in sovernment/EU | living<br>standards<br>standards<br>rnment/EU | standards<br>-> I<br>-> ^ | TTER trust in<br>TTER trust in  | government/EU<br>government/EU<br>government/EU |

Table 3. Main results table, effects of expenditure-based austerity on macroeconomic stability, living standards and trust in government and the

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First, countries are clearly divided into two groups on the debt-to-GDP outcome: compared to the country-specific counterfactual, the debt-to-GDP ratio *improves* in half of the treated countries after the expenditure-based austerity intervention, whereas it *worsens* in the other half. This division is also strongly reflected in the hypothesised and observed effects on trust in national government and the EU: all countries with a long-term reduction in the debt-to-GDP ratio also see a long-term improvement in trust, and all countries where the debt ratio fails to improve in the long term see worse trust than the counterfactual. This strongly suggests that credible public spending plans to ensure macroeconomic stability are essential for preserving trust in government. However, the findings on living standards indicate that time and income dynamics are also at play.

In the Netherlands, Ireland and Lithuania, the reduction or stabilisation of the debt-to-GDP trajectory occurs with a 1-2 year delay after the austerity intervention: in all other countries, the post-treatment improvement or weakening is nearly instantaneous. This brief time-lag between the implementation and outcomes of expenditure-based austerity also means I fail to find perfect reallife examples of the hypothesised "Group A" (top-left quadrant in Table 1), where public spending cuts have instant positive effects on debt to GDP, household living standards and trust in the government/EU all at once. Empirically, the most consistent pattern among countries with effective debt reductions involves a short-term negative shock to real household disposable incomes, followed by a recovery in the subsequent 2-5 years. As countries move from the hypothesised "Group C" (negative effect on living standards, positive on the debt ratio) towards "Group A" (positive effect on both), trust in government and the EU also tends to shift from worse to better. Sweden is perhaps the only example of a pure Group C country, where trust in the national government instantly improves as expenditure-based austerity maintains a stable the debtto-GDP ratio against a projected increase, despite rather persistent negative income effects. This is a strong expression of public trust for a government programme aiming towards macroeconomic stability, even at a cost to living standards.

The bottom of the results table includes countries where expenditure-based austerity fails to improve the trajectory of macroeconomic stability. Short and medium term time-lags are again involved, making it challenging to find pure empirical examples of the hypothesised groups. In most of these countries, at least two years of expenditure-based austerity take place: moreover, the "worsening" of the debt-to-GDP ratio is usually the result of debt running away from a stable, counterfactual level during the first intervention year, before settling at a heightened level with the second intervention. Household incomes also tend to follow a two-stage path, with an immediate downward shock followed by recovery in a 3-6 year window.<sup>9</sup> Although most countries therefore shift from Group D to Group B, the joint effect on trust remains negative: if the debt-to-GDP ratio does not recover to a stable pre-austerity trajectory, citizens bearing the cost of the intervention with a short-term reduction in living standards tend to lose trust in government and the EU.

Overall, these results suggest that the effect of expenditure-based austerity on macroeconomic stability matters more for citizens' trust in the implementing government than the effect on living

<sup>&</sup>lt;sup>9</sup> In Greece, real incomes stay beneath the counterfactual all the way until 2020; in Romania, the underperformance of median incomes until 2015 is followed by an extremely strong upwards spike, perhaps partially attributable to issues with data quality over time (Trindade and Goedemé 2020).

standards. Trust in government and the EU can also withstand certain short-term income losses from expenditure-based austerity, if the fiscal consolidation regime is followed in the medium term by a recovery of incomes, growth and fiscal stability. The findings from 16 of my 17 country cases are consistent with this multi-dimensional hypothesis: additionally, in the case of Malta, I tend to find null effects rather than effects going *against* the hypothesis. Therefore, the effects of expenditure-based austerity on macroeconomic stability, living standards and trust in government and the EU do not contradict my theoretical framework in any of the 17 member states where such interventions occurred during the 2008-2016 window.

