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The Experience of the Textile Industry in Pakistan, Philippines, Portugal, and Turkey

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Abstract

This study describes the main features of the restructuring and modernization of manufacturing industries, and specifically considers the experience of the World Bank in assisting the textile industry, particularly in Pakistan, the Philippines, Portugal and Turkey. Against the background of major economic and technological changes in the textile and garment industries in developed countries, it examines the role of government, the financial system and the private sector in the process of restructuring. The study pays special attention to the place of industry action programs in the rationalization of trade and industry policies, and conversely, the importance of adequate macro-economic and industrial policies in achieving the objectives of restructuring.

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SUMMARY

This study considers restructuring programs in the textile industry in order to understand their rationale and objectives, their administration and their relation to overall industrial policy more clearly.

The textile industry is a prime candidate for rehabilitation and restructuring efforts in some developing countries. It is one of the foremost contributors to manufacturing output and employment and often to foreign exchange earnings as well. However, since it is usually a heavily protected industry, the textile industry has developed many of the weaknesses associated with protection. Consequently, it is often in need of structural change and renewal. Programs for restructuring must be applied to the entire industry rather than to simply a few large companies because the industry consists of numerous medium-sized companies, frequently privately owned.

Restructuring in the textile industry is often a factor in rehabilitation as well as in the expansion of capacity. It attempts to improve the efficiency, productivity and capacity utilization of the industry as a whole and to change its production patterns so that the particular country is more competitive under shifting international conditions. This process may involve closings, mergers, and the reorganization of individual companies, including (where appropriate) forward or backward integration as well as increased specialization. Restructuring programs involve efforts that will continue over a longer period, which may be 5-10 years or more.

Restructuring is primarily of interest to countries which already have rather well-established industries - these include such industries as textiles or food processing, as well as industries like fertilizer or cement.

Lessons from Industrial Countries

Enormous changes have occurred in the last 15-20 years in the structure and the output and trade patterns of the textile (and clothing) industry in developed market economies. Major factors have been rapid technological advances, the vastly increased use of synthetic fibers, rising wage levels and changes in consumer tastes. Of particular importance has been the sharp rise in the use of synthetic fibers and their blends in the 1960s. Combined with the rapid growth of the knitting industry, this led (particularly in cotton) to a move away from woven fabrics, toward the production of yarn and to a deterioration of the competitive position of large integrated textile mills in relation to the producers of man-made fibers and yarn. Technology advanced at a fast pace and enabled some branches of the industry to adjust to high labor costs, as, for example, in spinning and weaving processes. Innovation has been less marked in the clothing industry. Nonetheless, various industrial countries have been able to continue the expansion of certain clothing lines, including exports, through improvements in quality and style.

In the industrial countries, restructuring of the textile industry has varied and has involved different degrees of government involvement. In some cases restructuring has primarily involved modernization of traditional production. The best results, particularly in European countries, were obtained by efforts that concentrated on specialized products emphasizing quality and style, and were often produced by medium or small-scale firms with flexible and innovative leadership. Apart from restructuring, industrial countries raised protective barriers against competing imports from developing countries through the imposition of quantitative restrictions embodied in the Multifiber Arrangement (MFA) and its predecessors.

Various aspects of the textile experience in industrial countries can be applied to programs in developing countries. Clearly, it is essential that industry programs are compatible with underlying shifts in technology and wage cost that will lead to changes in production patterns and the use of capital in new product lines. Furthermore, capital intensity in the production of standard textiles has increased dramatically. As a result, that branch of the industry has become less attractive for LDCs for employment objectives.

Because changes in technology and markets have been and continue to be very rapid, the individual firm and entrepreneur play a key role in the process of adjustment, as experience in industrial countries clearly illustrates. Government-supported programs cannot anticipate or formulate the future structure of a viable industry and the precise adjustments necessitated by technological change. Consequently, the market is important. Finally, restructuring success has been achieved in both small and large companies, depending on the circumstances in the individual countries. Industry programs should recognize the potential of both small and large firms.

Restructuring in Developing Countries

The discussion of textile restructuring programs in this study is largely based on the experience of four countries, Pakistan, the Philippines, Portugal and Turkey. In each of these countries the textile industry faces declining productivity and competitiveness. The causes are complex, but often include high and uneven protection, and investment incentives inducing excessive capital equipment imports. In addition, government intervention has frequently hurt management, innovation, maintenance of equipment and structural change. These problems are apparent in a deterioration of export performance and product quality, which are often accompanied by a worsening of the financial position of individual firms.

Low efficiency is caused by a combination of factors, including low quality of labor and management of plant and operations, which, in turn, have been protected from outside competition by high tariffs and other devices. Except Portugal, the level of protection of the textile industry is high (and well above the average for all manufacturing), even though textiles are no longer an infant industry. There is little justification for high protection, especially in relation to new industries such as mechanical engineering.

Considerable benefits can be derived from restructuring in terms of cost reduction, the creation of productive jobs and an increase in domestic and export output. Continuing a run-down industry with good potential is an obvious burden on the economy. Any attempt to transform the industry through export performance is limited as long as competitiveness is not restored.

In each of the countries reviewed, the industry or one or more of its branches is still competitive or can regain competitiveness through reasonable efforts. Low labor costs are a significant factor in the recovery potential. However, if the objectives of an industry program are to be achieved, the program must be complemented by policies aimed at weeding out firms that cannot become viable again, even with appropriate assistance. Consequently, an environment must be established in which competitive pressure will prevent the recurrence of conditions of decline and neglect.

Industry-specific programs usually have three components: restructuring, investment and technical assistance. Restructuring efforts are based on a determination of the products and processes in which the country has a comparative advantage, and of the steps that are needed to strengthen the efficiency and cost levels of the relevant production units. Definition of the key elements of restructuring should help guide decisions on the nature and level of

new investments. Investment in either expansion and replacment will be wasteful if the particular product or process should be reduced or phased out under the restructuring plan.

Total estimated investment requirements of the programs in these four countries are substantial, and range from $400 million to more than $900 million for 5-year periods. However, actual investment outlays will often be far below those originally projected in the initial technical concept. Among the reasons are the over-estimation of the need for new investment as compared to the rehabilitation of existing equipment and the cost of the latter; the availability of finance; a more detailed assessment of market prospects and generally of economic merits; the pace of implementation of institutional arrangements; and the compatibility of initial technical plans, entrepreneurial decisions and government policies.

The institutional arrangements are critical to the success of the program. The industry generally includes many privately owned firms, and, consequently the institutional arrangements must allow for the decisions of many private entrepreneurs. Selection of participating firms and evaluation of their proposals in terms of their consistency with the objectives of the restructuring plan and of their technical assistance needs can be supervised most effectively by a technical unit, usually in the ministry of industry. It should be guided by rules determining the eligibility of firms and investment proposals for participation in the program. These must include criteria for identifying the key components of the restructuring plan and must be applied uniformly to all firms in the industry. The determination of the financial and economic viability of individual proposals should be done by the

financing institutions bearing the credit risk. The banks will provide finance for creditworthy firms using funds provided by the government or external lenders through the central bank or another government bank. The country's financial and monetary policies should permit banks to take an active part in assisting firms participating in the industry program.

Conditions for Effective Restructuring

The experience of both industrial and developing countries suggest a number of conditions for success in restructuring. Among the more important conditions are: (a) a general industrial policy of opening up the economy, rationalizing investment incentives and reducing protection (making it more uniform over different industries); (b) the ability of the government to formulate a feasible restructuring program which can be implemented with cooperation of the many producing units involved, their management, and (often private) owners; (c) a willingness to let inefficient firms be phased out if they cannot survive in a competitive environment, even after a reasonable effort at rehabilitation and restructuring, and (d) the presence of development finance institutions which can locate and assist promising investment proposals regardless of the industry in which they originate; clearly, it would not be in a country's interests if the restructuring program for one industry stifled promising proposals from other dynamic industries.

The rehabilitation and restructuring programs reviewed represent diverse experience and policy approaches as well as different stages of development in the industry. In two countries (the Philippines and Portugal), the textile industry programs are an important element of broader policy reform and restructuring affecting the entire manufacturing sector and the whole economy. On the other hand, in Turkey and Pakistan the industry programs were not conceived initially within broader industrial policy initiatives.

The success of restructuring programs is largely based on the competitive drive of the market which is essential for the adjustment of the industry to international levels of efficiency. This will enable it to maximize its contribution to the national economy and the balance of trade. Also as a result, the industry will contribute more effectively to the elimination of poverty by reducing the price of simple consumer goods and providing more productive jobs. Conversely, governments will be more inclined to resort to outward-oriented policies if programs to help important industries with promising potential thrive in a more competitive environment are arranged.

In an environment of general policy reform, an industry-specific program can more effectively induce companies to make better use of their labor and equipment, and weed out inefficient and non-viable firms. In the absence of policy reform, application of even the most vigorous eligibility rules and appraisal standards will not adequately reduce inefficiency and costs. When general policies are aimed at lowering protection, (as is being attempted in the Philippines), the program will have a natural follow-through in forcing down prices while efficiency is on the rise.

Chapter I: Overview 1/

1. Introduction

Many developing countries are currently engaged in intensive efforts to adjust their economies to higher energy prices, reduced growth in industrial markets and associated changes in the international environment. Among the essential element in these longer run adjustment efforts are steps to restructure industries, to increase their efficiency, to better utilize existing factors of production, and to reorient manufacturing toward production and processes in which the countries have a comparative advantage. There is considerable scope for manufacturing to make a greater contribution to development objectives, particularly in terms of lower costs and prices for both consumption and intermediate goods, more employment creation, improved export performance, and a deepening of technological know-how.

Programs for the restructuring of selected industries can be instrumental in increasing the efficiency of the industry and in providing essential technical and financial assistance. This study examines restructuring programs in the textile industry in order to more clearly understand their rationale and objectives, their administration and their relation to overall industrial policy.

The textile industry has been selected because it is a prime candidate in some LDCs for rehabilitation and restructuring efforts. 2/ In a wide range of developing countries, the industry is one of the foremost contributors to

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1/ The authors have benefited from many comments received from colleagues and others, especially Anton Brender, Harold Catling, Yung Rhee, Howard Pack and Martin Wolf.

2/ In this paper, the textile industry includes spinning and weaving and also the processing of yarn into finished products, such as knitted products, household goods, home furnishings and clothing.

manufacturing output and employment and often to foreign exchange earnings as well. Yet it is generally a heavily protected industry which has developed many of the weaknesses associated with protection over the years. As a result, the textile industry is frequently in need of structural change and renewal. Programs for restructuring must be applied industry-wide rather than to only a few large companies because the industry consists of many medium-sized companies, frequently privately owned.

The Bank is assisting textile industry programs in numerous countries, because they are a key element in efforts to modernize manufacturing and make it more efficient. It has already lent (See Chapter III) considerable amounts for the textile industry, primarily through Development Finance Companies (DFCs) but also by direct lending (a accumulated total of $661 million as of June 30, 1980). In addition, the International Finance Corporation (IFC) has made loans and investments to textile companies (These investments stood at $187 million as of June 30, 1980).

2. The Concept of Restructuring

It is essential to understand the concept of restructuring of manufacturing industry in general in order to consider the specifics of restructuring in the textile industry and the broader questions suggested by textile experience. "Restructuring" has become a widely used (and perhaps overused) term. According to Webster's Dictionary, "restructuring" means "to change the make-up, organization or pattern" of something. The term can be applied to a company, a specific industry, the entire manufacturing sector or indeed the economy as a whole. In this paper, "restructuring" generally involves a program to help bring about specific changes in an industry or sector through particular steps and measures. Restructuring programs are designed to

contribute in a specific way to the process of structural change in the manufacturing sector or a particular industry.

