

**FOREIGN CONTROL AND EXPORT INTENSITY  
OF FIRMS IN INDIAN INDUSTRY**

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### *I. Analytical background*

On *a priori* reasoning, multinational corporations (MNCs) - the major source of foreign direct investment - intrinsically have certain monopolistic advantages<sup>1</sup>, which provide them with potential comparative advantage to perform better than the rival domestic firms of a given developing country in the export of modern manufactures from that country. To put it as a general proposition, foreign control leads to relatively greater export-intensity of the firms. This general proposition, which is deduced from the new economic theories of international trade and investment, provides a rationale for the "open-door" policy on foreign direct investment in a developing country. However, it can be argued that "the theoretical case is ambiguous and needs careful empirical investigation for each particular host country" (Lall and Mohammad, 1983, p.58).

Although the literature on the subject is rich with empirical studies of different developing countries, there seems to be no clear consensus on the better export performance of foreign controlled firms (MNCs) relative to domestic firms and hence, on the positive contribution of foreign direct investment to solve the whopping balance of payments problems of most developing countries, including India. On the one hand, there are studies, which make out a strong case for foreign investment by showing the evidence of foreign controlled firms' better export performance, and on the other, there are studies which underscore scepticism in the light of the empirical findings of either superior performance of domestic firms relative to foreign firms or no significant difference between them in the export performance. The major contributions of the first category include studies by Willmore (1976) on Central America, Jo (1976) on South Korea, and Willmore (1992) on Brazil, and the second set by Lim (1976) on Malaysia, Jenkins (1979) on Mexico and Newfarmer and Marsh (1981) on Brazil. In the case of India also, there is no consensus among the scholars on the positive relationship between foreign control and export performance.

To illustrate, a study by Subrahmanian and Pillai (1979) which made a simple comparison

of the export performance of sample firms under different clusters of foreign control in three industries viz., engineering, dye-stuff and pharmaceutical has found that export intensity did not increase with the higher levels of foreign association. In fact, their study (1977) of six important engineering products has shown an inverse relationship between level of foreign investment and export intensity. Similarly, a later study by Indian Institute of Foreign Trade (1982) of the comparative export performance of MNCs and local firms spread over six industries has concluded the relatively better performance of local firms in most cases. A more recent study by Pant (1993), which has used a more complex method of OLS regression and logit models, and covered a larger sample of firms, has found no significant difference in the export intensity of foreign and domestic firms with the sole exception of pharmaceutical industry, where, if anything, the MNC's orientation towards the domestic market has been greater than the local firms. Contrary to the above findings, a study by Lall and Mohammad (1983), which has econometrically analyzed the export performance of a very large sample of medium & large firms has concluded that foreign ownership has a positive impact on export performance. Thus, a review of the major studies on India reveals that the empirical evidence available so far is fragmentary and no clear cut conclusion is arrived at on the relatively greater export intensity of the firms under foreign ownership-control.

The mis-match of the theoretical proposition with empirical findings has been explained in terms of the market distortion-effect of the restrictive policy regime of the host government in making the domestic sales more profitable than exporting and thereby, orienting the firms under foreign control towards domestic market (Horst 1971, Lall and Mohammed, 1983). Thus viewed, empirical evaluation of the positive relationship between foreign control and export performance warrants the consideration of the nature of economic policy-regime of the country.

India has been taking a flexible policy stance since the mid-eighties to harness the potential of foreign direct investment by offering specific incentives and liberalization in its investment, industrial, trade and exchange policies as well as its approach to foreign investment on a selective basis for diversifying and expanding its exports of manufactures. With the introduction of a comprehensive liberalization-package as part of its macro stabilisation and market-friendly structural reforms since 1991, the government has suddenly turned around from the "selective" approach towards opening-up the doors fully and making an all-out effort to woo

foreign investment. The aim is to exploit its "attendant advantages of technology transfer, marketing expertise, introduction of modern management techniques in the country, and export promotion." (New Industrial Policy Statement, 1991).

