although this cut has not been to the liking of the Italians.\(^2\)

As a result of the decline in steel industry because of lower steel orders from the construction industry and car manufacturers European steel industry has shed 200,000 jobs, about 25 per cent of the total work force since 1974.\(^3\) In Britain the slump in steel industry has been the most severe: over the past decade employment has declined from 250,000 in 1970 to under 200,000 in 1980-81. Although lately new innovations in steel technology\(^4\) have been incorporated by doing away with the slow and energy-intensive open-hearth process and largely switching over to basic oxygen and continuous casting processes\(^5\) the renovation has been negated by the fall in domestic demand for steel. The latest round of steel strikes (1980), had

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2 The Times, 4 September 1980.

3 Also see Leonard H. Lempert, "Detecting the Damage of Receding Economic Flood Waters", The Christian Science Monitor (Boston), vol. 72, no. 123, p. 19.


5 Keith Pavitt, "Technical Innovation and Industrial Development", Futures (Sussex), vol. 12, February 1980, pp. 35-44.
further crippled the industry. Although apparently it was the workers' demand that their wages should keep pace with inflation that had triggered off the strike, the immediate provocation came from the nationalized British Steel Corporation's plans to cut employment drastically from 152,000 to 100,000. Although the strike was called off, it left the corporation badly shaken for the thirteen week strike had pushed the corporation's losses for 1979 to around £450 million. Only recently has the corporation started drawing up plans to increase capital expenditure to more than £1,000 million over the next four years. The latest investment forecasts published by the Process Plant Economic Development Committee indicates a steadily increasing trend in capital spending in each of the years to 1983. However, BSC's

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6 For details see, The Times, 17 September 1980. The level of spending would be as follows: 1980 - £151 million; 1981 - £214 million; 1982 - £300 million to a peak of £385 in 1983. The BSC has embarked on a £3 billion investment programme to more than double capacity of 35-60 million tonnes a year. See The Observer, 16 December 1979. To offset further losses, British Steel had sought to sell its diversified interests, in chemicals and contracting and had also toyed with the idea of entering into partnership with private companies like GEN, (Guestkeen and Nettleton). For latest developments concerning BSC's programme on closure of steel plants, see George Rosie, "Steel: The Fight to the End", The Sunday Times, 14 November 1982. BSC's latest plan to close down Ravenscraig Steel works at Motherwell has drawn criticism from Scottish trade union leaders, development agencies, who feel its loss would have a devastating effect on the Scottish economy. The Scottish development agency has warned that 'the closure would leave North Leverkeshire with an unemployment rate of 27%'.

investment programme over the next few years would not involve any gigantic schemes but would be designed to improve the yield and quality of steel it already produces, in particular through the introduction of continuous casting facilities.

The present crisis afflicting BSC owes its origin largely to an overambitious expansion drive in the early seventies. The ten-year investment programme launched in 1972 involved gradual phasing out of older plants like Corby or Shotton in North Wales. New Coastal Steel plants like Port Talbot and Llanwern were chosen for the production of bulk steel: the motive being to exploit the economics of large scale production so that export opportunities of cheaper steel to the Common Market could be probed. This strategy did not become viable for the rapid growth in demand for steel in the 1950s and 1960s, soon gave way to fall in demand in Western Europe and Japan influenced greatly by the economic crisis of 1974 with no sign of recovery till now. BSC's sale of steel started falling in 1978 with losses touching at £ 440 million in 1977-78 and over £ 300 million in 1978-79. BSC's losses should be seen in proper perspective: its losses mostly consist of interest charges and if one looks at operating costs alone, BSC lost only £ 5 per tonne of crude steel, in 1978, a remarkably low figure in comparison to SALICAR of France (£ 32), ITALSIDER of Italy (£ 21) and even SALZGITTER of West Germany (£ 10) for the same financial
year. However, as long as there is depressed condition in world steel markets, BSC will have no other alternative but to dole out redundancy payments in areas hard hit by steel closures although investments worth $100 million has already been made to provide more than 200 jobs with substantial backing from the European Coal and Steel Community (ECSC).

Trans-Atlantic Steel Disputes

Although BSC had expected to reach a break-even target in 1982-1983 with its modernization programme, that prospect has been threatened by the anti-dumping suits brought against the EEC by eight US steel producers. In 1981, BSC had exported about 300,000 to 400,000 tonnes of high quality steel products to the US and had expected that eventually the ambitious target of 400,000 to 500,000 tonnes could be reached. This export target was sine qua non for BSC's survival programmes. If the anti-dumping suits get the backing of the Reagan Administration, not only will Britain find it almost impossible to dispose off her 300,000 tonnes of steel (earmarked for USA) but can also expect a virtual invasion by the European steel producers (who have 6 million tonnes of steel scheduled for export to US) who

would try to dump it in the British market. Rupert Morris, a noted commentator on British steel has rightly observed that "import penetration of that order would soon make nonsense of BSC's planned output of 14.4 million tonnes. Although British steel's weekly losses have been cut from £12 million to £5 million today, there is precious little margin for error if the Corporation is to break-even by March 1983."

It may be recalled that the Common Market producers had taken advantage of a strong dollar to increase the volume of its exports to the US market. Although the Common Market producers had agreed to two rounds of price

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8 The Times, 12 January 1982. Also see Bailey Morris, "No Progress on Steel", The Times, 18 January 1982; BSC has budgeted to reduce 1981-82 losses to £318 million from £665 million in 1980-81, and is clamouring for £50 million of extra assistance from the State. See, Michael Smith, "Decision Sought on Steel Aid", The Guardian (London), 22 February 1982. Also see, Martin Upfham, "Hope fades for steel Revival", New Statesman (London), vol. 104, no. 2693, 29 October 1982, pp. 12-13. According to latest data available the company has almost abandoned its financial targets for 1982-83. It was losing £7.2 million (about $12.24 million) a week in August, compared with £1.7 million a week in May 1982. In the last three months its operating rate has dropped to 64 per cent of capacity (14.4 million metric tons a year) from 95 per cent. See, International Herald Tribune, 12 October 1982. BSC has taken consolation from the fact that EEC industry ministers have agreed to mount a 'robust' defence against possible restrictions by the United States and European steel exports, but it hardly solves the question on the daily costs to public funds of the operations of British Steel Corporation, whose total external cash requirements during the current financial year average of 2 million a day. See for details, The Times, 26 January 1982.
increase in 1981, a higher valued dollar made European steel much cheaper, and Common Market exports of steel to US jumped 21.4 per cent in the first six months of 1981 to 2.4 million tonnes. The Common Market producers had also decided to bring about a hike in the price of steel by 12.5 per cent so that the extra money earned could be ploughed back to aid its hard-pressed steel firms, which have had to lay off some 200,000 workers. However more than the profit motive what actually goaded the EEC steel-producers to scout for markets in the US was the state of its steel industry which was beset by recession and surplus capacity. But there was a limit to USA's 'benign indulgence', for in the US steel industry itself jobs have dropped from a high of 512,000 in 1974 to some 390,000 in 1981. As the Economist in a recent survey has pointed out: "... America's steel industry, though getting newer faster, is still basically out of date. It pays its workers 70 per cent more than the average American industrial wage. Its output is about a fifth dearer than steel available on world

markets. This is partly because of the availability of cheaper Japanese and South-East Asian Steel, which is also a reflection on their efficiency. Although the US had introduced the "trigger price" mechanism (in theory it is set to exclude steel produced at a cost less than the average Japanese cost) in practice it has been observed

10 The Economist (London), vol. 280, no. 7204, 26 September-2 October 1981, p. 20. Also see, US News and World Report (Washington), vol. 88, no. 21, 2 June 1980, p. 71. This crisis in US steel industry has toughened the stand taken by US steel producers vis-a-vis EEC steel producers. Long back in 1980 US steel had used its own calculations to show that EEC steel makers are selling at less than a "fair price":

<table>
<thead>
<tr>
<th>Product</th>
<th>% by which export price is below &quot;fair price&quot;</th>
<th>Margin of undercut ($/short ton)</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold reduced sheet</td>
<td>40.4</td>
<td>137</td>
</tr>
<tr>
<td>Italy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cold reduced sheet</td>
<td>48.3</td>
<td>158</td>
</tr>
<tr>
<td>Hot reduced sheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanized sheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Germany</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanized sheet</td>
<td>70.2</td>
<td>262</td>
</tr>
<tr>
<td>plate</td>
<td>54.5</td>
<td>150</td>
</tr>
<tr>
<td>Britain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Galvanized sheet</td>
<td>98.9</td>
<td>362</td>
</tr>
<tr>
<td>Structural section</td>
<td>69.3</td>
<td>214</td>
</tr>
<tr>
<td>Medium plate</td>
<td>71.9</td>
<td>205</td>
</tr>
<tr>
<td>Cold reduced sheet</td>
<td>59.5</td>
<td>235</td>
</tr>
</tbody>
</table>

that the non-functioning of this mechanism has been the rule
rather than the exception. Even in actual practice this
'cost' has been showing a steady upward rise. Some European
firms have tried to outsmart the US regulators by laying
claim to 'pre-clearance' certificates, an euphemism for good
behaviour, however there is a limit to the use of this
ploy, for frequent use of such 'pre-clearance' certificates
may result in a spate of anti-dumping cases, which the
trigger-price mechanism was supposed to avoid. But it is in
the interest of European steel producers to abide by the
trigger-price mechanism as scrupulously as possible, for it
is actually the 'mirror-image' of Europe's steel subsidies.
Pressure had been building up on the US government by
Sixteen US Speciality Steel Manufacturers and United Steel
Workers of America to take a harder line vis-a-vis
European Steel Imports and after much prodding Common
Market producers had initially agreed to cut back their
sales by as much as 1.5 million tonnes a year, besides
offering a restraint in the form of an "orderly marketing
arrangement" - a device which has been branded 'illegal'
by anti-trust authorities in the United States. 11

11 Newsweek, 11 December 1981, p. 52. Although the West
European steel producers' Association, EUROFER is
critical of the US trigger price mechanism, it feels
that revising the mechanism would be preferable to
In a recent development beginning with January 1982 the US International Trade Commission (which on 11 January 1982 had started looking into 92 cases of 'dumping') has ruled in favour of seven US steel producers, who had alleged that foreign competitors (mostly European) had been flooding the US market with steel at prices below the cost of production, and using government subsidies to a quota system. For details see, *International Herald Tribune* (Zurich), 9-10 February 1980, p. 9. The trigger price mechanism did/in reducing imports' market share from nearly 20% to 13% in the early part of 1979 and according to the *Economist* "put a floor under prices so that the American industry made an average 3.6% return on sales in the first nine months of that year, but by the fourth quarter of 1979, imports share had increased to 18% of a declining market". See, *The Economist*, 23 March 1980, p. 106. European steel imports constitute 6 per cent of US consumption. However third world producers are also making inroads into the US market. In 1981, when 59 countries had exported steel to the US it was observed that South Korea's exports roughly equalled France's. While United States is so much concerned about European imports if often overlooks the basic problem of its steel industry: a drastic fall in profit which renders steel uncompetitive in price and discourages modernisation. At present labour costs are prohibitive; constituting 35 to 40 per cent of the total cost of production. Hourly cost of production now exceed $23, up from $14 million in 1978. This has been compounded by the US Congress, which through 1974 and 1979 trade laws made trade relief more automatic - which would spawn more trade conflicts. For details see, Robert J. Samuelson, "US Protection of Steel Industry may Backfire", *International Herald Tribune*, 25 August 1982.
drastically reduce prices. The ITC feels that the US Anti-dumping Act and countervailing duty law investigations should specially be directed against 38 other cases involving mainly steel plates and hot and rolled and strip mill.

12 International Herald Tribune (Hong Kong), 19 February 1982. 92 cases under the trade panel's jurisdiction involved imports totalling about $1.4 billion in the first 11 months of 1981, 38 of the cases originally filed by domestic US steel producers will continue to be investigated which involve mostly steel plates, hot and cold rolled sheet and structural steel products but not galvanized sheet or various types of carbon steel bars. Also see, Joseph P. Griffin, "American anti-Trust Law and Foreign Government", The Journal of International Law and Economics, vol. 13, no. 1, 1978, pp. 137-48. For latest developments see, Newsweek, vol. 100, no. 18, 1 November 1982, pp. 41-42. The latest steel pact between EEC and USA is unlikely to solve the long-term problems of US steel industry which is currently operating at 40 per cent of capacity with an unemployment rate of 300,000. By most estimates, about 10 per cent of USA's 150 million tons of annual steelmaking capacity would have to be cut.

