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TRENDS AND PROJECTIONS

ANALYSIS OF TRENDS AND PROJECTIONS CONCERNING THE TEXTILE INDUSTRY WITH THE AIM OF DEFINING CRITICAL FACTORS AND IDENTIFYING PRIORITY AREAS OF FOCUS FOR FUTURE TECHNICAL AND OTHER ASSISTANCE TO DEVELOPING COUNTRIES[1]

by

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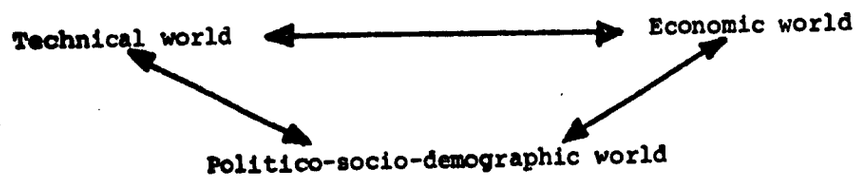
TABLE OF CONTENTS

AIMED AT THE IDENTIFICATION OF TRENDS AND PROJECTIONS CONCERNING THE TEXTILE INDUSTRY WITH THE AIM OF DEFINING CRITICAL FACTORS AND IDENTIFYING AREAS OF SPECIAL FOCUS FOR FUTURE TECHNICAL AND OTHER ASSISTANCE TO DEVELOPING COUNTRIES

1. INTRODUCTION

Within the framework of UNIDO/UNDP's first phase of a comprehensive evaluation of the textile industry technical assistance program, Battelle-Geneva was asked to submit a paper on trends and projections concerning the textile industry. The objectives of this paper are to identify those critical factors, problems and changes which do or will have a significant effect on the development of textile industries in developing countries. This analysis should also help to define future needs for technical and other assistance programs to developing countries.

The evolution in developing countries is dependent to a large extent on the evolution which is going on in industrialized countries. The evolution itself, which characterizes both developing countries and industrialized countries, is a function of a system of interactions mainly among the following three worlds:



Thus, anything that can be said, has to be analyzed and be considered in connexion with the present subject, should be viewed in the light of this three worlds' interacting system.

2. MAIN DEVELOPMENT TRENDS OF THE TECHNICAL WORLD

As the purpose is not to describe and to make evident technical developments in textile machinery and processes, we shall concentrate on the main sectors of the industry and only briefly mention the state-of-art as well as major development trends in each of these sectors.

2.1 SPINNING SECTOR

In the preparation stage, the same general trend as for practically all other textile equipement is to be observed, that is, the trend toward increased automation. In this respect, automatic opening, feeding, cleaning and blending should be mentioned, as well as direct and automatic interconnexion of these operations to the carding and drafting process. In particular, three developments are to be stressed :

- the increased interest in and importance of mixing machines in view of the trend towards fibre blending;

- cotton cards are still largely of traditional pattern, but probably, in view of the requirements of OE-spinning, the taker-in region is attracting more attention with some novel ideas to improve opening and cleaning at this point;

- the increased speed of cards : production rates of traditional cards come very near 40 kg per hour (however, usually much lower in the mills) and new high-speed, high-production cards are capable of rates of up to 100 kg per hour, at least theoretically.

In spinning, over past years, developments have principally been characterized by constant modifications of detail with the aim of improving the performance of existing equipment. In this respect, the following can be mentioned:

- The design of ring and speed frames : ring frames for worsted and cotton system spinning have long been made on the same basic frames, while speed frames similar to those used in cotton spinning have been used in the worsted trade in the form of cone rovers. It now seems that the idea of convertibility in other machines of more or less standard construction with drafting systems to suit different fibre ranges is making headway. (Also, the form of speed frames is changing and makes doffing much easier).

  A basic similarity exists also between the machines for long and short staple spinning now being supplied by a German firm, which are moving into short staple spinning from a woollen spinning machinery base.

- Automatic doffers, of both the built-in and carriage types, have now reached the pratical industrial stage, and whether such a system is adopted or not by mills depends almost entirely on operational factors.

- Newer are automatic piecers. However, these devices can be expected to penetrate without doubt as piecing is an operation which requires one of the highest manual labour inputs.

Finally, the limiting factors of ring-spinning, which are power consumption, yarn tension and ring traveller friction, have led to new technological developments such as OE-spinning, which is already firmly establised and has to be considered as a conventional technique now, and unconventional machines, which are more or less advanced in their developement (i.e. Repco, Bobtex, and Twilo).

It is noticeable that automatic doffing and automatic piecing are already being adapted to OE-machines. Among the main advantages of OE-spinning, as well as of the new unconventional spinning machines, the following can be stated:

- shortening of the production process
- require less labour
- work at higher speed.

Taking into account all factors, it can be said that the OE-spinning is economically more interesting for coarse yarns than for fine ones. The break-even-point varies from one country to another, depending on their energy and labour costs.

2.2 YARN TEXTURING

In yarn texturing (draw-texturing included) it is obvious that take-up speeds are becoming very much higher still. At last year's ITMA, machines having take-up speeds of 600-700 m/min. dominated, although only about 10% of texturing machines installed throughout the world today achieve such speeds.

Even further increases in the speed of false twist spindles by inserting through pins or pegs can be expected. A move towards friction twisting systems has been apparent for some time. The possibilities of very high rates of twist insertion by this system are well known, but whereas in the past talk has been of speeds up to the equivalent of about 2 million rpm, there are now rumours of 4 million rpm.

One process, the Fibre M system, is said to be capable of texturing at speeds of up to 4,000 m/min., which means that its heads could be coupled directly even to modern spinning extrusion machines. This obviously constitutes a very promising feature.

Another recent feature is the emphasis manufacturers are starting to put on convertibility. A number of makers are offering machines which are basically simultaneous draw-twisting machines but fairly easily transformable into sequential draw-twist machines if necessary.

Finally, attempts to still develop novel texturing systems can be mentioned.

2.3 WEAVING

At the end of 1973, the world stock of shuttle looms amounted to about 3 million units, that of shuttleless machines to about 160,000. In one year the following approximate number of machines are produced : 120,000 conventional ones by about 40 firms and 30,000 shuttleless ones by about 30 firms. Most manufactuters of shuttle looms today also produce shuttleless machines.

In the 1960's, a considerable growth of knitting had taken place. During the same period, weaving was characterized by a definite slow-down of its growth rate. Owing to a change in the fashion trend and also to the reaction of weaving machinery builders, this evolution has been reversed in the past few years.

Many interesting developments have occurred in the field of weaving. At least five major systems (or even over 20 if the sub-systems were to be considered) are now competing with one another :

- conventional shuttle looms, which still remain a very practical way to produce most cloths
- projectile weaving machines (or gripper-shuttle machines)
- rapier looms (both flexible and rigid types)
- jet looms, which have to be subdivided into air and water jet
- multiphase weaving machines, of which the circular ones have been known for many decades already.

The very different characteristics of fabrics allow for a certain specialisation of weaving machines, sometimes to the detriment of their versatility. In this respect, experts generally agree that shuttle looms still have got a future.

Another factor which appears to be much more detrimental to their future utilisation is the ever more stringent legislation concerning tolerable noise levels in mills.

The lower noise levels are one of the advantages of shuttleless machines, especially the jet types and the new multiphase weaving machines. However, the use of many shuttleless machines has so far been rather limited to the production of a few special types of fabric. Development work by manufacturers tends thus to improve the flexibility of their machines.

The main general trend is for weaving machines of all kinds, both conventional and shuttleless, to get wider; another one being further speed increases (this also applies for jacquard weaving).

Other developments which merit to be mentioned include improvements allowing, in general, working more efficiently and faster, such as :

- automatic weft supply systems
- digital displays of shuttle speeds (simplifying the optimal adjustment of picking)
- electronic or photo-electric warp and/or weft stop devices
- electronic control and monitoring systems.

It seems that mechanical limitations are a restriction in conventional loom design and, apart from various improvements which might slightly ameliorate productivity and profitability (factors which will continue to be of fundamental importance), it is difficult to see any major modifications being made to these machines in the future.

So far as the future use of shuttle looms is concerned, it is known that in the more industrialized countries at least, the number of installed looms has

been falling for many years now and that this is an irreversible trend. Even if the number of modern machines is increasing constantly, this does not mean that all the conventional looms would disappear. For certain fabrics or even for certain production ranges, the automatic shuttle loom still remains indispensable; in such cases, one is inclined to overlook such disadvantages as pirn changing and the limited shuttle capacity. On the other hand, the mechanical drawbacks which result in high levels of noise and wear are much more difficult to accept.

Opinions expressed by weaving equipment users in indutrialized countries prove that the majority of them would select shuttleless machines if they were re-equipping. The restriction regarding certain fabrics and production ranges does, however, remain valid.

Studies carried out by Battelle-Geneva have also revealed that weaving management is faced with a trend towards reduced profitability. Those that have automatic shuttle looms are more often directly involved than those whose equipment consists of shuttleless looms, since automatic looms are often less productive and entail higher production costs. Throughout the whole of the European weaving industry, it has thus become more and more urgent to take the necessary rationalisation steps.

Weavers who are required to re-equip, willingly take the larger looms which can weave multiple widths. In view of the Growing competition from the new cloth production methods, weavers moreover tend to re-equip with shuttleless looms which permit lower-cost production and thus make it easier to resist the competition of knitted goods, for example. However, the installation of shuttleless machines does pose some problems, the following being, we feel, one of the most important. Since the capital investment is much higher than for automatic looms, machine-capacity utilization must be maximized; in other words, work organization has to be improved. Three, or even four shift working is essential.

It also appears that there are more weavers who want highly versatile looms than those who want looms which, although less versatile, meet the needs

of a given sector of the industry and offer high productivity. This demand for loom versatility is completely logical in view of the fact that weaving is an industry directly affected by fashion and its frequent changes. In addition, as natural yarns are steadily losing ground, it will, therefore, be increasingly important to have machines which can handle the widest possible range of yarns.

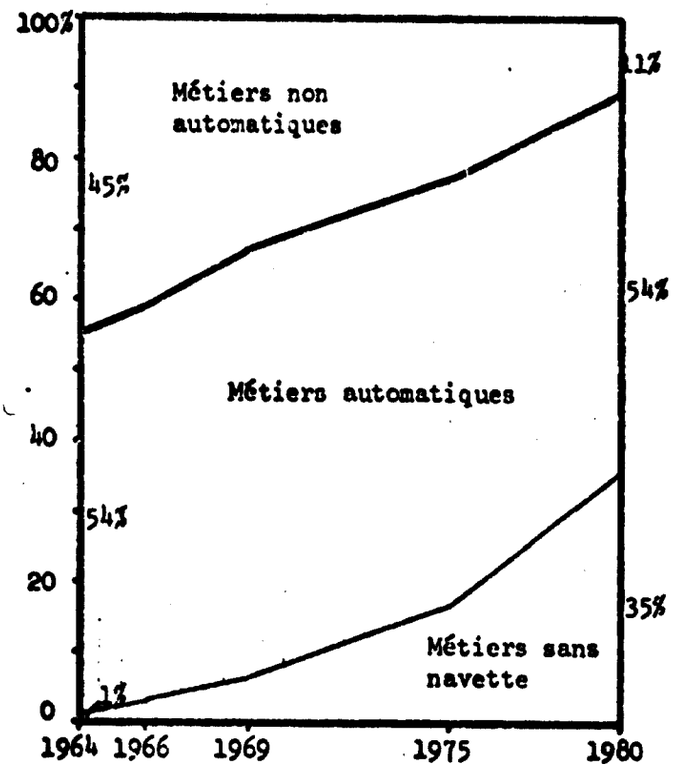
The trend in the number of automatic looms in use in a given country depends essentially on the developement level of the textile industry in that country. In North America and Western Europe, the number is falling whereas, in general, it is rising in other parts of the world. In the near future, the best markets for shuttle looms will be found in countries with the following characteristics :

- developing industrialization
- little affected by the pressure of international competition
- expanding weaving industry
- competitive in world markets as a result of low salary levels.

In the North American and West European markets, however, as time passes it will become increasingly difficult to sell automatic shuttle looms. There is, of course, no likelihood that automatic looms will disappear completely even in the most highly developed countries, since they are irreplaceable for certain special types of work.

The fall in the number of automatic looms in Western Europe is due to the replacement of old automatics by new, higher-capacity machines and the substitution of shuttle machines by modern shuttleless machines. This trend has become ever more pronounced as the European weaving industry is often still based on outdated structures and equipped with old-fashioned machinery that should be replaced as quickly as possible.

It is, therefore likely that by 1980 the breakdown of loom types in Western Europe will be as follows : 11 % non-automatics, 54 % automatics, and 35 % shuttleless; whereas the percentages around 1970 were about 30 %, 62 % and 8 % respectively (see also figure below).



2.4 KNITTING

The substantial growth of knitting in the 1960's has been linked to the synthetic fibre developement. Machines were built especially to process synthetic filament, and synthetic fibre types were developed especially to suit knitting machines. The following characteristics make knitting particularly attractive :

- little or no yarn preparation required
- high productivity
- allows for quick adaptation to fashion changes
- better handle of knitted synthetic fabrics over woven synthetic fabrics
- clothes made of knitted fabrics are extremely comfortable owing to their high elasticity
- good crease resistance
- easy-care properties

In spite of the much higher productivity of knitting machines as against weaving machines (with the exception of multiphase looms), economic appraisals for many end-use products often only show a marginal advantage for knitting processes. This is due to the considerably higher costs for the yarn used in knitting (textured or fine filament yarns).

The above-mentioned growth of knitting has also been helped by the fashion trend of the late 1960's which was entirely in favour of knitted fabric constructions. Since then, however, a change has occurred, and demand for knitted goods is marked by saturation (this applies above all to the double jersey sector).

Possibly today, numbering over 40, there are too many producers of large-diameter circular knitting machines in the world.

In recent years, development efforts by manufacturers have concentrated in general on making better use (or reaching optimal use) of the high performances and the quick and large patterning possibilities knitting machines offer, as well as on developing new fabric constructions. This evolution should suit the machine buyers, for which the fundamental problems today center round the current rate of technical obsolescence and the need for flexibility to extend into new markets and to generate new products as fashions constantly change.

2.4.1 DOUBLE AND SINGLE JERSEY

As regards double and single jersey machines in particular, last year's ITMA has shown that the main trends affecting these types of machine are :

- finer gauges
- higher speeds
- more production.

The circular piecegoods sector, and in particualr the double jersey market, poses the most difficult problem for both machine builder and manufacturer. The present world complement of double jersey equipement represents more than adequate productive capacity for current requirements, though continued penetration, if it takes place, of the men's outerwear market will require further installation of finer gauge machinery. To broaden the product range, most machine builders now offer a range of jacquard machines in gauges from 18 to 24, and in some cases 28, extending to 30 and 32 npi for plain dual-purpose machines, and up to 42 gauge for interlock.

The continuing trend to finer gauges, on both double and single jersey machines, may also be partly attributable to the requirements of transfer printing.

The move to place more feeders round the cylinder of jersey knitting machines has continued, and 48 feeders now seems fairly standard for conventional mechanical selection double jersey machines, with a productivity bonus in the form of an operational speed of up to 25 rpm.

Single jersey machines which are offered today come in many variations, offering a wide choice between various gauge (16 - 34 npi), diameter (8 - 32 in.) and feeder combinations (12 - 136).

The development of electronic selection machines and computer-based pattern preparation systems has slowed almost to a standstill. There has apparently been some cleaning up in the field of electronic pattern preparation systems, and most of the devices of this kind which now remain have been developed into fully commercial units with a considerable degree of interchangeability among the systems supplied by different producers.

The most constructive developments in the computer-aided design field are systems which solve the critical designer/computer interface problem and allow:

- automatic and rapid design, visualisation and correction of the design by a person who does not necessarily have specific knowledge (pattern design on a cathode tube using a magnetic pencil for either producing the design or cancelling the parts requiring correction), as well as

- direct connexion between the matrix and the knitting computer.

An alternative to machine patterning by jacquard knitting is of course to knit the fabric plain and apply patterns later by printing - notably now by transfer printing - and undoubtedly this approach has advantages, both purely commercial and in the scope of the patterns attainable. Jacquard patterning on jersey knitting machines is never likely to disappear, but the period of heavy pressure and really radical innovation in this field seems to have passed; cylinder and

dial machines with electronic selection of the individual needles, which are now available from many firms, can cater for almost any conceivable jacquard pattern requirement.

2.4.2 WARP KNITTING

Although most warp knitting machines are already high-speed machines, a constant search for even higher speeds, but also higher operating efficiency, remains one of the features of development in this sector. The following, however, has probably even greater practical importance : a marked shift in emphasis by machinery builders from the clothing markets to furnishings and household textiles. Following this trend, warp knitting machines now really offer considerable versatility of operation. Weft insertion has greatly contributed to this increased versatility.

From its introduction a few years ago the weft insertion aspect of warp knitting, which embraces both tricot and raschel types, has grown in importance and now constitutes a machine group in its own right among warp knitting machines. Weft insertion systems depend on either inside cycle or outside cycle weft preparation to the width required for insertion. High-speed weft insertion machines require weft to be prepared to width outside the knitting cycle, while those offering greater scope in selection and spacing of weft generally operate more slowly in that the weft, as in weaving, is unwound and inserted to the required width during the knitting cycle itself. Currently the latter type of machine seems less popular than the former.

One of the big advantages of weft insertion is to allow various kinds of spun yarn to be used. Previously, these yarns had practically been excluded from use by this type of machine. It is also possible now to use filament yarn as weft without the disadvantage of sloughing off. Moreover, as some machines are fitted with a mechanism providing selectivity, so that the weft insertion pattern can be varied, greater versatility of fabric types is obtained.

Lace and curtain raschel knitting has seen considerable development over the last few years, with the production of raschel net curtaining of all types.

The range of effects producible is both varied and distinctive. In other areas of manufacture, warp knitting may seek to imitate or follow other techniques; in curtaining fabrics, especially of the openwork and self coloured net varieties, it remains unchallenged as the main system of manufacture.

Also, the knitting of polyethylene slit film to give mesh sacks as well as nets is now well established (at speeds of up to 900 rpm).

Without doubt warp knitting machinery has become very versatile, but often the ingenuity of the machinery builders has not been matched by the production of warp knitted fabrics to meet appropriate market requirements. Clear signs now suggest this situation has changed, and the product orientation has become defined to the extent that machine builders are able to develop ranges of machine for specific market outlets with confidence and with the increasing attention to detail necessary when the merits of one machine are to be considered as against those of another or - more important for warp knitting - as against those of other systems of fabric manufacture.

2.4.3 FLAT KNITTING

In spite of the high productivity of the majoritiy of the other types of knitting machines, the flat knitting machine has maintained an important position within the knitting industry in view of its great ease of adaptability and its flexibility of use which allows all possible fancy weft knitwear constructions.

The very fact that the various knitting components operate discontinuously makes it possible to carry out virtually all the normal modifications after each course. Consequently, this type of machine is ideal for patterning, production of fancy panels, decreasing and increasing, small-and-medium-lenght production runs of fabric by the metre, etc. In general, flat knitting is basically reserved for clothing or luxury articles.

Most recent developments include new machines and systems which should bring about increased productivity (e.g., double sided machine which makes two widths of fabric simultaneously or a new take-down system which produces more stable fabric and so reduces the time taken later in making-up).

2.4.4 COTTON'S MACHINES KNITTING

There has been a relatively large fall in the production of fully fashioned clothing on Cotton's machines, which is now produced increasingly on flat knitting machines with latch needles.

A number of factors have led to the decline of Cotton's machines :

- numerous manual operations required for tranferring the rib end of a rib machine to Cotton's machines
- high level of equipment investment
- small variety in the articles
- machines which require highly skilled operators.

Although Cotton's machines have undergone a few improvements over recent years which will possibly allow them to keep up the pace, their future will depend on the trend in demand for articles offering a high-quality finish but at a relatively high price.

2.5 DYEING AND FINISHING

2.5.1 DYEING

In dyeing, really nothing new has been offered recently, and at the last ITMA there were only a number of minor novelties to be seen. Obviously,

manufacturers have been working on refinements of previously established methods and principles. In particular, a trend for economy can be stressed as a new achievement.

In fabric as well as package dyeing, a major feature is the almost universal aspiration after ever shorter dyeing cycle times that can be achieved by higher rates of liquor flow or by telescoping heating-up and cooling cycle procedures. Attempts are also being made to reduce liquor/goods ratios where possible.

Under the influence of the requirements of knitted fabrics, piece dyeing machines can now largely be divided into distinct groups - pure jet machines, overflow system machines, and atmospheric pressure machines based on the overflow principle.

As to jig dyeing, economics still usually dictate processing of small batches on a jig or similar machine. Since a wide range of adaptability is required, this can mean that a jig must have a large capacity, constant but adjustable cloth speed, high speed for rinsing, constant cloth tension which can be kept low for delicate fabrics, and good reproducibility. Jig manufactureres seem well aware of these requirements.

In the field of garment dyeing, some versatile machines are offered. For example, one make will dye stockings, panties, socks, pullovers, briefs, knitted finished goods, tubular fabrics, bathmats, terry and yarn in hanks or muffs. This is a drum machine with regulation of speed and a temperature-time diagram that are both infinitely variable. Operation can be manual or automatic, with a choice of 40 programmes and a pre-programmed stop for sampling that does not interrupt the programme. Delivery of the machine is in complete form, so erection time is short, and it yields savings on water, auxiliaries, dyes and time.

Another example is a fully automatic drum-type machine which is intended for dyeing half-hose, panty-hose, body shirts, sweaters and T-shirts as well as other piece goods such as towels, bedspreads, etc. It is operated automatically by two plastic formula charts; the operator has only to load and unload, fill the supply injectors and sample. The liquid ratio is from 1:8 to 1:10, giving lower consumption of water, energy and chemicals than in paddle-wheel machines.

2.5.2 FABRIC PRINTING

Flexibility of application appears to be the main trend in printing machinery, a secondary one being refinement of previously introduced ideas.

It also seems that all major difficulties in the making of rotary screens are now overcome. Some very long screens, particularly for the growing carpet printing trade, and some screens very much larger in diameter than in the past, which will permit longer repeats, are being produced at present.

Most manufacturers of rotary printing machines are offering them to print transfer paper as well as fabric. Also offered now is computer control of intermittent repeat printing and numerical control of printing on fabrics where motifs have to be positioned exactly between borders in the weave structure, e.g. on towelling.

Several new types of paper have been introduced in the transfer field, for new applications, among them types for printing on cotton. There is also now a machine which makes the aqueous-phase transfer process a reality for wool and polyamide. It should also be noted that the introduction of vacuum calenders makes it possible to lower the temperature of the transfer process, yielding less deformation of the fibres with a better handle of the cloth.

Finally, transfer printing calenders continue to develop with a search for even higher throughput rates (up to 38 m/min. seems already feasible).

However, the latest machines developed seem to have become too large and too complicated, and no doubt too expensive also, for use other than by firms with appropriate know-how and technical staff. The early transfer printing calenders could be operated satisfactorily even by unskilled labour. Hence firms interested in transfer printing of fabrics will have to decide which type of operation they intend, and buy their equipment accordingly.

2.5.3 FINSHING

As fabric finishing equipment tends to be individual and specialized, it is difficult to point out any specific trend.

2.6 MAKING-UP

Manufacturers of making-up equipment are putting a lot of effort into helping making-up to move from a highly labour-intensive industry it still is towards an increasingly capital-intensive industry. Thus the trend which clearly characterizes making-up equipment is the ever growing use of labour-saving and automatic devices.

Today, all manufacturers can offer some semi-automatic or fully automatic machinery. If, with a very few exceptions (laser application, use of ultrasonics), no completely new or revolutionary equipment has yet appeared, new machine models, and adaptations and combinations of components leading to increased automation are the features of present equipment. All technical, electrical and electronic knowledge is put into use to ensure that in the future the clothing industry will require fewer and fewer skilled hands on the factory floor.

Just as the textile industry, making-up will be an essentially capital rather than labour-intensive industry in the future. This movement seems to apply equally to the industry in Europe and in the Far East, for example, judging by the interest in automatic machinery and orders for such expensive equipment which came particularly from Asia at last year's ITMA.

In particular, the following operations can be carried out automatically by some of the present making-up equipment :

- loading of machines
- cutting, folding, sewing, tacking
- transfers
- stocking of finished goods
- folding and packing.

Some of the interesting features concerning sewing machines are the following :

- use of electromagnetic cam systems
- use of pneumatic control devices
- use of solid-state components
- special devices (photocells, etc.) to detect thread breakages and identify their position
- numerical control from punched tape
- units being designed to make maintenance as easy and as rapid as possible.

A special mention should be made of a non-conventional "sewing" machine which uses ultrasonics for instantaneous production of button-holes, eyelets and darts to finish the ends of belts and waistbands, plus a number of other operations.

Ultrasonic operation can be effected on fabrics of high thermoplastic content, such as polyester or polyamide. Its application to acrylic fibres is limited. Advantages are that neither thread nor needle is required, eliminating

thread tension and colour matching problems, besides giving considerable cost savings. Another is that operator-training is reduced to an absolute minimum.

Most new developments and systems, in general, offer the following advantages :

- flexibility
- accuracy
- reliability
- reduction of total number of operations, resulting in important time savings
- increased ease of maintenance
- possibility to use unskilled or little trained operatives and still get good quality work as well as improved productivity (in some cases by a factor of 10).

2.7 CONCLUSIONS

Having looked at the various developments which characterize the main sectors of industry, we come to the following general conclusion.

There is a definite general trend towards increased automation, often coupled with increasingly sophisticated engineering, the main aims of this evolution being :

- rationalisation
- reduction of lenght and number of operations
- reduction of labour intensity

- increase of productivity
- improvement of quality and its regularity.

Whenever the economics can justify it, manual labour is being replaced by a higher input of capital-intensive equipement, and this applies to all sectors, from spinning to garment making. As most innovations in the field of capital goods represent a move towards more advanced engineering and increased machine performances, among the resulting consequences it should be pointed out that generally :

(1) the need for improving the over-all consistency and/or quality of raw materials in process is gaining much importance;

(2) less labour is required. The future labour force will, on the one hand, be constituted by less skilled operatives but, on the other, by highly skilled technicians and specialists, as most efficient and maximum use of the equipment as well as perfect machine preparation, settings and maintenance become paramount.

Investment decision-making has become more complex as there will almost always be a choice involved, not only between several machines of fairly similar characteristics, but a choice between conventional and more elaborate systems, which are not necessarily characterized by the same type of parameters (such as, for example, in spinning, between ring-spinning and OE-spinning systems, or in weaving, between shuttle looms and shuttleless machines). The same applies in the case of a choice between various production techniques (such as, for example, weaving versus knitting, or machine patterning versus printing, etc.).

3. DEVELOPMENT TRENDS OF THE POLITICO-SOCIO-DEMOGRAPHIC WORLD

Development trends relating to political, social and demographic factors are of course greatly influencing the evolution in developing countries as such factors are constitutive elements of this evolution. As it is not possible in the present context to enter into details and try to deal exhaustively with this subject, we shall only outline a few developments which may take place in coming years.

3.1 GENERAL POLITICAL EVOLUTION ON THE WORLD LEVEL

With the oil crisis in 1973, a period of relative world-political stability, which has lasted for several decades, was coming to an end. This stability had been guaranteed by the main industrialized countries as well as by big multi-national entreprises.

Today already, only North America, Japan, Australia and North-Western Europe still represent islands of wealth which are, however, dependent to a large extent on the countries having substantial energy and raw material resources.

International organizations are coming more and more under the influence of developing countries and their coalition with countries of the communist block. Sudden political changes, especially outside of the old industrialized countries and the centrally planned economies, are taking place and becoming more important, with the result that private investments are exposed to growing insecurity. Even within OECD-countries, private industry is facing increased state intervention and higher financial charges.

With regard to the world trade in general and the textile trade in particular, the past evolution makes it that this subject is increasingly and overwhelmingly becoming a political issue.

3.2. DEMOGRAPHIC GROWTH

The growth of population, along with increasing incomes per caput, is the main factor determining the demand for textiles and fibres. Considering the future growth of world population and the resulting demand for textiles, it will absolutely be necessary to increase the production of fibres. However, as natural fibre growth will be limited by various factors, most of the supplementary production that is needed in order to satisfy future demand will have to come from the man-made fibre industry.

EVOLUTION OF WORLD POPULATION BETWEEN 1970 AND 2000 (in millions) 1)

AREA	1970	2000
Africa	345	818
America	511	985
North America	228	333
Latin America	283	652
Asia	2,056	3,788
Australia and the Pacific	19	35
Europe	462	568
USSR	243	330
W o r l d	3,636	6,524

1) SOURCE: UN, Demographic Yearbook and Monthly Bulletin of Statistics.

3.3 EVOLUTION OF TEXTILE CONSUMPTION

3.3.1 IN GENERAL

Growth of textile consumption (in constant value terms) has been considerable for over 15 years (1960's and early 1970's), at an annual rate of 5.2% on the whole. Growth rates, however, vary depending on the countries considered. In effect, one notices the existence of a rate of 5.3 % for developed countries, 6.7 % for developing countries and 4.6 % for least developed countries. 1)

3.3.2 PER CAPUT CONSUMPTION OF TEXTILES

In developed countries, growth of per caput consumption of textiles, in real terms, has reached an average of about 4% per year in the 1960's and early 1970's. This seems to indicate that, at given development levels, rising textile consumption is completely independent of population growth.

Considering least developed countries, one observes an entirely different picture. In effect, when demographic growth rates are particularly high (around 3%), it can be noted that the difference between growth of textile consumption and growth of population is always clearly negative. For such countries, population growth undoubtedly constitutes a brake to improvement of their textile consumption.

In developing countries, the situation is much more contrasted. The demographic pressure is slightly lower than in the afore-mentioned case and allows for an improvement of per caput textile consumption. It seems quite clear that the way out of underdevelopement takes place, in a first phase, over a textile consumption which is approaching that of developed countries.

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1) Developed countries are those in which per caput income is higher than $1,000; developing countries those with incomes between $500 and 1.000 and least developed countries those with incomes below $500.

On the world level, one sees then that, taking into account population growth, the relative loss of importance of textiles in consumer spending has not had time to occur; clearly a threshold of development exists, beyond which the textile budget coefficient stops falling and, in certain cases, rises again. In this regard, the influence of income at constant prices (total or per caput) appears, worldwide and at a given demographic growth, as being preponderant. Income elasticity of textile consumption, worldwide and in the long run, finally can be set at around one.

The per caput consumption of textiles by main consuming countries and fibre types is shown in the following table (source : FAO).

