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FOREIGN TECHNICAL COLLABORATION
IN INDIAN BUSINESSHOUSES 1957-76 :
A QUANTITATIVE ANALYSIS

SUBHENDU DASGUPTA



CENTRE FOR STUDIES IN SOCIAL SCIENCES, CALCUTTA

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MAY 1980

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This paper is a chapter of my Ph.D. thesis on Foreign Collaboration in Indian Business Houses, on which I am working at the Centre For Studies In Social Sciences, Calcutta, under the supervision of Amiya Kumar Bagchi.

Several question may be raised on different issues dealt with in this paper, most of which will be analysed in the other chapters of the thesis. In this respect, this paper is not a comprehensive one.

I am indebted to Amiya Kumar Bagchi for his guidance. I am grateful to N. Krishnaji, Nirmal Kumar Chandra and Sudip Chaudhuri for their valuable comments on an earlier draft of this paper. For the collection and use of data I acknowledge my debt to S.K. Goyal, the Indian Investment Centre, New Delhi and the Ministry of Industrial Development, Government of India. My friend Abhijit Lahiri has helped me in preparing the productwise categorisation of the collaboration agreements.

Subhendu Dasgupta
May, 1980.

FOREIGN TECHNICAL COLLABORATIONS

IN

INDIAN BUSINESS HOUSES, 1957-1976:

A QUANTITATIVE ANALYSIS

I

Discussions on foreign collaboration has occupied an important place in the studies on Indian economics. In the past analysis of foreign technical collaboration in India by institutions or academic economists¹ an important aspect of the issue has been excluded, that is, the role played by the Indian business houses in this respect. The aim of the present paper is to put forward an alternative approach by considering the place of each Indian business house in the sphere of foreign technical collaboration. The purpose here is to analyse the linkages of the Indian bourgeoisie with foreign economic power. The 'Linkage' is essentially a qualitative concept and is difficult to measure in precise terms. It can, however, be measured, with limitations, by some economic indicators. One such economic indicator, used in the present paper, is the number of foreign technical collaborations entered into by a business house.

Several important points, however, have to be clarified in this context. First, only that part of the Indian bourgeoisie, which comprises the Indian business houses, is considered in the present study.² The point of view adopted here, following R. K. Hazari, is that "The business group, not the individual joint stock company, is the unit of economic power."³ Secondly, in considering Indian bourgeoisie as an exclusive entity, only houses, wholly owned, controlled and managed by the Indian business families⁴ are included in the present study. Thirdly, we consider in this study, only collaboration in manufacturing industries. Fourthly, we deal in the present paper, mainly with the quantitative aspect of import of foreign technology, leaving detailed exposition of the qualitative aspect for a separate study.⁵

The sources of information for the present paper are several official reports -- published and unpublished. The Industrial Licensing Policy Inquiry Committee, appointed by the Government of India had undertaken several background studies in order to prepare their final report. Most parts of these background studies are not included in the published main report.⁶ For the present paper one such background study on foreign collaboration has been used extensively.⁷ For the list of collaborations, we have used the list prepared by the Indian Investment Centre for the years 1957 to 1973⁸ and for 1974 to 1976, the list prepared by the Ministry of Industrial Development, Government of India.⁹ The difference between the two is that the list prepared by the Ministry of Industrial Development includes some countries as sources of technology, which have not been considered by the Indian Investment Centre. The shares of these countries, however, are negligible.¹⁰ We have taken into account for the present study, those countries which are common in both the lists.

For the cataloguing of companies under the Indian business houses, our study depends on two lists, one prepared by the Industrial Licensing Policy Inquiry Committee (ILPIC)¹¹ and another prepared by the Monopolies Research Unit, Department of Company Affairs, Government of India (MRU).¹² There are differences between these two lists. The basis of selection of business houses by ILPIC has been the list evolved by the Monopolies Inquiry Commission in which 'the assets of all concerns belonging to a group together exceeded rupees 5 crores in 1964'.¹⁴ The criteria for the selection of business houses undertaken by ILPIC have been their own. The basis adopted by the MRU however, differs from this approach. It was based on the Monopolies and Restrictive Trade Practices Act of 1969. Here the groups under which the interconnected undertakings have a total value of assets of not less than twenty crores of rupees have been considered.¹⁵ The ILPIC has taken into account the companies that existed in 1964. On the other hand, the list of the MRU includes the companies registered upto 1974. In effect, some of

the houses, considered by ILPIC have not been included in the MRU list, and on the other hand, some of the houses in the MRU list are absent in the ILPIC list. Moreover, the numbers of companies listed under the same house in the ILPIC and the MRTP lists are often different.

The present paper is divided into three sections. The first is based on the data collected from the background study of the ILPIC. The second concerns the list of foreign collaborations prepared by the Indian Investment Centre and the Ministry of Industrial Development and the list of companies under the respective Indian business houses as mentioned in the report of ILPIC. The third relates to the information presented in the Indian Investment Centre and Ministry of Industrial Development's lists, and the list of Companies registered under the Indian business houses as prepared by the MRU.

II

The Industrial Licensing Policy Inquiry Committee (ILPIC) was appointed in July 1967 as "an Expert Committee to inquire into the working of the industrial licensing system during the past ten years."¹⁶ The Report of the Committee was submitted in July 1969. There were three terms of references set out for the work of the Committee. All the three terms of reference were concerned, in essence, with 'Industrial House' and the 'Licensing System'. Although there was no special reference to foreign collaboration within the scope of the study, it was observed by the Committee that, "the approval of terms of foreign collaboration ... had become almost an inherent part of the industrial licensing system. Therefore, data on (this aspect-SD) had also to be collected. Our enquiry revealed that consolidated data on (this aspect-SD) were not readily available anywhere in Government. Regarding foreign collaboration, we were able to obtain from the Ministry of Finance (Department of Economic Affairs) a list for the period between 1956 and 1965. We were

informed that the list had been roughly prepared for the use of the Public Accounts Committee sometime in 1965 and was not an exhaustive one. We, therefore, to the extent possible, supplemented these by culling out data from the records of the Foreign Agreements Committee."¹⁷

Incidentally, whatever data have been collected on the number of foreign collaborations in Indian business houses, they have not been presented comprehensively, either in the Main Report or in the Appendices. For the preparation of the Main Report the Committee had undertaken detailed background studies. One of them is a preliminary note on foreign collaboration, in which a comprehensive analysis of foreign collaborations has been made. We will now take recourse to this note to present the house-wise data on foreign collaboration which will cover a substantial part (1956 to 1965) of the period of the present analysis. The basic source of information on which the note is based, is a consolidated list obtained from the Department of Economic Affairs Ministry of Finance. There are several drawbacks to the information contained in this list. It comprises the collaborations which were approved any time between 1956 and 1965, and does not exclude the cases which failed to materialise after the issue of the Government's approval letter. The data, therefore, relate to collaboration agreements approved, rather than to those in force. But this list was considered by the Committee as being more comprehensive in coverage than any other available source of information. So far as the coverage of collaboration agreements is concerned, the Committee considered the number of cases in such a way that in cases where two collaborators for the same Company were involved, either for one or more than one product, and where the terms of both collaborators or for both products were given separately, these have been taken as separate cases in the analysis. The number of collaborations/approvals issued by the Government in each year between 1956 and 1965 was 2472. This figure includes approvals, giving

modification to and renewals of the agreements approved earlier. The numbers of cases of such renewals and modifications are 116 and 42 respectively, during the period under review. Collaboration agreements in which payments (such as royalty and technical fees) have been made separately, were treated by the committee as separate cases of collaborations. The total number of collaborations during the period between 1956 and 1965 has been found to be 2524, including renewals and modifications. This figure was treated in the preliminary note as the total number of collaboration. Moreover, in the background study technical collaboration was not considered separately from financial collaboration. Hence here the catalogue of collaborations comprises both technical and financial collaborations.

Our aim now will be to analyse the data presented in the background study, which will focus on the different aspects of foreign collaboration in the Indian business houses. We will consider from the study only those houses which, according to our definition, are categorised as Indian business houses.

First, note will be taken of the share of the Indian business houses (as defined by the ILPIC) in the total collaborations approved during 1956-65, as shown in Table 1. The share ranges from 21.83 per cent to 35.04 per cent, and the average share is 26.86 per cent.

We now turn our attention to the distribution of collaborations among different houses. The distribution of collaboration-approvals among the different Indian business houses in each year from 1956 to 1965, presented in Table 2 shows that all the Indian business houses have entered into collaborations with foreign Companies. An analysis of the frequency distribution shows that distribution of collaboration agreements was highly uneven among the houses. From Table 3, it is found that while at the bottom, a large number of houses have few collaborations, at the top there are a few houses with a large number of collaborations each. In the range of 1-19 collaborations,

there are 41 houses among the total 49 Indian business houses; in the range of 20-29 collaborations there are only 3 houses — Bajaj, Sarabhai and Shri in the range of 30-39 there are only 2 houses,— Soorajmull Nagarmull and Walchand, and in the range of 40-49, there is only one house—Kirloskar. The most important point is that, while there is no house in the range of 50-99 there are two houses with collaborations above 100 i.e. Birla and Tata. The feature of unevenness in the share of collaborations among the houses is presented in another way in Table 4, where the top 10 houses are ranked according to their share in the total number of collaborations in the Indian business houses. It seems that the collaboration-approvals of the Indian business houses during the period 1956 to 1965 have concentrated amongst a few houses. A question may be raised at this juncture regarding the correspondence between the size of the houses and the number of collaborations. The analysis of this aspect is, however, not within the scope of the present paper, and will be dealt with in a separate study.

Our analysis so far has covered all collaboration approvals, including renewals. Renewal constitutes a category by itself and, therefore, may be presented separately. The approvals for renewals aggregate 116 out of the total number of 2524 collaboration-approvals, among which the share of Indian business houses is 24 out of a total number of 678 collaboration-approvals. The share of each Indian business house in the renewals of collaborations during 1956 to 1965 is shown in Table 5. It has been mentioned in the background study that, 'the assimilation of the technology imported, is conditioned by the extent to which the basic knowhow is imparted by the collaborators, the degree of the absorptive capacity of the Indian company and their keenness to bring local adaptation'. The regular renewal of collaboration agreements suggests that foreign collaborations has not assured local adaptation and assimilation of technology. In the category of companies under the Indian business houses, however, the renewals constitute only 3.54 per cent of the collaboration-approvals during 1956 to 1965.

