

Comment on Larry A. Sjaastad's "Recent Balance of Payments Experience in Latin America"

By Michael Connolly*

Professor Sjaastad's essay is a welcome one in an important way: namely, it very neatly applies an increasingly important small-country trade model, the *Swan-Salter* framework, to a policy area of considerable concern; balance of payments problems in Latin America. In my comments, I would like to provide the geometric equivalent of *Sjaastad's* algebraic model in order to illustrate primarily the innate strength of the model in this context, and secondarily to highlight a minor weakness in emphasis regarding adjustment to the historically unprecedented trade deficits pointed out by *Sjaastad*. These trade deficits have been associated with the large scale increase in indebtedness by the Latin American countries analyzed. Finally, apart from my fundamental agreement with the ingenious application of the model, I will disagree with some of *Sjaastad's* remarks concerning the recent devaluations of the Mexican peso.

First, consider a country which produces and consumes a composite good, tradeables (imports and exports), whose home price is determined by world prices via the exchange rate, and another good, non-tradeables, whose domestic price is determined by domestic supply and demand. Beginning from an initial equilibrium in both markets, consider the effects of an increase in borrowing from abroad. Initially, expenditure on both tradeables and non-tradeables rises. However, the price of traded goods goes unchanged but a trade deficit results, while the price of non-traded goods rises to clear the domestic market. This is the very situation depicted by *Sjaastad*, and can be illustrated in the following graph due to *Swan* and *Salter* (cf. Fig. 1).

It depicts a moment in the process of adjustment to new foreign borrowing which has, as pointed out by *Sjaastad*, the effect of increased deficits (from none to $P' C'$), and a rise in the price of non-traded goods relative to traded goods (reflected by the steeper slope of the line passing through P' compared to P). There can be no disagreement with the

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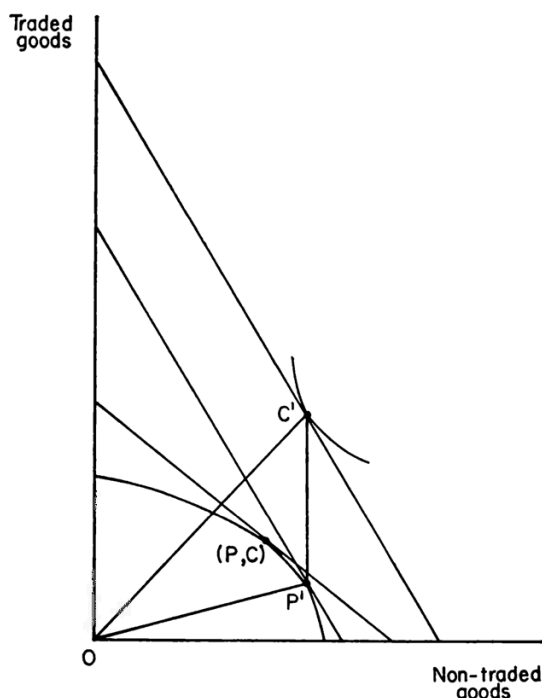


Fig. 1: Increase in foreign borrowing and trade deficit equal to $P'C'$

analysis: both effects must occur, and this is documented at length in *Sjaastad's* Table 1 which portrays the path of the goods and services account of 10 Latin American countries from 1970 - 72 through 1975, as well as in Table 2, which lists rates of inflation (changes in the consumer price index) for these countries from 1973 to April, 1976. As *Sjaastad* notes, the evidence bears out in large part the theoretical model he puts forth. Trade deficits did increase at an unprecedented rate, and substantial inflation relative to the U.S. rate (26 % for the period) took place, at no loss in foreign exchange reserves, thanks to borrowing from abroad on a large scale.

Now, are these trade deficits a source for alarm, or, in *Sjaastad's* terms: "The clear implication is that the massive borrowing policy of the past three years cannot long endure in Latin America, and that expenditure-reducing policies will have to be brought into play in many countries", and "... the fact that these countries have pursued expenditure-increasing policies ... suggests that the immediate economic outlook is unfavorable in those countries." There does, in fact, seem to be a potentially serious adjustment problem, and expenditure-reducing po-