It is foreseen that the world per caput consumption of textiles will reach approximately the following quantities :

1972	6.4 kg
1980	8.5 - 8-9 kg
2000	10.8 - 11.8 kg

This consumption will be highly differentiated depending on the country, either industrialized, developing or least developed. Whereas, in least developed countries and in developing countries, it is a social task to provide clothing for the population, in the industrialized countries existing wealth allows fashion trends and changes to possibly be the main factor leading to a still rising demand for textiles. The influence of fashion is not restricted to clothing alone, but has become already predominant in the field of household, furnishing and decorating textiles as well. Thanks to this evolution, possible saturation, which is threatening in some end-use sectors, has been pushed away in highly industrialized countries.

3.4 DEMAND FOR HIGHER QUALITY

As development progresses, that is, rising per caput income levels, consumers are becoming more exacting and require not only more variety and wider

TABLEAU

PRINCIPAUX PAYS CONSOMMATEURS DE PRODUITS TEXTILES. (Kg/per capita)

MAIN TEXTILE CONSUMING COUNTRIES (Kg per capita)

WICHTIGSTE TEXTILVERBRAUCHERLÄNDER (Kg pro Kopf).

	Coton Cotton Baumwolle	Laine Wool Wolle	Lin Flax Flachs	Fibres art. Art. fibres Künstliche Fasern	Fibres synth. Synth. fibres Synth. Fasern	Total Total Total
1. U. S. A. U. S. A. U. S. A.	8,5	0,4	0,3	3,1	12,6	24,9
2. Canada Canada Kanada	8,0	1,2	0,1	3,3	8,6	21,2
3. Suède Sweden Schweden	8,2	0,9	0,7	2,4	8,4	20,6
4. R. D. A. G. D. R. D. D. R.	5,3	0,8	0,3	9,6	4,2	20,2
5. Islande Iceland Islande	7,6	6,7	0,5	5,2	5,2	20,-
6. Japon Japan Japan	8,6	2,1	0,1	2,9	5,9	19,8
7. Norvège Norway Norwegen	7,3	1,8	0,4	2,5	6,9	18,9
8. Autriche Austria Österreich	5,3	1,6	0,7	3,2	6,7	17,5
9. Bulgarie Bulgaria Bulgarien	9,0	2,2	0,8	2,5	3,1	17,1
10. Tchécoslovaquie Czechoslovakia Tschechoslowakei	6,2	1,1	1,1	4,7	3,2	16,3
11. Finlande Finland Finnland	6,6	0,5	0,2	3,2	5,7	16,2
12. C. E. E. E. E. C. E. W. G.	5,1	1,5	0,3	2,6	6,3	15,8
13. U. R. S. S. U. S. S. R. U. d. S. S. R.	7,8	1,5	1,7	2,3	1,3	14,6
14. Pologne Poland Polen	3,5	0,7	1,9	3,5	3,2	12,8
15. Roumanie Rumania Rumänien	3,7	0,6	0,7	4,0	2,-	11,2

Source et définition : voir Tableau 33 — Source and definition : see Table 33 — Quelle und Definition : siehe Tabelle 33.

choice, but also higher quality goods. This evolution will create a new challenge for the industry, from the technical and commercial points of view. In order to cope with this new demand, industry will need to have the necessary know-how, advanced equipment, qualified staff and skilled work-force.

3.5 EDUCATIONAL AND TRAINING LEVELS

It is often felt in developing countries that one of the main problems is the lack of trained management (of all levels and in all aspects, that is, technical, commercial and managerial) as well as an insufficient number of highly skilled and experienced workers. This factor is one of the main reasons which limit the rhythm and the efficiency of development of a country. It is useless to have mills, equipement and raw material but not to have the qualified personnel to run it properly and to make the most efficient use of it.

Developing countries which, for instance, wish to develop their textile industry are offering more jobs; in some cases the objective is to double the existing number within five years. The new work-force will need to be trained. On top of that training, the knowledge and training of the previously existing labour will have to be upgraded and refreshed owing to the progress in machinery and production processes. So, a tremendous permanent task has to be accomplished in the field of training, a task that normally surpasses the capacity of the country.

As shown by the previous chapter and following the outlined trends which affect the "technical world", the future requirements in respect to educational and training levels of the labour-force in developing countries will not lessen in importance, quite on the contrary.

3.6 CONCLUSIONS

International politics, which is largely beyond the control of industry and of individual producers, is playing an ever larger role in textile dynamics.

The ineluctable growth of population will necessitate future increases of fibre and textile production. As this growth will be accompanied by rising incomes, not only quantitative but also qualitative growth of demand will result and have implications of innovative and organizational character for the textile industry in developing countries.

Also, as has happened in industrialized countries, fashion will start to play a role and influence textile production programmes in developing countries. This will yet constitute another challenge for the industry which is still clearly production- and not marketing-oriented in these countries. All this will finally lead to further considerable requirements as to the qualification, training and skill of the labour-force involved.

4. MAIN DEVELOPMENT TRENDS OF THE ECONOMIC WORLD

In the area of economics, many varied aspects have to be considered in connexion with the development of developing countries. Some of the main aspects relating in particular to the textile industry are the following:

- financial and monetary situation
- production and consumption of fibres
- fibre and textile prices
- consumer requirements
- international trade situation

The basic problems center around topics such as the following:

- satisfaction of the future world demand for fibres and textiles
- assistance in the development of the textile industry in developing countries
- guarantee of survival for the same industry in industrialized countries, and in the end
- achievement of the main goal which, in our opinion, should be "international specialization" that will be beneficial to all parties. This, however, will be attained only if decision- and policy-makers take the most global approach possible. Hence, the "political world" has to be involved, but should not dominate the "economic world" as it now usually happens.

4.1 GENERAL WORLD-ECONOMIC TRENDS

(See attached, as Appendix I, a copy of a confidential summary of Battelle's Central World Development Scenario for 1975-1980-1985 which constitutes a basic input for our macro-economic forecasting model EXPLOR-MULTITRADE 65).

Hereafter we make a few remarks about crucial world-economic problems which are relevant to developing countries and the future development of the textile industry:

- Energy and raw material problems remain unsolved. During recession and stagnation, surplus and falling prices hide the existing tendency towards shortage in the long run. The limits of growth as made evident by the Club of Rome are real but will be pushed further away (namely through innovation and technological progress). The available world resources of both energy and non-renewable commodities are mainly concentrated in few rich developing countries as well as in the USSR and PR China.

- Monetary problems remain also unsolved. They favour a trend to protectionist measures and exert a negative influence on the further expansion of liberalized world trade. A move towards protectionism can be expected in those OECD-countries which are not competitive any more and face considerable balance-of-payment problems.

- Rising energy and raw material prices will materialize in the medium and long run if and as soon as the economic situation truly recovers. This will lead to a new worldwide redistribution of income from the industrialized countries to the "energy- and raw material-countries". As a first consequence, the economically weak industrialized countries will be put under pressure. Then, the American balance of payment will be influenced. Finally, future oil, natural gas and raw material crises cannot be excluded, once production capacities are fully exploited again.

- The decreasing, stagnating or even negative growth of population in OECD-countries is another characteristic feature, and it means reduced demand and smaller potential for production. In the long run, considerable lower growth rates of the GNP at constant prices are thus to be expected.

- Western industrialized countries may be on the verge of entering a long-term economic downward trend. At present, the net growth rates are modest and the inflation rates slightly decreasing. As regards devaluation, a change has occurred compared to similar situations of the past, for prices seem not to be flexible any more towards lower levels and salaries tend to increase even during recession and unemployment. Thus, a future long-term downward trend will be characterised by rather high inflation rates. Worsening political conditions will emphasize this evolution.

- The foreseeable weakened growth potential of the industrial sector in industrialized countries will possibly be partly compensated by the trend towards more services. The better industrialized countries will succeed in transferring the production of goods involving high labour cost and a rather unskilled work-force to developing and low-wage countries, the more their tertiary sector will grow. Both the industrialized countries and the developing countries should thus take an increased interest in international specialization.

The growing economic interrelation between industrialized nations and "energy- and raw material-countries" could, after a longer or shorter period of structural adaptation, result in a strong mutual interdependence. Such a development could then probably guarantee that political considerations would lose ground to the benefit of economic considerations.

4.2 FINACIAL AND MONETARY DEVELOPMENTS

One of the main problems developing countries are faced with is a basic lack of capital which makes itself badly felt whenever an investment decision has to be made. This lack of capital becomes even more acute as the price of textile machinery and equipment developing countries want to buy rises steadily owing to two factors :

a) high inflation rates in industrialized countries where the equipment is usually produced, and

b) the fact that equipment becomes more advanced and complex, and thus costs more and more (e.g. compare prices of shuttle looms and shuttleless machines, and see also Chap. 2. which gives evidence for the ever higher capital inputs required).

The rising basic equipment cost is aggravated by other auxiliary costs, which have also to be considered, such as for energy consumption, floor space used and depreciation. These are generally also higher in the case of very advanced and sophisticated machinery. Quite substantial costs also arise when investment into "anti-pollution" (e.g. effluent treatment and disposal plant) has to be made. This kind of investment will no doubt play a more important role in the future in developing countries as well.

On top of the basic scarcity of capital, the high interest rates which prevail in developing countries are another factor making investment more difficult in these countries. The level of the interest rates there often discourages potential investors from going ahead with their plans, or when they nevertheless do, often renders a project relatively too expensive, consequently less competitive and less profitable.

Inflation rates are still another important factor which influences to a large extent the rhythm and prospects of development in developing countries. Unfortunately, we probably will have to live with high inflation rates in the future, and this will not be to the advantage of developing countries, as these tend to suffer more from such an economic situation than do industrialized countries. This has been clearly demonstrated by the recent past. The most to suffer among developing countries will certainly be those which do not have their own substantial energy and raw material resources.

Finally, the prevailing general international monetary insecurity is by all evidence a negative factor in view of the economic development in general and the development of developing countries in particular. Several and repeated if not to say constant, devaluations of many currencies around the world, of both industrialized and developing countries, are part of the picture which characterizes today's economic situation. This situation induces a tendency towards reducing the foreign trade volume and taking more protecionist measures. Such actions would entail quite considerably the further liberalization and expansion of the world trade, when the opposite would be the condition for best and immediate help to developing countries.

4.3 INVESTMENT ACTIVITY

The type of investment favoured by developing countries varies depending on their development stage and also on their national development goals.

For instance, more developed countries may place emphasis on investments which allow them to bridge rapidly a technological gap and will want to put impact on the transfer of technical know-how which is linked with it. For other developing countries, the main objective of their investment activity may lie, in a first phase, in import substitution and self-sufficiency and, in a second phase, in an increase of their export capacity which should let them respectively economize or earn foreign exchange and better equilibrate a generally negative trade balance.

In other, less developed, countries, emphasis may simply be put on investment projects which will primarily help to improve unemployment in the country by creating new jobs and absorbing available labour. The impacts of such "first stage" investments can be manifold when considering that not only will the unemployment rate decrease but that the employed labour will be trained, will acquire skill, experience as well as technical know-how, will pay taxes and also amplify the spending power in the country with all the well-known positive influences for consumption.

For various reasons (prestige thinking, strong influence of engineering firms, machinery builders, etc.) it is not always the objectively most adequate investment project which is chosen in developing countries. This often leads to badly exploited resources (labour, capital equipment, market opportunities). However, as mentioned in the previous paragraph, money in developing countries is scarce and expensive. So, potential investment opportunities should always be carefully screened in order ot ensure that the most appropriate one is chosen in respect to the country's needs, priorities and objectives.

4.4 FIBRE AND TEXTILE PRODUCTION

4.4.1 OVERALL DEVELOPMENTS OF FIBRE PRODUCTION

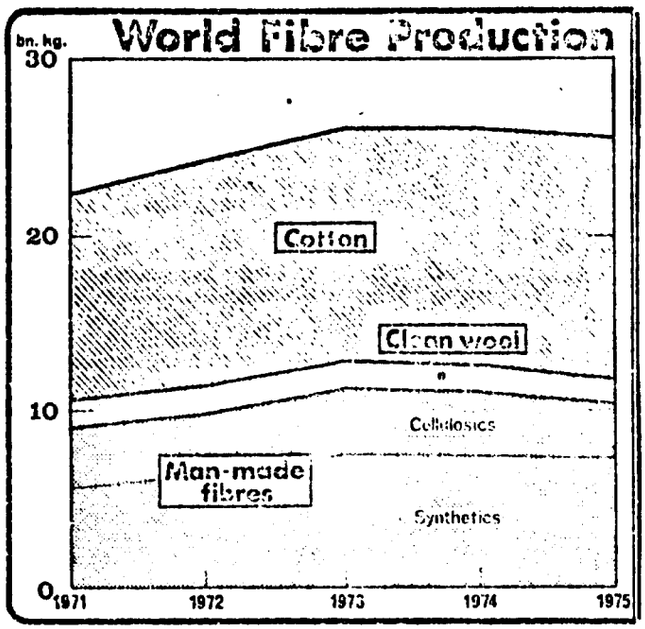
As the main determining factors of the demand for textiles are the demographic growth and rising per caput income levels, which go on increasing world demand for textiles will still be growing in the future. This means, for example, that total fibre consumption in the world is expected to go up from around

26 million tons in 1974 to
31 or 32 million tons in 1980,

a growth which corresponds to an annual rate of between 3 and 3.5 %.

As in the past and increasingly so in the future, it will not be possible to cover such a demand by a higher production of natural fibres. The natural fibres, cotton and wool in particular, are not available in sufficient quantities. The gap has to be filled by man-made fibres.

Over the past five years, world fibre production has developed as shown by the following figure:



Considering the three fibre groups, over a longer period, their production has evolved as follows (in million tons; rounded figures) [1] :

	Raw cotton	Clean wool	Man-made fibres	Total
1960	10.1	1.5	3.4	14.9
1965	11.9	1.5	5.5	18.8
1970	11.7	1.6	8.4	21.7
1974	13.6	1.5	11.3	26.4

The percentage importance of these fibre categories has changed in the following manner over the same period :

	Raw cotton	Clean wool	Man-made fibres	Total
1960	68	10	22	100
1965	63	8	29	100
1970	54	7	39	100
1974	52	6	42	100

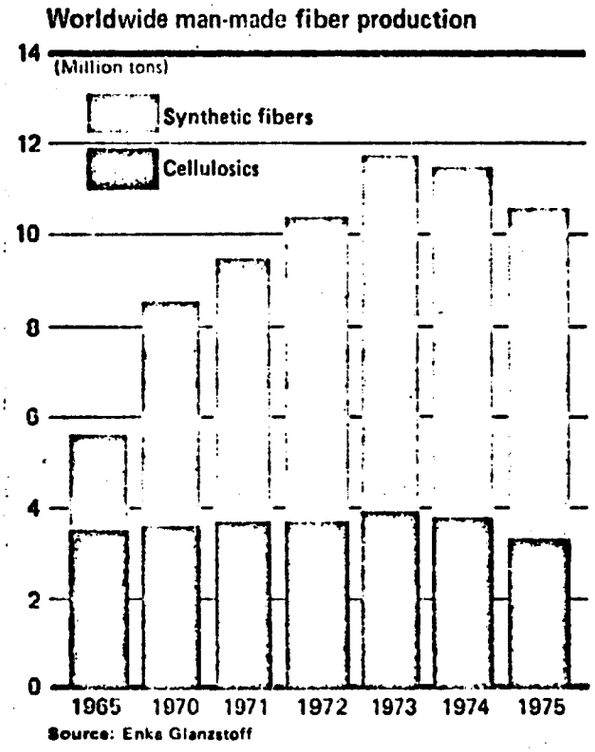
1) Source : CIRFS 1975.

The percentage figures clearly indicate the trend characterizing world fibre production, which is hardly going to be modified in future years.

It should be possible to increase cotton production, not necessarily by making more land available for cotton plantings (although this possibility does exist by encouraging cotton production in countries where it has never been attempted before, or by putting fallow land into use), but mainly by increasing the yield per acre, which in many countries around the world remains very low. Experts think that at least a 25%-increase should be attainable. In a longer-term view, we think that cotton will expand at rates ranging between 1 and 2 % par annum, which should be sufficient to cope with the growth in demand. But even so, the relative importance of cotton in total world fibre production will continue to fall.

Wool production is forecast to remain more or less stable, which means that its share in total world fibre production will drop, both in absolute and in percentage figures.

Man-made fibre production has achieved a most impressive development since the 1960's, as shown by the preceding figures. Since 1973, however, worldwide output has declined in consequence of the economic crisis in general and the textile crisis in particular. The evolution over the past 10 years is illustrated by the figure below.



For the future, the prospects for man-made fibre production are nevertheless bright. The consensus seems to be that there is not the expectation of anything like the growth experienced in the last five to 10 years for the next five to 10 years.

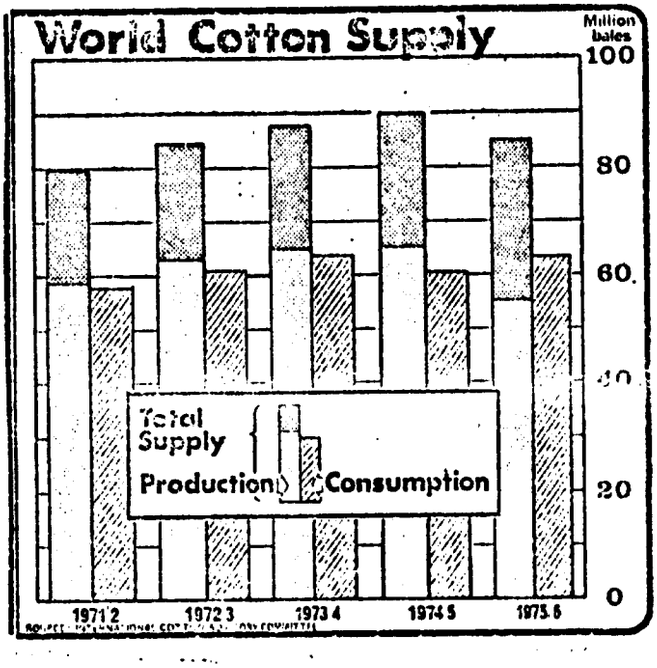
Notwithstanding the inevitable cycles, total world fibre production can reasonably be expected, in the long run, to grow at an average annual rate comparable to the envisaged growth of consumption, which should range between 3 and 4.1 %. Within this framework, however, the synthetic sector of man-mades will get virtually all the increment, as the use of cellulosics (rayon and acetate) may stagnate or decrease slightly. So, world-wide, an average annual growth of synthetics of 7 to 8% can be considered, when measured from a base between the 1973 peak and the 1975 trough.

Overall and according to forecasts on total world fibre use, reaching up to the year 2000, the percentage shares mentioned on page 35 might develop into the following breakdown between the three main fibre categories:

cotton	12 - 17 %
wool	~2 %
man-made fibres	81 - 86 %

4.4.2 COTTON DEVELOPMENT

The figure hereafter illustrates the world cotton supply situation up to the last season. Supply consists of annual production and existing stocks. For the 1976/77 season, a 10%-increase over the previous crop is expected on a worldwide basis.



Cotton represents a key factor in social and economic development by providing employment, food and feed by-products, industrial raw materials and foreign exchange earnings.

A study covering developing countries, in 1973, showed that over 120 million people live directly from the production of raw cotton. To this figure one has to add a growing number of people working in the developing textile industry. It has been estimated that about 45 million people live from cotton

textiles. Independently of the importance cotton has for creating jobs, it plays a dominant role in exports. In 16 countries, for example, cotton occupies first or second place, and in eight other countries it has a very substantial share in total exports. The total value of exports by developing countries of fibre, cottonseed, cotton yarn and fabrics has been evaluated at 6 billion dollars in 1973; only oil has surpassed this figure.

The development of textile industries in developing countries is in most cases strongly linked with cotton as the following figures demonstrate: over 75% of all yarn exported and over 85% of all fabrics exported by developing countries are cotton-based.

This development of further fibre processing in developing countries clearly constitutes a highly positive factor for their economic development as it allows keeping most of the value added for themselves and increasing by the same token, their potential export earnings. The value added obtained by exporting finished goods rather than raw cotton fibre varies depending on the article. In effect, the value added coefficient can range from 1.5 for yarn, and 3 to 4 for fabrics, to much more (possibly up to 10) in the case of made-up garments.

Another interesting aspect with regard to cotton is energy consumption. In a rather controversial report by L.B. Gatewood, Jr., of the National Cotton Council of America, entitled "The Energy Crisis: Can Cotton Help Meet It?", which was presented in 1973, the author gives detailed data on energy consumption of cotton, cellulosic and synthetic fibre production. Based on this analysis he concludes that cotton is produced from renewable, unlimited resources, and that producing cotton requires only one-fifth as much energy per pound as non-cellulosic fibre production, and only one-sixth as much as cellulosic fibre production.

To verifiy the cotton energy consumption data, J.R. Mauney, of USDA's Western Cotton Research Laboratory, used a model which served to estimate the energy consumption of corn production. He concludes that the calculations of Gatewood are somewhat low but, for the purpose of comparison to man-made fibres,

are probably accurate. He also concludes that energy harvested in the form of lint is roughly equivalent to the fossil fuel energy inputs. It should also be noted that cottonseed, a source of high-protein food and feed, is not included in the Gatewood calculations.

In a paper entitled "Energy Standard of Value", Dr. B. Hannon, of the Center for Advanced Computation, University of Illinois, suggests that energy costs, such as BTUs required for a project, could be used in developmental decision-making as an addition to the traditional money standard of value. Energy and labour intensity for cotton and man-made fibres were compared. Energy intensity is defined as BTU per Final Demand Dollar and labour intensity as Jobs per 10^5 Final Demand Dollar. Energy intensity per bale for cotton is 60,000; cellulosic staple and tow, 202,600; and noncellulosic staple and tow, 130.000. Labour intensity is given as 20.5 for cotton, 8.0 for cellulosics, and 6.3 for noncellulosics.

Of more interest is the net result of a 10% growth in cotton (bale) production and in the production of man-made fibres (as staple and tow). Total primary energy change for cotton is -380,000,000 BTUs, for cellulosics + 590 and for noncellulosics +990. Labour change, on the other hand, for cotton is +8,840 jobs, for cellulosics -820, and for noncellulosics, -690. These changes are based on the premise that GNP remains constant, and the 10% increase for cotton delivery represents proportionate absorption from all other deliveries.

Based on these data, it is easy to see that a decision-maker, in allocating energy resources to various industrial sectors, would easily select production of cotton to meet fibre demand because it is less costly in energy and increases employment.

Considering all that which has been mentioned before, cotton production can be expected to expand further in the future. A long-term growth rate of at least 1 or 2 % p.a. would be of interest to both producers and consumers, and should be achievable rather easily when taking into account the facts that cotton:

- is a key factor in developing employment and incomes in developing countries

- contains more protein than most cereals and has to be considered as an important source for food and feed

- constitutes a basic raw material for chemical products (e.g. use of linters as raw material for cellulosic fibres and film)

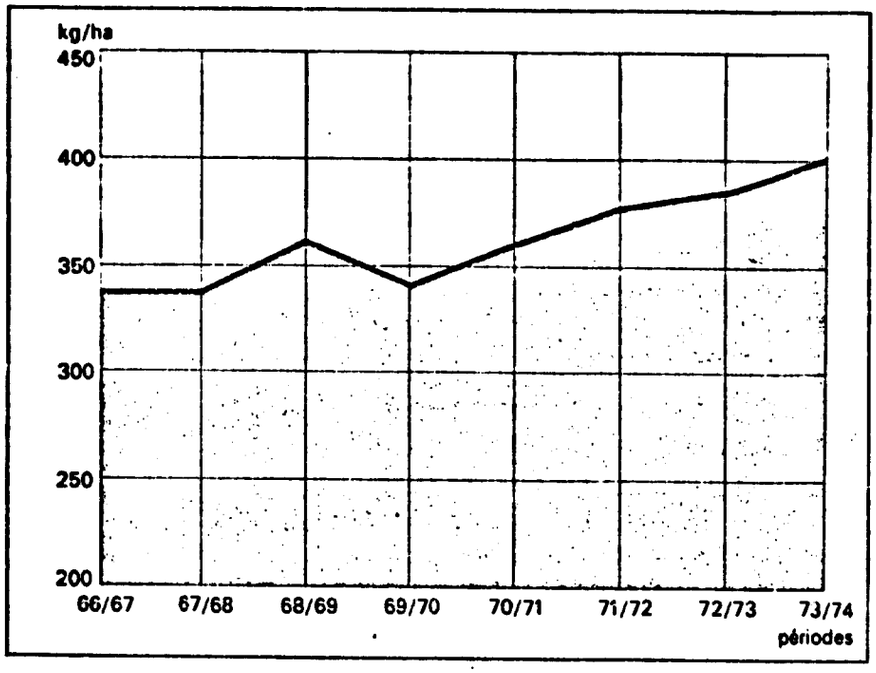
- is much less energy intensive than other fibre productions (cellulosic and synthetic)

- production can be increased by

  . improving the yield per acre (see figure below showing the worldwide evolution of yields for a period during which the average yield has risen by about 18% per year, attaining 400 kg/acre in 1973/74; in countries where modern methods and organisation are effective, yields between 550 and 900 kg/acre are obtained, whereas in many developing countries yields are very much lower owing to small area planting by individual farmers, inefficient methods as well as lack of advice, financing schemes, co-operative systems and other organisational support)

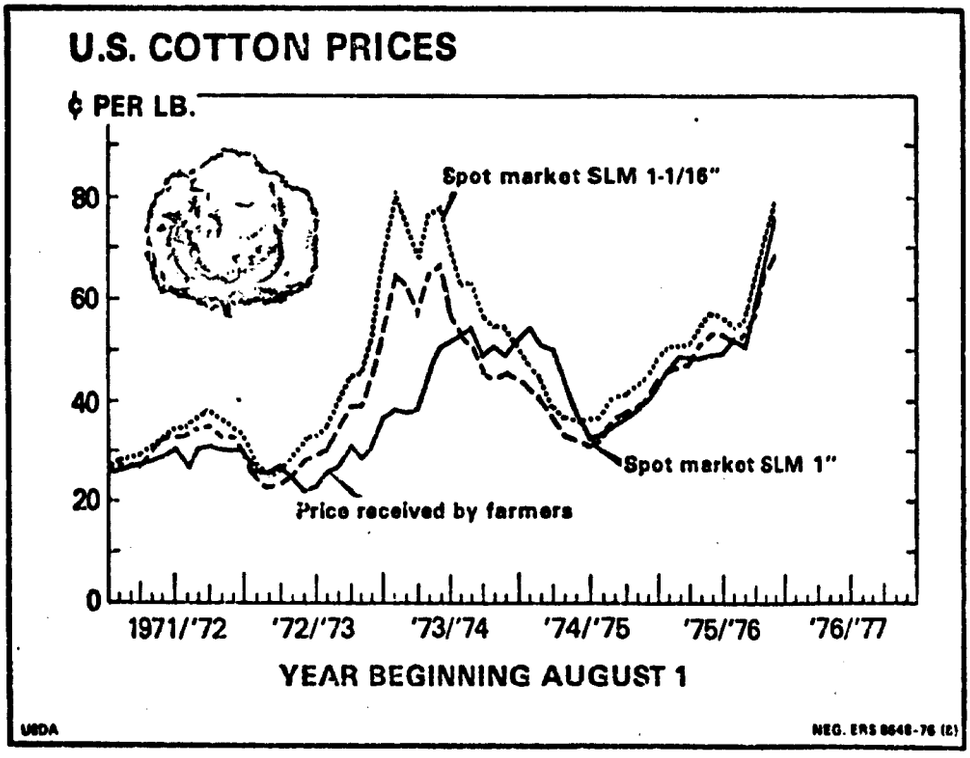
  . expanding cultivated area by increased plantings in existing growing countries, by starting cotton production in new countries and by putting fallow land into use

- is a fashionable fibre which is highly favoured by consumers in industrialized countries and an essential fibre for consumers in many countries with particular climatic conditions where it will never be replaced by man-made fibres in the main end-use sectors.



Apart from the fact that cotton is subordinated to weather and other natural factors, its main enemy is price fluctuation. Rapid rises in the cotton price in the past have meant loss of market share to the more steadily priced man-made fibres. Such an erosion has then not usually been recovered when prices have subsequently fallen. The latest rises in cotton are a result of the fibres' remarkable market success, even during recession, and failure on the part of growers to anticipate this. This recent evolution has demonstrated again that the most important influence on price is likely to be the estimate the textile trade puts on the availability of cotton over the year ahead.

As an example, the figure on the following page illustrates the evolution of U.S. cotton prices during past seasons.



Possibly, in the future, an internationaly operating buffer-stock scheme could be organised with the aim of stabilizing or even preventing fluctuations in cotton prices. Such a system would be most profitable to all parties concerned, that is, individual farmers, trade, processing industry and, finally, consumers.

A more general survey of the price evolution of various natural fibres since 1968 is given in the table and graph below (source : Comitextil Bulletin 76/2).

PRICES — PRIX

Prices in U.S. dollars/kg.

Periods	Cotton — Coton Import prices Prix à l'importation UNITED KINGDOM (1)	 (2)	Wool — Laine Wholesale prices Prix de gros UNITED KINGDOM (3)	 (4)	Flax — Lin Export prices Prix à l'exportation BELGIQUE (5)	Jute Import prices Prix à l'importation UNITED KINGDOM (6)
1968	0,54	1,38	2,33	1,73	0,716	0,352
1969	0,55	1,39	2,18	1,63	0,492	0,332
1970	0,63	1,35	1,89	1,76	0,595	0,332
1971	0,77	1,43	1,78	1,41	0,593	0,355
1972	0,76	1,61	2,98	2,46	0,764	0,349
1973	1,09	3,36	6,99	5,12	1,106	0,367
1974	1,22	3,39	4,96	3,65	1,332	0,420
1974 I	1,19	3,41	6,26	5,06	1,237	0,336
II	1,37	3,50	5,99	4,56	1,326	0,341
III	1,31	3,52	5,75	4,50	1,399	0,365
IV	1,27	3,53	5,52	4,14	1,451	0,379
V	1,24	3,48	5,26	3,80	1,429	0,381
VI	1,22	3,48	5,26	3,82	1,433	0,393
VII	1,23	3,61	4,99	3,80	1,285	0,404
VIII	1,21	3,52	4,87	3,11	1,296	0,409
IX	1,15	3,49	4,06	2,89	1,274	0,449
X	1,10	3,03	3,73	2,64	1,310	0,499
XI	1,01	3,03	3,83	2,65	1,209	0,537
XII	0,99	3,04	3,88	2,68	1,246	0,545
1975 I	0,91	3,02	3,92	2,69	1,228	0,557
II	0,88	3,04	4,00	2,74	1,203	0,571
III	0,91	3,05	3,98	2,76	1,096	0,567
IV	0,93	3,04	3,96	2,82	1,023	0,554
V	1,03	3,04	4,16	2,91	1,084	0,513
VI	1,05	3,04	3,85	2,77	1,220	0,420
VII	1,13	3,05	3,76	2,70	1,171	0,404
VIII	1,21	3,06	3,76	2,62	1,164	0,390
IX	1,25	—			1,164	0,391

Cotton

UNITED KINGDOM

(1) American, Orlean/texas, S.L.M. 15/16, "C.i.f. Liverpool

(2) Egyptian, Menoufi "fully—good", c.i.f. Liverpool

Wool

(3) 64's

(4) 56's

Flax

Export prices

(5) Belgium, Belgian, water—retted B, f.o.b. Antwerp

Jute

Import prices

(6) United Kingdom : Raw, baled, Pakistan, c.i.f. U.K. : through November 1971, Pakistan white C, from march 1972, Bangladesh white C, c.i.f. UK

Abaca

European ports

(7) Philippine, Manila (Now—Davao) G, c.i.f.

