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MARKET STRUCTURE AND PERFORMANCE
OF U.S. MULTINATIONALS IN
BRAZIL AND MEXICO

by

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MARKET STRUCTURE AND PERFORMANCE OF U. S. MULTINATIONALS IN BRAZIL AND MEXICO

I. Introduction

The competitive performance of an industry in a market economy is measured in several ways, but most frequently by relative profitability (Weiss 1971). Many studies have tested the hypothesis that the profit rates of sellers are determined in part by their market power (Weiss 1974). While these studies have generally supported the expected relationship in the U.S. and other more advanced capitalistic market economies, it is not certain a priori that the market power-profit relationship holds in the industrializing less developed countries (LDCs). Conceivably, their special economic, institutional, or cultural environments may distort the predictions of industrial organization theory. Moreover, multinational corporations (MNCs) tend to dominate some industrial sectors of many LDCs and may pursue nonprofit objectives or different profit goals than in their home countries. Testing the theory is especially difficult because neither LDCs nor MNCs publically report sufficiently disaggregated data (Horst 1974). Finally, even if detailed data were available, transfer pricing, the timing of international flows of funds, and radically different accounting practices may introduce distortions in company accounts that make meaningless interfirm comparisons of profitability (Robbins and Stobough 1973).

Compared to other fields of economics, industrial organization research applied to MNCs is in its infancy. Scherer (1970), in his only reference to MNCs, considers the study of foreign direct investment (FDI) clearly "...outside the conventional domain of [industrial organization] economics" (p.410)¹. Stephen Hymer's (1960) dissertation was the first

¹ However, the most recent edition of Cave's (1977) undergraduate IO text does have a new section devoted to the multinational company (pp. 44-47).

work to employ the industrial organization framework to explain the phenomenon of foreign direct investment. Since that time a few researchers have introduced dimensions of market structure as determinants of the level of FDI (Wolf 1971); Caves 1971, 1974a, 1974b; Bergsten, Horst, and Moran 1978; and Horst 1972, 1974). Many other economists specializing in the MNC also include oligopoly as at least one factor explaining the origins and behavior of MNCs (Vernon 1977; Kindleberger 1969; Knickerbocker 1973; Dunning 1974). Bain (1966) pioneered the work examining international differences in market structures; work along these lines has been extended by Pryor (1972), but little is available that includes comparisons among LDCs.²

Our literature search uncovered only three studies that statistically tested the market structure-performance hypothesis in an LDC context.³ House (1973), utilizing data for 31 manufacturing industries from Kenya's 1963 industrial census, found a highly significant, positive relationship between a gross price-cost margin and a three-plant employment concentration ratio. White (1974), employing data from the 1960s on 17 industries in Pakistan, also found a highly significant relationship between profitability and concentration.⁴ House and White, though utilizing simple regression

²Limited structural data have been generated and examined for Kenya (House 1973), Pakistan (White 1974), Korea (Nam 1975), and Brazil and Mexico (Fajnzylber 1970, 1975; Newfarmer and Mueller 1975).

³For a review of such empirical studies in a developed-country context, see Connor (1978). A simple correlation of +0.71 between sales concentration and a measure of foreign penetration was found by Willmore (1976) among 21 Guatemalan manufacturing industries reported in the 1971 census, but no analysis was made of the market structure-profit performance relationship.

⁴White had to rely on the stated, before-tax profits of a number of leading public firms, grouped into the industries of their principal activities. Concentration ratios were calculated in the main from estimates of production capacity (defined at least three different ways) rather than actual sales.

models with few controls, were able to "explain" about 40 and 60 percent of the variation in industry rates of return, respectively. A third study, based on 36 industrial firms in Tanzania, found no correlation between the rate of return on equity capital and concentration (Rweyemamu 1973).

This paper reports the results of a multiple regression analysis of the market structure determinants of profitability among the Brazilian and Mexican manufacturing affiliates of U.S. MNCs.⁵ Unlike the previous studies of the market structure-profits relationship in LDCs, it employs data on individual firms derived from a special U. S. Senate Foreign Relations Committee questionnaire designed specifically to answer questions concerning the structure and performance characteristics of the manufacturing sectors of the two largest LDC recipients of U.S. FDI, and especially the role that U.S. MNCs play in those sectors.⁶ The data source yielded a richness of detail that permits a specification of a model similar to the most sophisticated models applied in the more developed countries (e.g., FTC 1969; Hall and Weiss 1967; Shepherd 1972; Marion et al. 1977). Our results confirm that the expected relationships between market power and industrial performance demonstrated in the developed countries also robustly persist in the two LDCs studied. Somewhat surprising, however, is our finding that, despite the many economic and noneconomic differences between Brazil and Mexico, there are no systematic differences between the two in the underlying structure-performance.

