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Export Obligation, Technology Transfer and Foreign Collaboration in Electronics

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Introduction

Export obligation is an obligation imposed on a firm to export part or whole of its annual output. Usually, it is imposed by Government as a precondition for the grant to the firm of a licence to manufacture, or expand the manufacture of, a particular item. For the purpose of this paper, however, we have restricted ourselves to only such export obligation as is resorted to in the case of foreign collaboration and that too only in electronics industry. A specific case of foreign collaboration in the manufacture of electronic components has been taken up for close study, to examine principally how far export obligations are effectively enforceable. In the process, we examine also, the linkage between export obligation and technology transfer.

In part I of this paper we attempt to put together some background information on the frequency with which export obligation has been imposed by Government in the case of foreign collaborations in electronics industry. In part II is given background information on the state of component manufacturing, since the case chosen for intensive study concerns the manufacture of an electronic component. Only in parts III and IV do we report the results of our case study. The paper ends up with a few concluding observations.

* Views have been expressed by the authors entirely in their personal capacities and should not, in any way, be attributed to the institutions/organisations for which they are working or with which they are associated.

I

Electronics industry accounted for between 5 to 6 percent of the foreign collaborations in India which had been approved between 1957 to 1977. As can be seen from Table 1, this proportion has been increasing over the years. From under 5 percent during 1957-62 it had gone upto almost 8% during 1967-72, and was still close to 6.4 percent in 1973-77 when the total number of collaborations registered a marked increase of 46% compared to the quinquennium immediately preceding.

During the most recent quinquennium of 1974-78, for which year-wise data on export obligations was possible to collect, while in less than 20% of the total number of foreign collaborations was an obligation imposed for a proportion of annual output to be exported, the corresponding obligation to export was imposed with respect to almost 32% of the foreign collaborations in electronics industry (see Table 2). It would appear therefore that export obligation has been imposed more often in the case of foreign collaborations in electronics industry than in industry in general. At least, this has beenthe case in recent years.

Possible Rationale

There can be several reasons why Government might impose export obligation on a firm wishing to enter into a foreign collaboration. The principal reasons usually advanced in this regard are the following three: (1) Access to uptodate technology: It will ensure the import of uptodate technology not only to start with when the initial plant and equipment are being purchased from, or through, the foreign collaborator but also subsequently during the course of the period when export obligation is in force.

Table 1. Share of Electronics Industry in Foreign Collaborations; 1957 to 1977

Years	Total number of Collaborations	Number of collaborations in Electronics Industry	Percentage share of Electronics Industry in Total Collaborations
1957-62 (6 years)	1425	69	4.84
1963-67 (5 years)	1327	68	5.12
1968-72 (5 years)	931	76	7.99
1973-77 (5 years)	1392	89	6.39

Source: a) For data for 1957 to 1973:

(i) Directory of Foreign Collaborations in India, Vol.I, 1974, de Indiana Overseas Publications, Delhi.

(ii) A Guide to Electronics Industry in India, 2nd Edition, 1974, Statistics Investigations Bureau, Bombay.

b) For data for 1974 to 1977:

The information was personally collected from the Directorate General of Trade & Development (D.G.T.D), New Delhi. However, the data for 1974 are incomplete.

Note: The recorded year of a foreign collaboration pertains, according to D.G.T.D. procedures, to the date on which the case was initiated. This means that the figure for a particular year is subject to adjustment so long as a case initiated in that year is pending with the Government.

Table 2. Export Obligations in Total Manufacturing and in Electronics Industry, 1974-78

Year	All Manufacturing			Electronics Industry**		
	No. of Foreign Collaborations	No. of Export Obligation cases	Percentage of Export Obligation cases	No. of Foreign Collaborations	No. of Export Obligation cases	Percentage of Export Obligation Cases
1974*	139	23	16.6	6	2	33.3
1975	431	113	15.3	21	8	38.1
1976	353	74	21.0	11	2	18.2
1977	204	34	16.7	9	5	55.6
1978*	173	10	17.3	13	2	15.4
1974 to 1978	1300	254	19.5	60	19	31.7

Source: D.G.T.D., information was personally collected.