#### Robustness checks

Another factor accounting for the responsiveness of public trust to expenditure-based austerity might be specific government programmes which are subject to or spared from the intervention. In particular, cuts targeting the welfare state might influence both living standards and citizens' perception of the government more directly than general spending reductions dissipated across several functions of government, resulting in an above-average loss of trust. For robustness, I therefore replace the expenditure-based austerity indicator with a measurement of welfare state spending cuts during recessionary conditions. In the 2008-2016 period, only 10 'welfare state austerity' interventions took place in 8 countries, compared to 33 interventions observed for general public spending: additionally, all countries subject to welfare state austerity are also covered by the general indicator. Three of the welfare state austerity interventions are followed by an improvement in macroeconomic stability and trust;<sup>10</sup> the other five, with a worsening on these indicators.<sup>11</sup> These findings again suggest that favourable socio-economic trajectories are essential for maintaining public trust in fiscal consolidation. Public trust in government can tolerate a short-term reduction in welfare state spending only if this leads to a medium or long-term improvement in macroeconomic stability and living standards.

Lastly, my results are robust to alternative model specifications, specifically the exclusion of countries with an oversized weight in the synthetic control unit making up each country-specific counterfactual, using 0.8 as the cut-off point. These results are available upon request.

#### Conclusions

Managing the welfare state responsibly in a time of economic and fiscal pressures requires much more than mere political arguments for better and more comprehensive social protection. Strong welfare states are perhaps the crowning achievement of the European social model; indeed, one could even argue that providing everyone with the basic means for living life in dignity is a moral duty for rich and advanced democracies (Marchal and Marx 2024). But at the same time, the resources that governments use for providing welfare today should not undermine their fiscal capacity to keep providing welfare for future generations: after carrying societies and labour

<sup>10</sup> HU2012; IE2012; LV2010

<sup>11</sup> CY2014; EL2013; HR2011; PT2011-12; SI2012-13

markets over a crisis, re-stabilising the patterns of public spending, living standards and economic growth quickly becomes the next priority. In the present day, as geopolitical risks remain elevated while the playing field for competitiveness is continuously restructured, there can be no doubt that strategic public expenditures – including in skills, jobs, productivity and effective social protection – at the national and EU levels are required to complement and encourage private investment (Draghi 2024: 1, 15). Harmonious relationships between the private and public sector, between social protection, employment and growth are at the heart of the European social market economy: we cannot have one without the other.

In this paper I have analysed the macroeconomic, social and political impact of expenditure-based austerity interventions applied by EU member states in response to the financial crisis and sovereign debt crisis, from 2008 to 2016. These crucial tests of European solidarity and the EU social model have of course been extensively analysed. The ambitious policy response to the Covid-19 pandemic a decade later, centred around the welfare state both at domestic and increasingly at EU levels, furthermore demonstrated why public spending to preserve jobs, protect the unemployed and maintain aggregate demand during an unprecedented economic shock can prevent socio-economic imbalances from escalating (Madsen 2023). Moreover, the curious resilience in employment, social protection and poverty trends coming out of the pandemic and cost-of-living crisis in spite of comparatively weak economic growth demonstrates that everything cannot be left to the market: automatic stabilisers exist for a reason (European Commission / DG EMPL 2024). Under conditions of fiscal scarcity, this is all the more reason to ensure that public spending is targeted, relevant, and effective in the medium and long term.

My findings from 33 case studies of expenditure-based austerity in 17 member states, analysed with synthetic control models, suggest that it is possible to implement a fiscal consolidation programme without sacrificing citizens' trust in the national government and the EU. The most important condition is that reductions in public spending clearly and decisively contribute towards better macroeconomic stability: preventing an increase in the debt-to-GDP ratio or accomplishing a downward trajectory. Since I am unable to find any effect of public spending cuts on GDP growth, it therefore transpires that successful fiscal consolidation works through surplus budgets allowing a genuine reduction in the level of public debt. Citizens can even tolerate a short-term reduction in living standards, if it helps to carry macroeconomic stability over the crisis – provided that the fiscal adjustments result in expectations-beating incomes growth in the medium term. Specifically, my modelling suggests that positive incomes growth in a 2-5 year post-intervention window is crucial for maintaining trust in government. Contrasted to the length of the electoral cycle, well-timed public spending reforms may therefore bear fruit in sufficient time for decision-makers attempting to maximise their trust and political support prior to the next election.