Restructuring in the textile industry is often an element in a program of rehabilitation and new investment (that is, expansion of capacity). By working with individual companies, restructuring efforts attempt to improve the efficiency, productivity and capacity utilization of the industry as a whole. An additional goal is to change the industry's production pattern so that it better reflects the comparative advantage as the particular country. The program may involve closings, mergers, and the reorganization of individual companies, including, where appropriate, forward or backward integration as well as increased specialization.

Restructuring of a specific industry. For this discussion, restructuring is the most relevant where it concerns a specific industry rather than merely a firm or the manufacturing sector as a whole. In an economic sense, restructuring involves steps to align an industry (or a sector) more closely with a country's comparative advantage. These steps can be conceived of as responses by the manufacturing sector to structural adjustment policies or as specific actions taken to implement these policies.

By its nature, restructuring concerns existing rather than new industries. On the other hand, the development of new product lines or industry branches may be an essential element of restructuring, and most new industrial development in semi-industrial countries involves restructuring.

The following are the key elements of restructuring programs:

(1) Increasing the efficiency of present operations ("X-efficiency"), i.e., the productivity of the present factors of production (labor, supervision, plant and equipment).

(2) An increase in the efficiency of machinery use (higher capacity utilization), through multiple shifts, improved maintenance, and other changes in operating practices.

(3) Improvements in methods of production, including changes in the selection or utilization of equipment, often making possible production on a larger scale.

(4) Changes in the composition of output: less production of some items, more of others; or the starting of new lines, frequently involving greater specialization which makes possible larger volumes and lower costs.

(5) Changes in the organization of the industry, increasing plant size to a more economic scale, combining (integrating) smaller plants into larger units where necessary, or phasing out uneconomic smaller plants. 1/

(6) Relocating plants (and workers) to more desirable sites.

Some of the changes involved in restructuring require improvements in labor training, in general and production management, and in plant design and planning, all of which are essential characteristics of industry-specific programs. Few of these changes can be accomplished in a short time, and it should be clear from the start that restructuring programs must be conceived as efforts over a longer period, 5-10 years or more.

Rehabilitation and modernization of existing equipment and facilities can be frequently combined with various other elements of restructuring. This is also true for changes in equipment and production methods which are part of energy conservation and conversion programs. In fact, industry-wide rehabilitation or energy conservation programs often provide a good opportunity to bring about the adjustment and renewal process an industry may require.

1/ The optimum plant size varies with the industry. An increase in plant size does not necessarily entail greater efficiency or lower cost. For example, as pointed out by Mr. Catling, some of the largest textile mills in India are quite inefficient by industry standards, while in the United Kingdom certain large, well equipped mills have failed as a result of competition from smaller firms operating more efficiently.

The advantages of restructuring may indeed make it more economical to undertake rehabilitation for a portion (or all) of the industry rather than a few individual plants alone. Where restructuring is called for, definition of its objectives and principles will help indicate which products and processes deserve priority in rehabilitation and new investment.

A significant part of restructuring may also involve planned assistance to industries whose development is lagging behind others, or whose performance is below levels reasonably expected from the country's market size, income, capital stock, skills and know-how. This is frequently true of the engineering industries, which have received relatively less encouragement than other industries in some countries even though they are important for broader industrial growth. As in the restructuring of the textile industry, such assistance may involve the preparation of an industry plan, including identification of products and projects in which the country has a comparative advantage and of technical and financial help for the establishment or expansion of firms, and the organization of technological inputs into the industry.

The restructuring process, as distinct from specific programs, may extend beyond national borders. This can be seen in production sharing, the assembly of finished products with component parts, or the duty-free import of raw material inputs for export production. The final stages of the production process, often more labor-intensive, are relocated from higher cost industrial to lower cost developing countries.

Restructuring of the manufacturing sector. Restructuring may extend to the entire manufacturing sector. A program for manufacturing as a whole will entail policies which reinforce (and may be essential to) the

effectiveness of action on individual industries. They will usually include the following elements:

(1) Greater stress on production lines in which the country has a dynamic comparative advantage, through the introduction of more outward looking policies and other aspects of policy reform. Changes in industrial policy will also extend to such important elements as technological development, training and infrastructure improvement.

(2) Special attention to increasing efficiency and utilization of capital through various policy measures (pricing of factors, rationalization of the investment incentive system and its administration).

(3) Emphasis on job creation in manufacturing, including encouragement of labor-intensive industries in both home and export sectors.

(4) Programs assisting medium-sized companies, facilitating the integration of small but uneconomic units into larger firms.

Restructuring is of interest primarily to countries which have already rather well-established industries, such as textiles or food processing, as well as industries like fertilizer or cement. In many cases, textile rehabilitation programs are called for in countries which have relied or are still relying on expensive import substitution. Restructuring of the food processing industry may be of critical importance inasmuch as it helps to strengthen the link between manufacturing and agriculture and to lower the cost of food.

3. Textile Developments in the Industrial Countries

In manufacturing development, questions of strategy and planning and issues of finance must necessarily be seen against the background of critical developments in industrial countries. Much of new manufacturing production directly competes with the output of industry in industrial countries, either

in the home markets of developing countries or their export markets. Technology of production, marketing and management is often largely derived from experience in industrial countries. Technological developments and changes in labor costs in industrial countries often determine in which products LDCs can be competitive.

All of these considerations are particularly important in the case of the textile and clothing industry, which has witnessed major shifts in the distribution of specialization between developed and developing countries in the last two decades. Since the 1960s, dramatic changes have occurred in the textile (and clothing) industry of developed market economies as a result of technological developments, the increased use of synthetic fibers, higher wage levels and differences in consumer tastes. Consequently, there have been major shifts in comparative advantage in the textile industry between industrial countries and LDCs.

Because technology advanced at a fast pace, some branches of the industry were able to adjust to high labor costs. Investment in new, faster and more automated equipment, plus the use of increasingly modern production techniques, has resulted in greater efficiency as well as a rapid increase in the capital intensity of spinning and weaving processes. Yet, technological innovation and increase in productivity have been less dramatic in the clothing industry, and clothing production has moved increasingly from industrial to low-wage countries. Nevertheless, various industrial countries have been able to continue expansion of certain clothing lines (including exports) through improvements in quality and style.

The combination of higher capital intensity in spinning and weaving and the shift away from certain activities that are further downstream led to a significant decrease in employment in textiles and clothing for all industrial (OECD) countries during approximately the last fifteen years, even though total manufacturing employment in these countries still continued to rise. This development was accompanied by considerable restructuring, which varied among countries and which involved different degrees of government participation (see Chapter II). In certain cases, restructuring efforts were initially or predominantly aimed at concentration and modernization concerning the mass production of traditional products. They lacked innovation and were frequently inadequate in achieving the necessary reduction in industry size. Particularly in European countries, more promising results were obtained by efforts that concentrated on specialized products emphasizing quality and style, which were often produced by medium or small-scale firms with flexible and innovative leadership.

Apart from restructuring, industrial countries erected protective barriers against competing imports from developing countries by imposing quantitative restrictions embodied in the Multifiber Arrangement (MFA) and its predecessors. Although these imports continued to rise (in fact, at a fast pace until the mid-seventies, especially for clothing) the average share of the developing countries in the markets of the industrial world remained low, particularly for textiles as distinguished from apparel.

The experiences of the industrial countries provide certain lessons for restructuring in the LDCs. They are especially relevant to the preparation of industry-specific programs and the role of public policy and finance. Nonetheless, the circumstances in which European industry programs were

undertaken differ in several respects from the conditions faced by industry in developing countries. Most strikingly, the industrial countries faced sharply rising real labor costs at home and increasing competition from abroad. In many respects, the most appropriate policy adjustment would have been disinvestment in industries which were bound to decline and encouragement of new capital resources for more dynamic industries in which the countries had stronger longer-term comparative advantage. As discussed above, instead of such "creative" adjustment, the industrial countries often followed a more defensive course of increasing protection and over-investing in industries which were no longer innovative and technologically progressive.

In the developing countries, certain industries (including textiles) have encountered difficulties as a result of high and uneven protection and a procapital bias in investment incentives. Despite such disincentives, the combination of low labor costs, available raw material sources and technological know-how give these countries a continuing advantage in textile production.

Despite these crucial differences in economic environment, the recent restructuring experiences of industrial countries suggest what may be feasible or ill-advised for developing countries:

(1) Industry programs must conform to the country's longer-term comparative advantage. They should not be contrary to underlying shifts in technology and wage cost which require changes in production patterns and the use of capital in new product lines. If the programs run against the grain of market and technological forces, investment resources will quickly prove to be wasted, possibly on a large scale.

(2) Good managers must be available. In some countries a declining industry may suffer an exodus of good managerial and technical talent. Without such talent, it is hard to mount an effective industry program. Where this occurs, conditions must be established to attract and to hold good managers.

(3) LDCs must distinguish among product lines to improve their competitiveness. Because capital intensity in the production of standard textiles has increased dramatically, that branch of the industry has become less attractive for LDCs for employment creation. On the other hand, low wage countries may be able to continue making economical use of older machinery in the production of simple items for rural consumption and some low quality specialty products. The availability of domestic raw materials in some countries will enhance their competitiveness in certain product lines.

(4) Rapid industry changes limit government programs. Changes in technology and markets have been and continue to be so rapid that government-supported programs cannot anticipate or formulate the future structure of a viable industry and the precise adjustments necessitated by those changes. Several technical observers conclude that technological advance in industrial countries has put many segments of the industry in developing countries at a severe disadvantage in terms of volume, cost and (not least) quality of output. Through increased product specialization, developing countries may still gain competitiveness for selected items, as Korea and Taiwan have clearly demonstrated. However, even the clothing industry in developing countries can be easily penalized by the high cost or low quality of domestic textiles. Consequently, it will benefit from the duty-free import of inputs, particularly when producing for export.

(5) Rapid change in technological and cost conditions stress the importance of the roles of the individual firm and entrepreneur and their reaction to shifting market forces. Even in declining industries, individual firms may do well through quality and cost control, new product development and market leadership. As indicated by the experience of medium-sized specialized weaving firms in the West German and Belgian carpet industries the situation in the textile industry requires highly flexible leadership. To be effective, government programs may have to be highly selective in supporting (potentially) successful firms and withholding support for firms with a record of failure. (Some of the French and Japanese programs had these characteristics.) Thus, it is important that under restructuring and rehabilitation programs in LDCs, the executing agencies (e.g., Development Finance Companies) seek promising firms and provide them with the assistance they need. Programs should also help phase out less promising companies or facilitate their absorption by companies with greater growth potential.

(6) The size of companies which succeeded the most in the restructuring efforts varied from country to country. In the United states the larger textile companies again resumed strong growth, and even expanded into export markets. In Germany, the specialized weaving firms were medium sized; and Italy's success in fashion wear was forged by smaller companies. Clearly, industry programs must recognize the potential of small and medium firms. This is also relevant in view of the prevalence of small firms in some developing countries and the prospects for their efficient operation. For example, in Korea one-third of fabric exports originate in relatively small weaving plants.

4. Textile Industry Programs in Selected Developing Countries

The textile industry is a prime candidate for policy attention because of its predominant position in the industrial economy of middle-income countries, as well as the key role it plays in the early phases of manufacturing development. The industry often accounts for 25% or more of value added and employment in manufacturing industries. Further, it is an important export industry, often supplying up to 50% of manufactured exports (see Chapter III).