Another important feature of foreign collaboration, revealed in the background study, is the prevalence of plural agreements. Plural agreement means that a particular company under a house producing different products of a specific industrial categories enters into foreign collaboration more than one with one or more than one collaborator. It can be seen from Table 6 that companies under Indian business houses have entered into 328 plural agreements with foreign companies, which constitute 48.38 per cent of the total 678 collaborations undertaken by the Indian business houses. The plural agreement suggests, according to the background study, that 'the growth of collaboration has not resulted in the growth of new entrants commensurately. The growth has been the result more of diversification and expansion than new entry'.

The next important feature that has been dealt with by the background study is multiple collaboration, that is, collaboration by different firms for similar technologies. The phenomenon of multiple collaboration may arise from the fact that a collaboration is being undertaken by a new Indian company in an existing product line, without taking into consideration similar knowhow already available in the country in the units set up earlier with foreign collaborations. Of course, if possession of a collaboration agreement is necessary for winning in a competitive game, or if a firm has access to what it believes to be genuinely superior knowhow, we can expect competitive (or rather oligopolistic) forces to lead to multiplicity of collaboration agreements. The background studies has noted that, 'the crux of collaboration multiplicity lies in the repetitive import of the same/similar knowhow'. The house-wise distribution of multiple collaboration, presented in Table 7, amounts to 125, which is 18.44 per cent of the total number of (678) collaborations undertaken by the Indian business houses.

III

The lists of collaborations prepared by the Indian Investment Centre (IIC) and the Ministry of Industrial Development (MID) present the information in the following categories - (1) names and addresses of Indian firms (2) names and addresses of the respective foreign collaborators (3) of manufacture for which collaboration has been approved and (4) nature of collaboration (whether technical or financial and technical). (All this information is available separately for every year).

We, on our part, have classified the Indian firms, referred to in these lists, under the respective Indian business houses, as per the list houses and the companies under their control prepared by the ILPIC. In the context a limitation of the data has to be mentioned. The ILPIC document includes the firms that existed in 1964. On the other hand, documents of IIC and the MID include the firms with collaborations upto 1976. Hence, the firms under the houses which have appeared after 1964 and entered into collaboration will be left out of the purview of our study. The analysis include the collaborations only of those firms under the Indian business houses which existed in the Indian industrial scene upto 1964. Another point to be clarified is that, whenever there is more than one collaborator and more than one product in a collaboration agreement of an Indian firm, we have covered the cases separately. Following this procedure, we have prepared Table 8, showing the share of Indian business houses in the total collaborations in each year from 1957 to 1976. The annual average number of collaborations stands at 234.7, whereas that of collaborations entered into by Indian business houses is 37.15 per year. Two important features come out of the presented in the Table 8. First, the share of the Indian business houses in the total number of collaborations never exceeded 25 per cent. It varied between 5 per cent in 1968 and 24.58 per cent in 1965. Second, the period of analysis, viz., 1957 - 1976, can be divided into two distinct phases.

Between 1957 and 1967, the share of Indian business houses in the total collaborations on an average per year was 19.92 per cent, whereas between 1968 and 1976 the average was 10.73 per cent. This shows that Indian business houses have undertaken less foreign collaborations in the late sixties and early seventies, than in the earlier period.

We now focus our attention on the distribution of collaboration agreements among different Indian business houses. The distribution of collaboration approvals among the different houses in each year from 1956 to 1965 is presented in Table 9. We have considered 52 houses. The five houses, namely, R.K. Dalmia, Jaipuria, R. K. Kanoria, Muthiah and Thiagaraja present here have not been enlisted in the document of the Background Study of the ILPIC. On the other hand, Aminchand Pyarelal and Kothari enlisted in the Background study have not been included in the Main Report of the ILPIC. It can be seen from Table 9 that in the cases of most of the houses, the number of collaboration agreements was greater in the decade of late fifties and early sixties (1957 to 1966) than in the decade of late sixties and early seventies (1967 to 1976). Only J.K., Modi and G. V. Naidu have undertaken more collaborations in the later phase.

The analysis of house-wise distribution of the collaborations reveals some important features. Firstly, in most of the houses the share of the companies with foreign collaboration in the total number of companies under the respective house is insignificant (see Table 10). Only in the cases of seven houses, namely, Bajaj, Kirloskar, Mahindra, Murugappa Chettiar, Nowrosjee Wadia, Seshasayee and Tata, the shares were more than 30 per cent. On the other hand, in the cases of eleven houses, R. K. Agarwal, Bangur, Goenka, G. D. Jatia, B. Kanoria, R.K. Kanoria, D.C. Kothari, Mangaldas Jeysinghbai, Mangaldas Parekh, Soorajnull Nagarmull, J.P. Srivastava, the shares were less than 10 per cent. However, the absolute number of collaborations entered into by a business house does not convey the real picture of its degree of

dependence on foreign collaboration. It may be that the firms with foreign collaboration, in spite of being small in number, might constitute the major firms in the respective houses. In order to examine this question, an attempt was made to identify the 'major firm' in terms of the 'value of assets'. Table 11 shows the value of assets of the firms under the respective houses on 1964, collected from the ILPIC Report. Only for 39 houses were the complete data available. Among them, for 21 houses, the share of assets of firms with foreign collaboration to the total assets of the house is less than 50 per cent. On the other hand, for 8 houses, Kanani, Khatau, Kirloskar, Murugappa Chetty, V. R. Naidu, Nowrosjee Wadia, Sarabhai, Shri Ram, the shares were more than 50 per cent. (The rest fell in the range 50-80 per cent).

Second, the distribution of collaboration agreements among the houses has been uneven. From Table 12, it can be seen that out of 52 houses, 5 houses have had no collaboration. Among the rest, the larger number of houses have only a few collaboration agreements, but a few houses have a large number of collaborations. This feature of unevenness in the share of collaboration agreements among the houses can be presented in another way. The top 10 houses are ranked according to their share in the total number of collaborations in Indian houses, in Table 13. The top 10 houses secured 462 collaboration agreements, which is 62.19 per cent of the total collaborations in the Indian business houses.

We have also tried to compute the country-wise and product-wise distribution of collaborations. From the analysis of these data, two sets of results are obtained.

From an analysis of the nationality of the foreign collaborators, shown in Table 14, it is found that there are 19 countries, to which the foreign collaborators with the Indian business houses belong. In the calculation of country-wise collaboration agreements, the method adopted was that, in the

of an Indian firm which had entered into a collaboration agreement for one or more than one product with more than one foreign firms, the number of collaborating countries has been taken to be more than one. The leading countries in this regard are U.K. (constituting 25.44 per cent of the total collaboration with the Indian business houses), U.S.A. (23.42 per cent), Federal Republic of Germany (16.02 per cent), Japan (9.56 per cent), Switzerland (7.81 per cent), France (5.65 per cent) and Italy (3.36 per cent). These seven countries together share 91.26 per cent of the total collaborations.

A noteworthy feature in this context is that most of the houses do not have collaborators belonging to one particular country. In that sense, collaboration agreements have been distributed among the various countries. For example, Birla has had collaborations with foreign firms from 14 countries, Tata, Walchand and Thapar have had collaboration with 11 countries, Bajaj and Kirloskar with 9 countries each, J.K. and Amin with 8 countries, Shri Ram and Seshasayee with 7 countries and Khatau with 6 countries. However, there are a few examples of concentration of collaboration agreements with particular countries. For example, the Birlas have 38 collaboration agreements with firms from the U.S.A., the Thapars have 20 collaborations with British firms. Soorajnull Nagarnull has undertaken 13 agreements with firms from the U.K., Kirloskar has entered into 13 collaboration agreements with American firms, Mahindra has 12 with American firms, Khatau has 12 with firms from the Federal Republic of Germany, G.V. Naidu has 11 collaborations with Swiss firms and Nowrosjee Wadia has 11 collaborations with firms from the U.K. (This classification may not be accurate in all respects, because we do not know whether or not the foreign firms collaborating with Indian firms are themselves affiliated to a conglomerate domiciled in another country).

The distribution of the collaboration agreements undertaken by the Indian business houses under different products as classified by the Directorate General of Technical Development, Government of India,¹⁸ in presented in Table 15. It can be seen that there are altogether 27 products,

in which collaboration agreements have been made, and the percentage share of products such as electrical equipments, chemicals (other than Fertilisers), industrial machinery, metallurgical industries, machine tools, and transport have been 16.71, 15.43, 16.00, 10.28, 7.00 and 6.43 respectively, in the number of collaboration agreements entered into by the Indian business houses. Of the total 47 houses that have entered into collaboration agreements, 11 houses have collaborations in 5 or more categories of industries. Among the Birlas have collaboration in 21 industrial groups, the Tatas in 19 industrial groups, Mahindra, Shri Ram and Thapar have collaborations in 1 industrial groups each. On the other hand, the houses that have concentrated their collaboration efforts mainly in one group of industry are, Kilachar Tulsidas (6 out of its total 9 collaboration agreements are in Chemicals) (7 out of its total 8 collaborations in Electrical Equipment), G. V. Naid (5 out of its 10 collaborations in Industrial Machinery), Nowrosjee Wadia (11 out of its total collaborations in Chemicals), Ruia (5 out of its total collaborations in Chemicals) and Sarabhai (10 out of its total 16 collaborations in Chemicals). The houses in general however, have, distributed their collaborations agreements among a wide range of industries. This partly the diversification strategy of Indian business houses.

IV

The Monopolies Research Unit (MRU) of the Department of Company Affairs has prepared a fact sheet of companies under the respective business houses has been mentioned in the document that "every undertaking to which Part 4 Chapter III of the Monopolies and Respective Trade Practices Act, 1969 applies is required to register itself with the Central Government under Section 20 of the Act. According to Section 20, Clause (a) of the Act, the said Part 4 is applicable to :

- an undertaking if the total value of
- i) its own assets, or
 - ii) its own assets together with the assets of its interconnected undertakings

is not less than twenty crores of rupees"¹⁹

All the companies registered under this clause as on 31st December 1976 are listed in the fact sheet. From the list we have considered 47 houses, according to our criteria. Out of them 34 have also been enlisted previously by the Industrial Licensing Policy Inquiry Committee and 13 have appeared as new entries, in the MRU list. On the other hand, 17 houses that we have considered in the analysis of the ILPIC documents are not present here. Moreover, for the houses common to both the lists, the number of companies under the respective houses are always larger in the ILPIC list than in the MRU list, except in the cases of Bajaj, Khatau and Murugappa Chettiar, whereas in the cases of Kothari and S.P. Jain, the number of firms is the same in both the lists. "The introduction of the concept of inter-connection between undertakings as laid down in Clause 2(a) of the MRTP Act has led to the addition (and alteration) of a few undertakings to the groups already identified by ILPIC, and has brought about the new groups which were not studied by the ILPIC earlier within the ambit of Clause (a) of Section 20."²⁰ All the qualifications mentioned in the preceding section with regard to the lists of collaborations prepared by the Indian Investment Centre and the Ministry of Industrial Development, are also applicable to the data in the present section.