The logic of the new policy approach is drawn from the rhetoric of the theorized proposition that firms under foreign control by virtue of their access to parent firms' superior technology, control of world marketing channels etc., are better equipped to export than the domestic counter-parts. The available empirical evidence to the contrary in the literature are all based on studies carried out during the protectionist and restrictive policy regime in India. A study of India's recent experience is, therefore, needed to validate the theorized proposition and also to comment upon the government's turn around towards "open-door" policy. This paper is an attempt in that direction.

The paper is organized into four sections. The following section II has detailed out the methodology and the data-set used. Empirical results are analyzed in section III. And, final section IV summarises the main empirical findings.

## ***II. Methodology, data-set and limitations.***

The focus of the study is on the performance of foreign controlled (ownership) firms (hereafter, foreign firms) relative to domestically controlled (ownership) firms (hereafter local firms) of Indian industry on export front. A simple analytical method lies in a cross-sectional comparison of the relative export-intensity, defined as the ratio of value of exports to total value of output (sales), of a sample of foreign and local firms during a given period of the "liberalized" policy regime.

The delineation of the universe for sample selection, however, is a difficult task. First, foreign direct investment is concentrated in a few product-lines. Second, a certain minimum size is required for a firm to achieve success in export-markets and hence, the sample universe has to limit itself to the sub-set of large business corporations engaged in the manufacture and exporting. This means that small firms get excluded. Also, non-exporting firms should not get included in the universe. Besides, the universe should confine itself to the large firms engaged

in the manufacture of more or less similar (homogenous) products. And above all, the sample may be selected in pairs of foreign and local firms (competing firms) belonging to more or less same size-class and same degree of domestic market-power. Such a pairing procedure has the limitation of reducing the sample size, but has the advantage of the selection of a sample of equal number of foreign and local firms of similar characteristics but differing with respect to the attribute of "foreign-ness". The pair-wise sampling procedure adopted by us can be expected to serve the objectives better than the procedures of earlier studies.

The theorized proposition can be reduced to the following working hypothesis for empirical testing: The higher the proportion of export value in the total value of output - the higher the ratio of export to output - of the firm in the pair, the higher its relative export-intensity and the *vice versa*. On the basis of the frequency distribution of the number of pairs, wherein the ratio is relatively higher for foreign firms, or on the basis of the value of ratio of such firms in same product or the average value of such firms in similar product-groups (industry), some inferences can be drawn on the empirical validity of the working hypothesis.

The aforesaid methodology has the advantage of analytical simplicity but it has the risk of mixing up the influence of foreign control with other factors associated with foreign ownership. A more precise method for testing the causal relationships in the export behaviour is also, therefore, needed. For, the export performance of a firm is not simply a function of the "foreign-ness" (foreign control) *per se*; other firm-specific factors along with industry-related and country-specific factors do exert a deterministic influence. The effect of industry-related and country-specific variables can be controlled by limiting the analysis to the behaviour of firms in the manufacture and export of "similar" products from a given country. But some important firm-specific variables other than foreign-control have to be explicitly taken into account.

We have, therefore, supplemented our simple comparison approach with the estimation of a cross-section multiple regression model of the export functions of sample firms at the aggregate and important product-groups level by using the ordinary least square (OLS) method. The important firms-specific variables (other than foreign control) considered in the regression analysis include (1) capital-intensity to reflect the choice of technique (2) import-intensity to capture the quality-consciousness and (3) profitability to reflect the risk-taking ability in the

international market.

On the lines of Heckscher-Ohlin theory a firm irrespective of its ownership, would be exploiting the comparative advantage in the manufacture and exporting of labour-intensive products from a labour-surplus country like India. Given the product, however, the choice of factor-proportion (choice of technology) would vary across the firms under differing perceptions of rigidity in organizing the respective factors (e.g. labour) or policy-induced distortions in the factor market. In Indian context the choice of a production technique with higher capital/labour ratio renders some competitive advantage of real cost-efficiency to the exporting firms. Thus viewed, a positive relationship between capital-intensity and export-intensity is postulated in the regression model.

