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THE STEEL SECTOR*

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PREFACE

The creation of the European Single Market is the most significant step in economic integration so far taken. The creation of a single economic area in which capital and labour, goods and services all move freely is the target set by the countries of the European Community to be achieved by the end of 1992. Given the size and strengths of the Community, the changes under way may be expected to have significant impacts beyond its borders.

UNIDO, with financial support from the Government of the Netherlands, is holding an Expert Group Meeting to examine the main implications of this process for industrialization in developing countries. The expected growth effects of the Single Market will have implications for the world economy, including changes in trade and investment patterns. Other associated EC policies, especially in the areas of regional policy, competition, technology, environment, energy and technical standards will also affect a wide range of industrial sectors, and thus the prospects for industrialization in developing countries. The Expert Group Meeting will review the implications in terms of key industrial sectors: food, textiles and clothing, footwear, steel, chemicals, and electronics.

The present paper deals with one of these key sectors, the steel sector. It reviews trends in the world industry and examines the implications of the Single Market and European Community policy for the steel sector in developing countries.

The paper was prepared by the Regional and Country Studies Branch of UNIDO, with Dr. Peter Wisinger, Austrian Industries AG, Brussels, Belgium, as UNIDO consultant.

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1. RECENT GLOBAL TRENDS ON THE STEEL SECTOR

This paper analyses the impact of the Single European Market on the steel sector in developing countries. It takes into consideration not only the Single Market but also the European Economic Area (EEA) and the effects of closer cooperation between the EC and the former CMEA countries.

In 1974, world crude steel production reached the very high value of 740 million tons. In subsequent years, steel production was affected by the oil crisis. But in 1978/79 and from 1984 up to 1991, crude steel production was higher than in 1974. In 1990 crude steel production was 770 million tons and even in 1991, during a more depressed business situation, production is estimated at 734 million tons. It is necessary to add that, in finished products terms, the crude steel produced in 1991 resulted in more than 10 per cent higher output than 1974 due to improved efficiency.

After low apparent consumption in the early 1980s, EC and EFTA countries have subsequently experienced growing steel demand.

In 1984 the apparent consumption in the EC was 102 million tons and the level of 1988 up to 1991 was approximately 120 million tons. A similar trend has been seen for all of Western Europe. During this period important capacity reduction and other steps to improve efficiency in the industry have taken place.

Therefore, despite higher imports and a low growth rate of production in the EC and in Western Europe generally, the economic situation of the industry has improved considerably.

During the same period (1984 to 1990) the aggregate production of developing countries increased from 70 million tons to 102 million tons. The increase from 1974 to 1991 was from 31 million tons crude steel production up to 109 million tons. Production tripled in the developing countries.

The development of the EC steel demand will be decisive for all participants in the Single Market, both EC producers and importers. If the economic situation remains the same, the future trends in steel trade will show a similar picture as in the last decade: stable supply relations between OECD countries, increasing connections between developing and OECD countries. In addition, EC exports of steel products with low added value will decline further, while deliveries of such products into the EC will grow.

In former CMEA countries production and demand has started to shrink since 1987 from more than 220 million tons to well under 200 million tons. Due to the process of restructuring the economy in the former USSR and Eastern Europe, and the intention to produce more consumer goods and to reduce armaments which are steel intensive, production and capacities will have to be cut further.

Such plans for restructuring indicate reductions of capacity up to 50 per cent. The process of capacity reduction will be painful not only for the countries involved but also for Western Europe and other steel producing regions.

The excess quantities produced in Eastern countries are already causing shock-waves in the steel markets.

This may also affect developing countries, especially their exports to markets in the industrialized world. Close cooperation or the free trade area agreements concluded between EC and EFTA countries on the one side and the former CMEA states on the other could to some extent prove detrimental to developing countries during the period of adaptation. But the subsequent expected upswing of the economy in former CMEA countries will have positive effects on the world economy as a whole.

2. TECHNOLOGY POLICY

2.1 Aims and Content of the EC Technology Policy

Based on the agreements of the European Coal and Steel Community, a comprehensive European policy on R&D and technology in the steel sector has been developed over the last 30 years. The aims and contents can be summarized as follows:

- coordination of the R&D policies of the EC countries;
- definition of R&D programmes;
- sensible and effective use of financial funds;
- long-term strengthening of the competitive position of industrial companies.

EC technology projects are given preference, if

- they could not be carried out by individual countries alone, in terms of finance, personnel and technical resources required;
- they are projects of wider concern, such projects in connection with the environment where implementation across national borders is desirable;
- they are projects in connection with the completion of the European Single Market, the development of standards etc.

