Dollars, Debts, and Deficits

Rudiger Dornbusch

Published jointly by
Leuven University Press
Leuven, Belgium
and
The MIT Press
Cambridge, Massachusetts
London, England

First MIT Press edition, 1986
First published by Leuven University Press, 1986

Library of Congres Cataloging-in-Publication Data

Dornbusch, Rudiger.
Dollars, debts, and deficits.

Includes bibliographies and index.
1. Foreign exchange problem—United States. 2. Dollar, American. 3. Debts, External—Developing countries. 4. Economic stabilization—Developing countries. 5. Budget deficits—Europe. I. Title.
HG3903.D67 1986 339.5 85-24100
ISBN 0-262-04085-9

Dollars, Debts, and Deficits

Foreword

The "Professor Dr. Gaston Eyskens Lectures" are published under the auspices of the chair established on the occasion of the promotion of Professor Doctor Gaston Eyskens to Professor Emeritus on 4 October 1975 and named after him. This chair is intended to promote the teaching of theoretical and applied economics by organizing biannually a series of lectures to be given by outstanding scholars.

The pursuance of this goal is made possible through an endowment fund established by numerous Belgian institutions and associations as an expression of their great appreciation for the long and fruitful teaching career of Professor Gaston Eyskens.

Born on 1 April 1905, Gaston Eyskens has taught at the Catholic University of Leuven since 1931. For an unusually large number of student generations Professor Eyskens has been the inspiring teacher of general economics, public finance, and macroeconomic theory. He is recognized as the founder of Dutch language economic education in Leuven. It should also be mentioned that he was a founder of the Center for Economic Studies of the Department of Economics. As a member of the Governing Board of the university from 1954 to 1968, he succeeded in adding an important dimension to the social service task of the university.

As member of parliament, minister, and head of government, he dominated the Belgian political scene for many years. His influence on the cultural and economic emancipation of the Flemish community has been enormous.

Professor Dr. M. Loeys
Chairman of the Administrative Committee of the
Gaston Eyskens Chair

Preface

This book brings together a collection of essays on economic policy problems of the world economy. The occasion for developing the material into its present form was provided by an invitation to deliver the Gaston Eyskens Lectures at the Katholieke Univebsiteit Leuven, Belgium, in the fall of 1984.

The subject of the lectures, "Dollars, Debts, and Deficits," covers my policy research of the past few years: exchange rate questions, issues of LDC debt and adjustment, and the problems raised by budget deficits and European stagnation. Even though the three topic areas cover widely different policy problems, it makes sense to bring them together. This is the case because international economic interdependence links exchange rates, budgets, adjustment opportunities, and debt service across countries. But there is also a common political economy perspective with which I have approached these issues which gives the collection a coherent perspective. The message is that modern macroeconomics is useful, more than ever, as a framework for active policy.

In developing my ideas on these policy problems, I have benefited greatly from discussions with Stanley Fischer. He has been generous with friendship and advice. As a member of the CEPS Macro Group I had the advantage of working with a very stimulating team and I wish to acknowledge especially my collaboration with Olivier Blanchard and Richard Layard. On Latin American issues Eliana Cardoso and Mario Simonsen have freely given their advice. It is a pleasure to acknowledge these debts and hope for more. I would also like to thank Carol McIntire for her editorial assistance.

I wish to express my gratitude to the faculty and administration of the Katholieke Universiteit Leuven for their challenging invitation. Their generous hospitality is only rivaled by the enjoyment they take in offering a tough debate.

Contents

I Exchange Rate Theory and the Overvalued Dollar

Introduction to Part I

The experience with flexible exchange rates in the past fifteen years raises challenging questions of theory and policy. Among the most significant are the following three:

1. What factors can explain the persistent, large deviations from purchasing power parity (PPP)?

2. What are the effects of real exchange rate changes, and should exchange rates be used as a means of inflation stabilization?

3. Is exchange rate-oriented monetary policy or sterilized intervention effective in containing exchange rate movements and should either be employed for that purpose?

