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50 Years of Capital Mobility in the Eurozone: Breaking the Feldstein-Horioka Puzzle

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This paper, based on Camarero et al. (2022), assesses capital mobility for the Eurozone countries by studying the long-run relationship between domestic investment and savings for the period 1970-2019. Our main goal is to analyze the impact of economic events on capital mobility during this period. We apply the cointegration methodology accounting for endogenous breaks in the long-run saving-investment relationship that coincide with relevant economic events. We find a downward trend in the saving-investment retention since the 70s for the so-called "core countries", whereas this trend is not so evident in the peripheral, where the financial and sovereign crises (i. ex. ERM crisis, German unification, Euro debt crisis...) have had a more substantial impact. Our results also indicate that the original euro design had some flaws that remain unsolved.

In this research, we seek to measure capital mobility in the EU over the period 1970-2019 accounting for the different stages of the EU financial integration. The econometric methodology is based on the tests proposed by Kejriwal and Perron (2010) that allow us to identify if there is a long-term relationship between domestic savings and investment as well as its stability by the endogenous identification of potential breaks. Moreover, we test for cointegration using tests allowing for multiple structural breaks in the coefficients as proposed by Arai and Kurozumi (2007) and Kejriwal (2008). Finally, for the cases where we find cointegration between the two variables, we estimate the model including the breaks to assess if the relationship between domestic investment and saving (the slope parameter) has changed over time. In order to check for the robustness or our results we implement two additional estimations. First, we test for cointegration in a panel for different groupings using the MG/PMG estimators and,

second, we apply rolling window regressions to assess the evolution of the saving retention parameters over time. One of the main benefits of the econometric methodology is that we are not imposing exogenously the breaks (that could bias the analysis), as they have been obtained endogenously as a result of the econometric analysis instead.

The EU is a natural test for capital mobility because there are no barriers neither to capital nor to goods mobility. In case capital mobility remains persistently low, we should conclude that there are other reasons for this result, probably the so called "home bias". Unlike most of earlier literature, which focuses on the price approach, we adopt the quantity one based on Feldstein and Horioka (1980); we consider this approach is especially suited to assess the evolution of capital mobility within a monetary union where external imbalances have been persistently growing up to the Great Recession. External disequilibria are caused by macroeconomic imbalances between national savings and investment (S and I, respectively, hereafter) in a context of financial liberalization. Persistent imbalances between national S and I would be at odds with the existence of a Feldstein-Horioka (FH hereafter) puzzle. In Figure 1, we plot the current account (CA) balance of the core and peripheral EU countries as the average value of the difference between domestic I and domestic S. The two groups of countries show a mirroring evolution.

Indeed, the visual inspection shows a diverging trend between core and peripheral countries, especially since the convergence of interest rates in the EU from 1995 to 1997 on the euro's launching eve. While eliminating currency risk and the broader and deeper financial markets would facilitate the financing of external deficits allowing domestic savings

to drift apart from domestic investment, the situation for the peripheral countries changed dramatically with the 2007 financial crisis and the subsequent adjustment afterwards.

Figure 1. Current Account
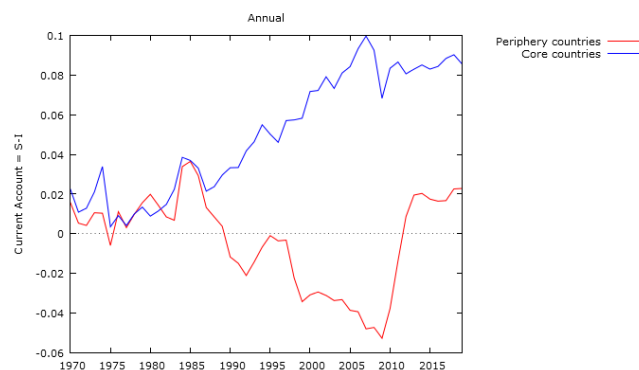
The main contributions of our analysis are, first, to identify different stages in the EU financial integration process up to the creation of the EMU; second, we analyze the evolution of the degree of capital mobility from the first years of the euro until the 2007 financial crisis distinguishing between core, peripheral and Central Eastern European countries; third, we can obtain a measure of the consequences of the financial crisis and the subsequent sovereign crisis on capital mobility; fourth, we have an appraisal of how the financial assistance programs affected the countries that were bailed out, and, finally, we can assess whether capital mobility increased after the European sovereign crisis.

Regarding our first question, our results confirm that the value saving-retention coefficient has, in general, been decreasing over time. This implies that the degree of capital mobility has been increasing during the 1990s after the Maastricht Treaty was signed, only to be affected by three critical events: the EMS crisis, the German reunification, and the USSR downfall.

Concerning the second question, our results confirm that European economic integration

encouraged capital flows from the core countries to the periphery (Ireland, Greece, Portugal, and Spain). Our results also show a larger beta coefficient in these countries, meaning that a high domestic saving rate is invested domestically.

Moreover, as a large proportion of foreign savings was invested in non-tradable sectors, such investment flows caused a boom and later created credit shortage after the 2007 financial crisis, ending with the sovereign crisis. As for the CEEC, in general, they have relatively low saving-retention coefficients after or even before their euro membership. Here, it is important to highlight two opposite cases: first, in Estonia (as in Spain), large capital inflows were invested in the non-tradable market (housing), causing a sizeable external disequilibrium. When the real state bubble burst, capital mobility decreased dramatically. Second, in the Slovak Republic, capital mobility was achieved after its EU membership, and despite the other CEEC, the financial crisis seems to have had no impact on capital mobility (such conclusion is in line with the quick recovery of the Slovak's economy).

As for the impact of the financial (2007) and sovereign crises (2010-2015) on capital mobility, we find heterogeneous effects depending on the type of country. The impact can be summarized as follows: while core countries show no impact of the crisis on capital mobility, with some exceptions, in the periphery, capital mobility has decreased. Moreover, some countries' capital mobility has not returned to its previous levels after the two crises.

IMPLICATIONS

The EU is a natural test for capital mobility because there are no barriers neither to capital nor to goods mobility. Our results confirm that the degree of capital mobility has been increasing during the 1990s after the Maastricht Treaty was signed, only to be affected by three critical events: the EMS crisis, the German reunification, and the USSR downfall. Although our results confirm that European economic integration encouraged capital flows from core countries to the periphery, the impact of the financial (2007) and sovereign crises (2010-2015) on capital mobility, has been heterogeneous, creating problems for the implementation of the policy mix in the Euro Area.

References

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