13 Financial Express (New Delhi), 20 February 1982. ITC's ruling makes it easier for the US Commerce Department to investigate whether penalty duties should be used to counter foreign government subsidies. The import cases that are still under active consideration cover about 89 per cent of the quantity and 85 per cent of the value of steel imports. However, the US Commerce Department has not shown the same zeal in countering cheap imports from either South Africa and Spain, who do not require preliminary ITO determinations on the import "injury" question, because they are not covered by the GATT (General Agreement on Trade and Tariffs). Even after the recent settlement of steel dispute between US and EEC, monitoring of special steel products from six European countries and the EEC as a whole would continue by the ITC. President Reagan's latest directive is the result of suits filed by the US steel industry against Austria, Sweden and European Community members, Belgium, France, Britain and Italy. The suits were filed under section 301 of the US trade law. For details, see, Telegraph, 18 November 1982.
The only concession made by ITC to foreign steel producers was in the category of galvanized sheet steel (widely used to manufacture consumer products) but this apparent laxity was equally matched by the strictures passed against the British Government by the ITC panel, which alleged that Britain was subsidizing mills producing steel bars (there were 20 separate complaints). Fearing that such strictures would anger its EEC allies, the US international trade negotiator Bill Brock had hastened to add that "carbon steel import cases would be decided on the basis of the facts and that there would not be a US domestic political decision on this matter" but this conciliatory move has been negated by the ITC's final ruling that the US Commerce Department should continue to hold proceedings against nine foreign countries involving 38 cases covering $1.26 billion in steel imports, or 85 per cent of the value of goods covered under the complaints, or 89 per cent of imports in the complaints.

The EEC obviously has not taken the US assurance to heart, for it would be taking the steel dispute to GATT (General Agreement on Trade and Tariffs) in an "attempt to defuse what threatens to build into a trade
war between two sides". The Europeans with a sense of injured innocence argue that the Americans have yet to prove the dumping claim conclusively, or verify the corollary, that EEC exports have endangered domestic US


The latest steel agreement reached between the European Community and the United States however does away with such a possibility. Secondly it has contributed to an improvement in trans-Atlantic relations. And possibly it would be easier to resolve world-wide trade issues such as those dealing with the Soviets. However, United States might face opposition from its allies, for it was proposed for example that GATT study liberalization of trade in such areas as banking, insurance and construction. Also see, Axel Strauss, "Officials say Steel Pact may help to resolve more US-EEC Disputes", International Herald Tribune, 23-24 October 1982.

The European Commission has gone out of its way to prevent such a trade war. In contrast to the unsympathetic US International Trade Commission (which ruled that imports of government subsidized steel from Belgium, Italy, France, Luxembourg, Britain and West Germany in 14 out of 16 cases has impaired the ability of domestic steel makers to sell their products in US) the European Commission has bended backwards to accommodate United States by proposing to amend its agreement with United States Commerce Department on steel shipments to make it more acceptable to US steel workers. Under the 6 August 1982 agreement with United States, the EC had agreed to reduce its exports of 11 categories of carbon and stainless steel products to 5.75 per cent of the US market until the end of 1985, compared with 6.3 per cent in 1981. Also see, International Herald Tribune, 12 October 1982. Also see, Stuart Auerbach, "Steel ruling by US Trade Panel may subject Europeans to duties", International Herald Tribune, 16-17 October 1982. The latest agreement actually has facilitated the extension of European steel cartel into the United States. This cartel formation has been indirectly encouraged by the European Community which has failed to resolve disparities in efficiency and subsidy levels among the 10 countries' producers.

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producers. But the fact that there is an element of truth in US allegations, is proved by the quiet change in British Steel Corporation's export strategy - it now prefers to export higher priced specialist steel products to the US market, unlike its less sophisticated continental producers who continue to export cheaper categories of steel.

Ironically, the Japanese steel producers have been the real losers in this trans-Atlantic steel war. When the trigger-price mechanism was introduced for the first time in early 1978, the European steel producers had benefited at the expense of the Japanese, and steel prices in America itself had been given a 'cosy cushion' at the cost of American consumers\textsuperscript{15} although apparently it had

\begin{quote}
The Community preferred a fixed quota in the US market, for US duties to counterbalance subsidies would have discriminated against steel from Britain and Italy, thus 'skewing' the delicate balance among Europeans. Also see, the editorial "Into the Steel Cartel", \textit{International Herald Tribune}, 27 October 1982.
\end{quote}

\textsuperscript{15} \textit{The Economist}, vol. 269, no. 7049, 7 October 1978, p.98. It may be noted that Japan has been a 'star-performer' in steel exports from the very beginning even back in 1965. Japanese exports had reached 10.9 million tonnes, a 43 per cent gain over 1964, accounting for 17 per cent of world steel trade. See for details, \textit{Business Week} (New York), no. 1918, 4 June 1966, p. 60. Also see, Bela Gold, "Factors Stimulating Technological Progress in Japanese Industries: The Case of Computerisation in Steel", \textit{The Quarterly Review of Economics and Business} (Urbana, Illinois), vol. 18, no. 4, Winter 1978, pp. 7-21. Japan's performance in the steel sector has been remarkable, for until the late 1960s Japanese steel industry has been using steel technology licensed from foreign producers, especially US. Since when the Japanese have made significant innovative contributions
helped peg US steel imports. However, it actually did not help lower European steel imports, for in a short span of eight months (January-August 1978), imports from EEC steel producers had risen by 40 per cent, compared with the same period in 1977, when 'trigger-price-mechanism' was not in operation. In contrast, imports from Japan fell by 14 per cent (imports from Germany had increased in the same

of their own in improving upon the basic technologies of sintering, iron-making, steel-making, continuous casting etc.

The latest steel pact between EEC and USA, would adversely affect Japan for US steel industry would soon attempt to bring unfair-trading practice charges against Japan which has already limited their US shipments to about 6 million tons a year. For details see, Newsweek, vol. 100, no. 18, 1 November 1982, p. 42.

Earlier Japan had already been hit by slow-down in oil exploration in the United States, which had been the biggest market for Japanese seamless tubes. Sumitoma Metal Industries Limited which produced 150,000 metric tonnes of tubes per month as a result was forced to curtail production of tubes by 40 per cent since July 1982. Similar outbacks are planned for Nippon Steel (with a total production of 50,000 tonnes of tubes) per month. Even in 1981 Japan was convinced that while EEC and USA would be busy settling the steel dispute it would have enough time to exploit the US market, as a result, we find Japan's exports to the US market of tubes climbing by 11.1 per cent to 1.049 million tonnes (1981 figures). The US market had greatly contributed to the impressive Japanese export performance in 1981, when Japanese pipe export went up by 10.5 per cent from the previous fiscal year (1981) to 3.121 million tonnes according to Kozai club, an industry organization that includes steel producers and trading houses. For details see, The Economic Times, 24 May 1982.
period by 73 per cent), although there was a tacit understanding between EEC steel producers and Japan to share equally the cuts in sales to the US!

But the zeal which the Americans now show in prosecuting EEC steel producers was initially absent, for all the EEC countries could be accused of 'dumping' steel at the very beginning, if the criterion were to be a sales price that reflected true production costs. But strangely no action was taken against erring European and Japanese steel producers, provoking the Economist to declare blindly "despite more than 200 anti-dumping investigations that have been triggered, the Americans have found extenuating circumstances to let the importers off the hook. Armco steel has even been persuaded to drop its anti-dumping case (a sure-fire certainty) against British steel." 16

Why the Americans had remained stoic to the aggressive salesmanship by EEC and Japanese steel-producers in 1978, is explained by two factors.

The Americans were reluctant to upset the delicate backstage negotiations which were in progress with the EEC and Japan on guidelines for a code on subsidies and countervailing duties under GATT in Geneva (in spite of

16 *The Economist*, ibid., p. 98.
stiff opposition put up by USA's textile protectionists); secondly, USA's steel industry in 1978 was much healthier, working at an enviable level of capacity (86 per cent), which was far higher than any of its competitors enabling some of the US producers to quote delivery dates many months ahead for some of its products to be exported overseas.

Against this background of increasing US-EEC friction over steel, and its adverse impact on British steel industry it would be interesting to see how French and German steel industry has tried to cope with recession.¹⁷ French

¹⁷ The latest figures provided by British Steel Corporation suggest that the projected sales to the US could be reduced by about 20 per cent against an original target in 1982 of up to 500,000 tonnes. This is one of the important factors which has prompted BSC to ask the state to increase substantially its external financing limit beyond the £350 million provisionally allocated for the 1982-83 financial year. According to Peter Hill, a noted industrial observer, the US import curb threat might indirectly undermine UK's efforts to have a common front on steel with the EEC for the British Steel Corporation's biggest worry is that up to 2 million tonnes of European steel could be shut out of the US market which would lead to further downward pressure on the carefully co-ordinated round of price increases that have been introduced since October 1981. For details see, Peter Hill, "British Steel Seeks Further £100 million", The Times, 23 February 1982. According to industry figures, the European steel makers have captured 25 per cent of the US market, while the US steel plants are working at only 65 per cent of their capacity. However if US curbs on European steel are really imposed it would have disastrous impact on a European industry that already has 50,000 jobless workers. See, Financial Express (New Delhi), 18 November 1981. Also see, The Economist, vol. 282, no. 7226, 27 February-5 March 1982, pp. 22-23. Also see, John Palmer, "Europe rejects US case on steel", The Guardian Weekly, vol. 126, no. 4, 24 January 1982, p. 6.
steel industry has been losing since 1977, when losses incurred by French giant steel firms USINOR and SACILOR touched $28.15 per tonne and $52.37 per tonne respectively.18 (see Table I)

Table I

EUROPEAN STEEL, 1977: SOME LOSERS

<table>
<thead>
<tr>
<th>Name of Company</th>
<th>1976 loss $ m.</th>
<th>Crude steel production in tonnes</th>
<th>Loss $ per tonne</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thyssen*</td>
<td>20</td>
<td>12.8</td>
<td>1.60</td>
</tr>
<tr>
<td>BSC**</td>
<td>163</td>
<td>19.7</td>
<td>8.29</td>
</tr>
<tr>
<td>Arbed</td>
<td>37</td>
<td>4.0</td>
<td>9.30</td>
</tr>
<tr>
<td>Italsider</td>
<td>148</td>
<td>10.9</td>
<td>13.63</td>
</tr>
<tr>
<td>Rochling-Burbach</td>
<td>39</td>
<td>~2.5</td>
<td>15.56</td>
</tr>
<tr>
<td>Usinor</td>
<td>250</td>
<td>8.9</td>
<td>28.15</td>
</tr>
<tr>
<td>Sacilor</td>
<td>225</td>
<td>4.3</td>
<td>52.37</td>
</tr>
</tbody>
</table>

* Estimate year to September 30.

** Estimate year to March 1977.

In September 1978, the former French Premier Raymond Barre made a frantic effort to stem this loss by persuading the reluctant French parliament to allow the French treasury to assume responsibility for most of the long term debts of giants like USINOR and SACILOR,¹⁹ as well as those of the smaller firm Chatillon-Neuves-Maisons. The total debts amounted to $3,730 million, and $2,120 million in debentures issued by the Groupement de l'Industrie Siderurgique.²⁰ Although the state assumed responsibility for the huge debts accumulated by the steel firms, it exploited this opportunity to take control of the three firms (later reduced to two through the merger of

¹⁹ Since 1978, USINOR has lost $508 million and SACILOR more than $678 million. The state has to bear most of the losses for it is the main creditor. Since September 1978, it has extended $1,115 million in aid to finance investment (also to make up for losses). There have been suggestions to covert a portion of its credits into shares. This in turn would reduce the participation of private and public shareholders and the two private holding companies, Nord-Est and Marine-Wender. The other suggestion is the creation of a single holding company, with the state cornering 98 per cent of class A shares and private interests being awarded the rent in class B shares. For details see, Francois Renard, "Iron and Steel Nationalisation", The Guardian Weekly, vol. 125, no. 13, 27 September 1981, p. 12.

²⁰ Ibid., p. 12. Its service charges, interest and capital are currently underwritten by the Caisse d'Amortissement pour l'Acier (Steel Amortisation Fund) with $1,610 million pumped in by Fonds de Developpement Economique Social (FDES).
USINOR with Chatillon-Neuves-Maisons) by underwriting most of this capital (63.83 per cent for USINOR and 76.90 per cent for SACILOR) in the form of credits. In addition $3,730 million earmarked as 'subsidies' were transformed into 20-year 'participative loans' with lucrative concessions (only 0.1 per cent interest to be levied for the first five years and 1 per cent for the next five) thus helping the loans to gain status as capital stock. Thus nationalization (though indirectly) was ushered in through the backdoor, although every attempt was made to conceal the semblance of a 'legal' nationalisation leaving leeway for a very 'theoretical' return to the fold of the private sector. 21 This involved parcelling of state shares between two holding companies: but this indirect nationalisation has not solved the problem of continuing lay-offs, an off-shoot of plant modernisation which is continuing at a cost of $2,540 million.