Explaining Deviations from PPP

Figure I.1 shows the U.S. real exchange rate measured by the relative deflators in manufacturing of the U.S. and its trading partners. The long

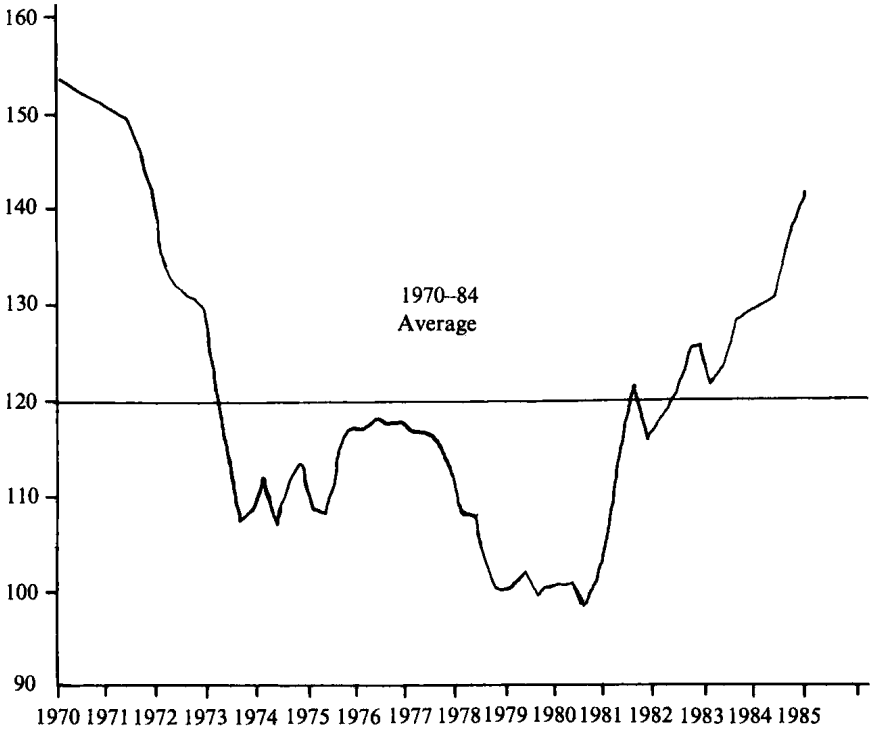

Figure I.1
The U.S. real exchange rate (index 1980 = 100)

period highlights the swings in the real exchange rate coinciding with the shift to flexible exchange rates. From an initial overvaluation of the 1960s, much advertised by Houthakker and Samuelson, the dollar depreciates in real terms, and the depreciated level, with large fluctuations, is sustained throughout the 1970s. The Carter period brought with it the collapse of the dollar in 1978–80. Then, in 1980–84, the dollar appreciated in real terms by 40 percent from the trough.

By the strict standards of PPP one would not expect large persistent movements in real exchange rates.[1] PPP theory makes a sharp distinction between the real influences on relative price levels and monetary-macroeconomic factors. According to the theory exchange rate movements reflect primarily divergent monetary trends, and these monetary trends are almost exclusively reflected in divergent price level trends. Hence there is little or no room for macroeconomic factors to effect relative price level changes. (It is understood that money is the only macroeconomic source of disturbance.) Only transport costs, tariff disruptions, or long-term shifts in international comparative advantage would be admitted as sources of relative price change.

At the outset of the flexible rate period PPP theory was clearly on the minds of many economists. Monetarism was then in its heyday and rapidly spilling over to international issues. From the monetary approach to the balance of payments it was a short step to a monetary approach to exchange rates. Of course the facts did not allow us to sustain for long a PPP interpretation of exchange rate movements and the Mundell-Fleming model made a rapid recovery as the main frame of reference for exchange rate questions.

Among the interpretations encountered today are chiefly three. The first emphasizes safe haven aspects. Observers in financial markets are impressed with the magnitude of capital flows into the U.S. These flows, which more than finance (ex ante) the current account deficit, are thought to be in search of political security and economic prosperity. The Reagan image is the magnet for all the world's money; investors are deserting a sclerotic Europe and escaping from Latin America which is seen ravaged by the debt crisis, the IMF, and essays at democracy.

The argument is unimpressive. Money had gone with equal enthusiasm only a few years before to Europe and Latin America. Indeed, it is already preparing to leave the "overvalued dollar" at exactly the place that only a moment ago seemed unthinkable. There is no question that investors are looking for profit opportunities—interest and especially capital gains. The stories about safe haven must be seen primarily as

rationalizations of why the overvalued dollar should not collapse, bringing with it capital losses that would tilt the balance of benefits toward holding nondollar assets.