Although the data, are not strictly comparable, the steps of analysis and the essence of the results are more or less the same as those of the previous sections. The main purpose of the present section is to test the results that have been presented in the earlier section, with a separate set of list of firms under Indian business houses.

From 1957 to 1976, the total number of collaborations entered into by the Indian business houses, as enlisted in the MRU documents, was 468, which gives an annual average of 23.4. The share of Indian business houses in the total number of collaborations was always below 19 per cent, varying between

4.17 per cent (in 1968) and 18.37 per cent (in 1958) (see Table 16.) Two distinct phases can be located as before, as from 1957 to 1967 average share of Indian business houses in the total collaboration agreements was 12.33 per cent, and that between 1968 to 1976 was 7.96 per cent. The trend has been similar to that thrown up by the ILPIC data, discussed in the previous section. The distribution of collaboration agreements among the different houses in each year from 1957 to 1976, as presented in Table 17, also reveals the same trend as followed by the Indian business houses as a whole.

From the analysis of the house-wise distribution of collaborations, as shown in Table 18, it is found that in the majority of the houses, the shares of the companies with foreign collaboration in the total number of companies under the respective houses are negligible. Only in the cases of 14 houses, the share was more than 30 per cent (The number is, however, larger in comparison to the houses enlisted by the ILPIC). In Table 19 are depicted the shares of assets of firms with foreign collaborations to the total assets of the controlling houses as on 1974. It is found that, among the 38 houses for which complete data are available, in the cases of 28 houses the value of assets of firms with foreign collaborations was more than 50 per cent of the total assets of the respective houses.

The frequency distribution of the collaboration agreements among the houses, presented in Table 20, highlights the feature of uneven distribution of collaboration agreements. Out of 47 houses, 8 houses have not entered in any collaboration agreements. Among the rest, most of the houses have clustered around the lower ranges of the distribution, and in the upper range there are very few houses. Analysis of the share of the top 10 houses, ranked according to the number of collaborations, shown in Table 21, exhibits the same feature. The first ten houses have secured 58.98 per cent of the total collaboration agreements undertaken by the Indian business houses.

The country-wise analysis of the collaboration agreements entered into by the Indian business houses, as presented in Table 22, expresses the same features, as have been formulated from the analysis of the houses enlisted by the ILPIC. The same seven countries as sources of foreign technology control the major share (i.e. 91.30 per cent) of the total number of collaboration though their rank has changed. The U.S.A. (27.27 per cent) has surpassed the U.K. (23.76 per cent) followed by the Federal Republic of Germany (15.08 per cent) which has retained its third position, and Switzerland (9.71 per cent) has surpassed Japan (7.64 per cent). The position of France (3.92 per cent) and Italy (3.92 per cent) has remained unaltered. This table also substantiates that in the cases of most of the houses, the collaboration agreements have been diffused among several countries, though this diffusion is not so wide-spread as in the cases of the ILPIC-enlisted houses. However, there are also some cases of concentration of agreements to one country, for example, Goenka has 5 out of its total 8 agreements with firms from the U.S.A; Khatau has 13 out of its total 18 agreements with firms from the Federal Republic of Germany; S.P. Jain has 5 out of its total 6 agreements with Japanese firms; Murugappa Chettiar has 5 out of its total 8 agreements with firms from the U.S.A; and Kilachand Tulsidas has 6 out of its total 9 agreements with firms from the U.S.A. (The same type of qualification as to the ultimate **locus** of control of the foreign firms as was mentioned in the proceeding section also applies in this case).

The product-wise analysis of the collaboration agreements, presented in Table 23, shows that among the 28 categories of product in which collaboration agreements have been made, a few categories of industries have controlled major shares, namely, electrical equipment (16.23 per cent), industrial machinery (14.04 per cent), chemicals other than fertiliser, (13.60 per cent), machine tools (9.21 per cent) and metallurgical industries (8.33 per cent). Some of the houses have distributed their collaboration ventures among different categories of industries. For example, Birla and Tata have collaboration agreements in 13 groups of industries, Mahindra and Thapar have undertaken collaborations in 9 categories of industries, J.K., Kasturbhai Lalbhai, Khatau and Shri Ram have entered into collaborations in 8 groups of industries, Kirloskar and

Walchand have collaborations in 7 types of industries, On the other hand, some of the houses have concentrated their collaboration ventures in one or two categories, for example Kilchand and Nowrosjee Wadia have concentrated on chemicals, G.V. Naidu and Prataplal Bhogival on machine tools, T.V.S. Iyengar on transportation and V. Ramkrishna on transportation.

V

The aim of the present paper has been to analyse the linkages of the business houses owned, controlled and managed by the Indian business families with foreign firms. On the basis of one of the indicators of such linkages, that is, the number of technical collaborations, the following conclusions have been arrived at :

1. The share of Indian business houses in the total number of collaborations in any year between 1957 and 1976 has not exceeded 30 per cent.
2. The number of collaborations entered into by the Indian business houses was fewer in the late sixties and early seventies than in the late fifties and early sixties.
3. The distribution of collaboration agreements has been uneven among the Indian business houses. A few houses accounted for a large share of the total collaborations whereas a larger number of houses accounted for a relatively smaller share.
4. Amongst the constituent firms of the respective business houses, the firms with foreign collaborations have never occupied a major share, although the value of assets of the latter in the total assets of the houses, have, in a number of cases, occupied a significant share.
5. Seven foreign countries accounted for around 90 per cent of the total collaborations with Indian business houses. Amongst these, the United Kingdom and the United States of America have been the leading countries followed by the Federal Republic of Germany, Japan, Switzerland, France and Italy.

6. In the cases of most of the houses, the collaborations have been distributed amongst various countries. There have, however, been exceptions where in the cases of some houses, foreign collaborations have been entered into with only one or two countries.
7. Foreign technical collaborations of the Indian business houses have tended to concentrate on a few specific groups of industries — namely, electrical equipment, chemicals, industrial machinery, machine tools, metallurgical industries and transportation.
8. The collaboration agreements in Indian business houses, with few exceptions, have been diffused among different categories of industries.

Notes

1. i) Government of India, Department of Industrial Development, Ministry of Industrial Development and Company Affairs, Report of The Committee on Foreign Collaboration, Delhi, 1967;
- ii) Engineering Association of India, Research Department, Indo-Foreign Collaboration in Engineering Industries, 1964 & 1965, Calcutta, 1966;
- iii) All India Association of Industries, Report on the Working of Foreign Collaboration Undertakings in India, Bombay, 1968;
- iv) National Council of Applied Economic Research, Transfer of Technology to India, New Delhi, 1969;
- v) Reserve Bank of India, Foreign Collaboration in Indian Industry Survey Report, Bombay, 1968;
- vi) Reserve Bank of India, Foreign Collaboration in Indian Industry, Second Survey Report, Bombay, 1974;
- vii) K.K. Subramanian, Import of Capital and Technology. A Study of Foreign Collaboration in Indian Industry, New Delhi, 1972;
- viii) J.K. Tandon, Indo-German Economic Relations. Chapter 7 : German Collaboration in Indian Industry, New Delhi, 1978.

Among the above-mentioned studies, only K.K. Subramanian has dealt with though not in details, the aspect of big business houses in the chapter on the overall evaluation of his book.

2. As specified at different times by i) Government of India, Report of The Monopolies Inquiry Commission. 1965. Volumes I and II. Delhi; ii) R.K. Hazari, Industrial Planning And Licensing Policy, Final Report. Planning Commission, Government of India, Delhi, 1967; iii) Government of India, Department of Industrial Development, Ministry of Industrial Development Internal Trade and Company Affairs, Report of the Industrial Licensing Policy Inquiry Committee (Main Report). Delhi, 1969; and , iv) Government of India, Monopolies Research Unit, Department of Company Affairs, Ministry of Law, Justice and Company Affairs, Financial Data for the Year 1974 of Undertakings Registered Under the MRTP Act, 1969 (As on December 31, 1974) New Delhi (mimeographed).
3. R.K. Hazari, The Structure of the Corporate Private Sector. A Study of Concentration, Ownership and Control. Bombay, 1966, preface.
4. The categorisation of business houses fully owned by the Indian business families as a separate entity are absent in the previous studies in which apart from these houses, owned controlled and managed by non-family Indian groups, and by foreign interests have also been taken into consideration.
5. The present paper is a Chapter of a thesis on which the author is at present working. The other chapters deal with a complete analysis of the theme.
6. Government of India, Report of the Industrial Licensing Policy Inquiry Committee. op cit.

7. S.K. Goyal, Professor of Economics, Indian Institute of Public Administration, New Delhi has helped the author to collect and use data from the background studies of the Industrial Licensing Policy Inquiry Committee.
8. Indian Investment Centre. List of Cases Involving Collaboration between Indian and Foreign Firms Approved by the Government of India, during the Period 1957 to 1973. New Delhi (mimeographed).
9. Government of India, Ministry of Industrial Development, List of Foreign Technical/Financial Collaboration Cases Approved By the Government of India during 1974, 1975 and 1976, New Delhi (mimeographed).
10. The countries included in the list prepared by the Ministry of Industrial Development and are not considered by the Indian Investment Centre are Malayasia, Luxembourg, Spain, Romania, Ireland, Bermuda and Hongkong.
11. Government of India, Report of the Industrial Licensing Policy Inquiry Committee, op cit., Appendix Volume II.
12. Government of India, Financial Data for the Year 1974 of Undertakings Registered Under the MRTP Act. 1969, op cit.
13. Government of India, Report of the Monopolies Inquiry Commission, op cit.
14. Government of India, Report of Industrial Licensing Policy Inquiry Committee, op cit, p. 13.
15. Government of India, Financial Data for the Year 1974 of Undertakings Registered Under the MRTP Act. 1969, op cit, Foreword, p. i.
16. Government of India, Report of Industrial Licensing Policy Inquiry Committee, op cit, Main Report, p. 4.

