Structural adjustment and international division of labour

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Summary and conclusions

An interesting feature of international economic integration in the post-war period has been the rise of the developing countries as exporters of manufactured goods. Until the sixties the developing countries accounted for less than 10% of world exports of manufactures. Since then this share has doubled to over 20% in the nineties. Between 1955 and 1973 the share of manufactures in the exports of the developing countries increased from 14% to 26%. After a significant decline because of the oil crisis, this share increased rapidly to almost 60% in 1993. Initially, only a small number of newly industrializing economies were responsible for most of the manufacturing exports of the developing countries, while since the early eighties more developing countries emerged as manufacturing exporters. The increasing exports of manufactured goods from the developing countries was perceived by the industrialized countries as an important problem because of a combination of factors: the concentration of these exports on the markets of the industrialized countries and in a small number of commodity groups, stagnating markets for these commodities in the industrialized countries, labour-intensive technology of production in the sectors involved and their concentration in economically weak regions.

The clothing sector, which is at the centre of this study, has played a major role in the emergence of developing countries as exporters of manufactured goods. The share of clothing in the manufactured exports of the developing countries increased from 2% in 1955 to over 16% in 1977, and decreased after that to 14% in the nineties. The latter decline took place, however, in the period of a rapidly increasing share of manufactures in total exports of the developing countries. In 1955 10% of world clothing exports came from the developing countries and over 70% from the industrialized countries. In 1993 the share of the developing countries has increased to almost 60%, while the share of the industrialized countries has declined to 32%. Finally, in the middle of the sixties the developing countries became net clothing exporters, while the industrialized countries became net clothing importers.

These changes in the international division of labour are considered as an external disturbance to the industrialized countries in this study. Adjustment to this disturbance can be both between sectors, i.e. a decline of the clothing sector and an increase in other sectors in the industrialized countries, and within the clothing sector. With respect to the latter we hypothesized in this study the possibility of specialization in different market segments in accordance with the level of economic development of a country. For the industrialized countries this meant specialization in higher quality segments. By taking these patterns of change and adjustment in the clothing sector as our starting point, we distinguished the following main objectives of this study:

- to derive a sequential pattern of new clothing exporters on the world market;
- to derive a manageable indicator of relative quality which can be calculated from international trade statistics;
- to derive the pattern of quality differentiation in international clothing trade between countries at different levels of development.

The sequential pattern of new clothing exporters on the world market is based on a general pattern of structural change in the course of economic development and the accompanying change in comparative advantage. Structural change has been defined in chapter 2 as a change in the composition of an aggregate, and more specifically the sectoral composition of the production of a country. In a process of economic development this appears in a more or less regular pattern of change in the production structure. While some sectors are characterized by an increasing share in total production, other sectors are characterized by a relative or even absolute decline. In a world with countries at different stages of development this implies that a specific sector will be *expanding* in one country and *declining* in another country. Country characteristics as size and availability of raw materials may yield variations in the general pattern, but do not fundamentally alter them. Factors which contribute to such patterns of structural change are changes in the composition of domestic demand when income increases (Engel's law), changes in intersectoral links and - not the least important in the context of our study - changes in comparative advantage and the international division of labour. Because of the latter factor expansion of a sector takes place not only because of a relative increase of domestic demand for its products, but also because of changes in international competitiveness, which result in the replacement of competitors on the domestic market (a process of import substitution) and the penetration of export markets.

The clothing sector usually expands during early stages of industrialization, but its share in production declines relatively at higher development levels. Moreover, high labour-intensity in production, which is reduced relatively little by technological change, has shifted comparative advantage in this sector from the industrialized countries to the industrializing developing countries. In Leamer's development ladder countries become net exporters of labour-intensive manufactured goods only after some level of capital per worker is reached. After a period of increasing net exports, net exports start to decrease and turn into net imports at successively higher levels of capital per worker. This results in a sequential pattern of emerging clothing producers. The newly industrializing economies - Hong Kong already in the middle of the fifties, Korea and Taiwan since the middle of the sixties - were the first major clothing exporters among the developing countries. They were succeeded by second tier newly industrializing economies, most of them also in Asia, while moving into other sectors themselves. Moreover, from the perspective of Western Europe, the Southern European countries and the Eastern European countries are important clothing exporters at an intermediate development level, of which the position of the latter has fundamentally changed since the events of 1989.

The industrialized countries remained the major destination of world clothing exports. That means that the rapid increase of the share of non-industrialized countries, i.c. the developing countries, in world clothing exports was realized to a very large extent by penetrating the markets of the industrialized countries. Nevertheless, a number of industrialized countries remained important clothing exporters. The latter will only partly be due to protection under the aegis of the Multifibre Arrangement. This applies of course first of all to Italy, which has been one of the two largest clothing exporters in the world since the early sixties. Besides adjustment to higher quality segments, its domestic network of subcontractors contributed to its competitive advantage. But also some other Western European countries which, contrary to Italy, have become net clothing importers, succeeded in maintaining export markets in the industrialized world, especially in Western Europe itself.

The pattern of international clothing trade described above is part of the inter-industry specialization between the industrialized countries and the other country groups. Specialization in different segments of the clothing market has been related in chapter 4 to the presence of product differentiation. In that chapter the distinction between horizontal and vertical product differentiation has been introduced. Horizontal differentiation, which combines economies of scale and equal cost functions for different varieties, is primarily relevant for trade between industrialized countries, i.e. countries with little differences with respect to factor endowments or technology. Vertical differentiation or quality differentiation refers to the existence of different quality levels within a commodity group, with different cost functions. The assumption of higher capital intensity in the production of higher qualities fits into a Heckscher-Ohlin type approach of international trade, with more industrialized countries having a comparative advantage in the production of higher qualities.