The second line of argument emphasizes that the U.S. economy is a service economy, bringing with it a new international competitive advantage. In this view long-term real exchange rate comparisons are a poor instrument to judge equilibrium relative prices. If the underlying equilibrium creates a new competitiveness in services, then a deterioration in manufacturing competitiveness is simply a reflection of the resource pull of the new industries. Trade imbalance in manufacturing is sustainable because services provide the leeway and financing. This argument is respectable but does not carry sufficient quantitative weight. The U.S. service balance surely does not show a large improvement, nor are there indications of a major shift to come. Indeed, the prospective shift would need to be large enough to offset the losses in manufacturing plus the burden of a reduction in net external assets that is now underway.

The third line of argument emphasizes monetary disturbances. One direction has been forcefully developed by Ron McKinnon. In a series of articles he has developed the view that international currency substitution—shifts from one country's $M1$ to another's—and the failure to accommodate these shifts lie behind the dollar's strength. The argument lacks both plausibility and evidence. International investors hold CDs, not $M1$, and hence this view cannot even start to explain what has happened to the dollar. More on the policy implications shortly.

The Mundell-Fleming model does help explain what has happened. Relatively tight U.S. policies in the monetary area and relatively easy fiscal policy would lead to the prediction of a real appreciation of the dollar on each count. But the dollar appreciation on account of monetary tightness would be transitory, evaporating as the tightening of money translates itself into adjustment in inflation and nominal interest rates. The initial appreciation would therefore be soon followed by a path of depreciation toward the initial real exchange rate.

To see this point consider the linkage between nominal interest rates and the rate of depreciation

$$i_t = i_t^* + e'_t, \tag{1}$$

where a prime denotes a percentage rate of change. This equation arises from the assumption that perfect capital mobility can be rewritten in

terms of real interest rates (r, r^*) and the rate of change of the real exchange rate, q':

$$r_t = r_t^* + q_t', \tag{1a}$$

where the real exchange rate is defined as $q = \log(eP^*/P)$. Note next that in Mundell-Fleming models the real exchange rate adjusts to its long-run level q asymptotically (see Dornbusch and Fischer 1986), so we can write

$$q_{t+1} = q + v(q_t - q), \quad 0 < v < 1, \tag{2}$$

where q_t denotes the current real rate and q (without time subscript) the given long-run equilibrium real rate. The key parameter is the speed of adjustment v. The speed of adjustment can be thought of in terms of the mean lag $v/(1-v)$, say 4 years. Combining (1a) and (2) yields an equation for the real exchange rate in terms of the current real interest rate differential:

$$q_t = q - x(r_t - r_t^*), \quad x = \frac{1}{1-v}. \tag{3}$$

The model shows that a rise in the real interest rate, as a result of a tightening of money, will lead to an immediate nominal and real appreciation which then is followed by a gradual depreciation to the initial long-run equilibrium. The smaller the speed of adjustment of the real exchange rate, v, the larger the impact of real interest rate changes on the current real exchange rate. Specifically suppose the mean lag is four years ($v = 0.8$), then a 1 percent rise in the real interest differential would lead to an immediate real appreciation of 5 percent. The model thus does explain large real exchange rate movements as the counterpart of monetary policy changes. Although the model explains the movement in the real exchange rate, it is open to the criticism that it does not explore the current account and cumulative debt implications of the sustained overvaluation. Krugman (1985) has made this point particularly strongly in calling the high dollar "unsustainable."

Four years of continuing appreciation, however, can only be explained, in this perspective, by an unending string of monetary surprises. The monetary explanation alone would therefore strain belief. But fiscal policy helps. Fiscal expansion in the U.S., and contraction in other major OECD countries, shifts demand toward U.S. goods and hence calls for a rise in the equilibrium relative price of U.S. goods and increased real interest rates. The larger and the more persistent the policy shift, the larger is the real appreciation.