This study does not attempt to provide a comprehensive overview of the growth and developments of the textile industry in developing countries. Rather, much of the analysis is based on the experiences in formulating and executing textile industry programs in four countries: Pakistan, the Philippines, Portugal and Turkey. The main emphasis is on the programs' economic background and objectives; the issues raised in connection with their implementation; and the role or intended role of external finance, including that from the World Bank.

In each of the countries reviewed in detail, the textile industry faces declining productivity and competitiveness. The causes are complex, but often include poor adaptation of the work force to the requirements of modern technology; high and uneven protection; and investment incentives inducing excessive capital equipment imports. Government actions have sometimes had an adverse impact on the strength of management, innovation, maintenance of equipment and structural change. These problems are apparent in the deterioration of export performance and product quality as well as a decline of the financial position of individual firms. They are most evident when

reduction in protection is contemplated as part of opening up an economy. Measures to rehabilitate the industry frequently form an integral part of a more general reform of industrial policies.

The industry is largely privately owned, although Turkey has a state-owned sector accounting for about one-fifth of its total textile output. It is characterized by many individual units, and often includes a cottage industry. In some cases, especially in Portugal, there are many units of less than economic size in the modern sector. However, the major problems of structural imbalance usually are the lack of adequate integration or specialization; the absence of balance between the various branches of the industry in view of existing demand patterns leading to underutilization of capacity; and the development of a product mix which is not sufficiently directed toward the requirements of (potential) markets. In addition, the inadequacy of industrial performance may be partly due to poor quality control and inadequate attention to the production of higher quality goods.

The X-efficiency of plants (the productivity of existing factors of production) is low in the countries reviewed in detail, and the industry has frequently turned to products and processes in which the countries cannot compete. This is not true for all developing countries, as for example the experiences of Hongkong and Korea demonstrate. Low levels of efficiency are caused by a combination of factors, including low quality of labor and management of plant and operations, which, in turn, have been protected from outside competition by high tariffs and other devices. It is difficult to determine to what extent low efficiency was caused by high protection or other factors, such as general country conditions (including government intervention, inflated prices for machinery, labor problems, etc.). However, with the

exception of Portugal, the protection of the textile industry is in the upper ranges (and well above the average for all manufacturing), even though textiles are no longer an infant industry. There is little justification for high protection, especially in relation to new industries such as mechanical engineering.

The rehabilitation and restructuring programs in the four countries reviewed represent a diversity of experience and policy approach as well as different stages of development of the industry. In two of them (the Philippines and Portugal), the textile industry programs are an important element of broader policy reform and restructuring that affects the whole manufacturing sector and indeed the whole economy. On the other hand, in the other two countries the industry programs were not conceived (at least initially) in the context of broader industrial policy initiatives.

5. Nature and Rationale of Textile Restructuring Programs

The principal rationale for rehabilitation and restructuring is the importance of the industry in the economy and the considerable benefits to be derived from restructuring programs such as the reduction in cost, the creation of productive jobs and an increase in domestic and export output. Continuing a run-down industry with good potential is an obvious burden on the economy. Any opportunity to transform the industry through export performance is foregone as long as competitiveness is not restored.

In each of the countries under review, the industry or one or more of its branches is still competitive or can regain competitiveness through reasonable efforts. Low labor costs are a significant factor in the potential for recovery. Nevertheless, in most cases they must be complemented by better

training and adaptation to modern production methods. However, if the objectives of an industry program are to be achieved, measures must go hand in hand with policies aimed at weeding out firms which cannot become viable again, even with appropriate assistance. A climate in which competitive pressure will prevent the recurrence of conditions of decline and neglect must be established.

Industry-specific programs usually have three components: restructuring, investment and technical assistance. Restructuring efforts are based on a determination of the products and processes in which the country can compete, and of the steps that are needed to strengthen the efficiency and cost levels of the production units concerned. Definition of the key elements of restructuring should help guide decisions on the nature and level of new investments. Investment covers both expansion and replacement but either may be wasteful if the particular product or process should be reduced or phased out under the restructuring plan. Improved training and technological adaptation are often essential. Without them, the conditions of neglect and backwardness will recur even after substantial new investment has been made.

Restructuring.

The economic characteristics of restructuring can be stated in simple terms. Investments are channeled into products in which the country can achieve comparatively low costs; which appear most promising in terms of realistic demand projections; and which do not suffer from excess capacity. When production units are of uneconomic size, mergers or other appropriate forms of consolidation will be encouraged. The restructuring program will direct assistance to firms that are able to achieve selected objectives, such as integration (e.g., Pakistan spinning) or specialization in certain products, and decentralization (e.g., the large integrated spinning and weaving operations in the Philippines).

The objectives of restructuring should be clearly separated from normal replacement of old equipment. The focus should be on realignment of the industry based on comparative advantage and an increase in X-efficiency. These should be distinguished from installing new highly automated equipment in the operation of which the country has no strong advantage.

Investment.

The investment component is based on the need to rehabilitate or replace worn-out or obsolete equipment, and to meet anticipated increases in demand, both domestic and export. In the cases reviewed, new investment made up half or more of the total program. In Turkey it accounted (in rounded figures) for as much as 80% of the total, followed by the Philippines (70%), Pakistan (55%), and Portugal (50%). The spinning and weaving industries receive most of the new capital outlays expected to be required to execute the restructuring program (see Chapter IV, Table 4-1).

The total estimated investment requirements of the programs are substantial and range from $400 million and to more than $900 million for the 5-year periods. However, actual investment outlays will often turn out to be well below those originally envisaged in the initial technical concept for a variety of reasons: the over-estimation of the need for new investment, as opposed to rehabilitation of existing equipment and the cost of the latter; the availability of finance; a more detailed assessment of market prospects and, generally, of economic merits; the pace of implementing institutional arrangements; and a reconciliation between initial technical plans, entrepreneurial decisions and government policies. Indeed, extensive new investment may not be needed once general policy improvement and technical assistance

help firms make better use of their present labor force and capital equipment, and as efforts to rehabilitate worn out machinery are successful.

Technical Assistance.

Technical assistance is an essential part of each of the programs. It consists of components for the training of labor and management, marketing assistance and technical help in selecting the right kind of equipment. The programs generally include measures aimed at helping individual firms improve their performance by making better use of both labor and equipment.

Institutional Arrangements.

The institutional arrangements are critical to the success of the program. Because the industry usually includes many privately owned firms, the institutional arrangements must allow for the decisions of many private entrepreneurs. Consequently, each program should be based on a conceptual plan for the industry which outlines the shifts in output, employment and capital investment in its various branches considered necessary in order to bring the industry up to more adequate technical standards, lower its cost, and expand output in line with projected demands.

Selection of participating firms and evaluation of their proposals in terms of their compatibility with the objectives of the restructuring plan and of their technical assistance needs can most effectively be supervised by a technical unit, usually in the ministry of industry. It should be guided by rules determining the eligibility of firms and investment proposals for participation in the program. These must include criteria for identifying the key components of the restructuring plan. Furthermore, the rules must be applied uniformly to all firms in the industry.

The determination of the financial and economic viability of individual proposals can be best accomplished in a decentralized manner, as,

for example, when it is undertaken by the financing institutions bearing the credit risk. It can be expected that these institutions will give preference to firms with high quality management and demonstrated capacity of growth and innovation. The banks will provide finance for creditworthy firms with funds provided by the government or external lenders through the central bank or another government bank. The country's financial and monetary policies should permit banks to take an active part in assisting firms participating in the industry program. (See Chapter IV and Table 4-2)

6. Essential Conditions for Effective Industrial Restructuring Programs

Numerous essential conditions must be met for industrial restructuring programs to be effective. If programs do not achieve their objectives, the expenditures of the substantial funds and the effort involved may be wasted. Among the more important conditions are:

(1) A general industrial policy of opening up the economy, rationalizing investment incentives and reducing protection (making it more even over different industries).

(2) The channeling of new investment resources to those industries which will contribute the most to the country's growth and balance of payments viability.

(3) The ability of the government to formulate a feasible restructuring program which can be implemented with cooperation of the many producing units involved, their management, and (often private) owners; and which encompasses the various elements of restructuring programs (see above), with an emphasis on essential technical assistance and training.

(4) The willingness and ability on the part of the government to let inefficient firms be phased out, if they cannot survive in a competitive environment, even after a reasonable effort at rehabilitation and restructuring has been made.

(5) The availability of sufficient financial and technical resources, both domestic and external, needed for the implementation of the program.

The importance of these conditions is illustrated by consideration of the following key questions raised by restructuring programs in the textile industry as well as other branches of manufacturing: (a) what is the interrelation between restructuring and general industrial policy reform; (b) what is the case for industry-specific action; and (c) what is the justification for financial assistance on special terms (particularly longer term amortization). These items should be regarded in terms of the past experience with restructuring in industrial countries discussed earlier.

(a) Need for Overall Policy Support

The success of restructuring programs is largely based on the competitive thrust of the market as an essential condition for bringing the industry ultimately to international levels of efficiency. This will enable the industry to maximize its contribution to the national economy and the balance of trade. It will also help the industry contribute more effectively to the fight against poverty by reducing the price of simple consumer goods and providing more productive jobs. Conversely, governments will be more inclined to resort to outward-oriented policies if programs are developed to help important industries with good potential flourish in a more competitive environment.

General policy reform will induce companies to make more effective use of their labor and equipment, and weed out inefficient and non-viable firms. Application of even the most vigorous eligibility rules and appraisal standards alone will not make the program sufficiently responsive to the need for reducing inefficiency and costs. On the other hand, when general policies are aimed at lowering protection (e.g., the Philippines), the program will have a natural follow-through in forcing prices down while efficiency is on the rise.

(b) Selectivity in Supporting a Specific Industry

The singling out of a particular industry for special assistance may seem contrary to the principle that incentives for different industries should be uniform in order to avoid distortion of resources. 1/ It would indeed be wrong if any industry program were instrumental in providing concessionary finance for investment of low priority or return. However, if a country's institutions and policies make it generally possible for firms with worthwhile investment proposals to obtain financing on equal terms regardless of the industry they are in, a special restructuring and rehabilitation program for an industry such as the textile industry, which can be soundly implemented, may be desirable in view of some key considerations:

(a) The industry is a significant element in the country's manufacturing production and employment.

(b) There are a large number of firms which are experiencing common problems calling for solutions warranting a common attack, through help in re-equipping, technical assistance and training.

(c) Investment under the program and related assistance can be expected to have a high economic return.

The rehabilitation and restructuring of a specific industry is merely a tool to provide technical and financial help, in addition to that which is generally available. It should enable the most promising firms with the best

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1/ See, e.g., Bela Balassa in "The Process of International Development and and Alternative Development Strategies", (Princeton University Essays in International Finance, No. 141, December 1980, which states (page 24) "....infant industries apart" (and the textile industry in the countries under review is certainly no longer an infant), "variations in incentive rates within the manufacturing sector should be kept to a minimum. This amounts to the application of the "market principle" in allowing firms to decide on the activities to be undertaken. In particular, firms should be free to choose their export composition in response to changing world market conditions."

investment and renewal proposals to modernize and otherwise to overcome weaknesses induced by past policy mistakes or other extraneous circumstances.

Because restructuring programs concern existing industries, they should be distinguished from a policy of searching out new industries which represent "the next generation of winners". While such a policy may induce dynamic industrial development in some situations, it has often failed in practice. 1/ Alternatively, restructuring programs may help induce changes in the pattern of output by emphasizing the competitive potential of certain branches in an innovative spirit. Industry-specific programs may also provide the basis for a constructive dialogue and cooperation between government and the industry which should help in realizing selected industry objectives.