* Data incomplete.

**Excluding electromechanical components and batteries.

(2) Cost effectiveness: It will ensure the cost effectiveness of the technology being imported in at least two ways. Firstly, given the limited domestic market, economies of scale should be possible to achieve if the market for a product is not limited to just the domestic market. Secondly, since the domestic market is protected by tariff and non-tariff barriers, only if the firm is forced to sell in the competitive world market will it be under pressure to keep low its costs of production. To the extent that the export obligation imposed on the domestic firm is shared by its foreign collaborator by assuming responsibility to buy back a portion of the domestic firm's output, the foreign collaborator too will develop a stake in cost-effective production by its partner firm.

(3) Improved export-earnings: It will add to the export-earnings of the country. To the extent that enhancement of export earnings is desired, by imposing export obligations on new manufacturing it is sought to ensure that a certain proportion of resultant output is earmarked for export. This, in fact, seems to have been a very major consideration that prevailed with the Indian Government for several years in recent past in allowing monopoly industrial houses and foreign firms to undertake or expand the manufacture of several non-essential items.[1/]

The very rapid pace at which technology has grown and changed in electronics in recent years has possibly been the single most important reason for allowing foreign collaborations liberally in electronics manufacturing in general and especially in the manufacture of electronic components. The resort to export obligation in electronics industry was possibly meant to help in keeping narrow the technology gap between the electronics industry in the industrially advanced countries and that in India.

Important policy instrument

Although the export obligation imposed in electronics industry ranges from 10% to 100% of annual output, in the maximum number of cases the obligation to export was within the narrower range of 40% to 60%. This can be seen from Table 3 giving a breakdown of the export obligation cases, that could be identified, by the proportion of output to be underwritten for export. The weighted average of export obligations works out to 50.4% for the electronics industry as a whole in regard to the foreign collaborations reported in recent past. Thus it would be a fair generalization to make that in the case of foreign collaborations sanctioned for electronics industry, the export obligation when imposed, tended to be quite substantial. Evidently, the Government laid great store by this policy instrument. At the same time, however, as we shall note later, in the past one year or so, there appears to have occurred a sharp shift in official thinking (as distinct from political thinking which may not crystallize for some time longer, in view of the recent changes) so that increasingly one comes across expressions of dissatisfaction with the use of export obligation, particulrly in the context of electronics development in the country.

In the circumstances, it is only appropriate that the working of this policy instrument in actual practice should thoroughly be appraised. For the purpose, we have chosen the case of a foreign collaboration in electronics industry entered into by one of the electronics firms set up in the public sector for the manufacture of an electronic component, as distinct from electronic equipment. It is in the components sector that most of technological changes in electronics has concentrated in recent years.

Table 3. Groupwise Distribution of Identified Export Obligations in Electronics by the Percentage of Annual Output to be Exported, 1974-78.

Percentage of output to be exported	Number of cases	Percentage of cases in each category
11 - 20	11	25.0
21 - 40	8	18.2
41 - 60	13	29.6
61 - 80	4	9.1
81 - 100	8	18.1
Total	44	100

Notes: (i) The data, pertaining only to the organised sector, are compiled from the statistics of licences issued in electronics as reported from time to time in Electronics Information & Planning, the monthly journal of the information Planning & Analysis Group (IPAG) of the Department of Electronics, Government of India.

(ii) The Statistics show item-wise licences issued, annual capacities and percentage export obligation wherever applicable. The dates of issue of licences, however, are not reported. Also, the reporting is irregular and infrequent.

The choice of a public sector firm as well has been somewhat deliberate. One hopes that not only is a public sector firm in a better position than private firms to resist pressures from its foreign collaborators but also it will perhaps resist better the temptation of colluding with the foreign collaborator in entering into export commitments which they both do not intend to honour. Whether or not this hope is actually realised, or realisable, is a separate matter.

II

Components are the building blocks and the electronic equipment their final outcome. As such components are considered, and perhaps quite rightly, as the base of the electronic industry.