The monetary-fiscal explanation needs some qualifications. One is that the dollar appreciation is large relative to Europe and small relative to Japan. It would therefore be important to understand the differential. The other question concerns the persistence of appreciation. In the long run budget constraints must be met, and hence a period of fiscal expansion requires that ultimately trade surplusses be generated to finance the increased interest bill. Those surplusses require a real depreciation, and the prospect of future real depreciation should limit the extent and persistence of the initial real appreciation. The resulting time path of real exchange rates depends on both the elasticity of trade flows to real exchange rates and on the substitutability of assets in portfolios. The more substitutable are domestic and foreign assets, the more the course of exchange rates is governed by the near-term monetary and fiscal policies.

The preceding discussion emphasizes fundamentals as determinants of the large dollar appreciation. But there is also room for bubbles.[2] There is no reason to rule out that a path of growing appreciation be entirely driven off equilibrium by expectations of capital gains. From a policy point of view, of course, it makes all the difference whether it is fundamentals or bubbles that are behind the overvalued dollar.

The Effects of Real Exchange Rate Changes

Real exchange rate changes have major impact on the inflation process and on output, profitability, and employment in trade-sensitive sectors. In both respects the dollar appreciation has split the U.S. economy, with the domestic sector running ahead in terms of output and prices and the international sector showing a decline in both respects.

The inflation impact of appreciation is perhaps best highlighted by figure I.2 which shows the U.S. levels of prices. The figure shows the GDP deflator trending steadily upward. Import prices are seen to rise more steeply in the depreciation phase up to 1980 and then to peak at the trough of the dollar before they start to fall in absolute terms.

The dollar appreciation affects U.S. inflation through at least four channels. First, there is a significant decline in the dollar prices of materials. To some extent this applies also to administered prices, in particular, petroleum prices. Second, import prices of commodities, other than materials, tend to fall and inflation of export prices slows down. This effect is stronger on the import side the more foreign suppliers' prices are based on their own costs, rather than on prices of

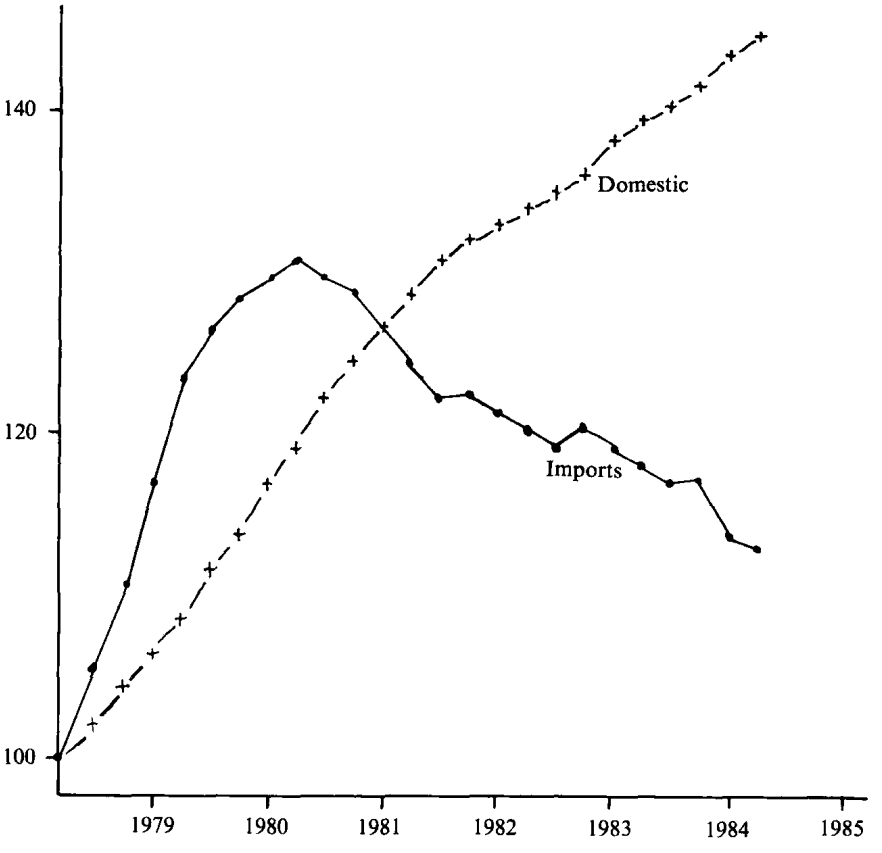

Figure I.2
The U.S. price level (index 1979 = 100)

competing products in the U.S. market. Conversely, on the export side appreciation slows prices more, the more suppliers base their pricing on foreign markets rather than home costs. Third, import competing domestic firms and firms that export will tend to restrain their price increases in the face of falling import prices. Fourth, the loss in competitiveness involved in real appreciation leads to reduced rates of wage inflation in the sectors most exposed to foreign competition and reduced cost of living inflation everywhere.