21 52 per cent of USINOR's capital is held by the USINOR-Chatillon financing company, whose shareholders are; the state 14 per cent, the Caisse des Dépots 28.2 per cent, the Credit National 10 per cent, the major banks 32 per cent, GIS 14.7 per cent. The remainder of USINOR's capital is in public funds (12.47 per cent), two private-holding companies (Nord est, 11.60 per cent; Chiers-Chatillon; 8.26 per cent), the Belgian group Cockerill-Hainant-Samdre (3.27 per cent) and Valmetal (51 per cent of whose stock is state owned).
Restructuring of French steel industry has been a late phenomenon, although efforts have been made since 1979 to train labour force, and install new plant equipments. But improvements have mostly been confined to the special steel sector, but that too in the planning stage. In April 1981, the first plan of this restructuring began with assets being transferred from Creusot-Loire to USINOR, although the process has suffered a temporary setback with the transfer of Ugine-Chiers to Sacilor by Pechiney-Ugine-Kuhlman being still held up. A classic case of French indecision was the delay in deciding the future of Societe Metallurgique de Normandie; whether its 6,000 strong labour force should be made redundant and its debt problem solved. The same vacillation has affected the SACILOR takeover of USINOR's Lorraine plants at Rehon-Longwy and Thionvilie and the setting up of a long products group.

In West Germany the Federal Government has ventured on a massive aid scheme ($535 million) to the steel sector, the major recipients of this largesse being Hoesch and Krupp, West Germany's second and third largest steel

22 SACILOR management is, however, not eager to inherit USINOR's problem, and allow USINOR to produce only cheap flat steel, produced at the cost effective steel works of Dunkirk.
companies. Although the government does not overtly advocate mergers, it would like the steel firms to be devoid of surplus capacity. Hoesch and Krupp had sent out feelers to the state government and North Rhine West-Phalia to ask for subsidies if rationalisation is to be effected. Hoesch still remains viable because its Dutch partner Hoogovens had shared most of its losses (more than DM 1 billion) over a span of five years (1976-81), and in 1981 it suffered another DM 500 million in losses. Krupp Stahl is also not lagging behind and it is unusual if it loses less than DM 50 million every month. As an excuse for their own poor performance they have accused other European governments of heavily subsidizing their steel industries, which they see as 'lame-duck subventions unrelated to virtuous rationalisation'.

23 The Economist (London), vol. 280, no. 7200, 29 August-4 September 1981, p. 62. Fortunately, the losses in West German steel industry is not accompanied by labour strikes as it happened in 1978, when I.G. Metall, the German trade union has gone on a strike with a demand for 5 per cent pay increase and the introduction of a 35-hour week, although 1978 was a welcome change from the disastrous slump of 1975-77. See for details, The Economist, vol. 269, no. 7059, 16 December 1978, p. 98. Subsidies for European Steel-makers since 1975 have been estimated at $ 20 billion, with the same amount approximately planned up to 1985. See for details, Business Week (New York), no. 2716-47, 30 November 1981, p. 32. Krupp Stahl expects a radical improvement in its profits in 1982, after a group net loss of 112 million Deutsche marks in 1981. Although there would be no marked improvement in output, because of the sluggish state of German economy, higher steel prices, and continued restructuring and cost paring is expected to rise earnings. For details see, International Herald Tribune, 21 April 1982.
In 1982, one sees the West German government after being increasingly troubled by unemployment in Ruhr area discarding its laissez faire approach to mergers and encouraging the state-owned Peine-Salzgitter; Krupp Stahl and Krupp Sudwest Falen, steel making divisions of Fried Krupp and Estel-Hoesch Werke (the West German arm of the Dutch West German Steel Company Estel) to coalesce their interests and form the largest steel company in Western Europe with a crude steel production of roughly 9 million metric tons, and yearly sales of about $5-6 billion.\(^{24}\) The factors which propelled this merger move were: (i) to provide Hoesch, with a domestic source of steel to take care of its finishing and its processing activities; (ii) the heavy losses suffered by both Krupp Stahl and Estel-Hoesch because of the recession-ridden European steel industry; (iii) assurances given by the Bonn government to supply necessary restructuring funds ($1.8 billion) to blend the operations of both the steel

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\(^{24}\) International Herald Tribune (Hong Kong), 5 February 1982; John Tagliabue, "Major Steel Works set merger in West Germany". The largest steel producers in Western Europe, however, are Federal Republic of Germany's Thyssen, with a turnover of 11.1 million tons and Italy's Finsider. The newly formed steel firm will fuse Krupp Stahl's specialization in surface treated sheet steel to Peine-Salzgitter's specialisation in shaped structural and sectional steel.
firms. The only offshoot of this merger move would be the likely break-up of Estel and link-up of the steel making activities of Hoesch and the Dutch Steel Company Koninklijke Nederlandsche Hoogovens Staal Pabrieken. This would be a serious setback to an inter-European co-operative venture, for the Dutch Hoogovens coastal steel plant in Ijmuiden was supplying the West Germans with an inexpensive source of steel. However what is troubling the FRG government is not the calculated failure of an intra-European enterprise, but how to make steel making in Germany more cost effective! To achieve this objective it wants to axe steel making capacity, which would adversely affect Estel-Hoesch, where crude steel production will be cut from 5 million tonnes (1981) to 3.5 million tonnes (1982). But the Hoesch plant in Dortmund will have to bear the brunt of the modernisation programme, for reductions in capacity and modernisation would displace about 13,000 to 14,000 workers.

25 Ibid., p. 9. In the new company, Krupp Stahl and Estel Hoesch will hold equal shares.

26 Hoesch as a part of its 'slimming' programme expects to close 2 of its 3 mills in Dortmund by 1987, and concentrate in making the remaining plant more sophisticated at a cost of about $1 billion. See for details, Business Week (New York), 30 November 1981, p. 32.
However, the only German steel firm which has not benefitted from the government's modernization is Elockner-Werke which plans to seek government steel aid by the end of June 1982. 'Rationalization', and 'modernization', an euphemism for sharp cuts in crude steel output is also on its cards. But it is apparently the most enterprising as it is expecting an offer of co-operation from Belgium's ailing steel giant Cockerill-Sambre which is interested in making a more rational use of existing capacity in Liege-Charlerot region. Although apparently such cooperation would entail switching Belgium steel coil production to Klockner's Bremen works, in the bargain Klockner would gain for it would ensure increased Klockner participation and leverage in Belgium.  

27 Klockner, which is Germany's third largest steel producer has still recently been offered only minimal state report in regional and technology aid. It has not taken kindly to the aid package earmarked for its rival steel firms, and strongly feels that 'unequal application of state aid further exaggerates the distortions to competition in steel stemming from massive national subsidies in other EEC countries.' See for details, International Herald Tribune, 19 March 1982. Also see, John Toglisbue, "Mannesmann puts accent on Diversity", International Herald Tribune, 13 October 1982. Also see, "Bonn rejects curb on Steel Exports", International Herald Tribune, 15 October 1982, and International Herald Tribune, 21 October 1982, and Business Week, 8 November 1982, p. 65; and The Economist, vol. 285, no. 7260, 23-29 October 1982, p. 52.
probably is the only West German steel firm which has succeeded in sustaining its viability without much Government protection, thanks to its heavy accent on diversity. A traditional maker of steel pipes (in the 1960s, steel pipe had accounted for 70 per cent of Mannesman's revenue but now it has dropped to 50 per cent). It is also branching out into the business of building plants and machines besides delving into telecommunications and computer markets. Mannesman's steel pipe business however still remains buoyant and still attracts heavy investment for Mannesmann is still capable of exploiting its traditional market in Soviet Union, which has absorbed nearly 7 million tonnes of steel pipes in the last twenty years. It has just contracted for the supply of 1.2 million metric tonnes of pipe and further agreements are expected shortly for deliveries through 1985. Mannesmann also has a great stake in the concluding of the controversial Siberian oil pipeline deal for which it is a general contractor along with France's Creusot Loire. What has troubled Western Industrial analysts is the way Mannesmann is excessively getting dependent on Soviet Union for sales. Of the 3 million tonnes of steel pipe a year that Mannesmann produces in Germany, Soviet Union's share is 10 to 15 per cent, contributing to about 5 per cent of the revenue. It was because of the Soviet
factor that Mannesmann's steel pipe trade prospered in 1981
and production rose by 14 per cent to 3.5 million tonnes.
This contributed to the improvement of the company's after-
tax earnings from 163.2 million DM (1980) to 243.6 million
DM ($107.3 million). The Soviet market thus has greatly
contributed to Mannesmann's booming steel pipe business as
the following figures show:

Steel Pipe Production : Millions of Metric
Tonnes

<table>
<thead>
<tr>
<th>Year</th>
<th>Tonnes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>2.7</td>
</tr>
<tr>
<td>1978</td>
<td>3.1</td>
</tr>
<tr>
<td>1979</td>
<td>3.2</td>
</tr>
<tr>
<td>1980</td>
<td>3.1</td>
</tr>
<tr>
<td>1981</td>
<td>3.5</td>
</tr>
</tbody>
</table>

This creditable performance was reflected in the hike in
revenue: from 13.8 billion DM up from 11.8 billion DM.

Mannesmann unlike its rivals has been cautious
enough to exploit its overseas subsidiaries: for example its
prize possession is a huge Brazilian subsidiary, which has
indirectly contributed to its efforts of being a major
supplier of steel pipes to North America. In USA too, it
has made its presence felt by acquisitions and joint
ventures. But recent trends point to its growing involvement
in communication and computer business. Mannesmann has
already acquired a stake in the telecommunications operations of the ailing AEG-Telefunken and has been shrewd enough to buy Kienzle, an unprofitable family-controlled computer company in South Germany. While Mannesmann can afford to diversify in Germany with impunity, in USA it is facing opposition from Federal Trade Commission; this became evident when it tried to coalesce its US holdings in 1979 which are fragmented. Its efforts to offer $245 million for Harnischfeger, a manufacturer of heavy machinery was thwarted by the FTC which ruled that the acquisition would violate anti-trust status.

However, Mannesmann's source of strength still remains in steel pipes, and justifiably it has reacted strongly to latest US efforts to curb sale of tubes and pipes; and it has been quick to point out that they were not subsidised and that their prices corresponded to the price prevailing in the US market. Mannesmann's tough stand has obviously influenced the latest West German objection to proposed new curbs on European Community Steel exports to the US. West Germany has also objected to the way the export cutbacks would be shared out among European steel manufacturers. The West German Government has been irked by the EC Commission's proposal to limit exports of tubes and pipes to 5.9 per cent of the US market for it would cripple a major steel and pipe producer like Mannesmann.
which had sold $482 million of steel to the United States in 1981 (mostly tubes and pipes for the US Oil and Gas Industry).

The European steel crisis seems to have reached an apogee with heavy losses suffered by Belgium's Cockerill Sambre group forcing the Belgian government to have a hard look at the EEC's steel policy. Although the European Commission has reluctantly approved $400 million aid package for this sick steel giant in Charleroi region, it has remained adamant on the question of the firm's overall modernization plan, for it had to reckon with a report prepared by a Kinsay Management Consultancy group which had predicted that Cockerill which had suffered a loss of 17,00 million Belgian francs (£213 million) in 1981, would continue to suffer losses and could expect deficit in the range of Bfr. 5,700 million - Bfr. 18,000 million in 1985.28

28 The Belgian government had requested the Commission to give approval to its plan of pumping in $630 million into the company to give shape to a five-year restructuring plan. However the European Commission had rejected it, on the plea that the plan designed to make the company viable by 1985 would only lead to further losses even otherwise 'modifications' could only result in more job losses and a reduction in crude steel capacity. For details see, The Times, 8 March 1982. The Cockerill Sambre (80% state owned) was formed in 1981 after amalgamation of Cockerill Steel Company of Liege and Hainault Sambre group based in Charleroi. However,
An Evaluation of the Role of the European Commission in the Steel Crisis

One of the cardinal principles of the ECSC treaty was to lead the European Community into a free trade regime, but it soon lost this missionary zeal for as a noted critic J.E.S. Hayward has pointed out "it became a means of maintaining an uneasy truce among industry and government protagonists". The ECSC obviously did not succeed in suffering out fears of closure of national markets to continental firms under pressure from national firms although it was supposed to encourage supranational competition. 29 However as 1971 figures show, the popular image of national firms dominating this crucial sector is not entirely correct. Table 2 shows us clearly that the 'absolute' number of manufacturing subsidiaries located in the EEC by continental firms having a stake in this sector transcends all other sectors, excepting that of industrial chemicals. 30

the group, owes its existence largely to massive government aid which was actually intended for 'restructuring'; however funds were used to stem losses and maintain a production capacity of 8.5 million metric tonnes of steel with a work force numbering 25,000.


