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Intereconomics

*Suggested Citation:* Rommel, Artur (1970) : Effects of a national merchant fleet, Intereconomics, ISSN 0020-5346, Verlag Weltarchiv, Hamburg, Vol. 05, Iss. 10, pp. 317-320, <https://doi.org/10.1007/BF02928924>

This Version is available at:

<https://hdl.handle.net/10419/138399>

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# Effects of a National Merchant Fleet

by Dr Artur Rommel, Hamburg

The debate about the German revaluation in October 1969 and possible negative consequences for the earnings of the German shipping industry has shown that the receipts for sea-going shipping, operating mostly in the international market, vary, through the Deutschmark (DM) rate of exchange into the US \$ or the pound sterling, according to whether freight rates are quoted in DM or one of these other currencies, for the earnings arise largely outside the domestic economy. Reports on the total of freight receipts and payments in these markets give an idea of the sums involved and indicate how these transactions affect a country's balance of payments. In 1969, for instance, DM 5,883 mn was spent in the Federal Republic of Germany on sea transport services, while the German shipping industry earned DM 4,372 mn.

## Effects on Income ...

The external economic effects of a national merchant fleet are always viewed in the light of the question whether and how the fleet helps to improve the balance of payments. Some States see fit to promote the creation of a fleet in order to counter a persistent tendency towards a balance of payments deficit. "Although the two sides of the balance of payments are always equal, reference is made again and again to active and passive balances, to balance of payments surpluses and deficits, and to balances of payments lacking equilibrium. This apparent paradox evidently makes sense only if the terms "surplus" and "deficit" are applied, not to the balance of payments as a whole, but to the items which together make up the balance of payments<sup>1</sup>."

The section of the balance of payments of interest in the present context is that concerned with services, which is frequently combined with the balance of trade to form the balance of current transactions. These accounts also are always in equilibrium. They may however show an active (positive) or passive (negative) balance which is described as a surplus or, reversely, a deficit. "... a country's balance of international payments

is a summary statement, or account, of all the transactions of its residents with the residents of the rest of the world ... On one side it records transactions giving rise to receipts (credits); on the other, transactions giving rise to payments (debits). If it is a complete record, everything must be accounted for. ... This means that both sides of the balance of payments must balance; debits must equal credits<sup>2</sup>."

## ... of a Merchant Fleet

Such transactions are however important, not just because they are recorded in the framework of the balance of payments, but because of the effect they have on the national income of the economy in question. A country's exports enlarge, and its imports reduce, the social product according to the definitive equation for the national income, disregarding State activities, of

$$Y = C + I + X - M$$

in which Y stands for national income, C for consumption, I for investment, X for exports and M for imports.

The resulting increase in income is the important —one might almost say—mercantilist objective of all export promotion measures, as has been demonstrated by the reaction to the German revaluation with its brake effect on German exports. Questions of foreign trade elasticity, which are important in connection with changes in the rates of foreign exchange, shall not be discussed in this context. But a closer look must be taken at the export multiplier as the determinant of the magnitude of changes in income.

If an autonomous rise of export follows the building of a fleet, e.g., from selling sea transport services to foreign countries, the national income of the country in question will, disregarding external repercussions, rise in proportion to the export multiplier  $\frac{1}{s+m}$  by  $dY = \frac{1}{s+m} dX$  s being the marginal saving propensity and m the marginal importing propensity, i.e. by the quotient of the changes in savings and/or imports and the

<sup>1</sup> K. Rose, *Theorie der Außenwirtschaft*, 2nd edition, Berlin and Frankfurt/Main, 1966, p. 15.

<sup>2</sup> P. T. Ellsworth, *The International Economy*, 3rd edition, New York and Toronto, 1964, p. 249.

changes in income springing from consumer habits. Bearing in mind that in line with the thereby induced change in income,  $dY$ , imports also change corresponding to the import propensity,  $dM = m dY$ , it follows that the balance of current transactions, defined as  $L = X - M$ , will change likewise, viz.,

$$dL = \frac{1}{1+m} dX.$$

"If all exports are regarded as autonomous, no allowance is made for the fact that induced import changes in one country present themselves to other countries as export changes which, if their own imports are also related to the national income, must in turn bring about changes in the imports into these countries and consequentially changes in the exports of the country under consideration. A distinction must therefore be made between autonomous exports,  $X_a$ , and induced exports,  $X_i$ , the latter being related to the incomes of foreign countries through their marginal import rates. In a two-country model<sup>3</sup>—e.g., a developing country as country 1 and an industrial country as country 2—the balance of current transactions change is shown by the equation

