REPLY*

BY A. L. GAATHON

Jerusalem

Mr. Frey's "Comment" contains two kinds of argument against my proposal for the use of effective, instead of official, exchange rates in measuring imports and exports in national accounts of developing countries with inflationary pressures [Gaathon 1972]. He holds that actual developments in such countries do not follow the behavior pattern upon which my argument rests; and while agreeing to the extreme usefulness of the concept of effective exchange rates, he puts them out-of-bounds of national accounts because they would distort them, in particular in regard to the measurement of sectoral saving.

The first kind of objection seems to me to be due to a misconception of my reasoning. If I say that national accounting is based on market prices and quote that "in equilibrium the marginal productivity or the marginal utility of each commodity is proportional to its market price" [Nicholson 1958, p. 395] my statement in no way contradicts Mr. Frey's conclusion that the "ever increasing involvement of the public sector hardly favors [perfect markets]." In my view the basis of national accounting is the identity of gross product with the sum of private and public consumption, gross domestic investment, and exports less imports. The very fact of adding up the thousand and one items of these components presupposes that their prices are comparable, that is that on the average at least the money amounts reflect economic volumes, which means that the equilibrium condition holds. This principle is independent from the degree of its actual implementation. This is as legitimate as the presumption in every constitutional state that each individual is law-abiding, until and unless somebody proves the opposite; in reality the number of citizens cheating on income tax, or customs duties, or infringing parking regulations, and so on and so forth, is presumably much larger than that of the innocents. Thus whereas I am talking in terms of equilibrium as the basic precondition of national accounting Mr. Frey argues in terms of actual developments turning away from equilibrium.[1]

I fail to understand Mr. Frey's polemics against my treatment of foreign market transactions. If he states that "the shift of aggregate demand and supply schedules through tariffs ... is hardly sufficient to stop the trade balance from deteriorating", that the "majority of developing countries apply quantitative import restrictions" and that improvements of the trade balance have "predominantly been achieved through exchange control" I don't see any discrepancy of our views. I said explicitly (p. 239) that import and export prices tend to move "away from equilibrium" and in footnote 4, p. 234, that "not only direct taxes on imports ... have to be taken into account, but also other measures [such as] import quotas." The transformation of such restrictions into effective exchange rates poses, of course, difficult statistical problems. But these are

* I use this opportunity of filling in the reference gap in footnote 13, p. 240, of my article [Gaathon 1972]. Dr. G. Stuvel was kind enough to inform me that he used the characterization of development plan data as "anticipated ex post figures" in an article in 1951. He adds there that "this expression has been coined by Professor J. G. Koopmans." [Stuvel 1951, p. 167].

[1] National accountants try to remove those—relatively few—cases in which deviations of market prices from equilibrium are ascertainable in input–output models used for linear programming and planning by introducing "shadow prices". I myself proposed a national accounting system which conceptually covers actual transactions as well as such deviations, distinguishing between "real flows", "financial flows", and "uncompensated benefits" [Gaathon 1953].

outside the scope of our conceptual discussion.[2] Frey also states that indirect taxes raised for revenue purposes should not be included in effective exchange rates. This I expressed implicitly in the same footnote: "Only those imposts which affect the choice of a purchaser between a given domestic product and the same good imported" are to be included. This excludes from the outset non-competing imports, such as raw materials, tobacco, coffee, tea, and the like—imports which account for the bulk of revenue duties in many countries. Frey's contention that the "infant industry or protection argument" is playing "a more important role" than duties which fall under the above definition seems to me to make a distinction without much of a difference. The infant industry argument differs from the aim of effective exchange rates only in having more of a long-term implication, and the protection argument seems not to differ at all.