30 Ibid.
### TABLE II


<table>
<thead>
<tr>
<th>Selected High Density Industries</th>
<th>% of All Worldwide Subsidiaries in EEC</th>
<th>% of Subsidiaries in Europe in EEC</th>
<th>No. of EEC Subsidiaries per Continental Parent</th>
<th>No. of Subsidiaries in EEC</th>
<th>No. of Parents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Iron and Steel</td>
<td>43</td>
<td>74</td>
<td>3.1</td>
<td>40</td>
<td>13</td>
</tr>
<tr>
<td>Engines and Turbines</td>
<td>55</td>
<td>86</td>
<td>4.0</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Special Industrial Machinery</td>
<td>39</td>
<td>47</td>
<td>2.6</td>
<td>18</td>
<td>7</td>
</tr>
<tr>
<td>General Industrial Machinery</td>
<td>39</td>
<td>70</td>
<td>19.0</td>
<td>19</td>
<td>1</td>
</tr>
<tr>
<td>Precision Goods</td>
<td>33</td>
<td>57</td>
<td>1.5</td>
<td>16</td>
<td>11</td>
</tr>
<tr>
<td>Industrial Chemicals</td>
<td>31</td>
<td>60</td>
<td>3.7</td>
<td>49</td>
<td>13</td>
</tr>
</tbody>
</table>

However, most of the continental firms which set up subsidiaries in France and Germany came from the BENELUX countries and that too as a bulwark against market closure. They had to reckon with rising labour costs which were making steel making increasingly unprofitable. However what actually was threatening the BENELUX firms (many of them sea-coast firms enjoying transport-cost advantages) were the activity of inland, high-cost steel producers in bigger countries which were merging and concentrating often at the behest of national governments and thus making the threat of market closure more real, thus "Sea-coast producers in small countries faced a choice between producing at lowest cost and hoping that markets would remain accessible, or running inland foreign plants for little or no return."31

The economic revolution which had characterized European steel-making during the 1950s and 1960s, led to the evolution of a few foreign subsidiaries, e.g. Arbed, a Luxembourg firm had a major stake in SIDMAR joint project in Belgium; Thyssen, Germany's and Europe's largest steel producer developed a major stake in the FOS-SUR-MER

venture in France. But such ventures were the exception rather than the rule. More than three-quarters of manufacturing subsidiaries in the steel sector had been acquired, although critics like Lawrence G. Franko feel that "these foreign acquisitions promoted, rather than restrained competition in the European iron and steel industry...the industry climate was one dominated by national merger and acquisitions, basing-point pricing, and even explicit market-sharing agreements". 32 This trend continued even in the middle of the 1970s, which saw only one transnational Dutch-German merger compared to 40 foreign subsidiary relationships. However, with this notable exception, most of the 'nationalization' in the 1950s and 1960s had been confined within national boundaries, although this had been preceded by emergence of "national champions" in most community member countries in gross violation of the spirit and existence of a common market in steel. 33

But even such rationalizations have not been able to resuscitate the industry and western Europe's share in world steel production has slid down behind that of Japan, although it still remains a crucial indicator of Western Europe's economy as reflected in the fact that even in the lean year of 1976, community exports of steel

32 Franko, n. 29, p. 146.

33 Tsoukalis, n. 31, p. 360.
had accounted for 16.8 per cent of total production, although the coverage of imports by exports was 186.9 per cent, in sharp contrast to 495.4 per cent in 1974.34

European steel industry still nurses obsolescent steel plants, particularly those strewn on continental sites, and lags behind Japan in terms of physical productivity (see Table III).

TABLE III
WORK HOURS PER TON OF CRUDE STEEL

<table>
<thead>
<tr>
<th>Country</th>
<th>Works hours per ton</th>
<th>Per cent difference as compared with Japan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium/Luxembourg</td>
<td>7.0</td>
<td>19</td>
</tr>
<tr>
<td>France</td>
<td>11.2</td>
<td>90</td>
</tr>
<tr>
<td>Germany (Federal Republic)</td>
<td>7.9</td>
<td>34</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>13.0</td>
<td>120</td>
</tr>
<tr>
<td>Italy</td>
<td>7.1</td>
<td>20</td>
</tr>
<tr>
<td>Netherlands</td>
<td>6.6</td>
<td>12</td>
</tr>
<tr>
<td>United States</td>
<td>7.3</td>
<td>24</td>
</tr>
<tr>
<td>Japan</td>
<td>5.9</td>
<td>-</td>
</tr>
</tbody>
</table>


34 Office Statistique des Communautes Europeanes, Annuaire Sidergie, quoted in Tsoukalis, n. 31, p.358.
It remains to be seen how long European steel industry continues to be a major vehicle for investment, for although the EEC has agreed to end all state aid to steel makers by 1985, individual EEC members have very little option but to 'force feed' basic industries like steel for fear of aggravating the unemployment problem; the average EEC unemployment rate already being well over 8 per cent in sharp contrast to 3 per cent in the 1970s. Government intervention has taken the form of repaying steelmakers' losses (which amounted to $2 billion in 1981 itself) and modulate their purchases to the demands of their own national companies. However, a keen analyst of European industry, John Atkin has wryly observed, "government interference is unlikely to reverse the trend of industrial change...indeed

35 Paul Lewis, "Belgian Steel Problems Highlight European Struggle on Free Trade", International Herald Tribune, 22 March 1982. However, contrary to popular expectation the European Commission itself has not slackened in its policy of giving financial assistance (vide Articles 49, 54 and 56 of the ECSC Treaty) for investments in the coal and steel industries; although investment expenditure in the steel sector seems to have 'stabilized' in 1979, amounting to 2000 million EUA (as against 2,100 million in 1978 and 2,400 million in 1977). Loans paid out to EEC member states in 1980 in EUA were as follows: Belgium/Luxembourg 63.78, Denmark 4.29, Federal Republic of Germany 90.92, France 121.30, Italy 133.56, United Kingdom 3.52, Third Countries 6.63, Total Community expenditure (million EUA) - 424.00 (41.29%). See Fourteenth General Report on the Activities of the European Communities in 1980, Commission of the European Communities (Brussels, 1981), pp. 68-68.
the mounting cost of supporting the basic industries is
beginning to produce a more cold-nosed approach... Sweden and
Belgium have cut back their aid to shipbuilding... British
steel has drastically reduced the labour force. However, this 'cold-nosed approach' has varied from place to place,
while Britain on the plea of restructuring its steel industry
has cut jobs by nearly 50 per cent and France by about 25
per cent, Belgium remains the only 'soft state' to have
eliminated only about 7 per cent of jobs. However, Britain
still remains the most 'innovative' in restructuring: the
state-owned British Steel Corporation in conformity to the
government policy of returning most of its non-steel business
to the private sector, is planning to sell its Redpath
Dorman Long heavy engineering subsidiary to Trafalgar House

36 John Atkin, "Where the jobs will be in Europe in 2000
A.D.", The Guardian, 15 March 1982. The volume of
'secret' financial help given by European governments
to their industries is almost impossible to be
gauged. Estimates by Britain's National Economic
Development council indicates that West Germany may
be the least offender contributing $3 billion a
year, or 1.7 per cent of total economic output, the
Netherlands being the worst with aid amounting to
3.2 per cent of output. Also see, G.H. Field and
P.V. Hills, "The Administration of Industrial
Subsidies", in Alan Whiting, ed., The Economics of
for a modest sum of £10 million. However, it remains to be seen whether such 'privatization' helps for it is unclear whether slump in steel is truly a short-term cyclical decline.

It might be recalled that two major factors have contributed greatly to the present steel crisis: the sharp decline in iron ore costs since 1957 and the continuing decline in real ocean freight costs, although the discovery of basic oxygen steelmaking did have an incidental role to play.

Initially, US and West-European producers were competitive in the mid 50s because of abundant raw materials, proximate markets and reasonably efficient plants. Gradually investment decisions started reflecting change in comparative advantage; while the United States and the EEC contributed to 82 per cent of non-communist world raw steel production in 1955, their share had fallen to 55 per cent by 1975 (Table IV).

37 Maggie Brown, "BSC sells Redpath to Trafalgar House", The Guardian, 3 April 1982. Redpath Dorman Long was incorporated in the public sector, when BSC was formed in 1968. It caters mainly to the specialized needs of the off-shore oil industry and is its largest suppliers of steel structures.
### TABLE IV

**WORLD RAW STEEL PRODUCTION AND EXPORTS, 1955, 1965 AND 1975**
(Millions of net tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total non-communist world</th>
<th>EEC(9)</th>
<th>Production U.S.</th>
<th>Japan</th>
<th>Non-communist world (at 75% yield)</th>
<th>World Exports/Production</th>
<th>EEC (A) + US + Japan share of World Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1955</td>
<td>228.7</td>
<td>80.4</td>
<td>117.0</td>
<td>10.4</td>
<td>38.4</td>
<td>.13</td>
<td>.91</td>
</tr>
<tr>
<td>1965</td>
<td>357.1</td>
<td>125.5</td>
<td>131.5</td>
<td>45.4</td>
<td>86.8</td>
<td>.17</td>
<td>.85</td>
</tr>
<tr>
<td>1975</td>
<td>467.3</td>
<td>138.1</td>
<td>116.6</td>
<td>112.8</td>
<td>160.4</td>
<td>.23</td>
<td>.79</td>
</tr>
</tbody>
</table>

To Japan goes the credit for accounting most of this increase (see Table V).

**TABLE V**

**CRUDE STEEL PRODUCTION IN MAJOR COUNTRIES**
(Percentage Shares)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>3.5</td>
<td>6.5</td>
<td>9.0</td>
<td>15.6</td>
<td>15.8</td>
</tr>
<tr>
<td>USA</td>
<td>39.3</td>
<td>26.4</td>
<td>26.0</td>
<td>20.0</td>
<td>16.4</td>
</tr>
<tr>
<td>FRG</td>
<td>7.9</td>
<td>10.0</td>
<td>8.0</td>
<td>7.5</td>
<td>6.3</td>
</tr>
<tr>
<td>France</td>
<td>4.7</td>
<td>5.1</td>
<td>4.3</td>
<td>4.0</td>
<td>3.3</td>
</tr>
<tr>
<td>UK</td>
<td>7.4</td>
<td>7.2</td>
<td>5.9</td>
<td>4.7</td>
<td>3.0</td>
</tr>
<tr>
<td>USSR</td>
<td>16.7</td>
<td>19.1</td>
<td>19.8</td>
<td>19.4</td>
<td>21.9</td>
</tr>
<tr>
<td>World</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

*Source: Calculations made on the basis of data provided in an Internal Report of Nippon Steel Corporation, Japan.*
Japan's remarkable achievement in making inroads into the highly competitive European steel market became possible due mainly to the various incentives offered by the Japanese government to stimulate its economy as a whole for it rightly felt that steel production was a major indicator of a nation's economic well being. Till the 50s, the Japanese government had adopted the following measures to invigorate its economy as a whole for it rightly felt that steel production was a major indicator of a nation's economic well being. Till the 50s, the Japanese government had adopted the following measures to invigorate its economy; they included (i) priority production policy with great stress on coal and steel; (ii) offer of government funds to key industries at low interest rates throughout the long gestation period through the Reconstruction Finance Bank and its successor the Japan Development Bank, and (iii) special depreciation coupled with regular depreciation already in vogue based on the special Taxation Measures Law. Japan's emphasis on steel as a major engine for growth should not be viewed in isolation; it was part of a well orchestrated economic policy which 'attached great importance to the realization of industrial structural changes by promoting capital investment and introduction of new technologies': the industrial strategy

was skewed in favour of heavy and chemical industries which steadily rose from 54.2 per cent in 1960 to 62.5 per cent in 1970, thus transcending the 58.6 per cent of the United States and 56.5 per cent of West Germany (see Table VI). This entailed substantial capital investment (formation of fixed capital) which constituted a far larger percentage of gross national expenditure in comparison to other industrially advanced countries. 39 (see Table VII)

After the 1950s the Japanese government has been less patronising, but has kept a watchful eye on the nation's economy which was tailored according to the special requirement of various 5 to 10 year economic expansion plans. Its task was made comparatively easier because of the rate of high savings in the private sector which contributed greatly to unprecedented economic growth in the 1950s and 1960s. However it was the National Income Doubling Programme formulated in 1960 which acted as a catalyst in accelerating Japanese steel production, and the Nippon Steel's confidential internal report is partly right in observing:

39 It was in the form of public investment for laying the essential industrial infrastructure involves railroads, highways, harbours, power and water supplies etc. Private investment took the form of plant and equipment modernisation and extension.
### TABLE VI

**INDUSTRIAL STRUCTURE AND PERCENTAGE OF HEAVY AND CHEMICAL INDUSTRIES**

<table>
<thead>
<tr>
<th>Industries/Country</th>
<th>Primary Industries</th>
<th>Secondary Industries</th>
<th>Manufacturing</th>
<th>Heavy and Chemical Industries</th>
<th>Tertiary Industries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Production Employee</td>
<td>Production Employee</td>
<td>Production Employee</td>
<td>Production</td>
<td>Production Employee</td>
</tr>
<tr>
<td>Japan (1955)</td>
<td>23.1 42.5</td>
<td>24.4 23.0</td>
<td>22.5 17.4</td>
<td>-</td>
<td>52.5 34.5</td>
</tr>
<tr>
<td>(1960)</td>
<td>12.6 30.2</td>
<td>43.5 28.0</td>
<td>31.5 21.3</td>
<td>54.2</td>
<td>44.0 41.8</td>
</tr>
<tr>
<td>(1970)</td>
<td>6.1 17.4</td>
<td>46.2 35.2</td>
<td>33.0 27.0</td>
<td>62.5</td>
<td>47.7 47.4</td>
</tr>
<tr>
<td>USA (1970)</td>
<td>3.1 4.4</td>
<td>33.4 29.9</td>
<td>26.9 24.6</td>
<td>58.6</td>
<td>63.6 65.7</td>
</tr>
<tr>
<td>West Germany (1970)</td>
<td>3.3 8.8</td>
<td>55.4 48.7</td>
<td>40.8 -</td>
<td>56.5</td>
<td>41.4 42.5</td>
</tr>
</tbody>
</table>

### TABLE VII

**International Comparison of Gross Fixed Domestic Capital Formation Share in GNE**

*(In real terms)*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Japan</td>
<td>17.6</td>
<td>16.1</td>
<td>24.2</td>
<td>28.4</td>
<td>35.1</td>
<td>32.2</td>
</tr>
<tr>
<td>USA</td>
<td>19.5</td>
<td>18.0</td>
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<td>West Germany</td>
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<td>France</td>
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<td>Italy</td>
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<td>UK</td>
<td>12.5</td>
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<td>18.4</td>
<td>18.0(’73)</td>
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**Source:** Yearbook of National Accounts Statistics; For USA in 1975, Survey of Current Business; For West Germany in 1975, Wirtschaft and Statistik.
"It set a guidepost to approximately double crude steel production to 48 million tonnes in 10 years (i.e. by 1970). As a result, Japan's crude steel production in 1970 amounted to 93 million tonnes, approximate twice as high a level as the National Income Doubling Programme goal." However, what the report does not explicitly state is that Japanese steel industry has been more successful than its counterparts in the west, in (a) responding to technical change, and (b) to the challenge posed by new producers in the newly industrializing countries (NIC's).