$$dL_1 = -dL_2 = \frac{1}{1 + \frac{m_1}{s_1} + \frac{m_1}{s_2}} dX_{1a}$$

and the change in national income in country 1 by

$$dY_1 = \frac{1}{s_1 + \frac{s_1}{s_2} m_2 + m_1} dX_{1a} \text{ and}$$

in country 2 by

$$dY_2 = \frac{1}{s_1 + \frac{s_2}{s_1} m_1 + m_2} (-dX_{1a}).$$

### Saving and Importing Propensities

The income changes in the two countries under consideration depend entirely on their propensity to save and to import. "It is seen that, given an autonomous increase in exports from country 1 to country 2, the national income of country 1 rises, and that of country 2 declines, as a rule, provided the marginal rates of saving and the marginal import rates are not negative; and the income change becomes larger as the marginal rates of saving in the country concerned decreases, as the marginal rate of saving in the other country increases, and as the marginal import rate in either country declines<sup>4</sup>." Developing countries may be assumed to have a low average and marginal saving rate because incomes are

low and mostly absorbed by consumption, whereas in industrial countries there is a greater propensity to save. In contrast, the import propensity is probably often higher in developing countries than it is in industrial countries; it would be hazardous to claim general validity for such a statement because liberal foreign trade policies are not pursued in all States. Hence the success of export promotion measures is not in every case a priori evident, especially bearing the following facts in mind.

The purpose of setting up merchant fleets is often import substitution rather than the exporting of services. As imports are a function of national income,  $M = M(J)$ , substitution for imports can only take place by way of a change in the function of imports, i.e., of the propensity to import, if the national income remains unchanged or even increases. True, a small or, possibly, negative import rate in country 1 would raise its national income and improve its balance of current transactions, but it would do so only as long as country 2, which puts up with a (noticeable) deterioration, does not retaliate by curtailing imports from country 1 which would reduce the effects on the balance of incomes and the balance of current transactions in country 1 to or below zero,  $dX_1 \leq 0$ .

"If such a tendency (i.e., a worsening of the balance of payments position) persists, it must be stopped at some point, and those who do not want to let the market forces come into play for stopping it inevitably look for administrative regulations. There have been groups of economists in various countries who have not been averse to improving the balance of payments position of their nations by policies of mercantilist character, that is, by administrative import restrictions and export subsidies<sup>5</sup>."

### Analysis of Balance of Payments Effects

The building of sea-going ships in domestic shipyards without drawing on components obtained from abroad or the use of a fleet in domestic traffic without employing foreign crews transferring earnings abroad entail no external economic transactions and are therefore neutral in their effect on the balance of payments although they augment the social product by creating assets. The wish to improve the balance of payments by means of a merchant fleet is therefore not solely motivated by reasons of employment policy but can be understood on the ground that exports of services may help to pay for imports of merchandise necessary or desirable for other

<sup>3</sup> R. Funck, *Außenwirtschaft*, in: *Kompendium der Volkswirtschaftslehre*, edited by Ehrlich i.a., Vol. 2, Goettingen, 1968, p. 89.

<sup>4</sup> R. Funck, *ibid.*, p. 90.

<sup>5</sup> W. Feilner, *Modern Economic Analysis*, New York/Toronto/London, 1960, p. 34.

reasons or allow them to be increased at the cost of lower imports of services.

An analysis of the effects on the balance of payments causes difficulty if ships are imported from abroad; and it makes no difference in principle whether they are paid for at once or the purchase price is credited. As happens whenever goods are imported, the payments made appear in the balance of trade together with a corresponding counter-entry in the foreign exchange account or on capital account. The procedure does not differ from other goods imports.

If a merchant fleet is employed on external transports, the effects are somewhat more complicated, as follows from the aforementioned considerations, because diverse transactions are involved — in addition to receipts from the exporting of shipping services and in local harbours, there are disbursements for imported services, including fees, in foreign ports and to foreign crews insofar as they transfer their earnings to other countries. The merchant fleet can contribute to an improvement of the services account, and thus the balance of payments, either by replacing imports in which case payments which would otherwise have to be made abroad are obviated, or by exporting services.

#### Hopes for Developing Countries ...

These two effects are decisive for the declared wish of many developing countries to establish merchant fleets of their own. Crucial for the repercussions on the balance of payments is in this case the net result of the external economic transactions which is ascertained by deducting the expenditure incurred for imported services, such as bunkering abroad, for foreign port fees, etc., and for residual imported shipping services from the receipts for service exports by the country's own merchant fleet and harbours. The ensuing changes

in exports,  $dX$ , and imports,  $dM$ , must be modified according to saving and importing propensities in order to ascertain the effects on the balance of income and the balance of current transactions; these can be quantified only by econometric analysis.

