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MULTINATIONAL CORPORATIONS AND INTERNATIONAL OLIGOPOLY: THE NON-AMERICAN CHALLENGE*

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The large scale migration of United States capital to foreign countries in recent years and the coming to prominence of the multinational corporation has stimulated a world-wide discussion about the nature and significance of this latest stage in the evolution of business organization. The purpose of this essay is to examine the problem of direct foreign business investment in its European context using a simple oligopoly model combined with data on the 500 largest industrial Corporations in the world (approximately 300 U.S. and 200 non-U.S.). Our aim is to analyze what might be termed the dialectics of the multinational corporation, the thrusts and counterthrusts of U.S. and non-U.S. corporations as they compete for shares in the world market using direct foreign investment as one of their chief instruments. Our hope is to clarify the debate on the "American Challenge," a debate which we think is in many ways a manifestation on the political level of the oligopolistic rivalry of large corporations on the business level. We also wish to draw out some of the implications of the current European policy to merge and rationalize in order to meet the "specter of the American Multinational Corporations."[1]

Servan-Schreiber's[2] analysis of the American Challenge provides a useful starting point. His analysis rests on three basic propositions. First, modern technology requires large corporations. The large corporation, because of its ability to concentrate capital and administer it effectively, is an essential requisite of growth and modernity. The parallels on this point, between Servan-Schreiber's analysis and that of Galbraith in The New Industrial State,[3] are of course obvious. Second, a country (continent)

without its own multinational corporations will become a colony. If Europe does not create corporate capitals to match the American giants it will be reduced to playing a secondary, colonial role, not just in the economic sphere, but in the political, social, and cultural spheres as well. Third, the appropriate remedy lies in positive rather than negative measures. Negative measures to restrict the inflow of U.S. corporation investment, as the Japanese have done, would in Servan-Schreiber's view, avoid the American Challenge rather than meet it. Instead he argues that positive measures are needed on a European wide basis to creat giant European corporations using advanced methods of business organization and working in close collaboration with universities and government to create an economic structure suited to modern technology.

This brief summary of Servan-Schreiber's analysis does not pretend to do justice to his views. Rather we have singled out certain key features, widely accepted in Europe and in the United States, which we feel require further investigation. The view that Europe's challenge is to emulate the United States model of industrial organization raises certain important questions for analysis and the task of this essay will be to formulate some tentative answers to them:

(i) What has been the relative performance of U.S. corporations and non-U.S. corporations in recent years and how much of an advantage has size been?

(ii) What is likely to be the impact of the European merger movement on the strength and performance of European Corporations and on the pattern

of trade and investment?

(iii) With regard to Servan-Schreiber's political analysis, how is the creation of European giant corporations likely to effect the "independence" of Europe?

I. An International Comparison Of The Size And Performance Of U.S. And Non-U.S. Industrial Corporations

(a) Size[4]

A major focus of the debate on the American challenge has been the large size of U.S. corporations. Table 1 shows the distribution of the 500 largest corporations by size of sales in 1967 and illustrates the "giantism" of the U.S. corporations. The United States accounts for about half of the industrial production of OECD countries but U.S. firms have a much larger share of the sales of corporations in larger size categories.

The phenomenon of giantism can also be seen in Table 2 which shows that the sales of the top ten U.S. corporations are about 2-1/2 times as large as the sales of top ten non-U.S. corporations but that the relative size ratio declines for smaller corporations and stabilizes at about 1.6 from the 40th largest corporations to the 200th. When size is measured by assets rather than sales, giantism, though still present, is less marked. The relative size ratio is slightly under 2 for the 20 largest firms and about 1.5 thereafter. (The differences in the sales asset ratio may reflect differences in accounting practice). When size is measured in terms of number of employees U.S. firms have only a slight size advantage.

Table 3 compares the size of U.S. corporations to the size of leading non-U.S. corporations on a country by country basis. These binary comparisons exaggerate the giantism of U.S. corporations and are of interest because countries and regions frequently compare their corporations directly with those of the United States and naturally feel overwhelmed. U.S. corporations, of course, are interested in the strength of their rivals collectively and not separately.

Table 4 shows that the relative size of U.S. and non-U.S. corporations differs substantially from industry to industry and serves as a warning against overgeneralization. In the chemical industry U.S. and non-U.S. corporations are just about evenly balanced, the large U.S. corporations are smaller than their non-U.S. counterparts while medium sized U.S. firms are a bit larger.[5] In the automobile industry, U.S. Corporations have an overwhelming size advantage over the leading non-U.S. corporations because production is much more concentrated in the United States than in Europe (taken as a whole). In addition, large scale foreign investments by the U.S. giants have enabled them to capture a significant proportion of the European market and this accounts in part the small size of their non-U.S. competitors. Other industries show variations on these two patterns.

United States corporations are thus formidable competitors. Their ability to mobilize very large amounts of capital for specific purposes gives them a great financial advantage especially in modern industries. However this advantage is somewhat overstated in the size comparisons. Since many non-U.S. corporations though operationally separate from each other

are linked through banks and financial institutions and form a corporate group not unlike the large United States corporations. U.S. corporations also appear to have a qualitative advantage in their administrative structures which gives them a certain flexibility and mobility that non-U.S. corporations do not have. In order to meet the challenge of their peculiar market, U.S. corporations had to develop an administrative structure capable of managing units spread out over an entire continent in an environment of rapidly and continuously changing markets.

Their answer - the national corporation (circa 1900), the multi-divisional corporation (circa 1920), and now the multinational corporation,[6] involved enlargement of the corporate brain and the development of business administration as a specialized profession with its own elaborate division of labour and its own system of education. The U.S. corporations thus represents a very highly developed form of capital (where capital is defined in the businessmen's sense of a concentration of wealth combined with the ability to use it for productive activities) and it is no wonder that European business enterprises wish to emulate it in size and organization. But as we shall see, it is not sufficient to point to the large size of the U.S. corporation, the apparently smooth functioning of its mechanism and its ability to defend itself in international competition to establish its superiority as a mechanism for organizing economic activity to meet today's problems.

(b) Performance

Size comparisons by themselves are of little importance. What interests

us is performance. The available evidence on the growth of industrial corporations in the ten years following the formation of the common market (1957-1967) shows that U.S. corporations have not been outstripping their rivals in recent years. Rather they fell behind from 1957 to 1962 and only managed to keep pace between 1962 and 1967. Table 5 shows a shift in the relative size ratio against U.S. corporations between 1957 and 1962, and an approximate stabilization thereafter. Table 6 indicates that this pattern holds for nearly all industries. There is thus a sense in which the U.S. corporations have been challenged rather than challenging.

To what extent was size an advantage in international competition during this period? To help answer this question a regression analysis was performed relating the data of growth of a corporation to its size, nationality and industry. The size of a corporation, S, was measured in terms of its sales at the beginning of the period. The growth rate, g, was measured by the average annual percentage change in sales over the period.[7] Country and nationality were indicated by a set of dummy variables, C_i and I_j, where $C_i = 1$ for a firm from country and i and o otherwise, and $I_j = 1$ for a firm from the j^{th} industry and o otherwise.

For econometric reasons it was necessary to exclude the dummies of an arbitrary country (The United States) and an arbitrary industry (Miscellaneous). The basic estimating equations were then of the following form where a_1 is coefficent of the country dummy variable for the U.S. and b_1 is the coefficent of the industry dummy variable for the Miscellaneous industry.[8]

$$g = \text{constant} + \sum_{2}^{m} (a_i - a_1) C_i + \sum_{2}^{n} (b_j - b_1) I_j + eS + f S^2 + u$$

The sample for 1957 to 1962 and for 1957 to 1967 consisted of the 100 largest U.S. and the 100 non-U.S. corporations. The sample of the second period 1962 to 1967 consisted of the 500 largest corporations, approximately 300 U.S. and 200 non-U.S. (A number of firms dropped off the Fortune list during the period and so the actual number of firms which could be used were 188 for 1957-1962, 438 for 1962-1967 and 178 for 1957-1967). The main results are presented in Table 7. For simplicity the constant term and the coefficients for industry dummies have been excluded, as they are not relevant to the hypothesis under test. Three regressions are presented for each period; first excluding the size variable altogether, second including it, and third using a logarithmic form. Regressions were also run separately for major industries, but the results are too long and involved to be presented here. For the moment we merely note that the main conclusions of Table 7 were broadly corroborated by the industry studies. We might also mention that the results were unaffected by additional tests involving changes in the sample, in the function fitted, and in the methods of estimation.