The Japanese were also shrewd enough to discern that steel was an industry in which technical progress had to be suitably blended with economies of scale. While the Europeans had resorted to periodic bursts of investment which only succeeded in raising capacity well ahead of demand, the Japanese were experimenting with the latest techniques besides 'trimming': quietly but drastically reducing the expected output of their steel industry in 1975 from 160 million tons to around 130 million tons.

The Japanese also concentrated on obtaining a better yield

40 Nippen Steel Report, n. 38.

41 The ECSC had succeeded in temporary 'staggering' of investments in (i) wide strip mills in Dunkirk and Ghent and Fos development at Versailles. See for details, The Economist, vol. 245, no. 6737, 7-13 October 1972, p. 81.
of finished steel (i.e. plates, coils, etc.) by resorting to continuous casting.\textsuperscript{42} Japan's thrust in this direction partly explains why its output of steel products (in 1979) reached the peak of the 1973-74 boom although the total output of crude steel was still far below the boom level.\textsuperscript{43} While the European Commission has persistently tried to persuade its members to have a harmonious steel policy, the latter are in no mood to 'sacrifice' their national interests. This crude display of such nationalistic sentiments was most evident in the recent setback suffered by the Commission in its plan to extend the EEC's emergency anti-crisis steel measure. West Germany, for example, has been a bitter critic of the Commission's steel policy, which it had branded as 'interventionist and expensive' way back in 1977,\textsuperscript{44} but at that time they had been docile enough to abide by Viscount Davignon's steel pricing policy because of the latter's

\textsuperscript{42} The Economist, vol. 275, no. 7128, 12-18 October 1980, p. 72.

\textsuperscript{43} Ibid., p. 73.

\textsuperscript{44} For background see, The Economist, vol. 264, no. 6983, 2 July 1977, p. 57. The Germans had pointed out that EEC could not afford to adopt a 'protectionist' stance for it was a net steel exporter; secondly, they found it difficult to agree with Viscount Davignon that prices could be controlled without curbs on imports (which if implemented would invertably invited retaliation).
apparent successful efforts against the Japanese, Spanish, and South African imports. But today, its attitude has considerably hardened although its steel industry remains the least disturbed by the world-wide slump. It is refusing to allow the Commission to subject wire rods to surveillance. Keeping in view the interests of its private special steel producers who have been hit hard by falling demand, UK has also insisted that future steel regime should also include special steel products. Italy has also expressed its unhappiness about the entire distribution system which assigns the steel production quotas among the leading companies.


West German steel firms like Thyssen have succeeded in making its steel and speciality steel divisions viable by seeing to it that they had well balanced capacities, a high-grade product mix and a close-to-the-customer sales organization. Thanks to such measures, the first few months of fiscal 1981-82 saw sales rise by 2 per cent/specialty steel division, and general steel sales increased by 16 per cent with shipments practically remaining at 1981 level; which implied that the increase in sales owed greatly to better revenues per tonne. However, whatever abrasions it had suffered at home because of structural problems in certain business sectors and abroad (i.e. in USA, where its US subsidiary Budd company had been hit by continuing slack demand for cars) was more than compensated by its trading and services division operating worldwide, namely Thyssen Handelsunion. During the first five months of fiscal 1981-82, sales went up by 25 per cent. However, Thyssen's international plant engineering business has been buoyant enough to fetch orders worth DM 5 billion (2.37 DM = 1 $ interbank exchange rates for 27 April 1982). For details see, International Herald Tribune, 28 April 1982.
with the approval of the Commission but in conjunction with
the steel producers' lobby the Eurofer. It may be recalled
that Italian steel firms have been the most profitable in
the European community and have often drawn criticism for
having evaded steel output limits set in Brussels. Italy
has also remained indulgent towards its small Bresciani
producers of reinforcing bar and rod, although it had been
found out that some of them are not even legitimate members of
any trade association or any organisation, but this is

46 It has been alleged that Italian steel producers are
adept in breaking minimum price rules by accepting 20
per cent penalties for late deliveries and then rever-
sing the rule by quoting a period which was unacceptable.

47 Unlike other European steel producers the Italians
have made sustained efforts to modernise for example
back in 1969, Italsider had started installing LD
converters in its Taranto plant (estimated goal of
production: 4.5 million tons of steel in 1972) with
an eye to increased production and sales. At Piambino
works it took the trouble of replacing open-hearth
furnaces with LD converters besides installing a
continuous casting plant. It is worth noting that
56 per cent of Italsider's steel was produced in the
LD process to 42 per cent in open hearth furnaces and
2 per cent in comparison to electric furnaces. See
report on the ordinary and extraordinary meeting of
shareholders, 30 April 1969, quoted in The Economist,
vol. 231, no. 6565, 21 June 1969. Two Important
factors have also contributed to Italian efficiency:
access to cheap US coking coal and new plants at
waterfront locations. For details see, Thomas B.
Curtis and John Robert Vastine, Jr. The Kennedy Round
p. 137.
complicated by the fact that they are under no obligation to abide by minimum prices and production targets for controlled products set by the Commission.

The Commission's role as a crisis manager in the present steel crisis could have been more effective if really its 'mandatory' powers were taken with the seriousness it deserves. Its failure in convincing its member states for the need of continued emergency cuts first imposed in October 1980. Or the senseless debates which ensued over the period of controls (i.e. whether it should be for 12 or 18 months) or more piquantly whether it should be extended to include wire rods speaks volumes of the spirit of consensus among the member states.

Although the Commission can claim some credit for the partial success of the Davignon plan it owed more to

48 It was designed primarily to avert chaos in an EEC steel market which has been troubled by continued fall in demand since 1974 which has adversely affected major steel using industries. For details see, International Herald Tribune, 5 May 1982.

49 It referred to the introduction of minimum prices for reinforcing bars - the first measure was announced in May 1977. (Official Journal, L/114, 5 May 1977) Davignon's declaration of 'manifest crisis' referred to Article 58 of ECSC treaty which should establish a system of production quotas.
quirk of circumstances than to its pronounced persuasive power. Eurofer which was created as an antidote to the West German inspired Denelux (which included Arbed in Luxembourg and Dutch steel industry in the north) as a part of its "rationalization groupings". Rationalization groupings did come in handy for effective implementation of the Davignon plan but probably it was the increasing discontent of steelworkers in the Saar industry protesting against redundancies that forced the Federal German Republic along with its Benelux followers to toe the Commission plan. There is also no evidence to suggest that the Commission has shown the same enthusiasm in rationalization of production and restructuring of this crucial industry, although it has been liberal with its purse strings when it came to combating social implications of plant closures as in Corby in UK. The European Investment Bank in contrast appears to have been more active in giving support to investment projects for example, in case of British Steel Corporation, the Bank had sanctioned 338.8 million European Units of Account (EUA) at the end of 1977.

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50 n. 29, pp. 360-61.

The funds were utilized for plant and machinery used at every stage of the steelmaking process: for raising port installations for the off-loading of raw materials and preparation of burden (Port
Industry Relocation

The Commission has also remained stoic to the need of relocation of traditional industries like steel in which it could have got enthusiastic support from firms in its member states like Britain or West Germany who as part of diversification are eager to set up steel plants in developing countries. The British consortium Davy Corporation (which ironically was the subject of a £143 million takeover bid from America's Enserch Corporation early in 1982) for example had won a letter of intent for the Paradeep Steel contract in India valued at around £1,250 million. Britain even went to the extent of flouting its own rules regarding award of Development Aid to the tune of £150 million, when actually the funds should

Talbot and Teesside): a blast furnace (Llanwern); steelmaking plant at Ravenscraig, Rotherham, Consett and Motherwell; cold-rolled sheet coating lines at Shotton, and seamless and welded tube facilities in Scotland and North-East England. Some loans were given for the crucial modernising activities aiding the steel sector and fringe processing like ingot moulds, repairs to continuous casting machines, refractory bricks and refining of coking plant by-products.

have come from Trade or Industry, and not from the drastically pruned Overseas Aid Programme. But Britain could not afford to lose this contract for it has been estimated that this deal could provide 50,000 man years of work for companies in recession hit areas of Midlands Scotland, the North East or North-West of England.


54 In a surprise move the Indian government has reportedly cancelled the contract awarded to McKee Davy which had become controversial because the public sector MECON had contested the new British terms (offered in February 1982) on the strength of its technical specifications. It is significant that MECON has been entrusted with the setting up of plant with the proviso that the bulk of the technology to be used would be indigenous; secondly Mecon has been advised to import advanced technology on purchase basis. It is not clear why the Indian government has taken such a drastic step alleging that the British consortium has reneged on its earlier commitments. For details see, "UK Loses $ 2,835 million Steel Plant Contract", The Times of India, 15 May 1982.

The deal reportedly fell through because Davy McKee had second thoughts on the turn-key concept and had submitted revised estimates which were approximately 50 per cent higher than the original project cost of $ 2,835 million. The Indian Government found it difficult to accept the view of the British Consortium that the project cost would go up with the change of product mix that India had suggested. For details, see The Hindustan Times (New Delhi), 16 May 1982.
Although latest developments suggest that the Paradeep deal has run into rough weather, if it had come through it would have exemplified Britain's current approach to development besides a bold and subtle way to relocate its ailing industries, a strategy in which both government institutions and private banks (i.e. export credit insurance and the banking sector) are involved. In case of Paradeep, cheap credit played a crucial role in Britain getting the letter of intent. Way back in 1980, the British Department of Trade and Industry had the foresight to set up a special unit known as Projects and export policy which was to act as a point of liaison between the British government, its export insurance subsidiary, the Export Credits Guarantee Department, the Overseas Development Administration and the Treasury.

The most lucrative aspect of the package offered was £ 450 million as loan covered by the Export Credits Guarantee Department (ECGD) coupled with an additional £ 100 million in official aid provided by the British

55 See Francois Duchene and Geoffrey Shepherd, "Industrial Adjustment and Government Intervention in Western Europe" (mimeo), Sussex European Research Centre, University of Sussex, 30 October 1980, p. 11.

Government - this more than satisfied the Indian wish to have the entire project financed externally with cheap credits meeting the cost of imported equipments. Critics have however argued that it amounts to tie up the entire process of India's industrial development with international capital and world market. What they found repugnant was the revival of the 'turnkey' concept in spite of India's success in building up adequate steel consultancy, engineering services and equipment-making facilities.

However, the reported termination of the letter of intent (13 May 1982) given to Davy McKee in September 1981, is based on an intriguing evidence: it seems the negotiations broke down because this British company was itself not interested in building Paradeep on a 'turn-key' basis and merely wanted to be an equipment supplier besides being in charge of overall supervision, without the concomitant responsibility which goes with it.

58 Ibid., p. 1563.
It is significant that talks had broken down on the financial and commercial aspects of the agreement, and that Davy McKee had, according to Government of India, violated the conditions laid down in the global tender, which was based on the concept of turn-key, fixed price and a specified commissioning time schedule. Davy McKee has been indicated on the following counts (1) unwarranted revision of the cost of the project to over $4 billion as against the original estimate of $2.8 billion. The revised quotation envisaged an over 50 per cent increase in the cost which did not take into account the cost of construction of the project, which is wanted to pass it on to India; (2) refusal to quantify the time scheduled for completion (the original time span was 45 months).