Slack and fragmented growth

Production of electronic components has not however, been growing in the country quite as fast as the production of electronic equipment,-the final product. This can easily be seen from Table 4. Between 1974 and 1978, while the production of electronic equipment almost doubled, the production of electronic components expanded by only 62.5%. As a result, the country's dependence on imported components increased significantly from 21% during the period 1971-74 to 32% during the period 1975-78.[2] Though this increased dependence on imported component is explained largely by the substantial growth in professional equipment requiring quality grade components not produced domestically, it is true also that large imports were allowed in recent years, particularly 1977, of components like TV picture tubes required for consumer electronics.[3]

Not only has the indigenous industry been growing slowly but also most of the existing capacity is based on machinery and know-how relating to very old technology. Most of this investment was made in the late sixties, using technology and scale prevailing at that time. Although 60% of the current production of components is accounted for by four units (two in the public and two in the private sectors), given their product range, it is probably still true that there is undue fragmentation of capacity even within the organised sector. In the small sector, some 350 units (as against 55 in the organised sector) account for one-fourth of the annual component output.[4]

Table 4. Production, Exports and Imports of Electronic Components, 1971 - 78

Rs. million, at current prices

Year	Local Production	Export	Import (Estimated)	Import as percentage of Total Requirement (%)
1971	390	10	90	19
1972	420	10	140	25
1973	510	20	140	22
1974	720	30	150	18
1975	750	35	265	27
1976	800	40	320	30
1977	905	55	525	38
1978	1,170	65	495	31

Source: S.L. Sarnot, Electronics Information & Planning, Vol.6, No.9, June 1979.

Views on expanding production

Not quite surprisingly therefore, though the component industry in the country faces considerable unutilized capacity, it cannot realistically think in terms of accelerating its production on the basis of existing technology or at the prevailing scales. The Electronics Plan for 1978-83, drawn up by the Planning Commission's Working Group, not only asks that the fragmentation of capacity should hereafter be avoided but also projects that "by 1983-84, the demand for most of the components will be such that 3-4 large units with viable capacities can operate effectively". The Plan suggests, in this context, a liberal policy "in regard to the purchase of foreign know-how and contemporary technology" for the manufacture of components. At the same time, the Plan urges strongly against the imposition of export obligation on the ground that "our scales of production are such that it would be unrealistic to think of significant exports".5/

At this stage it is pertinent to refer to the observations of another group of experts, the Committee on Electronics Exports set up by the Ministry of Commerce, which too reported at about the same time, but which, advocated the need to promote, on an urgent basis, investments in, and production of, electronic components "on a scale much higher than what is warranted by considerations of domestic demand, so as to provide the required components base for a sustained growth of electronic exports" (emphasis added). This Committee also called for liberal import of technology without any export obligation even in cases where foreign collaboration is permitted and large capacities are approved.6/

Foreign collaboration and export obligation

Thus, lately there seems to have been a major reappraisal within Government of the old position in regard to (1) the scale of production for

units to be licensed for the manufacture of components, (2) the role of foreign collaboration in setting up larger units and (3) the desirability of imposing export obligation wherever foreign collaboration was permitted. However, as we noted at the outset, possibly a principal argument for the imposition of export obligation in the case of foreign collaborations in electronics was that it promised access to the latest technology. Any resultant obligations to buy back entered into by the foreign collaborators will, it was felt, impel them to ensure that the products they bought from their Indian counterparts embodied the latest in technology. Evidently, there has been a reassessment now of the force of this argument and it is not considered necessary any longer to impose export obligation on firms entering into foreign collaborations for the manufacture of electronic components, not even when capacities much larger than those warranted by domestic demand projections are sanctioned.

There is no evidence of any slackening in the pace of development of electronic technology nor in the rapid rate at which old technology tends to become obsolete. Nor could it be said that the latest developments in technology have reduced the scale at which economies in costs could be maximised. Whatever has led to the above mentioned reassessment must therefore have had something to do with either the effectiveness of export obligation as such in securing access to contemporary know-how or the ability of the authorities to effectively enforce the actual observance of export obligation.[7] Let us see what our case study has to tell us in this and other regards.