(c) Justification of Providing Special Terms

Specific industry programs would not work very well unless they offered certain advantages which are not generally available to industrial investors. Consequently, they provide financial support on somewhat better terms than private channels normally would offer.

Amortization terms are longer, 5-10 years or even more. This is characteristic of all industrial financing through development finance companies or similar institutions providing long-term investment finance. However, in circumstances where capital (or foreign exchange) is generally scarce, the designation of special funds for a specific industry entails an additional degree of preferential treatment. This occurs even if development finance companies or other long-term lenders charge interest rates to their clients that are in line with those which would prevail in a free market.

1/ C.f. Martin Wolf, Adjustment Policies and Problems in Developed Countries, World Bank Staff Working Paper No. 349, 1979, page 136.

Secondly (and even more importantly), industry programs, including the (proposed) textile programs reviewed in this study, make available technical assistance that is especially tailored to the needs of the industry and which would not otherwise be obtained. This is provided on financial terms that could not be obtained commercially.

The use of such special terms is warranted when an industry is in a transitional stage during which it must overcome handicaps developed in the past which prevent it from meeting international competitive standards in terms of the size of the firm, degree of specialization, quality of product, degree of capital utilization, type and condition of equipment, etc. As a result, it needs finance (and technical assistance) which does not have to be repaid in the short-run. Moreover, even when they attain a more competitive position, most firms will still need finance provided through official channels, since they will be normally too small to borrow on the international market. Similarly, they cannot be expected to obtain short to medium-term financing for new machinery (e.g., 2-3 years amortization) as in Taiwan or Germany, and to service these loans by operating full time and meeting competition in world markets. Consequently, continued long-term financial support may be needed even after the initial special fund for restructuring has run out. Restructuring is ultimately a long-term proposition, and cannot be achieved in a short-term framework.

Chapter II: Textile Developments in Industrial Countries

1. General Trends 1/

In the last 15-20 years massive changes have occurred in the structure and the output and trade patterns of the textile (and clothing) industry in developed market economies. Rapid technological advances, the vastly increased use of synthetic fibers, rising wage levels and changes in consumer tastes have all played a role, with circumstances varying among industrial countries. They have also led to major shifts in comparative advantage in the textile industry between industrial countries and LDCs and, consequently, to changes in the relative competitiveness of different branches and product lines.

A major cause for these developments was the sharp rise in the use of synthetic fibers and their blends in the 1960s. Along with the rapid growth of the knitting industry, this led to a move away from woven fabrics toward the production of yarn (particularly in cotton), and to a deterioration of the competitive position of large integrated textile mills in relation to the producers of man-made fibers and yarn.

At the same time technology continued to advance at a rapid pace. The combination of investment in new, faster, more automated equipment, and the use of increasingly modern production techniques resulted in a rapid increase in the capital intensity of spinning and weaving processes. In the

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1/ This chapter draws extensively on Donald B. Keesing and Martin Wolf: "Textile Quotas against Developing Countries," Thames Essays, (1980), quoted as 1980a; and "International Trade in Textiles and Clothing," World Bank draft, (June 1980), quoted as 1980b. The following documents were also consulted: Martin Wolf, "Adjustment Policies and Problems in Developed Countries," World Bank Staff Working Paper No. 349, (August 1979); and Howard Pack, "Macro-economic Implications of Factor Substitution in Industrial Processes," World Bank Staff Working Paper No. 377, (March 1980). Certain data were derived from OECD sources.

United States the capital stock per worker in spinning is reported to have risen (in constant 1973 prices) from $18,000 in 1963 to $50,000 in 1973. Recent West German data indicates that the average cost of equipping one workplace in the textile industry was about $125,000 in 1978. Productivity also went up sharply. 1/ For all OECD countries, an average annual rate of 5.2% in productivity improvement was achieved between 1961 and 1973, as compared to 4.5% for manufacturing as a whole. Employment in the textile industry declined by 11% for developed market economies in general between 1961 and 1973. At the same time, the use of improved technology enabled the industry to keep up with the general rise in wages without losing competitiveness. Indeed, Keesing and Wolf suggest that there was an improvement in the competitiveness of the developed countries' textile (yet a deterioration in their apparel) industries. 2/

For the clothing industry, technological innovation and increase in productivity was much less marked. From 1961 to 1973 the average annual productivity increase was only 1.3%, and capital stock per worker in the United States rose in constant prices from $2,000 to no more than $2,500 between 1963 and 1973.

1/ A preliminary paper by Howard Pack ("Technical Choices and Operating Efficiency in Cotton Textiles", February 1980) provides a clear illustration of the extent of the productivity increases in spinning and weaving which occurred in industrial countries in roughly the last 25 years. In spinning between 1950 and 1977, according to "best practice standards" (i.e., standards based on engineering norms as tested by the realized performance of the best firms), operative hours per kg. of yarn decreased by 70%, i.e., labor productivity (Y/N) more than tripled during that period. At the same time, spindle time per kg. of yarn decreased by 23%, indicating a rise in capital productivity (Y/K) by about one-third. For weaving, similar comparisons between operative hours and loom hours per yard of sheeting for a representative automatic loom at the beginning and the end of the last 25 years show an increase in labor productivity of 2.5 times and almost a doubling of capital productivity. Of course, depending on relative factor prices, older technologies can still be economically efficient especially in low-wage countries.

2/ Keesing and Wolf, 1980a, page 24.

This development led to a shift in the comparative advantage of low wage countries toward downstream activities. It also increased the competitiveness of the industrial countries in more capital intensive and technologically advanced production items. Clothing production, in particular, moved increasingly from industrial to low-wage countries, often under off-shore type arrangements. However, low wage countries which had had a competitive edge in spinning and weaving, particularly of domestic raw materials, did not completely lose that advantage. Countries such as Korea, Hong Kong and Taiwan have quickly learned how to master and adopt new technology in standard textiles. Others like India and Pakistan can follow the general trend toward more capital and technology-intensive spinning and weaving operations at a greater distance. Their hourly wages for textile workers are only about one-third to one-fourth those in Portugal, which, in turn, are slightly less than one-third wages in the United Kingdom or one-fifth those in West Germany. Nevertheless, in order to regain competitiveness they must upgrade their labor force. To remain competitive, they will have to upgrade their machinery and to keep it well-maintained.

Howard Pack's calculations suggest that in spinning and weaving, "appropriate" (i.e., labor-intensive) technology can produce considerably more benefits for LDCs than the most capital-intensive technology in terms of additional output, employment and wage and non-wage income. 1/ Yet, with new technological development, what is "appropriate" has become more capital-intensive over time in both developing and developed countries, even though its character may differ, depending on variations in relative factor

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1/ See Howard Pack, (1980), particularly Table 3, page 15.

costs for individual countries. Furthermore, differences in mastery of technology and management skills will also continue to play an important role in determining comparative advantage. 1/

These changes in the industrial world took place against the background of continuously shifting patterns of demand, consumer tastes and styles, of which the greater preferences for casual wear is a prime example. In addition, in the 1970s overall demand for textile products slowed down and the demand for synthetic fibers decelerated.

In response to all of these changes, considerable industrial restructuring took place in the industrial countries. The nature and means of restructuring differed among countries. For example, in the United Kingdom, government action aimed at re-equipping and reducing the size of the cotton textile industry started as early as 1959 with the Cotton Industry Act. In 1973 the government adopted a similar program for the wool industry. Subsidies for scrapping and re-equipping and compensation payments for dismissed employees were intended to lead to a much smaller and economically viable industry. Even though increases in efficiency were obtained, the achievements in restructuring and upgrading were limited. The main emphasis was on concentration and vertical integration combined with new investment in traditional items under standard production methods. None were innovative enough nor sufficiently effective in reducing the industry's size.

In Germany the restructuring of the textile industry took place without government measures aimed specifically at the production of textiles and clothing. Industrial developments initially followed the British pattern,

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1/ Keesing and Wolf, 1980a, page 28.

as firms became concentrated in larger units for the mass production of a relatively small number of traditional products. However, in the 1970s emphasis shifted toward the development of very specialized high quality products, which were often produced by medium to small-scale firms, and the replacement of domestic production of most clothing by off-shore or subcontracting arrangements abroad. As in the Netherlands and the Scandinavian countries, the share of clothing in total manufacturing output dropped to below 4%.

In France, a government-supported program for the textile industry provided assistance for mergers, rationalization and modernization. The industry went through a period of concentration, frequently in the form of conglomerates rather than vertically integrated units. The clothing industry emphasized quality and style. In combination with backward integration into specialized fabrics, it further developed its potential for the making of fashion products. Today France continues to be a net exporter of clothing. The knitting industry also expanded in the direction of more luxury goods.

In Italy, the government provided subsidized loans and tax allowances for new investment and mergers and took over several lame ducks. Nonetheless, the role of the large integrated mills declined and spectacular growth occurred in the number of efficient, flexible small-scale firms, which were occasionally linked with parent companies through financial or marketing ties. These firms are specialized by product or production process and often use modern special purpose machinery. This development was accompanied by a move toward areas with lower labor costs and a lower level of unionization, as in the case of the United States. As a result, Italy has become the world's largest net exporter of textiles and clothing.

In the United States, the employment level is relatively stable because of the very large (and, as in other OECD countries, protected) domestic market, specialization, concentration, the timely introduction of modern automated machinery and new production methods, and the availability of relatively cheap cotton and energy. (In contrast, the industry's employment in the EEC is declining.) In the late seventies, assisted by a declining dollar, exports to Western Europe of such products as household goods, knitwear and denim further strengthened the industry.

These developments took place under the umbrella of protection against imports from low-income countries. Beginning in the late 1950s, quantitative restrictions were introduced for specific cotton products of a few countries. They were gradually increased in scope and intensity due to the active support of the chemical industry, which wished to protect its market for synthetic fibers when faced with excess capacity and decelerating demand (see Section 2 (c) below for details).

Changes in net imports have had less effect on textile employment than changes in domestic demand and in labor productivity. This is apparent even in clothing, the most labor-intensive branch of the industry. According to a study conducted under the auspices of the Georgia World Congress Institute, the effects of a change between 1970 and 1976 in the net trade deficit in clothing in seven leading industrial countries with all countries (except for the Netherlands) were far outweighted by job losses due to the rise in labor productivity, despite a loss of 67,000 jobs in the United States and 75,000 in the EEC due to trade effects. 1/ In the United States the

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1/ Keesing and Wolf, 1980a, Table 4.4, page 117.

productivity factor was more than four times as important as the influence of increasing net imports, and in the United Kingdom and Germany more than twice as much. Nevertheless, the growth in imports has had significant effects on employment in the industry, particularly in the limited geographic (and frequently relatively backward) areas where the industry is often located. However, in some cases, imports from other developed countries (e.g., Italy) have played as great or even a greater role than those from LDCs. 1/

2. Actual Developments

(a) Production and Employment

Total production of textile products in OECD countries rose at an annual rate of 4% between 1961 and 1973, but slowed down considerably thereafter, even declining slightly for the EEC as a whole. The value of output in OECD countries increased from $50 billion to $120 billion between 1970 and 1978. In addition net imports increased from $0.5 billion to $8 billion. The share of value added in total manufacturing showed a declining trend, dropping from about 9 percent in 1963 to 6.5 percent by 1979. If directly related activities (the chemical industry's production of man-made fibers, and the textile machinery industry, which is particularly strong in West Germany, Switzerland and Japan) are included, the level becomes approximately 10 percent of value added in manufacturing, or 4-5 percent of GNP.