The fact that had India agreed to Davy's revised estimates, raising finance would have been no problem is

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60 Discussions relating to technical aspects went on smoothly. What India found objectionable was the sudden hike in Davy's cost estimates: its proposed cost-estimates for a 1.5 million tonnes steel plant for example, would be adequate to set up a steel plant of a capacity as large as 3.4 million tonnes. However, the keenness on the part of Britain, to see this deal comes through is very much there, and last minute developments cannot be ruled out. See, interview with British High Commissioner Sir John Thomson, Times of India (New Delhi), 18 May 1982.

61 Indian Express (New Delhi), 18 May 1982.
proved by its assertion in its Annual Report that it has access
to all major banks and financing facilities: "Size is no
problem for us and current examples range from a Supplier Credit
for £80,000 for a study contract in Bolivia to a buyer credit
for $275,000,000 for a jumbo methanol project in the USSR."62
Davy had set a record for a single source financing in the form
of an ECGD backed $500,000,000 loan for a cold strip mill
at Smederevo in Yugoslavia. It is not known whether the
commercial banks had anything to do with Davy's intransi-
gence, because the terms of the 10-year Euro-currency loan
for Paradip were said to be unusually 'lax' with the loan
bearing an interest rate of 3/8 per cent over Libor for the
first seven years, and 1/2 per cent for the remaining three
years, with a moratorium of five years.63

62 Davy Corporation Limited, Annual Report and Accounts

63 The Economic Times, 27 April 1982. These terms were
far better than those India had obtained for the Orissa
Aluminium Project in 1981 when a Eurocurrency loan of
$680 million was raised carrying an interest rate of
2 per cent and 5/8 per cent over Libor for the remain-
ing five years. Although till now, London, being a major
financial centre is providing EEC based firms with strong
financial support, this trend might suffer a slowdown with
London-based international loan consortiums shifting a
part of their operations to New York after Falklands
crisis contributing to the growth of international banking
zones whose assets have registered a phenomenal growth
(since December 3, 1981) to more than $108.6 million
despite constraints imposed by certificate of deposit
and tax questions. For details see Robert A. Bennett,
Policy Implications

With production and employment contracting, EEC steel firms may exercise the following options: (1) to seek vertical integration with downstream industries, and (2) diversification overseas especially in developing countries. The second option may also incorporate a gradual shift of the production potential in conformity to competitive advantage. The second option, seems more viable, because whereas steel demand growth will remain around 2.4 per cent during the first half of 1980s (if their annual economic growth rate is 3.8 per cent) in the industrialized countries, steel demand for developing countries would be around 5.8 per cent in the first half of 1980. However, as newly industrializing countries in Asia and Latin America would be gradually reducing their steel import having built up a fledgling steel industry, EC based


The community share of world steel production has sharply declined from 23 per cent to 18 per cent in the last decade, or a fall over fifth of production, with capacity utilization rate for OECD being only 76 per cent. On the other hand, Asian countries, including Japan have raised their share of production from 17 per cent to 22 per cent. For details, see Christopher Tugendhat, "Europe and Industrial Policy", International Affairs (London), vol. 55, no. 3, July 1979, p. 403. Also see, Jaspar Becker, "Strong Efforts to Cure Europe's Steel Industry", Europe (Bangkok), vol. 3, no. 3, May-June 1981, pp. 18-20.
steel firms should therefore not only rely on exports but technical co-operation as well.

However the Paradeep 'experiment' clearly shows that much would depend on the level of self-sufficiency attained by the particular IDC to determine the nature and extent of technical co-operation it would like to seek. In case of India, for example, a major reappraisal of awarding turn-key contracts is already underway following representations made by several Indian public and private sector companies who feel that they have already demonstrated their capability of being the prime contractors for such projects.

65 This implies a judicious blending of modernisation and closing down of old plants and curbing expansion coupled with a balanced investment policy, for (1) whereas financing problems reflecting short-term marketing conditions can erode competitiveness, (2) generous investment incentives catering to the requirements of individual enterprises can generate excess capacities. For details, see Emile Van Lennep, "Opening Address by the OECD Secretary General", Steel in the 80's, OECD Paris Symposium (New Delhi, 1981), p. 13.

66 This would also help the EC producers to prune the high cost of investment at home (investment costs have risen by 75% since 1974 but even then they find it difficult to compete with Japanese steel producers, like Nippon, which has been increasing investment spending by a factor of five. For details see, Tsutomu Euono, "Outlook for World Steel Industry upto 1985 - Demand, Trade and Supply Capacity", Steel in the 80's (New Delhi, 1981), pp. 68-82.
both in India and abroad. These companies, which include Bharat Heavy Electricals, Metallurgical and Engineering Consultants India Limited (MECON), and Hindustan Machine Tools are already busy executing a number of turn-key projects in several developing countries. MECON in 1979 had even succeeded in thwarting a bid to give what was virtually a turn-key contract to Russians for setting up the second cold rolling mill at Bokaro. Although in the Paradeep Steel Plant, MECON's cost estimate was $100 million more than Davy McKee (which had quoted $2.8 billion for a 1.5 million steel plant), it was for a 3 million tonne plant. Secondly, the gross fixed investment per tonne of steel making capacity of ₹9,000 estimated by MECON tallies closely with the estimate for the Russian assisted plant being established at Visakhapatnam of ₹9,600 per tonne. This is in sharp contrast to ₹16,600, the investment per tonne of capacity envisaged

67 The Statesman, 19 May 1979. MECON is the design and consultancy company of the Steel Authority of India, and its abbreviations stand for Metallurgical and Engineering Consultants India Limited. It had for example successfully completed the detailed feasibility study worth ₹5 million for setting up the first iron and steel complex in Syria. This study composed mostly of detailed market surveys, explored the technical and economic viability of an one million steel plant in Syria using indigenous iron and other local resources. See Times of India, 28 September 1980.
in the plant which was to be set up by Messrs McKee Davy. MECON was also opposed to Davy McKee getting the turnkey contract for the latter only recently had ordered reappraisal in small, integrated steel making and rolling plant field, and although it had stated in its Annual Report that "it is finding acceptance over a wide area of the world and increasingly a 'turnkey' approach is being sought by clients particularly in developing countries". It did not state in clear terms whether it was executing currently any such project.

The fact that MECON has been able to drive home its point about the need for maximum indigenity has been vindicated by the Indian Government's latest decision to view the whole Paradeep Project as a purely commercial venture and its refusal to view it as a touchstone of Indo-British relations. It has decided to adopt a 'package' approach instead of earlier 'turn-key' concept by proposing to invite limited global tenders from reputed suppliers for


69 n. 62, p. 88. Also see, India Today (New Delhi), vol. 7, no. 10, 16-31 May 1982, pp. 84-87.
different packages of the steel plant. 70

Lessons of Paradeep

The fact that Davy McKee had to face keen competition from Mannesmann Demag (Davy's fixed price bid of $2.5 billion was closely matched by Mannesmann's $2.6 billion) for the letter of intent, clearly shows the fierce price undercutting engaged in by EEC firms to bag contracts in countries like India. The Commission could explore ways in which they could be persuaded to have a working relationship, mutually advantageous to each other in matters of joint-tendering and subcontracting in third countries. This would enhance their bargaining position in relatively more sophisticated developing countries like India, which has built up a strong technological base backed by a cadre of highly professional engineers and a reasonably developed engineering consultancy service, especially in civil engineering and metallurgical industries. What the European firms should take into cognizance is that gradually pressure is building up against offering 'turn-key'

70 Finance would also be their responsibility which would go to meet their respective scope of supplies of equipment and services. The fact that UK still remains a blatant optimist is proved by Sir John Thomson, "the British High Commissioner's assertion that the deal has failed mainly due to changes in the Plant site and Product mix and that McKee Davy would still be interested in undertaking on-shore work'. See, The Economist Times, 18 May 1982.
assignments to foreign firms for it is felt that it might lead to 'dilution' of the role of Indian consultants. It is significant that in an All India workshop on consultancy services, organised by Federation of Indian Export Organizations, in Delhi in May 1982 it was felt that to counter the Indian Government's marked preference for use of foreign consultants, especially in the power sector, the Indian Consultancy Organizations should consider forming consortia on a project-to-project basis.

What is more significant though Davy International has backed out on its original commitment detailed technical specifications for the major technological units like coke-ovens, and by-products plant, sintering plant, blast furnaces, rolling mills etc. has already been prepared for the Paradeep plant thanks to availability of local engineering talent.


Although the Indian government has asked its Planning Commission to identify new sources of funds, the overwhelming feeling in informed government circles is that there is no substitute for British financial package, although the Indian Government, in its negotiations with the London based Lazard Brothers has argued that as export-finance profits would more than balance commercial loan terms, it should be obliged with favourable terms for commercial credits. 'Finance' is therefore a crucial factor in favouring European, especially EEC based firms with contracts.\textsuperscript{74}

\textsuperscript{74} The Statesman, 18 May 1982. Also see, The Indian Express, 23 November 1981. For details see, Financial Express, 23 May 1982. The $ 1 billion loan which India would contract would be for 10 years with 0.375 percentage point above LIBOR. For the last three years it would be 0.5 percentage point above LIBOR which is currently above 14.5 per cent. Under the European Export finance system, export credits are provided by commercial banks, rather than the governments, who only act as guarantors. However, the whole philosophy behind the current Indian strategy on development of its steel industry is contingent on two factors: (1) ability to attract foreign funds without taxing the national resources to make Indian steel export-oriented which seems ill-conceived in the light of depressed world steel market and the fact that India has been importing steel. See, BM, "New Perspective for Steel Development", Economic and Political Weekly, vol. 16, no. 49, 5 December 1981, pp. 1779-81. Also see, India Today (Bombay), 15 November 1981.
Future Projections

The latest veiled US threat to impose retrospective duties by invoking an untested section of the Export Administration Act of 1979 (allowing US to impose penalties by up to 90 days) on the plea that its steel industry needs to be protected from encroachment by cheaper EEC steel, has been countered by Etienne Davignon, EEC's Industry Affairs Commissioner, who strongly feels that the US Steel Corporation's recent purchase of Marathon Oil Corporation for $16.4 billion clearly indicates that US steel industry is not as vulnerable as it is made out to be. Unlike European steel industry,

75 Jane Seaberry, "EEC Official Sees 'Blood on Floor' if the US Slashes Steel Imports", International Herald Tribune, 19 May 1982. From 1979 to 1981, imports of some key steel products, including sheet actually fell 16 per cent more than the fall in steel consumption in United States. However, in the first 10 months of 1981, sheet plate imports rose 324 per cent above 1980 levels, and cold-rolled sheet imports touched 2,536 per cent. See for details, Business Week (New York), no. 2723–54, 25 January 1982, p. 28. According to latest data available, US steel has reported that a third quarter loss of $82.4 million had cut profit to $1.8 million from $975.4 million in 1981. The company has sold $750 million of assets to remain viable. As an austerity measure, the steel has cut spending on authorized capital projects by almost $750 million since the end of 1981 but has made no outbacks in 1982 budget for its Marathon oil subsidiary. For details see International Herald Tribune, 2 November 1982.
which has aspirations for Third World linkages, its counter-
in the US has a more inward looking policy - but diversifi-
cation into other sectors (for example back in 1958 Armco Inc.
had bought National Supply Company, a manufacturer of oil
drilling equipment, and subsequently had branched out into
industrial products and services), helps it to cushion against
sudden fluctuations in demand and also providing steel firms
with adequate incentives to risk diversification. This allows
them to plough back their non-steel profits to fund steel
investment, besides this, according to an analyst: "They can
now also use the accelerated depreciation available from their
capital-intensive steel operations to reduce taxable income
in the more profitable non-steel areas, this in turn boosts
marginal return on investment "and cash flow". However,

76 Also see Lynn Adkins, "The Case for Steel Diversification",
Dun's Business Month (New York), vol. 119, no. 2, February
1982, pp. 74-76. Although US steel firms unlike its
European counterparts have refrained from offering 'turn-
key' projects to developing countries, in case of India,
US steel has started showing interest in the modernization
of public sector steel plants particularly Durgapur. Its
Canadian subsidiary Metchem, which has experience in
executing the Kudremukh Project has already sent out
feelers, and there are indications that Canadian
Government Aid coupled with Commercial bank credit may
be forthcoming if the deal is clinched. See India
Today (New Delhi), vol. 7, no. 5, 1-15 March 1982,
p. 109.

For an account of US steel's unproductive involvement
in the controversial Bokaro steel project (which was
supported by President Kennedy but opposed by Republicans),
see, John Kenneth Galbraith, Ambassador's Journal
(New York) 1970), pp. 220-21 and 486-7. Also see,
Padma Desai, The Bokaro Steel Plant (Amsterdam, 1972),
Hobert Crandall of Brookings Institution is less optimistic and feels that contrary to popular view steel industry in USA has a small asset base now valued at around $15 billion from which it has to make allocations for acquisitions. However, he feels that in this Darwinian fight for 'survival of the fittest' the least efficient firms would be edged out of the fierce competition, and in turn would bring about a hike in capacity utilization and an enhanced profit margin.

