ECON 7188

Economic History Seminar

Review of:

The Borchardt Hypothesis:

A Cliometric Reassessment of Germany's Debt and Crisis During 1930-1932

Tai-kuang Ho, Kuo-chun Yeh, & Ya-chi Lin

Charles Harris

R08323053

27 OCT 20

Overview:

In their paper, Ho, Yeh, and Lin explore whether inter-war Germany could have mitigated their economic recession by adopting a different exchange rate policy. They apply an open-economy dynamic model to understand the possible effects of such a policy change. Through their analysis, Ho, Yeh, and Lin argue that there is insubstantial evidence for the popular belief that floating the German Reichsmark would have led to hyperinflation. Rather, they conclude that floating the currency would have reduced the decline of German gross domestic product (GDP) and employment during the depression, leading to a better economic outcome and possibly better a better political climate.

Significance:

This paper joins a body of literature which examines alternate policy options available to inter-war Germany. Specifically, the authors take up a question first posed by Knut Borshardt in 1983: whether or not an alternate foreign exchange policy might have mitigated the effects of the depression on Germany's economy. They also build upon other work by Schiemann (1980), Eichgren (1994), and Holtfrerich (1996). Finally, the authors add to the body of literature employing formal empirical mathematical models to study such counterfactual policy options. Previous economists have conducted similar analysis on how depression-era economies would have responded to a "Taylor Rule", countercyclical monetary policy, interest rate policies, or the adoption / abandonment of a gold standard. This paper follows them and applies similar methods to Germany's choice over Reichsmark exchange rate policy.

Data:

Ho, Yeh, and Lin, incorporate data from a number of different sources. The authors draw their GDP figures from Ritschl (2002) and draw German debt statistics from Papadia and Schioppa (2015). They use the Jorda-Schularick-Taylor Macro-financial History Database (2017) to compute risk premiums and leverage Berlin Stock Exchange data from Statisches and Reichsamt (1939) to calculate the net worth of German companies. Finally, the researchers us import data from Ritschl and Sporer (1997) to calculate the portion of domestic goods consumed compared to imports. Ho, Yeh, and Lin calibrate their economic model's parameters by using the empirical data above when possible. When not feasible, they adopt the same "emerging-economy" parameters which Cespedes, Chang, and Velasco set forth in their work (2003, 2004, 2005).

Methods:

The authors employ a model proposed by Cespedes, Chang, and Velasco (2003, 2004, 2005). They introduce "balance sheet effects" into a standard model of an open economy, incorporating interest rate shocks, and international demand shocks. This method improves on previous scholars' analysis, which has been primarily narrative in nature and vague with respect to transmission mechanisms.

The authors begin by recovering the structural shocks from the inter-war period by analyzing German real GDP and real export data. They calculate real exports by deflating the value of exports by the cost of living index. The authors then use their model to calculate the expected responses to the various economic shocks of the period and compare the model output against observed data. They find that their model fits closely with the historical data. They then reintroduce the isolated shocks into the model individually. By doing this the researchers were able to determine which shocks had the most significant effects on economic outcomes. Their analysis suggests that export demand shocks and world interest rate shocks were equally influential in creating variation in Germany's real GDP during the study period. As such, the researchers include both of these shocks in their counterfactual analysis.

Ho, Yeh, and Lin, then run a series of computer simulations to model different aspects of the interwar German economy. To capture the effect of floating the Reichsmark on inflation, the researchers simulate the German consumer price index (CPI) under a few different model specifications. One is a baseline model. The others incorporate the effects of "expected changes" to the inflation rate and "current change" in the inflation rate. Next, Ho, Yeh, and Lin examine the effects of floating the Reichsmark on output stability. They simulate the cumulative deviation from steady state of the real GDP, labor supply, and real exchange rate. They then consider whether Germany's use of capital controls effects the results of their model. They also consider the possibility of a debt default such as many South American countries during the depression. To do this, they assume a 45% devaluation based on historical examples in the US and UK, and account for the international response and to such a debt default by excluding international trade and reducing output in their model. In the final section, the researchers consider the effects of Allied debt policy on a German decision to float their currency.

Findings:

Ho, Yeh, and Lin find that the simulated inflation for a fixed exchange rate economy is very close to the historical data. When they then simulate for a floating exchange rate, they find that inflation had a mean of 4% and a max of 10%. This is higher than the inflation under a fixed exchange rate, however,

it is not nearly as high as German economic planners feared it could be and certainly not in the hyperinflation range (around 50%). This result is also robust to whether or not the model accounts for expected or current inflation change.

While analyzing the effect of floating the Reichsmark on economic stability, the researchers find that a flexible exchange rate could have resulted in a 50% reduction in Germany's GDP loss and an 80% reduction in the spread of unemployment. Naturally, the simulation also showed that a free exchange rate would have resulted in a lower real exchange rate, but the researchers argue that the benefits to German GDP and employment outweigh the associated loss in net worth.

When the researchers consider the "default and re-peg" scenario, they find that it is less desirable than floating the currency. Under simulation, this policy resulted in GDP loss almost identical to the fixed exchange rate, but with even higher unemployment. The researchers also argue, however, that had Germany defaulted on their debt unilaterally, the loss of access to financial markets would have been inconsequential given that they had largely dried up already and would remain so for the short-to-mid-term.

Ho, Yeh, and Lin revisit their assumption on the debt to net worth ratio. Their initial calibration of 8.5 is based off of berlin Stock Exchange data from 1931. They make the argument that had this value increased beyond 19.1, floating the Reichsmark would no longer have been beneficial. They then argue that such an increase was a real possibility for Germany. This along with the Allies' ability to offer either benevolent or retributive debt policies affected Germany's risk assessment at the time. However, had Germany been confident in benevolent treatment from their international creditors, they would have had much more leeway to pursue an optimal policy.

The authors conclude by comparing Germany's interwar financial crisis to current financial crises in Europe such as those in Greece. They argue that Greece's choice to remain in or leave the eurozone is similar to Germany's choice over whether or not to float their foreign exchange rate. While popular wisdom holds that leaving the eurozone and reestablishing a national currency would allow Greece to regain monetary sovereignty and stimulate their economy, the authors caution that similar to interwar Germany's experience, outcomes are still dependent on the nation's level of foreign debt and the debt policies which that their international creditors pursue.

Comments:

This paper is clearly well researched, and offers a compelling case for Germany's counterfactual economic path. It is not written as clearly as it could be though. For one, it assumes a higher degree of familiarity with macroeconomic models, than might be ideal. A more careful discussion of the underlying concepts would likely aid comprehension for many readers. Another contributing factor is that the paper does not directly discuss the economic model which underpins its analysis, but rather, only references it in passing. The actual discussion of the model is relegated to an online appendix. This make it somewhat difficult to understand the exact methodology the researchers used in their economic simulations. Furthermore, in the handful of places where a portion of the economic model is presented explicitly, many of the variables go unexplained. Perhaps these equations are common knowledge to many economists, but the majority of papers seem to list the meaning of each variable explicitly. While the brief discussion of the model and other related equations is enough to understand the broad overview of the work, it does not support deeper understanding.