As export-performance is also influenced by product quality apart from product price, and given that the use of imported capital equipment and imported inputs has the potential to render differential advantage in terms of quality factor, a firm with higher import-intensity can be expected to stand out better than his rival in export-performance. Thus, it is postulated that export-intensity of a firm directly varies with its import-intensity.

It has been shown in some studies (Kumar 1990) that a firm with higher profitability has greater ability to operate in the riskier international market and thereby increasing its export propensity. We have, therefore, included profitability as an explanatory variable in the model. The possibility of the reverse dependency can be ignored in the case of manufactured exports from India, where export is still not a substantial proportion of the total output of the firms.

The aforesaid variables are measured in terms of the average ratios of (1) capital to output (2) import to total output value, and (3) net profit to net-worth in that order respectively and introduced as explanatory variables in the regression model. The choice of capital-output ratio rather than the more direct capital-labour ratio for measuring capital intensity<sup>2</sup> is due to the absence of information on physical quantity of labour (number of labour or labour time employed) in the data-set used for the study. The alternative method of using the total wages and salaries (Kumar 1990) as the denominator of the ratio has serious limitations in any analysis with the focus on foreign firms due to the high wage differential for the same skill or occupation across

foreign and local firms. Indeed, the use of capital-output ratio has the risk of mixing up the effect of capital intensity with labour productivity.

In the absence of detailed information on the pattern of ownership we have used a dummy variable ( 1 = foreign firms and 0 = local firms) to test for the effect of foreign ownership-control on the export performance. In conformity with the theorized proposition, a positive relationship is postulated between foreign ownership-control and export-intensity in the regression model.

The analysis is based on the data collated from the publications of the Centre for Monitoring Indian Economy relating to the larger business units in India<sup>3</sup>. Indian companies coming under the purview of Foreign Exchange Regulation Act are treated as foreign controlled companies. And among them, the ones that get included in the list of the top 500 corporate giants of India are the objects of the study. Of 64 such foreign controlled corporate giants operating in the country in 1992 two companies are not engaged in export at all and hence excluded from the sample universe. Further six foreign firms also have got excluded due to their highly diversified product-mix. The attempt at matching foreign firms with comparable local firms in the pairs on the basis of the "similarity" in product, domestic market-share and investment-size restricted the sample selection to 100 large companies distributed in 50 pairs of foreign controlled and Indian controlled giants engaged in the manufacture and export of products covered in 18 chapters of the harmonised scheme of international trade classification.

The analysis captures the average export performance of sample firms over 1990-92. The choice of three-year average eliminates the possible year-by-year fluctuations. Perhaps, the period is not representative enough to fully capture the dynamics of change in the behavioural pattern of firms under liberal policy regime. For, the change towards the real thrust and transparency of market forces, policy liberalization and globalization has started only with the introduction of economic reforms in 1991. Yet, it is reasonable to expect that observed findings on the firms' performance during the period, 1990-1992 which has had a relatively liberalized and outward-oriented policy environment capable of rendering foreign firms to exploit their comparative advantage in exporting, do provide the empirical basis for testing the theorized hypothesis.

The analysis has certain limitations arising from the small sample size, use of proxy

variables and the shortness of the period covered. Besides, by confining the scope to the large corporate giants the study ignores the import of earlier findings (Lall 1981, and Patibandla, 1988) to the effect that small firms are relatively more export intensive than large firms in the Indian context. The intention is not to belittle the role of small firms, whether foreign or local, in the promotion of Indian exports. No comprehensive data covering export performance of small firms is available from the published sources. Admittedly, our conclusions have to be read with the required caution warranted by the limitations of the analytical methodology and the data-set used in the study.