17. ibid, p. 5.
18. Government of India, Directorate of Public Relations & Publications, Directorate General of Technical Development, Handbook of Foreign Collaboration, New Delhi, 1974.
19. Government of India, Financial Data for the Year 1974 of Undertakings Registered Under the MRTTP Act, 1969, op cit, Foreword, p. i.
Section 26(2) of The Monopolies And Restrictive Trade Practices Act, 1969 - "The Central Government shall on receipt of the application (referred to in Sub-Section 1) forthwith enter the name of the undertaking in a register to be maintained for the purpose and issue to the undertaking concerned a certificate of registration containing such particulars as may be prescribed." Government of India, Ministry of Law, Justice and Company Affairs, The Monopolies And Restrictive Trade Practices Act, 1969 (54 of 1969) (As modified upto the 1st October 1976), Delhi 1976, p. 14.
20. Government of India, Financial Data for the Year 1974 of Undertakings Registered Under the MRTTP Act, 1969, op cit, pp i - ii.
Clause 2(g) of the MRTTP Act 1969 - "inter connected Undertakings" mean two or more Undertakings which are interconnected with each other in any of the following manner, namely,
 - (i) if one owns or controls the other;
 - (ii) where the undertakings are owned by firms, if such firms have one or more common partners;
 - (iii) where the Undertakings are owned by bodies corporate -
 - (a) if one manages the other, or
 - (b) if one is a subsidiary of the other
 - (c) if they are under the same management
 - (d) if one exercises control over the other in any other manner.

(iv) where one undertaking is owned by a body corporate and the other is owned by a firm, if one or more partners of the firm -

(a) hold, directly or indirectly, not less than fifty per cent of the shares, whether preference or equity, of the body corporate, or,

(b) exercise control, directly or indirectly, whether as director or otherwise, over the body corporate.

(w) if one is owned by a body corporate and the other is owned by a firm having bodies corporate as its partners, if such bodies corporate are under the same management.

(vi) if the Undertakings are owned or controlled by the same person or groups of persons.

(vii) if one is connected, with the other, either directly or through any member of Undertakings which are interconnected Undertakings within the meaning of one or more of the foregoing sub-clauses."

Government of India, Ministry of Law, Justice and Company Affairs,
The Monopolies and Restrictive Trade Practices Act, 1969, op cit,
pp 2-3.

TABIE 1 TOTAL NUMBER OF COLLABORATIONS IN INDIAN BUSINESS HOUSES AND ITS PERCENTAGE TO TOTAL COLLABORATIONS APPROVED (YEAR-WISE)

Year	Total Number of Collaborations in Indian business houses	Total Number of Collaborations Approved.	(2) as % of (3)
(1)	(2)	(3)	(4)
1956	31	97	31.95
1957	23	80	28.75
1958	41	117	35.04
1959	71	215	33.02
1960	90	352	25.57
1961	118	414	28.50
1962	96	401	23.94
1963	76	313	24.28
1964	82	306	26.80
1965	50	229	21.83
Total	678	2524	26.86

Source : Government of India, Ministry of Industrial Development, Internal Trade and Company Affairs, Department of Industrial Development, Industrial Licensing Policy Inquiry Committee, A Preliminary Note on Foreign Collaborations, 1969

Table 2 Contd.

(1)	(2)	(3)	
27. Murugappa Chettiar	1		
28. Naidu, G.V.			
29. Naidu, V. R.		1	
30. Nowrosjee Wadia		2	
31. Podar			
32. Ramakrishna, V.			
33. Ruia	1		
34. Sahu Jain			the
35. Sarabhai		2	
36. Scindia Steam Navigation			
37. Seshasayee	1		
38. Shapoorji Pallonji		1	
39. Shriram	2		
40. Shriyan Prasad Jain	1		
41. Soomajmull Nagarmull	2		
42. Srivastava J.P.			
43. T.V. Sundaram Iyengar			
44. Talukdar Law			
45. Tata	2	6	
46. Thackersey			
47. Thapar	1	3	
48. Vissanji			, Shri ram
49. Walchand	1		
TOTAL :	31	23	rmull, alchand

Source : Same as Table 1.

TABLE 3 FREQUENCY DISTRIBUTION OF THE COLLABORATION
APPROVALS IN INDIAN BUSINESS HOUSES 1956-1965

Range of Number of Collaborations	Number of Houses	Names of the Houses
(1)	(2)	(3)
Less than 5	19	
5 - 9	14	
10 - 19	8	
20 - 29	3	Bajaj, Sarabhai, Shri ram
30 - 39	2	Soorajmull Nagarmull, Walchand
40 - 49	1	Kirloskar
50 - 99	-	
100 and above	2	Birla, Tata
	49	

Source : Same as Table 1.

TABLE 4 TOP TEN HOUSES IN RESPECT OF COLLABORATION APPROVALS 1956-1965

Rank	Names of the Houses	Number of Collaboration Agreements in the House	(3) as % of total number of collaboration agreements entered by the India Houses
(1)	(2)	(3)	(4)
1	Birla	143	21.09
2	Tata	101	14.90
3	Kirloskar	49	7.23
4	Walchand	34	5.01
5	Soorajmull Nagarmull	30	4.42
6	Shri ram	22	3.24
7	Sarabhai	21	3.10
8	Bajaj	20	2.95
9	Thapar	19	2.80
10	Kasturbhai Lalbhai	18	2.65
11	Other Houses	221	32.61
Total		678	100.00

Source : Same as Table 1.

TABLE 5 HOUSE-WISE DISTRIBUTION OF RENEWALS OF
FOREIGN COLLABORATION APPROVALS, 1956-1965.

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	<u>House</u>	<u>Number of renewals</u>
	<u>(1)</u>	<u>(2)</u>
1.	Amin	1
2.	Birla	6
3.	Chinai	1
4.	Kamani	1
5.	Kirloskar	3
6.	Sarabhai	1
7.	Soorajmull Nagarmull	1
8.	Tata	5
9.	Thackersey	1
10.	Thapar	1
11.	Walchand	3
		24

Source : Same as Table 1.

**TABLE 6 HOUSE-WISE DISTRIBUTION OF PLURAL FOREIGN COLLABORATION AGREES
1956-1965**

<u>Houses</u>	<u>Number of Undertakings</u>	<u>Number of</u>
<u>(1)</u>	<u>(2)</u>	<u>(3)</u>
1. Amin	1	
2. Birla	11	7
3. Chinai	1	5
4. Kamani	1	5
5. Kasturbhai	2	10
6. Khatau	1	6
7. Kirloskar	6	49
8. Mahindra	1	8
9. Ramakrishna, V.	1	8
10. Sahu Jain	1	7
11. Sarabhai	2	14
12. Seshasayee	1	5
13. Soorajmull Nagarmull	2	26
14. Tata	6	65
		328

Note : Plural agreement means that a particular company under a house producing different products of a specific industrial category enters into foreign collaboration more than once with one or more than one collaborator.

Source : Same as Table 1.

TABLE 7 HOUSE-WISE DISTRIBUTION OF CASES WHERE THE SAME FOREIGN COLLABORATOR ENTERED INTO MORE THAN ONE COLLABORATION WITH THE INDIAN COMPANIES FOR SIMILAR PRODUCTS, 1956-1965.

Houses (1)	Number of Cases (2)
1. Amin	5
2. Bajaj	8
3. Bangur	3
4. Birla	34
5. Dalmia	2
6. Goenka	4
7. J.K.	1
8. Kasturbhai	4
9. Kirloskar	14
10. Mafatlal	6
11. Mahindra	3
12. Mangaldas Jeysinghai	2
13. Modi	1
14. Naidu	1
15. Ruia	1
16. Sahu Jain	5
17. Soorajmull Nagarmull	4
18. Shri nam	6
19. Tata	15
20. Walchand	6
	125

Source : Same as Table 1.

TABLE 8 SHARE OF THE INDIAN BUSINESS HOUSES ENLISTED BY ILPIC.
IN THE TOTAL COLLABORATION (YEAR-WISE), 1957-1976.

Year	Total Collaborations	Collaborations in Indian Business Houses	% of (3) to (2)
(1)	(2)	(3)	(4)
1957	53	9	16.98
1958	49	10	20.41
1959	204	44	21.57
1960	318	67	21.07
1961	399	81	20.30
1962	289	54	18.69
1963	343	45	13.12
1964	380	76	20.00
1965	240	59	24.58
1966	203	37	18.23
1967	170	41	24.12
1968	120	6	5.00
1969	129	14	10.85
1970	176	32	18.18
1971	235	31	13.19
1972	229	23	10.04
1973	250	16	6.4
1974	359	32	8.91
1975	271	29	10.70
1976	277	37	13.35
Total	4694	743	15.83

- Sources : i) Indian Investment Centre, List of Cases Involving Collaboration between Indian and Foreign Firms Approved by the Government of India during the Period 1957-1973. New Delhi (mimeographed).
- ii) Government of India, Ministry of Industrial Development, List of Foreign Technical/Financial Collaboration Cases Approved By the Government of India during 1974 1975 and 1976. New Delhi, mimeographed.
- iii) Government of India, Department of Industrial Development, Ministry of Internal Trade and Company Affairs Report of the Industrial Licensing Policy Inquiry Committee, Appendix Volume II. Delhi, 1969.

TABLE 9

YEARWISE DISTRIBUTION OF COLLABORATION AGREEMENTS IN EACH INDIAN BUSINESS HOUSE, ENLISTED BY ILPIC, 1957-1976.

Houses	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Agarwal, R.K.								1			
Amin				2	2				3	2	3
B.N. Elias											
Bajaj			1	3	4	3	2	2	1	1	2
Bangur	2			2	2	1		1			
Birla			7	14	13	8	13	23	14	13	6
Chinai				1				1			
Dalmia, J.		1			1	1					
Dalmia, R.K.											
Goenka			1	2	2		1	1	1		1
Indra Singh				1	1						
J. K.					2	1	1	2	1	1	1
Jaipuria											
Jatia, G.D.											
Kamani			2	1	2	1	1			2	
Kanoria, B.			2			1				1	
Kanoria, R.K.											
Kasturbhai Lalbhai				2	1		1	2	1		
Khatau	1		1		1		2	3			3
Kilachand Tulsidas			2	1			2	1			
Kirloskar				1	6	4	4	3	3		
Kothari, D.C.				1	1						1
Mafatlal			1		1	1		4	1		1
Mahindra & Mahindra		2	5	1	1	2	1	2	4	3	1
Mangaldas Jeysinghbhai						1					
Mangaldas Parekh						1					
Modi									2		
Murugappa Chettiar					3			1			

Contd... Next page

Table 9 Contd.