2.2 Technology Guidelines and Programmes

R&D programmes covering several years are established with the aim of making mid-term plans, of setting priorities among projects, and of planning the disbursement of the necessary resources. In this way, companies and R&D institutes as well as governments of the member states get a general view of the R&D priorities of the community.

The current 3rd EC framework programme for research and technological development has the following principal features:

The main emphasis is given to the key sector of information and communication technologies (ESPRIT, RACE, etc.) as being promising and significant growth fields in the future. Their share of the total budget is 39 per cent. Other subjects include industrial and material technologies (EURAM, BRITE, etc.) with 16 per cent, followed by energy (14 per cent), biosciences, environment technologies and others.

At the Community level, technology policy is implemented in three organizational forms:

- the Community's own research, in four research centres;
- contract research;
- execution and financing through the member states with the Commission's coordination.

Cooperation is also possible with third countries, through bilateral agreements or based on project-related participation. In the latter case of course, the third country participant has to care for its own administrative and financial contributions.

The Community has issued mid-term guidelines for the ECSC programmes 'Technical research for steel' covering the period 1991 to 1995. Guidelines are set up regularly in order to reflect the changing scientific and technological priorities of industry. The orientations in them correspond to the policy of the EC Commission regarding steel and indicate the necessary contributions that R&D has to make with regard to the competitive position of industry. Of course, the General Objectives for Steel 1995 form an essential basis for the above orientations.

Technological innovation has to be seen from two viewpoints:

- process innovation;
- product innovation.

As a matter of fact, both items are often closely connected: On the one hand the implementation of new production techniques generally leads to an improvement of the product performance and may even create new products and, on the other hand, in order to manufacture new products or product forms, new manufacturing lines and processes must be introduced.

The EC Commission grants financial assistance in accordance with the ECSC treaty. The magnitude is indicated by the following: 101 R&D projects regarding steel, both process- and product-related, plus 14 pilot plant projects received financial aid to the total value of 41 million ECU in 1990.

R&D efforts have also to consider industry-wide aspects, such as the competitive situation of industrial enterprises caused or changed by the completion of the Single Market. R&D steel subjects have to consider these aspects and they can be listed in the following order of importance:

process-related:
- reduction of energy costs
- improvement of measuring and analyzing
- techniques
- development of systems for automated control
- improvement of environmental values

product/branch-related:
- vehicles and transportation
- power generation
- plant engineering
- mechanical engineering
- steel construction
- environment protection

2.3 Outlook for the Future

In the EC Commission's General Objectives for Steel 1995 it is outlined that the competitiveness of the iron and steel industry in the Community will very much depend on the availability of top ranking technology. The R&D programmes of the Community represent an ambitious goal for the fulfillment of these endeavours.

As regards financial assistance for these programmes, subsidies are allowed according to the ECSC steel subsidies Code. It should be noted also that within the global Multilateral Steel Agreement (MSA), currently under negotiation, such subsidies for R&D financing are permitted to a certain extent, provided that the R&D results are made generally available.

The EC intention of investing in technological innovation and to pushing forward applied research should result in higher-value steel products, forms, finishes and fields of application.

Many measures concerning the creation of the Single Market are of a technical nature which, by themselves, will only have little effect, but aggregated will provide valuable stimuli for a better functioning of the whole EC area. Moreover, economic coherence will increase through the formation of the European Economic Area (EEA) including the EC and the seven EFTA states.

It can be assumed that a further active R&D policy of the Community will lead to positive demand stimuli for the whole Single Market and thus will be favourable for all market players. These stimuli are likely to have a positive impact on Europe and on the world economy, including developing countries.

3. TRADE POLICY CONCERNING STEEL

3.1 General Remarks

The completion of the EC Single Market will have an important impact on the economic situation of developing countries but it will be a varied one. In comparison with possible trends in the evolution of a Multilateral Agreement on Steel Trade Liberalization (MSA), however the effects of the EC Single Market on the international steel market should not be over-estimated. The future MSA will be the product of 'multilateral negotiations' which began in December 1990 when the United States proposed a 'multilateralization' of the bilateral 'Steel Consensus Agreements' agreed earlier between the United States and other countries with steel importing interests in the United States. These negotiations are not part of the actual multilateral trade negotiations (GATT-Uruguay-Round) but there is a close connection to GATT not only due to the fact that these negotiations are organized with the GATT at Geneva: The basic approach for the MSA is called the 'GATT-plus'-approach. That means that the outcome of the GATT-Uruguay-Round should be the basis for increased discipline, transparency and liberalization in international steel trade.

The EC is participating very actively in these multilateral steel negotiation. The following analysis of EC's actual position in these negotiations shows that foreign steel trade policy in the future will be more influenced by the outcome of these multilateral negotiations than by the completion of the EC Single Market.