Sisal

Import prices

(8) United Kingdom : Kenya—Tanganyika n° 8L, c.i.f. London

Coton

ROYAUME—UNI

(1) des Etats—Unis, Orlean/Texas, S.L.M. 15/16, C.a.f. Liverpool

(2) Egyptien, Menoufi "fully—good", c.a.f. Liverpool

Laine

(3) Laines de 64

(4) Laines de 56

Lin

Prix à l'exportation

(5) Belgique : de Belgique, roui à l'eau, B, f.o.b. Anvers

Jute

Prix à l'importation

(6) Royaume—Uni : Brut en balles, du Pakistan, c.a.f. Royaume—Uni : jusqu'à fin novembre 1971, "Pakistan white C", depuis mars 1972 "Bangladesh white C", c.a.f. Royaume—Uni.

Abaca

Ports européens

(7) Chanvre de Manille (Pas Davao) G, c.a.f.

Sisal

Prix à l'importation

(8) Royaume—Uni. Du Kenya et Tanganyika n° 8L c.a.f. London

TABLEAU

Prix en dollars US/kg

Abaca	Sisal	Cellulosic — Cellulosiques Discontinuous	 Continuous	Synthetic — Synthétiques Polyester	 Acrylic
Import prices Prix à l'importation	Import prices Prix à l'importation	Wholesale prices — Prix de gros		Wholesale prices — Prix de gros	
EUROPEAN PORTS (7)	UNITED KING. (8)	UNITED STATES (9)	 (10)	UNITED STATES (11)	 (12)
0,262	0,07	0,72	1,63	1,39	1,96
0,301	0,19	0,57	1,63	1,39	1,96
0,347	0,15	0,55	1,63	1,39	1,94
0,362	0,19	0,60	1,63	1,39	1,72
0,326	0,25	0,68	1,63	1,39	1,72
0,551	0,51	0,73	1,74	1,39	1,72
0,998	1,08	1,12	2,00	1,39	1,72
1,103	0,95	0,79	1,82	1,39	1,72
0,990	1,06	0,97	1,92	1,39	1,72
0,949	1,06	1,04	1,92	1,39	1,72
0,921	1,06	1,10	2,05	1,39	1,72
0,672	1,08	1,10	2,17	1,39	1,72
0,985	1,08	1,10	2,25	1,39	1,72
1,107	1,10	1,21	2,31	1,39	1,72
1,107	1,10	1,21	2,35	1,39	1,72
1,037	1,10	1,21	2,34	1,39	1,72
0,974	1,10	1,23	2,31	1,39	1,72
0,952	1,10	1,23	2,28	1,39	1,72
0,962	1,10	1,21	2,28	1,39	1,72
0,883	1,10	1,23	2,16	1,39	1,72
0,878	0,98	1,10	2,16	1,39	1,72
0,671	0,85	1,10	2,14	1,39	1,72
0,635	0,85	1,10	2,14	1,39	1,72
0,674	0,78	1,10	2,14	1,39	1,72
0,573	0,60	1,10	.....	1,39	1,72
0,553	0,60	1,10	2,18	1,39	1,72
0,649	0,60	1,10		1,39	1,72
0,652	0,60	1,10		1,39	1,72

Cellulosic—Discontinuous

wholesale prices

(9) United States : 1 1/2and3denier, regular rayon staple, f.o.b. producing plants

Cellulosic — Continuous

wholesale prices

(10) United States : Acetate, first quality, bright, 150 denier, f.o.b. producer's plant.

Synthetic polyester

wholesale prices

(11) United States : Dacron 3 denier, type 54 f.o.b. producer's plant

Synthetic — acrylic

wholesale prices

(12) United States : Orlon, 3 denier, type 42, f.o.b. producer's plant

Fibres cellulosiques—discontinues

prix de gros

(9) Etats—Unis : Fibranne viscose—régulière, 1 1/2 et 3 denier f.o.b. fabrique

Fibres cellulosiques — continues

Prix de gros

(10) Etats—Unis, Rayonne, acetate, première qualité, brillante, 150 deniers, f.o.b. fabrique.

Fibres synthétiques — polyester

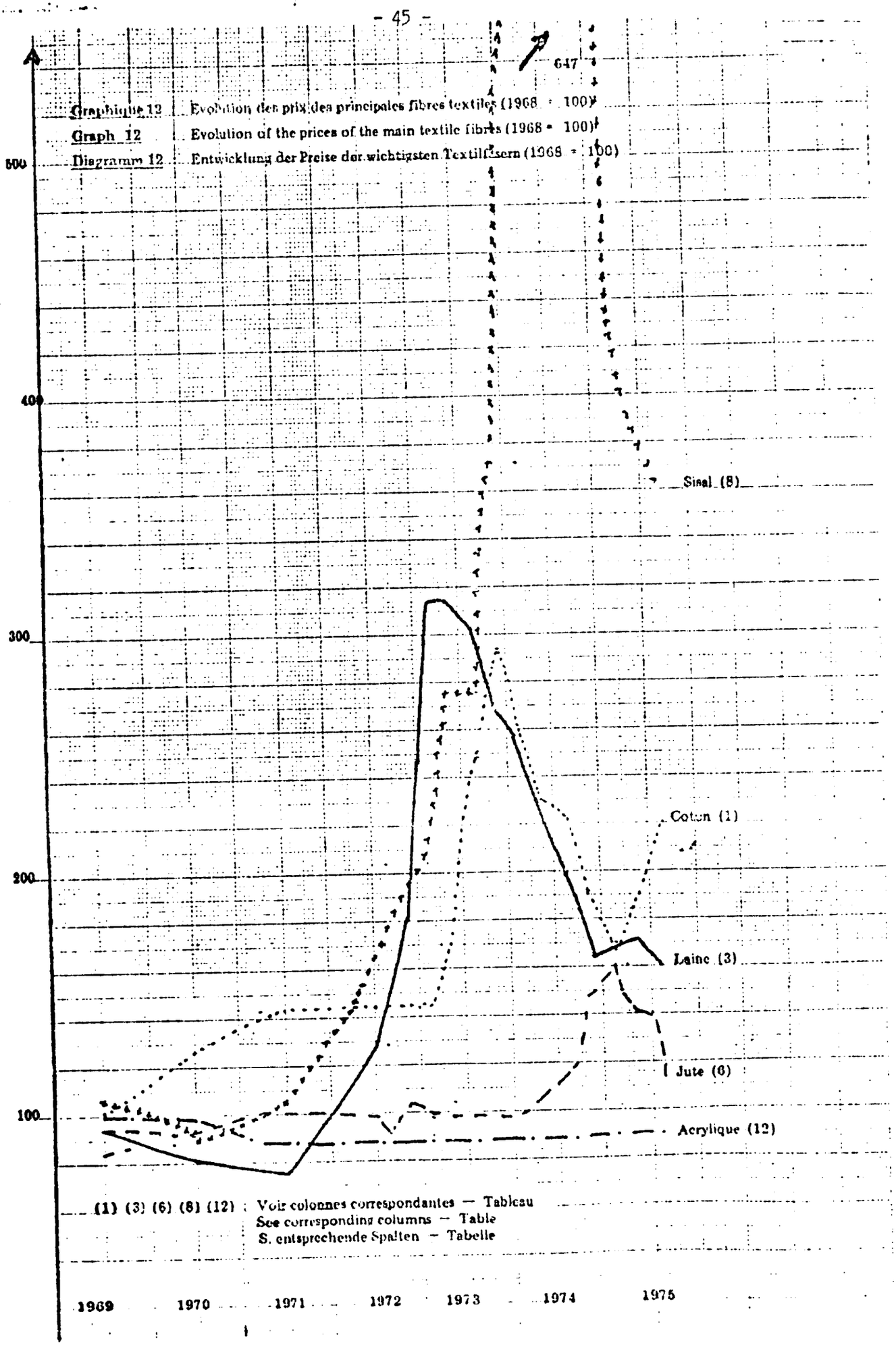
prix de gros

(11) Etats—Unis : Dacron, 3 deniers, type 64 f.o.b. fabrique.

Fibres synthétiques (acryliques)

prix de gros

(12) Etats—Unis : Orlon, 3 deniers, type 42, f.o.b. fabrique.



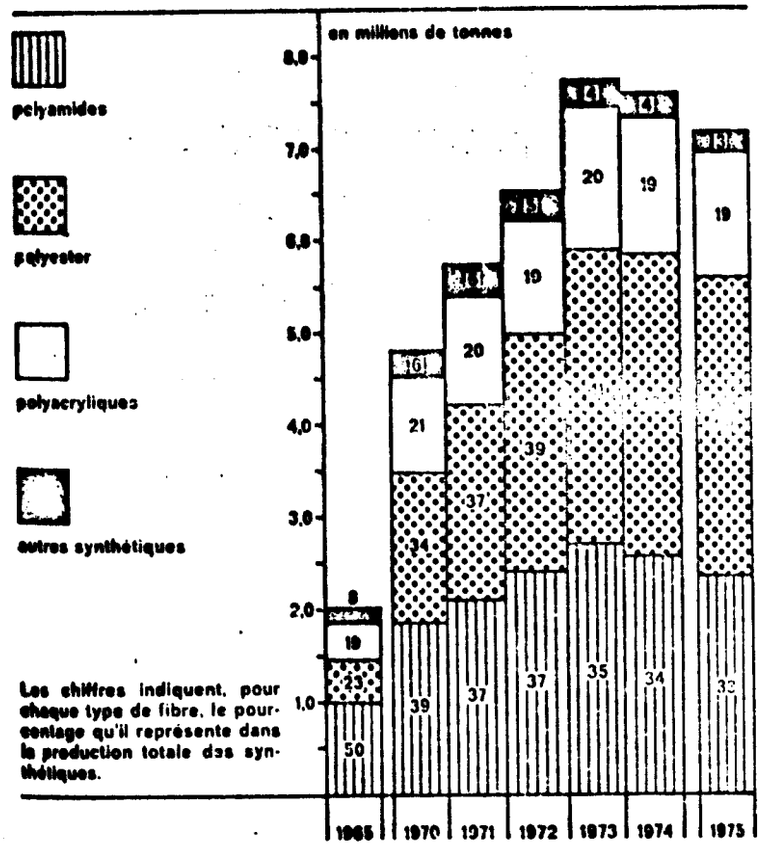
Graphique 12 Evolution des prix des principales fibres textiles (1968 = 100)

Graph 12 Evolution of the prices of the main textile fibres (1968 = 100)

Diagramm 12 Entwicklung der Preise der wichtigsten Textilfasern (1968 = 100)

4.4.3 MAN-MADE FIBRE DEVELOPMENTS

In paragraph 4.4.1 we have already indicated the past evolution of total worldwide man-made fibre production. As man-made fibres comprise several fibre types, it is worthwhile briefly observing how the main types are evolving. The figure on page 37 gives a first breakdown of man-made fibres between synthetics and cellulosics. Below, the breakdown and evolution of the various synthetic fibre types are shown for the period 1965-1975 (in million tons and %-shares).



Since the beginning of the 1970's, polyester has clearly taken the lead in synthetic fibres, steadily increasing its share in production, mainly to the detriment of polyamides and polyacrylics. The share of the latter has, however, remained stable over the years.

As to the breakdown of man-made fibre production between filament yarn and staple, it has evolved as follows for both synthetics and cellulosics (in million tons; rounded figures)[1]:

	Synthetics		Cellulosics	
	filament	staple	filament	staple
1960	0.4	0.3	1.1	1.5
1965	1.1	0.9	1.4	2.1
1970	2.4	2.4	1.4	2.2
1973	3.8	3.9	1.4	2.5
1974	3.8	3.8	1.3	2.4
1975	3.6	3.5	1.1	2.1

So far as the long-term outlook for the various man-made fibres is concerned, cellulosics will remain more or less stable. In particular, substitution of cellulosic filament by synthetics will go on in the future. The situation of cellulosic staple depends largely on the price of cotton. In general, cellulosics suffer and will continue to suffer from high cellulose prices, generally inferior properties, increase of energy cost and additional burden resulting from the necessary investment into expensive effluent treatment and waste disposal plant. All this strongly undermines the competitive position of cellulosics as against other textile fibres.

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1) Source: CIRFS 1975

In Western industrialized countries, one notes that more and more production units are being closed down and, in developing countries, there are hardly any new implantations to be observed. Nevertheless, cellulosic staples, which are the only hydrophilic man-made fibres should be able to maintain their position, in absolute figures, within the textile fibre market.

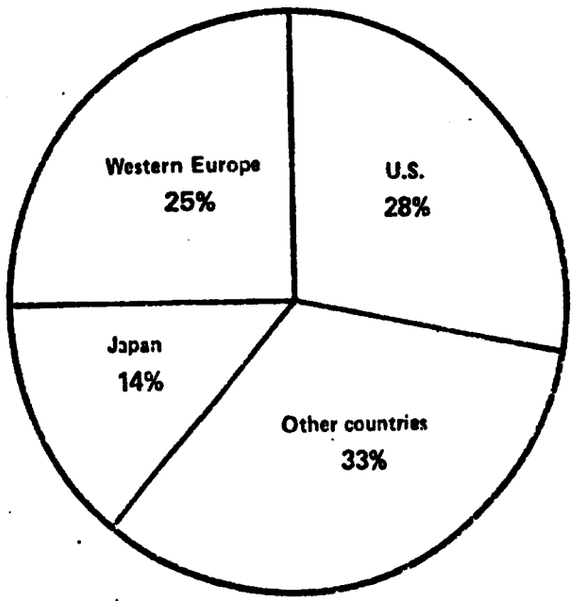
As mentioned already in paragraph 4.4.1, synthetics' overall long-term growth may be put down at an annual average rate of 7 to 8%. The growing production of noncellulosics, and thus their expanding market share, is propelled by forces which are almost certainly irrevocable. In industrialized countries, synthetic fibres have been consistently encroaching on natural fibres owing to ease of maintenance, durability, adaptability to fashion requirements, ease of processing with modern equipment, lower cost, and only moderate price fluctuations.

Considering synthetic fibre types individually, polyester staple, the best man-made cotton substitute, is clearly the largest growth area, and should continue to show above-average growth (6 to 8% p.a.). Polyamide will achieve modest growth, probably around 2% p.a. Acrylics, which are displacing natural wool, may not grow at all anymore in some countries, but may experience gains in countries susceptible to further market penetration.

One of the factors that will affect the fibres picture over the coming years is the extent to which polypropylene joins the major fibres. If some technical problems associated with polypropylene, for instance in dyeing, are overcome, it is potentially the cheapest fibre. So it could grow and become a significant factor in the fibres field, even to the extent of taking a sizeable stake in the market. In the USA, for example, it is forecast that polypropylene will gain in carpets, upholstery, rope and industrial goods, rising from 3% of the fibre market to 5% in the next five years.

As to the regional breakdown of fibre production, it is illustrated by the following figure concerning man-made fibre in total and by a table concerning synthetic fibre alone.

Regional breakdown of man-made fiber output



Répartition régionale de la production mondiale de synthétiques
(en 1 000 t)

Année	Europe Occidentale Total	États-Unis	Japon	Autres Pays du Monde	Total Mondial
1965	615	806	379	240	2 040
1970	1 500	1 562	999	748	4 809
1971	1 782	1 859	1 135	932	5 708
1972	1 953	2 309	1 083	1 166	6 511
1973	2 309	2 708	1 279	1 434	7 730
1974	2 138	2 655	1 146	1 641	7 580
1975	1 815	2 495	1 040	1 800	7 150
Fluctuation 1975 : 1974	env. − 15 %	env. − 6 %	env. − 9 %	env. + 10 %	env. − 6 %

The recent decline in production has occurred in different ways in so far as the regional evolution is concerned. Western Europe had the worst drop, followed by Japan and the USA. The rest of the world, East-bloc and developing countries, have been increasing their production and share of the market. This increase has even allowed these "other countries" to surpass the US-output for the first time.

In general, overcapacity has been built up during the early 1970's in many parts of the world. For instance, over the past five years, synthetic fibre capacity has risen by 2.5 times in developing countries and centrally planned economies. Often, plants are put up there with State aid, are much too big for the national or even regional market (at least at the start), and so the producers naturally aim at export markets, thus creating still stiffer competition on world level. However, so far, their export competitiveness and effectiveness of overseas marketing have not kept pace with the rise in production capacity.

A certain danger may exist for cotton-growing countries which develop man-made fibre production:

- i.o. a risk that production of man-made fibres may influence the demand for cotton negatively, could lead to the fact that

  . many agricultural workers would get laid off (for example, it has been calculated that the setting-up of a polyester plant of 10,000 t/year, with 1,000 employees, could replace about 30,000 people working in cotton fields)

  . agricultural parts of the country would be worse off income-wise

  . foreign exchange would be lost (as we have seen before, cotton is the major or one of the main sources of foreign exchange for many developing countries)

- difficulty would arise in selling man-made fibre on the world market, at a reasonable price and quality, against competition on the part of experienced world producers.

At present, with the current oversupply and consequent price pressure, manufacturers in industrialized countries may have to wait at least two years before tighter supply-demand conditions can be expected to support price levels some 20% higher, which would then justify investments in additional capacity. However, in view of the uncertainties surrounding the economic climate in 1978, reinvestment-level prices cannot be expected to prevail even then with any degree of assurance. With capital in tight supply throughout the world, alternate investments simply outrank the fibre industry at this juncture, owing to their demonstrably more attractive investment returns.

The future development of production by regions will be characterized by the following :

- West European production will lose still more ground as very little new fibre capacity will come on stream and possible output increases will be achievable by higher production speeds. This is due to the shrinking European domestic fibre market as textile imports grow from low-cost countries and to the diminishing export markets as world competition becomes steadily stronger.

- US-production will still be moving ahead as both the domestic and export markets will increase. The US enjoys the advantage of lower petrochemical feedstock costs, compared with Europe and Japan, as well as of bigger plant scales.

- The situation regarding Japan appears to be rather similar to the European one.

- Production in East European countries will further increase. These countries have better control over imports, labour and other costs, as well as domestic market growth. They still seem able to plan their fibre capacity growth effectively.

- Some developing countries, such as the Middle East oil-producing countries, are endowed with both low-cost raw materials and a rapidly rising domestic standard of living that can readily absorb increased internal fibre production which has to be expected.

- China, lastly, is experiencing a slower accelerating rate of living standard improvement, but could become a much larger consumer of man-made fibres even five years hence, owing to its sheer size. In fact, China's stated goal is a ten-fold increase in synthetic fibre production, for domestic consumption, to 1 billion lb/year by 1980. Moreover, should the most-favoured nation status be extended to China by the US, China could become a major competitor of US manufacturers in many sectors of the apparel industry. This could pre-empt important American fibre markets, and perhaps force US producers to export more fibre.

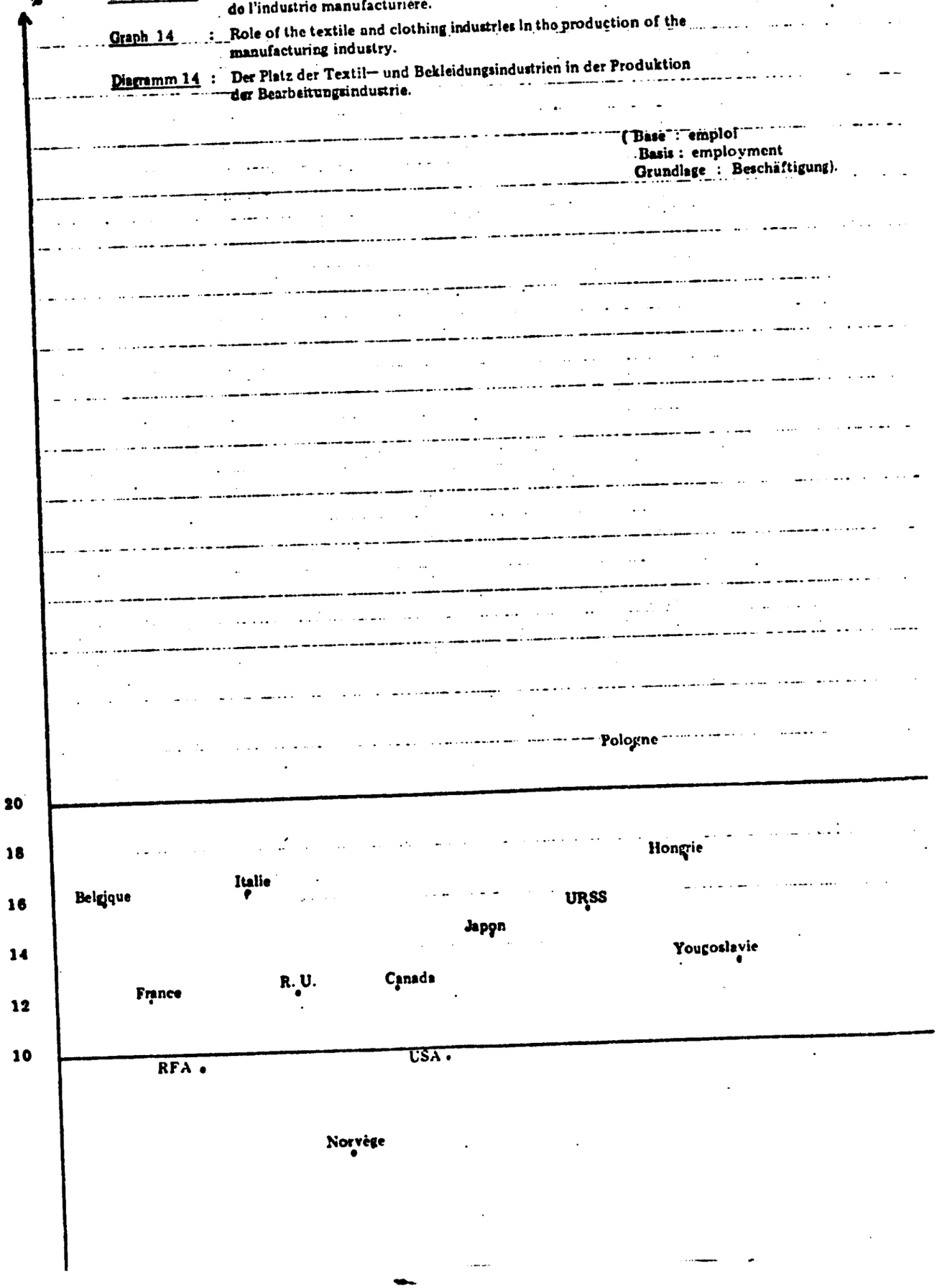
4.4.4 TEXTILE AND CLOTHING PRODUCTION DEVELOPMENTS

Depending on the country considered, the importance of the textile and clothing industries within the national economy varies; the following two graphs (14 and 15) make evident the difference between industrialized and developing countries (source: Comitextil Bulletin 76/2).

Graphique 14 : Place des industries textiles et de l'habillement dans la production de l'industrie manufacturière.

Graph 14 : Role of the textile and clothing industries in the production of the manufacturing industry.

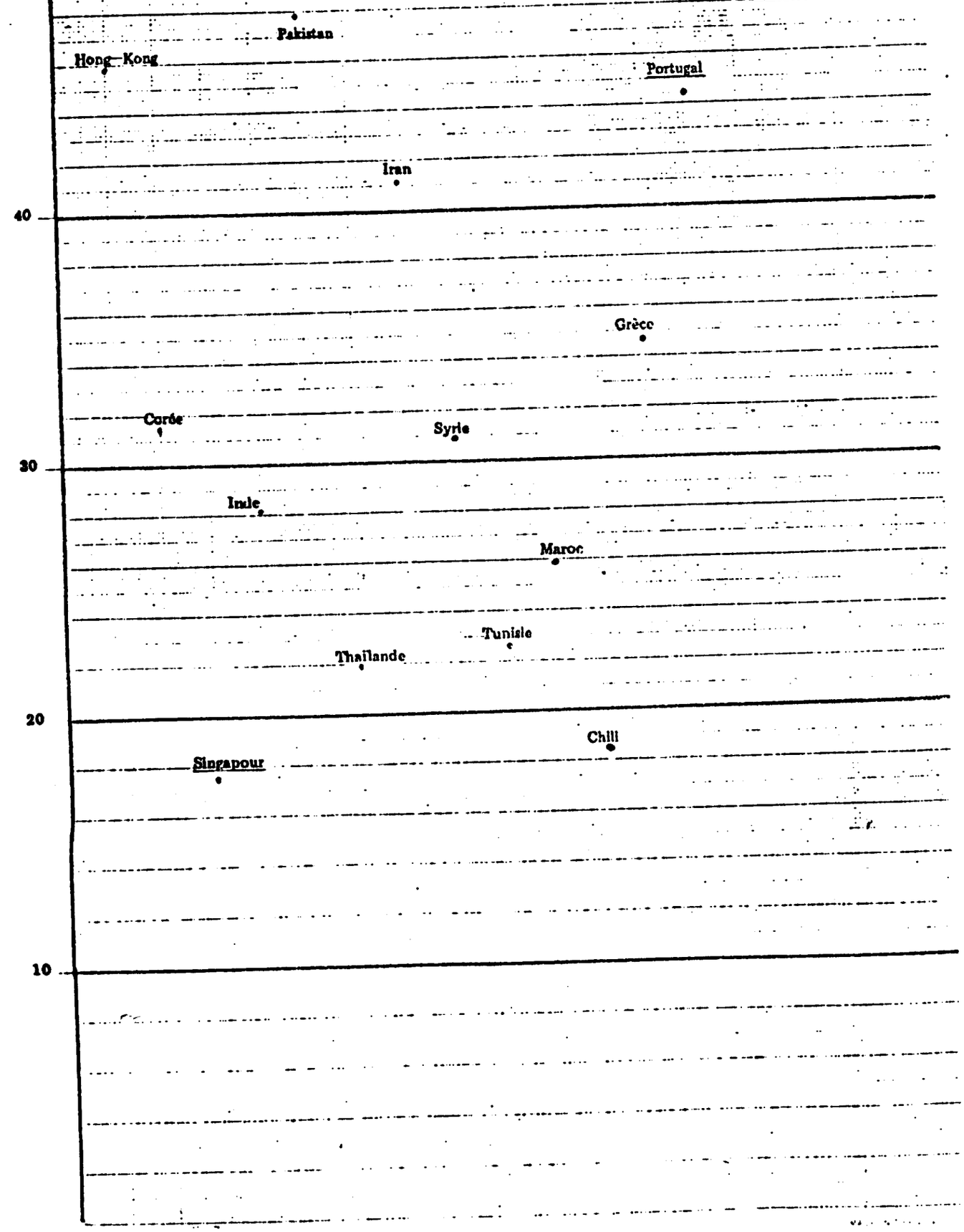
Diagramm 14 : Der Platz der Textil— und Bekleidungsindustrien in der Produktion der Bearbeitungsindustrie.



Graphique 15 : Place des industries textiles et de l'habillement dans l'industrie manufacturière (base : emploi).

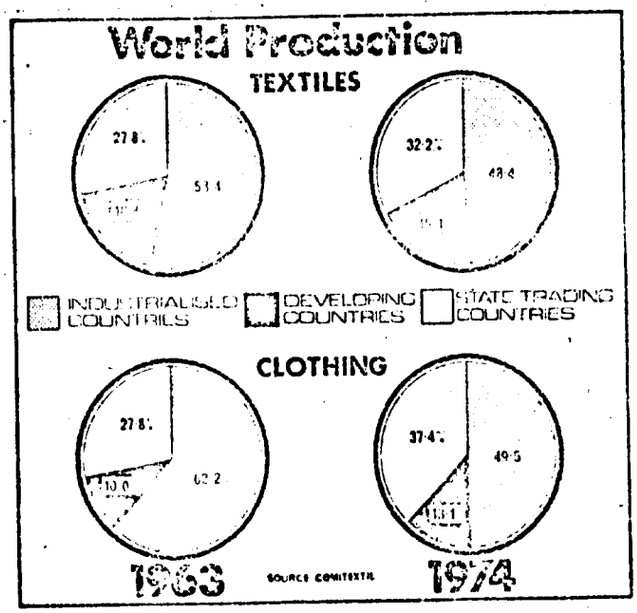
Graph 15 : Role of the textile and clothing industries in the manufacturing industry (basis : employment).

Diagramm 15 : Der Platz der Textil- und Bekleidungsindustrien in der Bearbeitungsindustrie (Grundlage : Beschäftigung).



Two other graphs (16 and 17; same source) show the development of production of the textile and clothing industries between 1967 and 1974 worldwide, in developing countries, centrally planned economies and industrialized countries.

The worldwide evolution of textiles and clothing production shows basically a similar, although in some aspects accentuated, picture as the one concerning fibre production. It is quite clear that a very substantial movement to both developing countries and State-trading countries has occurred in textile and clothing manufacturing for over ten years now, and during the 1970's in particular to the detriment of industrialized countries, that is, especially Western Europe and Japan. The following figure makes evident this evolution for the period 1963-74.