1/ Donald B. Keesing and Martin Wolf describe considerably diverse trade trends in different products. Despite increasing labor costs and inefficiencies associated with protective policies, certain developed countries have continued as net exporters, e.g., Italy (clothing), Germany (fabrics) and Belgium (carpets). See "Questions on International Trade in Textile and Clothing" in The World Economy, March 1981 (Basil Blackwell for the Trade Policy Research Centre, London).

Because of the rapid increase in the industry's capital intensity, total OECD employment in textile and clothing (including leather) fell from 10.3 million in 1963 to 8.3 million in 1978. In contrast, total OECD manufacturing employment over the same period increased by some 3.25 million. 1/ Employment in the United States remained virtually constant. The EEC's share in total OECD textile and clothing employment dropped from 52 to 44 percent, and that of United States increased from 26 to 31 percent. The share of southern European OECD countries increased as well, from 6 to 10 percent.

Between 1960 and 1970 the share of synthetic fiber in world fiber output rose from 5 to 29 percent, largely at the expense of cotton. Thereafter, growth was much less rapid due to both declining growth rates in textile products generally and a weakening of demand for man-made fibers in the clothing industry. Consequently, the share of wool began to stabilize, the decline of cotton slowed down, and excess capacity in synthetic fibers appeared.

The knitting industry also grew rapidly. In Western Europe the share of knitting in the intake of yarn grew from 12 to 29 percent between 1963 and 1978. The industry consists of highly capital-intensive plants, sometimes integrated with yarn production, which are geared toward the mass production of such goods as underwear and stockings. In addition, there are many small more labor-intensive units which are fashion-oriented and often specialize in knitted outerwear in , for example, Italy, France and the United Kingdom.

1/ OECD Labor Force Statistics.

(b) Trade

Table 2-1 shows that between 1973 and 1978 the trade deficit of the industrial world for textiles and clothing combined increased from $2.2 billion to $8.2 billion. EEC countries which had a combined surplus in 1973 of $1.1 billion were showing a deficit of $1.8 billion by 1978 largely because of a rise in the deficit in clothing from $0.9 billion to $3.4 billion. During the same period the United States changed a small deficit in textiles into a very slight surplus. However, due to an increase in the deficit in clothing, the combined deficit rose from $2.2 billion in 1973 to $4.7 billion in 1978.

Table 2-1. Net Trade in Textiles and Clothing of Key Industrialized Countries (billion dollars)

	1973			1978		
	Textiles	Clothing	Combined	Textiles	Clothing	Combined
EEC	1.97	-0.89	1.08	1.62	-3.38	-1.76
of which with Southern Europe	0.09	-0.47	-0.38	-0.17	-1.40	-1.57
Developing Countries	0.11	-0.95	-2.24	0.05	-2.75	-2.70
United States	-0.36	-1.88	-2.24	0.01	-4.67	-4.66
of which with Developing Countries	-0.24	-1.31	-1.55	-0.17	-3.95	-4.12
Japan	1.32	-0.20	1.12	2.33	-0.75	1.58
of which with Developing Countries	1.01	-0.37	0.64	1.67	-0.78	0.92
All Industrialized Countries	1.71	-3.89	-2.18	2.80	-11.02	-8.22
of which with Developing Countries	0.76	-2.94	-2.18	1.47	-8.31	-6.84

Source: Keesing and Wolf, 1980a.

Within Western Europe, substantial differences between countries exist. In 1977 Italy had an export surplus of $3.4 billion (followed in size on a worldwide basis by Korea, Hong Kong and India) consisting of both textiles and clothing. Finland and France are net importers of textiles but net exporters of clothing. The United Kingdom, Norway, Sweden and Austria had deficits both in textiles and clothing (as did Canada and Australia) and the Netherlands, Belgium/Luxemburg and Switzerland had deficits in clothing alone.

In 1976 slightly over one-third of manufactured exports (over 13 percent of total merchandise exports) of developing countries with a total value of $14 billion consisted of textiles and clothing. Approximately one-third went to other developing countries. Their share of world exports of textiles alone in 1973 was 18 percent, which included primarily cotton yarn and fabrics and knitted carpets, and 27 percent for textiles and clothing combined. As Table 2-2 shows, the growth of their exports to industrial countries since 1963 has been quite remarkable, particularly for clothing, except for the years after 1976.

Table 2-2. Growth of Imports of Textiles and Clothing from Developing Countries by Industrialized Countries

	Current (billion $)			Growth in Real Purchasing Power (% per annum)/a	
	1963	1976	1978	1963-76	1976-78
Textiles	0.58	3.04	4.12	7.2	4.6
Clothing	0.28	7.09	9.64	20.9	4.8
Total	0.86	10.13	13.76	14.1	4.8

/a Based on deflation by United Nations unit value indices for exports of manufactures from developed market-oriented economies.

Source: Keesing and Wolf, 1980a, Table 1.1, page 2.

Market penetration of products imported by EEC countries from developing countries was relatively high for so-called "sensitive" products (as defined under the MFA, see Section (c) below), including maximum percentages ranging from 42 to 49 percent for women's blouses and men's woven shirts. In the United States imports from all sources equalled 32 percent of apparent consumption for men's shirts, 39 percent for women's shirts and 49 percent for sweaters. However, these are exceptions. The average market penetration of developing countries in the American market was about 2.5 percent in textiles and 10 percent in apparel. In most developed countries (except Italy, France and Japan, where the rates are lower), the developing countries' share of the market in clothing ranged between 8 and 18 percent, and for textiles between 4 and 8 percent. 1/

(c) Protection

Under the tariff reductions of the Tokyo Round, tariffs for textiles and clothing are being brought down significantly. Yet they will remain well above the average tariff for all dutiable manufactured goods, except for Japan. In comparison with the United States protection in Japan is higher for all manufacturing but lower for textiles and clothing.

Table 2-3. Tokyo Round Tariff Cuts

	Textiles		Apparel and Make-Up Products		Average Dutiable Manufactures	
	1976	Final	1976	Final	1976	Final
US	17.0	11.4	25.9	21.1	8.1	5.6
EEC	11.7	8.6	16.0	12.1	10.0	7.1
Japan	10.5	9.0	13.5	13.2	15.3	13.4

1/ Source: Keesing and Wolf, 1980a, page 72.

Less developed countries under the general system of preferences (GSP) are entitled to reduction of tariffs normally up to 100 percent for exports to developed countries. However, the application of this principle is limited by a variety of devices such as product exclusions or reduced preferential margins through the use of tariff quotas or ceilings. As a result, the total positive effect of GSP for developing countries is now considered to be quite small in textile products.

Non-tariff restrictions on imports of textiles and clothing from developing countries are now embodied in the Multifiber Arrangement (MFA). The MFA grew out of bilateral restrictions, dating from the late fifties, such as the "voluntary" controls adopted by Japan on exports to the United States and the bilateral agreements between Britain and Hong Kong, India and Pakistan. At the instigation of the United States, they were followed by multilateral negotiations under the auspices of the GATT. This led to the Short-Term and subsequently the Long-Term Arrangements regarding International Trade in Cotton Textiles (LTA), which became effective October 1, 1962. The LTA was conceived as a temporary measure to give the (cotton) textile industry in developed countries a breathing space to adjust to changing circumstances. At that time, the net deficit of the United States in textiles and clothing was $490 million, or about 4 percent of total value added in domestic manufacturing of these products and some 2 percent of final sales, of which only $140 million was contributed by developing countries. The LTA was repeatedly extended for a total of 12 years. During that period, exports by developing countries, especially of goods made with non-cotton fibers, continued to grow rapidly.

In 1974 a new so-called Multifiber Arrangement (MFA) replaced the LTA (cotton) and bilateral "voluntary" restraint arrangements on woolen textiles and man-made fiber products between the United States and Japan, Taiwan, Hong Kong, Korea and Malaysia. The provisions of the MFA were more elaborate and provided more scope for liberal treatment than those of the LTA. However, they were generally applied in the most restrictive manner in order to allow only minor increases in quotas, which were normally based on actual imports in 1976.

The MFA was renewed in 1977 again in 1982. For the EEC alone, the 1977 agreement covered 130 categories of products from 40 countries and generally controls up to 85-95 percent (effectively or potentially) of the textile product imports from low-income countries into almost all of the leading market economies of the world. Experienced observers and analysts expect little change to occur in this situation in the years ahead.

Chapter III: The Textile Industry in Selected Developing Countries

1. Introduction

In various low-income countries the textile industry faces declining productivity and competitiveness. The causes are complex, but generally include weak or deteriorating management, worn-out or obsolete equipment and structural imbalance. These problems manifest themselves in different ways, such as a decline in exports, poor product quality and an inability to pay debts. They are most evident when reduction in protection is contemplated in order to open up an economy. Efforts to alter these conditions through appropriate rehabilitation, restructuring and development programs are frequently induced by and often form an integral part of more general structural adjustment measures and policies.

This chapter summarizes the main characteristics of the industry, the problems encountered and the major causes of these difficulties in four developing countries: Pakistan, the Philippines, Portugal and Turkey. Its objective is not to give an overview of the growth and achievements of the industry in developing countries generally. In some countries (e.g., Hong Kong and Korea), the industry has performed much better than in the countries whose programs are reviewed here.

2. General Characteristics

The textile and clothing industry makes a more important contribution to industrial output and employment in the developing countries than in most developed market economies. The following table serves as an illustration.

Table 3-1. Textile and Clothing Industry: Share of Value Added and of Employment in Total Manufacturing (1976)

	Value Added	Employment
EEC	6.8	11.2
USA	6.3	12.1
Japan	7.5	13.7
Pakistan	30.0	35.0
Philippines	10.0	28.0
Portugal	21.0	26.0
Turkey /1	16.0	24.0

/1 Organized and public sector only.

Source: OECD and World Bank data.

In absolute numbers, employment ranges from about 200,000 in Turkey (excluding small-scale operations) and Portugal to 220,000 in the Philippines (of which 120,000 in clothing) and 400,000 in Pakistan.

Among the OECD countries, there is an inverse relationship between per capita income levels and the relative importance of the textile and clothing industry. In 1976 the share of textiles and clothing in total value added in manufacturing in all OECD countries with a per capita income of $3,000 or higher was below 10 percent. For countries below that per capita level (Italy, Spain, Greece, Ireland, Portugal and Turkey) the share varied between slightly over 10 percent for Italy and Spain to 21 percent for Greece. 1/

Exports of textiles and clothing make a significant contribution to the balance of payments of the four countries reviewed:

1/ (Based on data from the United Nations: Yearbook of Industrial Statistics (various years) and from the OECD: Textile Industry in OECD Countries (various years).

Table 3-2. Textile Exports of Selected Countries (1978)

	Pakistan	Philippines	Portugal	Turkey
Exports of textiles & clothing ($million)	511	148	705	349
Exports of textiles & textile products (percentage of total exports in manufactured goods)	50	12	30 /3	45
of which (in %):				
Yarn	40	)25	10	70
Fabrics	40	)	36	10
Other	20 /1	75 /2	54 /4	20 /2

/1 Mainly household goods (towels) and some knitted wear.
/2 Garments.
/3 Of total exports.
/4 Woven and knitted garments (47) and miscellaneous (7).

Source: World Bank.

The composition of exports differs for each of the reviewed countries. In Turkey, a major producer of raw cotton, they consist primarily of cotton yarn. For Pakistan the export of yarn and (a limited range of) woven cloth account for about 40 percent each in normal years. Almost 50 percent of all Portuguese textile exports are woven and knitted garments. Finally, Philippine exports consist almost entirely of garments produced from imported cloth under special export trade arrangements.