I accept that few voters, and even fewer politicians, wish to make their name talking about budget cuts and fiscal consolidation. Lessons from "the dismal science" do not make for good political campaigns. I am also not suggesting that budget cuts are always, or even most of the time, the answer: the lessons from the two preceding decades have made it obvious that ambitious and well-targeted public spending is required to keep societies running during socio-economic crises, and to minimise their fiscal, social and political consequences. The important counter-cyclical function

of public spending is also quantified in the overwhelmingly positive fiscal multipliers (Deleidi et al. 2020).

However, I am suggesting that greater public spending during bad times must be counter-balanced by saving during good times: governments are better off maintaining stable debt-to-GDP ratios, and working down the accumulated deficits, to keep the option of emergency Keynesianism available when the next unexpected crisis hits. When expenditure-based austerity is decisive, appropriately targeted and well-communicated, it does not have to harm public trust in government. Instead, citizens (and voters) are likely to approve of actions leading to socioeconomic recovery.

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### Appendix A1. Expenditure-based austerity interventions and years spent under an active Excessive Deficit Procedure.

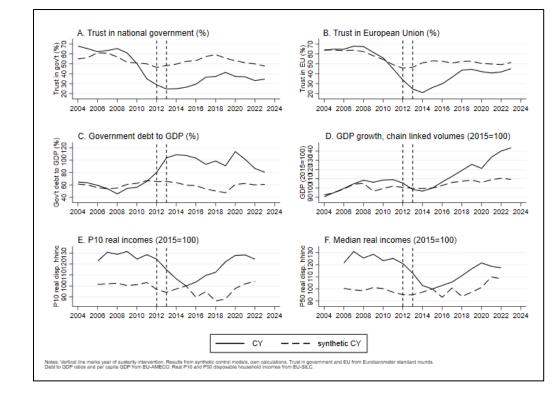
| Country | Years with expenditure-<br>based austerity | Years in EDP                         |
|---------|--|--------------------------------------|
| AT      | (2023)                                     | Dec 2009-Jun 2014                    |
| BE      | none                                       | Dec 2009-Jun 2014                    |
| BG      | none                                       | Jul 2010-Jun 2012                    |
| CY      | 2012 2013                                  | Jul 2004-Jul 2006; Jul 2010-Jun 2016 |
| CZ      | 2009 2012 2013                             | Jul 2004-Jun 2008; Dec 2009-Jun 2014 |
| DE      | (2023)                                     | Jun 2007-Jun 2012                    |
| DK      | none                                       | Jul 2010-Jun 2014                    |
| EE      | 2009 (2022)                                | none                                 |
| EL      | 2010 2011 2012 2016                        | Jul 2004-Sep 2017                    |
| ES      | 2011 2013                                  | Apr 2009-Jun 2019                    |
| FI      | none                                       | Jul 2010-Jun 2011                    |
| FR      | none                                       | Jun 2003-Jan 2007; Apr 2009-Jun 2018 |
| HR      | (2009 2010) 2011 2012 2013                 | Jan 2014-Jun 2017                    |
| HU      | 2009 2012 (2023)                           | Jul 2004-Jun 2013                    |
| IE      | 2012                                       | Apr 2004-Jun 2016                    |
| IT      | 2012 2013                                  | Jul 2005-Jun 2008; Jan 2010-Jun 2013 |
| LT      | 2009                                       | Jul 2009-Jun 2013                    |
| LU      | none                                       | none                                 |
| LV      | 2009 2010 (2023)                           | Jul 2009-Jun 2013                    |
| MT      | 2009                                       | Jul 2004-Jun 2007; Jul 2009-Dec 2012 |
| NL      | 2012 2013                                  | Jun 2004-Jun 2005; Jan 2010-Jun 2014 |
| PL      | none                                       | Jul 2004-Jul 2008; Jul 2009-Jul 2015 |
| PT      | 2011 2012                                  | Sep 2005-Jun 2008; Jan 2010-Jun 2017 |
| RO      | 2009 2010                                  | Jun 2009-Jun 2013; Apr 2020-present  |
| SE      | 2008 2009 (2023)                           | None                                 |
| SI      | 2012                                       | Jan 2010-Jun 2016                    |
| SK      | none                                       | Jan 2004-Jun 2008; Jan 2010-Jun 2014 |
| UK      | none                                       | Jan 2006-Oct 2007; Jul 2008-Dec 2017 |

**Appendix Table A1.** Expenditure-based austerity interventions and excessive deficit procedures in the EU-28, 2004 to 2023.