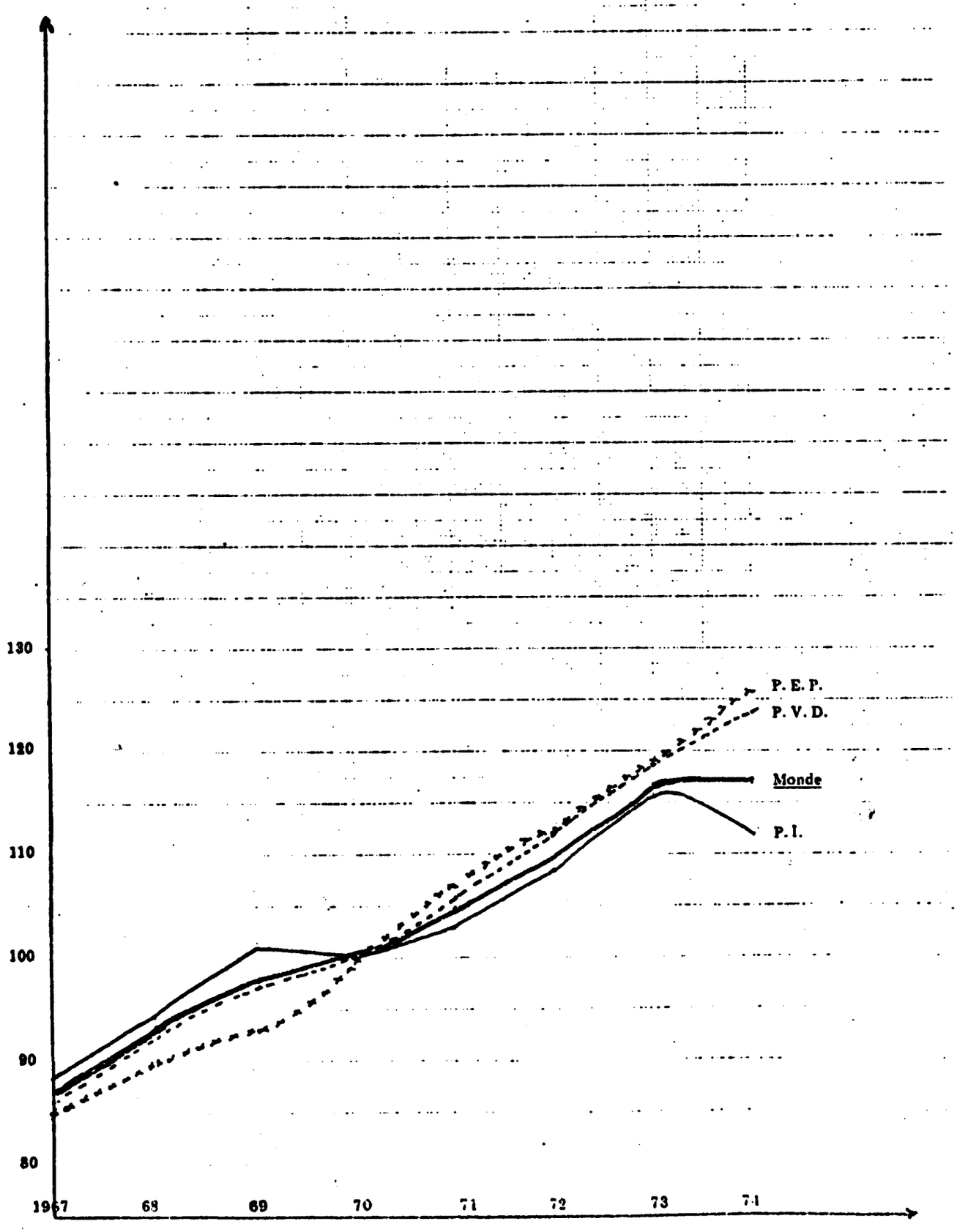


It is obvious also that the recent development will go on in the future, unless there intervenes a significant modification of the GATT's multifibre agreement (MFA), which is now governing much of global textile trading and provides generally for annual import growth rates of 6%.

Graphique 16 : Indice de production (1970 = 100) — Industrie textile.

Graph 16 : Production index (1970 = 100) — Textile industry.

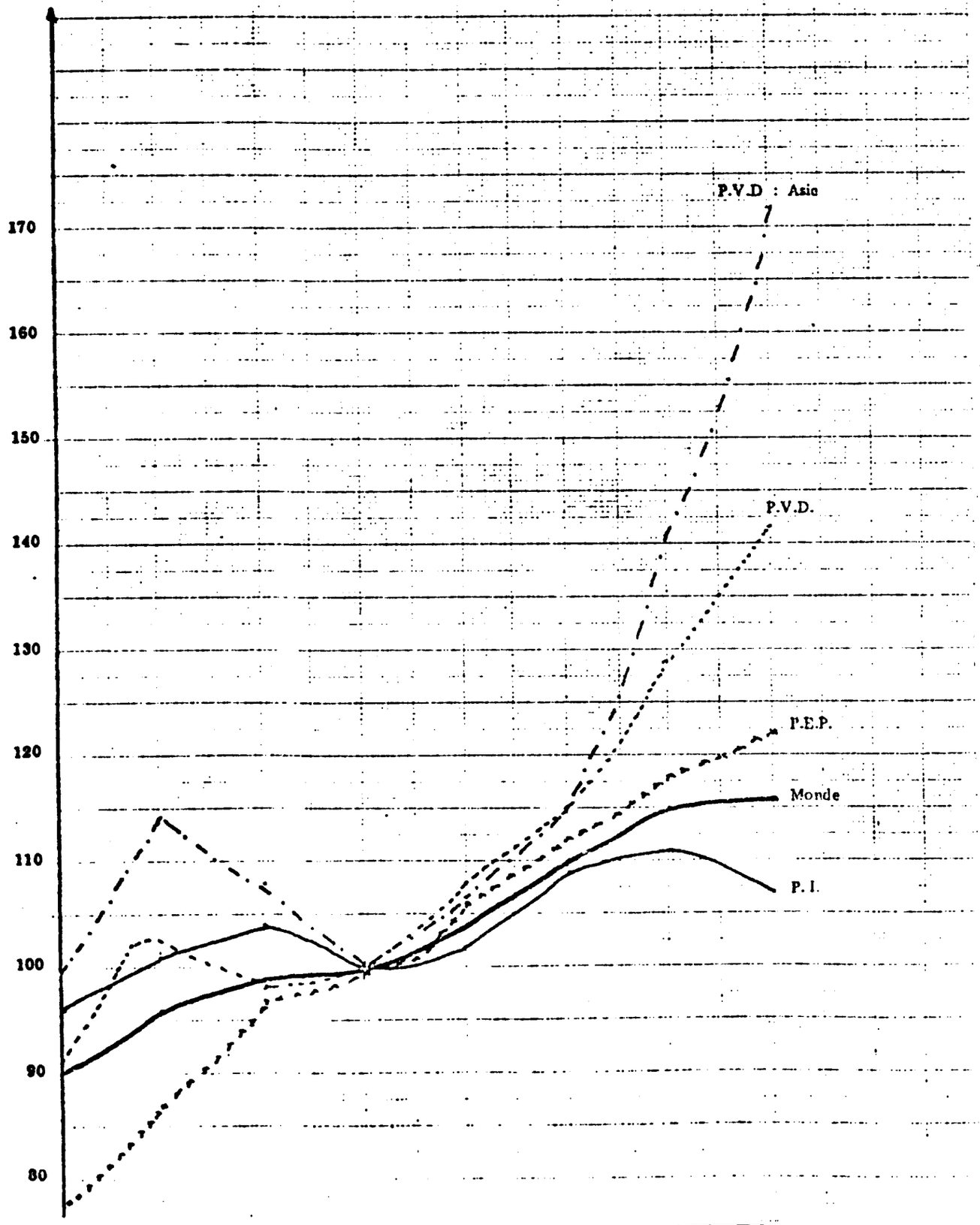
Diagramm 16 : Der Produktionsindex (1970 = 100) — Die Textilindustrie.



Graphique 17 : Indice de production — Industrie de l'habillement (1970 = 100)

Graph 17 : Production index — Clothing industry (1970 = 100)

Diagramm 17 : Der Produktionsindex — Die Bekleidungsindustrie (1970 = 100)



4.5 FIBRE AND TEXTILE CONSUMPTION

The following figures and tables stem from a Comitextil report, entitled "The Textile Industry in the Community and the World"[1], and illustrate the state and evolution of worldwide industrial consumption of fibres.

Between 1964-66 and 1973, the biggest increase in industrial fibre consumption has been achieved by developing countries as shown by the following growth (see also Tab. 2):

industrialized countries	35 %
centrally planned economies	49 %
developing countries	60 %

Overall, the %-share in worldwide industrial fibre consumption has thus evolved in the following way by region (see also Tab. 3):

	1964-66	1973
industrialized countries	51.5	48.4
centrally planned economies	29.3	30.3
developing countries	19.2	21.3

With regard to cotton in particular, it should not be forgotton that final effective textile consumption will be higher in industrialized countries and lower in developing countries than the figures for industrial fibre consumption indicate. This is due to the shift towards less converting of fibre and more processing of imported yarn, grey cloth and finished fabrics on the part of industrialized countries, whereas developing countries increasingly export more semi-finished and finished cotton goods instead of raw fibre.

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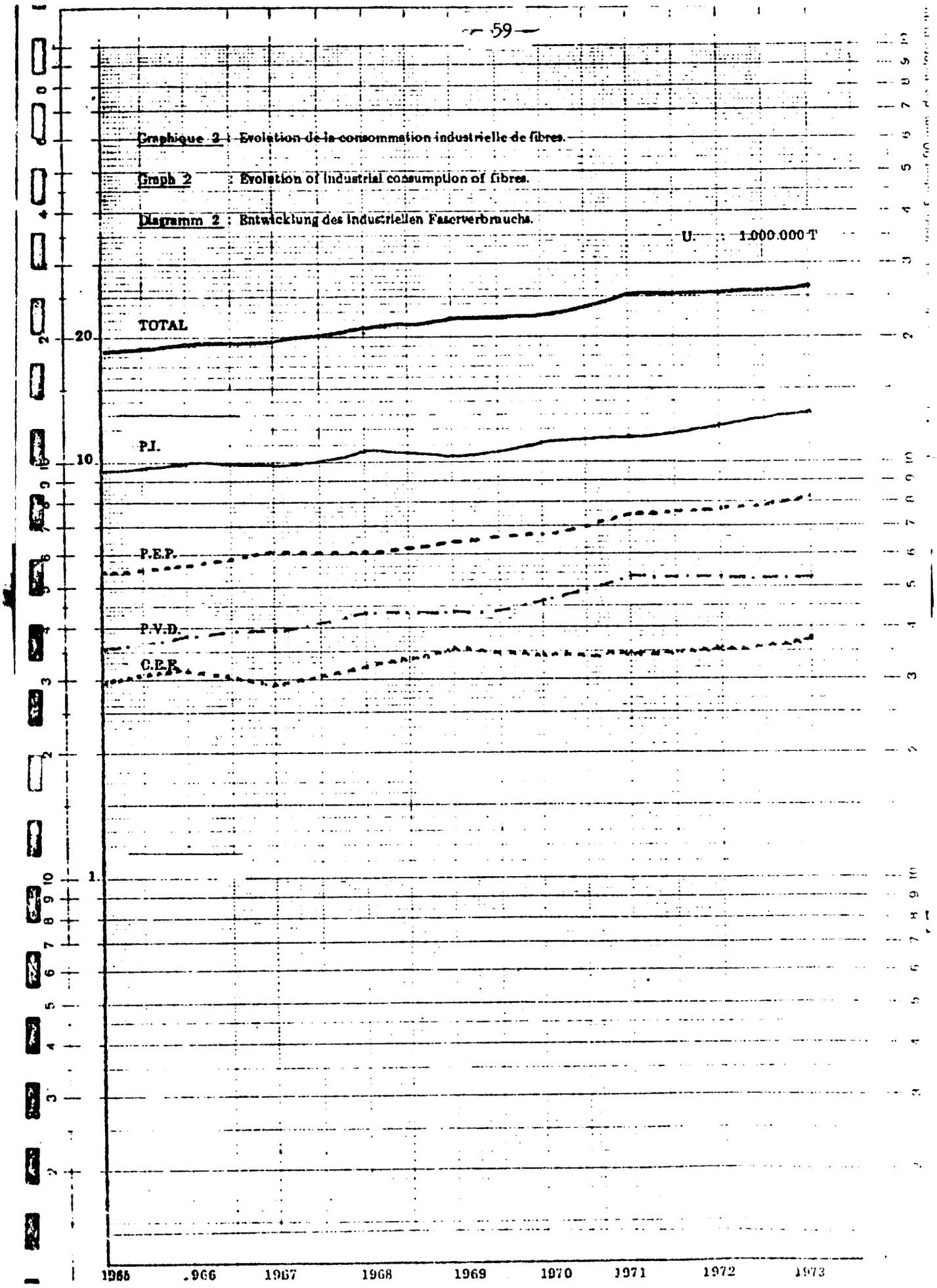
1) Comitextil Bulletin 76/2.



Graphique 2 : Evolution de la consommation industrielle de fibres.

Graph 2 : Evolution of industrial consumption of fibres.

Diagramm 2 : Entwicklung des industriellen Faserverbrauchs.

Graphique 3 : 1973 — Part des grandes zones économiques dans la consommation industrielle de fibres

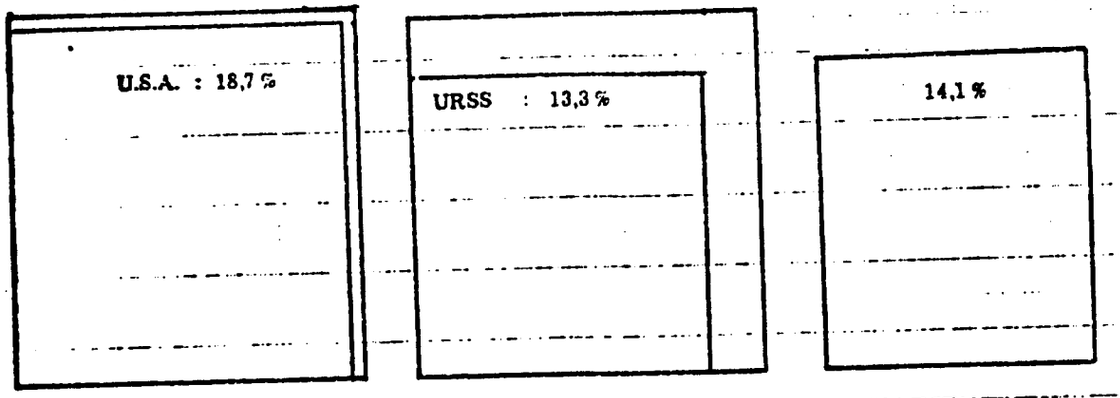
Graph 3 : 1973 — Share of the main economic areas in industrial consumption of fibres.

Diagramm 3 : 1973 — Anteil der wichtigsten Wirtschaftszonen am industriellen Verbrauch

1. Amérique du Nord
North America (19,7 %)
Nordamerika

2. Est Européen
Eastern Europe (19,5 %)
Osteuropa

3. C. E. E.
E. E. C.
E. W. G.

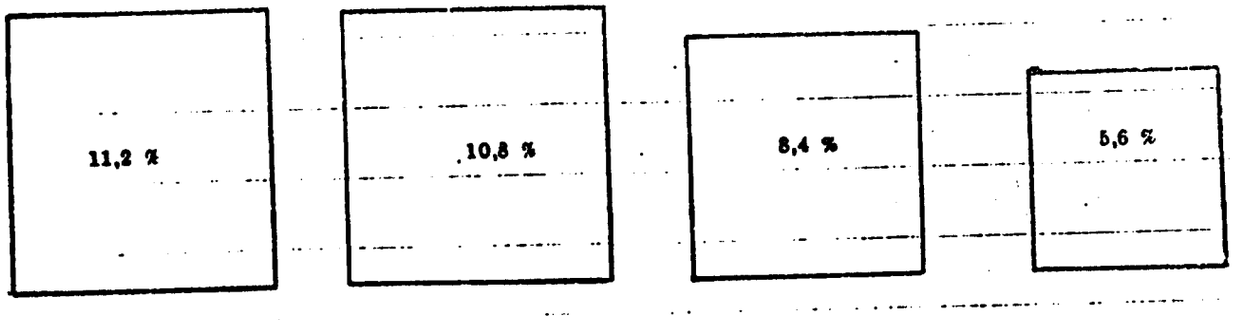


4. Extrême—Orient
Far East
Fernost

5. Asie Communiste
Communist Asia
Rotasien

6. Japon
Japan

7. Amérique latine
Latin America
Lateinamerika

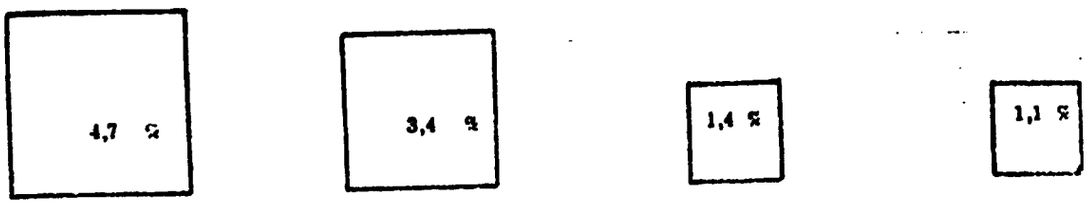


8. Autres pays Europe Occidentale
Other countries of Western Europe
Andere Länder Westeuropa

9. Moyen Orient
Middle East
Mittlerer Osten

10. Autres pays développés
Other developed c.
Andere entwickelte L.

11. Afrique
Africa
Afrika



CONSOMMATION INDUSTRIELLE DE FIBRES DANS LES PRINCIPALES ZONES ECONOMIQUES
INDUSTRIAL CONSUMPTION OF FIBRES IN THE MAIN ECONOMIC ZONES
INDUSTRIELLER VERBRAUCH VON FASERN IN DEN WICHTIGSTEN WIRTSCHAFTLICHEN ZONEN.

TABLEAU

Years	DEVELOPED COUNTRIES					CENTRALLY PLANNED COUNTRIES			DEVELOPING COUNTRIES						WORLD
	North America	Western Europe	Japan	Other	Total	U.S.S.R. and eastern Europe	Asia	Total	Africa	Latin America	Near East	Asia and far East	Oceania	Total	
64-66	3.841,9	3.877,0	1.677,4	239,4	9.635,7	3.889,2	1.596,5	5.433,7	114,8	982,1	554,6	1.030,6	—	3.588,1	18.709,5
67-69	4.330,5	4.106,9	1.863,0	279,8	10.580,2	4.401,1	1.960,8	6.391,9	195,0	1.070,1	684,3	2.188,7	—	4.138,1	21.020,2
70-72	4.686,9	4.569,4	2.074,9	336,8	11.668,0	4.901,4	2.513,4	7.414,8	254,9	1.285,8	792,5	2.605,7	—	4.941,9	24.024,7
1973	5.307,5	5.063,8	2.267,3	377,0	13.015,6	5.239,5	2.915,8	8.155,3	300,3	1.514,8	907,6	3.024,2	0,1	5.747,0	26.917,9

PART DES PRINCIPALES ZONES ECONOMIQUES DANS LA CONSOMMATION
SHARE OF THE MAIN ECONOMIC AREAS IN INDUSTRIAL CONSUMPTION.
ANTEIL DER WICHTIGSTEN WIRTSCHAFTSZONEN AM INDUSTRIELLEN VERBRAUCH.

TABLEAU 2

Période	PAYS DEVELOPPES					PAYS A ECONOMIE PLANIFIEE			PAYS EN VOIE DE DEVELOPPEMENT						WORLD
	Amérique du Nord	Europe occidentale	Japon	Divers	Total	U.R.S.S. et Europe orientale	Asie	Total	Afrique	Amérique Latine	Proche Orient	Asie et Extrême Orient	Océanie	Total	
64-66	20,5	20,7	9,—	1,3	51,5	20,8	8,5	29,3	0,6	5,2	3,—	10,4	—	19,2	100
67-69	20,6	19,5	8,8	1,3	50,3	20,9	9,—	29,9	0,9	5,1	3,3	10,4	—	19,7	100
70-72	19,5	19,—	8,6	1,4	48,5	20,4	10,5	30,9	1,1	5,4	3,3	10,8	—	20,6	100
1973	19,7	18,8	8,4	1,3	48,4	19,5	10,8	30,3	1,1	5,6	3,4	11,2	—	21,3	100

Source : FAO — Consommation de fibres par habitant
Quelle : — Per capita fibre consumption.

Graphique 4 : Part de chacune des fibres dans la consommation industrielle. — 1973

Graph 4 : Share of each fibre in industrial consumption — 1973

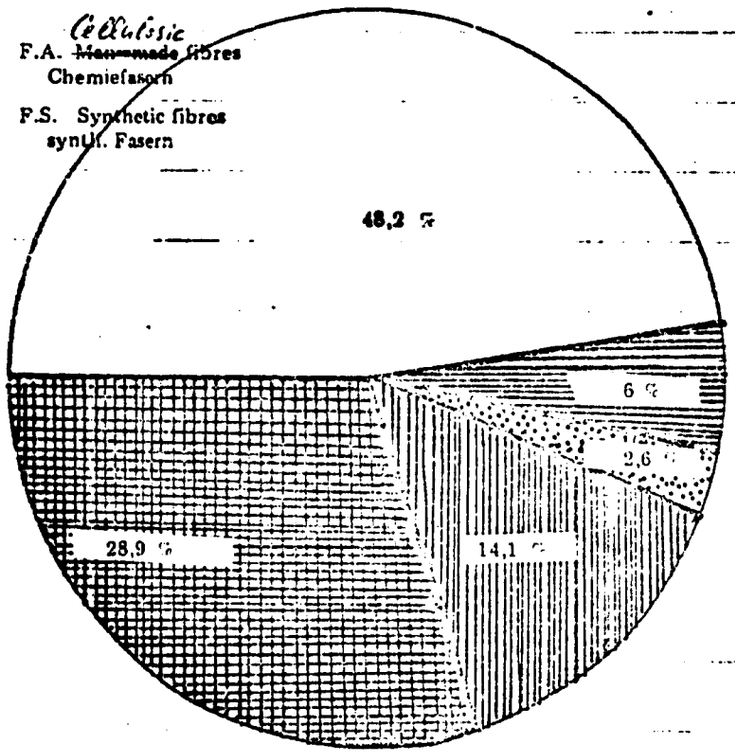
Diagramm 4 : Anteil jeder Faser am Industrieverbrauch — 1973.

Unité : tonnes

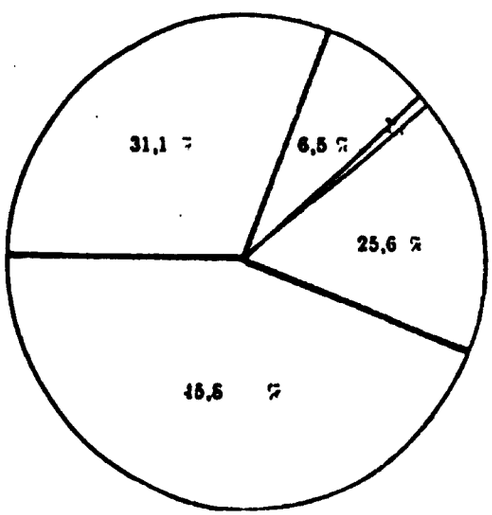
Légende

- Coton Cotton Baumwolle
- Laine Wool Wolle
- Lin Flax Flachs
- F.A. ~~Man-made fibres~~ Cellulosic Chemiefasern
- F.S. Synthetic fibres synth. Fasern

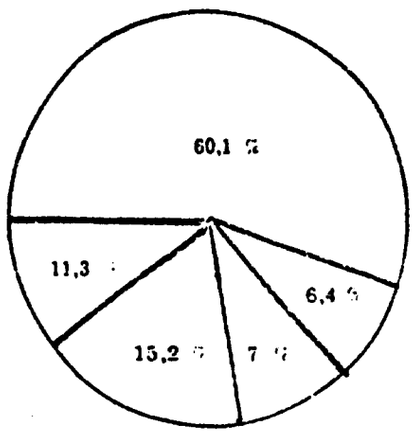
MONDE (26.917.900 T)
World Welt



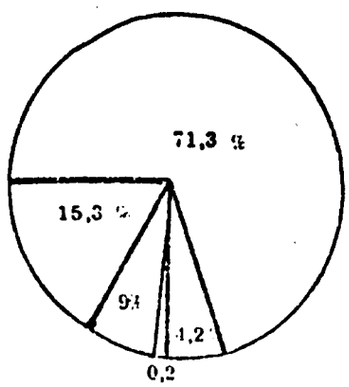
PAYS INDUSTRIALISES (13.015.600 T)



P. E. P. (8.155.300 T)



P. V. D. (5.747.000 T)



TABLEAU

Consommation industrielle de fibres ventilée par types de fibres et par grandes zones économiques
Industrial consumption of fibres, broken down by types of fibre and by large economic zones
Industrieller Verbrauch von Fasern unterteilt nach Fasern und nach den grossen wirtschaftlichen Zonen

1.000 T

Période	DEVELOPED COUNTRIES					Centrally planned countries			DEVELOPING COUNTRIES						World
	North America	Western Europe	Japan	Other	Total	U.S.S.R. and eastern Europe	Asia	Total	Africa	Latin America	Near East	Asia and far East	Oceania	Total	
1964-66															
Cotton	2.110,6	1.988,9	707,5	61,4	4.499,1	2.073,6	1.434,3	3.506,8	79,8	699,3	296,0	1.740,8	–	2.911,6	10.917,5
Wool	131,9	604,1	131,7	24,9	991,6	937,7	42,3	401,5	10,5	69,6	65,9	39,3	–	193,3	1.569,0
Flax	6,9	135,9	7,5	2,1	199,3	907,1	9,5	910,3	–	4,7	7,7	1,0	–	19,4	694,0
Cellulosic fibres	764,9	920,3	387,9	16,5	2.129,3	800,0	97,3	897,5	26,3	126,4	80,8	184,7	–	370,3	9.367,3
Synthetic fibres	801,9	997,6	423,6	39,8	1.855,3	151,9	17,3	199,0	3,4	90,3	11,5	99,2	–	107,3	2.131,8
Total	3.841,9	3.877,0	1.677,1	239,4	9.635,7	3.889,3	1.626,5	5.455,7	114,0	993,1	534,0	1.936,6	–	3.583,1	18.709,5
1970-71															
Cotton	1.619,9	1.414,6	761,9	103,9	4.068,1	3.439,7	3.133,5	6.565,3	163,8	800,3	535,0	2.141,3	–	3.229,4	13.292,7
Wool	99,9	997,5	177,8	97,9	642,3	444,6	30,7	495,5	30,1	96,1	69,0	37,3	–	238,5	1.673,6
Flax	1,1	133,1	9,9	3,2	141,0	936,3	50,3	989,3	–	9,0	9,8	1,1	–	19,9	740,7
Cellulosic fibres	732,6	861,4	940,4	91,0	1.998,5	1.013,3	119,9	1.199,7	45,9	140,1	110,3	184,5	–	481,1	3.320,4
Synthetic fibres	2.093,5	1.563,5	781,5	103,7	4.490,2	497,7	166,3	634,3	28,1	346,5	68,4	231,5	–	674,0	5.697,3
Total	4.646,9	4.969,4	2.674,9	356,8	11.648,0	4.901,4	2.613,4	7.414,8	254,9	1.388,8	792,5	2.605,7	–	4.941,0	24.024,7
1975															
Cotton	1.736,9	1.936,1	919,9	111,4	4.041,9	2.644,1	3.356,9	6.001,0	190,3	913,6	603,0	2.386,7	–	4.094,3	13.037,4
Wool	30,2	621,9	186,3	99,1	644,3	469,4	33,1	621,5	19,9	87,1	65,1	47,9	–	343,9	1.608,3
Flax	0,9	119,4	1,0	3,2	134,9	532,0	48,6	370,9	–	4,6	6,4	3,0	–	13,1	706,3
Cellulosic fibres	884,2	923,7	359,4	60,3	2.026,1	1.668,7	177,4	1.243,1	80,4	150,5	116,0	167,1	0,1	314,3	9.792,7
Synthetic fibres	2.626,8	2.109,0	910,0	135,4	2.980,2	938,9	280,5	916,5	40,0	656,9	92,1	390,4	–	682,0	7.731,0
Total	5.307,5	5.068,9	2.267,9	377,0	13.019,5	6.270,5	3.918,0	9.188,2	390,5	1.814,0	907,5	3.024,2	0,1	5.747,9	26.937,9

Source – Quelle : FAO – Consommation de fibres par habitant.

TABLEAU

Part de chacune des fibres dans la consommation totale
Share of each fibre in total consumption
Anteil jeder Faser am Gesamtverbrauch

Zeitraum	ENTWICKELTE LÄNDER					Planwirtschaftsländer			ENTWICKLUNGSLÄNDER						Welt
	Nord-amerika	West-europa	Japan	Ozeanien	Total	UdSSR und Ost-Europa	Asien	Total	Afrika	Süd-amerika	Nahost	Asien und Fern-Ost	Ozeanien	Total	
1964-66															
Baumwolle	54,9	41,0	43,2	25,3	49,7	69,3	89,3	65,5	65,9	71,5	71,4	89,9	–	81,1	58,4
Wolle	4,5	16,6	9,–	32,9	10,5	9,3	2,7	7,9	9,1	9,1	10,3	1,4	–	2,3	9,4
Flachs	0,1	4,–	0,4	1,9	1,5	12,–	0,2	9,5	–	0,5	1,4	–	–	0,4	3,7
Künstliche Fasern	16,6	24,–	33,1	23,6	22,1	20,9	6,1	16,4	22,9	12,1	14,5	7,–	–	10,5	16,3
Synthetische Fasern	20,6	13,4	24,3	14,1	19,2	3,9	1,2	5,1	6,1	6,1	3,1	1,7	–	5,–	11,4
Total	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	–	100,–	100,–
1975															
Baumwolle	32,9	37,3	38,9	29,3	31,1	46,6	80,5	60,1	63,4	50,3	66,7	76,3	–	71,3	48,4
Wolle	1,3	10,3	9,2	17,3	9,5	9,9	1,9	6,4	6,5	6,7	9,7	1,3	–	4,3	6,–
Flachs	–	2,4	–	0,9	1,–	10,–	1,7	7,–	–	0,3	0,7	–	–	0,3	2,6
Künstliche Fasern	13,9	16,9	13,7	19,1	13,9	20,3	6,1	13,5	16,9	10,–	13,8	9,5	100	9,–	14,1
Synthetische Fasern	33,3	41,5	40,3	35,9	48,5	13,3	8,3	11,5	13,5	33,7	10,1	13,5	–	13,3	23,9
Total	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–	100,–

Source – Quelle : FAO. – Par caput fibre consumption.

In the long run, this evolution may have some far-reaching consequences. In the case of developing countries, which are also cotton growing and develop their own textile industry, more cotton will be home-consumed, and there may be less fibre available on the world markets. This could influence cotton prices, and may give a relative price advantage to synthetics; on the other hand, this could guarantee the maintenance of a profitable price level for cotton, which is paramount for encouraging higher production and providing sufficiently high income levels to farmers in cotton-growing countries.

If cotton can maintain a reasonable price relationship with man-made fibres, and also the privileged position it enjoys by present fashion trends, a growth of around 1% per year up to 1985 can be envisaged, even in industrialized countries. The best long-term growth, however, should normally be experienced in developing countries (such as India, Pakistan, Turkey, Brazil, Mexico, Egypt, Iran and Sudan).

It is our opinion that, in the very long run, cotton can support higher prices without damage, as it will, just like wool, become more and more a luxury fibre, favoured by consumers who will be prepared to pay a good price for it. At least, the evolution of consumption during the past recession years seems to indicate such a tendency.

As stated previously in this paper, fibre and textile consumption will continue to grow, as a function of population, income and standard of living growth. Natural fibres being limited in their growth, the arising gap between demand and supply will have to be filled by man-made fibres, that is, primarily synthetic fibres. Normally, there should be no problem in satisfying this growing demand on the part of the textile industry and consumers as, in general, the man-made fibre industry will rather offer too much capacity than not enough in the future (see previous chapter). This does not preclude, however, that tight supply situations may arise temporarily with respect to man-made fibres as - most factors which have to be considered in investment planning have become more fluid, - uncertainty is prevalent, and - the risk involved in building new, high-cost plants has never been greater.