The combined impact of these channels is to reduce U.S. inflation significantly below what it otherwise would be. There is considerable disagreement, however, on the quantitative magnitude of these effects. Older estimates suggest that a 10 percent dollar appreciation reduces inflation by about 1 percent. More recent estimates, however, are of 2 to

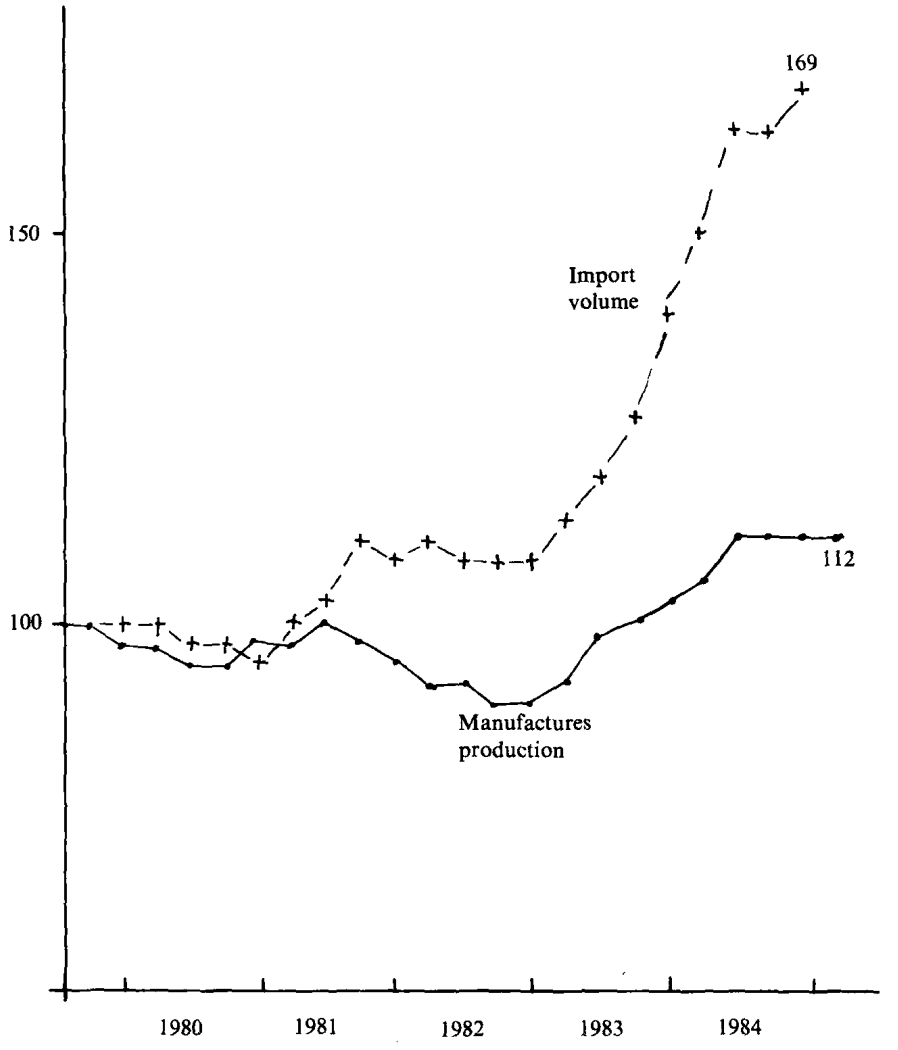

Figure I.3
Manufactures: import volume and domestic production (moving average, 1979:2 = 100)

3 percent. These effects are particularly large if the slowdown in inflation in turn exerts a favorable impact on wage settlements.[3]

The overvalued dollar has had a major impact on trade and domestic production. Figure I.3 gives an idea of the impact in manufacturing. While import volume grew nearly 70 percent over the period 1979 to 1984, the level of domestic manufactures production rose only 12 percent. Adjusting for high-tech industries and for space- and defense-related production, the domestic expansion becomes even

smaller and in some sectors negative. Manufacturing, agriculture, and other trade-sensitive sectors thus feel left out of the recovery.