licies would have, in part, the intended effect of reducing the trade deficits to more manageable proportions of national income if such levels of borrowing cannot be sustained (and I would agree that they probably cannot for the reasons *Sjaastad* gives). However, expenditure-reducing policies taken alone might prove to be bitter medicine, and I would argue that the main weakness of this paper is that it under-emphasizes the possible role of expenditure-switching policies, and in particular, devaluation as an alternative way of adjusting to trade deficits.¹ Theoretically, the expenditure-reducing policy contracts expenditure curve toward the origin, and has the effect of driving down the price of non-traded goods relative to traded goods, while expenditure-switching policies such as devaluation, have in principle the same result by liquidity induced dampening of expenditure coupled with a substitution towards non-traded goods.² Barring any rigidity in the money and/or relative price of non-traded goods, both policies move the system towards equilibrium at (P, C).³ (In this context, a lowered rate of inflation rather than a deflation of absolute prices would follow expenditure-switching.) In fact, however, as noted by *Sjaastad*, five of the ten countries, namely Argentina, Brazil, Chile, Colombia, and Peru pursue systematic expenditure-switching policies via some form of semi-automatic changes in exchange rates (crawling peg or mini-devaluations) and a sixth, Mexico, has undergone a major devaluation (or rather a series of two, a first from 12.5 to 19.8 pesos per dollar in the week following August 31, 1976, and then a second on October 27, 1976 from 19.8 to 26.3, amounting to a cumulative depreciation of 110 % in pesos (from 8 c to 3.8 c, or a 52 1/2 % devaluation in terms of dollars).⁴ Consequently, I would argue that *Professor Sjaastad* should place greater emphasis on the role of expenditure-switching types of adjustment. And, I would still hold this view in spite of the vaguely documented empirical view that devaluation does not improve the trade balance, because, on that issue, the evidence is not clear.⁵

¹ The now classic distinction between expenditure-switching and expenditure-reducing policies originated in *Harry Johnson's* 1958 essay.

² For discussion of the liquidity and substitution effects of devaluation in the context of the small country, traded, non-traded goods model, see *Connolly and Taylor* (1976 b), *Dornbusch* (1973) and *Mundell* (1971).

³ In the case of expenditure-reducing policies, the rate of inflation should subside, while with expenditure-switching, it should increase. In both instances, the relative price of traded goods will rise. On complications due to possible factor and commodity price rigidities, see *Dornbusch* (1974).

⁴ On November 22, 1976, the peso floated again, dropping to 3.5 c following the suspension of sale and purchase of gold and foreign exchange by the Mexican central bank. At the same time, pesos for March, 1977 delivery were quoted at 2.4 c at the International Monetary Market of the Chicago Mercantile Exchange.

⁵ The pessimistic view is taken by *Laffer* but his study suffers from the treatment of the changes in exchange rates triggered by the November, 1967

In this context, the Mexican devaluations after twenty-two years of pegging to the dollar deserves attention, in part as a result of the enormous capital flight following the first one. With hindsight, both *Sjaastad* and I might agree that the optimum currency argument, and in particular that part which stresses the use of money as a store of value for saving purposes⁶ applies to the peso and that under some ideal circumstances the devaluation was misguided in that it shook confidence in the currency.⁷ However, I do not agree that the actual inflation rate of 60 percent in Mexico from 1973 through April, 1976 over-estimates the true rate (calculated by *Sjaastad* to be about 50 percent) and that in light of the corresponding 26 % rate of inflation in the U. S., a mild depreciation, if any at all, would have been warranted. My reason for this is the very same one that was made in 1925 by *Keynes* in his *The Economic Consequences of Mr. Churchill* when the latter in his role of Chancellor of the Exchequer favored and enacted a return to the pre-war gold parity involving an appreciation from \$ 4.40 to \$ 4.86, or about 10 % of the pound. What misled *Churchill* was the Treasury Committee's use of movements of wholesale price indices which under-estimated the true extent of British inflation relative to the United States as a result of the overwhelming presence (at least two-thirds, by *Keynes*' calculations) of traded goods (in particular, raw materials) whose prices are internationally equalized. By the same token, I would argue that the 60 % rate of inflation in the consumer price index under-estimates the actual price misalignment, and that consequently the devaluation may have, unfortunately, been unavoidable.⁸

Evidence in support of this position is provided in the following table. It reports the percentage changes in consumer prices, money wages, and

depreciation of Sterling as independent devaluations. A more optimistic view is taken by *Cooper*, and also by *Bhagwat* and *Onitsuke*, particularly with respect to improved export performance. These studies point out that devaluation in the type of sample that *Sjaastad* is dealing with is invariably accompanied by a relaxation of import barriers, so improvement on that account is not necessarily to be expected.

⁶ See *Mundell* (1961).

⁷ The devaluation may have been misguided, but unavoidable as a result of the extremely expansionary monetary policy pursued that is reported in Table 1 of this paper. In any case, there is considerable opinion that it was mishandled by the imposition of a controversial export tax and contradictory wage policies. See *The Economist*, November 6, 1976 and *The Wall Street Journal*, October 27, 1976 for reports on such criticism.