Houses	1968	1969	1970	1971	1972	1973	1974	1975	1976
	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)
1. Agarwal, R.K.									
2. Amin	1	1	1		2				
3. B.N. Elias									
4. Bajaj	2		4	1					
5. Bangur				1					
6. Birla			5	3	4	6	5	8	
7. Chinai									
8. Dalmia, J.					1			1	
9. Dalmia, R.K.									
10. Goenka	1		1	1			1		
11. Indra Singh		1							
12. J. K.		1	3	2	5		1	1	
13. Jaipuria									
14. Jatia, G.D.			1						
15. Kamani		1					1		
16. Kanoria, B.									
17. Kanoria, R.K							1	1	
18. Kasturbhai Lalbhai			2			1	1		
19. Khatau			1		1	1	2	1	
20. Kilachand Tulsidas									
21. Kirloskar		3	1	1	2	4	2	1	
22. Kothari, D.C.							2		
23. Mafatlal			2				1		
24. Mahindra & Mahindra			3	1	1	1	1		
25. Magaldas Jeysinghbhai									
26. Magaldas Parekh									
27. Modi			2	1	1		2	1	
28. Murugappa Chettiar			1		1			1	

Contd ...

Table 9 Contd.

Houses	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Muthiah											
Naidu, G.V.		1		1			2		1	1	
Naidu, V.R.				1	2				1		1
Nowrosjee Wadia			2	1	2	1	1		3		
Podar							1	1	1		
Ruia	1	1						2	1		
Sahu Jain				1	2	1					
Sarabhai			3	4	2			2	1		
Scindia Steam Navigation					1			1			
Sashasayee		1	2	2	2	5	1		1	1	3
Shapoorji Pallonji			2				1	2			
Shriram			1	3	5	1		1	1	1	
Shriyan Prasad Jain						2				1	2
Soorajmull Nagarmull			1	5	9	2	1	5	3	1	2
Strivastava, J.P.								1			
S.V.S. Iyenger			1		2	1		1		1	
Talukder Law			1			1					
Tata	4	3	5	7	7	10	5	6	7	2	4
Tackersey			2	1			2	1	1		
Talpar	1	1	2	4	3	3		3	3	1	1
Talagaraja											
T. Ramakrishna				3			2		2	2	1
Talssanji					1						
Talchand			1	2		2	1	3	2	3	8
Total	9	10	44	67	81	54	45	76	59	37	41

Contd...

Table 9 Contd.

Houses (1)	1968 (13)	1969 (14)	1970 (15)	1971 (16)	1972 (17)	1973 (18)	1974 (19)	1975 (20)	1976 (21)
29. Muthiah									
30. Naidu, G.V.					1		4	3	1
31. Naidu, V.R.					1				
32. Nowrosjee Wadia				1	1				
33. Podar									
34. Ruia							1	1	
35. Sahu Jain							1		
36. Sarabhai				2			1		
37. Scindia Steam Navigation			1	1					
38. Seshasayee							1		2
39. Shapoorji Pallonji		1		2				1	
40. Shriram		1		1	1			2	
41. Shriyan Prasad Jain									1
42. Soorajmull Nagarmull				1					1
43. Srivastava, J.P.									
44. T.V.S. Iyenger							1	1	
45. Talukder Law								2	
46. Tata	2	3		6		2	2	3	4
47. Thackersey			1	1					
48. Thapar		1		1	1	1	1	1	7
49. Thiagaraja									
50. V. Ramakrishna			2	1					
51. Vissanji									
52. Walchand		1	1	3					1
Total	6	14	32	31	23	16	32	29	37

Source : same as Table 8.

E 10 DISTRIBUTION OF TOTAL NUMBER OF COLLABORATION AGREEMENTS
IN COMPANIES UNDER INDIAN BUSINESS HOUSES, ENLISTED BY ILFIC.
1957-1976.

House	Total Number of Companies enlisted under the house	Total Number of Companies with foreign Collaborations	% of (3) to (2)	Total Number of Collaborations
(1)	(2)	(3)	(4)	(5)
Agarwal, R. K.	40	1	2.50	1
Amin	13	3	23.08	17
B.N. Elias	5	Nil	-	-
Bajaj	24	9	37.50	26
Bangur	93	7	7.52	9
Birla	276	49	17.75	148
Bhinai	18	2	11.11	2
Bordia, J.	18	4	22.22	6
Bordia, R.K.	11	Nil	-	-
Bornerka	69	6	8.69	14
Bhadra Singh	12	2	16.67	3
B.K.	51	10	19.61	24
Bisipuria	18	Nil	-	-
Bhatia, G.D.	15	1	6.67	1
Bhambhani	27	7	25.93	11
Bhambhani, B.	13	1	7.69	4
Bhambhani, R. K.	20	1	5.00	2
Bhatnagar Lalbhai	36	6	16.67	11
Bhatnagar	50	8	16.00	18
Bhambhani Tulsidas	24	3	12.50	9
Bhoskar	22	9	40.91	37
Bhambhani, D.C.	20	2	10.00	5
Bhatnagar	34	6	17.65	12
Bhatnagar & Mahindra	19	13	68.42	30
Bhatnagar Jaysinghbhai	15	1	6.67	1

Contd Next Page

Table 10 Contd.

(1)	(2)	(3)	(4)	(5)
26. Mangaldas Parekh	18	1	5.56	1
27. Modi	12	3	25.00	11
28. Murugappa Chottiar	10	5	50.00	8
29. Muthiah	11	Nil	-	-
30. Naidu, G.V.	17	4	23.53	15
31. Naidu, V.R.	11	2	18.18	6
32. Nowrosjee Wadia	14	5	35.71	12
33. Podar	20	2	10.00	3
34. Ruia	24	3	12.50	7
35. Sahu Jain	29	3	10.34	5
36. Sarabhai	29	7	24.14	15
37. Scindia Steam Navigation	8	1	12.50	4
38. Seshasayee	13	6	46.15	21
39. Shapoorji Pallonji	29	6	20.69	9
40. Shriram	54	7	12.96	18
41. Shriyan Prasad Jain	14	4	28.57	6
42. Soonajmull Nagarmull	110	9	8.18	31
43. Srivastava, J.P.	16	1	6.25	1
44. T.V.S. Iyenger	22	4	13.64	8
45. Talukdar Law	13	1	7.69	3
46. Tata	84	29	34.52	82
47. Thackersey	29	6	20.69	9
48. Thapar	63	13	20.63	35
49. Thiagaraja	34	Nil	-	-
50. V. Ramakrishna	11	1	9.09	13
51. Vissanji	10	1	10.00	1
52. Walchand	29	6	20.69	28

Source : Same as Table 8.

TABLE 11 SHARE OF THE ASSETS OF THE COMPANIES WITH FOREIGN COLLABORATIONS IN THE TOTAL ASSETS OF THE HOUSES, ENLISTED BY ILFIC, 1964.

House	Total Assets of the House in (Rupees in Crores)	Assets of Companies with foreign Collaborations (Rupees in Crores)	% of (3) to (2)
(1)	(2)	(3)	(4)
1. Agarwal, R.K.	7.01	1.11	15.83
2. Amin	14.96	10.37	69.32
3. Bajaj	35.28	20.03	57.54
4. Bangur	104.31	11.69	11.21
5. Birla	457.84	216.85	47.36
6. Chinai	18.35	.42	2.29
7. Dalmia, J.	26.71	7.40	26.36
8. Goenka	65.34	13.86	21.21
9. Indra Singh	10.55	N.A.	-
10. J.K.	66.84	16.60	20.27
11. Jatia, G.D.	N.A.	1.3	-
12. Kamani	18.04	16.06	89.02
13. Kanoria, B.	N.A.	N.A.	-
14. Kanoria, R.K.	12.56	N.A.	-
15. Kasturvhai Lalbhai	51.19	26.00	50.79
16. Khatau	40.09	35.76	89.20
17. Kilchand Tulsidas	37.22	25.65	68.91
18. Kirloskar	43.02	38.20	82.80
19. Kothari, D.C.	N.A.	N.A.	-
20. Mafatlal	92.70	46.18	49.82
21. Mahindra & Mahindra	38.58	N.A.	-
22. Mangaldas Jeysinghbhai	9.73	3.19	32.79
23. Mangaldas Parekh	12.70	.46	3.62
24. Modi	19.38	6.38	32.72
25. Murugappa Chettiar	20.06	16.80	83.75

(contd.)

Table 11 Contd.

(1)	(2)	(3)	(4)
26. Naidu, G.V.	26.41	18.14	68.78
27. Naidu, V.R.	21.55	19.90	88.17
28. Nowrosjee Wadia	20.56	18.99	92.36
29. Podar	14.28	6.68	46.78
30. Ruia	22.40	5.54	24.73
31. Sahu Jain	58.75	18.07	30.76
32. Sarabhai	56.71	47.33	83.46
33. Scindia Steam Navigation	55.98	1.30	2.32
34. Seshasayee	32.72	20.43	62.44
35. Shaporji Pallonji	26.35	8.69	32.98
36. Shriram	74.13	59.46	80.21
37. Shriyan Prasad Jain	13.99	9.02	65.76
38. Soorajmull Nagarmull	95.62	29.85	21.80
39. Srivastava, J.P.	N.A.	.17	-
40. T.V.S. Iyenger	43.83	8.46	19.30
41. Talukdar Law	5.59	N.A.	-
42. Tata	505.36	367.14	72.65
43. Thackersey	17.19	7.24	42.12
44. Thapar	98.30	43.42	53.80
45. V. Ramakrishna	18.78	.82	4.37
46. Vissanji	14.99	2.86	19.08
47. Walchand	81.11	43.85	53.80

Note : N.A. means not available.

Source : Same as Table 8.

TABLE 12 FREQUENCY DISTRIBUTION OF COLLABORATION AGREEMENTS
ENTERED INTO BY THE INDIAN BUSINESS HOUSES FILED BY
ILPIC, 1957-1976

Range of Collaborations	Number of Houses	Names of the Houses
(1)	(2)	(3)
0	5	
1 - 5	15	
6 - 10	10	
11 - 20	12	
21 - 30	5	Mahindra, Walchand, Bajaj, J.K., Seshasayee
31 - 40	3	Kirloskar, Thapar, Soorajmull- Nagarmull
41 - 80	-	
81 - 90	1	Tata
91 -100	-	
Above 100	1	Birla

Source : Same as Table 8.

