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# The Effects of Development Aid on Exports

by Helge E. Grundmann, Basle \*

**Of what benefit cooperation with developing countries is in actual fact to the industrialized countries is a question which is receiving increasing attention in the discussions on development policy. In the present economic situation special interest attaches in this context of course to the repercussions of public development aid services on the export activities of enterprises in the donor countries. The following article is based on the findings of a study into "Job procurement through development aid credits and exports to developing countries" (Arbeitsplatzsicherung durch Entwicklungshilfekredite und Exporte in Entwicklungsländer, Basle 1978) which was undertaken by the author together with Christel Bergmann on behalf of the Federal Ministry for Economic Cooperation.**

Development aid services can, in general, be *directly* export-effective if development aid funds are used to pay for goods and services exported by firms in the donor country to the country receiving the development aid. Development aid services may, in addition, have *indirect* export-promoting effects by exercising, in certain circumstances, a positive influence on the competitive position of the enterprises of the donor country and/or on the import capacity of the recipient country.

It is the purpose of the present article to assess the direct and indirect effects of development aid on the export trade of the Federal Republic of Germany. There are data on the use of bilateral and multilateral development aid funds for the purchase of goods and services from the Federal Republic which can be drawn upon for a quantification of the exports resulting directly from development aid disbursements. An assessment of their indirect effects on the export trade on the other hand is insofar problematic as detailed investigations into the effects of development aid on the economic development of recipient countries, on deliveries by individual firms, etc., are not available and the various causal interconnections cannot be isolated by statistical methods. Recourse to regression analysis can only help to trace the direction of these interconnections: it does not enable the indirect effects on exports to be quantified.

The public development aid comprises grants and credits — the latter if they involve a subsidy ele-

ment of at least 25%. It is rendered through capital aid and technical cooperation projects and programmes in developing countries, either on a bilateral basis or via multinational development agencies (special organizations of the UN, the World Bank group, EC Development Fund).

## Bilateral Capital Aid

A calculation relating to the cumulative *bilateral capital aid loan disbursements* up to the end of 1976 indicates that deliveries by German enterprises accounted on average for 77.4% of the disbursements; in five of the last 15 years only was their share below this average figure. Bearing in mind that the development aid has since 1973 by and large been "untied" and that contracts have since then been placed by international tender, it seems reasonable to attribute the fluctuations in the share of orders secured by German suppliers since that time mainly to their relative competitive position in regard to the goods in question which varied according to the nature of the projects.

The export contracts placed with German enterprises as a direct result of capital aid provision amounted in the average of the 1962–1976 period to 3% of all German exports to developing countries; the highest figure — 6% — was recorded in 1963 and the lowest one — 1.5% — in 1976. The retrogressive trend since 1973 of the exports resulting directly from capital aid is a corollary of the enormous increase of German goods exports to developing countries.

\* Prognos AG.

Mechanical engineering, electro-technical products, road vehicles and chemicals accounted in 1976 for about three-quarters of the export orders resulting from bilateral capital aid. The sector-by-sector distribution of the export orders obtained as a result of bilateral capital aid thus matches the sectoral composition of the goods exports to developing countries as a whole fairly accurately<sup>1</sup>; from this it may be inferred that the share of German groups of suppliers in capital aid-induced export contracts corresponds to their international competitive strength.

The direct employment effect of these export orders is put at 9,000 jobs (in 1976). The additional indirect effects on production and employment of interindustry relations can be determined by means of input-output computations. These indirect effects on employment were in 1976 of an order of about 7,900 jobs – in the mechanical engineering and electro-technical industries and in particular also in the services sector, agriculture and forestry, and the iron and steel industry.