⁸ It is of historical interest to note that *Keynes* used two series, movements in the cost of living and movements in money wages in the U.S. versus the U.K. in his 1925 essay, both in preference to movements in wholesale price indices, but that the calculations were omitted in the abridged 1932 version appearing in his *Essays in Persuasion*. As *Jacob Frenkel* has reminded us, *Jacques Rueff* has always favored movements in money wages as measures for changes in the purchasing power parities of currencies.

**Rates of Change in Consumer Prices, Money Wages,
and Domestic Credit: 1973 - 1976**

% Change in:	United States	Mexico
Consumer prices	30	66
Money wages	27	84
Domestic credit	26	148a)

Source: International Financial Statistics, October 1976. Consumer prices are from line 64, money wages from 64m for the U.S. and 65 for Mexico, domestic credit from line 32.

a) This calculation goes to the end of January, 1976 rather than March since the data are not available.

domestic credit for the United States and Mexico over a three year period (from the first quarter of 1973 to the first quarter of 1976).

While the Mexican inflation was only 36 % greater than in the U. S., money wages rose there 57 % more than in the U. S., and even more striking, domestic credit grew 122 % more, reflecting a very expansionary monetary policy (due in part to the large increased borrowing abroad). In short, while the discrepancy in the relative movements in the consumer price indexes is not particularly great, this is not, as *Sjaastad* suggests, the appropriate measure because of the presence of traded goods. Rather, the relative movements in money wages would, following *Keynes* and *Rueff*, be better indicators of movements in purchasing powers of currencies, and further, the enormous expansion in domestic credit in Mexico relative to the U. S. would be another, both suggesting that devaluation was inevitable.

Finally, I might note that if Mexico's price experience is similar to that of developing countries following devaluation,⁹ a 110 % devaluation (as of November 22, 1976 it was 129 % following the float of that date) would cause an *additional* increase of slightly less than 30 % in the wholesale and consumer price indexes over rates that would have taken place otherwise, and approximately a 60 % additional rise in the peso price of both exports and imports over a two year period. That is, the primary effect on prices would be to raise the relative price of traded goods, and the inflationary impact, while present, would be less than suggested by *Sjaastad*. The actual inflation that takes place will, however, depend ultimately upon the monetary and exchange rate policies pursued by the Central Bank of Mexico.

⁹ See *Connolly and Taylor* (1976 a).

In closing, I would like to stress the ingenuity of the use of the small open country model and to compliment the author for a provocative application of it to the balance of trade problems in Latin America.

References

- Bhagwat, V. and Y. Onitsuka* (1974), Export-Import Responses to Devaluation: Experience of the Nonindustrial Countries in the 1960's, *International Monetary Fund Staff Papers* (July).
- Connolly, M. B. and D. Taylor* (1976 a), Testing the Monetary Approach to Devaluation in Developing Countries, *Journal of Political Economy* (August).
- (1976 b), Adjustment to Devaluation with Money and Non-traded Goods, *Journal of International Economics* (August).
- Cooper, R.* (1971), An Assessment of Currency Devaluation in Developing Countries, in: *Gustav Ranis (ed.), Government and Economic Development* (Yale University Press, New Haven, Conn.).
- Dornbusch, R.* (1973), Devaluation, Money and Non-Traded Goods, *American Economic Review* (December).
- (1974), Real and Monetary Aspects of the Effects of Exchange Rate Change, in: *R. Z. Aliber (ed.), National Monetary Policies and the International Financial System* (University of Chicago Press, Chicago).
- Frenkel, J.* (1976), A Monetary Approach to the Exchange Rate: Doctrinal Aspects and Empirical Evidence, *Scandinavian Journal of Economics*, No. 2.
- Johnson, H. G.* (1958), Towards a General Theory of the Balance of Payments, in: *H. G. Johnson, International Trade and Economic Growth* (Allen and Unwin, London).
- Keynes, J. M.* (1925), *The Economic Consequences of Mr. Churchill* (The Hogarth Press, London), reprinted in: *J. M. Keynes, Essays in Persuasion* (Harcourt, Brace and Company, New York: 1932).
- Laffer, A.* (1974), Exchange Rates, the Terms of Trade, and the Trade Balance, mimeograph (June).
- Mundell, R. A.* (1971), Devaluation, in: *R. A. Mundell, Monetary Theory* (Goodyear, Pacific Palisades).
- (1961), A Theory of Optimum Currency Areas, *American Economic Review* (November).
- Salter, W. E.* (1959), Internal and External Balance: The Role of Price and Expenditure Effects, *The Economic Record* (August).
- Swan, T. W.* (1955), Longer Run Problems of the Balance of Payments, A.N.A.A.S. paper.