The first important feature to emerge from the investigation is the significant relationship between size and growth. The coefficients are negative for S and log S, and positive for S^2 and $(\log S)^2$. This indicates a U-shaped relationship in which size has a negative effect first and then a positive one. The exact strength of the upward twist is not well established and differs substantially according to whether we use the

parabolic equation, [f (s) = constant + eS + fS^2] or its log equivalent [f (S) = constant + e log S + f log S^2]. In the former case for example the turning point occurs when a firm's sales reach 8 billion dollars (according to the 1962 to 1967 equations): While in log form, the turning point occurs at sales of 3.2 billion dollars in this period. However, in 1962 there were only 3 corporations whose sales exceeded 8 billion dollars (all from the U.S.) and 9 corporations whose sales exceeded 3.2 billion (7 from the United States). In the earlier period, 1957 to 1962, the turning points are 5.4 for the parabolic firm and 3.8 for the non-parabolic firm and the number of firms which sales exceeded these figures were 4 (3 from the United States) and 7 (5 from the United States), respectively. The upward twist therefore applies only to a handful of giants. For the rest of the sample the relationship between size and growth is clearly negative.

An examination of the residuals suggests that even this upward twist may be an illusion caused by the types of curve we have fitted. Indeed for the period 1962-67 the industry regressions show a negative relationship between size and growth rate over the whole range.

The Second important conclusion of the regression analysis is that nationality has frequently been a significant variable in explaining the growth rates of firms. This is because many firms are national rather than multinational and their fortunes depend very much upon the countries to which they are attached. Recalling that the coefficients measuring the country effects in Table 7 refer to the difference between the growth rate of companies based in a particular country and that of the United States, we

note first that these coefficients are mainly positive from 1957 to 1962 and mainly negative from 1962 to 1967. This indicates a country effect or common factor for U.S. firms that was disadvantageous in the first period and advantageous in the second.

Surprisingly, when the regressions for 1962 to 1967 were run for a reduced sample of the 178 large continuing firms (i.e., those firms that were among the 100 largest U.S. or 100 largest non-U.S. firms in 1957 and were still on the Fortune list in 1967), the country coefficients were uniformly higher in nearly every case. This indicates that non-U.S. corporations held their own better in the middle and large range than they did in the smaller range. To put this another way, small U.S. corporations had some advantageous factor in common so that they performed better as a group than predicted by our equations relating size to growth.

As for other countries in the first period it was disadvantageous to be a British or Canadian firm, relative to the U.S., but this disadvantage was removed in the second period when the country affect came to closely approximate that of the United States. Germany and Italy showed the opposite pattern to the United States; a relatively strong positive country effect in the first period that disappears in the second; (in the case of Germany it becomes strongly negative). Finally the Japanese country effect as expected, was strongly advantageous in both periods.

Before we apply these empirical findings to the second and third questions raised in the introduction, we should perhaps stress their tentative

nature. A number of empirical studies on the effect of size and growth have been conducted for samples drawn from within a country and these in general have concluded that there is little correlation between size and growth.[9] Since the problem of sorting out the effects of size, industry and national is difficult and complex, our experiments far from exhaust the possible interrelationship which can be tested. However it is clear that the data do not support the view that size has been an advantageous, much less a crucial, factor in growth during the first decade following the establishment of the common market.

II. Dialectics of the Multinational Corporation (1957 to 1967)

If the U.S. corporations did not grow faster than their European and Japanese rivals where did the notion of the "American Challenge" come from? We suggest it was due, in part at least, to myopia. Europeans felt threatened because they saw U.S. corporations gaining an increased share of the European market. They paid little attention to the fact that, in the world market taken as a whole, U.S. corporations were themselves being threatened by the rapid growth of common market and the Japanese economy and required a rapid expansion of foreign investment to maintain their relative standing. To understand the divergent views on who is being challenged and who is challenging, it is useful to distinguish between Gp, the growth rate of the U.S. parent firm (including its subsidiaries), Gs, the growth rate of its subsidiaries, and Ge, the growth rate of non-U.S. firms. The stylized facts of the period were something like the following:[10]

$$Gs > Ge \geq Gp$$

European firms compared Gs to Ge and felt they were being challenged. U.S. multinational corporations compared Ge to Gp and also felt a challenge. The fact that both parties could feel challenged stemmed from the difference in the horizons of national and multinational corporations. Multinational corporations see the world as their oyster and judge their performance on a world-wide basis. They look to their global market position. National or regional firms keep their eyes close to the ground and concentrate on their share of particular sub-markets. Thus the same phenomenon appears different according to the eyesight of the beholder. To the short-sighted European firm, whose markets are mainly European, U.S. investment seems to be an aggressive move to dominate Europe. To the long-sighted American firm, on the other hand, this investment appears to be a desperate attempt to defend its existing world share and keep up with the dynamic Europeans.

A more interesting interpretation of the ten years between 1957 and 1967 would recognize that a firm can be challenging and challenged at the same time just as a military strategy can be both offensive and defensive. The rapid growth of the common market and Japan in the fifties challenged the dominance of the U.S. giants who responded with an aggressive policy of foreign investment. Their great strength, their past experience with continental and multinational markets, plus the open door policy of European governments made this counter-strategy successful.

This invasion of Europe threatened the position of European firms who have now begun their countermeasures. The threats, of course, have not been felt evenly. The United Kingdom, for example, seems to have felt less challenged

than other countries even though U.S. penetration of the U.K. is far higher than for the continent. This is because linkages are well established and because many leading British firms are themselves multinational and think in terms of world markets. Japan also did not feel as threatened as other countries but for different reasons. By virtually prohibiting foreign investment, the Japanese government reserved its rapidly growing market for its own firms and frustrated the attempts by U.S. corporations to redress the imbalance caused by the Japanese challenge. This has created considerable tension and may soon have to be modified as Japanese corporations encounter increased resistance to their penetration via exports.

What about the next round? It is a foregone conclusion that Europe will follow (is following) the policies advocated by Servan-Schreiber. The European merger movement is well under way and nearly all European governments are actively taking positive measures to strengthen their large corporations. Negative measures are out of favour, in part because they are unworkable in the context of the common market, where an American firm denied entry to one country can always locate in another and penetrate the forbidden market through exports. Unanimous agreement is therefore required but is not possible due to divergent interests and outlook. In any case, by now the die is cast, since all of the top U.S. corporations have staked their claim in the European economy.

Where will the positive measures lead? There is no reason to believe that newly enlarged European corporations will increase their rate of growth merely

because of their increased size. On the contrary, the data of the past decade indicates that most mergers will slow down the rate of growth.

With the exception of the very largest firms, for which there does not seem to be any well-established relationship between size and growth rate, most firms are located on the downward sloping part of the curve where the larger their size the slower their growth. These equations for 1957-67 may well not apply to the future: but taking into account the numerous other studies on the relationship between size and growth cited above, we can predict with some confidence that an analysis in 1977 or 1987 of the growth rates of firms will at least not show any positive relationship between size and growth.

The European merger movement is ,however ,likely to result in a crucial qualitative change in the nature of European business. By increasing the average size of European firms it will make them less regional in outlook and more mutinational, with the result that they,like American firm,will invest heavily overseas. Amongst the most important reasons for this change are:

(1) Mergers and rationalizations will lead to corporate reorganization and the creation of new administrative structures more akin to those of the American corporation and better suited to multinational expansion. Or, to put the matter differently, as European firms increase in size and complexity their administrative 'brain' will increase more than proportionately and their attention will focus not so much on national or European markets but on the world as a whole including the United States market itself. In a sense, the vision of a firm depends on the height of its head office building.

(2) Greater financial strength will enable European firms to invest more overseas. Investment in a foreign country often involves a more direct challenge to established firms than does exporting. Firms which were previously prepared to tolerate some competition in the form of exports may not be willing to tolerate direct investment. To protect themselves against what they consider to be a policy of aggressive expansion, they may attempt to drive the intruder out of the market before he gets too strong. The outcome of this struggle is likely to depend upon the relative financial strengths of the established firms and the firm attempting to increase its market share by investing, which in turn depend upon their relative sizes.