While Europe seems to have shied away from US style diversification, not all EEC countries would enthusiastically approve of the current process of industry relocation—even if it is in a low growth industry like steel, fearing that it

pp. 16-22, 23-37. While President Kennedy felt that US participation in the Bokaro project was essential to counter increasing Soviet influence in India's steel and machine building industry, General Lucius Clay, of the powerful 'Committee to strengthen the security of the free world, felt otherwise. He commented: "The observation of countless instances of politically operated heavily subsidized, and carefully protected insufficient state enterprises in less developed countries makes us gravely doubt the value of such undertakings in the economic lives of these nations.... While we realize that in aiding foreign countries we cannot insist upon the establishment of our own economic system, despite its remarkable success and progress, we should not extend aid which is inconsistent with our beliefs, democratic tradition, and knowledge of economic organisation and consequences...." However, in spite of such pontification, the Americans were not ready to part with the latest technology, for the technology recommended for Bokaro in the US Steel Corporation's Report was of the semi-continuous variety instead of the more advanced continuous casting of flat steel items.
may lead to dislocation of labour and capital. For example, President Mitterrand has expressed concern over the transfer of Europe's industrial and financial resources to Asia, although judging by the sluggish performance of French steel industry, one would have inferred that an 'industrial lebensraum' would have been a better option than facing charges of 'dumping' in the highly competitive US market. Only recently French steel firms like Chatillon, Creusot-Loire, Forges de Geugnon have been accused by the United Steel Workers Union of having dumped stainless sheet and strip products in USA.

While there is no evidence to suggest that the European Commission has given any serious thought to the problem of relocation of this mature industry with a long gestation period, it has been encouraging mergers between steel firms in both France and Belgium. Only recently, the Commission has authorized an alliance between the French steel firms Sacilor and Usinor, both owned by the French Government and a planned joint subsidiary called Ste Metallurgique de Normandie. The alliance of these three companies would give rise to a new group called Usinor-Sacilor.


Normandie whose output of steel would be more than of either British steel, West Germany's Thyssen or Italy's Finsider. The Commission is allowing such a merger on the plea that since the French steel market still remains dependent on imports (about 36 per cent), USN's emergence would not place any constraints on competition.  

In Belgium, the Commission is encouraging talks between Cockerill-Sambre, Estel Hoesch Hoogovens and Klocknerwerks on production arrangements so that Cockerill's future could be made secure. The talks essentially would focus on ways to facilitate exchange of steel products and streamlining production. One result of these talks could be provision by Hoogovens of crude steel for rolling or galvanization at Cockerill's Liege plant.  

Interim Conclusions

However it remains to be seen how these measures are going to insulate European steel industry from inevitable contraction in employment and production. One option might

79 International Herald Tribune, 3-4 April 1982.

80 Ibid., 22-23 May 1982.

81 By the second half of 1974, the steel boom was over. There was a fall in demand for steel products during the first quarter of 1975, which were down 33 per cent from the first quarter of 1974. By April 1975 the decline had reached 14.5 per cent in United States and Japan, and 12.4 per cent for the EEC as a whole.
be to effect a transition to a relatively smaller steel industry. This may be a better option than erecting trade barriers or entering into market-sharing agreements with Japan or the LDCs. The Europeans should not lose sight of three important factors: (i) that their share (along with US) of world market in iron ore has plummeted to less than 20 per cent thanks to new discoveries in Brazil, Australia, Venezuela, Liberia, and India. (ii) Coal markets have become more competitive as the competitive edge of the European mines has been eroded. (iii) That contrary to usual assumptions steel industry, besides being capital intensive, is equally labour-intensive. In USA, where steel industry shares some of the characteristics of its counterparts in Europe, only 0.75 per cent of manufacturing had more labour-intensive techniques (however it was more than 30 per cent in Belgium).

Between November 1974 and March 1975, prices fell between 40 per cent and 50 per cent. The 1975 crisis was exacerbated because of the crisis in user industries like automobile, construction and shipbuilding industries which are major consumers of steel. See for details, Ernest Mandel, The Second Slump (London, 1980), pp. 56-57.

of production. This was computed from the share of labour payments (1976 data) (see Table VIII):

TABLE VIII

SHARE OF LABOUR COSTS IN VALUE ADDED, UNITED STATES MANUFACTURING INDUSTRY

<table>
<thead>
<tr>
<th>Industry</th>
<th>1974</th>
<th>1976</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radio and TV sets (SIC 365)</td>
<td>0.482</td>
<td>0.449</td>
</tr>
<tr>
<td>Apparel (SIC 23)</td>
<td>0.572</td>
<td>0.573</td>
</tr>
<tr>
<td>Nonrubber Footwear (SIC 314)</td>
<td>0.583</td>
<td>0.580</td>
</tr>
<tr>
<td>Basic Steel (SIC 331)</td>
<td>0.537</td>
<td>0.685</td>
</tr>
<tr>
<td>Chemicals (SIC 28)</td>
<td>0.279</td>
<td>0.288</td>
</tr>
</tbody>
</table>


While judging by the usual criterion of efficiency (i.e. output per man hour), it has been observed that Japan and US are close competitors and that UK and France do not fare well in terms of labour efficiency (1977 data), although labour productivity is contingent on product mix and
### TABLE IX

**MAN-HOURS PER METRIC TON OF RAW STEEL PRODUCTION:**
**US, EEC AND JAPAN**

Industry Average (1976) 8.2 (US), 11.24 (EEC), 9.6 (Japan)

**Source:** US Bureau of Labour Statistics

**Eurostate data:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Country</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>Germany</td>
<td>8.41</td>
</tr>
<tr>
<td></td>
<td>Italy</td>
<td>6.75</td>
</tr>
<tr>
<td></td>
<td>Belgium</td>
<td>6.89</td>
</tr>
<tr>
<td></td>
<td>UK</td>
<td>16.40</td>
</tr>
</tbody>
</table>

**Source:** Eurostat, Eisen and Stahl (1977).
labour relations.\textsuperscript{83}

The viability of an alternative strategy may not lie in erecting large in-line facilities on deep water port sites, although primary steel production in coastal sites in the EEC had increased from 5 per cent in 1955 to 25 per cent lately-but it is not known whether it has been able to stem declining comparative advantage. The US has evolved a plan to counter this regressive trend by concentrating on interior locations which could cater to the requirements of raw materials and product markets; the EEC in contrast has been more adventurous erecting plants at Taranto, Dunkirk and Fos. But as Crandall

\textsuperscript{83} Data on labour productivity would also be contingent on difference in characteristics of national steel industries, for example, US industry produces more highly finished flat-rolled products (which would need more man hours) and is relatively weak in production of tubular steel products which it was eager to import from the EEC to meet the needs of its oil industry (in the first three months of 1982, US producers had shipped 910,000 tonnes of steel tubes). However, glut in the oil market, has drastically reduced the projection for the rest of 1982 to only 1.4 million ton in sharp contrast to 3.8 million in 1982. See for details, \textit{The Economist}, vol. 283, no. 7237, 15-21 May 1982, p. 77.

Capacity utilization is also a major factor in determining labour productivity, provided suitable measures are taken to adjust manning requirements to demand. For example, US Carbon steel industry, required eight man hours per metric ton of finished products at a 90 per cent of capacity. The figures for Japan and Europe are 7.7 and 11.5 respectively. See Crandall, n. 82, p. 130.
has shown the construction of the most modern integrated, 'greenfield' facilities is not the solution to the problem, for it hardly helps in economising on labour. For example, the cost of building a new integrated carbon-steel mill with blast-furnaces, LD technology incorporates 45 per cent as labour costs. In 1976, construction labour charged $8.00 per hour in USA, $8.15 in Belgium and the Netherlands, $7.00 in West Germany, $5.25 in France, $4.20 in Italy and $4.00 in Japan. So if equivalent costs are assumed to be the same in all countries, labour costs would be an important variable in determining the cost of erecting new facilities. It is here that the low-wage newly industrializing countries would triumph. Japan also remains a formidable competitor, although its costs sometimes do rise with the value of the Yen, but under any such circumstances any loss due to such hike is more than compensated by switching into higher

84 Crandall, n. 82, pp. 130-31.

85 Also see, Sanjaya Lall, "Developing Countries and the Emerging International Technological Order", Journal of International Affairs (New York), vol. 33, no. 1, Spring/Summer 1979, pp. 77-78. According to latest estimates, a steel worker in USA would cost his company $24.84 an hour in contrast to his counterpart in South Korea who is paid only $2 an hour.
valued, higher profit alloy steel. 86

Concluding this discussion, one can say that this sectoral study confirms the general notion that increasingly the European Commission would find it difficult to impose its writ on the member states as long as they succumb to their own national interests. 87 If Europe has to maintain

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86 The Economist, vol. 245, no. 6737, 7-13 October 1972, p. 81. Also see The Economist, vol. 264, no. 6988, 6 August 1977, pp. 75-76. However, Japan might find it difficult to export strong, heat-resistant 'specialty' alloys to USA, for ITC knows fully well that although specialty steels account for only 1.5 to 2 per cent of the total US market, it is one of the growing segments of this shrinking industry, and secondly it is of great importance to national defence. For details see, Newsweek, vol. 100, no. 18, 1 November 1982, p. 43.

Italy for example feels that its restructuring programme faces a greater threat from the European Commission, which is insisting that it should fall in line with Britain, France and West Germany, who have cut jobs by 108,000, 58,000 and 39,000 respectively in 1974-81. See, The Economist, vol. 283, no. 7237, 15-21 May 1982. Also see, The Hindu, 25 November 1981. Also see, W. Schernk, "Continuous Casting of Steel", in L. Nasbeth and Ray, ed., The Diffusion of New Industrial Processes: An International Study (London, 1974), pp. 232-50.

comparative efficiency in this slow growth sector, and if it wants swift transition to a continuous process industry which would ensure a logical flow from input to output, besides adapting to the new international division of labour, by which improvement in quality of steel can be brought about without greatly taxing energy, manning requirement and times, it has to have a common European approach. Ironically, it was ingrained in the tenets of the ECSC treaty, whose objective was to transfer steel (and coal) policy from the national to the Community level, but which still remains to be implemented both in letter and spirit.

Secondly as the steel crisis deepens the European steel firms would have to operate with international rather than merely national terms of reference and in this venture it can be expected to be backed by a traditionally strong banking sector. They would essentially be interested in


89 Such a common policy would put curbs effectively on subsidy given by members promoting this ailing sector, thus discarding competition. Also see, "European Steelmaking - General Setting and the ECSC", in Kenneth Warren, World Steel (New York), pp. 150-98 (1975).
mineral LDCs, and their strategy would be to 'build very large operations at major break-of-bulk points in the mineral rich nations...shipping semi-finished material to much smaller market-oriented finishing mills", although it might give rise to certain economic and technical problems like securing regular delivery, quality control etc.

Two other important factors would also contribute to the present state of the world steel industry: (1) 'resource diplomacy of the mineral producers, who would encourage further processing so as to accelerate the economic return from

90 Watten, ibid., p. 310. France's Creusot Loire's recent successful bid for a $808 billion contract to build a cold-rolled steel mill as an adjunct to the Krakatau Steel Complex in Cilegon, West Java, Indonesia, confirms this trend, but fierce competition and price undercutting is also contributing to a large number of contracts being lost; only recently, the China Technical Import Corporation has asked the German-led Engineering Consortium SMS-Schloemann Siamag (17 member Consortium including US and Japanese companies) for suspension of its cold-roll steel mill order that would form an ingredient part of the giant Baoshan Iron and Steel Complex near Shanghai.

91 Warren, n. 89, p. 310. According to latest figures, external assets of banks in the major industrial countries has expanded from $119 billion to $1.5 trillion. See, Newsweek, vol. 99, no. 22, 3 May 1982, p. 36. Also see, Pramod B. Shah, "Financing of Large Scale Projects", The Economic Times, 14 November 1981; the discussion pertains to India. It is significant that like Western commercial banks, the Chase Manhattan Bank has also evinced interest in India's export-oriented industrial projects including steel. It remains a matter of conjecture whether the US steel firms would be far behind. See for details, The Economic Times, 14 November 1981."
exploitation of minerals; (2) environmental consciousness in the industrialized countries. For example in Germany, Thyssen has been troubled by the exacting demands of the Duisburg and Dortmund factory inspectorate, which has kept its new 10,000 tonne a day blast furnace and Hoesch's oxygen steel mill under surveillance. In USA, the steel producers had to incur $320 million (or 10 per cent of its expenditure) on air and water control facilities in 1972, with an additional requirement of $3,500 million. However, in the developing

92 Subrata Sengupta, "Transfer of European Advanced Technology to India : A Case Study of Iran and Steel Industry", in K.B. Lall and H.S. Chopra, ed., The EEC and the Third World (New Delhi, 1981), p. 191. Also see, Kannan Srinivasan, et al., "The Orissa Aluminium Complex", pp. 2009-10. The article clearly shows that one of the factors which had motivated the French based aluminium transnational Pechinay Ugine Kuhlmann, to set up a 100 per cent export-oriented alumina plant, is the stringent regulation for environmental safeguards in the West.