### **III. Empirical results**

To begin with the results of the simple comparison approach, we observe the pattern of distribution of sample pairs in terms of the relative export-intensity of foreign firms. (table 1). Out of the total 50 sample pairs, foreign firms show poor performance relative to local firms in majority (30 pairs) cases. Also, the average value of export-output ratio (export-intensity) of all foreign firms taken together appears lower than corresponding average for local firms: the difference between the overall average export-output ratio of foreign firms (10.11%) and local firms (11.23%) is found statistically significant. Clearly, the evidence does not support the validity of the proposition on the relatively greater export propensity of foreign firms. On the contrary, the overall result of our simple comparison approach is suggestive of the relatively higher propensity of local firms for promoting exports.

There are of course inter-industry variations. As can be seen from table 1, foreign firms have higher export-output ratio relative to local firms in scale-intensive industries like chemicals or automobiles or technology-intensive industries like industrial machinery and electronics. The higher export propensity of foreign firms is also found in the consumer good industries like tobacco or soaps, where their monopoly advantage in terms of product differentiation and brand name provide the comparative advantage over the local firms in the international market. On the other hand, local firms have performed better with higher export-output ratio in labour-intensive processing and raw material based industries like tea, food products, and metallic as well as non-metallic mineral products. It seems, a general conclusion on the influence of foreign (ownership) control on the export performance of the firms is not



warranted; industry-specific characteristics do contribute to the differential performance of the foreign firms relative to local firms on the export front.

Also, it is perhaps too simplistic to draw policy inferences merely on the basis of the observed export-propensity of foreign firms relative to local firms. We, therefore, analyze regression results of the multi-variate export functions of all firms taken together, and also of the firms in the two major groups viz., (1) chemical and (2) engineering, of India's manufactured exports. Estimated coefficients of OLS regressions for the sample firms are reported in table 2.

It may be noted that the matrix of correlation coefficients does not indicate any serious multi-collinearity problem. Also, the variables are defined in a form that can be expected to eliminate the problem of heteroskedasticity. The value of  $R^2$  in all the estimates vouch for the goodness of fit of the equations. F-values are statistically significant at 5 per cent level. Overall, the regression model employed is found adequate to examine the causal relationships of the export function of the firms.

The result for all the firms taken in aggregate shows the expected positive signs for the coefficients of all explanatory variables considered, except foreign ownership control. In particular, the significant and positive signs of variables representing import-intensity and profitability are instructive. There is a clear suggestion that the ability of firms to exploit the riskier international market, and their concern with product quality are significant factors in the export performance. The coefficient of capital-intensity is found lacking in statistical significance though it has acquired the expected positive sign. This suggests that the choice of a relatively capital-intensive complex technology *per se* is not of unique significance in the firms' export performance.

The significant result of the regression estimate is this: The coefficient of dummy variable for foreign ownership-control does not show up the postulated positive sign and also does not pass the test of statistical significance. Clearly, export-intensity is not seen positively related to foreign ownership control. In other words, the theorized proposition on the relatively greater export-intensity of foreign firms does not have empirical support in Indian context even under a liberal policy regime.<sup>4</sup> On the contrary, the negative sign of the coefficient of the dummy variable (though lacking in statistical significance) is suggestive of a relationship between foreign

control and export-intensity contrary to the one expected in the theory. By implication, foreign firms (MNCs) in general continue to exploit the domestic market in preference to exporting even during a regime of liberalization.

The foregoing conclusions also seem to be valid when the analysis is carried out at two major export product-groups viz., chemicals and engineering. The coefficient of dummy (foreign control) in both cases has taken negative sign though statistical significance is poor. The Import-Intensity appears as a positive factor in the firms export performance in both the product-groups.

The analysis of the export functions at the two major product-groups suggests the possible variations in the influence of different factors on export-intensity of firms in different industries. The analysis of firms' export behaviour at more dis-aggregated product groups is, therefore, called for. In doing so, we have been faced with the problems arising out of the small sample-size in each product-group to estimate cross-section regressions. As a practical step, therefore, the regression equations have been estimated by pooling the data for each year during 1990-1992 in the product-groups with fewer sample firms. Yet, the product-groups covered in the analysis has got restricted to the following:

- (1) food products,
- (2) pharmaceutical,
- (3) dyes and colouring materials,
- (4) soaps & similar preparations,
- (5) non-electrical machinery, and
- (6) (a) electrical machinery, (b) electronics.