**TABIE 13 RANKING OF INDIAN BUSINESS HOUSES ENLISTED BY ILPIC
ACCORDING TO THE NUMBER OF COLLABORATIONS, 1957-76**

Rank	Houses	Number of Collaborations	% of (3) to total collaborations in Indian business houses
(1)	(2)	(3)	(4)
1	Birla	148	19.92
2	Tata	82	11.04
3	Kirloskar	37	4.98
4	Thapar	35	4.71
5	Soorajmull Nagarmull	31	4.17
6	Mahindra & Mahindra	30	4.04
7	Walchand	28	3.77
8	Bajaj	26	3.50
9	J.K.	24	3.23
10	Seshasayee	21	2.83
11	Other Houses	281	37.81
	Total	743	100.00

Source : Same as Table 8.

TABLE 14 COUNTERWISE DISTRIBUTION OF COLLABORATION AGREEMENTS IN THE INDIAN BUSINESS HOUSES, ENLISTED BY ILRIC, 1957-1976.

HOUSES (1)	AUSTRIA (2)	AUSTRIA- LIA (3)	BEIGIUM (4)	CANADA (5)	CZECHO- SLOVAKIA (6)	DENMARK (7)	FRANCE (8)
1. Agarwal, R.K.							
2. Amin				1			1
3. Bajaj	1						1
4. Bangur							1
5. Birla	3			1	1		5
6. Chinai							1
7. Dalmia, J.			1			1	1
8. Goenka							
9. Indra Singh							2
10. J. K.			1			1	2
11. Jatia, G.D.							
12. Kamani							
13. Kanoria, B.							
14. Kanoria, R.K.							1
15. Kasturbhai Lalbhai							
16. Khatau						2	
17. Kilachand Tulsidas							
18. Kirloskar	1						1
19. Kothari, D.C.				1			
20. Mafatlal							
21. Mahindra & Mahindra							3
22. Mangaldas Jeysingbhai							
23. Mangaldas Parekh							
24. Modi							
25. Murugappa Chettiar							
26. Naidu, G.V.							
27. Naidu, V.R.							1

(Contd.)

Table 14 Contd.

-: 42 :-

	FRG	GDR	HUNGARY	ITALY	JAPAN	NETHERLANDS	POLLAND
	(9)	(10)	(11)	(12)	(13)	(14)	(15)
1. Agarwal, R.K.	1						
2. Amin	5			1	1		
3. Bajaj	4			3	4	1	
4. Bangur	1			1			
5. Biria	20	4	2	3	27	1	1
6. Chinai				1			
7. Dalmia, J.	1						
8. Goenka					1		
9. Indra Singh	1						
10. J. K.	10			3	2		
11. Jatiya, G.D.							
12. Kamani	3					1	
13. Kanoria, B.							
14. Kanoria, R.K.							
15. Kasturbhai Lalbhai	1			3	3		
16. Khatu	12				1	1	
17. Kilachand Tulsidas							
18. Kirloskar	6				5	3	
19. Kothari, D.C.	1				1		
20. Lafatlal	5			2			
21. Mahindra & Mahindra	2						
22. Mangaldas Jeysingbhai							
23. Mangaldas Parekh	1						
24. Modi	1				2		
25. Murngappa Chettiar							
26. Naidu, G.V.	1			2			
27. Naidu, V.R.				2	2		

contd...

Table 14 Contd.

	SWITZER- LAND (17)	U.K. (18)	U.S.A. (19)	U.S.S.R. (20)	T O T A L (21)
1. Agarwal, R.K.					1
2. Amin	1	4	3		17
3. Bajaj		9	2	1	26
4. Bangur	1	2	3		9
5. Birla	14	28	38		148
6. Chinai					2
7. Dalmia, J.		1	1		6
8. Goenka		6	7		14
9. Indra Singh					3
10. J.K.		2	3		24
11. Jatia, G.D.		1			1
12. Kamani	3	3	1		11
13. Kanoria, B.	1	3			4
14. Kanoria, R.K.			1		2
15. Kasturbhai Lalbhai	1	2	4		11
16. Khatau	1	1	1		18
17. Kilachand Tulsidas	1	2	6		9
18. Kirloskar	1	6	13		37
19. Kothari, D.C.	1		1		5
20. Mafatlal	2	2	1		12
21. Mahindra & Mahindra	1	12	12		30
22. Mangaldas Jeysingbhai					1
23. Mangaldas Parekh		1			1
24. Modi	3		5		11
25. Murgappa Chettiar		3	5		8
26. Naidu, G.V.	11	1			15
27. Naidu, V.R.			1		6

Contd..

Table 14 Contd.

HOUSES (1)	AUSTRIA (2)	AUSTRIA- LIA (3)	BELGIUM (4)	CANADA (5)	CZECHO- SLOVAKIA (6)	DEN- MARK (7)	FRA (8)
28. Nowrosjee Wadia							
29. Podar							
30. Ruia							
31. Sahu Jain							
32. Sarabhai			2				
33. Scincia Steam Navigation							
34. Seshasayee							
35. Shapoorji Pallonji							
36. Shriram							
37. Shriyan Prasad Jain							
38. Soorajmull Nagarmull							
39. Srivastava, J.P.							
40. T.V.S. Iyengar							
41. Talukder Law					1		
42. Tata		3	1				
43. Thackersey							
44. Thapar	1	2	1	1			
45. V. Ramakrishna			1		2		
46. Vissanji							
47. Walchand	1	3		1	3		
Total	7	8	7	5	7	4	42

Contd.

Table 14 Contd.

	FRG	GDR	HUNGARY	ITALY	JAPAN	NETHER- LANDS	POLLAND	SWEDEN
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
28. Nowrosjee Wadia								
29. Podar								
30. Ruia	4				1			
31. Sahu Jain	3				1			
32. Sarabhai	4							1
33. Scindia Steam Navigation	1							
34. Seshasayee	3			2	3			
35. Shaporji Pallonji	2	1			1			
36. Shriram	2			2	4	2		
37. Shriyan Prasad Jain	1				3			
38. Soorajmull Nagarmull	2				3			
39. Srivastava, J.P.	1							
40. T.V.S. Iyengar					1			
41. Talukder Law								
42. Tata	9			2	4	1		3
43. Thackersey	1							
44. Thapar	3				1			1
45. V. Ramakrishna	3							
46. Vissanji								
47. Walchand	5	1		1	1			
Total	119	6	2	25	71	10	1	7

Contd. ..

Table 14 Contd.

	SWITZERLAND (17)	U.K. (18)	U.S.A. (19)	U.S.S.R. (20)	TOTAL (21)
28. Nowrosjee Wadia	1	11			12
29. Polar	1		2		3
30. Ruia	1		1		2
31. Shu Jain			1		1
32. Sarabhai	4	1	3		8
33. Scindia Steam Navigation	2	1			3
34. Seshasayee	1	4	3		8
35. Shapoorji Pallonji		4	1		5
36. Shriram	1	2	5		8
37. Shriyam Prasad Jain		1	1		2
38. Soorajmull Nagarmull		13	7		20
39. Srivastava, J.P.					1
40. T.V.S. Iyengar		4	3		7
41. Talukder Law		2			2
42. Tata	2	26	26		54
43. Thackersey		3	5		8
44. Thapar	1	20	2		23
45. V. Ramakrishna			3		3
46. Vissanji		1			1
47. Walchand	2	7	3		12
Total	58	189	174	1	743

Source : Same as Table 8.

TABLE 16 SHARE OF INDIAN BUSINESS HOUSES REGISTERED BY MRTP

Table 15 contd.

(1)	(17)	(18)	(19)	(20)	(21)
17. Kilchand Tulsidas		6			
18. Kirloskar					
19. Kothari, D.C.				1	
20. Mafatlal		8	1		
21. Mahindra & Mahindra		3			
22. Mangaldas Jeysinghbhai					
23. Mangaldas Parekh		1			
24. Modi		2			2
25. Murugappa Chettiar					
26. Naidu, G.V.		2			
27. Naidu, V.R.					
28. Nowrosjee Wadia		5			5
29. Podar		1			
30. Ruia		5	1		
31. Sahu Jain		1			
32. Sarabhai		10		2	1
33. Scindia Steam Navigation					
34. Seshasayee		2			
35. Shapoorji Pallonji					
36. Shriram		4			1
37. Shriyan Prasad Jain		3			
38. Soorajmull Nagarmull	1	2			
39. Srivastava, J.P.					
40. T.V. S. Iyengar					
41. Talukdar Law		1			
42. Tata		13		1	
43. Thackersey		2			1
44. Thapar		3			
45. V. Ramakrishna					
46. Vissanji					
47. Walchand					
Total		2 108	5	6	14

Note : The product classification of collaborative oration
have not been categorised in the DGTD Hand of India,

Source : Same as Table 8.

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Justice/

111) Government of India, Monopolies Research Unit, Department of
Company Affairs, Ministry of Law, & Company Affairs, Financial Data
for the year 1974 of undertaking Registered under MRTP Act, 1969
(As on December '31, 1976), New Delhi. (mimeographed).

TABLE 16 SHARE OF INDIAN BUSINESS HOUSES REGISTERED BY MRTP
IN THE TOTAL COLLABORATION (YEAR-WISE), 1957-1976

Year:	Total Collaborations	Collaborations in Indian Business Houses	% of (3) to (2)
(1)	(2)	(3)	(4)
1957	53	7	13.21
1958	49	9	18.37
1959	204	25	12.25
1960	318	34	12.33
1961	399	41	10.27
1962	289	34	11.76
1963	343	29	8.45
1964	380	45	11.84
1965	240	31	12.92
1966	203	25	12.31
1967	170	23	13.53
1968	120	5	4.17
1969	129	8	6.20
1970	176	24	13.63
1971	235	23	9.79
1972	229	18	7.86
1973	250	16	6.40
1974	359	23	6.41
1975	271	25	9.23
1976	277	22	7.94
Total	4694	468	9.97

- Sources:
- i) Indian Investment Centre, List of Cases Involving Collaboration between Indian & Foreign Firms Approved by the Government of India during the Period 1957 to 1973 New Delhi (mimeographed)
 - ii) Government of India, Ministry of Industrial Development, List of Foreign Technical/Financial Collaboration Cases Approved By the Government of India during 1974, 1975 and 1976, New Delhi, (mimeographed).
 - iii) Government of India, Monopolies Research Unit, Department of Justice/ Company Affairs, Ministry of Law, & Company Affairs, Financial Data for the year 1974 of undertaking Registered under MRTP Act. 1969 (As on December '31, 1976), New Delhi, (mimeographed).