#### Bilateral Technical Assistance

Data are lacking for the exports which have been financed through disbursements in the framework of the *bilateral technical cooperation* except for the projects which have been carried out by the Gesellschaft für Technische Zusammenarbeit (German Agency for Technical Cooperation) (GTZ). Although orders for goods required for technical assistance projects are not "tied" either, nearly 90% of the payments made in connection with such projects in 1976 went back to German enterprises – mainly for the supply of materials, for construction work, consultancy services and expert opinions, but not for operational items which in the case of technical cooperation projects are for the most part obtained in the country in which the project is undertaken.

The exports resulting from allocations made through the GTZ amounted in 1966 to 0.33% of all German exports to developing countries, and about 4,000 jobs were created by these exports. These figures relate however only to a part of the export orders resulting from bilateral allocations, for the GTZ accounts for no more than about one-third of the allocations from bilateral development aid funds. It is however not possible to extrapolate the ratio of exports resulting from GTZ projects to all exports to developing countries to the entire range of bilateral allocations because the organizations whose development activities are financially supported by Federal Government allocations (Churches, foundations,

media, etc.) operate – in some cases entirely – differently structured projects, from which follows that the resulting import requirements of the developing countries in question also differ in character and volume. At any rate, the figure of 0.33% marks the lower limit of the proportion of the export contribution of orders resulting from bilateral allocations to the total of exports to developing countries.

#### International Development Banks

While data about multilateral technical cooperation deliveries from the Federal Republic are lacking, there are records which show the extent of the *multilateral capital aid*.

As far as the *international development banks* (World Bank, IDA, IFC, ADB, ADF) are concerned, the cumulative disbursements up to 1977 in respect of contracts with German enterprises are of a similar ratio to the total disbursements as the share of the Federal Republic in world trade. The Federal Republic thus participated in the orders placed by the international development banks as corresponds to its international competitive position. Bearing in mind that the public development aid contributions of the members of the international development banks, including the Federal Republic, give them only a share in the subscribed capital, that the paid-in-capital is only a fraction of the subscribed capital and that these institutes obtain the bulk of the funds for their lending operations in the international capital markets, the ratio of export orders for German firms to the public development aid funds provided on the way over the international development banks can in point of fact be much more favourable than is the case with the bilateral capital aid which is financed entirely out of public development aid funds. This explains why the volume of export orders for German firms financed by payments of the international development banks in 1976 was not greatly different from the volume of export orders which resulted from bilateral capital aid although the German bilateral capital aid in that year was almost four times as large as the multilateral one.

As neither the structure of the international development bank projects nor the procedure followed in the placing of orders was significantly different from that applying to bilateral capital aid, the sector-by-sector distribution of the export contracts for such projects may be assumed also to have been similar. Hence the overall employment effects of the exports resulting from orders financed by disbursements of the international development banks in 1976 probably also corresponded in volume and distribution over the

<sup>1</sup> These four industries accounted (in 1976) for 73.6% of all goods exports to developing countries.

various industries to the deliveries made by German firms on the strength of bilateral capital aid loans by the Federal Republic.

### European Development Funds

The cumulative total of the orders for German firms financed by the three *European Development Funds* (EDF) in the period from 1959 to the end of 1976 amounted to 192.3 mn European units of account. The Federal Republic thus accounted for altogether 12.5% of these deliveries while its share of the finance for public development aid was about 30%. This low share of the total deliveries is chiefly due to the low share of German firms in construction contracts (9.3%) which accounted for close on 70% of the total EDF spending<sup>2</sup>. As these contracts were placed by international tender, it is to be assumed that German enterprises have so far shown little interest in such invitations for tenders, for there is no evidence whatsoever of German suppliers being under a general competitive handicap on the international level. The reserve of German suppliers may however have something to do with a feeling on their part that they do not stand much of a chance when tendering for contracts in the former colonial territories of the other EDF members.