4.6 CONSUMER REQUIREMENTS

The final consumer is the one who makes the final decision whether to buy or not, and whether to buy rather one article in preference to another. This free decision-making is crucial in a liberal economic system and on highly developed markets; it also calls for a truly marketing-oriented business strategy on the parts of manufacturing and distributing firms.

Normally, the motivations underlying consumers' choice are manifold and varied. However, three main criteria can be mentioned as being

- fashion
- price
- fabric properties.

All these criteria become more and more important with higher per caput income levels and rising standard of living.

Regarding fashion and highly developed markets, it is estimated that today in textiles on the whole about 75% of turnover is subject to fashion influence. Quite obviously, fashion has always played a considerable role with respect to clothing articles. At present its impact has expanded and reaches household, furnishing and decorating textiles as well, and even underwear. As already stated elsewhere, this evolution is helping to further off saturation limits which are threatening some end-use sectors in highly industrialized countries and will allow textile consumption to still achieve more or less steady growth overall.

Not only man-made fibres but also natural fibres are perfectly well suited to cope with consumers' requirements dictated by fashion influence. Cotton, for instance, is now finding that, thanks to present fashion trends, it has some end-uses where it easily dominates and even is no longer price-sensitive, winning acceptance among young people who are prepared to pay the price demanded for fashion garments. This is particularly true for jeans and some other fashion goods, mainly of the sports and leisure type wear.

The recent record demand for cotton, while rival fibres are still trying to climb back to previous consumption levels, has come about because of the popularity of this fibre with consumers, and in particular the prolonged vogue for denim, and to some extent also for weft velvet and corduroy. This has secured cotton a market using large amounts of fibre in both men's and woman's wear at the expense of other trouser and skirt fabrics. The use of denim has been further extended into other clothing areas such as jackets and shirts. Cotton has also been aided by the accompanying fashion for cheesecloth and teeshirts, again mainly a market dominated by this fibre.

The fashion trend in force for many, specifically cotton fabrics has also, to a large extent, directly favoured developing countries, as cotton usually holds, as we have previously seen, a predominant share in their textile industries. Proof of this is the continued penetration of European markets by imports, many of which come from the newly established textile industries in cotton-producing areas.

This fashion trend in favour of casual, sports and other leisure wear is expected to continue in future in industrialized countries, owing to shortening of work hours, maintainance of high standards of living, and a consequent increase of leisure time and activities. In its studies, Battelle-Geneva foresees, up to 1980 and thereafter, growth rates for sports and leisure wear well above the average growth rates for clothing in general. Moreover, in the long-term, the same trend will spread out to other today still less industrialized and developed countries as well.

Regarding price as a consumer requirement, we have already mentioned elsewhere that the evolution charcterizing fibre prices can be detrimental to cotton and other natural fibres. However, thanks to the intrinsic fibre properties, current and, we are convinced, also future fashion trends, natural fibres will, as time goes on, improve their competitive situation by becoming less and less price-sensitive. If a profile of consumer requirements would be established concerning cotton goods, for example, we believe that price would prove to be quite secondary in importance to other considerations such as, in

particular, the fact that the fibre is a natural product, wear comfort (absorption) and fabric design corresponding perfectly to the actual fashion trend. This allows, and will always allows, natural fibres such as cotton, wool and silk to stand up to competition from man-made fibres, and these latter ones (at least the standard, mass-production types as opposed to speciality fibres) will go on being priced according to the price level of their natural counterparts, rather than the opposite.

With regard to fabric properties, consumer requirements relative to easy-care properties, crease-resistance, wear comfort, etc., greatly influence demand for specific fabrics and articles. For example, the crease-resistance and wear comfort properties may be decisive for the choice of knitwear rather than of a woven article; so far as fibre content is concerned, impact on wear comfort may lead to the selction of a cotton or wool product rather than a synthetic one (this is particularly important under extreme climatic conditions); on the other hand, impact on easy-care properties may give synthetic products a definite edge over natural ones.

These consumer requirements, coupled with fashion trends or not, lead to an advantage of one fibre, fabric or garment over another. They have also led to intensive research in order to confer given characteristics (such as easy-care, crease-resistance, permanent-press, machine washability, etc.) to natural fibres without damage to or substantial loss of their intrinsic qualities (handle, absorption, wear comfort, breaking load, etc.) and have finally brought about blends of natural and man-made fibres. In this case, the objective is to combine the advantages of both types of fibre. The tremendous success of blends over recent years is illustrated by the fact that certain articles previcusly in pure cotton and also certain articles in 100% synthetic fibres have been definitely replaced by mixed fabrics. So, blends have not only caused some lower market shares of cotton in given sectors, but have also allowed cotton to enter some other markets from which it had practically been excluded before.

As the various afore-mentioned factors demonstrate, cotton, for example, has to be considered today as an utterly practical and up-to-date fibre which is perfectly adapted to modern life, actual fashion trends and present consumer requirements, as constant efforts are being made to confer all the necessary easy-care properties to this natural fibre without any loss of its intrinsic qualities.

It is partly for this reason that today man-made fibre manufacturers want their fibres to compare more favourably with natural fibres and thus still seek to improve the quality of their products (e.g. hydrophilic polyester, bulked and spun-like yarn, yarn of bi-component fibres and also composite yarn with a PA or PES-filament core in order to achieve a yarn having a cotton-aspect and the specific properties of a continous filament.

There is plenty of evidence that natural fibres will be perfectly able to stand up to the competition by synthetic fibres also as far as their wear charcheristics are concerned. Therefore, the future prospects for natural fibres in general and cotton in particular appear to be bright in all respects. And this at least should have positive implications for developing countries in the long run.

4.7 INTERNATIONAL TEXTILE TRADE DEVELOPMENTS

During the past 15 years, the international textile trade has undergone considerable modifications. It is the West European countries and Japan which have been most directly affected by these modifications. Indeed, their foreign trade pattern in textiles and clothing has been competely modified, from importing fibres and exporting yarn as well as finished goods to importing much less raw material such as cotton fibre, for instance, but more semi-manufactured and finished goods instead. This change in the import structure is a direct result of the liberal trade policy adopted by the industrialized countries vis-à-vis developing countries.

The tables and figures in Appendix II give a detailed illustration of the international trade developements concerning fibres, textile products and clothing since 1963, or particularly between 1970 and 1974. International trade in made-up articles has grown much faster than trade in yarn and fabrics, and this trend will certainly continue in the near future.

On top of special bilateral agreements and preferential agreements between the EC and developing countries, which give the latter generalized preferences for their textile products, as well as agreements granting complete customs exemption in some cases, the GATT Multifibre Arrangement (MFA) favours the development of textile exports from developing countries. The basic objectives of this multilateral contract, freely entered into by those countries wishing to participate in it, are :

> "To achieve the expansion of trade, the reduction of barriers to such trade and the progressive liberalization of world trade in textile products, while at the same time ensuring the orderly and equitable development of this trade and avoidance of disruptive effects in individual markets and on individual lines of production in both importing and exporting countries."

Two essential criteria should be met by any possible multilateral solution of the general problems affecting the international trade in textiles and clothing. First, it must recognise the needs and respect the rights of both exporting and importing countries - of the exporting countries to capitalize on their advantages in one of the few industries in which they are competitive and of the importing countries to protect their industries and the people who work in them from the damage and hardship which would be caused by market disruption. Second, the solution must provide for the normal development of the industry.

Industrialized countries encounter increasing difficulties in trying to keep pace in the competition with the subsidised industries of many developing countries and East European countries. Owing to the considerable growth of imports, since the beginning of the 1970's and especially during the severe recession which has generally affected the textile industry more than other sectors, the textile and clothing industries of the EC and other West European countries are affected more and more. Strong appeals from the industry for action to deal with the problems caused by imports from low-cost countries are increasingly to be heard, and a trend towards more protectionist measures is becoming acute in the importing countries. The continued surges in import penetration represent a source of possible long-term damage, and the industry cannot accept being completely dismantled in the near future.

At a meeting in Spring 1976, representatives of the textile and clothing industries of Western Europe have drawn attention to the fact that these industries give employment to four million workers and that, between 1963 and 1975, these industries have lost more than a million jobs in the industrialized countries of Western Europe (about 750,000 in textiles and 300,000 in clothing); furthermore, the rate of unemployment in these industries has reached 30%.[1] It is felt that the West European textile and clothing industries have already paid a heavy price for the policies pursued so far.

As all sectors, from fibre production to garment making, are closely interrelated, the problems are aggravated; if any one processing level along the pipeline diminishes or even disappears, all other levels, including the fibre production stage, and thus the chemical industry, are directly affected. For example, if only one sector in the pipeline declines, fibre production will

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1) In Appendix III, we reproduce a document "The European Textile and Clothing Industries and the International Division of Labour" (source: Comitexil Bulletin 76/4) which describes the view about international textile and clothing trade developments by the Western European industry and puts forward some definite and constructive proposals for all parties concerned.

lose part of its domestic market on which it heavily relies in order to use maximum capacity and be able to produce at profitable levels. It cannot expect, in the future, to increase its exports owing to steadily stronger competition from manufacturers from the US, developing countries and other areas as well. Likewise, if the spinning or weaving and knitting sectors decline, each subsequent sector in the pipeline will have bigger supply problems and will have to import more goods from abroad to assure the necessary production inputs and so contributes to worsening the basic problem and situation.

One of the most important reasons for the growing concern in West European countries is surely the general fact that a considerable number of jobs are at stake and more particularly, perhaps, the realisation that alternative jobs for women are unlikely to become available if the textile and clothing industries disappear. It is also possible, then, that the danger of an OPEC-type situation might arise, should Europe become totally dependent on outside sources for its clothing.

All this leads to appeals for stronger import protection for fibre, textiles and clothing, and possible future reactions from West European countries, and perhaps Japan, may include reinforcing existing measures or introducing new measures, such as:

- import quotas for specific products and product groups

- self-restraint agreements developing countries are often persuaded to apply voluntarily, and, in the worst event,

- complete import stops.

In order to get a better and more concrete idea about the stand West European countries may take at the new re-negotiation stage of the GATT-MFA, which now regulates world trade in textiles to a large extent, the report "The European Textile and Clothing Industries and the International Division of Labour" (see Appendix III, para. 8, Concrete proposals for the orderly development of trade and of world textile and clothing production) may serve as guideline.

One problem which makes it rather difficult for the EC in particular to react to the threats which the rising import pressure puts on its industries is the fact that it remains some way away from drawing up an industrial policy for textiles. Thus, the co-ordination which is likely to be required if a competitive European textile industry is to survive is at present missing, leaving each member to go ahead with its own plans to restructure the industry. Moreover, the disadvantage of such government-supported restructuring plans is that it may not always be the most competitive, or efficient, producers who will survive.

Sometimes it is felt that a domestic producer within Europe has certain advantages, such as market proximity, ability do develop close links with designers and retailers, quick response to fashion changes. However, to remain really competitive, the industry will have to invest, and to justify such an investment, it will have to have the long production runs it can get only through large markets; but it is these markets that are constantly and seriously curtailed by imported goods.

What the final outcome of the up-coming GATT-MFA re-negotiations in 1977/78 will be is completely in the open. Significant modifications in the sense of particular improvements will probably be sought by industrialized countries. However, it is also possible, as the Chairman of the Textiles Surveillance Body of GATT has mentioned at a recent IFCATI-conference in Vienna, that "the Arrangement will not be renewed at all. This would leave countries wishing to protect their markets against imports to operate under the safeguard

provisions of the GATT, which are themselves under discussion in the multilateral trade negotiations. For my part I think it likely that special rules for the textile sector will continue to be necessary, but there is no sign, at this early stage, of a consensus on this point among the interested countries. They may be expected to reserve their position at least until they see the outcome of the major review."

One aspect that should not be overlooked is that the international textile trade problems arise not only between the industrialized and developing countries, but increasingly also among countries of the third world itself. In effect, major exporters, such as India, Pakistan and Singapore, obviously do not wish to see their quotas diminish in favour of other third world countries.

The same problem area is cornered by the report of the representatives of the textile and clothing industries of Western Europe (see Appendix III). They say that the international division of labour has brought about, at world level, a situation of imbalance as harmful to the industrialized countries as to the genuinely developing countries. And they rightly conclude that, in the end, the genuinely developing countries have not been able to benefit from the opening up of the markets of the industrialized countries. Their share of total exports by the socalled developing countries as a whole, has remained very small; furthermore, due to the competition they have met, prices received have been un-remunerative and, in fact, have contributed to a further impoverishment of their economy.

4.8 CONCLUSIONS

The prevailing monetary problems and insecurity tend to give birth to protectionist measures and thus influence negatively the further liberalization of the world trade. It is also possible that Western industrialized countries may be entering a long-term economic downward trend which will be accompanied by high inflation rates. These evolutions will affect more or less directly developing countries as well and seriously restrain their growth potential.

The expected reduction of growth in the industrial sectors of industrialized countries will be partly compensated by the movement towards more services. This may lead to an increased transfer of production of goods involving high labour costs to developing countries and would thus contribute to developing further international specialization and co-operation among industrialized and developing countries.

Unfortunately, many factors tend to reduce the shift towards developing and low-wage countries. One such phenomenon is the fact that in countries in which labour cost is low, in general, capital cost is very high. Another factor which tends to slow down the production transfer lies in that industrialized countries have a definite advance over developing countries in textile technology, quality levels and aesthetics, and they are best suited to constantly make the most and best use of it. As the economic evolution forces industrialized countries always to increase and improve their technology and quality standards, the existing gap hardly ever narrows. The same evolution, and in particular the high and steadily rising cost of re-equipment, makes investment decisions with regard to timing and financing increasingly difficult in all countries. Such decisions, however, will be ever more critical for developing countries, as their industry tends equally to become more capital-intensive, owing to their acute shortage of capital and its high cost. In the end, the trend towards higher capital intensity seems likely to benefit the industrialized countries above all.

Furthermore, it seems that it is not always the objectively most adequate investments which are chosen in developing countries. This, regretably, represents a waste of scarce resources.

As to the fibre production and consumption, with the largely predominating share of man-made fibres in the long run, cotton will tend to become more and more some sort of a luxury fibre, almost to the same extent as wool is already today. This should ensure the future of cotton production and its sale at profitable price levels. Cotton, in general, has an excellent image with

consumers, is favoured by fashion trends as well as particular unchangeable climatic conditions, and thus, ultimately, appears as a really irreplaceable fibre. So, everything should be done to increase its production and improve its quality.

As world production of textiles and clothing has been growing faster than consumption in the past, world markets often appear as being disrupted, and this situation may be aggravated in the future as the same trend is likely to prevail.

In industrialized countries, especially in the most advanced West European countries where the market size stagnates or even tends to diminish, future growth will be principally growth in quality, and not so much growth in volume anymore. This trend will

- be reflected in consumption of textile goods as consumers will invariably require higher quality items,

- emphasize further the influence of fashion,

- affect similarly the consumption of fibres in industrial applications, where the use of expensive speciality fibres is widening in several end-uses and substitution of non-fibrous materials constantly growing; as a result,

- widen the gap between industrialized and developing countries as the former will permanently put more effort into new and more sophisticated machinery, processes and products in order to meet consumer demand.

So far as the international textile trade developments are concerned, developing countries have strongly increased exports to industrialized countries, much more so in clothing than in textile products. This is due to the fact that

the clothing industry is still predominantly labour-intensive, and the advantage in wage costs has helped developing countries to expand above all their world market shares in the labour-intensive sectors.

Industrialized countries encounter growing difficulties in trying to keep pace in the competition with subsidised industries and low-wage countries, particularly in the field of cotton-based, but increasingly also in man-made fibre-based products. The situation in the most affected countries, that is, Western Europe and Japan, is getting so worrying that appeals for stronger import protection, sometimes even for complete import stops, are increasing. This seriously hampers the development of liberal world trade, as well as the economic development of developing countries, and is of particular importance as the GATT-Multifibre Arrangement is due for re-negotiation in a short time. The background against which the MFA will be re-negotiated is completely different from the one which prevailed during the initial negotiation, and the results will most certainly not be as positive for the developing countries as substantial improvements will be sought by the industrialized countries, if the MFA is renewed at all.

5. OVERALL CONCLUSIONS

5.1 CRITICAL FACTORS

Further to the preceding analysis of trends and projections affecting the technical, politico-socio-demographic and economic worlds, we draw up hereafter a summarizing list of some factors which will represent critical issues with respect to the further development of textile industries in developing countries.

5.1.1 FACTORS BASICALLY RELATED TO PROBLEMS CENTERING ROUND THE TECHNICAL WORLD ASPECTS

In principle for all developing countries, but particularly for the more advanced ones and those with higher ranking objectives like foreign exchange earnings through exports of semi-manufactured and finished goods, investment decision-making becomes ever more complex owing to the trend towards more advanced, and not exclusively mechanical egineering, and generally ever more sophisticated systems; this

(1) - involves choices not only from among different machines of the same type, but also from among different systems and techniques

(2) - requires less labour overall, but also more better trained workers and specialists (in many countries this may pose a problem of alternate national development goals, i.e., "offer of jobs" and "use of competitive equipment" to be able to compete on world markets)

(3) - needs ever larger capital resources

(4) - requires better maintenance and work organisation (as to plant and machine lay-out, production flow, supply of spares, type of products, etc.) in order to make the most efficient use of highly productive and expensive capital equipment

(5) - needs more and better trained management in technical, organisational, commercial, economic and marketing aspects.

5.1.2 FACTORS BASICALLY RELATED TO PROBLEMS CENTERING ROUND THE POLITICO-SOCIO-DEMOGRAPHIC WORLD ASPECTS

The best future growth potential for the consumption of textiles exists in developing countries; not so much in least developed countries, where substantial demographic growth tends to render impossible rising per caput consumption of textiles, but in countries having their own energy and/or raw material resources. The development of textile industries can be considered as a way out of underdevelopment (this is an evolution similar to that of industrialized countries, where textiles were one of the prime sectors to benefit directly from the industrial revolution).

Dependent on the development phase and objective —

- maximum employment of available labour
- self-sufficiency and import substitution
- export earnings --

each type of problem area may vary in intensity, but basically relates to

(6) - choice of the specific production activity, equipment, type of organisation, etc.

(7) - necessary capital resources

(8) - acquisition and transfer of know-how

(9) - knowledge of markets and competitive situation.

As development progresses and income levels rise, the consumer requirements in developing countries evolve. Consequences are :

(10) - growing demand for higher quality goods

(11) - fashion influence which starts to make itself felt more strongly

(12) - increasing competition to face from abroad

(13) - marketing-oriented business policy becomes ever more important.

Developing countries which are pushing the development of their textile and clothing industries are

(14) - confronted with an almost insurmountable problem of constant and ever growing need for training of people

. employment of new, yet unskilled labour
. permanent refreshing and upgrading of knowledge of existing labour and management personnel.

5.1.3 FACTORS BASICALLY RELATED TO PROBLEMS CENTERING ROUND THE ECONOMIC WORLD ASPECTS

The forecast lower economic growth in industrialized countries will not allow anymore substantial growth of exports from developing countries as in the past 10, 15 years. The gap between world textile production and consumption may be widening to an extent which the growth of consumption in developing countries will not be able to compensate. So,

(15) - market disruptions may become more acute, leading to problems concerning the international trade and price levels (which tend to become unprofitable).

Owing to the continued surges in import penetration, industrialized countries will start to react against the present arrangements regulating international textile trade, in order to safeguard the survival of an industry offering plenty of jobs in general and for women in particular, with

(16) - consequent problems in the area of international trade policies (more restraints, etc., which will seriously hamper further expansion of liberalized world trade as well as economic interrelations which would be most profitable to both parties).

It has also to be foreseen that the future will be marked by

(17) - high inflation rates which will affect developing countries to a larger extent than industrialized countries, and namely restrict their competitiveness through higher cost of imported products such as capital goods, chemicals, and services;

(18) - continued, if not accentuated, lack of capital, coupled with high interest rates, as equipment cost as well as auxiliary costs increase because of the involvement of more advanced techniques and more complex systems, and also because of inflation, which puts such costs further up;

(19) - continued monetary insecurity and devaluations, with the consequence that imports into developing countries of necessary goods are subject to strong price fluctuations and tend to become too expensive, so that they are either limited or not authorized at all, thus leading to

- unsatified demand in the country
- insufficient use of production capacity
- lack of profits.

For various reasons, the best or optimum investment project is

(20) - not always chosen in developing countries with the result that existing resources (money, labour, capital equipment and market opportunities) are badly or insufficiently exploited.

As the prospects for growth of natural fibres and cotton in particular are bright, developing countries should try to make the most out of this trend; but to this end, they

(21) - need assistance with respect to

- improving yields (by better methods and organisation)
- improving quality of fibre and products
- assimilating research work carried out elsewhere (industrialized or more advanced developing countries)
- stabilizing price flutuations.

As developing countries want increasingly to enter production of man-made fibres,

(22) - danger arises of

- overcapacity and market disruption
- national or regional duplication
- investment into type-wise inadequate fibre production
- unsound, direct competition to possible national production of natural fibres.

With rising income and standard of living levels, consumer requirements in developing countries evolve also, and quality and fashion influence increases. As this happens

(23) - production of textiles and clothing needs steady adaptation, and thus requires

. marketing-oriented business strategy

. up-to-date equipment in so far as processing techniques are concerned.

EC-countries will ultimately draw-up a common industrial policy for textiles, and they, but probably also other West European countries and Japan, will certainly ask for substantial improvements for fibres, textile products and clothing in a new MFA. But there is also a chance that this Arrangement will not be renewed. Whatever happens,

(24) - the consequence will be a set-back of developing countries, and thus a risk of a slow-down in their development; further, it is likely that in the future, trade between industrialized countries themselves will become more important, so developing countries should seek to achieve the same among them.

5.2 PRIORITY AREAS OF FOCUS

With respect to the aforementioned critical factors, we classify priority areas of focus for future technical and other assistance to developing countries in seven categories under the following headings :

- basic advice and studies
- financing
- technology transfer
- research and development
- training and education
- marketing
- global policy.

Each category consists of various activities on which the impact should increasingly by put within assistance programmes to be provided. In detail, each group could incorporate, among others, the following assistance activities in connection with development projects:

(1) Basic advice and studies

- detailed and thorough screening of project idea
- objective assessment of direct link with national development priorities and objectives
- regular check of consistency with surrounding economic and market conditions
- advice on optimum solution in case of technology transfer
- regular investment opportunity and pre-feasibility studies
- complete feasibility studies

(in order to guarantee that the technically, economically, and commercially most adequate type of investment is chosen)

(2) Financing

- availability of more funds at bearable interest cost
- special financing schemes favouring developing countries not in possession of substantial energy and raw material ressources, as well as least developed countries which suffer most from basic lack of capital and inflation

(3) Technology transfer

- securing organisational and financial backing of technology transfer
- ensuring acquisition of best adapted equipment (for specific country and markets aimed at)
- favouring special adaptation of equipment in developing countries (as it is not necessarily the best equipment in industrialized countries, nor the one imposed by some machinery builder, which will be the most suitable one for developing countries)
- encouraging transfer between more advanced developing and less developed countries

(4) Research and development

- encouraging improvement of methods, organisation, and quality in natural fibre production, particularly in cotton
- testing and quality control
- assimilating advanced technology and research results obtained elsewhere

- creating and strengthening institutions (operating as a nucleus in a country or region) which are aware of R + D achievements in industrialized countries and other developing countries, and have assimilated them, can give advice to industry, and solve arising practical production problems in a satisfactory manner

(5) Training and education

- setting up of training centers in developing countries
- providing backing-up support of local trainers by experts
- instituting special courses, seminars, and training programmes in developing countries
- impact not only on technical problems, but much more, on organisation, management, and marketing

(6) Marketing

- implanting of fully marketing-oriented strategies, including aspects of
  . market research
  . product development
  . distribution
  . advertising
  . price policy,

  as markets will have to be identified which can absorb growing production, only the types of article and quality required by consumers should be produced, and this varies depending on the markets aimed at - domestic or export, and when export, for similar markets as own or for higher developed ones.

(7) Global policy

- promoting of trade co-operation and opening up new market opportunities among developing countries which would favour
  . an overall increase in trade, and
  . the development of least developed countries.

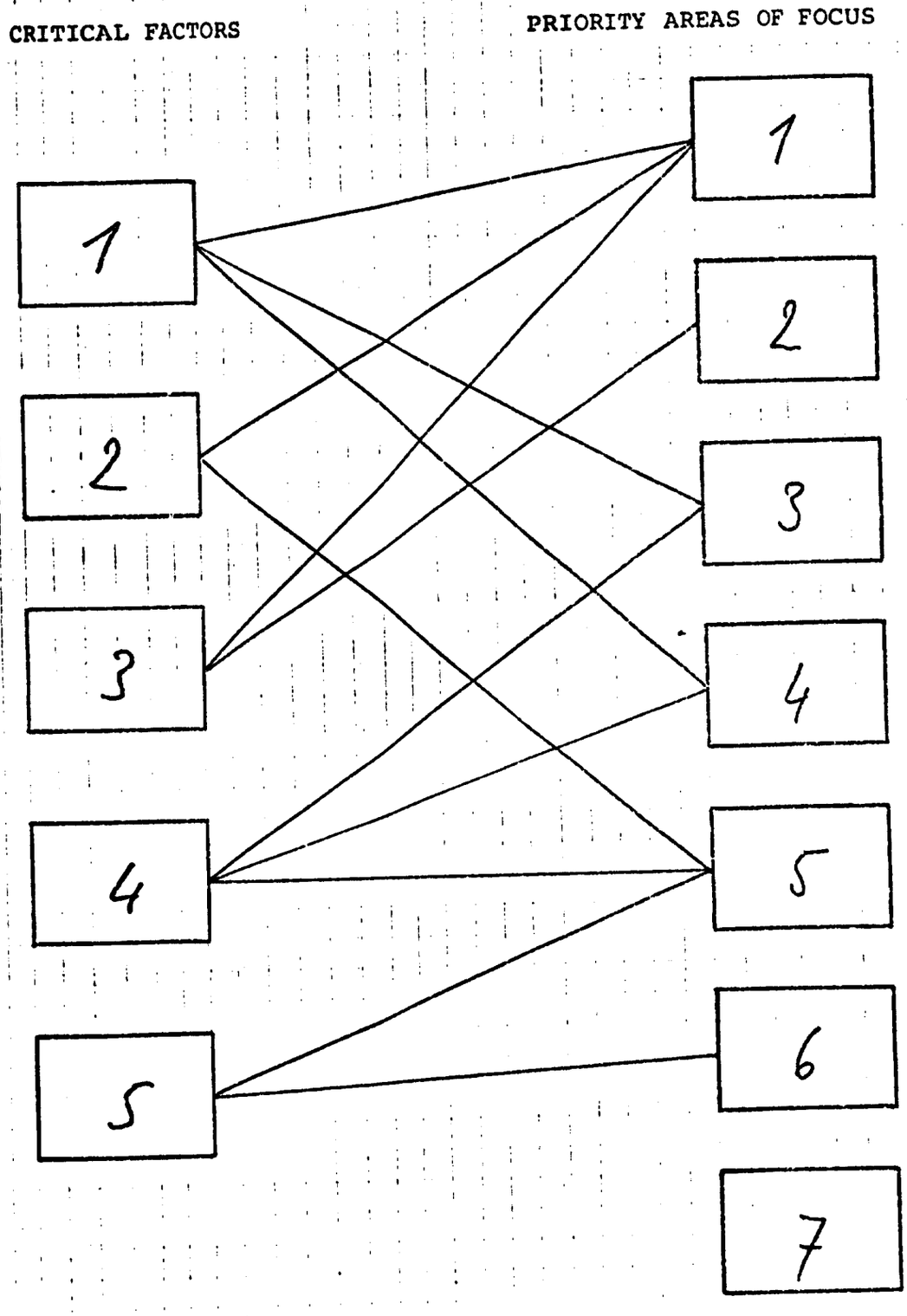
5.3 LINK BETWEEN CRITICAL FACTORS AND PRIORITY AREAS OF FOCUS

Below, we have graphically shown which critical factors call for a given assistance activity in a selected priority area of focus.

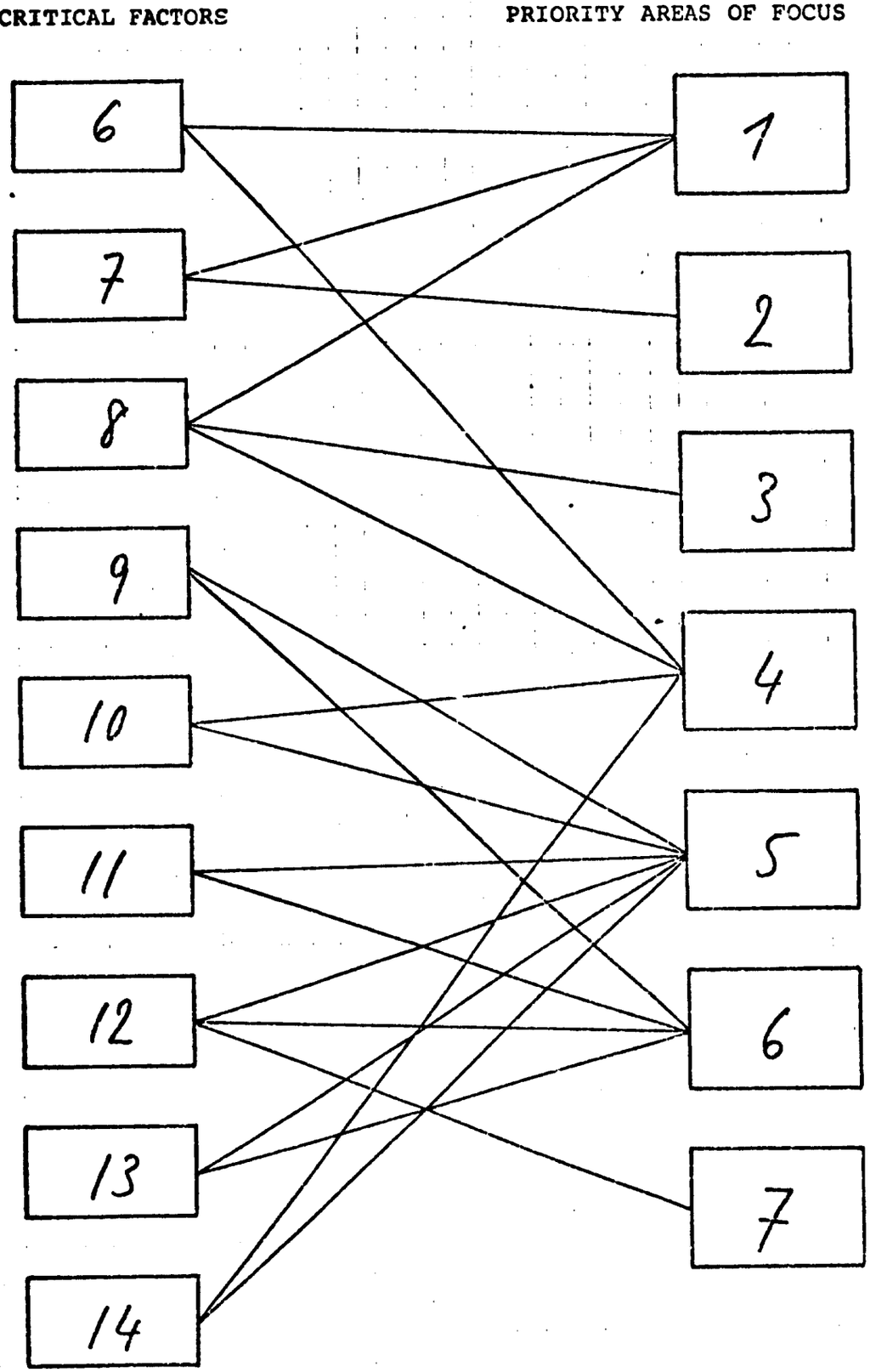
Neither the factors nor the assistance activities are to be considered exhaustive, and since no rank weighting of these is involved, a summing-up of the number of links between critical factors and a given area of focus is probably not representative for the ranking of the latter; nevertheless, as an indication, the number of overall links allow putting the selected priority areas of focus into the following order:

- basic advice and studies
- training and education, as well as marketing
- research and development
- technology transfer
- financing, and global policy.