I now turn to Mr. Frey's belief that the introduction of effective exchange rates distorts the resulting income distribution by sectors, and in particular the contributions of the public and the private sectors to saving. The shortest way to lay open the points of dispute seems to me to design a simplified national accounts system containing the

SCHEME OF NATIONAL ACCOUNTS

	Business		Government		Households		Total Domestic		Rest of the World	
									X	M
	−	+	−	+	−	+	−	+	−	+
A. Using official exchange rates										
1. Factor payments	80					80	145	145		
2. Factor payments			65			65				
Taxes on—										
4. domestic output	30			30			60	60		
5. imports				30	30					
6. Export subsidies		20	20				20	20		
Output:										
7. consumption		60			60		60	60		
8. exports		40							40	
9. Imports					40					40
10. Total	110	120	85	60	130	145	285	285	40	40
11. Savings	+ 10		− 25		+ 15		0		0	
B. Using effective exchange rates										
1, 2. Factor payments	80		65			145	145	145		
4. Taxes on domestic output	30			30			30	30		
9. Imports					40		70			40
5. Taxes on imports					30					30
8. Exports		40						60	40	
6. Export subsidies		20							20	
7. Output for consumption		60			60					
10. Total	110	120	65	30	130	145	245	235	60	70
11. Savings	+ 10		− 35		+ 15		− 10		+ 10	

[2] How to distinguish between taxes and subsidies substituting for exchange rate adjustments and other taxes and subsidies is a problem which seems to be soluble only by approximation. In Israel the matter has been widely discussed and a number of shortcuts have been proposed. See Nadav Halevi's survey [Halevi 1969, pp. 90–92].

same basic data twice, once recording foreign trade at official exchange rates and once at effective rates. I assume only four sectors—Business, Government, Households, and Rest of the World—and as final products only private consumption and exports, omitting public consumption and gross domestic investment. In the above table the sign (−) means payments of the sector to others for inputs or as transfers, and the sign (+) receipts for output to or transfers received from other sectors. In the Rest of the World account (−) correspondingly means exports to, and (+) imports from the country for which the accounts are drawn up.

Part A of the table shows the usual treatment of import taxes and export subsidies which together with their domestic counterparts form the "net indirect tax" component of gross product. The savings of the Business and Household sectors, 15 + 10, are offset by the dissaving of the government sector. The zero saving of the domestic economy implies a net foreign investment of zero, too.

The fact that at the official exchange rate imports are undervalued in terms of the domestic price level and therefore are charged import duties, and that exports have to be subsidized in order to be profitable, is accounted for in part B where the import taxes are routed from the Households sector, not to the Government, but to the Rest of the World account, and export subsidies, again not from the Government sector, but from the Rest of the World account to Business. In fact, the import taxes enter, and export subsidies come out of, an Exchange Equalization Fund which, of course, is kept in domestic currency. This fund might be a department of the Treasury or of the Central Bank. Its in- and outflows are routed from and to the Rest of the World account because the value of imports in terms of domestic prices is 70, and not 40, and the value of exports in term of the real resources to be sacrificed by the economy is 60, and not 40. In my view the national accounts of any country have to reflect the economic facts of that country—among them the relative price structure—and not the price distortions caused by keeping the official exchange rate rigid when domestic prices and costs have significantly changed.

The difference between the two parts of the table expresses itself in two significant forms, namely, the sector distribution of savings and their aggregate. The saving amounts of the Business and the Households accounts are the same in the two parts, but in part B Government shows a higher dissaving. In consequence the domestic economy shows in part B an aggregate dissaving of − 10 which is offset by a net capital import of 10 (expressed in the table as positive saving of the Rest of the World). This is, of course, incorrect in terms of in- and outflows of foreign exchange, which balance.[3] But it is correct from the point of view of the domestic valuation of foreign trade: the economy could afford to spend 10 more than it produced because it had to give only 20 in support of exports while it could collect 30 from importers over and above the import values of the official rate. (The lower amount of export subsidies may reflect the exploitation of comparative cost advantages, or of exogenous improvements of the terms of trade such as booming demand in foreign markets.)

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[3] These transactions, as well as the flows on donation and capital accounts in foreign exchange, should be recorded in a Balance of Payments, distinct from the Rest of the World account, that is outside the National Accounts [Gaathon 1972, p. 241].