### Overall Direct Effects

The payments to German suppliers under *bilateral as well as multilateral development aid* reached in 1976 a total of DM 2.3 bn — i.e. 3.6% of all German exports to developing countries. Almost 42,000 workers were engaged in productions destined for this part of the goods and services exports. Bearing in mind that the German exports to developing countries have increased over the last 15 years at an annual average rate of 12.7% while the total public development aid rose in the same period only by an annual average of 5.6% and that the share of the Federal Republic in the supply total has declined only slightly, it may be inferred that the development aid-financed exports accounted at some times in the past for a far higher proportion of the German exports to developing countries than was the case in 1976. The relative decline of development aid-financed exports is to be attributed to the strong overall growth of the export business with developing countries rather than to any marked decline of "return flows".

### Indirect Effects

A question which needs answering in this context is whether part of the exports to developing countries which were not financed directly by devel-

opment aid funds must not be attributed to indirect effects of the development aid or whether the enormous growth of the German exports to developing countries has occurred in every case irrespective of the development aid services.

As mentioned earlier, it is impossible to give an unequivocal answer to this question on the strength of statistical tests. On a world scale, it is true, there exists a positive statistical relation between the exports to developing countries and the development aid disbursements. This is shown by a regression computation for these two items covering the 1962–1976 period. The strong positive connection indicated by this regression does not however provide any evidence about the causality. To assess the probability of a causal connection use must be made of qualitative tests and plausibility ratiocinations.

A qualitative indicator of a possible connection is provided by a comparison of the share of the Federal Republic<sup>3</sup> in the markets of countries on which the German development aid has been focused with the average market share of the Federal Republic in the developing countries in general or the average German market share in a group of similar countries<sup>4</sup>. Such a comparison shows that in almost all the focal countries the German market share was during this period markedly higher than in the average of the comparable group of countries. This suggests that there exists a positive connection between the German development aid and the competitive position of German exports in these countries.

It cannot however be ascertained beyond doubt how this positive connection between development aid services and economic relations has arisen, i.e. whether the development aid benefited the export trade or whether the development aid was focused on countries with which the Federal Republic was already maintaining close economic relations. There is however much presumptive evidence to suggest that, as a rule, the economic relations with a particular developing country are furthered by development policy activities in that country.

### Plausible Presumptions

Positive effects on the export business of the donor country may follow if

the economic basis of the recipient country is improved by projects financed in the ambit of development aid and economic growth is speeded

<sup>3</sup> The share of the Federal Republic in the combined exports of all OECD countries to a particular developing country or a group of developing countries.

<sup>4</sup> In view of the heterogeneous features of developing countries it is advisable to divide them into different groups according to their level of industrialization and/or incomes.

<sup>2</sup> Cf. Official Journal of the EC, 20th year (1977), No. C112.

thereby because an acceleration of economic growth goes in most developing countries hand in hand with an at least equally great acceleration of the growth of imports: the donor country will in this case generally participate in the market expansion, especially if it is accounting for as substantial a share of world trade as does the Federal Republic;

the import capacity of the recipient country is, directly or indirectly, increased by grant of credits: if this happens, a country with a large share of the world trade will in general likewise feel positive effects;

the deliveries of the donor country under development aid auspices induce follow-up orders: these are especially likely to materialize in the case of projects for which the original plant and working assets came from the donor country and in which the demand for additional working assets, and also for spare parts, leads to consequential exports, and also when parts of a basic supply network have been provided through development aid-financed projects – when for instance a developing country has installed Ger-

man equipment to start up a telecommunications network, it is quite likely to use more German equipment in its extension;

development aid-financed projects and supplies have an indirect effect of opening new markets: such effects may operate in very different ways – by creating general “goodwill” for the donor country and its products, by providing an opportunity to demonstrate the use of its products, for instance in a vocational training centre equipped with German machines, by enabling one or more German firms to make such large deliveries for an individual project that they find it worth their while to set up a servicing station which they can then use to market their own products, etc.

It is therefore probable that part of the growth of the German exports to developing countries at least did not materialize autonomously but has been induced, it may be said, by German activities in the sphere of development policy. The export-promoting effect of the development aid was therefore probably altogether greater than is to be deduced from the volume of the “return flows”.

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