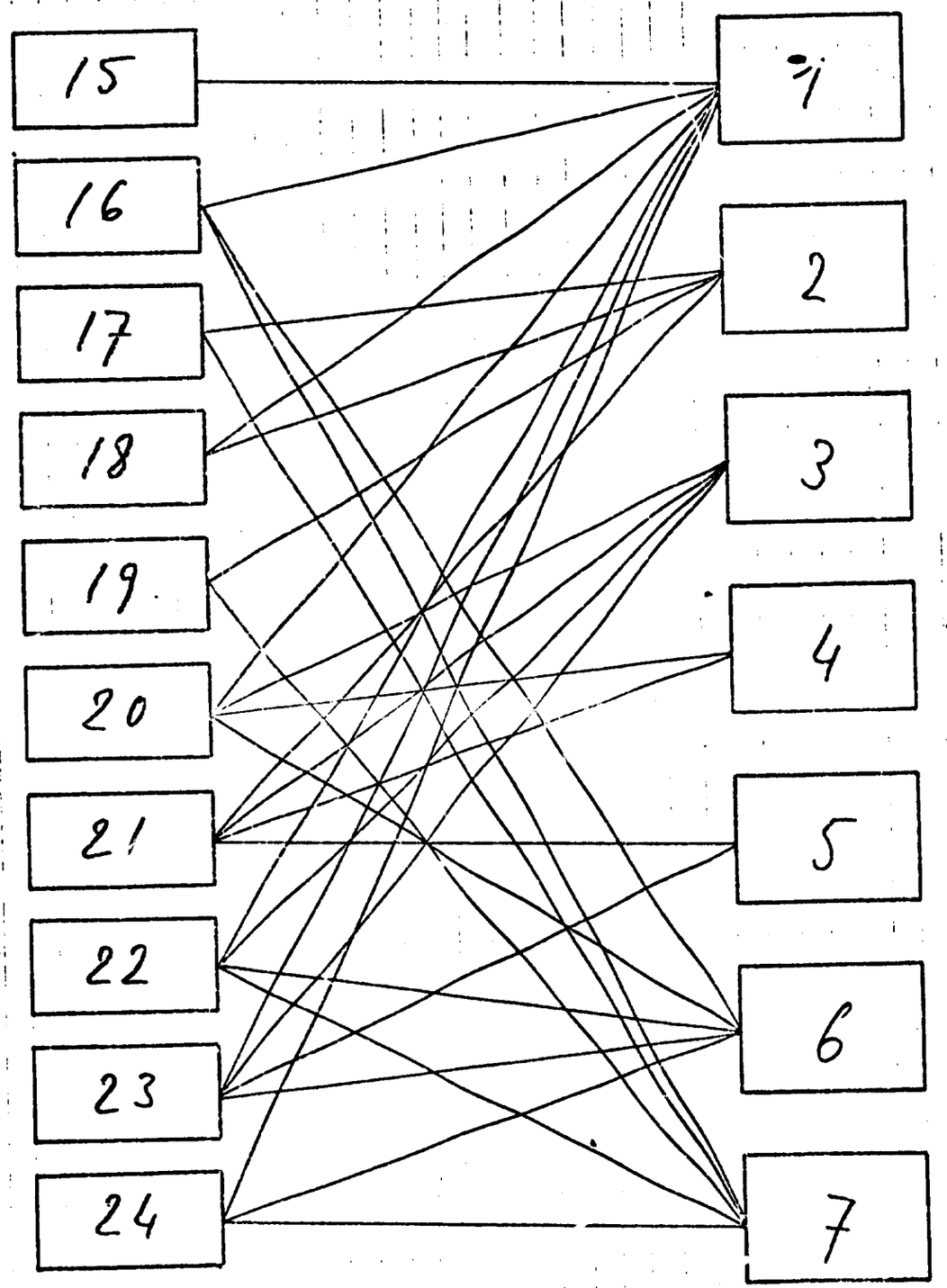
5.3.1. Factors basically related to problems centering round the technical world aspects



5.3.2. Factors basically related to problems centering round the politico-socio-demographic world aspects



5.3.3. Factors basically related to problems centering round the economic world aspects



APPENDIX I

4.2 DESCRIPTION OF THE DETAILED BATTELLE CENTRAL SCENARIO

4.21 PERIOD 1975-80

a) The World

In very broad terms, this period is characterized by greater instability in trade relations. Some progress is made towards further trade liberalisation (including the area of non-tariff barriers) as fluctuations of exchange rates reduce the value of tariff protection. Multilateralism stands by as a process of problem solution at the world level, but strong protectionism and bilateral agreements remain exceptions. Temporary and sectorial measures are taken in some OECD regions mainly in order to maintain the level of employment in manufacturing sectors affected by foreign competition (including competition emanating from the most advanced LDC's).

b) The OECD

Despite more irregular paths and a general slow down, average economic growth remains high (~4%) and inflation is better controlled (~7%). Japan continues to move faster than the other countries (but with a growth rate lower than in the 60's), and the USA witnesses an unprecedented period of prosperity (as local and foreign investment sharply increases).

Some European countries, in particular GB and Italy, are slowed down in their growth process by increased social tensions. But a general movement of economic recovery from the recessions of 1974-75-76 takes place, and previous growth rates are again attained in the other European countries.

With no specific Atlantic or Pacific Trade Agreement, there is a great expansion of American exports (which starts playing a greater role in American economic growth), often accompanied by a reduction of the European trade share in third areas (in particular in the Pacific area, South America, and the CPE(*)).

For Europe, intra-European trade, which continues to develop faster than world trade, remains the main source for trade expansion for each single country. The extension of the Common market to GB, Denmark and Ireland strongly contributes to this development.

The overall balance of trade of Europe towards the rest of the world is, however, negative as a result of the slower growth of exports (affected by the American and Japanese competition) and of the increased demand for imports of raw materials and energy generated by a higher level of economic activity.

Japan remains highly competitive, but progressively moves its production and exporting base for basic manufactured products to other countries (Canada, Australia, advanced developing countries). Japanese capital investment is massively directed towards joint-ventures in those areas which are rich in raw materials and energy resources. In Japan, industrial specialisation moves to high technology industries.

Japanese faster trade growth is found in its relations with Continental China and other countries of the Pacific Rim. In this area, the price competition between Japan and the US is very fierce.

Canada positively benefits from the US expansion period, but slowly decreases the relative importance of its large trade link with the US by increasing trade relations with Europe and Japan.

(*) Centrally Planned Economies

The Canadian export trade moves progressively from its raw material base to increased levels of transformation as a result of local investments made in joint ventures with Japanese, American, and European industries.

c) The OPEC

The real price of oil slightly decreases during the period, and no important substitution takes place in energy sources : despite energy conservation policies, the demand for OPEC oil remains high, and continues to increase as a result of the high growth period in the USA and the economic recovery in Europe.

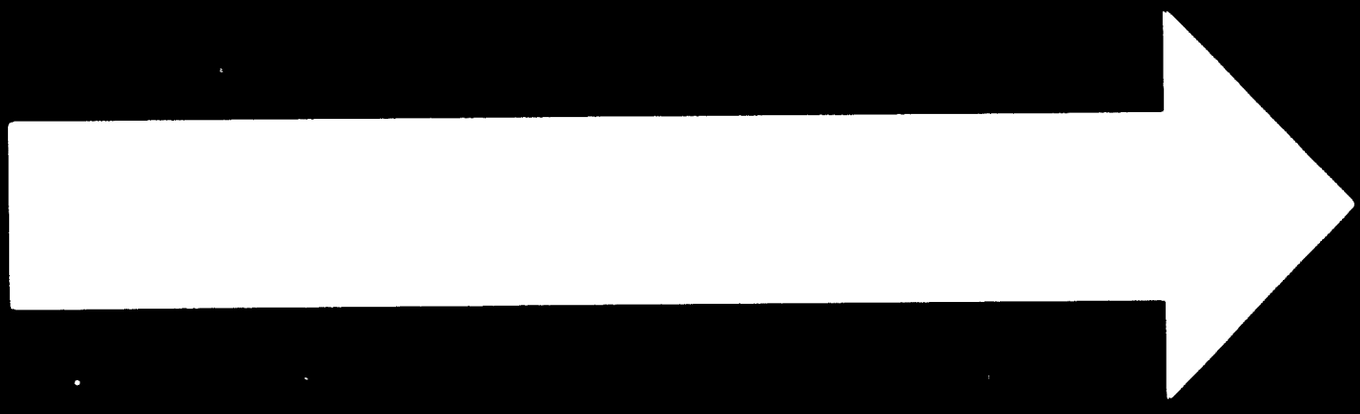
In OPEC, the acceleration of the economic development process leads to a rapid increase of imports of equipment goods and other manufactures. Even if in some countries balance of payment deficits appear, OPEC acquires great financial power ; its foreign investment policy is largely orientated towards the OECD. Some countries (Algeria, Iran, Nigeria, Venezuela) become regional growth poles, activating economic development in neighbouring countries.

d) The LDC's (non-OPEC)

Raw material prices continue to be affected by strong fluctuations, but do not reach the mid-70's peak. Attempts to build mini-OPEC's are unsuccessful. As the prices of manufactured products do not continue to decline relatively as in the past, for many LDC's the terms of trade move unfavourably. The share of LDC's in world trade therefore continues to decline.

A Group 1 of advanced LDC's (originally including some OPEC countries mentioned above, but also some South American countries like Brazil and Mexico, Mediterranean countries and export-orientated

C-345



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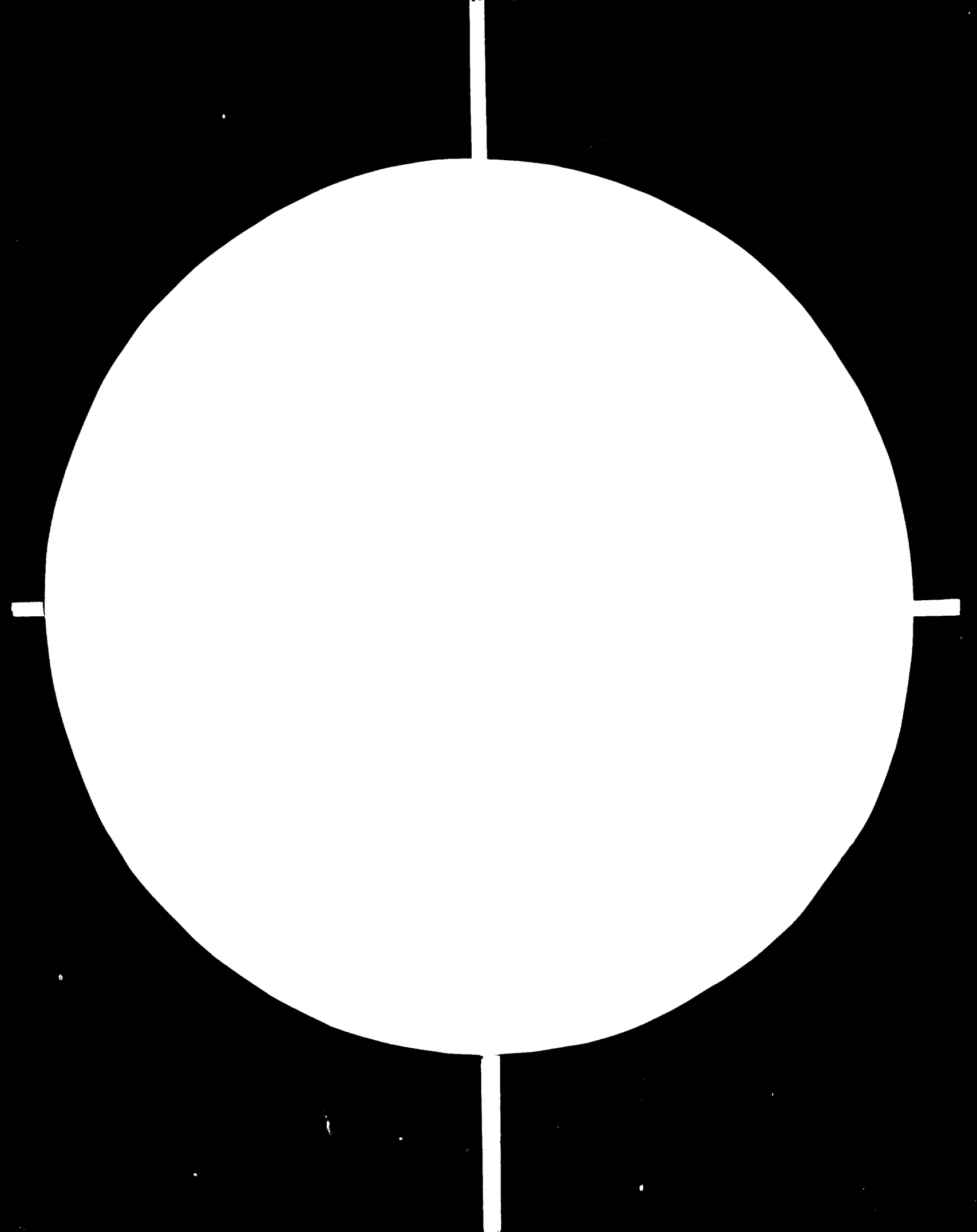
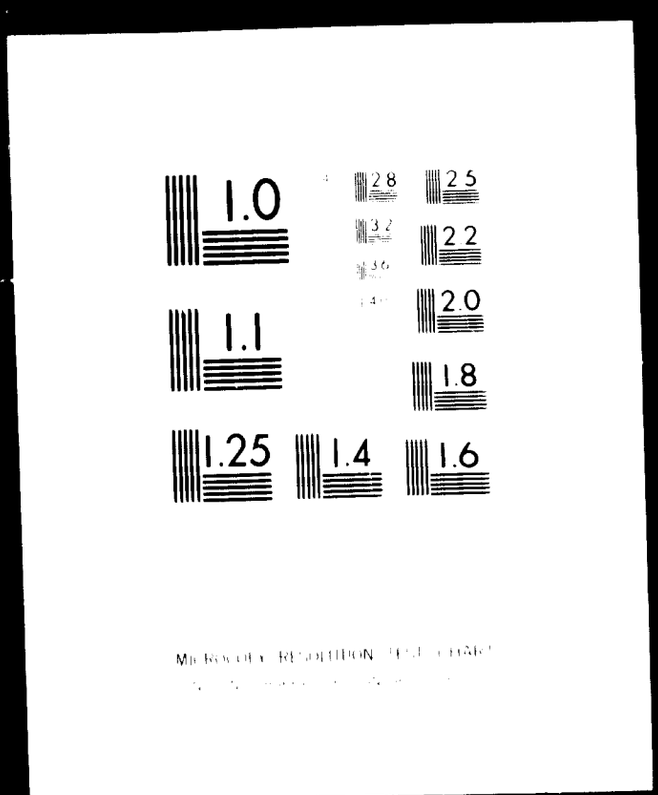




Asian economies like those of South Korea and Taiwan) follows a rapid industrialisation process and increase exports of manufactured products to the OECD (despite strong protectionist reactions); these countries gain access to capital markets in OECD and OPEC, and become an integral part of the "developed" world.

A Group 2 including the majority of the other developing countries are starting their process of industrialisation ; their needs for equipment goods and energy, and the instability of their export (raw materials) receipts create large balance of payment deficits. Each country's situation is examined separately by the international organisations (IMF and IBRD) and by the OECD and OPEC countries, and specific financing schemes are established to allow the development process to continue. In general,however,a strong pressure is put towards greater balance of payments equilibria,and imports are carefully restricted ; the general process of economic development is slowed down and many countries stagnate.

At the extreme, a Group 3 of very poor LDC's (including India, Pakistan and Bangladesh,as well as some African countries) cannot move at all out of economic stagnation.

They suffer food shortages, have little export capacity, and virtually no possibility for direct access to foreign capital markets. The progressive reduction of international aid continues to take place as in recent years.

These countries are forced,therefore,to reduce their imports of equipment goods and cannot achieve any real industrialisation process. The gap between these poor countries and the OECD and CPE richer countries widens and raises new issues at world level.

e) The CPE's

The Centrally Planned Economies (COMECON and China) do not participate in the multilateral trade system. While the USSR continues to follow autarchic policies, the other COMECON countries see progressive interest in increased trade relations with the OECD. The share of trade with the US is overall substantially increased.

In general, during this period, CPE's trade with the OECD grows faster than total world trade.

4.22 PERIOD 1980-85

a) The World

This is expected to be a period of stable recovery and growth with substantial progress of multilateralism, as many LDC's and CPE's become active members of international monetary and trade agreements.

Trade development is again faster than world economic growth and the international distribution of activities is improved.

b) The OECD

The OECD continues to enjoy relatively high levels of economic growth ($\geq$ 4%) ; Europe again has higher growth rates than the USA, as the end-result of a process of structural change and of increased competitive capacity (owing to a relative increase of the value of the US dollar and the yen).

The process of integration of the European Community is successfully continued, and towards the end of the period Southern European countries (Greece, Portugal, Spain) become a part of it and bring an additional impetus to intra-European trade. In the USA, the increased value of the dollar reduces the export drive and encourages a flow of direct investments in the most advanced developing countries.

Japan and Canada continue their rapid development process along the lines described for the period 1975-80.

c) The OPEC and the advanced LDC's (Group 1)

The OPEC remains an organisation co-ordinating the petroleum policies of exporting countries ; greater interdependence with the OECD leads, however, to a moderate oil price policy, while other energy sources are starting to be developed in the consumer countries. Indeed the OPEC countries as well as the LDC's Group 1 can be assimilated with the OECD area ; they also have constituted regional growth poles, accelerating the development process in other LDC's ; new multinational corporations, based in these countries, transfer industrial technologies throughout the developing world.

d) The other LDC's (Groups 2 and 3)

The increased activity levels in the OECD, the OPEC, and the Group 1 LDC's leads to higher real export prices for raw materials ; some of the LDC's take advantage of this development to accelerate their industrialisation process.

However, in the Group 3 countries, which do not export raw materials and have high population densities, the stagnation of the

70's is followed by large food shortages and famines. As a result, strong autarchic policies are adopted,and agriculturally based development processes are established. The participation of these countries in world trade is further reduced.

e) The CPE's

During this period, the integration of the CPE countries with the OECD area is increased ; in particular between the European Community and the COMECON area,regional trade agreements replace existing bilateral agreements and generate additional trade possibilities. This is a first move towards participation in the world multilateral system.

China moves rapidly out of its autarchic policies, and trade develops mainly with Japan and the USA.

Graphique 9 : Evolution des exportations de fibres textiles

Graph 9 : Evolution of exports of textile fibres

Diagramm 9 : Entwicklung der Ausfuhr von Textilfasern

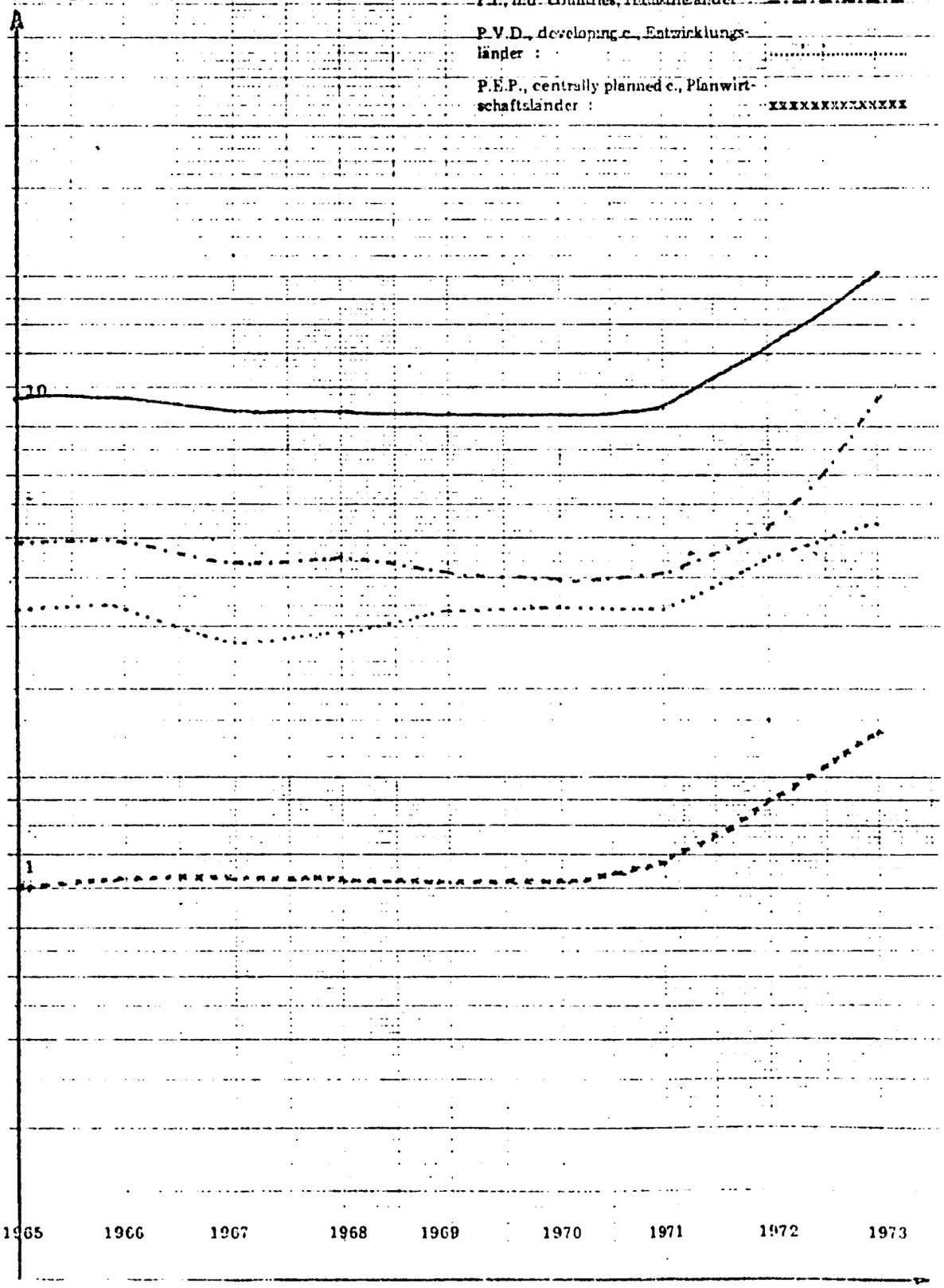


TABLEAU 13

ECHANGES MONDIAUX (1) DE FIBRES TEXTILES (2) (Mio $)

WORLD TRADE IN TEXTILE FIBRES

WELTHANDEL MIT TEXTILFASERN.

Régions d'exportation / Provenance / Ursprung \ Destination / Bestimmung	Pays industrialisés / Industrialised countries / Industrialisierte Länder				Pays en voie de développement / Developing countries / Entwicklungsländer				Pays de l'Est / Eastern countries / Ostländer				MONDE / WORLD / WELT			
	62	71	72	73	62	71	72	73	62	71	72	73	62	71	72	73
Pays industrialisés (2) / Industrialised countries / Industrialisierte Länder	2,18	1,60	2,19	3,73	0,35	0,72	0,76	1,19	0,23	0,22	0,21	0,73	2,78	2,59	3,30	5,72
Pays en voie de développement / Developing countries / Entwicklungsländer	1,39	1,19	1,60	1,79	0,21	0,39	0,59	0,87	0,27	0,59	0,58	0,72	1,92	2,17	2,77	3,20
Pays de l'Est / Eastern countries / Ostländer	0,07	0,27	0,49	0,73	—	0,02	0,03	0,05	0,29	0,38	0,39	0,44	0,37	0,67	0,91	1,22
MONDE / WORLD / WELT (2)	3,66	3,05	4,27	6,25	0,56	1,13	1,38	1,51	0,79	1,18	1,29	1,89	5,14	5,41	6,93	10,13

(1) base exportations — based on exports — Grundlage : Ausfuhr.

(2) Echanges intra-CEE exclu ; 1962 : CEE (6) — 1971 — 1973 : CEE (9)
Intra-EEC trade, excluding ; 1962 : EEC (6) — 1971 — 1973 : EEC (9)
Intra-EWG-Handel, ohne ; 1962 : EWG (6) — 1971 — 1973 : EWG (9)

(3) CTCI/SITC 26.

Base — Basis — Grundlage :

Source : Bulletin Mensuel de Statistique de l'ONU : Mai 67 — Avril 75 — Juillet 75.

TABLEAU 14

PART DES GRANDES ZONES ECONOMIQUES DANS LES ECHANGES MONDIAUX (1) DE FIBRES TEXTILES (Mio $)

SHARE OF THE MAIN ECONOMIC AREAS IN WORLD TRADE IN TEXTILE FIBRES (3)

ANTEIL DER WICHTIGSTEN WIRTSCHAFTLICHEN ZONEN AM WELTHANDEL MIT TEXTILFASERN.

Origine / Origin / Ursprung — Destination / Bestimmung	Pays industrialisés / Industrialised countries / Industrialisierte Länder				Pays en voie de développement / Developing countries / Entwicklungsländer			
	62	71	72	73	62	71	72	73
Pays industrialisés (2) / Industrialised countries / Industrialisierte Länder	59,9	52,2	51,0	59,7	62,5	63,7	55,1	62,3
Pays en voie de développement / Developing countries / Entwicklungsländer	38,2	35,9	37,5	28,6	37,5	33,6	42,3	35,1
Pays de l'Est / Eastern countries / Ostländer	1,9	8,9	11,5	11,7	–	2,7	2,2	2,6
MONDE (2) / WORLD / WELT	100	100	100	100	100	100	100	100

Pays de l'Est / Eastern countries / Ostländer				MONDE / WORLD / WELT			
62	71	72	73	62	71	72	73
25,3	19,6	24,2	38,6	54,1	47,7	47,3	56,5
34,2	30,0	45,3	38,1	37,4	40,1	39,7	31,6
36,7	32,2	30,5	23,3	7,2	12,1	13,0	11,9
100	100	100	100	100	100	100	100

Footnotes : voir Tableau 13 — see Table 13 — siehe Tabelle 13

TABLEAU 21

ECHANGES MONDIAUX DE PRODUITS TEXTILES ET D'HABILLEMENT (Mio $)

WORLD TRADE IN TEXTILE PRODUCTS AND CLOTHING. (a)

WELTHANDEL MIT TEXTILIEN UND BEKLEIDUNG

Origine des exportations / Herkunft		Pays industriels / Industrialized countries / Industrialisierte Länder				Pays en voie de développement / Developing countries / Entwicklungsländer		de développement countries Länder		Pays de l'Est / Eastern countries / Östliche Länder				Monde / World / Welt			
Destination / Bestimmung		70	72	73	74	70	72	73	74	70	72	73	74	70	72	73	74
Pays industriels (b)	Textile	3520	4590	5980	6970	2225	2630	3810	4670	330	380	760	1250	6125	7805	10330	12990
Industrialized countries	Habill.	1630	2090	2565	2830	410	470	550	750	135	180	165	195	2175	2710	3290	3775
Industrialisierte Länder	Total	5150	6685	8525	9800	2635	3100	4160	5420	515	730	925	1445	8300	10515	13610	16665
Pays en voie de développement	Textile	1095	1625	2210	3340	520	1005	1460	2050	240	345	365	490	2155	3275	4535	5580
Developing countries	Habill.	1260	2410	3670	4690	190	320	420	580	75	150	180	210	1525	2880	4270	5480
Entwicklungsländer	Total	2355	4335	6380	8030	1010	1825	1880	2630	315	495	545	700	3680	6155	8805	11360
Pays de l'Est	Textile	220	390	670	720	230	395	570	720	270	445	540	680	830	1230	1780	2020
Eastern countries	Habill.	165	215	455	620	50	80	125	155	640	980	1160	1275	805	1375	1740	2050
Östliche Länder	Total	385	705	1125	1340	280	475	695	875	920	1425	1700	1855	1685	2605	3520	4070
MONDE (a) (b)	Textile	4835	6910	9340	11030	3375	4030	5840	7440	900	1370	1665	2220	9110	12310	16645	20790
WORLD	Habill.	3055	4815	6690	8140	650	870	1095	1485	850	1250	1506	1680	4555	6965	9290	11395
WELT	Total	7890	11725	16030	19170	4025	4900	6935	8925	1750	2650	3170	4000	13665	19275	25935	32185

(a) CTCI — SITC 65

(b) CTCI — SITC 84

(c) Différentes sources GATT
Various GATT sources
Verschiedene GATT-Quellen.