⁵Earlier versions of this research have been reported by Connor and Mueller (1977) and by Connor (1977). However, the present results differ significantly from the previous versions in model specification, weighting procedures, and interpretation of some variables. The intervening two years work has benefited greatly from the comments of numerous critics, some of them anonymous.

⁶Details on the questionnaire, its processing, and the sample are contained in Appendix B of Newfarmer and Mueller (1975). That report also displays the basic descriptive results of the survey (in Chapters IV, VI, and Appendix A). Also see Connor and Mueller (1978a) for an explanation and analysis of the main elements of market structure used in the present study.

links.⁷

Section II specifies our model and gives the definitions and expected direction of influence of the dependent and independent variables used in the analysis. Section III discusses the data source and the sample employed. Section IV displays the empirical results, for Brazil and Mexico separately, and then for the pooled sample.

II. The Model and Variables

To test the theory that MNCs' profits are determined significantly by their competitive environment, we employ a version of the now traditional market structure-profits model. Specifically, we specify a cross-sectional, ordinary least squares regression model with firm profit rates as the dependent variable and with various measures of the dimensions of market structure and some control factors as independent or "causal" variables.⁸ The regression models estimated in this paper are of the form:

$$(1) \pi = b_0 + b_1 S_1 + \dots + b_n S_n + b_{n+1} C_1 + \dots + b_{n+m} C_m + U,$$

where π is a firm profit rate, S_i is one of n market structure variables, C_j is one of m control variables, and U is a normally distributed, spherical disturbance term. Thus, this model posits a causal chain running from market structure through various subsumed modes of firm conduct, to firm profit performance. Ultimately, individual firm performance can be related via orthodox oligopoly theory to such society norms as

⁷ More precisely, there are no differences that are not already accounted for in intercountry differences in industry growth rates or firm sizes. This finding is an extension of previous research that showed remarkable parallelisms in several dimensions of market structure among Brazil, Mexico, and the U.S. in 1972 (Connor and Mueller 1978a). Adams (1976) also found that structure-performance relationships persist across national boundaries.

⁸ Throughout this paper we write about testing "hypotheses" associated with an "experiment" based on a "causal" model. The reader may regard the empirical exercises below as tests of the stability of the estimates of the least squares parameters rather than true hypothesis testing. However, because the regression models were first fitted against data drawn from only one country-year combination and then applied later to other country-year data sets, there is still a strong case for interpreting the results as statistical hypothesis testing proper.

efficient resource distribution, income equity, macroeconomic stability, and technological progress (Shepherd 1970).

Any attempt to apply such a model (1) to data that are drawn from a semi-industrialized economy and (2) with many of its industries dominated by affiliates of foreign-owned companies involves several potential hazards.

Official sources in LDCs are likely to be inaccurate, overly aggregated, or otherwise unsuitable for structure-profit tests. In addition to data limitations, the special economic conditions typical of many LDCs may dampen the effects of structure on performance. High concentration, for example, may not facilitate collusion among rivals because of cultural differences among managers, particularly between the foreign and domestic segments of an industry. Many LDCs have implemented more or less comprehensive controls over prices or output. Even in moderately developing LDCs, rates of manufacturing growth and structural change are apt to be quite sharp, and this is also likely to interact negatively with concentration (Gale 1972). Rapidly shifting aggregate economic structures may also imply rapidly changing market structures, which would invalidate the assumptions of the structure-profits model (Bain 1970). Finally, most LDCs are relatively open to international trade, in the sense that a large proportion of their primary production is exported and a large percentage of their manufactures is imported. Failure to consider trade flows can weaken the statistical impact of simple domestic concentration ratios, as has been demonstrated for the U.S. case by Esposito and Esposito (1971).

In addition to concentration, other aspects of market structure may conceivably operate in different or weaker fashions in an LDC context.

Methods of product differentiation familiar to industrialized countries may be absent or quite ineffective, particularly advertising media and similar forms of promotion. Moreover, any market power advantages deriving from research and development activity are likely to be absent in LDCs (Mansfield 1974).