The financial resources associated with size confer other advantages on the big firm. It can buy its way into markets by taking over local firms. It can afford to take risks. For a firm the size of the American giants, with a capital of billions of dollars, the purchase of an overseas plant costing say twenty million dollars may be a relatively minor affair. For a firm with a capital of millions of dollars this plant would be a major undertaking to be contimplated only if it was fairly sure to succeed. Thus the smaller firm must be cautious where the bigger firm can afford to experiment.

(3) By consolidating the overseas sales of European firms, mergers will make them better able to establish subsidiaries of an efficient size. In any particular market a big firm is likely to have actual or potential sales larger than those of a small firm, either because it is already

selling more in the form of exports or because it can afford to finance a costly promotion and distribution programme for its products. Equally it can afford to establish a large and efficient subsidiary which can produce the output necessary to satisfy this larger market. From the point of view of both supply and demand the big firm is therefore better able to produce on an efficient scale.

As a hypothetical example, consider the case of four European firms, each with actual or potential sales of twenty millions dollars in the United States. At this level it may be hopelessly inefficient to produce locally, and therefore they export from their domestic plants. Suppose they now merge. Then the resulting firm will have actual or potential sales worth eighty million dollars - a significant share of the American market - which may be high enough to justify setting up a local subsidiary.

A brief examination of the relevant statistics supports the view that size is a major determinant of overseas investment.[11] In 1957, out of 1,542 firms with investments overseas, 15, each having foreign assets worth over 100 million dollars, accounted for 35% of total American manufacturing investments abroad. Together with 64 others having investments worth over 25 million dollars each, they accounted for 69% of the total, leaving 1,463 firms to share the remaining 31%.[12] In the British case the big investor is equally dominant. Some 46 firms, most of them large, accounted for 71% of manufacturing assets overseas in 1962, and 3 firms owned virtually all petroleum assets overseas.[13] Between them they accounted for around 83% of all British investments in petroleum and manufacturing combined.

The role of investment in the expansion of American and European firms in each other's markets is well illustrated in Table 8 which shows the local production of foreign-owned subsidiaries in manufacturing and petroleum (P) and the exports (X) of various countries. Although some of the figures are rather rough estimates the broad pictures they reveal is accurate. Three European countries - the U.K., the Netherlands, and Switzerland - account for about nine-tenths of the sales of all European subsidiaries in American manufacturing and petroleum. These sales are roughly twice as much as the total exports to the United States of these three countries combined. By contrast, other European countries rely mainly on exports to serve the American market, and of these the most striking is Germany, whose firms exported twenty times as much in 1966 as they produced in the United States.

As a result of investment, firms of the first group have been able to maintain a clear lead in the American market over other European firms. Despite an impressive growth of exports to the United States, which doubled in nine years, by 1966 German sales were still only a quarter of those of the first group. Moreover, the absolute gap increased dramatically as this group's sales increased by over 4 billion dollars as compared to 1.4 billion for Germany and 0.4 billion for France.

It is clear that if French or German firms wish to establish themselves extensively or even securely in the American market they will have to invest heavily, something they have not yet done.[14] Why have they not done so? After all, the American market is important to them, as their export performance shows.

More to the point, they have been investing heavily in other countries as Table 9 shows. During the years 1961-64 German firms invested an average of 220 million dollars a year abroad and French firms an average of 100 million, compared to which their investment in the United States looks trivial - an average of 5.5 million dollars a year for the Germans and 9 million for the French.

Part, if not the whole, of the answer lies in the small size of French and German firms, particularly in those areas where European investment in the United States has been heavy. Using the sectoral distribution of investments in 1959 as a guide, we find that the bulk of them lie in areas where firms of the U.K., the Netherlands, and Switzerland have a clear lead over other European firms and are of a size comparable to the American giants.[15] Unilever (Anglo-Dutch), Nestle (Swiss) and British-American Tobacco (British) are many times larger than other European firms in their sectors of food and household products and are about the same size or even larger than their American rivals. In petroleum Royal Dutch - Shell (Anglo-Dutch) and B.P. (British), which has recently begun a massive expansion into the United States, are several times larger than other European firms. In pharmaceuticals, a comparatively small-scale industry, Switzerland has the only four specialist companies on the Fortune list of non-American firms. In rubber and paper British firms are the biggest in Europe and rival the Americans, and in electrical goods the Netherlands has the largest non-American firm. Of course, there are exceptions. Switzerland, for example, is mentioned by the U.S. Department of Commerce as having investments in the electrical industry, yet the largest Swiss firm is only fifth in Europe. But on the whole the correlation holds up fairly well.

In industries where the three countries are not European leaders - iron and steel, machinery, automobiles - their firms are fairly small in comparison to American firms and they tend not to invest in the United States. Even the apparent exception of chemicals, where British ICI is the largest in Europe (excluding Unilever) and relies on exporting, reinforces our argument, for ICI is planning to expand rapidly in the United States from its comparatively small base in artificial fibres.

As it stands,this all leaves the question of causality open, for it would be possible to argue that these firms are giants because they invest in the United States rather than the other way around, and that if European firms merge to become giants there is no reason to assume that they will follow the same path and also invest in the United States. If the European giants produced a third, a half or more of their output in the United States this argument would be plausible, but they do not. Over the last decade, for example, Unilever has never produced more than a sixth of its output in the American continent as a whole, both north and south. Even British-American Tobacco, perhaps the most dependent on its American investments has only a third of its assets there. We can conclude, therefore, that as a rule the causality runs from giant size to investment in the United States at least as strongly as it does from investment to giant size. In cases such as ICI or BP,which are just beginning to invest seriously,the causality is clearly far stronger in the size to investment direction. This is not to deny that overseas investment does not or will not play a crucial part in the growth of large firms, particularly in the case of small countries

such as Switzerland or the Netherlands. On the contrary, the most common path for European firms may well be domestic growth on the basis of home sales and exports up to the point where they are well enough established in foreign markets and financially strong enough to consider foreign investment. At first they begin by investing outside America in markets which are easier to enter. Eventually, when they have gained the experience, created the organizational structure, and, perhaps most important of all, gained the extra financial strength necessary, they invest in the United States.

Clearly most European firms are still at the first or second stage. Either they have not invested abroad at all, or are investing outside of America. Mergers, by adding to their financial strength and consolidating their foreign sales, will enable these firms to accelerate the first and second stages or even to skip the intermediate stage so that they go straight from home protection to investment in the United States. Rather than labour this point any longer, we shall assume that the European merger movement will result in both heavy overseas investment outside the United States, and in the slightly longer run in the United States itself.

How will U.S. corporations react to the challenge of outward investment by European firms? U.S. corporations have also been undergoing a large merger movement which may have maintained or increased their relative size. Since U.S. corporations are large and powerful there is no reason for them to accept a lower rate of growth. Moreover, precisely because they are the dominant firms, they must worry about losses in relative position and be prepared to adopt defensive measures when threatened. Although they might be

willing to accept a loss of a few points in their market shares to a large number of medium and small rivals, they are not likely to regard even a small loss to a rival European giant with equanimity. Thus, the merger movement makes it even more likely that they will do everything in their power to maintain the same rate of growth as non-U.S. firms: as their resources and skills are very great they are likely on average to be fairly successful in this effort. European firms will have the advantage at first of great government support, but if the world balance is threatened the United States government can be counted on to come to the rescue of its corporations.

The American response is likely to assign an even greater role to increased foreign investment. For one thing it is very costly for a dominant firm to resist incursions into its own market by serious rivals (since the loss caused by a 1% reduction in price is greater for the establishment firm than for the new entrant). Equally European attempts to gain a foothold in the U.S. market are also likely to be successful for it will be easier for the U.S. corporations to counterattack abroad, and to meet inward foreign investment with outward foreign investment. Indeed, U.S. corporations might even welcome an exchange of markets since it will create a better world-wide environment for multinationalism. Another factor is that the growth of the U.S. economy may slow down, if the new Republican Administration adopts a deflationary monetary and fiscal policy over the next few years. To maintain their world position U.S. corporations would have to expand even more rapidly abroad in order to compensate for their slowly growing home base. A slowdown in the growth of the U.S. market will

present less of a problem to non-U.S. firms because they start from a smaller base. Investment in the U.S. would likely continue and combined with deflationary policies would improve the U.S. balance of payments and facilitate the outward migration of U.S. capital. Finally, added pressure to invest abroad comes from the fact that U.S. corporations will not be able to stand idly by and allow Europeans to capture important markets in the underdeveloped countries or in the communist countries.