The industry is largely privately owned. However, Turkey has a state-owned sector accounting for about one-sixth of the total value of textile output in the country. It is characterized by many individual units and includes cottage industries producing garments and carpets and often cloth. In some countries (for example, in general in Portugal; the wool sector in Turkey), even the organized sector of the industry has many small units

which are not an economical size. Even where the modern sector generally consists of larger units structural imbalances exist. For example, in the Philippines there is insufficient specialization. In Pakistan there is need for forward integration of spinning mills with underutilized capacity; moreover, delineation of and coordination between the roles of the organized and the small scale, cottage-type operations in cotton weaving needs improvement. The same is true for wool weaving in Turkey. In Portugal there is not only a need for the closure or merger of firms of uneconomic size, but also for a readjustment between the major branches of the industry with a stronger emphasis on garments and, to a lesser extent, woven goods, with an upgrading in product quality.

3. Problems and their Causes

In each of the countries reviewed, the industry has efficiency problems. Labor productivity is low. Pakistan's labor productivity in spinning, weaving and finishing is only about 15-20 percent of that achieved in Western Europe. In the Philippines and Turkey, labor productivities in the various branches of the industry vary between 40 and 60 percent of Western European levels. In Portugal, average labor productivity in textiles is only 60-65 percent of these standards.

Furthermore, machine efficiencies are often less than they could be (between 75 percent and 85 percent of comparable international standards in most cases). Waste control and quality control are usually inadequate or lacking. Because management and labor pay inadequate attention to maintenance, machinery in many developing countries becomes worn-out or inadequate long before it does in industrial countries. Except for Portugal, unit costs are further increased and competitiveness reduced through underutilization of

capacity. This is especially true in spinning and finishing, but occasionally in factory-type weaving as well (Pakistan). Finally, with the exception of the private sector in Turkey in spinning and weaving, the industry typically uses worn-out, badly maintained, often obsolete equipment. In Pakistan 40 percent of the spinning and 85 percent of the weaving equipment is over 20 years old. In the Philippines, these figures are 45 percent and 62 percent, respectively. In Turkey, 70 percent of the printing equipment is considered to be obsolete. In Portugal, 45 percent of the machinery in the woolen and cotton sectors (not including knitting) is over 15 years old. Engineers frequently consider old equipment a handicap to productivity improvement. Economists, on the other hand, stress that old machines can still be profitable (as long as the present value of the stream of net returns exceeds the scrap value). 1/

The reasons for the poor performance of the industry are somewhat different in each case. Special factors such as labor problems (Pakistan and Portugal, see below) and the purchase of machinery at inflated prices as a means of (illegal) capital export (the Philippines) have sometimes played a role. However, in each country (except Portugal), inefficiency was aided by high tariff protection and reinforced by quantitative restrictions, which often included a complete banning of certain competing imports. These restrictions and high protection rates were considerably above average rates for manufactured goods

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1/ Some technical industry experts point out that developing countries may continue to use older type, more labor-intensive machinery where it is in good condition. It may not, however, be justifiable to purchase such machinery for use in even the lowest wage-rate countries. Where older type machinery is in place, it is suitable mainly for production for rural markets, a limited number of low quantity products and usually not for export (comment by Mr. Catling).

and ranged between 50 and 100 percent in the Philippines, between 85 and 195 percent in Pakistan, and between 60 and 125 percent in Turkey (all nominal rates). They sheltered the industry from its beginning and have played a large role in sustaining the inefficient firms and those with considerable surplus capacity or obsolete machinery. There were insufficient or no penalties on inadequate general and technical management, poor plant layout, production methods and preventive maintenance; unsatisfactory waste, quality or cost controls; neglect of proper training and supervisory activities; and other factors which keep productivity and efficiency low. In addition, the lack of adequately trained mechanics and other technicians has been a handicap in several countries.

Government action has occasionally hurt the performance of the industry. For example, the long-standing deficiencies in management by the Turkish State Economic Enterprises have been detrimental to the efficiency in the textile mills of the public sector. The industrial and labor policies pursued in Pakistan in the mid-seventies led to sharply declining labor productivity, reduced initiative and a fall in resources for renewal and modernization. In Portugal, relatively small family-owned enterprises had difficulty in adjusting to the post-1974 period involving higher cotton prices, loss of captive markets, rising wages and government constraints on the dismissal of workers. Special factors such as the deteriorating quality of domestically produced cotton exacerbated the problems of the Pakistan textile industry.

Finally, labor productivity in low-wage countries is frequently lower than in the industrial countries, despite use of the same machinery. In his earlier quoted paper "Technical Choices and Operating Efficiency in Cotton Textiles," Howard Pack compares realized performance in Latin America,

India and Kenya with "best practice standards" (i.e., engineering norms as suggested by equipment manufacturers and as tested in the realized performance of the best firms in Western Europe). He found that in spinning, the realized labor/output ratio (operative hours per unit of output) is well above best practice norms, and is often between 2-4 times those standards. On the other hand, the capital/output ratio (spindle time per unit of output) comes much closer to the best practice norm, and in some cases, even lies somewhat below that norm. For weaving, an analysis of Kenya data shows similar results. Data on the labor/capital ratio for spinning indicates that an average Latin American plant needs twice as much labor per unit of machinery than indicated by best practice standards. Similarly, the spindle use per labor hour in Kenya varies between 40 and 23 percent of best practice standards in United Kingdom mills using similar machinery. In other words, labor requirements per unit of capital were 2-4 times those in Britain. 1/

In summary, the X-efficiency of plants (the productivity of existing factors of production) is low in the countries reviewed in Chapter II. The industry has frequently turned to products and processes in which the countries do not always have a demonstrated comparative advantage. Clearly, this is not true for all developing countries, as the experience of Korea demonstrates.

1/ Pack suggests that at least part of the differences in productivity, especially in weaving, can be due to excessive product variety in a country such as Kenya, where the industry has excess capacity and firms try to raise capital utilization rates by producing a wider range of products. Statistics are provided which, for example, show that (in the United Kingdom) a doubling of the average length of run on one loom from 3,800 to 7,700 yards decreases unit labor requirements by 49% and machine requirements by 14%. When Kenyan labor and total factor productivities are adjusted for this factor, they come considerably closer to the best practice norms.

Low levels of efficiency are caused by a combination of factors, including low quality of labor and management of plant and operations, which, in turn, have been protected from outside competition by high tariffs and other devices. It is difficult to say to what extent low efficiency was caused by high protection or other factors, such as general country conditions (including government intervention, inflated prices for machinery, labor problems, etc.).

4. World Bank Involvement in Textile Industry Development through DFCs and Direct Lending Operations

The World Bank has assisted the textile industry in a number of countries other than those reviewed here, since the industry is of very importance in the modernization of manufacturing. Table 3 shows the extent of Bank assistance through development finance companies to the textile industry in the countries under review plus four other important textile producing LDCs--Colombia, Korea, Mexico and Nigeria.

Table 3 illustrates that the Development Finance Companies (DFCs) concerned have used from about 6 percent (Mexico and Nigeria) to about 50 percent (Pakistan) of their total resources, including those obtained from the World Bank, for the textile industry (as broadly defined, i.e., usually including footwear). Out of a total amount of Bank/IDA financing to DFCs for the four reviewed countries of $1,270 million, about $350 million or 27 percent was lent to the textile industry. These figures assume that Bank funds have been spent on textiles pari passu with other DFC funds. For all eight countries, Bank/IDA lending to DFCs was $3,115 million, of which $620 million or 20 percent was passed on to the textile industry.

Total direct Bank/IDA cumulative lending for textiles as of June 30, 1980 amounted to $661 million 1/ and IFC investments in textiles and fibers (original commitments) at that time stood at $187 million. 2/

Some of the Bank's direct lending operations are also concerned with rehabilitation and restructuring. Examples are two loans provided to Egyptian textile enterprises (in 1976 for the Kafr el Dawar and El Beida textile project and in 1980 for the NSWC textile project), as well as a loan made recently for the SOGITEX Textile Rehabilitation Project in Tunisia. These direct operations do not include measures for the revitalization of the industry as a whole. They also do not deal with the necessary policy support, whether relating to over-all industrial policy reform or to measures regarding the textile sector alone.

1/ By mid-1982 this figure had increased to $986 million. Source: Bank and IDA cumulative lending operations, World Bank Annual Reports 1980 and 1982.

2/ By mid-1982 IFC investments in textiles and fibers amounted to $154 million. Source: Statement of Loan and Equity Investments, IFC Annual Reports 1980 and 1982.

Table 3-3. Share of Lending by World Bank Supported DFCs to the Textile and Clothing Industries

Country and DFC	Total Bank Lending to DFCs ($ Million)	Textiles and Clothing 1/ % of Total DFC Lending
Colombia		
Various DFCs	492.5	19.8
Corporacion Financiera Popular	52.5	19.6
Korea		
KDB	252.5	3.4
KDFC	320.0	21.0
SMIB	145.0	29.2
Mexico		
FONEI	360.0	3.6
FOGAIN	147.0	19.0
Nigeria		
NIDB	76.0	6.0
Pakistan		
PICIC	273.0	50.9 2/
Philippines		
DBP		14.1
PDCP	375.0	13.6
IGLF		14.5
PISO	15.0	-
Turkey		
TSKB	432.0 3/	19.9
SYKB	15.0 3/	25.0 4/
DYB 5/	110.0	2.0
Portugal 6/		
Banco de Fomento Nacional	50.0	8.0

1/ Including footwear in some cases, e.g., Colombia (CFP), Mexico (FOGAIN) and Philippines (IGLF).

2/ Loans outstanding as of December 31, 1979; principal and interest overdue on the textile portfolio on that date amounted to 54.3% of that portfolio and to 65.6% of total overdue accounts.

3/ Including $65 million to TSKB and $15 million to SYKB from the 1979 Bank loan for the private textile industry.

4/ Based on total loan approvals through 1978, i.e., before the first Bank funds (for textiles) were made available.

5/ Bank for public sector investments only.

6/ In mid-1979 a further loan was approved for $45 million to assist small and medium scale enterprises.

N.B. The figures in this table are in most cases derived from an analysis of total loans approved or committed over a period of recent years; in some cases, however, they are based on an analysis of loans outstanding as of a certain recent date.

Source: World Bank

Chapter IV. Rehabilitation and Restructuring Programs

1. Rationale

There are good reasons for governments of developing countries to assist their stagnant and embattled textile industry consisting of many individual firms by means of industry-wide programs aimed at improving or restoring their economic and financial health and vitality. The abandonment of an industry which still has long-term development potential and which contributes so significantly to employment, output and the balance of payments is difficult to contemplate. Nonetheless, the maintenance of a run-down industry in which large amounts of capital and labor are locked in increasingly less productive operations is a heavy burden on the rest of the economy. Related financial problems, including defaults on debt services payments to banks which are often wholly or partially government-owned, tend to exacerbate the situation. Any opportunity to transform the industry into an important engine for future growth through its export performance (e.g., Korea, Hong Kong and Taiwan) is lost as long as its competitiveness continues to decline.

Fortunately, in each of the countries under review, the textile industry or at least certain parts of it (clothing in the Philippines) either continue to be competitive internationally or meet the conditions to regain their competitiveness once productivity has increased to reasonable level and product quality and product mix have been properly adjusted where necessary. The clearest case is Turkey, where the domestic resource costs of the (private) textile industry are low. Generally, the industry still appears to be reasonably healthy. Similarly, the Pakistan textile industry, once a stable environment for private management, is being restored and serious labor productivity problems are being resolved, should be able to provide the

domestic market with relatively cheap and simple consumer goods from domestically produced raw materials, and to continue to sell certain types of cloth and yarn abroad without need for export subsidies.