III

Though the foreign collaboration case we have studied is actual, we shall not disclose the identities of either the firms or the item for whose production the collaboration was entered into between them. This we do, not because any confidential material has been used by us but to save any possible embarassment to the parties concerned, while the collaboration arrangements are still in force.

For the purpose of our paper we shall refer to the Indian public sector firm by the name of INDIONICS and the multinational as MULTIONICS. Since the item to be manufactured is an electronic component, we shall call it COMPC.

Already a number of Indian firms were engaged in the manufacture of compo, some with and some without foreign collaboration, some in the organized and some in the small scale sector. Also, considerable unutilized capacity, being about 50%, existed with regard to this item. At the same time, however, imports were being allowed of quality grade compos for use in professional grade equipment.

The licence issued by the Government of India to Indicnics for the manufacture of compo stipulated that the firm should export at least 75% of its annual output. Under the collaboration arrangement entered into by Indionics with Multionics, the latter would lift 60% of the former's output every year.

It was estimated that when this unit of Indionics came on stream it would, at 80% capacity utilization, increase the national output of compos by about 10%. A much more significant aspect of this particular foreign

collaboration was that it was designed to result in the production, largely, of quality grade compos, the domestic demand for which was likely to grow as the production of professional grade equipment increased. Evidently, however, the fact that this particular installation of capacity was licenced on the condition that 75% of its annual output would have to be exported meant that in Government's assessment domestic demand for the type of compos, which Indionics was thus planning to produce, might still not increase fast enough. With an export obligation of 75%, it was natural that under the collaboration arrangement entered into by Indionics with Multionics provided for the latter to buy back a substantial part of the former's annual output.

Under the collaboration arrangement entered into by the aforesaid two firms, the following three separate, but mutually related agreements were signed.

1) Technical Data Agreement: Under this, Multionics not only was to supply to Indionics with all technological information in its possession on the manufacturing process but also to train the latter's employees in India and abroad. However, all the information thus received will have to be kept secret by Indionics. Payment for this information will be made by Indionics in the form of both downright payment of a stated amount as well as royalty at the rate of 5% of the net ex-factory sale value of its output (i.e. sale value minus excise duty and the cost of imported raw materials) for the first five years.

2) Equipment Agreement: It is a more or less turnkey arrangement, which obliges Multionics to supply and assist Indionics in installing the necessary plant and machinery. It carries a guarantee that the plant and machinery

thus supplied by Multionics will produce the stated annual quantities of the various types of compos. Payment for plant and machinery is required to be made by Indionics on downright basis. Thus Multionics extends no credit whatsoever to Indionics.

3) Purchase Agreement: This binds Multionics for five years to buy from Indionics stated quantities of various types of compos (these work out to 60% of the annual projected output under the Equipment Agreement) at a price 7% below the 3-month average of selling price at which Multionics or its affiliated companies have supplied the items to industry in Europe.

Given the above framework, the collaboration arrangement under review for the manufacture of compos sought to set up additional capacity at the cost of something like Rs.5 crores with 50% incurred in foreign exchange. Annual employment directly to be generated by the projected investment was estimated at 350 and net value added at Rs 50 lakhs. Even though the investment - employment and investment - net value added coefficients are not particularly attractive, the investment was perhaps still considered worthwhile, taking into account the nature of the item to be manufactured, the new technology it embodied and the export commitment which the accompanying collaboration arrangement carried.

The various arrangements built into the three agreements listed above for the supply, purchase and pricing of raw materials and final output are discussed in the following section.

IV

One noteworthy aspect of the collaboration arrangement under review is its package nature whereunder the various agreements are quite closely interlocked in certain respects. However, the interlocking seems to have been concerned not with securing for the domestic firm, Indionics, the major purposes for which it was entering foreign collaboration, namely transfer of technology and export sales but with reinforcing such of the provisions of the agreements as lend to the foreign collaborator, Multionics, a commanding position in important respects. This is particularly so with regard to (1) the source of raw materials and operating supplies to be used by Indionics for the manufacture of compos (2) the pricing of these supplies, and final output and (3) penalties for default in buy back commitment.

