Enforcement of sovereign debt under war reparations

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The difference between sovereign debt and war reparations lies in the enforcement of debt contracts. Periods around war reparations exhibit many of the same macroeconomic characteristics as sovereign defaults, yet they are usually repaid. Neither Germany nor Finland following the two world wars were able to default on reparations because of their creditors' strong political and military position. In a sovereign debt model, I show it would have been a better policy to default on its sovereign debt. Only the French repayment of its 1871 indemnity can be considered rational given its macroeconomic situation. The enforcement of reparations in Germany and Finland carried large economic and political costs.

Sovereign debt is paid back most of the time, despite creditors not having many remedies to enforce debt contracts. Countries pay back their loans because they want to be able to borrow again, or to avoid financial sanctions. Unlike in corporate bankruptcies, and outside of military intervention, no one can force a country to pay its sovereign liabilities. One such extreme and rare example is that of war reparations, which has often been directly linked to the removal of occupying troops. As a result, sovereigns generally do not directly default on war reparations. The reason that defaults on reparations are rare is that they have political consequences far and above normal sovereign defaults, which themselves are not costless. Recent sovereign defaults in Greece saw political interference in exchange for financing during the Eurozone crisis, and China has taken possession of critical infrastructure from its debtors.[1] The most famous example of reparations is probably that of German World War I reparations. Germany defaulted on its sovereign debt in 1933 but did not default on reparations themselves.[2] Reparations were negotiated to a standstill and effectively ended at the Lausanne Conference in 1932, a year before the sovereign debt default.

This paper shows how episodes of war reparations exhibit many of the same characteristics of sovereign defaults yet were repaid. The literature on sovereign debt defaults has shown that defaults

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[1] An example is Sri Lanka handing over control of its Hambantota Port to China in 2017 (Abi-Habib 2018).

[2] The 1922 refusal to pay reparations is discussed in the full paper. The sovereign default is dated according to Hjalmar Schacht (1967, p. 137-41), but various debts were defaulted on at different times.

typically occur after a sharp contraction in output, are followed by a devaluation of the currency, and are costly. The devaluation of the currency lowers the relative price level and real wages. Governments choose to default when it is economically beneficial not to pay interest and principal and instead incur the loss associated with a default and financial autarky. The costs of default are both the inability to smooth consumption, by not being able to borrow again, as well as an explicit output loss that occurs because of the default. To account for these stylised facts, I apply a sovereign debt model by Na, Schmitt-Grohé, Uribe, and Yue (2018) to the Franco-Prussian War indemnity, to German interwar reparations, and to Finnish World War II reparations. This narrow set of reparations cases are the largest transfers (over 20 percent of GDP) where there was agreement to pay in a relatively short time span (less than ten years). I collected data for the output, interest rates, debt stocks, wages, and exchange rates (nominal and real) for each episode. Common for them was that reparations were paid because they were enforced by military or political power, even if the country was situation in the default set of the model.

The case of Franco-Prussian War indemnities features several default-like characteristics (output contraction and high debt levels) but sees no devaluation nor a fall in real wages. Its stock of foreign assets allowed France to borrow money quickly to repay the indemnity, and despite briefly being strictly in the default set, I argue that repayment made sense. Conversely are the cases of German and Finnish reparations. German real output contracted by over 20 percent during the hyperinflation of the Weimar Republic (1921-23), as Germany refused to pay reparations in 1922. It was forced to resume negotiations by military force after the Allied occupation of the Ruhr. Reparations were rescheduled in 1924 and were subsequent paid throughout the 1920s, financed by capital inflows (Feldman 1993, p. 631-69). Once capital flows reversed by the 1930s, austerity replaced debt which translated into output losses and a downward adjustment to real wages, which were too high because of the gold standard (for an overview of this debate, see e.g., James 1986, Borchardt 1990, Holtfrerich 1990, or Ritschl 2002). At this point, the European nations did not have the ability to enforce debt contracts and the U.S. agreed to a de facto cancellation of reparations. Despite no obvious nominal devaluation accompanying the default, once stealth interventions and export subsidies are accounted for, the German default is well explained in the model. Finnish reparations in the 1940s were repaid under great economic strain and the economy exhibited all the characteristics normally associated with a default. Unable to default because of geopolitical considerations, it took Finland longer to grow because large parts of its domestic resources went to produce reparations.