Regression results of these dis-aggregated product-groups are shown in table.3. It appears that the statistical significance of a variable in influencing the firms export-propensity differs with the product-groups.

To begin with *capital-intensity*, the expected positive sign is there only in four product-groups and here statistical significance is confined to three groups viz. dyes, soaps, and electrical machinery. In the case of food-products and machinery the coefficient has taken a negative sign which is statistically significant. This implies that the choice of relatively labour-intensive techniques provides the competitive advantage to the firms in the manufacture and export of these

products.

As for *import-intensity*, the regression estimates show the expected positive sign to the coefficient in five product-groups. In three of them the statistical significance is also high. The coefficient is negative but is not statistically significant in other two cases. In general, however, the export-propensity of firms is found influenced *inter alia* by its import-intensity. By inference, the policy of export promotion in the country needs to be matched with a policy of import-liberalization.

As for *profitability*, the coefficient has taken the expected positive sign and statistical significance in four product groups viz., food products, pharmaceutical, dyes, and electrical machinery. In the product-groups, machinery, and electronics also the sign is positive though the statistical significance is poor. Only in the case of soap and similar products the coefficient has taken negative sign but the statistical significance of its value is very poor. All considered, therefore, the successful exporters require internal financial strength so as to enable their exploitation of riskier international market especially in product-groups enjoying economies of scale.

Finally, we consider the influence of foreign control on the export performance of firms by examining the sign of the coefficient of dummy (foreign firm = 1; local = 0) in the regression estimates. Interestingly, in none of the product-groups the relevant coefficient has taken the expected positive sign with statistical significance. In two product-group viz., dyes and electronics, the sign is positive but the statistical significance is poor. Clearly, our econometric analysis does not provide conclusive empirical support to the postulated hypothesis of positive relationship between foreign control and export intensity of firms. In other words, there is no clear evidence to validate the theorized proposition of the relatively higher export propensity of foreign firms in Indian industries.

Contrarily, the regression estimates have indicated negative sign to the dummy coefficient in the majority of product-groups considered though, the statistical test shows the required significance only in two product groups viz., food products and electrical machinery. At least in these two product-groups there is a negative relationship between foreign control and export

intensity. In other product-groups viz. pharmaceutical, soap, and machinery the observed relationship can be said to be negative though not statistically significant. To wit, foreign firms (MNCs) in India continue to exploit the domestic market in preference to exporting, of even products in which they have potential comparative export advantage despite, the change over in the country to a policy regime of market-friendly liberalization and transparent outward-orientation!

### *V. Summary of findings and policy implications*

We may conclude the discussion by summarizing the main findings and drawing their implications on India's current foreign investment policy. The simple approach of the comparison of export-intensity of firms in pairs of foreign and local firms shows that (1) it is not foreign firms but their local rivals that do better on the export front in majority of the cases studied; (2) the average export-output ratio of all sample foreign firms taken together is significantly lower than the corresponding figure for local firms; and (3) there is inter-industry variation in the relative export performance of firms.

The result of the more sophisticated econometric analysis has indicated that the export performance of firms even in a given product-group is related to a number of firm-specific factors. In particular, the relative export-intensity of firms in general is positively related to their import-intensity and profitability, and in some product-groups capital-intensity. Interestingly, however, the regression estimate for all the firms taken together indicates that among the factors influencing the firms' export performance, foreign ownership-control is not an explanatory variable of significance. Also, in none of the equations for dis-aggregated product-groups, the coefficient of the dummy (foreign control) is positive with statistical significance. Contrarily, the coefficient has taken a negative sign for the majority of product-groups and in at least two with statistical significance. In other words, the theorized proposition of relatively greater export intensity of firms under foreign ownership control has no empirical support in Indian industry even during a liberalized policy regime.