Low labor costs are a significant factor in the industry's recovery potential. For example, in Pakistan hourly wages are about one-fifteenth of West German hourly wages for unskilled labor in textiles, and labor costs per kilogram of yarn are roughly one-fourth. Combined with relatively low raw material costs, the low wages should make it possible to achieve production costs in spinning and weaving that are low enough to compete successfully with European prices, even when freight and insurance charges plus EEC duties are added. The Portuguese textile industry continues to show that it can compete internationally (at least in EFTA and EEC markets) in the absence of significant protection or export subsidies, despite structural and productivity problems. Only the textile industry (excluding clothing) in the Philippines has less favorable conditions.

In order to achieve the objectives of an industry program, the program must be accompanied by policies to weed out firms which, even with appropriate aid, cannot be made viable again. A climate must be established in which competitive pressures prevent the recurrence of conditions of decline and neglect. This proviso is particularly important in assessing whether external assistance for the program is desirable. It is most easily satisfied when the governments concerned are engaged in general policy reforms within the framework of an outward-looking strategy of structural adjustment; and when they wish to make the textile industry one of the main sub-sectors eligible for the special assistance which may be required to meet the challenges and opportunities this strategy poses.

2. Contents and Objectives of Industry Programs 1/

Even though the details of two of the programs under review (Portugal, the Philippines) are still being worked out, they all will definitely include three elements which are interdependent and mutually reinforcing: an investment component, a restructuring component (including, in Portugal, a refinancing aspect), and a technical assistance component. The size, composition and main elements of the restructuring programs reviewed are summarized in Tables 1 and 2.

The (proposed) investment component includes the rehabilitation or replacement of worn-out or obsolete equipment. In addition, new investment is included to meet the projected increase in demand, both domestic and foreign. Both replacement and new investment must be confined to the lines and processes in which the country has a comparative advantage. These investments are designed to make possible appropriate changes in the product mix and product quality, as well as the removal of imbalances in the existing structure. These structural changes are important in lowering costs and meeting projected demand. The

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1/ Besides the four restructuring programs reviewed, the Bank is also involved in the restructuring and rehabilitation of the textile sector in Bangladesh. A comprehensive program is underway to rehabilitate 77 mills in the jute industry and through the Imports Program Credits considerable work has been done on the restructuring of the cotton textile industry. An IDA credit of $30 million (1982) helps finance Phase I of a program to rehabilitate the 50 large composite mills in the public sector. Rehabilitation would be carried out only where investment would give positive incremental financial and economic rates of return excess of 15 percent, and a level of product costs, after rehabilitation, not greater than the CIF cost of similar products. In addition to mill rehabilitation, the sector program addresses key sectoral issues of pricing, staffing levels, and management development.

programs all include amounts for investment in additional equipment, even though the replacement of existing machines with more modern equipment will usually entail by itself an increase in capacity; and even though certain branches of the industry in most of the countries concerned still suffer from significant underutilized capacity.

The Turkish program for the private sector has a new investment component of 78 percent of the total, followed by the Philippines with about 68 percent, Pakistan (excluding cotton ginning), with 57 percent and Portugal with 48 percent (see Table 4-1). The estimates in Table 4-1 are engineering estimates which, in practice, may exceed what is economically or practically feasible. In evaluating these percentages of new investment, it is important to note that they sometimes include replacement value. On the other hand, the cost of overhauling old equipment per unit is much lower than the purchase of new machinery. 1/ Further, the technical estimates even when arrived at through a determination of the products and processes in which the country has a comparative advantage, may be based on engineering data which do not adequately allow for economic return. They may assume too readily the availability of adequate financial resources and institutional arrangements for the program's implementation. In practice, execution of new investment and rehabilitation is likely to be slower than originally envisioned. Sector investment estimates must be based on an all the needs or plans of many private companies. These figures in turn, must be translated into a government action program which must allow for the possibility of execution and the availability of finance.

1/ For example, in the Philippines, the cost of rehabilitating a plant of 1960-70 vintage is estimated at $100 per spindle and one of pre-1960 vintage at $150 per spindle, while a "fully modern" new plant costs $300 per spindle. Rehabilitation of old looms in the Philippines is estimated at between $2,500 and 4,500 per loom, while new looms would cost about $15,000.

Finally, the estimates may not completely take into account the possibilities of repairing old equipment, or of making existing shops more efficient in their use of present equipment, as well as the importance of avoiding the introduction of new equipment that is too capital intensive.

Restructuring has to be implemented through both the investment and technical assistance components. The adoption of the right selection or eligibility rules or guidelines (to be discussed in Section 3 below) is also relevant. While the emphasis on the individual elements of restructuring may differ for each of the countries under review, the basic thrust of restructuring is very similar in each case. Investments will be directed to branches or product lines where there is no excess capacity and which appear the most promising in terms of realistic demand projections and export prospects. When units are of uneconomic size, mergers or other appropriate forms of concentration will be promoted. The overall program will direct its assistance to firms which are interested in achieving selected goals, such as integration (as in Pakistan spinning) or specialization and decentralization (as in the Philippine integrated large spinning and weaving mills).

Technical assistance is an essential part of each of the four programs. They all have an important training component. In Pakistan, in addition to measures aimed at improving marketing efforts abroad, this feature receives almost exclusive emphasis. 1/ The other main component is aimed at helping individual firms improve their performance. Turkey, with support of

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1/ The Bank, in the most recent loan to PICIC, included funds for modernizing and upgrading existing textile training institutes and the government expected to get UNDP support for establishing a management training institute for the industry.

the Bank, is establishing a local extension service for the textile industry. It is also setting up a technical assistance fund from which firms can borrow if they need longer term help from specialists abroad in production management and marketing. In the Philippines, technical assistance would be supplied to firms for shop-floor level advice on improving operational performance and for help in preparing project proposals. In addition, the Ministry of Industry would receive help in implementing the guidelines for project selection and appraisal. The program proposed (by technical consultants) for Portugal also has a substantial component for assisting firms in overall and technical planning and for improving technical performance.

3. Administration

The administration of the restructuring programs in the countries under review differs considerably. It depends on the country's policies for manufacturing industry in general, the importance and scope of the textile program and the extent of financing available for the programs.

The link between the industry programs and the government's industrial policies may widely vary in different countries. In both Pakistan and Turkey, the textile programs were initiated without a direct link with overall industrial policy reform. Thus, the textile programs in these countries did not include agreement on the reduction of protection once the programs were completed. In this respect, the programs are different from those in the Philippines and Portugal where the industry and the government contemplate comprehensive programs.

In all four cases, the programs were originally based on comprehensive expert studies. These outlined the shifts in output, employment and investment in the various branches of the industry that were needed for improvement, to make it possible for the country to use its comparative advantage in the industry more effectively, and to expand in line with projected domestic and export demand. As previously remarked, the investment requirements discussed in these expert studies usually overstated what can be realistically expected on the basis of economic criteria, market prospects, available finance, institutional arrangements and industry attitudes.

The technical recommendations of the expert studies are an input into the action programs for the industry. However, implementation may fall short of the targets set in these action programs. In Pakistan, for example, technical assistance for the industry is being organized, but actual investment and rehabilitation appears limited thus far to textile projects financed by PICIC under part of a $40 million IDA credit. (This compares with an estimate of a $500 million foreign exchange component of a 5-year program in the expert study.)

In Turkey, the program envisioned restructuring of major components of the privately owned segment of the industry, the establishment of eligibility criteria for firms, and the implementation through DFC intermediaries. The World Bank has made a loan of $80 million (channeled through two DFC intermediaries) for the program. The program is a portion of the technical expert plan, which estimated foreign exchange requirements of $450 million over 5 years. In the state sector, the program is administered directly by a special implementation unit, and the World Bank loan ($83 million) covers all of the foreign exchange requirements of Phase I of the program.

In the Philippines, the government has a comprehensive program of industrial policy reform in progress, including a phased reduction of protection, rationalization of incentives and action programs for selected key industries. 1/ The textile industry is one of the industries receiving special attention. The plans for the industry include rehabilitation and new investment accompanied by a reduction in protection that is coordinated with the government's overall program. In fact, the textile industry program and the government's overall reform are closely interrelated and mutually reinforce each other.

In Portugal, the government has already taken a number of steps to rationalize the incentive system. Furthermore, tariff protection is relatively low and further measures to strengthen competitiveness are anticipated in connection with admission to the EEC in the mid-eighties. The government has embarked on major restructuring programs and technological upgrading in which the textile industry plays a key role.

Administrative arrangements must suit the institutional set-up of the country as well as the scope and nature of the program. However, in general, programs adopted for the entire industry have the following characteristics and elements:

(1) A large number of private firms may participate in the program. Some of these may already be efficient and have a sound structure. Others will need substantive changes in organization, management and capital investment, although some may be beyond repair. Two sets of actions are needed to determine who will participate in the program,

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1/ Details on the government's program are given in "Philippines: Industrial Development Strategies and Policies" (1980), a World Bank Country Study, Chief of Mission - Barend A. de Vries.

and to what extent: (a) the application of eligibility rules aimed at achieving the restructuring plan for the industry deemed necessary under the program, and (b) the determination of financial and economic viability of the participating firm proposals.

(2) The eligibility rules are formulated by the government (usually the ministry of industry or MOI), based on a previous study of the industry and in consultation with the industry. The rules are administered by an agency of the MOI ("Project Unit"), assisted by consultants (if necessary).

(3) Determination of viability is done by the financing institution(s) bearing the credit risk. They would undertake financing of eligible firms which they consider creditworthy.

(4) The financial resources for the program would be both internal and external, possibly channeled through the central bank or another government bank. Amortization terms would be longer than what might otherwise be available through private channels.

(5) Technical assistance (project development, plant layout and plant management, labor training, choice of equipment, product quality, marketing, etc.) is provided as needed in conjunction with financing. It is administered through the MOI Agency or an associated unit ("Project Unit"). In many situations, technical assistance may be most effectively applied when it is associated with the provision of finance.

Eligibility rules, that is rules to establish which firms or projects should qualify for assistance under the program, have to be closely linked with the industry program as well as with any general policies pursued by the government to bring the industry back under the discipline of the market. In establishing and applying them, a rough outline of the most likely and desirable future structure of the industry must be assumed.

In addition to assigning a priority to rehabilitation and replacement investments over new investments, particularly in the first few years or when total funds for assistance are limited, eligible proposals would generally involve the following:

(1) Units of economic size, whether already existing or to be formed through mergers, other types of concentration, or by appropriate forms of integration or specialization by product or by process.

(2) Sectors in which there is no pronounced excess capacity, except for bottleneck removal (e.g., sewing thread production in spinning).

(3) Promising products or product lines (e.g., garments and other products likely to contribute directly or indirectly to increased exports).

(4) Adequate efforts at raising productivity in existing plants (e.g., by requiring, as suggested for the Philippines, that each proposal provide a detailed plan to ensure efficient operations, including facilities for the in-house training of staff as well as an assessment of the need for external advice on plant operations.

Clearly, eligibility rules or guidelines of this type will have to be applied uniformly and carefully by a technically and economically competent staff. Also, as mentioned earlier, consultation with the industry is essential. Their application should neither stifle private initiative nor supplant it. The objective is to adopt best long-term solutions for the company involved and the economy as a whole. The final decision on choice of equipment, product or product line, technology and location should remain with the entrepreneur concerned, with the help of technical assistance when necessary. Consequently, the rules should remain general, and great reliance must be placed on the characteristics of the individual firms involved in their application.