We can therefore expect a period of intensified multinationalization (almost amounting to capital flight) over the coming decade as both U.S. corporations and non-U.S. corporations try to establish world-wide market positions and protect themselves from the challenges of each other.[16] The cross-penetration implied by the simple oligopoly model we have just described has as its logical end a stable equilibrium where all of the dominant oligopolists have similar world-wide distributions of sales. This logical end is not likely to be achieved in practice but the following equations are useful device for illuminating current tendencies.

$$S_1 = a_{11} \ Y_1 + a_{12} \ Y_2 ,$$

$$S_2 = a_{21} \ Y_1 + a_{22} \ Y_2 ,$$

where S_1 equals the aggregate sales of the "dominant" U.S. corporations; S_2 equals the aggregate sales of the "dominant" non-U.S. corporations; Y_1, the size of the U.S. market; Y_2, the size of the non-U.S. market; and the a_{ij}'s represent the share of a firm from country i in the market of country j

(obtained either through exports or local sales). The stylized fact of the present world structure of industry is that a_{21} (the European share in the U.S. market) is very low. Hence if Y_2 grows faster than Y_1, non-U.S. corporations will grow faster than U.S. corporations, unless Americans increase a_{12}. As we suggested above, this perhaps describes the period 1957 to 1967 in a rough sort of way. The increase in a_{12} and the slowing down in the rate of growth of Y_2 has threatened European firms and led them to take steps which increased a_{21}. This in turn we suggest will lead American firms to further increase a_{12}. As this dialectical process unfolds, the world distribution of sales of American and European firms will tend to approximate each other more closely. As $\frac{a11}{a12}$ approaches $\frac{a21}{a22}$, relative size S_1/S_2 becomes less and less affected by differences in the rate of growth of Y_1 and Y_2. In other words, corporations of both centers will come to experience similar rates of growth regardless of whether Europe is growing faster than America or America is growing faster than Europe. But this solution to the "American Challenge" on the level of oligopolistic competition will not remove conflicts at the political level. A breaking of the link between corporations and countries will create conflicts between the private and public interest and between one nation and another that are difficult to resolve. In the next section we turn to these more intractable and more important problems.

III International Capital and National Interest

The concept of the "American Challenge" as a diagnosis and prescription of Europe's current predicaments is in large part a myth resting on an exaggeration of the prowess of the large U.S. corporation and a myopic view of the dynamics of international competition. It is in fact one of the guises for a new form of protectionism and as such is an attempt to identify the national interest with the interest of certain dominant firms. The instruments of this neo-protectionism differ from those of the old. Instead of tariffs to preserve the domestic market for national firms, businessmen are asking for positive help to penetrate foreign markets. The theme,however,is the same; the growth of a certain sector of private business is elevated to a national goal and the economic problems of the entire country are viewed from a particularly restrictive vantage point.

Our analysis suggests that the main result of the strategy of "positive measures" to help large firms will be to change European business qualitatively towards multinationalism, rather than to raise the relative growth rates of European firms.

The increased multinationalism that follows increased size, by the weakening link between country performance and company performance, will help to equalize growth rates of firms of different nationality and make it easier for U.S. corporations to maintain their position.

If the goal were to develop a strong national business sector, it would probably be better to follow the Japanese example of fostering the growth of

the internal market, restricting inward investment, and penetrating foreign markets through exports rather than investment (though this policy,too,has its limitations). The present strategy will strengthen a few very large corporations but divorce their interest from that of the national economy, and may well have a negative effect on international trade,as corporations concentrate on foreign investment rather than exports. For example, the data from the Reddaway Report (Table 10) covering the 15 countries which receive most British direct foreign investment show that the big investors produce locally twenty times as much as they export. Furthermore their exports to these markets have fallen by 7% whereas their local production has risen by 62%. In the same period, the exports of other British firms which did not have local foreign investments have risen by 42%. It seems inconceivable that the big investors, if not allowed to invest overseas, could not manage to raise their exports well above the £106.2 million that they presently export. More work is needed for other countries, but this example should serve as an illustration of the difference between policies to maintain a corporation's shares of the world market and policies to maintain a country's share.[17]

What will be the overall effect on economic performance and political independence of a world of multinational corporations, some from one side of the Atlantic, some from the other, (and perhaps a few from the underdeveloped world)? We can here provide only the briefest summary of various approaches.

The United States anti-trust tradition, as exemplified by Kasyen and Turner[18] for example, would tend to view the current wave of national and

international mergers and take-overs suspiciously, just as this tradition viewed with alarm the merger movement in the U.S. at the end of the 19th century. At that time the growth of the national corporation led to great concern in the agrarian and small business sectors about "the fate of small producers driven out of business or deprived of the opportuning to enter it by 'all-powerful aggregates of capital'," and about "the power of monopolies to hurt the public by raising prices, deteriorating products, and restricting production"; while on the political side, "concentration of resources in the hands of a few was viewed as a social and political catastrophe," a belief, as Kaysen and Turner point out, "which can be rationalized in terms of Jeffersonian Symbols of wide political appeal and great persistence in American Life: business units are politically irresponsible and therefore large business units are dangerous." The anti-trust tradition would argue for competition rather than size to obtain efficiency and innovations and would resolve doubts "in favor of reducing market power rather than maintaining it." These political forces,however,had little influence in the U.S. As Mason points out in his preface to Kaysen and Turner, "the battle against size was lost in the merger movement at the turn of the century."[19] Similarly the battle against size on the international plane is being lost in the current international merger movement,and international anti-trust is not likely to challenge the resulting size structures in any serious way. Indeed, it is supporting them.

International trade economists have in general been less concerned about the dangers of high concentration and oligopoly,and have welcomed the free flow of capital as a device for integrating the world economy. They have

stressed the advantages of scale and argued that the multinational corporation, because of its organizing ability, will be a powerful force in allocating capital efficiently, and spreading technology from advanced to less advanced countries. They welcome an industrial structure where large firms span the entire world producing each component in the country where costs are lowest and making technical advances and product innovations quickly and evenly available throughout the world. Their suggested model is perhaps the United States economy, where major firms are spread over most of the country and take advantages of differences in relative supplies of labor, capital, or natural resources. On the international plan, the prototype is perhaps United States - Canadian integration, which, symbolically speaking has proceeded on North South lines, i.e. pairing of Canadian enterprises with their counterparts to the south, rather than on East-West lines, i.e. co-ordination with Canada of the various parts of its economy.

Socialist economics also stresses the advantages of scale in keeping with Marx's analysis of the increasingly social nature of production (including the increasingly social nature of management). However, it does not always agree with the international trade approach on the way in which capital should be concentrated and centralized. Whereas the trade approach argues for coordinating one industry across many countries, socialist economics points to the advantages of coordinating many industries within one country. It thus argues for combining oligopolies to form monopolies (because it views the choices offered by oligopolistic product differentiation as usually meaningless and sometimes harmful); for combining industries to harmonize complementary and

competing sectors, and of course for central planning to provide overall coordination of all enterprises. Most important, it stresses the need for political control of economic decision makers. This implies that the boundaries of an enterprise should be contained by the boundaries of the political unit, since enterprises which extend over several untis can escape political regulation by any one unit (on this argument the conglomerate enterprises should perhaps be organized on regional rather than national levels in order to be more sensitive to local requirements).