As expected, there is a policy facet to our empirical findings. As there is no conclusive evidence of relatively greater export intensity of foreign firms even during a period of liberal policy regime, the prescription of a general and open-door policy to woo multinational corporations (foreign direct investment) from the view point of promoting manufactured exports merits re-

consideration. There is theoretical rhetoric in the plea for globalization. But the empirical foundation of the logic of relying upon foreign controlled firms (MNCs) to expand manufactured exports is rather weak though, there may be "other" economic compulsions for India to make an all-out effort for inviting foreign direct investment.

To conclude, the induction of foreign ownership/control in the firms is not enough for achieving the broader policy goal of export growth. Also, there is no logic in the formulation of an open-door policy on foreign direct investment with a view to enhance export earnings without considering the country-specific situations on the resource endowment including those relating to infrastructure, technology and skill. A policy approach of "selective" liberalization and integration with the world economy based on the incentive structure of market may still serve the export interests of a developing country like India.

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Table 1

Export intensity (Export-Output Ratio) of sample firms in pairs

Product group	No. of pairs in which export-output ratio is higher in		Average export-output ratio of sample firms (per cent)		
	foreign firm	local firm	foreign firm	local firm	total
09 Tea	0	1	7.78	13.72	10.72
21 Food	0	3	4.88	10.27	7.58
24 Tobacco	2	0	18.37	5.99	12.18
26 Ore	0	1	57.13	88.78	72.95
27 Fuel oil	0	1	0.04	0.06*	0.05
30 Pharm.	2	8	3.92	14.37	9.14
32 Dyes	2	1	20.29	12.23	16.26
34 Soap etc	2	2	12.69*	10.84	11.77
39 Plastic	2	1	9.03	8.10	8.57
40 Rubber					
48 Paper	1	1	3.65	2.89	3.27
58 Textile	1	1	10.22	10.40*	10.31
69 Ceramic	0	1	2.74	3.23	2.99
76 Aluminium	1	1	12.93*	12.24	12.59
84 Machinery	2	4	12.49	8.06	10.53
85 Electrical	1	2	7.17	10.37	8.77
Electronics	2	1	11.67	4.88	8.28
87 Roadvehicle	2	1	7.73	5.48	6.60
All	20	30	10.11	11.23	10.67

\*t\* test showed statistically significant difference in the averages between foreign and local except where marked \*

Table 2.

OLS regression estimates							
Product	No. of cases	R <sup>2</sup>	F	Coefficients of explanatory variables.			
				capital-intensity	import-intensity	profit-ability	Dummy
All	100	0.1812	5.258	+0.2420 (1.317)	+0.30317 (2.688)*	+0.28051 (2.766)*	-0.19039 (0.764)
Chem.	34	0.521	7.912	+0.2833 (1.017)	+0.69674 (2.466)*	+0.46108 (3.719)*	-0.24838 (0.708)
Engg.	26	0.253	1.778	-0.888 (1.765)*	+0.7009 (2.303)*	+0.4677 (0.264)	-0.0639 (0.133)

Figures in parenthesis denote 't' values.

F significant at 5 per cent level

\* significant at 5 per cent level

All = All sample firms

Chem = Chemical & allied product group.

Engg = Engineering product group.

Estimated Equation

$$\log X/O = a + b_1 \log K/O + b_2 \log M/O + b_3 \log R/N + b_4 D + e$$

where, K/O = capital/output (capital-intensity)  
M/O = import/output (import-intensity)  
R/N = net profit/networth (profitability)  
D = Dummy (1 foreign firms, 0 = local firms).

Table 3.