3.2 Subsidies

It is well known in EC Law that there is an important legal difference between the EC Treaty (Art.92) and the ECSC Treaty concerning subsidies, because Art.4 of the ECSC Treaty prohibits subsidies granted by member states. But as a consequence of the world-wide steel crisis a special 'ECSC-Steel-Subsidies-Code' was developed within the legal framework of the ECSC. The basic idea of the ECSC Steel Subsidies Code was to allow some specified subsidies for research and development, for environmental protection purposes and the permanent closing of a steel producing entity. It was understood that those subsidies are compatible with the good functioning of the ECSC Treaty and therefore not actionable under national trade laws.

The actual (7th revision) draft of the MSA concerning subsidies contains almost the same wording as the ECSC Steel Subsidies Code. All participating states - with the notable exception of the United States - promote the idea that subsidies which are not prohibited by the MSA should also not be actionable under national trade laws (so called 'green lighting'). At the moment it is not clear whether the not-actionability is limited to such subsidies in member states of the MSA or applicable also to such subsidies in non-members.

3.3 Officially Supported Export Credits for Steel Plant and Equipment

There is some evidence that the parties to the MSA will agree to seek increased transparency and discipline over aid credits, tied or untied, and other forms of subsidized official export credit support for steel plant and equipment. The reason behind this is, on the one hand, the determination not to foster overcapacity through official export credits of tied or untied aids; on the other hand, the parties to the MSA could face difficulties with the steel industry on the home markets when explaining why public support would be only available to the foreign steel industry (as a consequence of the prohibition of public support to the steel industry with limited exceptions for public supports in the fields of research and development, environmental protection purposes and the permanent closing of a steel producing entity).

At the present stage of negotiations some delegations are in favour of a clause strictly prohibiting all official export credits or tied or untied aids. Other delegations support a prohibition of official export financing which is not compatible with the 'OECD guidelines'. That means that official grants, loans, officially supported export credits or other official financing for steel plant and equipment will be prohibited if they do not meet the OECD guidelines which have been adjusted in December 1991 (Helsinki package). It seems worth mentioning that this approach would allow deviations from the OECD guidelines, because the parties will be permitted to match offers from countries which are not parties to the MSA.

The EC delegation is still opposing the MSA proposals concerning more discipline in the field of export credits for steel plant and equipment. The main argument is that financing for steel plant and equipment has nothing to do with steel trade. The EC delegation has proposed that the question of export credits for steel plant and equipment should be dealt with only in the OECD. It is evident that 'progress' in this question will have important effects on the developing countries. However, these effects do not depend on the completion of the EC Single Market, because they will be a consequence either of the MSA or of tougher OECD guidelines.

3.4 Tariffs for Steel Products

According to Art.3 of the present draft of the MSA the participating states intend to modify their schedules of tariff concessions in the GATT to provide duty-free treatment for imports of steel products. The analysis of the MSA makes clear that this Art.3 is only part of a multilateral trade agreement and not part of an agreement with the intention of preparing a customs union or a free trade area. This legal distinction has the consequence that according to the most-favored-nation (MFN) clause (Art.I GATT) all member states of the GATT (and not only member states of the MSA) will be entitled for duty-free treatment as far as concerns products which are to be covered by the product coverage (Art.10) of the MSA.

It is intended that duty-free treatment for those products will be implemented by way of equal annual rate reductions from the MFN applied rate as of June 1, 1991, over a ten year period, beginning with January 1 following the date when the MSA comes into force. The reduced rate is in each stage to be rounded off to the first decimal. The resulting tariff rates will be binding under the GATT. The provisions of the MSA do not prevent the parties from implementing reductions in fewer stages or at

earlier dates than indicated above. Some states participating in these multilateral steel negotiations have announced that they will provide duty-free treatment earlier; but at the same time some 'countries in transition' announced that they will not be able to implement duty-free treatment by way of equal annual rate reductions.

3.5 Other Market Access Measures for Steel Products

The MSA draft contains a set of rules prohibiting in detail a number of market access measures for steel products. It should be mentioned that most of these rules are already part of the GATT (e.g. on quotas or other quantitative restrictions); some of them even contain an explicit reference to the relevant Articles of GATT. If there are really new rules concerning a liberalized market access for the parties to the MSA it can be argued that all other members of the GATT will benefit from these rules as a consequence of the MFN-clause. For other states, not intending to become parties to the MSA it seems to be interesting that the parties to the MSA agreed to phase out all existing voluntary restraint arrangements and all agreements to coordinate or maintain patterns of trade and to prohibit these types of market access measures in the future.