In all three historical episodes, the level of debt and output losses lie within the default set at one point, implying that the optimal economic policy would be to default. Because it was not possible to default on war reparations because they were enforced, economic policy was suboptimal in the cases of Germany and Finland.

I. Related literature

[Literature review not shown due to word limit.]

II. A model of optimal default

[The model is not shown. It follows the optimal monetary version of Na et al. (2018).]

III. When default is optimal

The stylised facts of sovereign default presented in section II (not shown) can help analyse the special case of war reparations. The default set is shown graphically in Figure 1 for each of the three cases, with the level of debt on the y-axis and tradable output on the x-axis. The colour blue denotes the area in which the government repays debt, while the yellow area denotes where the government defaults (white is outside the grid of the model). The figure shows how to interpret the model and compare to the repayment of war reparations.
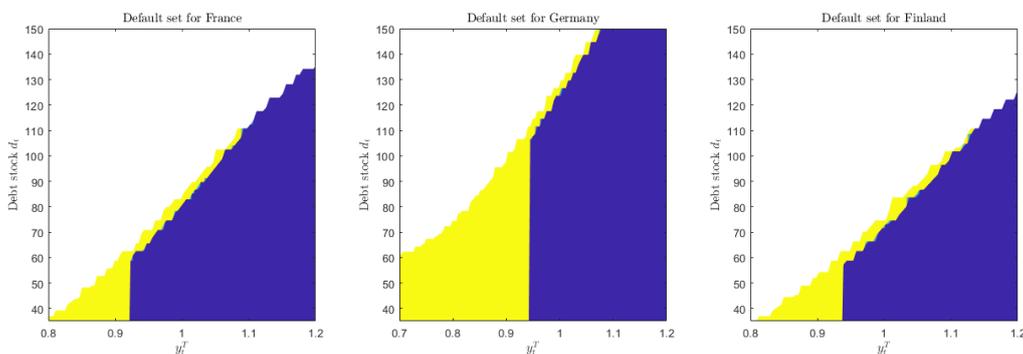

FIGURE 1: ESTIMATE OF CAPITAL CONTROLS.

Note: The dark blue area is the state denotes repayment while the yellow area is default. The white area is outside the ergodic distribution and not part of the grid. Replication file, *plot_default_sets.m*.

The model output is compared to historical data, which I collected for real GDP, credit spreads, debt levels, real wages, nominal exchange rates, and real exchange rates for the three cases. To apply the model to historical data, the reparation is interpreted as an unexpected increase in the state variable d_0. At t_0 the country learns that it must pay the reparation, which is captured by a decrease in net

output by the term $y_0 - d_0$. It is then possible to see where the level of net output lies in the default set, given historical data for the other macroeconomic variables. It will allow us to understand the costs of paying reparations and whether the optimal policy would have been to default.

[The three case studies left out due to space limitations].

IV. Enforcement of war reparations

The three reparations studied here were paid under very different circumstances. France, Germany, and Finland all found themselves, at one point or another, in a situation where a strict interpretation of the model would suggest that a sovereign default was the right policy. Defaults did not happen on reparations, and only Germany defaulted on its sovereign debt. The French and German cases are opposites, even if there are historical similarities and German reparations were, to some extent, designed with French indemnities in mind.

The model suggests that France should have defaulted in 1871, but they were right to pay given the macroeconomic and political situation. The quick rebound in output means that already by 1872, France is outside the default set. It had easy access to loans at reasonable interest rates, with high investor participation from both foreign and domestic sources. The most important factor was that France had accumulated a high stock of foreign assets, meaning its net debt was essentially zero, which incentivised a settlement that did not include sanctions or confiscations. It is a case in which enforcement of sovereign debt played a positive role, in that a default would have been more costly than repayment. It is also likely that military enforcement was not needed, because France was incentivised to repay because of its easy access to debt and stock of foreign assets. The macroeconomic situation was, crucially, one in which the current account was positive, meaning that while France repaid the indemnity it did not do so by indebting itself.