Since the multinational corporate system is the prevailing one, we might spend some time discussing it in more detail and especially its relations to nation-states. George Ball has put the case for the withering away of the nation-state most succinctly:

> "the structure of the multinational corporation is a modern concept designed to meet the requirements of a modern age; the nation-state is a very old-fashioned idea and badly adapted to serve the needs of our present complex world."[20]

The idea behind this point of view, as expounded by Sidney Rolfe[21], for example, is that the phenomenal progress in communications and transportation have created an interdependence of human activity that renders national boundaries obsolete. All countries, the U.S. included, "the conflict of our era is between ethnocentric nationalism and geocentric technology." The multinational corporation is modern because it is the first of the major institutions to grasp the significant fact that "history is not of the essence here, evolution is," and "what the world faces is <u>le défi international rather than le défi Américan</u>."

This argument contains a strong element of technological determinism, and in our view greatly oversimplifies and perhaps badly mistakes the trends of the modern world. Although it is quite true that modern world technology makes it possible to coordinate production and marketing on a global basis, it is also true that modern communications make centralized planning within one country possible. Moreover, the high productivity of the new technology allows countries greater scope for national independence, since it becomes far less urgent to concentrate on economising scarce resources. Most important, improved communications make it easier for small regions and units to obtain the most advanced knowledge quickly and cheaply without formal institutional lines of communication. This provides increased scope for independence and re-enforces polycentralism rather than centralism. It is not at all clear that heirarchal authoritarian corporate structures are well suited to this environment. In an age when it is possible for every nation or city to be almost instantaneously in communication with every other nation or city, the technological distinction between hinterland and centre disappears, though it can still be maintained by political or economic institutions. In short, the options available under the new technology are much wider than those suggested by the proponents of the multinational corporation and it is unjustified to foreclose debate at this time.[22]

Whatever the force of technology, it is clear that the growth of multinational corporations, by itself, tends to weaken nation-states. Multinational corporations render ineffective many traditional policy instruments, the capacity to tax, to restrict credit, to plan investment, etc., because of their

international flexibility. In addition, multinational corporations act as a vehicle for the intrusion of the policies of one country into another with the ultimate effect of lessening the power of both.[23] These tendencies have long been recognized in dependent underdeveloped countries, but it now also evident that even the United States, as a nation-state is losing some of its "independence" as it attempts to cope with the tangled web woven by its international business.[24]

The battle, however, is far from over. Nation-states are powerful and are not likely to die easily. Merely to ask which institution one expects to be around 100 years from now, France or General Motors, shows the nature of the problem. Moreover, the implication of Ball's point of view is that the United States must also wither away as a nation-state.[25] How exactly this is to occur is, to say the least, not clear. The growing feed-back operations of U.S. corporation on the United States has already created considerable difficulty and can be expected to lead to increased attempts by the American state to control its corporations. Other countries will also try to control the eroding forces of multinational business. Even the government of Canada, which for unique reasons has been less resistant to giving up "independence" for foreign investment than other countries, has stopped short of full integration, and has, for example, used tariffs to interfere with corporate rationalization.

Nation-states and nationalism have in many ways been powerful supports of capitalism, for they have created the group solidarity which enabled the system to survive. In a private enterprise system, some win and some lose,

and a national government with the power to redistribute income and wealth is needed to convince losers to allow the game of competition to go on.[26] The manner of giving subsidies to the losers (e.g., price supports to farmers) has often been inefficient and has been subject to much criticism by economists; but this is not the same as saying the corporations can do without a strong nation-state to deal with the problems of the business cycle, social security, unemployment, unbalanced regional growth, labor unrest, attacks on property and order, etc. If, for example, all countries lost their power of fiscal and monetary policy, as some observers believe Canada has, how would aggregate demand be stabilized? Or does multinationalism do away with Keynesian problems?

Hence the multinational corporations require multinational states. It is Utopian to think that this will come about quickly enough to permit the full flowering of international business. It might be possilbe to stagger toward some level of co-operation at a higher plane on monetary and fiscal policy, tariff policy, and anti-trust policy, but the degree of success will be limited. A most important obstacle to supranationality stems from the fact that many of the most important government policy instruments require patriotism to be effective. From the moral suasion exercised by governments on banks, to the voluntary guide lines established for capital flows, wages, and prices, to the demand for honesty in the payment of taxes, the government depends upon voluntary compliance by the majority of its citizens in order to operate effectively. Group loyalty of this kind does not exist at an international level. There does not yet seem to be any effective replacement

for the nationalism that has in the past helped to dissolve class conflict and maintain social cohesion (witness how effectively patriotic sentiments have been used by Western governments to blunt the edge of social discontent during periods of economic hardship such as the years of post-war reconstruction).

In a regime of multinational corporations and weak nation-states, difference will become accentuated and will lead to international alliances and federations parallel to the multinational corporation.[27] And even if a strong world federal government could be established, many problems can only be solved at the national and local level. If nation-state governments are too greatly weakened,the model for the future may be the urban crisis, where strong national corporations confront weak city governments. In short,there is a conflict at a fundamental level between national planning by political units and international planning by corporations that will assume major proportions as direct investment grows.

In conslusion,we may return to the question raised in The American Challenge about the danger of Europe becoming a colony. Servan-Schreiber is perhaps correct that in the world of multinational corporations it is better to have some of your own than to have none at all.This does not,however,mean that European Multinations Corporations will enable Europeans to control their future. Instead,difficulties arising from the internationalization of wealth may well inhibit Europe's ability to cope with its internal problems and, in this regard, the problems faced by the United Kingdom in reconciling international finance and the national interest should serve as a warning (as should the current problems of the United States). The problem of colonialism is not

really a European problem since European business, despite Servan-Schreiber's analysis, is strong,not weak. Colonialism is the problem of the underdeveloped countries,where both state enterprise and private capital are very weak and are in no way a match for the powerful business organization of the advanced world. In the coming competition between European and U.S. corporations, the markets of the third world will be an important battleground,because the stakes will be not only the limited markets of Africa,Latin America and Asia,but oligopoly equilibrium in the developed world itself. The lesson of Europe's past colonialism is that the harm it did to foreigners was not matched by benefit to itself (i.e, by a benefit to the country as a whole rather than to a particular group). Indeed,the nation was often called upon to sacrifice in order to maintain imperial connections benefiting only a few. Partly because of this, there is a tradition among some English economists of challenging the advantages of foreign investment (Keynes).[28] In following that tradition rather than the more prevalent one,that assumes international movements of capital to be guided by an invisible hand to improve human welfare, we are in no way suggesting policies to stop multinationalization, since we believe it to be foregone conclusion. Our aim is to point out some likely consequences and contradictions of the laws of international industrial reorganization, as we see them. The propensities of multinational corporations to settle everywhere and establish connections everywhere is giving a new cosmopolitan nature to the economy,and policies to deal with it will have to begin from that base.

TABLE 1

THE SIZE DISTRIBUTION OF LARGE INDUSTRIAL CORPORATIONS

SIZE CLASS OF SALES (million of dollars)	CUMULATIVE NUMBER OF FIRMS							CUMULATIVE SALES						
	1957		1962		1967			1957		1962		1967		
(1)	US (2)	NON US (3)	US (4)	NON US (5)	US (6)	NON US (7)	US as % of TOTAL† (8)	US (9)	NON US (10)	US (11)	NON US (12)	US (13)	NON US (14)	US as % of TOTAL (15)
19,999 to 26,005	–	–	–	–	1	–	100	–	–	–	–	20.0	–	100
15,345 to 19,999	–	–	–	–	1	–	100	–	–	–	–	20.0	–	100
11,724 to 15,345	–	–	1	–	2	–	100	–	–	14.6	–	33.3	–	100
9,033 to 11,724	1	–	2	–	3	–	100	10.9	–	24.2	–	43.8	–	100
6,931 to 9,033	2	1	3	–	4	1	80	18.8	7.4	32.3	–	51.5	8.4	86
5,318 to 6,931	3	1	3	1	7	2	78	24.6	7.4	32.3	6.0	68.9	13.9	83
4,080 to 5,318	5	1	4	2	9	2	82	33.3	7.4	37.0	10.1	78.2	13.9	85
3,131 to 4,080	6	2	7	2	12	2	86	36.9	10.8	47.7	10.1	89.2	13.9	86
2,402 to 3,131	11	2	11	3	28	5	85	50.2	10.8	58.2	12.6	133.4	22.0	86
1,843 to 2,402	16	4	20	4	37	10	79	60.5	14.9	76.6	14.6	153.0	32.8	82
1,414 to 1,843	22	5	29	8	50	18	74	69.9	16.5	91.9	21.2	173.5	45.7	79
1,085 to 1,414	33	7	41	11	73	34	68	83.1	18.9	106.3	25.0	202.3	65.6	76
0,823.5 to 1,085	45	8	56	23	101	61	62	94.0	19.8	121.0	36.1	229.5	90.9	72
0,639.8 to 0,823.5	57	18	77	36	137	87	61	102.9	26.9	136.2	45.9	256.2	109.7	70
0,490.1 to 0,639.8	81	27	108	61	175	112	61	116.5	31.8	153.4	59.5	277.5	123.4	69
0,376.0 to 0,490.1	105	51	138	88	225	142	61	126.5	42.0	166.2	70.9	298.9	136.3	69
0,289.5 to 0,376.0	143	67	180	118	278	185	60	139.2	47.3	179.9	80.9	316.4	150.7	68
0,221.4 to 0,289.5	196	88	235	155				152.8	52.7	193.9	90.2			
0,169.9 to 0,221.4			284	183						203.3	95.5			