3.6 Public Procurement of Steel Products

Art.VIII Sec.8 of the GATT contains an explicit exception from the rule of nondiscrimination in the field of public procurement. Accordingly, the MFN clause is not applicable in the field of public procurement. The GATT Code on Public Procurement introduced the rule of nondiscrimination in the field of public procurement only for the members of that Code and not on the basis of the MFN clause. These legal connection between GATT and the GATT Code on Public Procurement are very important for the understanding that every advance in the MSA concerning public procurement (e.g. for urban mass transport, highways etc.) will be available only to states that are either members of the MSA or members of the GATT Code on Public Procurement.

3.7 Dumping

Some parties to the MSA have in the past had the impression that instruments of anti-dumping legislation have been misused by certain countries to harass other steel exporters. Therefore all states (with the exception of the USA) participating in the MSA negotiations are in favour of rules to avoid any abuse of antidumping measures. The most important proposal of special antidumping rules in international steel trade is of a multilateral control concerning the initiation of anti-dumping investigations. That means that a member of the MSA may initiate an anti-dumping investigation only when the so called multilateral 'Parties Group' has determined, through sufficient discussion initiated immediately after the filing of the request for an anti-dumping investigation by the authorities of the member state, that there exists appropriate and sufficient evidence of dumping and material injury as well as reasonable and sufficient causal link between the dumped imports and the alleged injury.

3.8 Concluding Remarks

There are still some doubts if the MSA (in the existing or in a modified version) will ever come into force. Some future rules will have direct positive effects for developing countries (e.g. customs tariffs, market access measures). With the very important exception of the future prohibition of officially supported export credits for steel plant and equipment, there seem at first sight to be no future rules that will have negative effects for developing countries. This is because the main goal of the MSA is to increase discipline, transparency and liberalization in international steel trade and to reduce or eliminate all protectionist trends in international steel trade. All countries that will not be members of the MSA (which is to be open for signature by any other country) should bear in mind that the MSA

will create a sort of 'world wide Single Market' for steel trade with trade-creating effects that are beyond the trade-creating effects of the completion of EC's Single Market.

4. COMPETITION POLICY

The EC competition laws including the rules on mergers and acquisitions (which have been enacted two years ago) are applicable if there are certain effects on trade within the EC. As a consequence of these extraterritorial effects of EC competition and merger legislation, enterprises in developing countries may also have the obligation to comply with these EC rules in principle.

That means in the field of competition law that all agreements between undertakings, decisions by associations of undertakings which have as their object or effect the prevention, restriction or distortion of competition as regards the production of or trade of products, are prohibited in so far as they affect trade between the member states of EC. But if these agreements etc. do not affect trade between the member states they are outside the scope of EC competition laws. It is argued that the completion of the EC Single Market will - as a consequence of the trade creating effects of a Single Market - reduce the danger that anticompetitive agreements between undertakings from developing countries can be interpreted as affecting trade between member states.

As regards merger control, the present EC regulation is only applicable if the world-wide turnover of the enterprises involved is equal to or above ECU 15 billion and the turnovers within the EC of at least two of these undertakings are equal to or above ECU 250 million. As a consequence of these very high thresholds it is clear that EC merger control will have neither positive nor negative effects on enterprises from developing countries.

5. STEEL: EC INVESTMENT POLICY AND ITS IMPACT ON DEVELOPING COUNTRIES

There is no EC or ECSC steel investment policy as such. This should hold also in the future, particularly because further deregulation will take place in the sector.

Indirectly however ECSC regulations have a strong influence on investment. This can be seen as follows.

Since the beginning of the 1980s, ECSC has sought capacity cutbacks in crude steel and in semiproducts at the first processing step such as hot rolled flat products.

The instruments for this policy were used:

(a) a strict authorization of governmental capital supply to the state owned steel industries, it being allowed only according to the so called 'private reasonable investors' criterion, with such capital flows being otherwise treated as prohibited subsidies.

(b) during the years of the steel crisis the quota system with corresponding effects on investment constraints within the appropriate areas of the steel capacities.

(c) the codex of prohibited subsidies, validated recently, restricting national subsidies to (i) specific investment cases for research and development, (ii) environment protection purposes and (iii) subsidies for the permanent closing of steel producing entities.

In addition, subsidies provided by the EC funds for regional and structural development, together with the system of different rates of subsidies depending on the regional development status, have particular effects on investment decisions and on the locations of capacities in the steel industry. According to the customs union theory, the expected growth impetus of the Single Market, within and outside the EC, should (with a given positive trade creation effect) improve the investment climate for the global sector.

However, in the steel sector two reservations seem immediately necessary:

First, there are still overcapacities within the EC, and these are increasing by reason of the present cyclical depression.

Second, the EC steel sector continuously shows 'revealed comparative advantages' towards the rest of the world (with an export/import ratio of 1.9 and an export intensity of nearly 13 per cent of production).