TABLE . 17 YEARWISE DISTRIBUTION OF THE COLLABORATION AGREEMENTS IN THE INDIAN BUSINESS HOUSES REGISTERED BY MRTP, 1957-1976.

Houses (1)	1957 (2)	1958 (3)	1959 (4)	1960 (5)	1961 (6)	1962 (7)	1963 (8)	1964 (9)	1965 (10)	1966 (11)
1. Bajaj							1	2	1	1
2. Bangur	2				2	1		1		
3. Bhiwandiwala										
4. Birla	1	1	4	3	3	4	3	5	4	4
5. Chowgule								1	1	1
6. Godrej				2						1
7. Goenka			1	1	1			1	1	
8. Harbanslal Mahotra			1	2	1		1			
9. J.K.					1		1	2	1	1
10. Jaiouria										
11. Kamani			2	1	3	1	1			2
12. Kapadia		1		1	1		1	1	1	
13. Kasturbhai Lalbhai			1	2	1		1	2		
14. Khatau	2	1	1		1		1	2		
15. Kilachand Tulsidas			2	1			2	1		
16. Kirloskar					5	4	3	3	3	
17. Kothari										
18. Mafatlal		1	1		1	1		2		
19. Mahindra and Mahindra		2	3		1	2	1	1	3	3
20. Modi									1	
21. Murugappa Chettiar						3		1		
22. Naidu, G.V.		1		1			1		1	1
23. Naidu, V.R.				1	2				1	
24. Nowrosjee Wadia			2	1	2	1	1		1	1
25. Oberoi										
26. Prataplal Bhogilal				2	1	2	2	1	1	
27. R.N. Goenka										
28. Raunaq Singh							1			
29. Ruia								2		

Contd

Table 17 Contd.

House	1968 (13)	1969 (14)	1970 (15)	1971 (16)	1972 (17)	1973 (18)	1974 (19)	1975 (20)	1976 (21)	T O T A L (22)
1. Bajaj		1	3		1					11
2. Bangur										6
3. Bhiwandiwalla										-
4. Birla			4	2	1	4	2	1	2	49
5. Chowgale						1	1			6
6. Godrej							1			3
7. Goenka	1						1			8
8. Harbanslal Malhotra					1				1	7
9. J.K.		1	3	2	4		1	2	1	21
10. Jaipuria										-
11. Kamani		1					1			12
12. Kapadia				1						7
13. Kasturbhai Lalbhai			2		1	1				14
14. Khatau			1		1	1	2	2	1	16
15. Kilschand Tulsidas									3	9
16. Kirloskar	1	3	1	1	2	4	1	1	1	33
17. Kothari							1		1	2
18. Mafatlal			1							8
19. Mahindra and Mahindra			3	1	1	1	1		1	25
20. Modi			2	1	1		2	3		10
21. Murugappa Chettiar			1		1			1	1	8
22. Naidu, G.V.					1		4	4		14
23. Naidu, V.R.				1						6
24. Nowrosjee Wadia				1						10
25. Oberoi										-
26. Prataplal Bhogilal						1	1	1		12
27. R.N. Goenka										-
28. Raunaq Singh							1	1		3
29. Rupa										2

Contd. ...

Table 17 Contd.

House (1)	1957 (2)	1958 (3)	1959 (4)	1960 (5)	1961 (6)	1962 (7)	1963 (8)	1964 (9)	1965 (10)	1966 (11)	1967 (12)
30. Sahu Jain					1	1					
31. Salgaocar											
32. Sarabhai				2	1			1	1		
33. Scindia					1			1			
34. Seshasayee											
35. Sri Ambica (Harballav Das)					1						
36. Sriram			1	1	3	1		1	1	1	
37. S. P. Jain						1					2
38. Somaiya			1	2			1	1			
39. Soorajmull Nagarmull						2		1			
40. TVS Iyengar			1		2	1		1		1	
41. Tata	2	1	2	4		8	3	5	3	2	3
42. Thackersey								1	1		
43. Thapar		1	2	2	3	2		2	1	1	1
44. Thiagaraja											
45. V. Ramakrishna				3			2		1	2	1
46. V. S. Dempo											
47. Walchand			1	2		2	2	3	3	3	5
Total	7	9	25	34	41	34	29	45	31	25	23

Contd. ...

Table 17 Contd.

House	1968 (13)	1969 (14)	1970 (15)	1971 (16)	1972 (17)	1973 (18)	1974 (19)	1975 (20)	1976 (21)	Total (22)
30. Sahu Jain										2
31. Salgaocar										-
32. Sarabhai				1			1			7
33. Scindia			1	1						4
34. Seshasayee										-
35. Sri Ambica (Harballav Das)										1
36. Sriram				1	1			2	1	14
37. S. P. Jain										3
38. Somaiya	1									6
39. Soorajmull Nagarmull										3
40. TVS Iyengar							1	1		8
41. Tata	1	1		4		1	1	4	2	47
42. Thackersey				1						3
43. Thapar		1		2	1	2	1	2	6	30
44. Thiagaraja										-
45. V. Ramkrishna			1	1						11
46. V. S. Dempo										-
47. Walchand	1		1	3					1	27
Total	5	8	24	23	18	16	23	25	22	468

Source : Same as Table 16.

TABLE 18 DISTRIBUTION OF TOTAL NUMBER OF COLLABORATION AGREEMENTS IN COMPANIES UNDER INDIAN BUSINESS HOUSES, REGISTERED BY MRTP 1957-1976

House	Total Number of Companies Registered under the houses	Total Number of Companies under Foreign Collaborations	% of (3) to (2)	Total Number of Collaborations
(1)	(2)	(3)	(4)	(5)
1. Bajaj	27	5	18.52	11
2. Bangur	43	5	11.63	6
3. Bhiwandiwala	10	Nil	-	Nil
4. Birla	69	17	24.64	49
5. Chowgule	20	3	15.00	6
6. Godrej	3	1	33.33	3
7. Goenka	6	2	33.33	8
8. Harbanslal Malhotra	10	2	20.00	7
9. J. K.	34	9	26.47	21
10. Jaipuria	2	Nil	-	Nil
11. Kamani	24	8	33.33	12
12. Kapadia	13	3	23.08	7
13. Kasturbhai Lalbhai	20	5	25.00	14
14. Khatau	46	6	13.04	16
15. Kilachand Tulsidas	13	3	23.08	9
16. Kirloskar	15	6	40.00	33
17. Kothari	4	2	50.00	2
18. Mafatlal	19	5	31.58	8
19. Mahindra & Mahindra	13	9	69.23	25
20. Modi	11	3	27.27	10
21. Murugappa Chettiar	12	5	41.67	8
22. Naidu, G.V.	14	3	21.43	14
23. Naidu, V.R.	7	2	28.57	6
24. Nowrosjee Wadia	8	4	50.00	10

(Contd.)

Table 18 Contd.

(1)	(2)	(3)	(4)	(5)
25. Oberoi	12	Nil	-	Nil
26. Prataplal Bhogilal	11	3	27.27	12
27. R.N. Goenka	7	Nil	-	Nil
28. Raunaq Singh	9	1	11.11	3
29. Ruia	7	1	14.29	2
30. Sahu Jain	1	1	100.00	2
31. Salgaocar	14	Nil	-	Nil
32. Sarabhai	13	4	30.77	7
33. Scindia	3	1	33.33	4
34. Seshasayee	1	Nil	-	Nil
35. Sri Ambica (Harballav Das)	11	1	9.09	1
36. Shriram	14	6	42.86	14
37. S.P. Jain	14	2	14.29	3
38. Somaiya	9	3	33.33	6
39. Soorajmull Nagarmull	9	2	22.22	3
40. T.V.S. Iyengar	19	4	21.05	8
41. Tata	27	12	44.44	47
42. Thackersey	7	1	14.29	3
43. Thapar	36	10	27.78	30
44. Thiagaraja	31	Nil	-	Nil
45. V. Ramakrishna	8	1	12.50	11
46. V. S. Dempo	13	Nil	-	Nil
47. Walchand	20	5	25.00	27
Total				468

Source : Same as Table 16.

TABLE 19 SHARE OF THE ASSETS OF THE COMPANIES WITH FOREIGN COLLABORATIONS
IN THE TOTAL ASSETS OF THE HOUSES. REGISTERED BY MRTP. 1974

Houses	Total Assets of The Houses (Rs. in crores)	Assets of the firms with Foreign Collaboration (Rs. in crores)	% of (3) to (2)
(1)	(2)	(3)	(4)
1. Bajaj	9064.2 (23)	4213.4 (5)	46.48
2. Bangur	16426.1 (43)	3799.0 (5)	23.13
3. Birla	72935.9 (69)	31055.5 (17)	42.58
4. Chowgule	3081.6 (16)	1620.1 (3)	52.57
5. Godrej	5401.4 (3)	3133.1 (1)	58.00
6. Goenka	3348.5 (6)	1330.5 (2)	39.73
7. Harbanslal Malhotra	729.1 (5)	550.6 (2)	75.51
8. J.K.	17636.0 (29)	9055.3 (9)	51.34
9. Kamani	6276.9 (15)	5930.7 (7)	94.48
10. Kapadia	6045.7 (12)	3924.5 (3)	64.91
11. Kasturbhai Lalbhai	10055.1 (15)	4289.9 (5)	42.66
12. Khatau	10796.8 (37)	8143.9 (5)	75.43
13. Kilachand	3629.9 (12)	3130.6 (3)	86.24
14. Kirloskar	11327.9 (15)	9119.0 (6)	80.50
15. Kothari	2774.0 (4)	1654.0 (2)	59.62
16. Mafatlal	23298.5 (13)	12339.6 (5)	52.96
17. Mahindra & Mahindra	9810.3 (13)	9717.7 (9)	99.05
18. Modi	9237.6 (9)	6685.9 (3)	72.38
19. Murugappa Chettiar	4042.8 (10)	3195.3 (4)	79.04
20. Naidu, G.V.	6070.7 (12)	4154.2 (3)	68.43
21. Naidu V.R.	2862.0 (7)	2363.9 (2)	82.60
22. Nowrosjee Wadia	5345.7 (8)	5211.1 (4)	97.48
23. Prataplal Bhogilal	2936.9 (8)	2575.0 (2)	87.68
24. Raunaq Singh	1992.0 (7)	1446.0 (1)	72.59
25. Ruia	61.0 (6)	3.2 (1)	5.24
26. Sahu Jain	2195.9 (1)	2195.9 (1)	100.00

Contd.