† 1967

TABLE 2

THE RELATIVE SIZE OF U.S. AND NON U.S. CORPORATIONS FIRMS

	1967 Sales (billions of dollars)		Relative Size Ration in 1967		
Firms Ranked*	U.S.	Non U.S.	Sales	Assets	Employees
1-10	82.2	32.8	2.5	1.9	1.2
11-20	30.7	15.7	2.0	2.0	1.2
21-30	25.3	12.7	2.0	1.4	1.5
31-40	20.1	10.7	1.9	1.7	.7
41-50	15.2	9.5	1.6	1.4	1.0
51-60	13.5	8.7	1.5	1.7	.5
61-70	12.0	8.0	1.5	1.7	.9
71-80	10.6	7.1	1.5	1.1	.9
81-90	9.9	6.5	1.5	1.2	1.2
91-100	9.1	5.6	1.6	1.2	.9
101-110	8.1	5.2	1.6	1.3	.7
111-120	7.7	4.7	1.6	.9	.9
121-130	7.1	4.4	1.6	1.5	1.0
131-140	6.5	4.0	1.6	1.1	.8
141-150	6.0	3.7	1.6	1.4	.9
151-160	5.5	3.5	1.6	.9	1.3
161-170	5.2	3.3	1.6	1.1	1.0
171-180	4.9	3.1	1.6	1.4	.9
181-190	4.6	2.9	1.6	1.1	1.2
191-200	4.4	2.8	1.6	.7	.5
1-50	173.5	81.3	2.1	1.7	1.1
1-100	228.6	117.2	1.9	1.6	1.0
1-200	288.8	154.8	1.8	1.5	1.0

* 1-10 means the 10 largest firms (by sales size), etc.

+ The relative size ratio is the ratio of total sales, assets, or employees of U.S. corporations to non U.S. corporation within a given ranking.

TABLE 3

RELATIVE SIZE RATIO BY COUNTRY (1967 Sales)*

RANK OF FIRM	U.K.	Sweden	Switz-erland	Germany	France	Italy	Benelux	Canada	Japan
1	2.7	29.7	11.1	8.6	13.2	9.7	8.3	22.3	11.6
2	2.4	20.1	15.9	6.7	9.9	6.9	13.8	15.7	8.0
3	3.5	19.7	16.2	6.3	9.4	8.1	13.8	14.7	7.6
4	2.9	17.5	14.5	4.7	2.3	6.4	10.6	10.9	6.0
5	2.5	22.6	11.7	4.2	6.5	6.9	10.6	12.0	4.9
6	4.4		12.7	3.9	6.2	8.4	12.4	11.3	4.6
7	4.1		15.0	4.2	6.0	9.8	12.0	11.3	4.3
8	4.5		18.4	4.2	5.7	16.7	13.9	12.9	4.4
9	3.9			3.7	4.8		12.3	11.3	4.1
10	3.8			4.0	4.7		13.4	12.0	4.3
11	3.8			3.8	4.7			12.1	4.3
12	3.4			3.4	4.2				4.4
13	3.4			3.3	4.7				4.5
14	3.6			3.8	5.4				4.6
15	3.6			3.7	5.9				4.5
16	3.6			3.7	6.6				4.7
17	3.8			5.0	7.7				5.7
18	4.0			5.2	8.4				6.2
19	4.0			6.6	8.7				6.3
20	4.1			7.1	8.8				6.2
21	4.1			7.0	9.8				6.1
22	4.0			7.0	9.4				5.9
23	4.6			7.4	9.4				5.9
24	5.2			7.8					6.1
25	4.6			8.6					6.2

* see notes to table 2.

TABLE 5

CHANGES IN THE RELATIVE SIZE OF U.S. AND NON U.S. FIRMS 1957 - 1962, 1962 - 1967

(RELATIVE SIZE RATIO)*

Firms Ranked**	Sales			Assets			Employees		
	1957	1962	1967	1957	1962	1967	1957	1962	1967
1-10	2.2	2.3	2.5	2.2	1.9	1.7	1.3	1.0	1.2
11-20	2.9	2.1	1.9	3.7	1.9	2.0	1.4	.9	1.2
21-30	2.4	2.1	2.0	2.3	1.7	1.4	1.3	.8	1.5
31-40	2.4	1.8	1.9	1.6	1.5	1.7	1.0	.8	.7
41-50	2.0	1.9	1.6	2.0	1.5	1.4	1.3	.8	1.0
51-60	1.9	1.7	1.5	2.5	1.8	1.7	1.3	.8	.5
61-70	1.9	1.6	1.5	2.1	1.3	1.7	.7	.7	.9
71-80	2.0	1.5	1.5	2.0	1.4	1.1	.6	.7	.9
81-90	1.9	1.5	1.5	2.5	1.1	1.2	.8	.8	1.2
91-100	2.0	1.6	1.6	1.6	1.7	1.2	1.2	.9	.9
101-110		1.5	1.6		1.3	1.3		1.0	.7
111-120		1.5	1.6		1.4	.9		.6	.9
121-130		1.6	1.6		1.0	1.5		.7	1.0
131-140		1.5	1.6		.9	1.1		1.0	.8
141-150		1.5	1.6		.9	1.4		.5	.9
151-160		1.5	1.6		1.0	.9		.8	1.3
161-170		1.6	1.6		1.1	1.1		.6	1.0
171-180		1.7	1.6		1.2	1.4		.6	.9
181-190		1.7	1.6		1.5	1.1		1.1	1.2
191-200		1.7	1.6		1.0	.7		.8	.5

* see notes for table 2

TABLE 6

CHANGES IN THE RELATIVE SIZE OF U.S. AND NON U.S. FIRMS BY INDUSTRY

RELATIVE SIZE RATIO OF 3 LARGEST CORPORATIONS IN EACH * INDUSTRY

	1957	1962	1967
Auto's	11.6	6.2	6.4
Electrical Mach.	4.2	2.5	2.7
Oil	1.3	1.9	1.9
Chemical	.8	.8	.8
Food	2.5	2.1	2.1
Iron and Steel	4.7	2.3	1.8
Non Ferrous	1.8	1.5	1.3
Mach. and Engi.	1.7	1.6	1.5
Rubber	3.3	2.2	2.2
Paper	n.a.	2.3	1.9
Textiles	n.a.	2.4	2.1
Aircraft	n.a.	3.4	4.1
Stone	n.a.	1.2	1.6

* Ratio of total sales of the three largest U.S. to total sales of the three largest non U.S. firms.