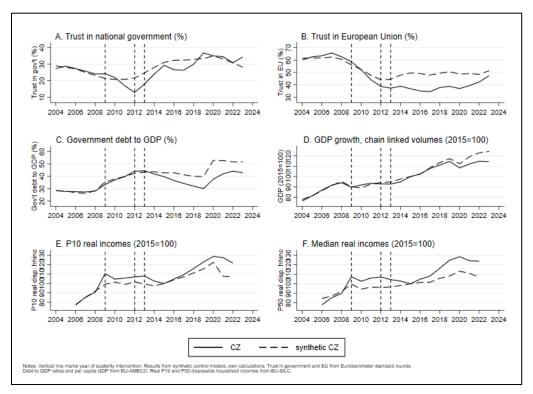
Notes: EU-28 definition including United Kingdom (data for UK available until 2019). Expenditurebased austerity defined as real government spending reductions during a year with negative GDP growth. Interventions in brackets are excluded from statistical analysis.

#### Appendix A2. Country-specific results graphs, predictions from synthetic control models.

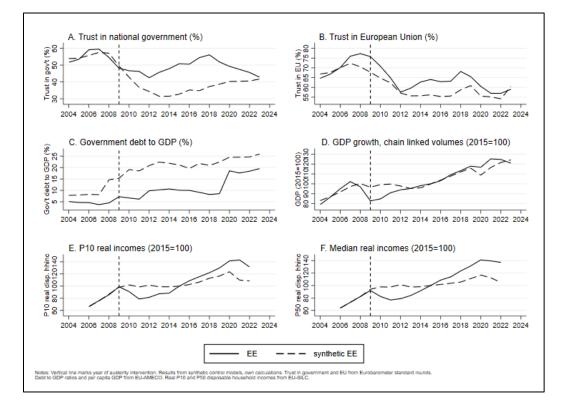
#### 1. Cyprus



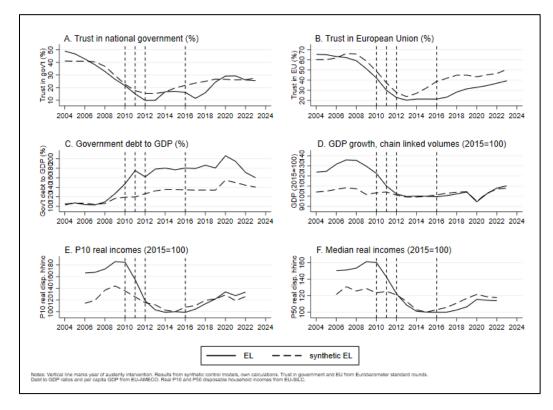
#### 2. Czechia



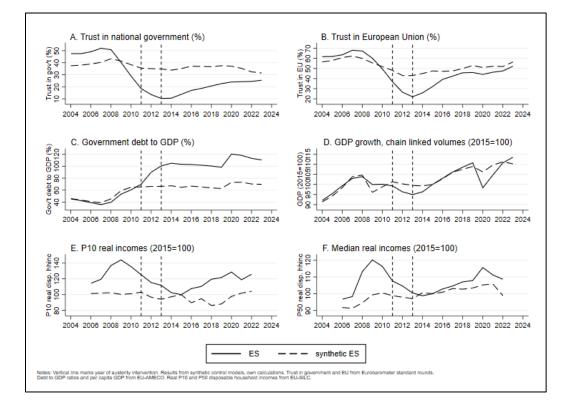




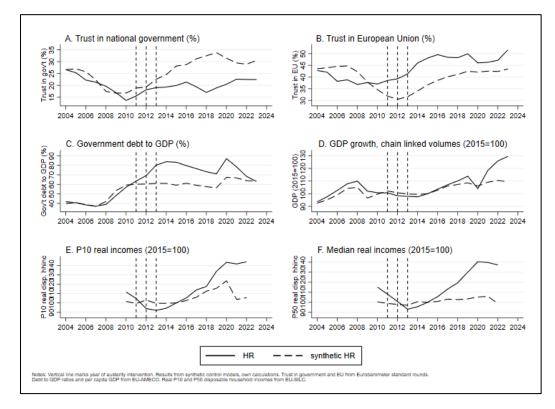
#### 4. Greece



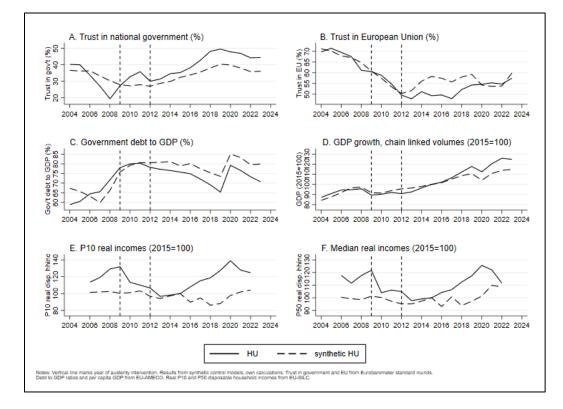




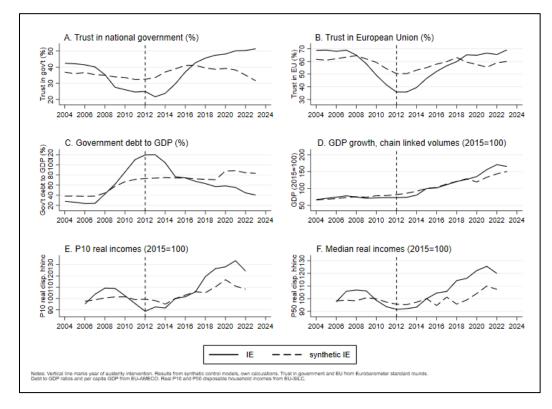
#### 6. Croatia



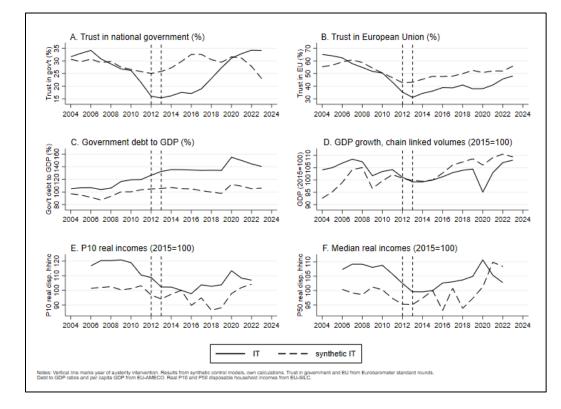
#### 7. Hungary



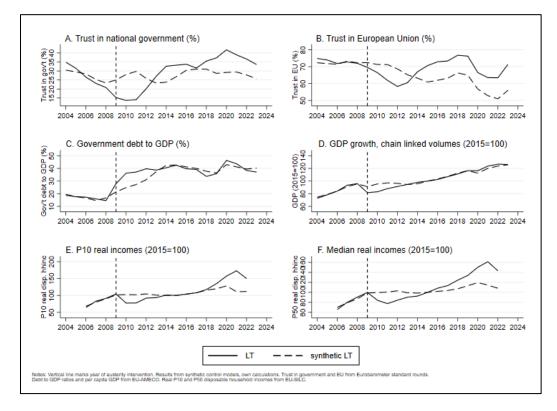
#### 8. Ireland



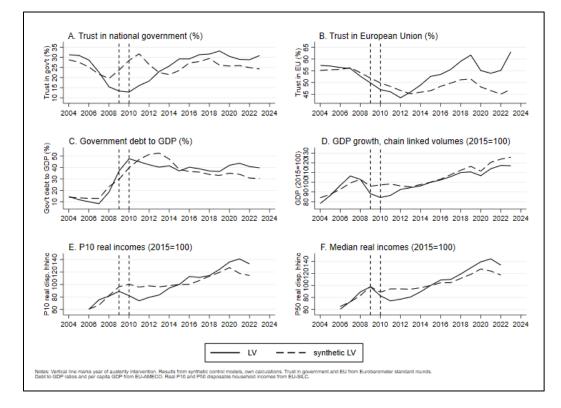




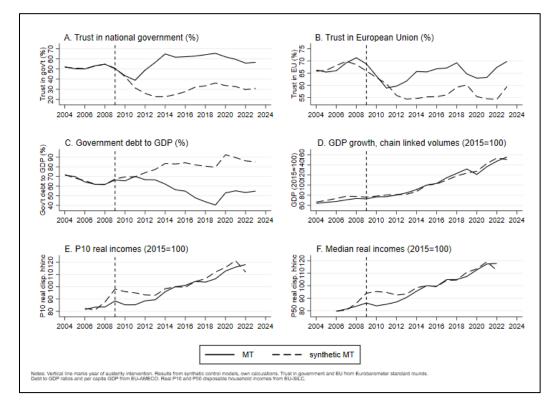
#### 10. Lithuania



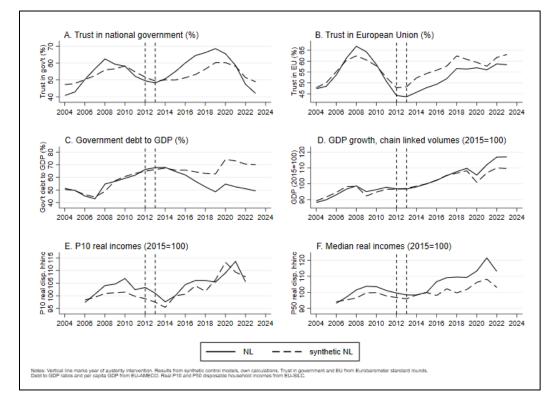




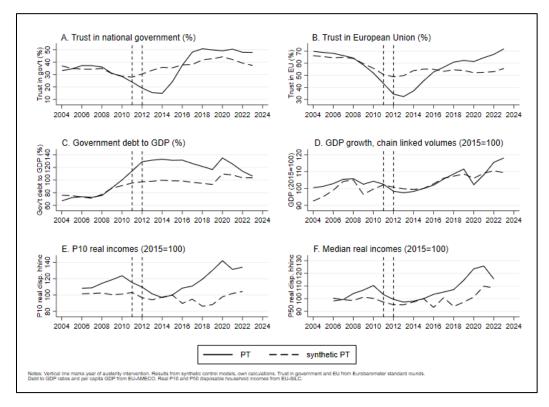
#### 12. Malta



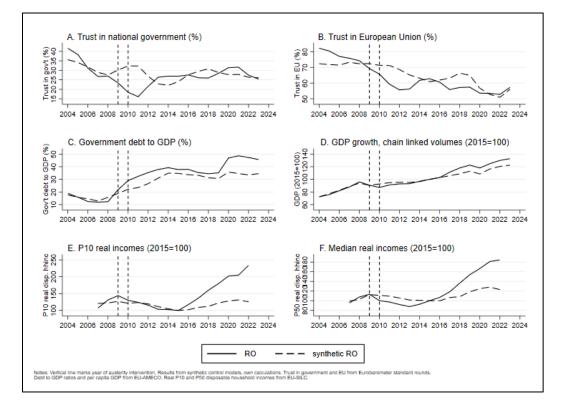
#### 13. Netherlands



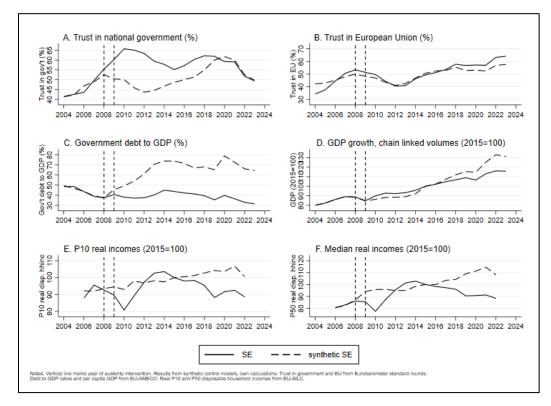
#### 14. Portugal



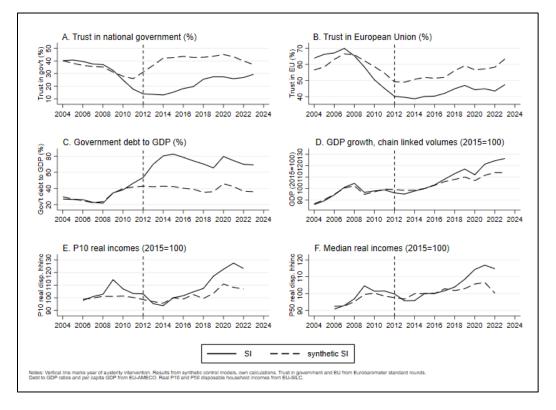