Table 19 Contd.

(1)	(2)	(3)	(4)
27. Sarabhai	10521.0 (12)	8217.2 (4)	78.10
28. Scindia	15132.6 (3)	204.5 (1)	1.35
29. Shriram	14408.9 (14)	13006.8 (6)	90.27
30. S. P. Jain	3698.7 (12)	2878.3 (2)	77.82
31. Somaiya	2493.6 (6)	2314.5 (3)	92.82
32. Soorajmull Nagarmull	4625.2 (9)	581.2 (3)	12.56
33. T.V.S. Iyengar	9426.4 (17)	3593.5 (4)	38.12
34. Tata	73311.3 (27)	59125.2 (12)	80.65
35. Thackersey	2111.0 (4)	490.0 (1)	23.21
36. Thapar	16755.8 (34)	12139.8 (10)	72.45
37. V. Ramakrishna	3520.2 (8)	2245.2 (1)	63.60
38. Walchand	12184.4 (20)	6209.0 (5)	50.96

Note Figures in brackets show the number of firms to which the value of assets relate, as the data of all the firms were not available.

Source Same as Table 16.

Table 20 FREQUENCY DISTRIBUTION OF THE COLLABORATION AGREEMENTS
IN THE INDIAN BUSINESS HOUSES, REGISTERED BY MRTP. 1957-1976

Range of Collaborations	Number of Houses	Names of the Houses
(1)	(2)	(3)
0	8	
1 - 5	10	
6 - 10	14	
11 - 20	8	
21 - 30	4	J.K. , Mahindra & Mahindra, walchand, Thapar
31 - 40	1	Kirloskar
41 - 50	2	Birla, Tata
	47	

TABLE 21 RANKING ACCORDING TO THE NUMBER OF COLLABORATION AGREEMENTS
OF THE INDIAN BUSINESS HOUSES, REGISTERED BY MRTP, 1957-1976

Rank	House	Number of collaboration agreements	% of (3) to total collaborations in Indian business houses
(1)	(2)	(3)	(4)
1	Birla	49	10.47
2	Tata	47	10.04
3	Kirloskar	33	7.05
4	Thapar	30	6.42
5	Walchand	27	5.77
6	Mahindra	25	5.34
7	J.K.	21	4.49
8	Khatau	16	3.42
9	Kasturbhai	14	2.99
10	Naidu G.V.	14	2.99
11	Other Houses	192	41.02
	Total	468	100.00

Source : Same as Table 16.

TABLE 22 COUNTRYWISE DISTRIBUTION OF COLLABORATION AGREEMENTS IN THE
INDIAN BUSINESS HOUSES, REGISTERED BY MRTP, 1957-1976

Houses	AUSTRIA	AUSTRIA LIA	BELGIUM	CANADA	CZECHO- SLOVAKIA	DENMARK	FRANCE	FRG
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1. Bajaj								1
2. Bangur								1
3. Birla	1						1	4
4. Chowgule								3
5. Godrej								1
6. Goenka								
7. Harbanslal Malhotra							1	2
8. J.K.			1			1	2	10
9. Kamani								4
10. Kapadia								
11. Kasturbhai Lalbhai								
12. Khatau						2		13
13. Kilchand Tulsidas								
14. Kirloskar							1	6
15. Kothari								
16. Mafatlal								2
17. Mahindra & Mahindra							3	
18. Modi								1
19. Murugappa Chettiar								
20. Naidu, G.V.								1
21. Naidu, V.R.							1	
22. Nowrosjee Wadia								
23. Prataplal Bhogilal					3		2	
24. Raunaq Singh								1
25. Ruia								
26. Sahu Jain								1
27. Sarabhai			1					1
28. Scindia								
29. Sri Ambica (Harballav Das)			1					
30. Sriram								2
31. S. P. Jain								
32. Somaiya							1	1
33. Soorajmull Nagarmull								
34. T. V. S. Iyengar								
35. Tata		1					2	6
36. Thackersey								
37. Thapar	1	2	1				1	2
38. V. Ramakrishna					1		4	3
39. Walchand	1	3		1	3			5
Total	3	6	4	1	7	3	19	73

Contd ...

Table 22 Contd.

HOUSES	GDR ITALY JAPAN NETHERLANDS SWEDEN SWITZERLAND						
	(1)	(10)	(11)	(12)	(13)	(14)	(15)
1. Bajaj			1	2			
2. Bangur			1				
3. Birla			3	4			6
4. Chowgule			1				
5. Godrej		1					
6. Goenka				1			
7. Harbanslal Malhotra						1	
8. J.K.			3	1			
9. Kamani					1		3
10. Kapadia			1				
11. Kasturbhai Lalbhai				3	5		1
12. Khatau					1		1
13. Kilchand Tulsidas							1
14. Kirloskar				4	3		1
15. Kothari							2
16. Mafatlal			2				
17. Mahindra and Mahindra							2
18. Modi				2			3
19. Murugappa Chettiar							
20. Naidu, G.V.			2				11
21. Naidu, V.R.			2	2			
22. Nowrosjee Wadia							1
23. Prataplal Bhogilal							3
24. Raunaq Singh							
25. Ruita				1			
26. Sahu Jain				1			
27. Sarabhai						1	3
28. Scindia							3
29. Sri Ambica (Harballav Das)							
30. Shriram			2	2			1
31. S.P. Jain				5			
32. Somaiya				4			
33. Soorajmull Nagarmull							
34. T.V.S. Iyengar				1			
35. Tata				3	1	1	2
36. Thackersey							
37. Thapar				1		1	1
38. V. Ramakrishna							
39. Walchand		1	1				2
Total		2	19	37	11	4	47

Contd.

Table 22 Contd.

HOUSES	U.K.	U.S.A.	YUGOSLAVIA	T O T A L
	(16)	(17)	(18)	(19)
1. Bajaj	5	2		11
2. Bangur	1	3		6
3. Birla	10	21		50
4. Chowgule		1	1	6
5. Godrej		1		3
6. Goenka	2	5		8
7. Harbanslal Malhotra	3			7
8. J.K.	1	3		22
9. Kamani	3	1		12
10. Kapadia	4	3		8
11. Kasturbhai Lalbhai	2	3		14
12. Khatau	1			18
13. Kilachand Tulsidas	2	6		9
14. Kirloskar	6	12		33
15. Kothari				2
16. Mafatlal	3	2		9
17. Mahindra and Mahindra	9	12		26
18. Modi		4		10
19. Murugappa Chettiar	3	5		8
20. Naidu, G.V.				14
21. Naidu, V.R.		1		6
22. Nowrosjee Wadia	11			12
23. Prataplal Bhogilal	3	3		14
24. Raunaq Singh	1	1		3
25. Ruia		1		2
26. Sahu Jain				2
27. Sarabhai	1			7
28. Scindia				4
29. Sri Ambica (Harballav Das)				1
30. Shriram	2	6		15
31. S. P. Jain		1		6
32. Somaiya				6
33. Soorajmull Nagarmull		2		3
34. T.V.S. Iyengar	4	3		8
35. Tata	13	19		48
36. Thackersey	2	1		3
37. Thapar	16	4		30
38. V. Ramakrishna		3		11
39. Walchand	7	3		27
Total	115	132	1	484

Source : Same as Table 16.

Table 23 Contd.

House	Dye-stuffs	Drugs & Pharmaceuticals	Textiles (including those Dyed, Printed or otherwise Processed)	Paper & Pulp including
	(18)	(19)	(20)	(21)
1. Bajaj				
2. Bangur				1
3. Birla				1
4. Chowgule		1		
5. Godrej				
6. Goenka			1	
7. Harbanslal Malhotra				
8. J.K.			1	
9. Kamani				
10. Kapadia			1	
11. Kasturbhai Lalbhai	1	1	1	
12. Khatau	2		1	
13. Kilachand Tulsidas				
14. Kirloskar				
15. Kothari				
16. Mafatlal	1			
17. Mahindra & Mahindra				

(66)

George Roques

Table

	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1. Paper Products									
2. Fermentation Industries									
3. Food Processing Industries									
4. Soaps, Cosmetics & Toilet Preparation.									
5. Rubber Goods									
6. Glass									
7. Ceramics									
8. Cement & Gypsum Products									
9. Glue and Gelatin									
10. Non-Scheduled Industries									
11.									
12.							2		
13.					2		4		1
14.									
15.									
16.									
17.									
18.							3		
19.									
20.									
21.				1			1		
22.							1		
23.							1		
24.									
25.	1						1		
26.									
27.						1			
28.				1					
29.									
30.									
31.									1
32.									
33.							1		
34.									
35.									
36.									
37.									
38.									
39.									

Contd ...

Source : Same as Table 16.

Table 23 Contd.

(1)	(18)	(19)	(20)
18. Modi			2
19. Murugappa Chettiar			
20. Naidu, G.V.			
21. Naidu, V.R.			
22. Novrosjee Wadia			3
23. Prataplal Bhogilal			
24. Raunaq Singh			
25. Ruia		1	
26. Sahu Jain			
27. Sarabhai		2	1
28. Scindia			
29. Shri Ambica (Harballav Das)			
30. Shriram			1
31. S. P. Jain			
32. Somaiya			
33. Soorajmull Nagarmull			
34. T.V.S. Iyengar			
35. Tata			
36. Thackersey			
37. Thapar			
38. V. Ramakrishna			
39. Walchand			
Total	4	5	12

Note : The product classification of 12 Collaborative Enterprises is categorised in the DGTD Handbook.

Source : Same as Table 16.

n/c.

India : An unpublished French Memoir by George Roques

27. ABANTI KUNDU

: Pattern of Organisation in Handloom Industry of West Bengal

Table 16 (continued)

	(21)	(22)	(23)	(24)	(25)	(26)	(27)	(28)	(29)	(30)
1.					2					
2.							2	1		
3.										
4.										
5.										
6.										
7.										
8.					1					
9.	1									
10.										
11.										
12.										
13.										
14.										
15.							2			
16.										
17.										
18.										
19.										
20.										
21.										
22.										1
23.			2	1			3			1
24.										
25.										
26.						3				
27.										
28.								1		
29.								4		
30.										
31.	3	1	2	1	5	5	9	19	1	2

32. n Agreements could not be made, because they have not been cate-

33.
34.
35.
36.
37.
38.
39.

Source : Same as Table 16.

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