TABLE 7

REGRESSIONS RESULTS

Description	Germany -US	France -US	Benelux -US	Italy -US	U.K. -US	O.EFTA -US	Japan -US	Canada -US	Other -US	S	S^2	R^3
1957 to 1962												
Excluding S												
Parameter estimate	7.1 **	2.8	-4.5 *	10.2 **	-2.4 **	4.7 *	10.6 **	-5.1 **	4.3			
t value	4.15	1.36	-1.73	2.82	-1.99	1.81	2.89	-2.18	0.96			0.314
Including S												
Parameter estimate	5.8 **	0.9	-2.8	8.6 **	-3.2 **	3.2	8.9 **	-6.1 **	2.9	-3.1067 **	.2923 **	
t value	3.42	0.45	-1.10	2.43	-2.65	1.22	2.47	-2.64	0.66	-3.27	2.75	0.357
S in logs												
Parameter estimate	5.5 **	-0.9	1.5	7.2 **	-4.4 **	1.0	7.2 **	-6.7 **	-0.2	-20.8217 *	.9880 **	
t value	3.25	-0.43	0.57	2.02	-3.41	0.36	1.96	-2.93	-0.05	-1.94	1.72	0.372
1962 to 1967												
Excluding S												
Parameter estimate	-3.9 **	-1.5	-1.2	-0.6	-0.8	0.2	6.9 **	-0.0	1.4			
t value	-3.22	-1.13	-0.61	-0.29	-0.94	0.13	6.26	-0.02	0.57			0.206
Including S												
Parameter estimate	-3.6 **	-1.9	-1.5	-0.8	-0.8	0.0	6.4 **	-0.3	0.8	-1.8516 **	.1160	
t value	-3.04	-1.38	-0.77	-0.36	-0.87	0.00	5.88	-0.19	0.32	-3.40	2.37	0.231
S in logs												
Parameter estimate	-2.8 **	-1.6	-1.3	0.0	-0.8	0.2	6.4 **	-0.2	0.7	-11.5656 **	.5579 *	
t value	-2.34	-1.18	-0.65	0.01	-0.89	0.09	5.90	-0.13	0.30	-2.24	1.91	0.254
1957 to 1967												
Excluding S												
Parameter estimate	2.6 **	2.7 **	3.4 **	5.8 **	-1.7 **	2.4	11.3 **	-0.4	4.5 *			
t value	2.44	2.12	2.01	2.74	-2.29	1.58	5.20	-0.27	1.72			0.381
Including S												
Parameter estimate	1.9 *	1.7	2.4	4.9 **	-2.1 **	1.5	10.3 **	-0.9	3.8	-1.6455 **	0.1409 **	
t value	1.76	1.28	1.43	2.35	-2.89	1.00	4.82	-0.59	1.46	-2.92	2.23	.417
S in logs												
Parameter estimate	1.6	0.5	1.7	4.0 *	-2.9 **	0.1	9.1 **	-1.3	1.7	-12.8019 **	0.6062 **	
t value	1.58	0.38	1.03	1.92	-3.72	0.07	4.22	-0.84	0.62	-1.97	1.74	.439

Note: t values = coefficients divided by their standard errors. Two asteriks means significant at the 5% level with a two-tailed t test. One asterik means significant at the 10% level with a two-tailed t test. S is measured in billions when regressions include S, and in hundreds of thousands when they include log S.

TABLE 8

Exports and Local Production

(millions of dollars)

	X	P	X+P	P/X	X	P (est)	X+P	P/X
Out of U.S.		1957				1966		
Europe	6,940	10,762	17,702	1.55	14,440	36,000	50,440	2.50
Into U.S.		1959				1966		
U.K. Netherlands, & Switzerland	2,320	4,657	6,977	2.01	3,740	7,400	11,140	1.97
Other Europe.	4,580	559	5,139	.12	8,050	1,271	9,321	.16
of which:								
France	690	92	782	.13	1,050	123	1,173	.12
Germany	1,380	47	1,427	.03	2,700	138	2,838	.05

Sources: Survey of Current Business (various), Statistical Abstract of the United States (various), U.S. Business Investment in Foreign Countries (1960), and Foreign Business Investment in the United States (undated). All these are U.S. Department of Commerce publications

Definitions: X = exports (c.i.f.)
P = manufacturing and petroleum sales of local subsidiaries

Methods. The rate of growth of sales up to 1966 is assumed to be the same as that of net assets in the appropriate industry (manufacturing, petroleum). A cross check with the sales of U.S. manufacturing subsidiaries for 1965 suggested that the original estimate of 39,600 million dollars was too high by about 3,000 to 4,000 million. The estimate was therefore adjusted to the 36,000 million dollars given in the table. For the U.K., Netherlands and Switzerland net assets by industry were not available for 1966. It was therefore assumed that sales grew at the same annual rate as net assets between 1959 and 1967. For France and Germany no breakdown of assets was available for 1966 and the growth rate assumed was that of net assets in all industries. This probably understimates the growth of manufacturing and petroleum sales, but the error is not likely to be important.

Finally 50% was added to the f.o.b. figures for export and import given by the Department of Commerce to allow for insurance, freight and other charges.

TABLE 9

DIRECT INVESTMENT FLOWS OF INDUSTRIAL COUNTRIES

(In millions of U.S. dollars)

	Average 1957-60			Average 1961-64		
	Outflows	Inflows	Net	Outflows	Inflows	Net
U.S.	-2,830	330	-2,500	-3,210	310	-2,900
U.K.	-510	310	-200	-670	480	-190
sub total	-3,340	640	-2,700	-3,880	790	-3,090
Belgium	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
France	-10	30	+20	-100	200	+180
Germany	-120	60	-60	-220	200	-20
Italy	-60	220	+160	-170	350	+180
Netherlands	-170	50	-120	-120	60	-60
sub total	-360	360	0	-610	890	+280
Other EFTA countries	n.a.	20	n.a.	-60	110	+50
Canada	-60	550	+490	-100	360	+260
Japan	-50	20	-30	-90	80	-10
Total Industrial	-3,810	1,590	-2,220	-4,740	2,230	-2,510

Source: Marcus Diamond, IMF Staff Papers, March 1967.

TABLE 10

U.K. Exports and Local Production (£ millions) in 15 Major Countries

	1956	1963	% change
1.- U.K. exports (f.o.b.)	1,450.3	2.000.5	+38%
2.- Exports of forms in Reddaway sample	114.2	106.2	-7%
3.- Local production of firms Reddaway sample	1.321.4	2.137.8	+62%
4.- Total U.K. exports to 15 countries less those of firms in Reddaway Sample (f.o.b.)	1.336.1	1.894.3	+42%

Notes and sources: Table VI W.B. Reddaway EFFECTS OF U.K. DIRECT INVESTMENT OVERSEAS AN INTERIM REPORT. (Cambridge, Cambridge University Press 1967)

Local production has been estimated by substracting 150% of the value of exports (f.o.b.) of firms in Reddaway sample from the total sales of these firms in the 15 countries. The extra 50% is to allow for the fact that sales are valued at selling price whereas exports are valued at f.o.b.

FOOTNOTES

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[1]The Editor, "The Multinational Corporation: The Splendors and Miseries of Bigness," Interplay (November, 1968), p. 15. This source provides as good a definition of the Multinational Corporation as any - "an organization which, while remaining in private hands, transcends national boundaries and national regulation."

[2]Jean-Jacques Servan-Schreiber, Le Défi Américain (Paris: Editions de Noel, 1967). Servan-Schreiber is chosen because he is the most articulate propagator of a certain view. The literature on the subject

Footnote 2 continued:

is too extensive to be quoted here, but at the very least we must mention Christopher Layton, Trans-Atlantic Investments (Boulogne sur-Seine: The Atlantic Institute, 1966); M.Byé (ed.), La Politique Industrielle de L'Europe Intergrée et L'Apport des Capitaux Extérieurs (Paris: Presses Universitaires de France, 1968); Charles Kindleberger, "European Integration and the International Corporation," Columbia Journal of World Business, (Winter, 1966); Gilles Y. Bertin, L'Investissement des Firmes Etrangères en France (Paris: Presses Universitaires de France, 1963); Stefan H. Robock, "The American Challenge - An Inside Story," The Hermes Exchange, Vol. 1, No. 2, October, 1968; Bela Balassa, "American Direct Investments in the Common Market," Banca Nazionale del Lavoro, No. 67 (June, 1966); Ernest Mandel, "International Capitalism and Supra-Nationality," in R. Milliband and J. Saville (eds.) The Socialist Register 1967, (London: The Merlin Press, 1967); Gyorgy Adam, "Standing up to the American Challenge," The New Hungarian Quarterly, Vol. IX, No. 3 (Autumn, 1968).

[3]John Kenneth Galbraith, The New Industrial State, (Boston:Houghton Mifflin Company, 1967).