The situation in Germany was different. The model suggests that Germany was in the default set in 1920, in 1924 (using the present value of the Dawes annuity), in 1931 (even excluding the Young annuity), in 1932, and in 1933. It was forced to repay reparations in the 1920s with disastrous long-term consequences. Germany had limited access to borrowing until 1925, from which point it managed to escape output losses by borrowing abroad. Economic growth from 1925 to 1929 was built on a debt-spiral and real wages that were too high, given Germany's external position. A continuously negative current account helped keep real wages and the real exchange rate high, but it could only last if debt could be rolled over into new loans. The model suggests Germany should repay in 1929, but we know that it was folly – the debt stock could not be rolled over. Austerity by the Brüning

cabinet was implemented to maintain market access, but it relied on two crucial facts. First, that the market would acknowledge debt sustainability and keep lending, and second, that domestically the policies could be implemented without political chaos. Both proved unsustainable. Based on the net foreign asset position, the current account, the high level of real wages and the real exchange rate, only a small shock to output would put Germany into the default set. Two years of costly austerity only yielded further ground for the Nazi takeover, rather than regaining market access as was the goal. Had Germany defaulted already in 1929, it would have saved two years' worth of interest payments and entered autarky at the same time, as market access was by then de facto gone.

Like the German case, Finland did not have the option of defaulting because of political pressure in the new geopolitical landscape that emerged from World War II. Unlike Germany, it managed to eventually grow its way out of debt trouble, and not by taking on more debt. The trajectory was suboptimal, however. It involved three devaluations, a fall in real wages of more than 50 percent, and large inflationary problems. A default would have allowed foreign exchange to be used for domestic purposes, but because it was not possible the macroeconomic adjustment had to come from elsewhere.

In France in the 1870s, the investors were largely domestic which would have made a default costly to the households who financed the indemnity. The same households and government who had stocks of foreign assets that were at risk. In Germany and Finland, creditors were almost all foreign and both countries had no foreign assets after the wars. The incentives and costs would have been in favour of a default. But investors knew that repayment would be enforced. It therefore makes sense that credit spreads did not increase following the announcements of reparations, as the probability of default did not increase as debt contracts were enforceable by military force. The fact that reparations in general are enforced likely lowers borrowing costs. Sovereign debt crises generally entail rollover risk of loans, but if investors know that their claims will be repaid, then they should be willing to lend at lower interest rates, if they are seen to be linked to reparations. Repayment can happen even if it does not make sense economically, and investors can lend more money to cover old debt, even if the debt is unsustainable.

Models of sovereign defaults, like the one presented in this paper, concerns itself with willingness to pay. It offers a way to judge if it is in the country's interest to pay its debt. Willingness to pay has been the norm since 1907 when the Drago Doctrine agreed that countries would not enforce sovereign debts by military force.[3] The invasion of the Ruhr in 1923 was a reversal to the time before the Drago

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[3] Convention II, which was signed and ratified by all countries in this study (Germany, Finland, France, Russia, the U.K., and the U.S.) by 1910. There are certain exceptions in Article I, which states that the convention does not apply if states refuse or neglect to accept an offer of arbitration.

Doctrine. Without discussing the legality of the invasion (see e.g., Allemés and Schuster 1924 for the case for and against), it was a break with the idea that creditors should not enforce debt contracts militarily. The idea of reparations is that they are involuntary, but they stand out as uniquely enforceable within sovereign liabilities. The reason is that they are political by nature. Both German and Finnish reparations were, to varying extend, a break with the Drago Doctrine.[4] The argument in this paper is that both cases show that the enforcement of reparations and reparations-related debt created a sub-optimal economic outcome. In Germany's case, it prolonged repayment and ensured default came only after the Nazi takeover and years of austerity. In Finland's case, it forced three devaluations and years of economically costly repayment, before it managed to grow its way out of debt.

V. Conclusion

The literature on sovereign debt mostly focuses on recent examples of defaults. This paper situates the repayments of war reparations within the quantitative literature, to understand if the repayment was optimal. The economies of France in 1871, Germany in the 1930s, and Finland in 1945 are all shown to exhibit some macroeconomic characteristics that are typically seen during sovereign default, but they have very different outcomes. The enforcement of reparations by military force broke with the Drago Doctrine and created a suboptimal economic outcome. I argue that Germany would have benefitted from an earlier default and Finland was constrained in its economic policies. The Franco-Prussian War indemnity was enforced but would have likely been paid regardless, because of France's stock of foreign assets. Military intervention to force the payment of debt therefore only hurt economic policymaking.

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[4] Germany more so than Finland, as there was arguably no military intervention to enforce Finnish debt, but it was there implicitly in the political intimidation.

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[References in Sections I, II, and IV are not included.]

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