Control on Raw Material Supplies

Although it is only under the Purchase Agreement that Multionics undertakes to lift 60% of the annual output of compos from Indionics, and it is there that one can see a legitimate direct interest of Multionics in the use by Indionics of raw materials and operating supplies of the right specifications, there is a stipulation in all the three agreements listed above enjoining upon Indionics to use only such raw materials and operating supplies as meet the specifications laid down by Multionics.

Thus under the Purchase Agreement Multionics has been granted

> "the right from time to time to inspect on a continued basis the finished Products, the raw materials used therein, the methods of production and scrap resulting from any manufacturing process".

Under the Technical Data Agreement Indionics is obliged not only to use the raw materials and operating supplies of approved specifications but also to advise Multionics

> "of any changes to be made in the source of raw materials and operating supplies before making the changes" with "justification that the specifications and/or requirements will be met".

Also the performance guarantee given by Multionics under the Equipment Agreement, with respect to machinery and equipment supplied has been made contingent on Indionics using not just spare parts but also raw materials and operating supplies of the specifications of Multionics. Thus each agreement reinforces the other in binding Indionics to the use of raw materials from approved sources.

Special nature of raw materials

As things stood at the time the above collaboration agreements were entered into, the particular raw materials and operating supplies required by Indionics for the manufacture of compos would have to be altogether imported. What little of the raw materials was available domestically was perhaps very much below the quality required for the quality grade compos to be manufactured by Indionics. But that domestic production of quality grade raw material might become available in the course of next five years was not provided for.

It was known that there existed only a limited number (about half a dozen) of international suppliers of raw materials, including an affiliate of Multionics itself. All of these international suppliers were large companies. Given the freedom to do so, Indionics could certainly have tapped, for its raw materials, companies other than Multionics. Of course, it could be argued that given the monopolistic control over supplies of

raw materials, it was to the advantage of Indionics that the collaboration arrangement assured it of these supplies in adequate quantities. However, the accent of the provisions relating to raw material supplies in the collaboration arrangement we are reviewing, is such that makes one strongly suspect that Multionics was at great pains to ensure a market for one of its own products through this arrangement but without, at the same time, making any commitment in regard to its price.

Asymmetrical Pricing Arrangement

Interestingly, in none of the three constituent agreements of this collaboration arrangement was it explicitly stated that Indionics would buy its raw materials and operating supplies from the Multionics or an affiliate thereof. Could not the above omission have been deliberate with a view to avoiding any price arrangement? Thereby Multionics retained full freedom to charge whatever price it could at a particular time for the raw materials supplied to Indionics.

It is interesting also/that while no pricing arrangement is written into the agreements for the raw material supplies, with respect to the output of final goods, compos, which Multionics undertook to purchase every year, the pricing arrangement was explicitly written into the Purchase Agreement. The price Multionics pays for compos had to be 7% less than the 3-monthly average of selling price charged by Multionics and its affiliates to industry in Europe. To what extent Multionics will be in a position to manipulate the prices at which it, or its affiliates sell compos to European industry (presumably manufacturers of electronic equipments) is an open question in itself.[8/] Knowing well the scale at which compos were being

manufactured abroad by other competing firms in the major exporting countries, the price Multionics could possibly expect to be able to charge the industry in Europe would have to be quite low; even without any manipulation. In these circumstances, could Indionics, realistically, hope to supply compos at that competitive international price, when its own scale of operation would be so much smaller compared to the scales of operation prevailing abroad?

No cost covering guarantee

Not only is there a clear asymmetry in pricing arrangements for raw materials on the one hand and final output on the other but also it is an asymmetry that offers no protection whatsoever to the domestic firm against any divergent movement on the prices of raw materials and the final output. There is no provision, for instance, that the price Multionics pays for the compos bought from Indionics will adequately cover the latter's costs including its raw material cost.