PART DE CHACUNE DES ZONES ECONOMIQUES DANS LES EXPORTATIONS. (%)

SHARE OF EACH ECONOMIC AREA IN EXPORTS (%)

ANTEIL JEDER WIRTSCHAFTSZONE AN DER AUSFUHR (%)

TABLEAU 22

Origine / Destination / Bestimmung		Pays industrialisés / Industrialized countries / Industrialisierte Länder				Pays en voie de développement / developing countries / Entwicklungsländer	
		70	72	73	74	73	74
Pays industrialisés	Textile	72,8	66,5	63,8	63,2	54,–	62,8
Industrialized countries	Habill.	53,4	43,4	38,3	37,–	50,2	50,6
Industrialisierte Länder	Total	65,2	57,0	53,2	51,7	61,8	60,7
Pays en voie de développement	Textile	22,6	27,9	29,–	30,2	25,0	27,6
Developing countries	Habill.	41,2	50,1	54,9	57,6	38,4	39,1
Entwicklungsländer	Total	29,8	37,–	39,8	41,6	27,9	29,5
Pays de l'Est	Textile	4,6	5,6	7,2	6,1	10,1	9,7
Eastern countries	H bill	5,4	6,5	6,8	7,1	11,4	10,4
Ostländer	Total	4,9	6,–	7,–	7,1	10,3	9,8
MONDE / WORLD / WELT		100	100	100	100	100	100

Origine / Destination / Bestimmung		Pays de l'Est / Eastern countries / Ostländer				MONDE / WORLD / WELT			
		70	72	73	74	70	72	73	74
Pays industrialisés	Textile	42,2	42,3	45,6	53,9	67,2	63,4	62,1	62,–
Industrialized countries	Habill.	15,9	11,7	11,–	11,6	47,7	33,9	35,3	35,3
Industrialisierte Länder	Total	29,4	27,5	29,2	36,1	60,7	54,6	52,5	51,9
Pays en voie de développement	Textile	26,6	25,2	21,9	21,1	23,7	26,6	27,2	28,3
Developing countries	Habill.	8,6	11,7	12,–	12,5	33,5	41,3	46,–	49,5
Entwicklungsländer	Total	18,–	19,7	17,2	17,5	26,9	31,9	34,–	35,4
Pays de l'Est	Textile	31,1	32,5	32,4	25,–	9,1	10,–	10,7	9,7
Eastern countries	H bill	75,2	76,6	77,–	75,9	13,9	19,7	18,7	18,1
Ostländer	Total	52,6	53,8	53,6	46,4	12,3	13,5	13,6	12,7
MONDE / WORLD / WELT		100	100	100	100	100	100	100	100

Footnotes, voir Tableau 21

Footnotes, see Table 21

Fußnoten siehe Tabelle 21

TABLEAU 28

BALANCES [a] DU COMMERCE DES TEXTILES [b] ET DES VETEMENTS [c], PAR REGION, 1970 et 1972 A 1974

BALANCE OF TRADE IN TEXTILES AND CLOTHING BY AREAS, 1970, 1972 TO 1974.

BILANZ DES HANDELS MIT TEXTILIEN UND BEKLEIDUNG NACH ZONEN, 1970, 1972 BIS 1974.

(millions de dollars f.o.b.)

	1970			1972		1973				1974		
	Textiles	Vêtements	Textiles et Vêtements	Textiles	Vêtements	Textiles et Vêtements	Textiles	Vêtements	Textiles et Vêtements	Textiles	Vêtements	Textiles et Vêtements
Pays développés avec												
Monde	1.290	− 880	410	895	− 2.105	− 1.210	990	− 3.410	− 2.420	1.860	− 4.365	− 2.505
Pays en voie de développement	1.130	− 850	280	705	− 1.940	− 1.235	900	− 3.120	− 2.220	1.330	− 3.940	− 2.610
Pays de l'Est	160	− 30	130	190	− 165	25	90	− 290	− 200	530	− 425	105
Pays en voie de développement avec :												
Monde	− 1.220	875	− 345	− 750	2.010	1.255	− 1.195	3.175	2.070	− 1.560	3.995	2.435
Pays développés	− 1.130	850	− 280	− 730	1.940	1.235	− 990	3.120	2.220	− 1.330	3.940	2.610
Pays de l'Est	− 90	25	− 65	− 50	70	20	− 205	55	− 150	− 230	55	− 175
Pays de l'Est avec												
Monde	− 70	5	− 65	− 140	95	− 45	115	235	350	− 300	370	70
Pays développés	− 160	30	− 130	− 190	165	− 25	− 90	200	200	− 530	425	− 105
Pays en voie de développement	90	− 25	65	50	− 70	− 20	205	− 55	150	230	− 55	175

[a] Exportations moins importations.

[b] Division 65 de la CTCI : Fils, tissus, articles textiles façonnés et produits connexes.

[c] Division 84 de la CTCI : Vêtements.

TABLEAU 24

PRINCIPAUX EXPORTATEURS MONDIAUX DE PRODUITS TEXTILES MANUFACTURES (1) (Mio $)
MAIN WORLD EXPORTERS OF TEXTILE MANUFACTURED PRODUCTS
WICHTIGSTE WELTAUSFUHRLÄNDER VON TEXTILERZEUGNISSEN.

Pays Country Land	1962	1970	1973	1974	%	
					1974/1973	1974/1970
EEC (2) (3)	1324	2.712,7	4.626,5	5.639,4	+ 21,9	+ 107,9
Japan	938	1.744,5	2.450,3	3.074,9	+ 25,5	+ 76,2
United States	494	603,1	1.224,8	1.795,4	+ 46,6	+ 197,7
India	490	460,8	650,0	802,7	+ 23,5	+ 71,5
Switzerland		352,7	646,6	742,1	+ 14,8	+ 110,4
Hong Kong	103	275,9	667,4	721,7	+ 8,4	+ 162,4
Austria		224,9	445,7	545,3	+ 22,3	+ 142,5
Korea (Rep. Of)		84,9	435,2	492,3	+ 13,1	+ 479,9
Portugal		161,0	329,1	400,9	+ 21,8	+ 149,0
Spain		85,8	167,5	249,5	+ 48,9	+ 190,1
Sweden		102,3	193,3	242,7	+ 25,6	+ 137,2
Egypt		135,7	166,7	237,9	+ 42,7	+ 75,3
Poland		85,0	164,9	203,5	+ 23,4	+ 139,4
Greece		36,9	132,6	185,0	+ 39,5	+ 401,4
Canada		91,0	149,2	173,0	+ 16,-	+ 90,1
Yugoslavia		78,8	138,2	162,5	+ 17,6	+ 103,6
Turkey		25,4	97,8	(145,0)	+ 48,3	+ 471,-
Singapore	80	53,7	142,4	138,0	— 3,8	+ 157,-
Soviet Union		92,0	137,0	133,0	— 2,9	+ 44,6
Finland		40,4	68,6	96,2	+ 40,2	+ 138,1
Norway		35,1	59,0	73,1	+ 23,8	+ 108,3
Israel		33,3	52,2	53,2	+ 1,9	+ 35,4
Australia		20,8	40,8	48,9	+ 21,-	+ 139,7
Pakistan	80	320,2	443,0	.....		
Brazil		32,2	229,0	.....		
Hungary		85,0	147,4	.....		
Mexico		27,4	130,5	.....		
Argentina		4,7	21,6	.....		

Source : Tableaux 31 à 39 : différentes publications du GATT et de l'ONU
Tables 31 to 39 : various GATT and UN publications
Tabellen 31 bis 39 : verschiedene GATT und UN—Veröffentlichungen.

Note : Le classement des 10 pays les plus importants ne tient compte que des pays pour lesquels l'on dispose de renseignements en 1974. Il est certain que par ex. le Pakistan et peut—être aussi le Brésil, figurent actuellement parmi les 10 premiers exportateurs de produits textiles. En outre, Taiwan, qui n'est plus membre de l' ONU occupe certainement une place de choix dans l'habillement.

The classification of the first ten countries takes account only of the countries on which data for 1974 are available. It is certain eg. that Pakistan and maybe also Brazil are presently among the first ten world exporters of textile products. Moreover, Taiwan which is no longer member of UN ranks certainly among the top countries, as regards clothing.

Bemerkung : Die Gliederung der 10 wichtigsten Länder berücksichtigt nur die Länder, über welche Daten 1974 verfügbar sind. Es ist sicher dass zB. Pakistan und vielleicht auch Brasilien jetzt zu den 10 ersten Weltausfuhrländern von Textilien gehören. Darüber hinaus nimmt auch Taiwan, das jetzt nicht mehr zu UN gehört, einen der ersten Plätzen im Bekleidungsbereich ein.

(1) CTCI - SITC : 65
(2) CEE : extra-6 en 1962 — Extra-9 à partir de 1970.
(3) RU/UK en 1962 : 686.

TABLEAU 25

PRINCIPAUX EXPORTATEURS MONDIAUX D'ARTICLES D'HABILLEMENT. (1)

MAIN WORLD EXPORTERS OF WEARING APPARELS. (1)

WICHTIGSTE WELTAUSFUHRLÄNDER VON BEKLEIDUNG. (1)

(Mio $)

Pays Country Land	1962	1970	1973	1974	%	
					1974/1973	1974/1970
EEC (2) (3)	301	947,2	1.572,2	1.801,9	+ 14,6	+ 90,2
Hong Kong	199	698,9	1.423,6	1.688,3	+ 18,6	+ 141,7
Korea (Rep. Of.)	1	213,6	749,4	956,6	+ 27,6	+ 347,8
United States	85	226,9	286,9	417,8	+ 45,6	+ 84,1
Poland		136,0	280,6	363,4	+ 29,5	+ 179,5
Japan	204	462,4	369,4	328,3	— 11,1	— 29,-
Romania		122,0	253,0	265,0	+ 4,7	+ 117,2
Portugal		80,2	197,6	246,2	+ 24,6	+ 206,7
Austria		93,4	161,5	197,4	+ 22,2	+ 113,5
Spain		50,1	133,2	175,4	+ 31,7	+ 250,1
India	2	36,4	94,9	161,3	+ 73,1	+ 351,4
Sweden		81,1	136,9	162,8	+ 18,9	+ 100,7
Yugoslavia		85,0	145,2	159,7	+ 10,-	+ 87,9
Switzerland		80,8	121,5	144,2	+ 15,8	+ 79,8
Canada		74,8	122,2	133,4	+ 9,2	+ 78,3
Singapore		39,9	129,6	126,9	— 2,1	+ 310,7
Israel		52,2	86,2	96,5	+ 11,9	+ 84,8
Greece		9,9	53,6	88,3	+ 64,7	+ 791,9
Turkey		4,3	52,9	(80,0)	+ 66,4	.....
Egypt		10,2	28,9	45,8	+ 58 5	+ 339,-
Norway		16,4	25,4	29,8	+ 17,3	+ 81,7
Soviet Union		14,0	25,0	28,0	+ 12,-	+ 100,-
Australia		9,3	17,1	16,4	— 4,1	+ 76,3
Hungary		99,6	204,9	.....		
Brazil		3,0	88,7	.....		
Mexico		9,1	67,2	.....		
Argentina		15,7	28,0	.....		
Pakistan		5,3	17,0	.....		

(1) CTCI — SITC : 84

(2) CEE : extra—6 : 1962; extra—9, à partir de 1970

(3) RU/UK : 102

TABLEAU 27

PRINCIPAUX IMPORTATEURS MONDIAUX DE PRODUITS TEXTILES MANUFACTURES. (1) (Mio $)

MAIN WORLD IMPORTERS OF TEXTILE MANUFACTURED PRODUCTS. (1)

HAUPTEINFUHRLÄNDER VON TEXTILERZEUGNISSEN. (1)

Pays Country Land	1962	1970	1973	1974	% 1974/1973	% 1974/1970
EEC (2) (3)	452	1.268,1	2.732,7	3.441,8	+ 25,9	+ 171,4
United States	654	1.135,1	1.579,7	1.628,0	+ 3,1	+ 43,4
Japan		223,8	1.132,9	999,0	— 11,9	+ 346,4
Canada	273	470,9	777,2	991,2	+ 27,5	+ 110,5
Hong Kong	169	497,0	942,8	899,9	— 4,6	+ 81,1
Soviet Union		403,0	634,0	865,0	+ 36,4	+ 114,6
Australia	246	326,5	623,6	844,0	+ 35,3	+ 153,5
Sweden	199	342,5	513,6	657,6	+ 28,-	+ 92,-
Switzerland	128	263,3	504,8	571,7	+ 13,3	+ 117,1
Austria		245,0	478,2	551,9	+ 15,4	+ 125,3
Singapore		264,6	419,1	398,3	— 5,-	+ 50,5
Finland		151,9	259,4	360,1	+ 38,8	+ 137,1
Yugoslavia		130,4	190,3	340,4	+ 78,8	+ 161,-
Norway		147,4	225,2	280,7	+ 24,6	+ 90,4
Korea (Rep. Of)		127,8	300,7	269,6	— 0,4	+ 111,-
Spain		67,5	175,9	247,9	+ 40,9	+ 266,7
Poland		26,0	171,9	240,0	+ 396,-	+ 823,1
Portugal		58,1	112,9	161,7	+ 43,2	+ 178,3
Greece		53,1	92,5	101,3	+ 9,5	+ 90,8
Israel		47,6	73,2	95,9	+ 31,-	+ 101,5
Romania		43,0	63,0	95,0	+ 50,8	+ 120,9
Egypt		23,1	26,7	26,6	— 0,4	+ 15,2
Hungary		72,2	124,0	.....		
Brazil		27,6	69,9	.....		
Argentina		25,7	16,4	.....		
Mexico		20,7	43,8	.....		
Pakistan		9,8	26,7	.....		
India		9,8	.....	.....		

(1) CTCI — SITC : 65

(2) 1962 : Extra — G — 1970 à 1974 : extra — 9

(3) 1962 : RU/UK : 378.

TABLEAU 28

PRINCIPAUX PAYS IMPORTATEURS D' ARTICLES D' HABILLEMENT. (1) (Mio $)

MAIN IMPORTING COUNTRIES OF CLOTHING. (1)

HAUPTEINFUHRLÄNDER VON BEKLEIDUNG. (1)

Pays Country Land	1962	1970	1973	1974	%	
					1974/1973	1974/1970
EEC (2) (3)	134	806,0	2.509,7	3.302,0	+ 31,6	+ 309,7
United States	363	1.269,1	2.167,5	2.323,3	+ 7,2	+ 83,1
Soviet Union		748,0	1.062,0	1.227,0	+ 15,5	+ 64,-
Japan		90,8	573,7	826,3	+ 44,-	+ 810,-
Switzerland	67	240,7	501,3	581,1	+ 15,9	+ 141,4
Sweden	73	267,4	400,9	492,2	+ 22,8	+ 84,1
Canada	62	170,4	334,2	412,1	+ 23,3	+ 141,8
Austria		75,7	195,9	260,3	+ 32,9	+ 243,9
Australia	15	41,2	113,3	257,2	+ 127,-	+ 524,3
Norway		126,6	204,8	248,5	+ 21,3	+ 96,3
Hong Kong		45,7	119,4	104,0	— 12,9	+ 127,6
Finland		36,9	58,4	71,7	+ 22,8	+ 94,3
Singapore		23,2	36,7	54,5	+ 48,5	+ 134,9
Spain		15,4	37,1	44,8	+ 20,8	+ 190,9
Poland		31,0	53,9	42,7	— 20,8	+ 37,7
Portugal		8,9	30,0	39,6	+ 32,-	+ 344,9
Yugoslavia		17,8	19,8	30,9	+ 56,1	+ 73,6
Greece		4,0	10,1	14,1	+ 39,6	+ 252,5
Romania		7,0	10,0	12,0		
Korea (Rep. of)		0,5	11,0	5,9		
Israel		2,3	5,4	5,2		
Egypt		0,7	0,1	0,5		
Mexico		27,2	56,4	.....		
Hungary		18,1	34,7	.....		
Brazil		5,9	8,6	.....		
Argentina		2,4	0,4	.....		
Pakistan		0,2	0,1	.....		
Turkey		0,0	0,0	0,0		
India		0,3	.....	.....		

(1) CTCI — SITC : 84

(2) 1962 : CEE (6), 1970 à 74 : CEE (9)

(3) 1962 : RU/UK : 148 Mio $.

TABLEAU 30

SOLDE DES ECHANGES EXTERIEURS : PRODUITS TEXTILES. (Mio $)

BALANCE OF FOREIGN TRADE : TEXTILE PRODUCTS.

BILANZ DES AUSSENHANDELS MIT TEXTILPRODUKTEN.

Countries	1970	1972	1973	1974
E.E.C.	1.444,6	1.444,5	1.893,8	2.197.6
JAPAN	1.520.7	1.797.1	1.317.4	2.075.9
PORTUGAL	102.9	153.9	216.2	239.2
KOREA (Rep. Of)	−42.9	47.5	134.5	222.7
EGYPT	112.6	152.5	140.0	211.3
SWITZERLAND	89.4	128.1	137.8	170.4
UNITED STATES	−532.2	−747.8	−334.9	137.4
TURKEY	8.0	23.6	67.9	(88.0)
GREECE	− 16.2	− 11.4	40.1	83.7
SPAIN	18.3	54.4	− 8.4	1.6
AUSTRIA	− 20.1	− 8.8	− 32.5	− 6.6
POLAND	59.0	36.0	− 7.9	− 36.5
ROMANIA	− 17.0	− 9.0	− 5.0	− 41.0
YUGOSLAVIA	− 50.6	− 36.4	− 52.1	−177.9
HONG KONG	−222.0	−266.1	−275.4	−178.2
NORWAY	−112.3	−134.4	−166.2	−207.5
SINGAPORE	−210.9	−204.0	−275.7	−260.3
FINLAND	−111.5	−148.1	−190.8	−263.9
SWEDEN	−240.2	−283.5	−320.3	−414.9
SOVIET UNION	−311.0	−548.0	−497.0	−732.0
CANADA	−379.9	−564.5	−628.0	−618.2
PAKISTAN	310.4	260.7	416.3	
BRAZIL	4.6	65.2	159.1	.....
MEXICO	6.7	32.1	86.7	.....
HUNGARY	12.8	40.1	23.4	.....
ARGENTINA	− 21.0	− 14.1	5.2	.....
INDIA	451.0	.....	.....	.....

TABLEAU 31

SOLDE DES ECHANGES EXTERIEURS : ARTICLES D'HABILLEMENT. (Mio $)

BALANCE OF FOREIGN TRADE : CLOTHING.

BILANZ DES AUSSENHANDELS MIT BEKLEIDUNG.

Pays	1970	1972	1973	1974
EEC	141,2	−399,3	−937,5	−1.500,1
HONG KONG	653,2	991,8	1.304,2	1.584,9
KOREA (Rep. Of)	213,1	423,4	738,4	950,7
POLAND	99,0	132,0	226,7	320,7
ROMANIA	115,0	184,0	243,0	253,8
FINLAND	56,0	127,6	148,9	219,3
PORTUGAL	71,3	116,0	167,6	206,6
SPAIN	34,7	85,7	96,1	130.6
YUGOSLAVIA	67,2	118,5	125,4	128,8
ISRAEL	49,9	72,3	80,8	91,3
TURKEY	4,3	24,2	52,9	(80,0)
SINGAPORE	7,7	52,6	92,9	72,4
EGYPT	9,5	19,3	28,8	45,3
AUSTRIA	17,7	− 0,5	− 34,4	− 62,9
NORWAY	−110,2	−152,0	−179,4	− 218,7
AUSTRALIA	− 31,9	− 55,4	− 96,2	− 240,6
CANADA	− 95,6	−182,2	−212,0	− 278,7
SWEDEN	−186,3	−233,4	−264,0	− 329,4
SWITZERLAND	−159,5	−279,1	−376,8	− 436,9
JAPAN	371,6	271,4	−204,3	− 498,0
SOVIET UNION	−734,0	−923,0	−1.037,0	−1.199,0
UNITED STATES	−1.042,2	− 1.633,3	−1.880,6	−1.905,5
BRAZIL	− 2,9	23,5	80,1	.....
MEXICO	− 18,1	− 25,4	10,8	.....
ARGENTINA	13,3	8,1	27,6	.....
PAKISTAN	5,1	10,0	16,9	.....

TABLEAU 32

SOLDE DES ECHANGES EXTERIEURS : ARTICLES TEXTILES ET HABILLEMENT. (Mio $)

BALANCE OF FOREIGN TRADE : TEXTILE PRODUCTS AND CLOTHING.

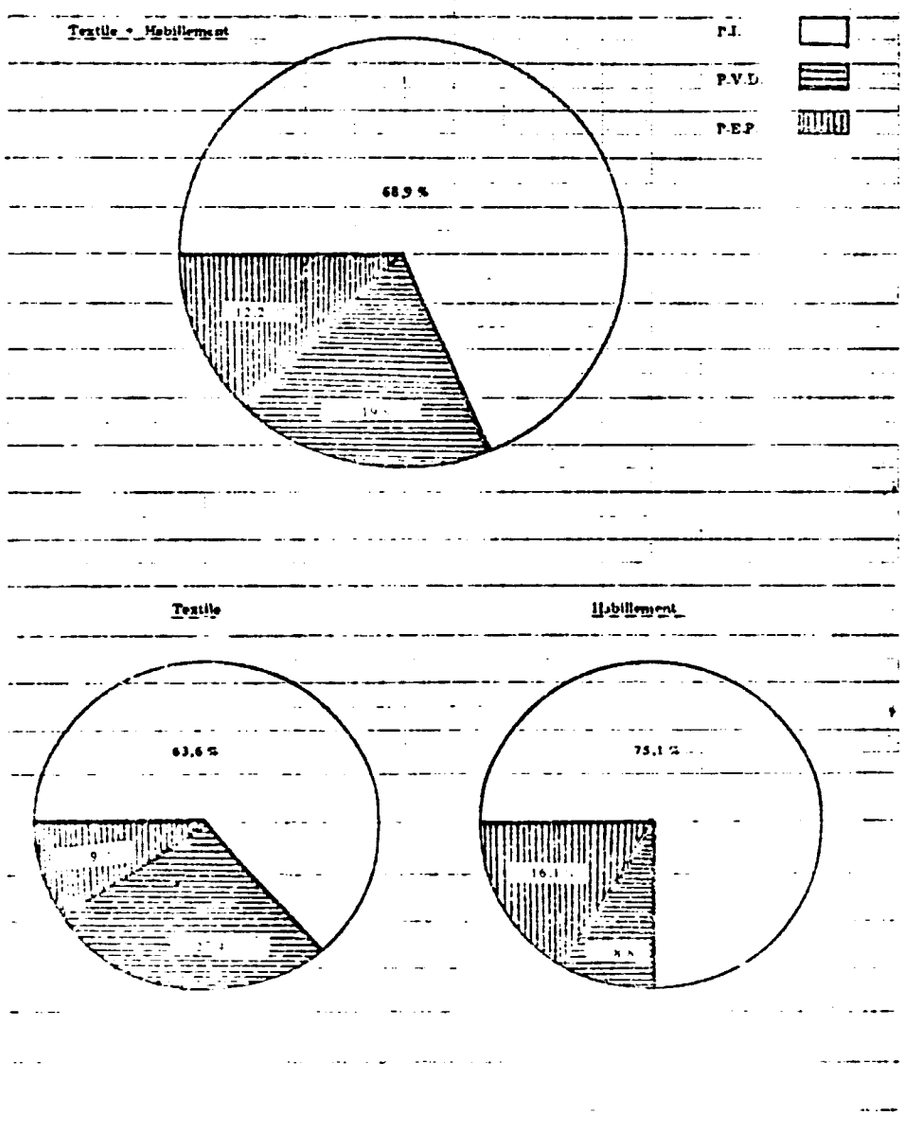
BILANZ DES AUSSENHANDELS MIT TEXTILPRODUKTEN UND BEKLEIDUNG.

Pays	1970	1972	1973	1974
EEC	1.585,6	1.045,2	956,3	697,5
JAPAN	1.892,3	2.068,5	1.113,1	1.577,9
HONG KONG	431,2	725,7	1.028,8	1.406,7
KOREA (Rep. Of)	170,2	470,9	872,9	1.173,4
PORTUGAL	174,2	269,9	383,8	445,8
POLAND	153,0	168,0	219,7	284,2
EGYPT	122,1	151,8	168,8	256,6
ROMANIA	98,0	175,0	238,0	212,0
TURKEY	12,3	47,8	120,8	(168,9)
GREECE	— 10,3	27,8	85,6	157,9
SPAIN	53,0	140,1	87,7	132,2
ISRAEL	41,6	60,9	59,8	48,6
FINLAND	— 55,5	— 20,5	—41,9	—44,6
YUGOSLAVIA	16,6	82,1	73,3	—49,1
AUSTRIA	— 2,4	— 9,3	—66,9	—69,5
SINGAPORE	—202,2	—151,4	—182,8	—187,9
SWITZERLAND	— 70,5	—151,0	—239,0	—266,5
NORWAY	—222,5	—286,4	—345,6	—426,3
SWEDEN	—426,5	—746,7	—840,0	—1.096,5
SOVIET UNION	—1.045,0	—1.471,0	—1.534,0	—1.931,0
UNITED STATES	—1.574,4	—2.381,1	—2.235,5	—1.738,1
BRAZIL	1,7	88,7	239,2	.....
MEXICO	— 11,4	6,7	97,5	.....
HUNGARY	94,3	169,0	193,6	.....
ARGENTINA	— 7,7	— 6,0	32,3	.....
PAKISTAN	315,5	270,7	433,2	.....
INDIA	487,1	.....	.....	.....

Graphique 42 : 1963 — Part des grandes zones économiques dans les exportations mondiales de produits textiles et d'habillement.

Graph 42 : 1963 — Share of the large economic areas in world exports of textiles and clothing.

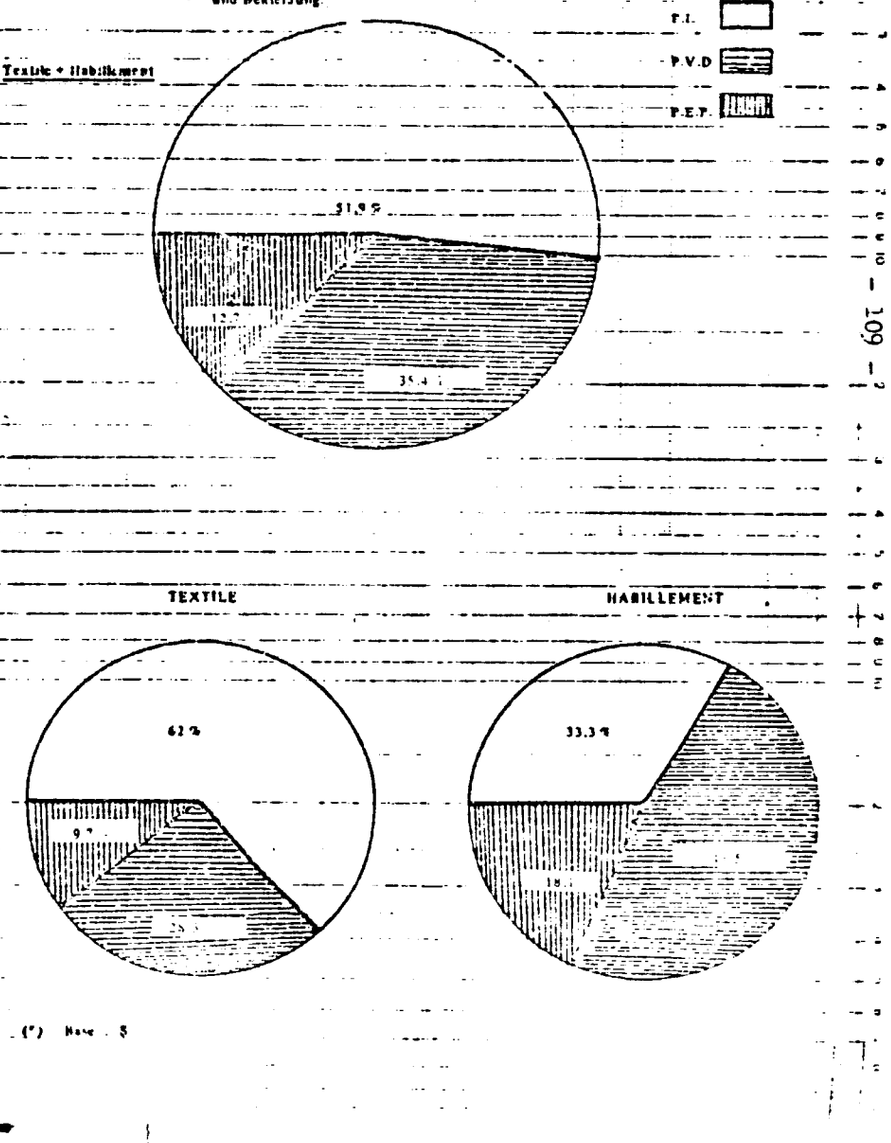
Diagramm 42 : 1963 — Anteil der grossen Wirtschaftszonen an der Weltausfuhr von Textilien und Bekleidung.



Graphique 43 : 1974 — Part des grandes zones économiques dans les exportations mondiales d'articles textiles et d'habillement. (*)

Graph 43 : 1974 — Share of the large economic areas in world exports of textiles and clothing.

Diagramm 43 : 1974 — Anteil der grossen Wirtschaftszonen an der Weltausfuhr von Textilien und Bekleidung.

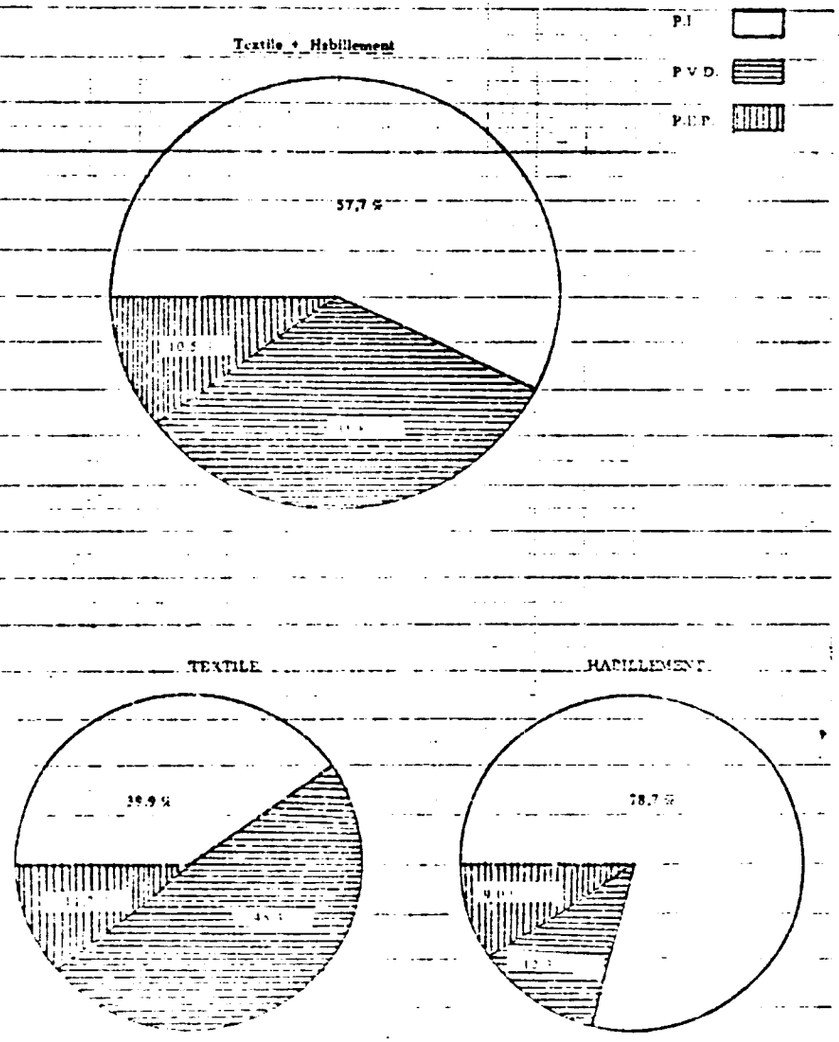


(*) Note : S

Graphique 44 : 1963 — Part des grandes zones économiques dans les importations mondiales de produits textiles et d'habillement.