There are, on the other hand, several counterarguments that suggest that the traditional industrial organization model is appropriate in an LDC context. For one, the absence of effective regulatory mechanisms and price controls in most LDCs may facilitate the efforts of MNCs to engage in joint profit maximization strategies. The propensity of many LDCs to adopt highly protectionist measures to foster industrialization also implies that trade openness is unlikely to seriously affect concentration calculations in that sector. With respect to advertising, there is some case study evidence of its efficacy, primarily from Latin America (Ledogar 1975; Barnett and Müller 1974). It is clear that MNCs spend considerable amounts on advertising in LDCs, that the patterns of expenditure across markets are quite similar to those in richer countries (Connor and Mueller 1978), and that advertising professionals are confident of its efficacy (Wiechmann 1976, Miracle 1972). Finally, with respect to barriers to entry, the evidence indicates that plant sizes tend to vary more with absolute market size (GNP) than with levels of development (GNP per capita) (Pryor 1972; Scherer et al., 1975). Additionally, if absolute cost barriers originate in capital market imperfections, then one may expect performance to be even more strongly related to this barrier in the LDCs than in the more developed countries.

On balance, there are strong reasons to believe that structure-performance tests carried out with LDC data should yield results comparable to those in the more industrialized countries. The analyses may, however,

require adjustments of the familiar measures of market structure or the inclusion of additional control variables.

There also are several reasons why the market structure-profit model might not predict MNC affiliates' profit performance. One relates to the locus of decision making within MNCs. If the affiliates of MNCs are tightly controlled by the company headquarters, then the affiliate may not always have as its goal the maximization of affiliate profits. That is, the pursuit of a global profit maximization strategy may at times require foreign affiliates to shift their dividend remissions, loan payments, or other flows of funds to the parent; even more serious perhaps is the extent to which MNCs may engage in "transfer pricing" schemes that artificially alter reported affiliate profits (Robbins and Stobaugh 1973). Another potential objection concerns minority ownership. Some authors have suggested that MNCs may have different time horizons than their joint venture partners, particularly if the latter are individuals.⁹ Divisiveness in this regard could affect firm performance via uneconomic dividend payment or "entrepreneurial withdrawals." Finally, it has been suggested that MNCs are by their very natures able to surmount barriers to entry (Caves 1974b).

Here, too, the evidence appears to support the validity of the traditional approach. Numerous surveys of MNC financial practices reveal that foreign

⁹ Data collected on U.S. MNC affiliates in Brazil and Mexico revealed that minority partners were often the former owners of acquired firms (Newfarmer and Mueller 1975).

affiliates are treated as independent profit centers and that various return on investment ratios are the principal criteria employed to measure performance and to determine executive compensation (e.g., Basche 1970). Often, but not universally, technology payments¹⁰ are grossed into net income. Since minority ownership can affect performance either way, it is desirable to include a variable for it in firm-level tests. The question of the ineffectiveness of barriers to entry for MNCs finds some support from a study of Canada by Gorecki (1976). But the conclusion remains that a sufficiently detailed model specification can overcome the special conditions imposed by MNC penetration. We now describe the variables and theoretical expectations regarding their behavior in the model.¹¹

Profit Performance

While it is only one of several measures of performance, relative profitability remains by far the most common criterion in empirical structure-performance studies (Weiss 1971). Three different firm profit rates are used here. The first is "simple" profits, net revenue in current U.S. dollars after the application of local (i.e., Brazilian or Mexican) taxes but before U.S. taxes are netted,¹² expressed as a percentage of stockholders' equity (P/E). Simple profits are also expressed as a

¹⁰ Technology payments are made by affiliates for the use of patents and trademarks, for contractual management or technical services, or for the rental or use of certain technical manuals, machinery, or production processes.

¹¹ A summary of all these variables, their symbols, means and standard deviations are given in Appendix Table A.1.

¹² The sample MNCs reporting were necessarily given wide latitude in converting local currencies to U.S. dollars. Some firms convert their accounts monthly, others annually. In Brazil, frequent devaluations were common, but companies there had had several years experience with "indexing" by 1972.

proportion of total affiliate assets (P/A).¹³ Finally, a conceptually superior index of return on foreign affiliate investment is "broad profits" over stockholders' equity (BP/E). Broad profits merely adds technology payments to net after-tax income on the assumption that these payments are largely a return to the parent corporation for the sunk costs of research, development, and marketing techniques transferred to affiliates.¹⁴ Broad profits over equity (BP/E) thus focuses on two potential income streams received by U. S. investors.

The use of accounting profits is laden with well-known difficulties relating to the valuation of physical assets, managerial perquisites, and the treatment of intangibles (Weiss 1974). Moreover, because they are highly sensitive to swings in the business cycle, it is generally considered desirable to average profits over several years, though several researchers have found significant results using only single year data (e.g., Collins and Preston 1969, Rhoades 1973). Data limitations did not permit this averaging procedure to be employed here.