Why did Indionics agree to such an asymmetrical pricing arrangement? The asymmetry in these arrangements is clearly to the advantage of the foreign collaborator and to the disadvantage of the domestic firm. Could it not be that this asymmetrical pricing arrangement was possible for Multionics to shove down the throat of Indionics because the latter was under pressure? Given the obligation to export as much as three-fourths of its annual output, Indionics had to secure a contractual commitment from Multionics to buy back a substantial part of its output of compos, if it was to avail itself of the licence to produce this item. This possibly gave Multionics a strong whiphand in bargaining with Indionics.

Or was Indionics entering into an export obligation in full awareness of the likely unfavourable international market - unfavourable in terms of

its own unit cost -- with the intention of ultimately pleading with the authorities for a waiver of export obligation on precisely the ground of unfavourable international prices? Would even a public sector concern resort to such disingenuous practices? It is well known that the domestic firms often try to renege on their export obligations and seek a waiver from Government "on the plea of unfavourable trend in international prices", a ground which authorities seem often to concile.[9/] Whether or not public sector firms are as prone to such practice as private sector firms is a separate matter and quite worthwhile investigating.

Asymmetrical Penalties

Asymmetry obtains not only with respect to pricing. It exists also in the sharing of the onus of default in fulfilling export obligation. In the case studied by us, Multionics is liable to pay penalty at the rate of 4% of the value of compos as actually stated in the Purchase Agreement. Penalty at the same rate is payable by Indionics to the extent it fails to meet the order paced by Multionics. In both cases, the determination as well as payment of penalty arises only at the end of five years. On the face of it, there is symmetry of obligations between the contracting parties. Actually, however, it is not so.

While the whole onus for sale abroad of the quantities which the foreign collaborator fails to lift falls thereafter on the domestic firm, the former still is entitled to its share of 5% of the sale value (as defined) of these goods by way of royalty. So while the foreign collaborator continues to be a net gainer, the domestic firm may, having to incur considerable additional expense to dispose of its output in other markets, end up quite in the red. Under the arrangement, Indionics cannot directly sell in such foreign markets where Multionics or an affiliate has factories.

Earlier, we spoke of the special interlocking nature of the various collaboration agreements we have studied and how it seemed to work in favour of the foreign collaborator. Here is an aspect where interlocking between the Technical Data and Purchase Agreements could have been to the advantage of the domestic firm but it was not done.

Why Royalty on Defaults?

The question whether, in all fairness, payment of royalty can rightfully be demanded on that portion of the output the foreign collaborator is committed to, but fails to, lift is worthwhile raising. The argument that royalty is always linked to the sale value of output regardless of where it is sold loses its validity once it is noted that the wholeccollaboration arrangement is predicated on the commitment of the foreign collaborator to lift a major part of the project output. When the foreign firm fails to lift the full portion it is committed to, the default in these circumstances is a major one and the entitlement to royalty to the extent of default could, it is felt, legitimately be withheld.

Why should a foreign collaborator want to renege on its buy back commitments even when the arrangement for the pricing of final output it buys is clearly on its side? Two possible answers could be given. Firstly, it may still work out that what the foreign firm loses by way of penalty payment (which falls due only at the expiry of the five years period) is more than offset by the gain to the firm through enhanced royalty. This could well happen if the domestic market is not only in a position to absorb much larger quantities than originally envisaged (i.e. in excess of 25% of the domestic firm's output in this particular case

of foreign collaboration) and at prices much higher than those possible to obtain internationally. Afterall, the domestic market enjoys the protection of various tariff and non-tariff barriers.

Secondly, could it be that the technology embodied has, or is about to, become internationally obsolete? This takes us back to the question of access to contemporary technology through foreign collaboration. Are the arrangements for the transmission of technology really such as effectively ensure that the domestic firm has full access to all new developments in the field once it enters a foreign collaboration of the type we have examined? More specifically, does the imposition of export obligation help tangibly in this regard? From the point of view of the focus of this paper, the questions posed above are extremely important. In the light of the asymmetrical effective incidence of the penalty provision of the collaboration arrangements, backtracking by the foreign collaborators on their buy back commitments does not seem to be very difficult. The less effectively enforceable are their buy back commitments, the weaker, it appears, will be the interest of the foreign collaborators in keeping their partner firms in the developing countries uptodate in technology.