Graph 44 : 1963 — Share of the large economic areas in world imports of textiles and clothing

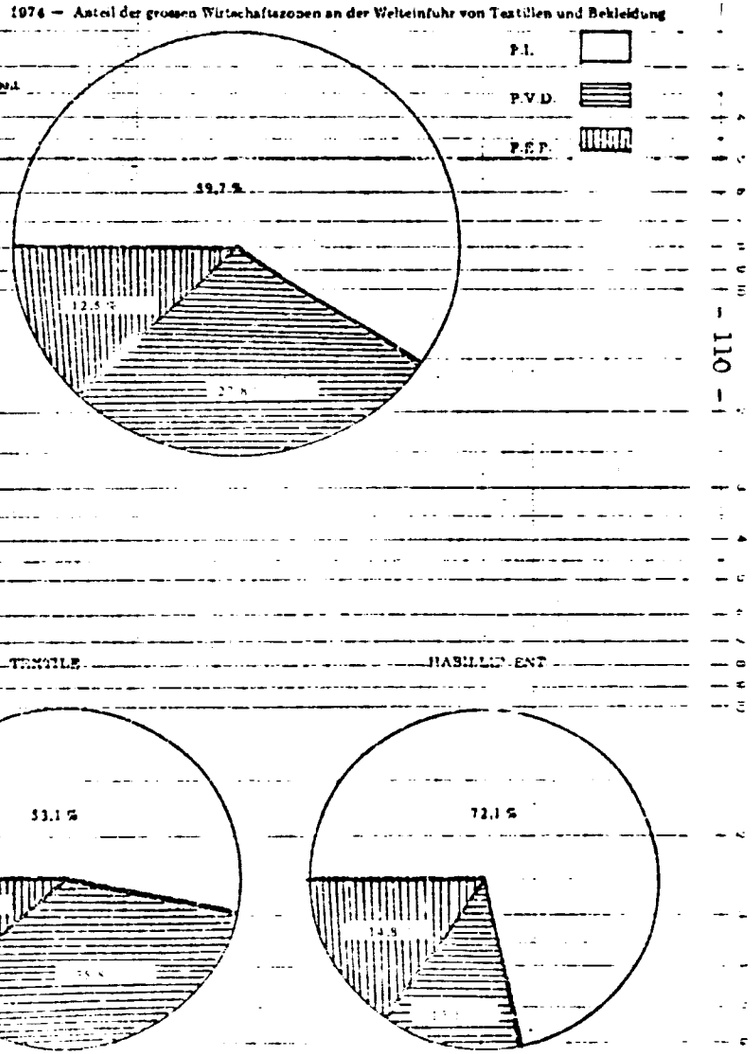
Diagramm 44 : 1963 — Anteil der grossen Wirtschaftszonen an der Welteinfuhr von Textilien und Bekleidung



Graphique 45 : 1974 — Part des grandes zones économiques dans les importations mondiales d'articles textiles et d'habillement.

Graph 45 : 1974 — Share of the large economic areas in world imports of textiles and clothing

Diagramm 45 : 1974 — Anteil der grossen Wirtschaftszonen an der Welteinfuhr von Textilien und Bekleidung



APPENDIX III

COMITE de COORDINATION des INDUSTRIES TEXTILES de la CEE (COMITEXTIL)
74, rue Royale
1000 BRUXELLES

COMITE SYNDICAL EUROPEEN TEXTILE, HABILLEMENT ET CUIR
8, rue Joseph Stevens
1000 BRUXELLES

ASSOCIATION EUROPEENNE DES INDUSTRIES DE L' HABILLEMENT
20, Avenue des Arts, Boîte 11
1040 BRUXELLES

1

LES INDUSTRIES EUROPEENNES DU TEXTILE ET DE L' HABILLEMENT ET LA DIVISION INTERNATIONALE DU TRAVAIL

Réunis en date du 25 mai 1976, les représentants des travailleurs et des employeurs de l'industrie du textile et de l'habillement des pays industrialisés de l' Europe occidentale ont décidé, unanimement, de lancer, à l'intention de l'opinion publique, mais aussi de tous les responsables politiques de ces pays, un avertissement solennel sur la situation critique dans laquelle se trouvent ces industries, en raison d'options de politique générale et commerciale, aux conséquences fâcheuses pour les pays industrialisés, et sans effet réel à l'égard des besoins des véritables pays en voie de développement.

Ils attirent l'attention sur le fait qu'en douze ans de temps, ces industries ont perdu plus d'un million d'emplois dans les pays industrialisés de l'Europe occidentale; en outre, dans ces industries, le taux de chômage atteint, actuellement, jusqu' à 30 %.

Cette situation crée des problèmes d'emplois et de revenus insoutenables.

Les représentants de ces industries, qui occupent 4 Mio. de travailleurs, ont procédé à une réfutation de la théorie de la division internationale du travail, en formulant les propositions précises et constructives pour l'ensemble des parties concernées.

I. INTRODUCTION

"Il est indispensable d'établir des relations de solidarité et de co-responsabilité dans un climat de coopération dans lequel les pays en voie de développement n'apparaîtront plus seulement comme des fournisseurs d'une gamme limitée de biens nécessaires aux pays industrialisés mais comme les partenaires de la croissance économique mondiale dans laquelle une part grandissante et plus juste devrait leur revenir." (1)

Les partenaires sociaux des industries européennes du Textile et de l' Habillement souscrivent à cette déclaration. Ils rappellent formellement que toute activité économique doit tendre vers une finalité sociale tant dans les pays industrialisés que dans les pays en voie de développement.

Aussi, ils ont toujours estimé que le développement du tiers monde ne devait pas nécessairement être calqué sur nos modèles, mais être repensé en fonction des besoins réels de ces pays.

Ce développement ne peut pas résulter d'une politique volontariste de transfert artificiel de certaines activités des pays industrialisés, en fonction de la division internationale du travail.

(1) Communication de la Commission au Conseil (Bulletin des C.E. supplément 9/75).

THE EUROPEAN TEXTILE AND CLOTHING INDUSTRIES AND THE INTERNATIONAL DIVISION OF LABOUR.

At a meeting on 25th May 1976, representatives of the workers and of the employers of the textile and clothing industries of Western Europe's industrialized countries decided, unanimously, to give a solemn warning, not only to public opinion but also to those politically responsible in the countries concerned, about the critical position with which these industries are faced, due to the industrialised countries and with no real effect so far as the genuinely developing countries are concerned.

Attention is drawn to the fact that in the space of twelve years, these industries have lost more than one million jobs in the industrialised countries of Western Europe; furthermore, the rate of unemployment in these industries has now reached 30%.

This situation creates unbearable employment and income problems.

The representatives of these industries, which give employment to 4 million workers, proceeded to refute the idea of the international division of labour, and put forward definite and constructive proposals for all parties concerned.

I. INTRODUCTION

"It is absolutely necessary to establish a relationship of solidarity and co-responsibility in a climate of co-operation in which the developing countries will no longer appear only as suppliers of a limited range of goods needed by the industrialized countries but as partners in world economic growth, of which they should enjoy a growing and fairer share." (1)

Textile

The social partners in the European and Clothing industries subscribe to that declaration. They reassert absolutely that any economic activity must lead to some kind of social end as much in the industrialized countries as in the developing countries.

Furthermore, they have always felt that the economic development of the third world need not necessarily be based on a copy of our own patterns, but should be thought out again and adapted to the actual needs of those countries.

This development cannot come about as the result of a policy of voluntary and artificial transfer of certain sectors of the industrialized countries, in the cause of international division of labour.

(1) A communication from the Commission to the Council (E.C. Bulletin supplement 9/75).

L'application de cette théorie a provoqué une mono-industrialisation textile des pays du Tiers Monde, sans induire un développement industriel valable. La mono-industrialisation rend particulièrement vulnérable aux fluctuations de la conjoncture, et exacerbe les conditions de la concurrence. Il en est résulté une source de problèmes graves, tant pour les véritables pays en voie de développement que pour les pays industrialisés.

2. UN DEVELOPPEMENT EN FONCTION DES BESOINS REELS DES PAYS EN VOIE DE DEVELOPPEMENT.

Pour les pays en voie de développement, la priorité des priorités est certainement le problème de la faim. La solution de celui-ci implique l'augmentation de la production agricole par des mesures urgentes et adéquates.

La seconde priorité réside dans la formation d'une infrastructure économique et sociale (ports, routes, barrages, digues, écoles, services de santé...) susceptible de favoriser le développement de ces pays.

Ces différentes actions doivent aller de pair avec un effort particulier en matière de formation, non seulement d'une élite intellectuelle, mais aussi d'ouvriers qualifiés, et de personnel d'encadrement compétent. Dans cette perspective, une aide accrue des pays industrialisés est indispensable.

Lorsque ces conditions sont remplies, une industrialisation (1) véritable a toutes les chances de naître et de se développer.

Cette industrialisation doit être ressentie et conçue par ces pays eux-mêmes, et au profit de leur population. Le choix doit résulter d'un certain nombre de compromis propres à chacun des pays et non pas de la recherche de la seule satisfaction des besoins des pays industrialisés.

Le développement d'un pays nécessite l'implantation d'industries susceptibles de jouer un rôle d'entraînement pour l'ensemble de l'industrie. Ce ne sont pas, nécessairement, les industries de biens de consommation qui favorisent la croissance. Il est incontestable que les machines-outils, qui fabriquent d'autres machines-outils, favorisent davantage la croissance que la production de tissus sur des métiers automatiques, importés à grands frais de l'étranger.

La situation du marché, et son évolution, doivent également être prises en considération. Par exemple, l'ensemble de la production manufacturière mondiale s'est accrue de 105 % entre 1963 et 1974, alors que la production textile n'a progressé que de 58 % et la production d'articles d'habillement que de 51 %.

(1) Cette industrialisation ne doit cependant pas systématiquement conduire, comme c'est souvent le cas actuellement, à la disparition des activités de production traditionnelles, telles que l'artisanat. Ces productions sont, en effet, susceptibles d'absorber une partie du chômage endémique qui règne dans ces pays. Les produits de l'artisanat sont généralement très appréciés dans les pays occidentaux, qui leur ont garanti des avantages tarifaires et autres.

The application of this theory has lead to a textile mono-industrialisation in countries of the Third World, without bringing about a sound industrial development. Mono-industrialisation is particularly vulnerable to fluctuations in business and trade trends, and aggravates conditions of competition. The result has been a source of serious problems, as much for the genuinely developing countries as for the industrialised countries.

2. A DEVELOPMENT ADAPTED TO THE REAL NEEDS OF THE DEVELOPING COUNTRIES.

The top priority for the developing countries is undoubtedly the problem of hunger. The solution calls for an increase in agricultural production by means of urgent and adequate measures.

The second priority is the setting up of an economic and social infrastructure (ports, roads, dams, dykes, schools, health services...) capable of contributing to the development of those countries.

All this should be done in conjunction with a special effort in the field of training, not only as regards an intellectual elite, but also skilled workers and efficient management personnel. With this in view, increased aid by the industrialised countries is vital.

When these conditions have been fulfilled, a genuine industrialisation (1) will have every chance of being brought about and of developing.

This industrialisation must be felt by and thought out by these countries themselves, and for the benefit of their people. The choice must result from a certain number of compromises peculiar to the countries concerned and not from trying only to satisfy the needs of the industrialised countries.

The development of a country calls for the setting up of industries whose role is to feed industry as a whole. Consumer goods industries are not necessarily those which benefit growth. Without any question, machine tools which make other machine tools contribute much more to growth than does the production of cloth on automatic looms, imported at great cost from abroad.

The market situation and its evolution, must also be taken into consideration. For example, world manufacturing production as a whole increased by 105 % from 1963 to 1974, whereas textile production only increased by 58 % and clothing production by only 51 %.

(1) Such industrialization should not, as is so often the case, lead, systematically, to the disappearence of traditional production, such as handicrafts. This type of production is, in fact, capable of absorbing a proportion of the unemployment, endemic in these countries. Handicraft products are usually much appreciated in the West, where tariff and other advantages have been granted.

3. LES CONDITIONS d'une DIVISION INTERNATIONALE du TRAVAIL au PLAN MONDIAL NE SONT PAS REALISEES.

Une première remarque s'impose

La division internationale du travail ne peut être une fin en soi, mais uniquement un moyen susceptible de créer les conditions d'un développement harmonieux de l'économie mondiale.

S'il n'en était pas ainsi, la spécialisation en matière de production placerait les états souverains dans une situation de dépendance totale, pour certains biens intermédiaires, ou comme dans le cas des produits textiles, pour des biens de première nécessité, voire dans certains cas stratégiques. Il est malsain de faire accréditer l'idée qu'une telle dépendance puisse être considérée comme politiquement acceptable.

Deuxième remarque

Cette théorie a été conçue au début de la révolution industrielle, dans un climat économique et social totalement différent de celui que nous connaissons aujourd'hui. Elle présuppose une mobilité complète de la main-d'oeuvre, des capitaux, et une liberté entière des échanges.

L'aspect social des problèmes créés par le transfert d'activités dans d'autres parties du Monde n'est, à aucun moment, pris en considération. Outre ses conséquences humaines, le reclassement de la main-d'oeuvre, quel que soit le niveau de qualification, pose des problèmes particulièrement difficiles à résoudre, même dans une période de plein emploi, et à fortiori dans une période de chômage structurel. Dans ce contexte, la main-d'oeuvre féminine, et les travailleurs âgés, sont particulièrement vulnérables.

Les principes d'une concurrence parfaite sont battus en brèche par l'"interventionnisme" toujours de plus en plus grand des gouvernements. Les restrictions à l'importation [illegible] d'un certain nombre de pays [illegible] aux conditions de concurrence [illegible] qui règnent sur les marchés internationaux et qui résultent d'aides à l'investissement ou à l'exportation, de dévaluations "compétitives", de prix politiques....

De leur côté, les pays en voie de développement protègent généralement leurs industries par des barrières prohibitives, et dans de nombreux cas, par des interdictions à l'importation. Les importations dans les pays à commerce d'Etat sont soumises à des règles spéciales qui n'ont aucun rapport avec les conditions de l'économie de marché.

Il est incontestable que les conditions préalables à une division internationale du travail, telle que conçue par ses auteurs, ne sont donc pas remplies.

4. Les FAIBLESSES de la THEORIE des COUTS COMPARATIFS.

Selon la théorie des coûts comparatifs, une division du travail optimale, au plan géographique, est atteinte lorsque chaque pays et chaque région se spécialisent dans les produits pour lesquels ses avantages comparatifs sont les plus élevés (ou ses désavantages comparatifs les plus faibles).

3. The CONDITIONS FOR an INTERNATIONAL DIVISION OF LABOUR at WORLD LEVEL DO NOT EXIST.

It should be noted firstly

The international division of labour cannot be an end in itself, but only a means likely to create conditions for a harmonious development of world economy.

If this were not so, specialisation in the field of production would place sovereign States in a situation of total dependence for certain non-essential goods, or, in the case of textile products, for essential goods, even of strategic importance. It is unhealthy to give credence to the idea that such dependence could be considered as politically acceptable.

Secondly

This theory was conceived at the beginning of the industrial revolution, in an economic and social climate completely different from the one we know today. It presupposes complete mobility of labour, of capital and utter freedom of trade.

The social aspect of the problems created by the transfer of operations to other parts of the World is never, at any time, taken into consideration. Over and above its human consequences, the re-training of workers, at whatever level, raises problems, which are particularly difficult to solve, even in a period of full employment and more so in a period of structural unemployment. In this context, women and old workers are particularly vulnerable.

The principles of perfect competition are smashed by the ever growing intervention by governments. [illegible] restrictions which exist in a number of [illegible] countries [illegible] international markets and which are the consequence of investment or export aids, of "competitive" devaluations, price policies.....

For their part, the developing countries usually protect their industries by prohibitive barriers and in many cases, by prohibition of imports. Imports into State trading countries are subject to special rules which have no bearing whatsoever on conditions of the market economy.

It is quite clear that the conditions, as a prerequisite for an international division of labour, as conceived in the minds of its authors, have not been fulfilled.

4. The WEAKNESSES OF the THEORY OF COMPARATIVE COSTS

According to the theory of comparative costs, an optimal division of labour, at geographical level, is reached when each country and each region specialises in the products for which its comparative advantages are the highest (or its comparative disadvantages the lowest).

a) Elle prend pour point de départ les avantages et désavantages comparatifs existant à un moment donné, et présume que ce ratio ne se modifiera pas au cours des temps. Or, les situations acquises sont, régulièrement, remises en question par l'innovation technologique. C'est ainsi qu'en l'espace de quelques années, la production de la plupart des biens textiles est devenue hautement capitalistique.

Dès lors, si l'on devait appliquer la théorie de la division internationale du travail, dans toute sa logique:

1) ces activités devraient être retransférées vers les pays industrialisés, avec toute la perte de substance que de telles opérations impliquent,

2) ou bien les bas salaires devraient être maintenus artificiellement à leur niveau actuel, ce qui est socialement inacceptable. Une telle situation ne ferait qu'aggraver les déséquilibres constatés, et hypothéquerait à jamais le développement harmonieux de l'économie mondiale. Les pays en voie de développement sont-ils condamnés à rester éternellement des pays à bas salaires ?

Seule une amélioration générale du niveau de vie de ces pays, qui implique une redistribution équitable des revenus, est susceptible de créer un marché intérieur, et réduire d'autant la dépendance vis-à-vis de l'exportation.

b) Les avantages comparatifs sont déterminés, au niveau des seuls produits considérés.

Par contre, ne sont pas pris en considération les coûts qui résultent pour l'ensemble de l'économie, de la nécessité d'importer certains biens intermédiaires, et dans le textile, d'importer la technologie, au demeurant de plus en plus sophistiquée et de plus en plus coûteuse. Le solde net de l'opération est, dans bien des cas, négatif.

5. Les INDUSTRIES du TEXTILE et de l'HABILLEMENT ONT DEJA PAYE un LOURD TRIBUT à la POLITIQUE MENEE JUSQU'A PRESENT.

- De 1963 à 1975, les industries textiles de l'Europe occidentale ont perdu ± 750.000 ouvriers, soit plus d'un ouvrier sur quatre, et les industries de l'habillement 300.000 ouvriers.

- A la suite de mesures d'ordre politique, une série d'anciens marchés se sont fermés aux exportations des pays de l'Europe Occidentale.

- Les pays d'Europe Occidentale ont déjà consenti un grand effort d'augmentation des importations et ont, en 1974, absorbé à eux seuls 34 % des exportations totales des P.V.D. et 48 % des exportations de ces mêmes pays destinées aux pays industrialisés. Dans la seule C.E.E., les importations en provenance des P.V.D. ou prétendus tels, représentaient 57,2 % des importations extra-C.E.E. (46,1 % dans le textile et 68,7 % dans l'habillement), ce qui correspond à une augmentation de 10 points par rapport à 1970.

- Pour certains articles finis, tels que les chemises, les pantalons... les importations représentent jusqu'à 80 % de la consommation nationale, le seuil d'acceptabilité des importations semble, dans de nombreux cas, atteint, sinon dépassé.

a) The starting point is the comparative advantages and disadvantages at a given moment, and it is assumed that the ratio will remain unchanged during the course of time. In fact, established situations are regularly questioned due to technological innovations. For instance, in the space of a few years, production of most textile goods has become highly capital intensive.

Therefore, if the theory of the international division of labour were to be applied, in all its logic:

1) these activities should be transferred back to the industrialised countries, with all the material loss such operations would entail,

2) or low wages would have to be maintained artificially at their present low level, which is socially unacceptable. Such a situation would only aggravate the disequilibrium noted and would hypothecate for ever the smooth development of world economy. Are the developing countries to be condemned to remain for ever low wage countries ?

Only a general improvement in the standard of living in those countries which implies an equitable re-distribution of incomes, can bring about an internal market, and reduce proportionately dependence on exports.

b) The comperative advantages are set out against only those products which have been considered.

On the other hand, consideration has not been given to the cost to the economy as a whole, of the need to import certain semi-essential goods, and in textiles, to import technology which is, all the same, more and more sophisticated and more and more expensive. The net balance for the operation is, in many cases, unfavourable.

5. The TEXTILE and CLOTHING INDUSTRIES HAVE ALREADY PAID A HEAVY PRICE FOR THE POLICY PURSUED SO FAR.

- Between 1963 and 1975, the textile industries of Western Europe lost ± 750,000 workers, namely more than one worker out of four and the clothing industries, 300,000 workers.

- As the result of political decisions, a number of traditional markets have been closed to exports from Western European countries.

- Western European countries have already made a big effort to increase their imports and, in 1974, they alone absorbed 34 % of all exports from the developing countries and 48 % of the exports from the same countries to the industrialised countries. In the EEC alone, imports from the developing, or supposedly developing, countries accounted for 57,2 % of extra-EEC imports (46.1 % in textiles and 68.7 % in clothing), which is equal to an increase of 10 points over 1970.

- For certain finished products, such as shirts, trousers... imports account for up to 80 % of home consumption. The threshold of acceptability so far as imports are concerned, would seem, in a number of cases, to have been reached, if not exceeded.

Il est hors de doute que, en dehors de la notion de sécurité d'approvisionnement pour des biens de première nécessité, évoquée précédemment, les possibilités d'augmentation des importations sont extrêmement réduites, si l'on veut éviter l'aggravation des problèmes sociaux actuels en Europe, et la création d'une situation explosive.

Apart from the security of supply of essential goods, mentioned previously, it is certain that the opportunities for an increase in imports are considerably reduced, if one wants to avoid aggravating the present social problems in Europe and the creating of an explosive situation.

6. Les SACRIFICES CONSENTIS PAR les INDUSTRIES et les OUVRIERS EUROPEENS DOIVENT PROFITER aux VERITABLES P. V. D.

Il n'en est malheureusement rien, car dans la réalité, l'application de la notion de la Division Internationale du Travail a conduit à une sur—industrialisation d'un nombre limité de territoires et pays

Si pour les articles d'habillement, les exportations des P.V.D. se sont accrues entre 1970 et 1974 de 4 Mia. de $, seuls trois pays ou territoires, qui comptent uniquement 55 mio. d'habitants, ont monopolisé à leur profit plus de 60 % de cet accroissement : Hong—Kong (+ 970 Mio. $), Corée du Sud (+ 740 Mio. $) et Taiwan (+ 640 Mio. $).

Dans ces pays, l'utilisation d'un matériel extrêmement moderne, jointe à l'exploitation d'une main—d'oeuvre sous—payée, a attiré une masse de capitaux à la recherche d'un profit maximum.

Outre ces pays du Sud—Est Asiatique, un second groupe de fournisseurs accapare de façon quasimonopolistique les marchés d'importation d'Europe Occidentale, du moins en ce qui concerne l'habillement : il s'agit des pays est—européens, à commerce d'Etat, dont la politique de vente repose sur des cours de change purement artificiels.

Dans ces pays, un dirigisme d'Etat associé à des taux de change artificiels, est à la base d'une politique d'exportation à tous prix de biens de consommation dans le but de créer des ressources en devises pour une politique d'équipement.

Bref, la division internationale du travail a provoqué la création au plan mondial, d'une situation de déséquilibre aussi préjudiciable aux pays industrialisés qu'aux véritables P.V.D.

En conclusion, les véritables P.V.D. n'ont pas pu profiter de l'ouverture des marchés des pays industrialisés. Leur part dans les exportations totales de l'ensemble du Groupe dit "des P.V.D." reste extrêmement faible, en outre, les prix qu'ils ont obtenus de leur vente ont été, en raison de la concurrence qu'ils ont rencontrée, non rémunérateurs et ont, dans la réalité, provoqué un appauvrissement supplémentaire de leur économie.

6. The SACRIFICES MADE BY EUROPEAN INDUSTRIES and WORKERS MUST BENEFIT the GENUINELY DEVELOPING COUNTRIES.

Unfortunately, it is not so, because, in reality, the applying of the idea of the International Division of Labour has lead to an over—industrialization in a number of territories and countries.

Out of a total increase in the exports of clothing from the developing countries, of 4Bn, between 1970 and 1974, three countries or territories alone, with a population of only 55 million monopolised more than 60 % of this growth : Hong Kong (+ $ 970 mn), South Korea (+ $ 740 mn) and Taiwan (+ $640 mn).

The use in those countries of very modern machinery, coupled with the exploiting of underpaid labour, has attracted a great deal of capital in search of maximum profit.

Outside those South East Asian countries, a second group of suppliers has taken over, in a semi—monopolistic way, the import markets of Western Europe, at least so far as clothing is concerned : this refers to the Eastern European State trading countries, whose sales policies are based on entirely artificial exchange rates.

State planning in those countries, supported by artificial exchange rates, is the basis of [illegible] of consumer goods, in order to secure foreign exchange to satisfy a policy of equipment.

In short, the international division of labour has brought about a situation, at world level, of imbalance as harmful to the industrialised countries as to the genuinely developing countries.

In the end, the genuinely developing countries have not been able to benefit from the opening up of the markets of the industrialised countries. Their share of total exports by the so-called developing countries as a whole, has remained very small, furthermore, due to the competition they have met, prices received have been un—remunerative and, in fact, have contributed to a further impoverishment of their economy.

7. Les EXIGENCES FONDAMENTALES d'une POLITIQUE de DEVELOPPEMENT

Là où la théorie de la division internationale illustre son inefficacité, il est urgent de repenser la politique de développement du Tiers Monde. Les partenaires sociaux des industries européennes du textile et de l'habillement considèrent qu'une telle politique se doit impérativement de respecter les conditions suivantes :

7. The BASIC REQUIREMENTS OF a DEVELOPMENT POLICY.

Where the theory of the international division of labour is shown to be ineffective, it is a matter of urgency that there should be reconsideration of the development policy for the Third World. The social partners of the European textile and clothing industries consider that such a policy must definitely respect the following conditions :

1) avoir, pour objectif essentiel, l'amélioration du bien-être des populations dans toutes les parties du Monde,

2) être conçue en fonction des besoins réels de ces populations,

3) ne pas créer de nouveaux déséquilibres économiques et sociaux,

4) ne pas monopoliser le bénéfice du développement au profit de quelques-uns,

5) ne pas créer de liens de dépendance excessifs entre Etats,

6) répartir équitablement les sacrifices qu'elle exige.

1) its essential objective must be the improvement of the well-being of populations in all parts of the World,

2) it must meet the real needs of those populations,

3) it must not lead to fresh economic and social disequilibrium,

4) it must not lead to the benefits of development being chanelled to the few,

5) it must not lead to excessive inter-dependence between States,

6) it must ensure the fair sharing of sacrifices entailed.

8. Des PROPOSITIONS CONCRETES EN VUE d'un DEVELOPPEMENT ORDONNE du COMMERCE et de la PRODUCTION TEXTILE et d' HABILLEMENT DANS le MONDE.

8. CONCRETE PROPOSALS FOR the ORDERLY DEVELOPMENT OF TRADE and OF WORLD TEXTILE and CLOTHING PRODUCTION.

Le maintien, en Europe, d'une industrie du textile et de l'habillement viable et prospère est, en effet, dans l'intérêt de l'économie européenne et des véritables P.V.D.

The maintaining, in Europe, of a viable and prosperous textile and clothing industry is, in effect, in the interests of European and genuinely developing countries' economies.

Sa capacité de création est le meilleur garant d'une augmentation de la consommation textile, dont le niveau est déterminant.

The ability to create is the best guarantee of an increase in textile consumption, the level of which is decisive.

Les partenaires sociaux du textile et de l'habillement européen estiment indispensable de formuler certaines propositions concrètes susceptibles de conduire à une croissance harmonieuse de l'industrie textile dans les pays industrialisés et dans les véritables P.V.D.

The social partners in European textile and clothing consider it absolutely necessary to set out some concrete proposals calculated to lead to a smooth growth in the textile industry in the industrialised countries and in the genuinely developing countries

1) Une régulation, à long terme, des échanges mondiaux est indispensable, dans son application, une différenciation doit être faite entre véritables P.V.D. [illegible] tous les partenaires au commerce mondial, y compris les pays à commerce d' Etat, doivent faire un effort comparable;

1) Long term rules for world trade are absolutely necessary; when applied, a differentiation must be made between genuinely developing countries [illegible] world, including State trading countries, must make a similar effort;

2) Les préférences tarifaires ne doivent être accordées qu'aux véritables P.V.D. et être retirées aux pays qui n'en ont pas ou plus besoin; la charge principale ne peut pas continuer à être supportée par l' Europe Occidentale toute seule;

2) Tariff preferences must only be granted to genuinely developing countries and should be withdrawn from those countries which do not or no longer need them, the main burden cannot continue to be borne by Western Europe alone,

3) Il est nécessaire qu'un certain nombre de pays, qui sont actuellement abusivement considérés comme en voie de développement, ouvrent davantage leurs frontières, notamment aux véritables P.V.D.;

3) It is necessary that a number of countries which are at the moment wrongly called developing, should open their frontiers more, particularly to the genuinely developing countries;

4) Le statut d'industrie naissante ne devrait cependant pas permettre de déroger aux règles générales du GATT en matière de subsides à l'exportation, dumping... Ces pratiques conduisent, en effet, à un appauvrissement des pays exportateurs.

4) The status of an infant industry should not, however, involve going outside the rules of the GATT in the matter of export subsidies, dumping ... Such practices lead, in effect, to an impoverishment of the exporting countries

5) Ces différentes orientations de politique commerciale doivent être liées à l'objectif fondamental que constitue le relèvement du niveau de vie et la promotion des conditions de travail et d'emploi des populations.

5) The moves in the directions in commercial policy must be tied to a basic objective which is the raising of the standard of living and a improvement in working conditions and employment for the people.

Dès lors, tout arrangement international sur le commerce, devrait être assorti d'une clause sociale. Aux termes de celle-ci, les droits découlant de cet arrangement ne sauraient être invoqués que pour autant que les pays signataires aient ratifié et appliquent les normes internationales découlant des conventions et recommandations de l' Organisation Internationale du Travail, dans des domaines tels que : la sécurité de l' emploi, la garantie du revenu, les conditions équitables de travail, la sécurité, l'hygiène et la santé.

From now on, any international agreement on trade, should includs a social clause. The terms of such a clause should ensure that the rights under the agreement could only be invoked by those countries having ratified and applied the international norms inherent in the conventions and recommendations of the International Labour Organisation, in the fields of such as : security of employment, guaranteed income, fair conditions of work, security, hygiene and health.

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