#### 15. Romania



#### 16. Sweden



#### 17. Slovenia



#### Appendix A3. Expenditure-based austerity and the results for GDP growth.

Across the synthetic control models, GDP growth is the least sensitive outcome to expenditurebased austerity interventions. In 11 of the 17 treated countries, there is no meaningful difference between the observed and counterfactual growth trends: or if any short-term divergence can be identified, it tends to be very small (to the effect of 1-3 index points) and underperforming the counterfactual.

In the six countries where meaningful treatment effects can perhaps be identified, growth underperforms the counterfactual in four of them. In Estonia and Lithuania, the downward shock in GDP growth begins to underperform the counterfactual already 1-2 years prior to the first expenditurebased austerity intervention: in these countries, the response is for the downward spiral in GDP growth to halt before catching up to its pre-shock trend. Still, growth does not exceed the counterfactual in the medium or long term.

In Spain and Latvia, the first of two expenditure-based austerity interventions is more clearly associated with a decline in GDP growth, before GDP again stops declining and turns towards an increasing trajectory with the second intervention. Similar to Estonia and Lithuania, the eventual catch-up does not result in counterfactual-beating growth rates.

Finally, in Cyprus and Sweden there is some indication of the second expenditure-based austerity intervention resulting in expectations-beating medium-term growth performance. These findings still have to be taken with reservations: in Cyprus, the growth trajectory is negative in the first two post-treatment years before turning upwards. It is therefore likely that explanatory factors other than fiscal consolidation are at play. And in Sweden, the immediate positive GDP growth effect after expenditure-based austerity in 2009 is contrasted against very sluggish counterfactual growth.

The relative lack of meaningful analytical findings for GDP growth, with the plausible exception of Sweden whose export-driven growth model is arguably more receptive towards fiscal austerity than the demand-led Southern European growth models (Hübscher and Sattler 2022), concurs with other research analysing the effects of public spending cuts on growth. In particular, Fragetta and Tamborini (2019) find that expenditure-based austerity interventions during the same time window studied in this paper had a negative short-term growth effect which dissipates to zero in the medium to long term (in other words, not turning into a positive growth effect above the non-austerity counterfactual). These findings stand in sharp contrast to the frequently made political argument, suggesting that public spending cuts in themselves will lead to better growth performance. Maintaining debt-to-GDP ratios at sustainable levels is important for growth and political trust in institutions, and sometimes this can require targeted fiscal consolidation measures. But cutting for the sake of cutting does not seem to have any favourable effects on growth – on the contrary.

#### References

- Fragetta, Matteo and Tamborini, Roberto (2019), 'It's not austerity. Or is it? Assessing the effect of austerity on growth in the European Union, 2010-15', *International Review of Economics and Finance*, 62, 196-212.
- Hübscher, Evelyne and Sattler, Thomas (2022), 'Growth models under austerity', in Luciano Baccaro, Mark Blyth, and Jonas Pontusson (eds.), *Diminishing Returns: The New Politics of Growth and Stagnation* (Oxford: Oxford University Press), 401-19.