Know-how follow up unassured

While the export obligation of as high a magnitude as 75% had possibly forced Indionics to agree to a pricing arrangement that could clearly work to its disadvantage, there is little evidence that Indionics could, in its turn, secure any reasonably dependable guarantee from Multionics with regard to either export itself or access to new developments in technology after the initial machinery and equipment had been obtained. None of the three agreements contains anything explicit to that effect. If, access to developments in technology was sought principally through the export

obligation route, it should be clear from our study that the chances of achieving the objective could not be particularly bright if the buy back commitments of the foreign collaborator are not always effectively enforceable.

What seems to come quite clearly out of our study of the foreign collaboration arrangement under review is that when a domestic firm, as distinct from a domestic subsidiary, branch or any other entity effectively subordinate to a multinational corporation, buys foreign technology, the export obligation itself places it in a considerably weak bargaining position in relation to the foreign collaborator. Multionics supplied machinery, equipment and know-how on the strict basis of outright payments by Indionics. It is the technology of that time, as embodied in the machinery and equipment purchased, that Indionics really got in return.

The operative significance of the agreement on technical data was really to bind Indionics to additional payments, principally royalty, in lieu of the drawings etc. of the machinery and equipment paid for separately in cash. The contractual obligation undertaken by Multionics to buy back the final output was no doubt substantial but the terms seem to be highly unfavourable and the penalty provisions against default weak. Also, no explicit obligation was taken on by Multionics, not even as part of its buy-back commitment , that while Indionics will buy raw materials of approved specifications and from approved sources, Multionics will keep Indionics uptodate in technology.

In fact, the substantial export obligation on Indionics seems to have only forced the firm to enter into an onerous arrangement with Multionics, its foreign collaborator, with a view to securing a corresponding buy-back commitment from the latter. The greater the dependence of the domestic

firm on a foreign collaborator to lift its output, the stronger, it appears, becomes the position of the latter to extract beneficial terms in the collaboration arrangement as a whole. At the same time, it is not always certain that the buy back commitment secured from the foreign collaborator is effectively enforceable. The gains in terms of technology transfer claimed to follow the buy back commitment of the foreign collaborator tend naturally to be illusory to the extent that the buy back commitments of the foreign collaborator are not genuinely meant.

Concluding Observations

Our study of the foreign collaboration case leads us to believe that an export obligation on the domestic firm could place it in a weak bargaining position vis-a-vis its foreign collaborators and that this weakness of the domestic firm might particularly impinge on its ability to secure access to contemporary technology, especially the know-how that supplements and/or follows the know-how embodied in plant and machinery initially purchased under the collaboration arrangement. At the same time, the buy back commitment secured from the foreign collaborators might not be effectively enforceable because the penalty provision is not stringent enough in actual practice to deter default. Of course, one cannot altogether rule out the possibility of collusion between the domestic firm and its foreign collaborator on the extent of commitment -- really the absence of it -- either party attaches to the export obligation.

Still, the principal argument which possibly prevailed in favour of imposing export obligation in case of foreign collaborations was that it would ensure continuing access to contemporary technology. And since

such contemporary technology is often associated with large scale operation, export obligation, at the same time, ensures that output in excess of domestic demand is easily exported.

Evidently, the above argument has not held in practice. Otherwise, why should the Ministry of Commerce Committee on Electronics Exports have suggested that export obligation should not be imposed in cases where foreign collaboration is permitted and large new capacities are approved, as recommended, for the manufacture of electronic components?

Little information is publicly available on the extent of defaults in export obligations and the causes behind these defaults. Nor is it known in how many cases waiver, partial or complete, was granted, for how long and on what grounds. Only when one has access to information of this nature, can one empirically demonstrate whether or not export obligations imposed on foreign collaborations have been a success. If not, why? In the absence of such information, one is left only to draw inferences from policy changes.