At an aggregate level there is clear evidence that the real exchange rate has a definite and sizable effect on the trade balance. A 10 percent real appreciation deteriorates the trade balance, measured as a fraction of GDP, by about 0.8 percent. The large dollar appreciation, in conjunction with the relatively more rapid U.S. expansion since 1982, thus readily explain the trade and current account deterioration.

In the early phase of the overvaluation, well into 1984, the strong dollar was not much of a political issue because rapid domestic recovery overshadowed the growing lack of competitiveness.[4] A year later, with a full response of trade flows to the overvaluation and a slowing down of the economy, there is wild furor. Congress is up in arms against the "deindustrialization" and is looking for remedies. Senator Bill Bradley sponsored a Sense-of-the-Senate resolution calling for easier monetary policy, to take down the "yo-yo dollar." His argument was:

> The level of the dollar is killing jobs, business plans, and future economic opportunity. Unless we immediately address the problem posed by the value of the dollar, we will be putting U.S. industry into an economic hole out of which it will be incredibly hard to grow.[5]

Under the incredible heading of "Trade Emergency and Export Promotion Act" the Rostenkowski-Gebhardt-Bentsen bill singles out countries with large bilateral trade imbalances for special protection measures:

> ... to assure that international trade occurs in a balanced open and fair manner, and to assure the people of the United States that their Government will take trade actions to protect the vital interest of the United States.[6]

The prime target is of course Japan, but also some developing countries. In the eagerness for protection, the bill encourages the administration to negotiate away free trade by yet further administrative action. It also proposes import barriers on trade surplus/debt servicing countries like Brazil. Surely that affords Brazil with a singular opportunity to stop debt service altogether.

Congress always enjoys talking protection. The threat is that this time the economy may run out of steam and the dollar may be slow coming down, with yet slower adjustment to the real depreciation, so that increased protection becomes almost inevitable. Not surprisingly, many people see protection as an attractive way to move toward budget balance by collecting import duties.

Exchange Rate Policy

In the area of exchange rate policy there are two chief questions: one is whether the large appreciation of the dollar reflects a policy failure of monetary policy; the other is whether target zones, or even fixed rates, are a preferable, practicable option.

The most influential idea in exchange rate policy is McKinnon's call for an exchange-rate-oriented monetary policy. Stabilizing the exchange rate, it is argued, makes money supplies endogeneous and thus minimizes the impact of asset market disturbances. A first variant of this theory is the currency substitution version which holds that $M1$ shifts from foreign monies toward the U.S. dollar are behind the dollar appreciation. Because monetary policy is constrained by national aggregate targeting, the authorities fail to accommodate the shift in the composition of $M1$ demanded and hence give rise to exchange rate fluctuations that revalue the relative supplies to restore portfolio balance.[7]

That view of international asset markets found little reception. The criticism of the position is this: the basic premise of the McKinnon prescription, and its flaw, is that it assumes that exchange rate instability is induced by shifts in the currency denomination of the public's money holdings, that is, by currency substitution. But surely international currency speculation is not carried out by shifts between different countries' $M1$'s (currency plus demand deposits) but by shifts between interest-bearing assets. McKinnon now recognizes the problem and has shifted his continued support of exchange-rate-oriented monetary policy to a new ground: indirect currency substitution, otherwise known as capital mobility.[8]

In the case of direct currency substitution McKinnon had the right cure for a nonexistant problem—international money demand shifts. Now recognizing that in fact currency speculation means shifts in international bond portfolios, McKinnon develops the notion of *indirect* currency substitution and gets the wrong cure for the right problem. He argues that even in the case of portfolio shifts not involving monetary assets, the proper response is a change in the *money* supply to sustain the exchange rate:

> Why should changes in international portfolio preferences between *nonmonetary assets* affect the demand for domestic *money*? The short answer is that the domestic transactions balances demand increases *indirectly* when international investors desire more bonds denominated in the domestic currency.[9]