In the hope that this net effect will in every case be positive, some developing countries do not allow themselves to be deflected from efforts to create a merchant fleet of their own and secure sufficient employment for it. They see all the more cause for doing so because the import policies of the industrial countries frequently deny them an opportunity to establish other export industries. Many finished products in fact still enjoy a, mostly substantial, measure of tariff protection in industrial countries whereas the raw materials supplied by developing countries come in duty-free. That "there frequently exists a considerable discrepancy between the desire on the part of the developing countries to increase their exports and their own industrial capacity"<sup>6</sup> is not entirely due to the import tariff policy of the industrial countries, for "the goods thus (i.e., by developing countries) exported are frequently not competitive on the world market, either because their price is above world market level (as a consequence of their low productivity and the therefore high production costs) or because they are not up to western standards. Inability to compete is due much more to these causes than to import duties imposed by the industrial countries of the West, although the contrary is frequently asserted".<sup>7</sup>

#### ... when Setting up Merchant Fleets

When developing countries for the reasons mentioned aim at setting up merchant fleets as almost their only export industries so as to lessen their

<sup>6</sup> A. Rommel, Technical Progress in Growth Processes, in: INTERECONOMICS, No. 3, 1967, p. 71.

<sup>7</sup> A. Rommel, *ibid.*, p. 74.



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dependence on a few primary commodities, they do not focus their economic policies according to strictly economic considerations. If the theory of comparative costs has any validity at all, it applies to the services sector as much as to goods production. Accordingly one would have to examine first whether the underlying conditions are more favourable for sea-going shipping than they are in the industrial field. It is certainly true that in shipping, as also in other sectors of the economy, import substitution can be enforced by law. But whether exports of services can be achieved in this way depends on the readiness of the trading partners to relinquish services of their own. The practical enforceability of such measures is largely determined by the terms and customs of foreign commerce. There remains only the question whether, when new industries are set up, "the objective of these policies is to bridge an initial interval for industries that will later be profitable without further protection"<sup>8</sup> or whether such a policy for shipping will be permanent.

The substitution of a country's own services—in the present case, shipping services—for imports and, even more so, the exporting of services necessarily causes the shipping services rendered by foreign countries to decline if such substitution exceeds the annual growth rate of the services required as a result of increasing exchanges of goods. If the substitution and the growth of demand for shipping services on the seas are synchronous, i.e., if new shipping nations do no more than absorb the growth rate, the demand for export services by the traditional shipping countries will stagnate.

#### **Economic Consequences not Always Positive**

If the sea transport services previously exported by a country decline, its balance of payments will tend to worsen. In a country with a large payments surplus from exports of industrial goods, such as the Federal Republic, such a trend may be economically desirable from the rather formal viewpoint of balance of payments equilibrium even though the effect on the sector directly concerned is negative. In countries where sea-going shipping is the main export item however the balance of payments position may in an extreme case worsen to such an extent that the negative trend has to be compensated by means of economic policy, imports being curbed or, insofar as this is possible, other export industries being established. Shipping countries which are traditional exporters of such services would thus find themselves in a situation similar to the one which the developing

countries strive to overcome by creating their own merchant fleets.

There is thus no a priori certainty that the net effect on the balance of payments of the operations of a new merchant fleet is always as anticipated. There will be a negative influence if for lack of shipyard capacity in the countries concerned ships have to be bought, chartered, fitted out or overhauled abroad. Processes of economic change which are not brought about by market factors but forcibly by State regulation often run counter to the economic principle of achieving the maximum output from the available input. In some countries shipping policy attaches more importance to liner operations than to tramp shipping even though the latter may carry more cargo or contribute more to the production of income and to improving the balance of payments. In developing countries it is often impossible to argue on economic grounds that a start should be made with the capital-intensive, technically advanced and therefore more complicated liner operations in order to establish an export industry. For given the shortage of capital and trained personnel prevailing frequently, it is easier and economically more rational to start with a simpler process. In joining the liner services however the declared wish to exercise influence on the conferences, and especially, their tariff rates policy has something to do with political prejudices which are outside the sphere of economic calculation.

Economic considerations enter into the matter of course all the same. If the developing countries were to secure more favourable tariff rates in the conferences, they would not only score a prestige success. For, the cost of the traffic for which they have to pay freight charges, that means the imports of importance to them, would become a smaller burden and its detrimental effect on the balance of payments would be lessened. To what extent the freight rates for such transports can in fact be lowered or at least kept stable cannot be determined here. The assumption that such influence is brought to bear on the tariff rates policy of the conferences not by political means but through membership in the liner operator groups presupposes that the shipping companies can pursue an autonomous policy in regard to freight rates. In such circumstances the outcome will depend on the market situation, and that means to some extent, on the possibility of outsiders penetrating into the particular trade. The positive effect on the services sector of the balance of payments which can perhaps be achieved in this way still appears to be the only economic reason for many developing countries today for establishing their own liner services rather than investing in other fields.

<sup>8</sup> W. Fellner, *ibid.*, p. 35.