Two points are particularly important in this connection. First, as discussed in Chapter II, rapid developments in technology and changes in consumer preferences, relative prices and costs that have occurred recently in the industrialized countries, suggest that governments or their agencies should avoid becoming involved in detailed decisions regarding the direction of textile industry development and in the selection of firms which carry forward the industry's restructuring.

Second, a project proposal which has passed the initial test provided by the eligibility guidelines will still be subject to determination of viability by the financing institutions involved. The proposal will face the normal detailed scrutiny of its managerial, technical, economic and financial merits before it can actually receive the requested assistance. At this point, important related issues, such as matters of capital intensity, can be tested through the use of appropriate prices for capital and labor in calculating the economic rate of return.

In principle, the same guidelines should apply to projects in the public sector. However, when the number of companies under some form of central public management is limited and their production patterns and processes are not excessively complex, it may be possible to apply the guidelines implicitly through a well-organized and staffed "rationalization and modernization unit". While working closely with managers of individual companies, this unit would be ultimately responsible to the overall management of the group in its rehabilitation and restructuring work. Determination of financial and economic viability of the individual enterprises involved would also have to be reviewed by the central management.

Table 4-1.

Technical Investment Estimates for Restructuring, Rehabilitation and Development of the Textile Industry in Pakistan, Philippines, Portugal and Turkey
(in millions of US$)

Sub-Sector	Pakistan (1978-1983, 1978 prices)				Philippines (1980-1985, 1980 prices)				Portugal (1980-1985, 1980 prices)				Turkey (1980-1982, 1979 prices)			
	New Investment	Rehabilitation &/or Replacement	Total	Share of each Sub-Sector(%)	New Investment	Rehabilitation &/or Replacement	Total	Share of each Sub-Sector(%)	New Investment	Rehabilitation &/or Replacement	Total	Share of each Sub-Sector(%)	New Investment	Rehabilitation &/or Replacement	Total	Share of each Sub-Sector(%)
Spinning	132	97	228	36	104	29	133	33	235	216	451	51	42	-	42	10
Weaving	133	118	251	40	82	88	170	43	134	201	335	38	121	60	181	45
Finiching	52	55	107	17	35	8	43	11	na	na	13	3	59	28	87	22
Knitting	4	-	4	1	51	-	51	13	-	15	15		16	-	16	4
Clothing and make-up articles	35	-	35	6	-	-	-	-	57	20	77	9	76	-	-	19
Total	356	270	625	100	272	125	397	100	426	452	891	100	314	88	402 1/	100
(Percentage)	(57)	(43)	(100)		(68.5)	(31.5)	(100)		(48 5)	(51.5)	(100)		(78)	(22)	(100)	
Technical Assistance			10				7				61				5	
Grand Total			635				404				952				407	

1/ Plus 440 in local currency

NOTES

1. General -Estimates prepared by technical consultants which, with the exception of Turkey, had not yet been fully reviewed or adopted by Government, the Philippine estimates are from the Bank Textile Sector Reconnaissance Mission. Figures include local currency costs for Pakistan and Portugal but not for Philippines and Turkey. Investments do not always appear to include allowance for civil works or interest during construction.

2. Pakistan - a) Foreign exchange costs are 72% of total cost estimates.
b) Projected increase in demand 133,000 tons in terms of yarn used between 1977/78 and 1982/83.

3. Philippines a) Including foreign exchange costs of engineering and installation services (10%) and for physical contingencies (10%).
b) Finiching includes texturising.
c) Projected increase in demand 80,000 tons in terms of yarn used between 1980 and 1985.

4. Portugal a) Figures based on scenario assuming optional restructuring and entree into EEC.
b) Projected increase in demand 68,000 tons in terms of yarn used between 1980 and 1985.

5. Turkey a) Local currency costs make up 52% ($440 million) of total estimated investment requirements
b) Of total $842 million in local and foreign costs $461 million is estimated to be for cotton sector, $134 million for wool, $74 million for knitting and $156 plus $16 million respectively for garments and accessories.

Table 4-2.

Elements of Textile Industry Programs (Actual or Proposed)

	Pakistan	Philippines	Portugal	Turkey	Egypt 1/	Tunisia 2/
AIMS OF PROGRAM						
Organization of Industry						
- phase out certain mills	+	+	+	0	+	0
- integrate into larger units	0	0	+	0	0	0
Structure of Output						
- more specialization	0	+	0	0	0	0
- change of output mix	+	+	+	+	+	+
- increase of exports	+	+	+	+	+	+
Plants						
- improve X-efficiency	+	+	+	+	0	0
- improve product quality	+	+	+	+	+	+
CONTENTS OF PROGRAM						
Investment in:						
- rehabilitation	+	+	+	+	+	+
- replacement & modernization	+	+	+	+	+	+
- expansion	+	+	+	+	+	+
Technical Assistance						
- in preparation of program	+	+	+	+	+	+
- in implementation of program	+	+	+	+	+	+
INSTITUTIONAL ARRANGEMENTS						
Project Unit	0	+	+	0	+	0
Planning Unit	0	0	+	0	0	0
Development Bank	+	+	+	+	0	0
Banking System	0	0	+	+	0	0
RELATED POLICY MEASURES						
Part of general Macro-Economic Policy Reform 3/	0	+	+	0	0	0
Public Investment Program (Manufacturing) 4/	0	+	+	0	0	0
Reform of Incentive System (Manufacturing)						
- trade	0	+	0	0	0	0
- investment	0	+	+	0	0	0
- credit	0	+	+	0	0	0
Textile Industry Incentives						
- pricing	0	0	0	0	0	0
- trade	+	+	0	0	0	0
- investment	+	+	+	0	0	0
- credit terms	0	+	+	+	+	+

Note: + = Provided for in Industry Program
0 = Not Provided for in Industry Program

1/ Rehabilitation and development projects for three important public sector textile enterprises.

2/ "SOGITEX" Textile Rehabilitation Project covering primarily production of denim for export by one large public sector enterprise.

3/ At start of Textile Program.

4/ Government undertaking to make significant changes in public investment expenditures in manufacturing.

5/

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Describes a methodology for treating foreign capital for cross-section cost-benefit studies when there is investment by foreigners that is specific to a particular activity. Illustrates the methodology by using the results of a larger study of eighty-four manufacturing firms in the Ivory Coast.

World Bank Staff Working Paper No. 465, July 1981. 45 pages.

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Examines the role of development finance companies as major mechanisms for assisting medium-scale productive industries, assesses their potential for aiding small enterprises in meeting socioeconomic objectives of developing countries, and discusses the evolution of World Bank assistance to them.

Sector Policy Paper. April 1976. 68 pages (including 7 annexes). English, French, German, and Spanish.

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Reviews the empirical evidence available concerning the nature of the costs and benefits of infant industry development and forms some hypotheses about policies to promote infant industries. Based on research conducted under the "Sources of Industrial Growth and Structual Change" research project.

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David L. Gordon, coordinating author

Examines the potential role of the World Bank in encouraging developing countries to assist small enterprises and suggests that efficient substitution of labor for capital is possible in a broad spectrum of small-scale manufacturing and other activities that are able to absorb a rapidly growing labor force.

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World Bank Staff Working Paper No. 519. May 1982. 41 pages (including references).

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Industrial Project Analysis: Case Studies

Frank H. Lamson-Scribner, Jr.

Cases and exercises dealing with financial and economic analysis, and project preparation and optimization.

World Bank (EDI), January 1977, xiii + 211 pages. (Available from ILS, 1715 Connecticut Avenue, N.W., Washington, D.C. 20009, U.S.A.)

$5.00 paperback.

Industrial Prospects and Problems in the Developed Countries

Bela Balassa

Addresses the allegations that increases in the import of manufactured goods from developing countries adversely affect the industrial sector in the developed countries and that growing protectionism in the developed countries has made it necessary for developing countries to turn to domestic markets or to trade among themselves in order to sell their manufactured goods. Argues that trade with the developing countries actually benefits the developed countries, that rates of industrial protection should be lowered, and that an international safeguard code should be instituted to smooth the process of adjustment to freer trade in the developed countries.

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Discusses how Korea has been able to establish successfully an independent base of technological know-how and marketing expertise in many sectors during the past fifteen years and suggests how Korea's experiences might be useful in programming the development of other countries that are currently at earlier stages of industrialization.

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The Johns Hopkins University Press, 1981. 144 pages.

LC 80-27765. ISBN 0-8018-2568-7, $6.50 (£4.25) paperback.

Managerial Structures and Practices in Manufacturing Enterprises: A Yugoslav Case Study
Martin Schrenk

Explores the managerial procedures and practices that have evolved in Yugoslavia's manufacturing industries under the Yugoslav system of "self-management socialism," discusses the inferences that can be drawn from these observations regarding economic efficiency, and concludes with some observations on the strengths and weaknesses of this particular pluralistic system.

World Bank Staff Working Paper No. 455. May 1981. iv + 100 pages (including 4 appendixes).

Stock No. WP-0455. $5.00.

Manufacture of Heavy Electrical Equipment in Developing Countries
Ayhan Çilingiroğlu

Analyzes growth and competitiveness, comparing prices and costs with those in the international market.

The Johns Hopkins University Press, 1969. 235 pages (including 2 annexes).

LC 76-89962. ISBN 0-8018-1097-3, $5.50. (£3.25) paperback.

Spanish: Fabricación de equipo eléctrico pesado en los países en desarrollo. *Editorial Tecnos, 1971.*

330 pesetas.

The Mining Industry and the Developing Countries
Rex Bosson and Bension Varon

An overview of the world's nonfuel mining industry, its structure and operation, and the major factors bearing on them.

Oxford University Press, 1977; 2nd printing, 1978. 304 pages (including 12 appendixes, bibliography, index).

LC 77-2983. ISBN 0-19-920096-3, $29.50 hardcover; ISBN 0-19-920099-8, $14.95 paperback.

French. L'industrie minière dans le tiers monde. *Economica, 1978.*

ISBN 2-7178-0030-1, 49 francs.

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The Johns Hopkins University Press, 1979 144 pages (including index).

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French: La programmation des investissements industriels. méthode et étude de cas. *Economica, 1981. (Combines translation of this book with that of the case study of the fertilizer industry in Volume 2, below.)*

ISBN 2-7178-0328-9, 65 francs

Volume 2: The Planning of Investment Programs in the Fertilizer Industry
Armeane M. Choksi, Alexander Meeraus, and Ardy J. Stoutjesdijk

Discusses the main products and processes of relevance to fertilizer production and a systematic description of the planning problems that need to be addressed during the project identification phase.

The Johns Hopkins University Press, 1980. 320 pages.

LC 78-8436. ISBN 0-8018-2138-X, $25.00 (£13.75) hardcover; ISBN 0-8018-2153-3, $15.00 (£6.25) paperback.

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production controls, public enterprises, infrastructure and location, industry-agriculture linkage, and the international environment.

Oxford University Press, 1980; 2nd printing, 1982. 325 pages (including bibliography, index).

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Small Enterprises and Development Policy in the Philippines: A Case Study
Dennis Anderson and Farida Khambata

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World Bank Staff Working Paper No. 518. 1982. 77 pages (including references).

ISBN 0-8213-0006-7. $3.00.

Small-Scale Enterprises in Korea and Taiwan
Sam P. S. Ho

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Stock No. WP-0384. $5.00.

State Manufacturing Enterprise in a Mixed Economy: The Turkish Case
Bertil Wålstedt

Traces the historic roots of "etatism" and reviews the performance of six major state industries in Turkey.

The Johns Hopkins University Press, 1980. 354 pages (including appendixes, index).

LC 78-21398. ISBN 0-8018-2226-2, $30.00 (£17.50) hardcover; ISBN 0-8018-2227-0, $13.50 (£7.00) paperback.

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