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Estimating the effect of the EMU on current account balances: A synthetic control approach

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ABSTRACT

The European sovereign debt crisis wrought major political and economic damage on the European Monetary Union (EMU). This led to a reassessment of the pre-crisis period of economic growth and stability in the EMU, shifting attention to the macroeconomic imbalances that emerged between member states, especially those in current account balances. This paper uses macroeconomic data on OECD economies and a new statistical approach for causal inference in observational studies—the synthetic control method—to estimate the effect of the EMU on the current account balances of individual member states. This 'counterfactuals' approach provides strong evidence that the introduction of the EMU was responsible for the divergence in current account balances among member states in the run-up to the euro crisis. The results suggest that the EMU effect operated through multiple channels and that fundamental changes to the institutional framework of the EMU may be required to safeguard the currency union against a reemergence of dangerous external imbalances in the future.

1. Introduction

The European sovereign debt crisis (hereby referred to as the euro crisis) put severe economic and political strain on the European Monetary Union (EMU) and even cast doubt on the future of the wider European project. The no-bail-out clause enshrined in the Treaty of Rome (1957) was broken multiple times, harsh austerity measures plunged the periphery of the currency union into a prolonged recession and political tensions rose both within and between member states.[1]

The euro crisis prompted a reassessment of the EMU, which had been labeled a "resounding success" by the European Commission (2008, p. 3) after its first decade. When countries joined the EMU and adopted the euro they relinquished control of monetary policy to the European Central Bank (ECB) who assumed responsibility for stabilizing member state economies following economic disturbances. While the ECB achieved its main policy goal—average euro area inflation was just above the Bank's 2% target between 1999 and 2008—, the narrow focus on average inflation masked significant divergence among member states. The period after the introduction of EMU up until the euro crisis was characterized by differentials in inflation, but also in growth, real exchange rates and current account balances (Carlin, 2013; Lane, 2006).

This paper focuses on the current account imbalances that emerged among EMU member states prior to the euro crisis. On the tenth anniversary of the EMU in 2008, current account balances ranged from −14.5% of Gross Domestic Product (GDP) in Greece to 5.6% of GDP in Germany.[2] The current account balance is defined as the trade balance (export minus imports) plus net interest

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[1] The Treaty of Rome was signed in March 1957 and is officially known as the Treaty establishing the European Economic Community (TEEC). For more information on EEC/EU treaties, see: http://europa.eu/eu-law/decision-making/treaties/index_en.htm.

[2] Source: IMF World Economic Outlook database, October 2015.

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and profit receipts from abroad (Carlin and Soskice, 2015, p. 352). It captures inflows and outflows of both goods and services and investment income. Iversen et al. (2016) show that the EMU's current account imbalances had a distinct geographical pattern, with the southern European economies (and Ireland) amassing substantial deficits and the northern European economies amassing substantial surpluses, and that they were self-reinforcing, with the northern economies trade surpluses being reinvested into the fast-growing southern economies (see also Hall, 2012).

If a country is running a current account deficit it signals that they are a net borrower from the rest of the world. Persistent current account deficits therefore signal rising external indebtedness, which can reflect the accumulation of government debt (as in Greece and Italy), private sector debt (as in Ireland and Spain), or a combination of the two (as in Portugal). Sizeable external deficits can pose serious economic problems. To the extent that they reflect the overheating of the nontradables sector they can damage the competitiveness of the export sector. This problem is particularly acute in a currency union (such as the EMU) because of the inability to devalue the nominal exchange rate to restore competitiveness. Large current account deficits also make economies more vulnerable to external economic shocks because of the risk of a sudden stop in the capital inflows financing the deficit (Lane, 2012).

The global financial crisis of 2008–09 shook financial market confidence, making investors reluctant to lend to the EMU's deficit countries and pushing up their government bond yields (Sturm, 2011; von Hagen et al., 2011). This escalated into a sovereign debt crisis due to unique features of the EMU; the lack of a credible lender of last resort and the lack of a banking union (De Grauwe, 2013; Iversen et al., 2016; Moro, 2014). However, it is clearly no coincidence that the countries that on average ran current account deficits during the first decade of EMU—Italy, Ireland, Spain, Greece and Portugal—were those that later became embroiled in the euro crisis (Brancaccio, 2012; Carlin, 2013).