We broadened the assumption of higher capital intensity in the production of higher qualities somewhat further by differentiating between stages of clothing production. The labour intensity of clothing production is primarily determined by the relatively high labour intensity at the assembly stage. Comparative advantage with respect to higher qualities in the industrialized countries is above all connected to the stages of design and marketing. A specific aspect of the marketing stage is the advantage of market nearness where a volatile demand in fashion and quality prone clothing markets in the industrialized countries requires flexibility and speed of response from producers. Nevertheless, specific skills and quality control remain a human capital aspect in the assembly stage. On the one hand separability of stages of clothing production may offer opportunities to relocate the assembly stage to less developed countries, but these opportunities will be restricted by the requirements of market nearness.

The distinction between qualities also differentiates the general relation between economic development and structural change. The shift *between* sectors in the course of economic development can go together with a process of vertical differentiation *within* sectors with a gradual shift towards higher quality levels *(upgrading)*. When a sector is nonhomogeneous, some structural change is taking place between quality segments within the sector. This has to do both with changes on the production side (changes in factor endowments) and with changes in demand related to rising incomes. This can also be characterized as a process of increasing complexity, because of a shift both towards relatively more complex sectors and towards more complex segments within a sector. The parallel shift of comparative advantage from more to less developed countries applies first of all to lower quality levels. In the course of economic development comparative advantage will gradually shift to higher quality levels. Penetration by less developed countries on the markets of industrialized countries will start at lower quality segments, but penetration may subsequently shift to higher quality segments. As a consequence, clothing producers in the industrialized countries will have to concentrate on higher quality and fashion segments when clothing exports of less developed countries are upgraded. Again this can be regarded as an example of structural adjustment to external disturbances.

In the empirical analysis of such patterns of structural change and adjustment one is confronted with the problem of the measurement of quality differences. The possibilities for direct measurement of characteristics which are accountable for quality differences are severely restricted by the availability and processability of data. The assumption of equal cost functions for horizontally differentiated varieties of a commodity and different cost functions for vertically differentiated commodities, however, implies that price differences between varieties of a commodity (group) can be taken as indicators for quality differences. As our study concentrated on changes in the international division of labour, international trade statistics were the primary data source. This implied unit values as price indicators. As unit values represent the values of composite commodities, they comprise both differences in prices of individual commodities and differences in composition. Moreover, differences in prices comprise both pure price differences and differences in qualities.

In this study we concentrated on quality differences between clothing exports from countries at different levels of development. In order to minimize the problems with respect to diverging 'pure' price changes in the course of time and the non-existence of specific commodities or varieties in different periods, we have chosen a cross-section approach which compares unit values of export flows to a common region of destination. This approach yields, for each specific year, a pattern of relative qualities of clothing exports which reveals the changing relative position of individual countries during the course of time. We compared these relative unit value results with two types of price index numbers which adjust for differences in composition, viz. a Fisher index and a translog index. In a cross-section analysis price differences between export flows from different countries will primarily reflect quality differences. The index numbers can thus be regarded as quality indexes, notwithstanding the fact that in various studies the deviation between relative unit values and these index numbers has been taken as an indicator of quality differences. From our comparison it appeared that the ranking of countries according to the relative quality of their clothing exports was to a large extent the same when using either relative unit values or a Fisher or translog index.

Relative unit values are not a perfect measure of quality differences. Nevertheless they can be regarded as a reasonable compromise between accuracy and practical applicability. Moreover, relative unit values have the advantage that one can use less detailed trade statistics, as more detailed trade statistics pose additional problems with respect to classification, rounding errors, missing data, etc. Our application of the mirror-statistics problem to bilateral clothing trade data has shown this problem to be much smaller with respect to unit values than with respect to the value and quantity data themselves.

In the empirical analyses in chapter 5 we studied two cases. In the first, the relative position of The Netherlands has been studied in comparison with the developing countries on the one hand and European industrialized countries on the other. In the second the position of three newly industrializing economies on the Western European market has been compared with that of three Eastern European countries. Both studies reveal the process of upgrading in the course of economic development. Moreover, the first study confirms the sequential pattern of new clothing exporters, which penetrate the Western European market at the lower quality segments, while the newly industrializing economies upgraded their clothing exports and narrowed the quality differential with, for example, The Netherlands. Because of the latter development the newly industrializing countries became more direct competitors with The Netherlands than countries like Italy, Germany and France, which specialized in higher quality levels of clothing exports. In the second case the newly industrializing economies bridged the quality gap of their clothing exports to Western Europe with three Eastern European countries. At the same time a constant-market-shares analysis showed that the so-called 'competition effect' of Eastern European clothing exports towards Western Europe became smaller in subsequent periods relative to the competition effect of the newly industrializing economies as they became more direct competitors in terms of quality.

This study focused on the process of structural change and structural adjustment with respect to a sector which underwent a far-reaching shift in the international division of labour. Although smoothed by extensive protection under the aegis of the Multifibre Arrangement, new exporters took over a large share of the international clothing market from the industrialized countries. Adjustment by upgrading improved the chances for survival of clothing production in the industrialized countries, while technological alternatives, above all in the labour intensive assembly stage of production, are limited. Such a process of adjustment might get a new stimulus - or an additional external shock - when the Multifibre Arrangement expires in the beginning of the next century.

We have not dealt extensively with other sectors in this study. It will be of interest to analyze whether comparable sectors like footwear are characterized by similar processes of structural change and adjustment. One would expect they are. But also with respect to 'higher-income' sectors such changes will be relevant. Shifts in the international division of labour in these sectors are less extreme, and their markets may not become as intensively penetrated as the clothing sector, although exports of the newly industrializing economies are also upgrading in an intersectoral sense. This would imply a much larger range of qualities within the realm of industrialized countries' comparative advantage.