These tendencies are likely to persist and the West European steel industry will strive to improve its competitiveness further: it will do so also through specific investments.

High investment to sales ratios during the 1980s, going hand in hand with reductions in crude steel capacity, were mainly directed towards product specialization, increases in degree of finishing and modernization of the production processes. Further, there have been a series of acquisitions and direct investments across national frontiers (e.g. USINOR/Saarstahl, British Steel/Mannstädt-Werke of Mannesmann, and most recently the takeover of a number of East German steel plants by the Italian Ilva Group).

The concentration process within the West European steel sector is expected to continue in the future, in particular as far as the German steel industry is concerned. West European steel enterprises will gather together to maintain competitiveness and performance viz-à-viz large traditional producers of the United States and Japan as well as towards rising stars such as POSCO of Korea and China Steel of Taiwan.

5.1 The challenges from Eastern Europe

The opening of the Eastern European economies and the dissolution of the Soviet Union resulted in a radical change of the environment for steel development. The most significant features are as follows:

The cutback of arms production and the closure of less productive or resource wasting capacities will lead to huge disinvestment in crude steel capacity, taken Europe as a whole (East and West together). We assume a cutback of the present production capacity in Eastern Europe (including the former Soviet Union) of approximately 230 million tons to some 140 million tons. At the same time the remaining capacities have to be fundamentally modernized through capital investment. For strategic reasons like such as the securing of markets, the necessary capital will be furnished partly by direct investments from steel enterprises in Western Europe (perhaps some 30 per cent of the total).

The asymmetric trade policy with respect to East European reform countries, established by free trade agreements, will intensify steel trade flows between West and East Europe. It will give further impetus to the process of 'intra-industrial specialization' between more sophisticated steel products and processing in the West and rather 'mid tech' or standard materials production in the East. The investments and location decisions of enterprises will be orientated within the next 15 years in line with these tendencies.

5.2 General investment conditions within Europe will also affect developing countries

In general however, the investment boom of the late 1980s (due to the effects of the Single Market) will decline. One contributing factor to that would be the persistence of high interest rates, which would be a particular burden for the capital intensive industries such as steel.

Conditions for real capital investment will furthermore be affected by the general economic surroundings in capital markets, including tremendous capital needs for the restructuring of Eastern Europe, ecological requirements as well as the problem of aging populations, which will place increasing demands on the national income.

Steel enterprises will therefore increasingly have to rely on their own resources for finance, and will have to improve their competitiveness accordingly, with special attention to cost structure and quality.

The steel sector however will remain, against the background of new processing technologies in the liquid steel stage, a basic industrial branch in developed industrial countries.

So, within the next ten years, the introduction of innovative production processes like thin strip casting can be expected, which will contribute to more flexible capital use. Concentration of ownership will continue to grow. However, the above-mentioned need for more flexibility with regard to capital, will cause a tendency towards more market appropriate, flexible organization structures. As a consequence, there will be an increasing decentralization of operating units and locations. These processes may lead to less pressure for further deregulation in the steel sector: this means that viable enterprise structures can, to some extent, counteract sector specific regulations in the long run.

Steel will also be affected by the challenge of environmental protection, both concerning the reduction of emissions by new process technologies as also the appropriate structure of raw material and energy use. Pressure to avoid the sinter process in iron ore treatment will support the use of pellets, which should give new momentum to the iron ore producing countries, and additional value added. The increasing use of the direct reduction process (now the COREX-technology) in pig iron production will facilitate a broader use of standard quality coal as the basic energy input. These developments may result in a reconfiguration of the relevant raw material markets.

All in all, this scenario for steel in the 1990s emphasizes that enterprises will have more and more to rely on their own potentials, only partly supported by national or supranational structural policy. Although there will be some impact on steel investment policy through national or supranational public authorities, such as in the field of restructuring aids to the reform countries, public authorities will increasingly refrain from protectionist strategic attitudes in the Single Market and subsidies will be strictly examined for their compatibility rules. The EC generally intends a breaking up of national or supranational subsidies systems. At present, nearly 90 per cent of public subsidies are distributed among the four large member states.

As a consequence, however, new locations for steel mills within Western Europe could emerge, taking into account that at present the south of Europe is disadvantaged. By differentiation of the subsidies rates in favour of structural weak regions of the South, regional convergence within the EC could be improved. However, especially if there were industrial restructuring of the successor states of Yugoslavia, capacities in competition with those in North Africa could emerge.