This paper investigates the extent to which the introduction of the EMU was responsible for the current account imbalances that emerged between member states in the 2000s. Given the role that current account imbalances played in the euro crisis it is crucial to the next generation of euro area policymaking that the part played by the EMU (and its institutional framework) in driving the imbalances is better understood. As Bertola et al. (2013) clearly state, any credible strategy for getting the EMU back on track needs to address the balance-of-payments crisis as well as the sovereign debt and banking crises.

My study uses a new statistical approach for causal inference in observational studies—the synthetic control method (Abadie and Gardeazabal, 2003; Abadie et al., 2015, 2011, 2010)—to investigate the effect of the EMU on the current account balances of individual member states. The method constructs counterfactuals, or 'synthetic control units', which show what would have happened to the current account balances of member states had they not joined the EMU. The synthetic control units are constructed as a weighted average of OECD countries outside of the EMU. The difference between the actual current account balances of member states and their synthetic counterparts provides an estimate of the causal effect of the EMU on the current account balances.

The synthetic control method has previously been used to assess the economic benefits of the EU (Campos et al., 2014), the impact of the Stability and Growth Pact on government debt in euro area countries (Koehler and König, 2015) and the effect of the EMU on GDP per capita (Fernández and Perea, 2015) and real exchange rates (El-Shagi et al., 2016). To the best of my knowledge, this is the first time this approach has been used to study the effect of the EMU on current account balances. The synthetic control method has several advantages over traditional cross-country regressions and comparative case studies. First, the counterfactuals-based approach allows us to directly estimate the 'causal effect' of the EMU on current account balances. Second, the control units are created using a transparent and data-driven procedure, which is often not the case in comparative case studies (Abadie et al., 2015, p. 2). Lastly, the method avoids the model-dependent extrapolation that is common in regression-based analyses (Abadie et al., 2015, p. 3; King and Zeng, 2006).

The rest of the paper is organized as follows. Section 2 reviews the theoretical and empirical literature on the EMU and current account balances. Section 3 sets out the synthetic control methodology. Section 4 presents the results of the synthetic control analysis. Section 5 presents a number of placebo and robustness checks. The final section provides some concluding remarks.

2. Literature review: the EMU and current account balances

A rich literature on the macroeconomic effects of the EMU has emerged since the euro was introduced in 1999. Previous studies have investigated the effect of the EMU on a whole range of economic indicators, such as trade (Baldwin, 2006; Baldwin et al., 2008; Bun and Klaassen, 2007; Micco et al., 2003), foreign direct investment (De Sousa and Lochard, 2011; Petroulas, 2007), cross-border banking (Blank and Buch, 2007; Coeurdacier and Martin, 2009; Spiegel, 2009), real exchange rates (El-Shagi et al., 2016), GDP per capita (Fernández and Perea, 2015), and wage growth and unemployment (Grüner, 2010; Mikosch and Sturm, 2012). Mongelli and Vega (2006) provide an overview of the early literature on the effects of the EMU on economic performance, financial structures and product and labor market institutions.

A large number of scholars have also studied the effect of the EMU on current account balances. Starting with the theoretical side, the literature has identified three main channels through which the EMU contributed to current account divergence among member states. The first is the competitiveness channel. The EMU fixed exchange rates between member states and removed the ability of countries to devalue to restore external competitiveness. It is also well documented that the wage-setting institutions of EMU member states vary greatly in their capacity to restrain wage growth, particularly in sheltered sectors (Hancké, 2013; Johnston et al., 2014). The divergence in real unit labor costs among member states under EMU therefore led to differences in the price competitiveness of their products on world markets and the emergence of current account imbalances between the north and south of the currency union (Hall, 2014, 2012; Iversen et al., 2016).