That the policy of imposing export obligation on foreign collaboration has not yielded the desired results is an inference one can reasonably draw from the recommendation of both the Planning Commission's Working Group and Ministry of Commerce Committee on Electronic Exports to abstain altogether from imposing export obligations on foreign collaboration.

On the basis of our examination of the specific case of foreign collaboration, it appears to us, however that the failure of the policy of export obligation could possibly have been due to the inadequate attention to the observance of the corresponding buy back commitments

by the foreign collaborator. This commitment might have been much more effectively enforceable if the stake of the foreign collaborator had been greater in the fulfilment of the obligation. To give up export obligation altogether might be tantamount to throwing the baby with the bath water. Without adequate export obligation how will it be ensured that the large capacities sanctioned in the name of either cost-effective production and/or access to contemporary technology do not remain largely unutilized because of inadequate domestic demand?

Notes and References

1. The decision to liberalize policy in this regard was taken long back. The then Minister of Industrial Development and Company Affairs announced in January 1969: "Henceforth, even in low priority and non-essential industries, foreign collaboration will be allowed, if the collaborator agreed to underwrite a major portion of the production for exports....." (emphasis added), See Directory of Foreign Collaborations in India, Vol 1, Part H, sec.1, p.4; de Indiana Overseas Publications, Delhi, 1974.

2. See Sarnot, S.L., Status and Perspective of the Electronics Components Industry in India, Electronics Information & Planning, June 1979, Vol.6, No.9. Our percentages are based on Sarnot's calculations which adjust the value of imports to include import duty @ 120%.

3. See Report of the Sub-group on Components and Materials, Electronics Information & Planning, October 1978, Vol.6, No.1

4. Ibid.

5. See Report of the Planning Commission's Working Group on Electronics Industry, Electronics Information & Planning, October 1978, Vol.6, No.1. Since the ground on which the Working Group considered it unrealistic to think of significant exports is "our scales of production", evidently the scale envisaged for 1978-83 was not considered large enough to yield enough economies of scale to make Indian exports competitive.

6. See Report of the Committee on Electronics Exports, Electronics Information & Planning, November 1978, Vol.6, No.2. Interestingly, this Committee was headed by the same person, M.G.K. Menon, as the Planning Commission's Working Group on Electronics Industry.

7. Not that export obligation provisions of a licence do not carry penalties for default and they seem, on the surface at least, to be quite stringent. The formal position with regard to penalty was as follows:

"A licence issued for import of capital goods with an export obligation ..... shall execute a bond/legally acceptable undertaking ..... in regard to the fulfilment of prescribed export performance. The bond/legal undertaking should be supported by a bank guarantee for an amount equal in value to the annual obligation of exports". Or "In lieu ..... in the event of his inability or failure to export directly, ... he shall hand over to the State Trading Corporation or such other agency ..... twice the difference between stipulated annual commitment/obligation and actual exports, and in addition pay ..... a specified amount by way of liquidated damages".

See Directory of Foreign Collaborations in India, op.cit.,

Part B, Sec.1, p.6.

However, it appears that there is a not so difficult way of escaping these penalties in the event of default . "..... there is nothing that the Department of Electronics or the Government of India can do anything against these companies, if they fail to meet their commitments. At the most these companies can be denied further licenses in these areas". See the editorial feature on 'Export Obligations and Foreign Equity Companies' in Electronics Today, May 1975, p.15

8. This is not quite the same thing as transfer pricing, a technique which multinationals are known to use in good measure to secure maximum profits net of tax. What we are talking about here are prices charged by a multinational or its affiliates to the industrial consumers of a component the latter use in the manufacture of industrial or consumer electronic equipment.

9. See the editorial feature on 'Export Obligations' in Electronics Today of January 1976. The editorial related how Philips India, since rechristened as PEICO Ltd., had fallen behind on its export obligations for more than one of its products and sought exoneration on the plea of unfavourable international markets. In fact, the editorial strongly suspected that domestic foreign firms (the term includes a foreign firm registered in India) had tended to accept voluntarily export obligations with a view to gaining "foot hold in the areas which are otherwise barred" to them but with no serious intentions to fulfil the obligations.

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