A last topic in the field of the investment policy of developed steel countries towards developing countries' concerns the tendencies within the MSA (Multilateral Agreement on Steel Trade Liberalization) to restrict (if not cancel completely) public supported export credits for steel plants and

equipment. The existing proposal to prohibit all 'official grants, loans, officially supported export credits or other official financing for steel plant and equipment' by reason of the need for 'structural adjustment in world steel capacity'. In a second clause the proposal allows for exception from this strict prohibition, if the credits fulfill the OECD guidelines issued in a modified manner in the Helsinki package. Government guarantees and insurance of commercial loans and government loans given at market conditions as well as untied financing would not be prohibited. These conditions would in addition allow for matching better offers coming from outside the more restricted member circle of MSA - and would therefore be less strict than the OECD guidelines themselves.

6. INDUSTRIAL PRODUCT STANDARDS AND PRODUCT LIABILITY

6.1 The Function of Product Standards

It is the aim of product standards to ensure and to improve the comparability of goods and services. Moreover, standards are issued in the interests of safety, exactitude and environment, pervading the production and sales process in practically all sectors of the economy, as well as testing, measuring and quality control. In addition to standards and technical regulations, testing and certification rules are used to achieve conformity of a product or service with specified qualifications.

6.2 Negative impact of differing Standards: obstacles to international Trade

Differing standards, regulations and testing requirements may represent clear trade barriers, and as such they have received growing attention. There is no doubt that following the removal of duties and quantitative restrictions by the EC treaty and by the free trade area agreements between the EC and the EFTA states, the remaining trade barriers, especially in the case of industrial standards, have emerged as the most significant obstacles to free trade of goods in western Europe.

This has special significance for the steel sector. Here, technical impediments are having negative effects at company level, such as by means of:

- distortions in the production process;
- smaller manufacturing lots;
- higher stocks and inventory costs;
- higher distribution costs;
- increased testing and certification expenses.

The above factors will result in:

- reduced earnings and consequently;
- diminished competitive position on international markets.

Considering the above it is not surprising that EC companies in many statements have regarded technical barriers as the main obstacles for the final completion of the European Single Market.

6.3 Product Standards and the Single Market

The EC action against technical barriers has three main components:

- harmonization of national legal regulations with respect to safety, health and environment;
- setting of uniform European standards through European standards bodies;
- mutual approval of national standards and technical certificates until suitable European standards have been established.

For completion of the European Single Market standardization has to receive major attention. It is recognized that the Single Market may be jeopardized by a lag in standardization work. Late in 1990, the EC Commission published a 'green paper' in order to accelerate and concentrate all standardization efforts. This discussion paper pointed out the strategic importance of European standards taking into account the necessity of overall coordination and improvement. With regard to realization, the approach includes short-term and long-term measures:

short-term: immediate improvement of efficiency, in standard setting leading to accelerated issuing of European standards;

long-term: reorganization of the European standards system, to be achieved by new structures in committees and working groups;

In detail, essential aspects for improving measures will consist of

- increasing integration of industry experts into working groups;
- creation of standardization bodies on industrial branch levels;
- committees' decisions being made on a majority rather than on a consensus basis.

6.4 Implications of the EC Policy for third Countries

Trade between non-EC countries and the EC will be affected by the measures to remove technical trade barriers in the following ways:

There will be easier access to the individual EC markets and export penetration to the whole EC area will be facilitated. This holds good especially for those EC destinations that have managed up to now to protect their markets through applying technical barriers. There will be positive effects especially for those who are already acting within EC borders.

Exporters making deliveries from one EC country to another will benefit from administrative simplicity which will not apply to the same extent for exporters from non-EC countries. The first and only admission and product test has to be executed in the first EC country. However, in case of goods of non-EC origin, goods must undergo multiple tests in various EC countries, even in the case of equivalent-standards, since mutual recognition of test certificates has not yet been realized. Consequently, suppliers from non-EC countries face adverse competitive conditions. Besides, EFTA states are in a somewhat more favourable position than other non-EC countries due to the fact that they are fully integrated in the European organizations for standardization, such as in the European Organization for Testing and Certification.

In the steel sector, the meeting of new product standards or rather 'harmonized' standards will certainly not raise any greater problems, neither for EC producers nor for outsiders, as could happen in the case of other products, such as food and toys, where environmental aspects may have some discriminating effects.

Summing up, European standards have an increasingly global reach, and competitors from outside the EC will still have barriers to overcome. However, these barriers, in the steel sector, refer more to the question of recognition of test certificates than to the ability to meet the technical standards which, as experience has shown, is performed equally well by both EC and non-EC manufacturers.

A side aspect in the discussion on technical trade barriers is the question of product liability.

According to EC rules, the EC producer is liable for EC produced goods, while for non-EC produced goods the first importer is liable. This situation not infrequently leads to the situation that dealers situated in the EC prefer to buy EC manufactured goods rather than non-EC manufactured ones in order to avoid liability. It remains to be seen whether, in the steel sector, the question of product liability will be a determining factor for establishing and securing a market position as compared with other competition factors such as price, quality assurance, promptness of delivery or steel treatment services.