A perusal of the technical specification bid for Orissa Alumina Plant (schedule 1, Appendix 2) (Agreement of 9th January 1981) (Date 20.10.1981) shows that whereas care has been taken to protect the equipments to be assembled at site against the ambient pollution inherent with alumina fabrication i.e., fine dust and soda projections, no mention is made of any equipment for prevention of atmospheric pollution. For EEC's views on the environment, See European File, no. 2/81, January 1981, "The European Community and Environmental Protection", and The European Community's Environmental Policy, European Documentation, May 1977.
countries, the urge to industrialize has mostly kept discussions on environmental control at bay, although it has been taken for granted that environmental pollution on a greenfield site might be unavoidable. But once the steel industry has attained its maturity, and has started giving financial and economic returns, one would have ample time to decide on the optimal plant size in relation to profitability, but this does not hide the fact that the problems of subsistence, nutrition and health far out weigh the problems of industrial pollution in the developing world.

The developing countries have come a long way from the 50s when their annual total production was under 3 million tons. By the 1980s not only have the main steel producing countries attained an impressive level of industrialization but in many cases they have also built up a robust mining industry. However, they can hardly afford to follow a policy of autarky, for conditions in developed countries actually determine supply-demand relations and also fix price levels in the international market, because in spite of increasing production and consumption, the LDCs represent less than 5


94 Ibid., p. 21.
and 10 per cent of world totals.\textsuperscript{95} Although because of wide price fluctuations the Western industrialized countries no longer count on steel as a steady source of export earnings,\textsuperscript{96} their efforts to get a 'reasonable' price with an 'acceptable' profit margin is realized only in very few LDCs for the latter often impose high import tariffs to protect local industries.\textsuperscript{97}

However, in case of India, one finds that an inflated domestic steel price has adversely affected engineering exporters. Although India had introduced a scheme (6 February 1981) which stipulated that the price difference between the indigenously produced steel and the steel available at international markets would be reimbursed, the scheme is making very tardy progress because of procedural delays; Steel Authority of India Limited (SAIL) which has made the sole canalising agency, has been trying since 1981-82 to import

\begin{itemize}
\item \textsuperscript{95} \textit{Industrialization of Developing Countries, Problems and Prospects, Iran and Steel Industry, United Nations, (New York, 1969), p. 1.}
\item \textsuperscript{96} \textit{Ibid., p. 2.} For example, between 1962 and 1963, European export prices for some typical steel products fell by 26 per cent but between 1964 and 1965 it registered a price hike by 14 per cent. In 1963, the international market price for steel was more than 30 per cent below the domestic prices of some developed exporting countries. By the end of 1968 export prices again started climbing up.
\item \textsuperscript{97} \textit{Financial Express, 2 June 1982.}
\end{itemize}
one million tonnes of plates and structurals, but because of 'meagre' imports, it is finding difficult to meet the needs of engineering units. This is a classic example of the Indian Government's 'inward-oriented' policy, where in spite of a very competitive international market in steel, the export-oriented Indian engineering units have to starve for such critical steel items like wire rods. But one wonders whether the international steel producers (especially those which are EEC based) have ever tried to exploit the considerable Indian market in such steel items, whose imports are permitted under the 'buffer stock scheme'.

Although the problems faced by the Indian Engineering

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98 Financial Express, 3 June 1982. SAIL plans to import 0.5 millions of plates and structural during the next six months in an attempt to bridge the gap between demand and supply in these items, although such a measure has to be coupled with improvement of stock-yard arrangements and easing of transport bottlenecks. Also see, World Development Report, the World Bank (Washington, 1981), pp. 80-81.

The Indian Government's claims that it is eager to supply the engineering exporters with steel at international prices is belied by the fact that only less than 20 per cent of the total application claiming benefits under the scheme has been approved. The Engineering Exporters are unhappy with the Union Government's rejection of the industry plea to broad base the formula for determining the international steel price by including the steel prices prevailing in South Korea and other newly industrializing (NIC) countries. The Union Government however feels that to arrive at the base international steel price, the London Metal Bulletin and the Japan Metal Bulletin would suffice. Also see, Import Policy, April 1981-March 1982, Government of India Department of Commerce (New Delhi, 1981), pp. 12 and 107.
units clearly show that Indian steel planners have thought more about bulk production of steel, rather than production which should have been geared to meeting the demand for particular categories of steel. Although it is unlikely that there would be any review of the Indian steel policy in the light of difficulties faced by engineering industry, in the coming years foreign collaboration in steel sector would be welcome, as long as demand for steel outstrips supply. Probably finance provided by Western financial institutions would be a bigger attraction, and Western firms would mainly act as equipment suppliers and would continue to play a crucial role in providing the latest techniques in (i) reduction of coke rate of blast furnaces; (ii) use of computers for process control and toning up efficiency, (iii) use of oxygen to enhance the performance of the open hearth furnace and cutting down of time in changing operations, (iv) emphasis on quality control by determining operating standards for individual production department.

99 This is hedged with a big 'if' for Western banks are finding it more difficult to recycle OPEC surpluses, although in case of India they do not fear any rescheduling of debt. For details see, The Times, 19 May 1982. However, what should alarm India is the fact that lending to the non-oil LDCs had fallen sharply in 1982.

100 n. 95, p. 71.
(v) Linz Donawitz (LD) continuous casting process. The Indian Government's refusal to buckle down under British diplomatic prodding on the question of the Paradeep issue, and its reported decision to set up a central engineering and technology organization (CENTO) with task of guiding the future growth and development of the domestic steel industry, and undertaking feasibility surveys of investment plans (including technical and techno-economic details) would not augur well for European steel firms (especially those from UK) interested in relocating some of their ailing units) which had the mistaken notion that because of long, traditional ties India would continue to remain their traditional preserve, but the failure of the Paradeep steel also ironically highlighted India's failure to play off individual European firms against one another, a strategy about which Bill Warren is right in

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102 The Economic Times, 30 May 1982.


For example, during a critical phase of Paradeep negotiations, when Davy McKee came to know that the note submitted to the Indian Cabinet containing a comparative analysis of its and Mannesmann Demag's offer clearly showed that the German offer was far better (on three counts: on the question of fixed price, lower quotation and better technology) it promptly slashed its quotation to the German level in the revised offer made on August 7, 1982. Thinking that now it would be possible to get a lower quotation from Mannesmann, the latter was asked...
observing "Third World countries can increase their bargaining power 'negatively by making use of opportunities to play off capitalist states against another; to play off the communist world against the capitalist world (for example, East-West rivalries have advanced the Indian steel industry) and to play off individual foreign firms, especially of different national origins, against one another."  

With Japan\textsuperscript{105} and Sweden\textsuperscript{106} eager to collaborate in

\textsuperscript{104} Warren, ibid., p. 12.

\textsuperscript{105} It is significant that the ruling Japanese Liberal Democratic party pleaded for more economic collaboration between India and Japan in the steel sector. For details see, The Hindustan Times, 7 April 1982. What is more significant is that a Japanese team of steel experts is scheduled to visit India to re-examine the recommendations made by a report prepared by British steel corporation (overseas service) on the proposed development programme for the Durgapur Steel Plant. The terms of reference of this team includes: an on-the-spot study of the existing production facilities, gauging the extent of technological obsolescence, need for updating of technology, scope for capacity expansion with addition to product mix. India probably expects that this visit might pave the way for technical and financial collaboration, the latter in the form of suppliers' credits, and soft loans on Government to Government basis. For details see, The Economic Times, 15 October 1982 and Indian Express, 6 August 1982. Also see, Financial Express, 14 October 1982.

\textsuperscript{106} In case India wants to decrease its dependence on the integrated steel plants and adopt a policy of de-centralization, the Swedish offer of INRED technology (induction-reduction) would come handy. This has been under development by the Boliden Corporation of Sweden since 1972 utilizing fine grained iron ore and non-coking coal (that are in abundance in India). The INRED process is self-sufficient in energy and does not require any fuel. It can be used to set up mini plants (with output of 100,000 tonnes) which can produce hot metal for the foundry industry. See, for details Patriot (New Delhi), 24 April 1982. Also see,
India's steel sector, India might be tempted to exercise such an option, but even then the European (especially, EEC based) steel firms interested in tie-ups in India, should exercise more circumspection and while entering into negotiations, should reckon with the increasing clout exercised by the public sector design and consultancy firms who are generally weary of foreign interference and are conscious of their prerogatives. The Indian test-case is however a rough indicator of the type of obstacles the EEC steel producers are likely to face when they try for diversification overseas, especially in LDCs. Besides, as the latest deal between West Germany and

Subrahmanyan, n. 59, p. 1986. Sweden has also offered India the Eldred process, a cheap method of producing liquid iron by two-stage reduction of iron-ore concentrates in coal. The process has jointly been developed by ASEA, AB and Swedish firm Stora. For details see, The Economic Times, 29 October 1982.

107 When the Paradeep contract was awarded to Davy, in September 1981 MECON wanted the Coke oven batteries and rolling mills to be accommodated in the package (for which Davy has tie-ups with the world's best firms) but Davy had rejected the proposal without realising that MECON might be appointed prime consultant to the Project. See Financial Express, 25 May 1982.

108 A noted Indian economic analyst, Balraj Mehta however, is doubtful about the future role of the Indian Engineering and design services in Paradeep, and he comments "It is unthinkable, however, that foreign financing of a steel plant of the scale desired can be arranged without arrangements for turn-key construction of the plant by foreign agencies with Indian engineering and design services and equipment manufacturers playing a subsidiary, supportive role". See for details EM "Orissa Steel Plant Fiasco", Economic and Political Weekly (Bombay), vol. 17, no. 22, 29 May 1982, pp. 895-6.
Brazil shows, EEC steel producers have often to protect their interest against those of the latter. West Germany which has iron ore and coal stakes in export to countries like Brazil, was being pressurized by the latter to fix a new imported steel price level up by 30 per cent on the existing price in the EEC, and though it negotiated on 10 per cent was forced to concede 17.5 per cent. This is a clear case where the EEC is importing to protect other industrial interests in Third World, besides making use of the much cheaper steel these LDCs produce with their lower labour costs, though ironically, the EEC is itself overproducing as the demand drops. 109

Although recent estimates of expected demand were pegged 30-40 per cent higher than actual, this expectation is not likely to be realized because of the continued slowdown in downstream industries, and the fact that there has been no appreciable rise in the volume of new orders, 110


110 In 1979, the total volume of new orders in May, June, July and August was down by 15 per cent, 16 per cent and 23 per cent. The situation became more critical with drastic fall in price of main steel products like cold rolled sheets and reinforcing bars. The 80s were no different with total orders for steel 20 per cent below the corresponding period in 1979. Between January-September 1980, there was a 13 per cent fall in steel price while production costs rose by 5 per cent. Capacity utilization also kept pace with the general decline, touching an all time low in September 1980 (58%). See for details, Fourteenth General Report on the Activities of the European Communities in 1980, Commission of the European Communities (Brussels, 1981), p. 96.
it is a belated recognition of the fact that what they actually fear is the efficiency of the Italian 'Bresciani' system of steel production based on scrap and electric arc welding, which according to Economists like Keith Pavitt, may be the most efficient and 'increasingly appropriate in a period of slow growth in steel demand, and 'increasingly appropriate in a period of slow growth in steel demand, and increasing competition from the newly industrialising countries'. 112

However the fact that 27 per cent of EEC steel making capacity would be 'superfluous' in 1985 emphasises the need for 'restructuring' which unfortunately has


remained in the realm of the rhetoric. 113

The slow process of restructuring is hardly a boon to the workers, who get very little time for retraining. It is significant that 30 per cent of these workers have been made redundant since 1974, and more are expected to swell their ranks. The rate of unemployment would be greatly influenced by the outcome of the current EEC-US negotiations on steel. The EEC recently made an offer to restrain exports to 4.95 per cent, while US wants it to be pegged at 3.95 per cent. An analyst, Clyde H. Farnsworth, comments "On the basis of total demand for steel, in 1981, of 104 million tonnes, which include domestic shipments plus imports but less exports, 4.95 per cent would amount to a little more than 5 million tonnes, compared with 6.4 million tonnes the European shipped to US in 1981. See, Clyde H. Farnsworth, "US Reportedly Considers Quota on EEC Steel", International Herald Tribune, 10 June 1982.

The European Commission is expected to ask its members to cut production capacity by between 33 million and 38.5 million tonnes, which would mean the closure of 20 more steel plants. This was expected for consumption amounts to only 112 million tonnes, thus making surplus of 32 per cent of installed plant capacity. The new proposal if put into use would reduce the access by 16.5 million tonnes, besides tightening controls on aid to steel-makers. For details see, International Herald Tribune, 18 November 1982.