OLS regression estimates for dis-aggregated product groups

Product Group	No. of cases	R <sup>2</sup>	F	Coefficients of explanatory variables.			
				capital-intensity	import-intensity	profit-ability	dummy
21	24	0.7022	11.202	-0.3300 (2.600)*	+0.14365 (1.223)	+0.2548 (2.655)*	-0.4355 (5.011)*
30	60	0.4775	12.569	+0.2352 (0.9640)	+1.0975 (4.888)*	+0.23083 (2.773)*	-0.6298 (0.165)
32	18	0.6706	6.618	+1.1789 (3.576)*	-0.2666 (1.046)	+1.28000 (4.166)*	+0.6018 (1.866)
34	24	0.3134	2.169	+1.4560 (2.556)*	+0.2476 (1.078)	-7.9093 (0.023)	-0.7452 (0.156)
84	36	0.3788	4.727	-1.817 (3.987)*	+0.6023 (2.194)*	+0.0186 (0.104)	-0.1066 (0.224)
85a.	18	0.7559	10.065	+1.8843 (3.545)*	-0.1654 (0.995)	+2.2268 (4.838)*	-1.5028 (4.534)*
85b.	18	0.3203	1.531	-0.2891 (0.318)	+1.5553 (2.341)*	+0.3209 (1.067)	+1.1940 (1.441)

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 Figures in parenthesis denote 't' values.

† significant at 5 per cent level;  
 \* significant at 5 per cent

21.= Food products

Chemical & Allied Products.

30 = Pharmaceutical

32 = Dyeing & colouring

34 = Soap & similar products

Engineering Goods.

84 = Machinery & mechanical

85a= Electrical machinery

85b= Electronics

Estimated Equation

$$\log X/O = a + b_1 \log K/O + b_2 \log M/O + b_3 \log R/N + b_4 D + e$$

where, K/O = capital/output (capital-intensity)  
 M/O = import/ Output (import-intensity)  
 R/N = net profit/networth (profitability)  
 D = dummy 1 for foreign and 0 for local firms



*End notes*

1. The monopolistic advantages arise out of their leadership in technological changes and innovations, ownership to patent, trade mark and other trade and investment related intellectual properties, and easy access to financial resources, modern marketing infrastructure and established foreign contacts, to say the least.

2. Some other scholars (e.g. Lall and Mohammad, 1983 and Newfarmer and Marsh, 1981) have also used capital-output (K/O) ratio as a proxy for capital intensity (K/L).

3. The publications of the Centre for Monitoring Indian Economy (CMIE) that came handy are (1) *Market and Market Shares*, 1993 and (2) *Key Financial Data on Larger Business Units*, 1993

4. Using the three-year annual average data for 1992 we have also run separate regressions for foreign firms and local firms with each equation having 50 observations. The regression results are shown below:

Type of ownership/control	Capital intensity	Import intensity	Profitability	R <sup>2</sup>
Foreign firms	+ 0.1096 (0.355)	+ 0.4748 (1.656)	+ 0.7902 (0.484)	0.10
Local firms	+ 0.4887 (1.862)	+ 0.2742 (2.491)	+ 0.4813 (3.760)	0.34

The results clearly show the differential export behaviour of foreign firms and local firms and the significantly higher explanatory power of the variables in the case of local firms. There is thus no empirical support to the proposition of the higher export propensity of foreign firms. We can proceed the analysis by running separate regressions for the disaggregated product groups, but the number of observations of foreign firms is inadequate. Hence, we continue the analysis by using the dummy variable to test for the effect of foreignness on export.

We have also estimated the regression equation for all the firms taken together using the data for 1992. The results are:

capital-intensity	import-intensity	profitability	Dummy
+0.4002 (2.105)*	+ 0.2956 (2.910)*	+ 0.2587 (3.395)*	-0.0041 (0.764)
[ No.of cases 100; R <sup>2</sup> = 0.2186 F = 6.6461* ]			

Interestingly, the coefficient for dummy (foreign control) is negative in sign but statistically not significant as is the case with the equation estimated with the three-year average data for 1990-92. In other words, the data for 1992, a year of clearly liberal policy regime, also does not give support to the theorized proposition of the positive relation between foreign control and export intensity.

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