7. IMPLICATIONS OF ENVIRONMENTAL LEGISLATION FOR NON-EC COUNTRIES

In the field of steel the impact of environmental legislation could be severe in EC countries.

Assuming a scenario in which a range of costly measures with respect to SO_2 and dust and taxes on CO_2 affect only the EC itself and drive up the cost of the most basic industrial commodity, energy, the steel industry in the community could be forced to implement an extensive package of measures. For the steel industry especially coal, or rather the coke made from cokeable coal, is not only an energy source for the industry. As the reducing agent in the blast furnace process, it is a main raw material.

In this scenario, all pollution producing steps necessary for the iron and steel making process could then be moved to countries with lower or non-existing taxes or restrictions. (For instance, there would be shrinking of sinter-production and coke-production in the EC and expansion of these activities abroad). The more costly pelletizing process would substitute to some degree for the sintering process, and the use of more pellet feed for blast furnaces in the EC would bring more money for some developing countries than the mere delivery of iron ore. This tendency to build smoke-stack industries in non-EC countries is well known.

The production of pig iron, sponge iron and semis in developing countries might also be encouraged, and these exports would generate more money than export of raw materials. However, one should keep in mind the existence and growth of export capacities for pig iron in the former CMEA countries. Emissions and CO_2 problems would be moved to these countries.

Because of quality considerations and just-in-time necessities the EC countries would increase imports of semis only to a limited extent.

An alternative scenario may be envisaged. In this, after some delay, similar environmental legislation and especially CO_2 taxes accompanied by similar restrictions would be introduced in the developing countries also. In this case, a greater transformation of the steel industry will take place. In this second scenario the use of coal to make coke and the use of coke in blast furnaces would be in question. Energy saving and conservation (e.g. lower consumption of coke) would not be enough. The

use of reducing agents with less carbon content (such as oil, natural gas, and hydrogen) would be triggered off.

Coal might be used in new processes where the CO_2 tax-burden could be shared, such as the COREX- or FINEX-process, generating electrical energy and pig iron as a by-product. On the other hand the use of processes of direct reduction by means of natural gas would be boosted. The impact on the non-EC countries in general would not be unfavourable: there would be higher exports of natural gas at the expense of EC coking coal and there would be a move of some processes to iron ore producing countries beyond the EC borders.

Consideration of these scenarios should be tempered with the realization that the EC accounts for only 13 per cent of world carbon dioxide emissions, and that many large sectors of EC industry, such as steel and cement, would be exempted from the tax.

The increasing convergence of trade and environmental policies has led to suggestions of protectionism in the guise of environmentalism.

The GATT secretariat has drawn attention to dangers of this kind. The temptation of a country may be tempted to initiate unilateral vigilant action against another country, and this will create trade barriers. A recent GATT publication takes the position that 'a country may not restrict imports of a product solely because it originates in a country whose environmental policies are different'.

At a wider level, it should be pointed out that to frustrate developing countries' ability to improve living standards will at the same time frustrate efforts to raise standards of environmental protection.

The experience of the steel industry indicates that investments in environmental protection bring diminishing returns - the biggest effects at the start of the endeavours and the costliest for the remaining few percents of pollution. In Austria, for instance, the quantities of emissions imported from former CMEA countries have been assessed as more important than home-generated pollution.

In general, it would appear that positive incentives for non-EC countries to comply with international environmental agreements will be more effective than punishing polluters by means of trade sanctions. It appears more sensible to grant incentives for developing countries to achieve economic growth in more environmentally acceptable ways.

8. REGIONAL DEVELOPMENT POLICY WITHIN THE EC CONCERNING STEEL AND THE IMPLICATIONS FOR NON-EC COUNTRIES

Like other policies of the EC, the goals of regional development policy are higher efficiency and better functioning of the Community and this will create also more trade with developing countries. Part of the gap in income and economic performance between rich regions such as the London area, Paris, the Rhine and Northern Italy and the poor ones like the South of France, peripheral Spain, Italy and Greece and the North of the U.K. will be bridged by a programme of approximately $ 90 billion. The Community Regional Policy for 1989 - 1993 supports these poorer regions that have an income of less than 75 per cent of the EC average.

Developing countries in the Mediterranean region will be more concerned because there is a danger of a narrowing gap within Europe accompanied by a widening one between the regions of Southern Europe and the other states of the Mediterranean.

The changes in the economic structure of the sunbelt of Europe will exert a decisive influence on their economies (e.g. through a positive influence by more tourism from the south of Europe to North Africa).