[4]The data are taken from Fortune magazine's annual listing of the 500 largest industrial corporations in the United States and the 200 largest industrial corporations outside the United States (100 in 1957). The data are subject to numerous deficiencies but are the only ones available, since government statistics typically use the industry rather than the corporation as the unit of analysis. Fortune ranks firms by sales rather than assets

Footnote 4 continued:

assets or employees and we have accordingly used sales for most of the tests in this paper. To the extent that Fortune correctly reflects business thinking on the "best" measure of size, sales may well be the appropriate index for analyzing oligopoly strategy.

[5]We have counted Unilever as a chemical firm rather than a food firm. If Unilever is excluded from chemicals, the relative size ratio shifts in favor of the U.S. firms in this industry.

[6]See Alfred D. Chandler, Jr., Strategy and Structure (New York: Doubleday & Company, Inc., 1966) for an analysis of the development of the United States structure of business organization in response to the challenge of the continental market and the rapidly changing composition of output.

[7]Certain adjustments were made to deal with inaccuracies in the Fortune data and mergers. The adjusted data yielded better results than the crude data and only equations for adjusted data have been reported. The difference, however, were small.

[8] Suppose we had instead estimated:

$$g = \text{constant} + \sum_{i=1}^{m} a_i c_i + \sum_{j=1}^{n} b_j I_j + eS + fS^2 + u \qquad (1)$$

Since every firm belong to exactly one country, $\sum_{1}^{m} C_i = 1$. Similarly since every firm belongs to exactly one country $\sum_{1}^{n} I_i = I$. The set of variables $(C_1 \ldots\ldots C_m)$ and $(I_1 \ldots\ldots I_n)$ are thus linearly dependent.

Footnote 8 continued:

To get around this problem we chose an arbitrary country (country 1) and note:

$$a_i c_i = (a_i - a_1)\, c_i + a_1 c_i \qquad (2)$$

$$\sum_{i}^{m} a_i c_i = \sum_{2}^{m} (a_i - a_1)\, C_i + a_1\, C_i \qquad (3)$$

$$= \sum_{2}^{m} (a_i - a)\, C_i + a_i \qquad (4)$$

Since $\Sigma\, C_i = I$. Similarly, letting Industry 1 be an arbitrary industry:

$$\sum_{2}^{n} b_i I_i = \sum_{2}^{n} (b_i - b_2)\, I_i + b_2 \qquad (5)$$

Substituting (4) and (5) into (1) gives us the equation in the text which can be estimated since the vectors $(C_2 \ldots\ldots C_m)$ and $(I_2 \ldots\ldots I_n)$ will normally be linearly independent.

[9] See, for example, H.A. Simon and C.P. Bonini, "The Size Distribution of Business Firms," American Economic Review, Vol. XLIII, (Sept., 1958); P.E. Hart and S.J. Prais, "The Analysis of Business Concentration," Journal of the Royal Statistical Society, Part 2 (1956); S. Hymer and P. Pashigian, "Firm Size and Rate of Growth," The Journal of Political Economy, Vol. LXX (December, 1962); E. Mansfield, "Entry, Gibrat's Law, Innovation, and the Growth of Firms," American Economic Review, Vol. LII, No. 5 (December, 1962); A. Singh and G. Whittington, in collaboration with H.T. Burley, Growth, Profitability and Valuation. (Cambridge: Cambridge University Press, 1968). These studies, as well as a number of others, have for the most part found that above a certain minimum size, large

Footnote 9 continued:

firms do not perform better (or worse) than small firms when judged by costs, profits or propensity to grow. This evidence on the existence or non-existence of economies of scale is, however, far from conclusive for an important theoretical reason. Small firms are often complementary to large firms, acting as suppliers to the large firms or filling the gaps left by large firms. The two sets are in ecological equilibrium, as bees are to apple orchards or as any parasite is to its host. International size comparisons, though subject to their own special difficulties, get around this problem, in part, since the smaller firms outside the United States are not in ecological equilibrium with the larger firms but in competition.

[10] It is well known that U.S. subsidiaries in Europe have, on average, been growing faster than their European rivals. Between 1950 and 1965, for example, the value of U.S. direct investment in Western Europe rose from 1,720 million dollars to 13,894 million dollars. Few European firms, even the heavy overseas investors, could have matched this growth rate of 14.9% a year sustained for fifteen years. Assuming that these figures are a reasonable guide to the relative sales performance we can conclude that $G_s > G_e$ is a fair stylization of the facts.

Our regressions and tables show that, on average, $G_e \geq G_p$. Indeed for the period 57-67, as a whole, the inequality is strict.

[11] (More evidence will be provided when) G. Bertin (Universite de Rennes) completes his econometric investigation of the relationship between size and foreign investment.

[12]U.S. Business Investments in Foreign Countries, Washington, 1960.

[13]W.B. Reddaway, Effects of U.K. Direct Investment Overseas, Cambridge, 1967.

[14]At present there is a great asymmetry between commodity flows and capital flows. Europe's exports of manufactures to the U.S. are about equal to its imports from the U.S., but direct investment by European corporations in the U.S. is much smaller than U.S. direct investment in Europe. The theory of the product cycle from innovation to exports to loss of market, as the European firm's advantage is eroded by competition.

[15]U.S. Business Investments in Foreign Countries, Washington, 1960.

[16]Cross investment is a long standing feature of direct foreign investment. In many industries where U.S. Corporations have substantial direct investment in foreign countries, one of the leading firms in the United States is a foreign firm, - e.g., oil, soft drinks, paper, soaps, and detergents, farm machinery, business machinery, tires and tubes, sewing machines, concentrated milk, biscuits, chemicals.

[17]Note that local production abroad by U.S. corporations is growing much faster than exports. See, also, Van der Beld and Van der Werf, "A note on International Competitiveness," Berlin, 1965. Table 6, p. 14 shows that Germany has done far better than either the U.K. or the U.S. even when price has been allowed for. Similarly, Junz and Rhomberg (IMF Staff Papers, 1965) show that Germany and Japan did better relative to the U.K. and the U.S. than prices would explain.

Footnote 17 continued:

In each of the above two studies the bad performance of the U.K. and the U.S. could be explained by the fact that their firms have tended to expand by investing rather than exporting.

[18]Carl Kaysen and Donald F. Turner, Antitrust Policy (Cambridge, Harvard University Press, 1959). The quotations are from page 19 and 9, respectively.

[19]E.S. Mason, preface to Kaysen and Truner, op.cit., p. xi.

[20]George W. Bell, "The Promise of the Multinational Corporation," Fortune (June, 1967), p. 80.

[21]Sidnay Rolfe, "Up-dating Adam Smith," Interplay, (November, 1968).

[22]For an important discussion of technology and nationalism in the tradition of Harald Innis, Karl Polyani, and Marshall Mcluhan, see Abraham Rotstein, "The 20th Century in prospect: Nationalism in a technological society," and Melville Watkins, "Technology and Nationalism," in Peter Russell (ed.) Nationalism in Canada.

[23]For a discussion of the limitations on a nation-state brought about by Multinational Corporations. See, Foreign Ownership and the Structure of Canadian Industry, (Ottawa, the Queens Printer, 1968). See,also, Kari Levitt, "Canada: Economic Dependence and Political Disintegration," New World, Volume IV, no. 2.

An incisive treatment designed for underdeveloped countries but perhaps soon to be some relevance for developed countries is found in F. Perroux, and R.Demonts, "Large Firms Small Nations," Présence Africaine, Vol. 10, NO. 38.

[24]Some interesting aspects of the problem are explored in Leo Model, "The Politics of Private Foreign Investment," Foreign Affairs, June, 1967, pp. 648.

[25]The arguments put forward by Ball and the large corporations for an international system of incorporation are, of course, as much an attempt by firms to escape from U.S. regulation as anything else.

[26]C.F. C.P. Kindleberger, International Economics (New York, Richard D. Irwin Co., 1966).

[27]Ernest Mandel, "International Capitalism and Supra-Nationality," op.cit., and "Where is America Going?" New Left Review, March/April 1969, p. 14,15.

[28]J.M. Keynes, "Foreign Investment and National Advantage," The Nation and the Athenaem (August, 1924).