The creation of steel production capacities in the South of Europe such as project UTOPIA follows the creation of steel consuming industries and, for the long coast line from Taranto up to Trieste and from Trieste down to Greece, potential steel investment projects could become feasible and even become cases for direct support.

Because of a drain on the investment means of the European Community through the structural funds and the emerging needs in the former CMEA countries there will be some negative effect on Latin America and South and South-East-Asia. The major share of investment from the industrialized countries used to flow to these countries. The urgent need to allocate EC funds for a structural programme for former CMEA countries is evident and the Community Regional Policy after 1993, it may be expected, will have funds for this purpose after the internal programme of the EC has been completed. The negative impact could be even more aggravated for South-East-Asia if a free trade area between USA and Latin America were sharply to reduce the investment flow to their countries. The challenge for this region is to press ahead with its own investment decisions and plans.

9. HUMAN RESOURCE DEVELOPMENT POLICY IN THE EC ON THE STEEL SECTOR

The general issue of the Single Market as far as human resources are concerned is related to the so-called 'social dimension of the Single Market'. So far this has led to the 'Community Charter for Social Rights'. From this Charter will evolve evolutive programmes and policies embracing a broad spectrum of social and employment conditions. The aim is to establish minimum standards and regulations in social security, labour market, professional education and working conditions, leaving at the same time member states their national profiles of social systems.

The European Social Fund can be considered as a rather indirect instrument of human resource policy in the steel sector. The ESF provides support measures, in particular for young workers, within structurally weak regions, which are within the EC often identical with traditional heavy industrial areas. These subsidies are only provided if there is a 50 per cent participation of the member state applying for them. They include restructuring aid for the benefit of dismissed workers in case of long lasting unemployment and for retraining.

Apart from this there are few explicit instruments for EC wide human resource development in the steel sector.

The steel sector will of course be affected by the human resource aspects of the Single Market in general. In this context some indirect effects with respect to migration from developing countries can be expected as well.

In brief, they can be mentioned as follows:

- Education and training according to harmonized regulations as well as the EC wide mutual recognition of diplomas in the technical areas (Harmonization of 'Fachhochschulen' or 'European Engineer' concept) will have a mobilization effect in the field of qualified technical and managerial labour throughout the Single Market.

  Therefore some 'ratchet effects' against outside persons with respect to access to specific education and supply of special types of labour cannot be excluded.

- The freedom of settlement and employment also for medium qualification levels may result in an additional attraction of the EC member workforce to the well-developed economic centers. This might lead to more immigration pressure from outside on European border regions.

- Again, the opening of Eastern Europe will perhaps induce far more effects on real human resource conditions than the establishment of the Single Market to the extent that labour will become a rather abundant economic factor by reason of open borders. The income relations between (scarce) capital and (abundant) labour as well as between those qualified and less qualified labour may change dramatically. Moreover, because the skill and qualification level of the East European workforce is much higher than that of developing countries there are possibilities of a growing pressure of labour supply from East European countries and, therefore, additional barriers to migration from non-European developing countries to the EC countries.

10. SPECIAL RELATIONS OF THE EC WITH DEVELOPING COUNTRIES

Although many important questions will remain unresolved until the MSA- and GATT-negotiations are concluded, one must still consider what steps could be taken in favour of the developing countries and what instruments are available in order to alleviate the negative effects of the EC Single Market, especially in the field of steel.

First of all it must be said that the international legal instruments in force remain untouched. The legal framework cannot be changed for the worse. However it may be expected that the developing countries will face more difficulties in taking advantage of the legal framework, because the competitive situation will be sharpened. This means that the chances of the developing countries succeeding in the EC market are reducing, even though the present arrangements between the EC and the developing countries, like LOME IV convention, GSP and others, which give preference to the developing countries in trade with the EC, are still in force without any restraints. This is not only due to the obviously increasing competitive position of EC enterprises (a similar effect may be triggered off by liberalization in trade, such as for example through MSA), but also may be caused by intensified aids for some of the former CMEA countries.

As a whole, the Single Market will have positive as well as negative effects. To counteract the negative impacts, there is already a legal and institutional basis including the LOME IV convention and agreements with other developing countries and country groups exist as well (although these are not as intensive and far reaching as LOME IV). All these instruments, including investment programmes, technological and financial aid programmes, educational programmes, research programmes, programmes facilitating the market access, unrepayable credits and so on, deal with the kinds of problems described above. In principle, there are already instruments which could be applied - perhaps modified and adapted to new economic circumstances.

The more serious problem is the financial one, and it is questionable if the financial resources are sufficient to deal with all the negative aspects. New crises in central and eastern European countries and the consequent economic support programmes of the EC require considerable resources.

Finding answers to the question of the amount of financial means and the question of their distribution represent the most difficult problems in considering how any negative impact on the developing countries' steel sector may be alleviated.