Seller Concentration

The analysis uses a weighted, minimum, five-digit SIC concentration ratio (CR4).¹⁵ Five-digit SIC level domestic sales data were used as

¹³ Had interest payments been available, a superior measure would add interest payments to after-tax profits. However, a ratio representing firm leverage was included, partially to correct for returns to the company in the form of interest (see Hall and Weiss 1967).

¹⁴ This definition of profits conforms roughly to the Department of Commerce's concept of "direct investor ownership benefits" in that it includes royalties and fees (though it excludes dividends and interest remittances). Other authors would also include earnings from intrafirm trade as an element of ownership benefits.

¹⁵ Weighted concentration ratios are commonly used in firm-level studies to overcome the problem of product diversification: FTC (1969); Hall and Weiss (1967); Imel and Helmlinger (1971). In the special survey, the reporters were asked to give their local market shares for each of their five-digit SIC product classes and their affiliate's rank within each market. Minimum CR4 estimates were calculated by multiplying the market share by the rank (if among the top four firms). Unless the market shares of the top four were equal, this underestimates the true CR4. Further adjustments were made if, as was frequently the case, two or more U.S.

weights. Because high seller concentration tends to facilitate the coordination of business decisions among oligopolists that recognize their mutual interdependence, the CR4 term is expected to have a significantly positive effect on firm profits. However, this effect is likely biased toward zero somewhat because the CR4 estimates are minimum ones.

Firm Relative Market Share

The second structural element is the firm's relative market share (FRMS). This statistic is the ratio of the firm's market share to the four-firm concentration ratio of the markets in which it operates, weighted by product sales. A high relative market share is indicative of the capacity of a firm to exercise dominance or leadership in its industry relative to the other leading firms (Marion 1975). Moreover, in consumer goods industries particularly, FRMS reflects the firm's success in building and maintaining consumer loyalty to its entire product line (FTC 1969). Finally, where there are substantial economies of scale in production or distribution, FRMS may serve as a proxy for a firm's cost advantage relative to its major rivals. Under any of these interpretations, FRMS should exert a positive influence on profits.

Product Differentiation

A third dimension of market structure is the industry's advertising-to-sales ratio for the firm's principal product (AD). Heavy advertising intensity is only one of several ways of creating consumer loyalty, but it is widely accepted as the most effective method of product differentiation. Additionally, extensive advertising may erect barriers to new entry (Comanor and Wilson 1974). In both instances, AD can be expected to raise firm profit levels.

15 (continued)

affiliates were competitors; the information they provided was resolved. Finally, four-plant census data were used in place of our four-firm ratios if the former were larger. For a more complete discussion of these procedures see Connor (1977: 254-58).

A similar interpretation can be given to research and development intensities (R&D). That is, there is little evidence of basic research by MNCs abroad, and most R&D effort may well be directed at fairly superficial product design adaptations (Imel and Helmberger 1971; IAS 1973). The capacity to locally adapt U.S.-designed products to local conditions often is necessary for successful MNC operations.

Leverage

The financial leverage of an affiliate is measured here by its equity-to-assets ratio (LEVER).¹⁶ A highly leveraged company, because it has relatively large debts for its size, can be expected to make large interest payments. Thus, when regressing against P/A (which is uncorrected for interest payments), the variable LEVER should have a positive coefficient. However, the sign of LEVER in regressions on profit over equity is expected to display weaker or even opposite outcomes.¹⁷

Growth

Rates of long-run industry growth (GRO) were computed from public sources for the major manufacturing industries of Brazil (1966-70) and

¹⁶ This definition follows Hall and Weiss (1967), but is nearly the inverse of the more usual debt-to-equity ratio. Thus, a "highly leveraged" firm is one with a low LEVER ratio.

¹⁷ In the regressions below, we also specified a parabolic relationship by adding LEVER². The sample affiliates displayed an extremely wide range of leverage ratios and we considered the possibility that there was an "optimal" (profit-maximizing) level of LEVER. Some previous research has used the leverage ratio as an indicator of financial risk, but we do not adopt that interpretation here.

Mexico (1962-70). Most researchers have argued that unexpected shifts in consumer demand, combined with lags in the provision of new productive capacity, lead to temporary price rises and consequent "windfall" profits. On the other hand, in LDCs high growth rates may strain input markets and cause factor prices to rise. Thus, the expected impact of GRO is uncertain, but it is included because other profit-structure studies have discovered it to be a highly significant control factor.

Firm Size

Economists have long theorized a link between firm size and performance. Corwin Edwards (1951) reasons that there is a direct connection between corporate bigness, market power, and profits. Baumol (1959) suggested that large firm sizes are indicative of imperfect capital markets. In an MNC context, the global size of a corporation is more relevant for modeling these conditions than the size of any legal subunit, though the two size measures may well be correlated. Nevertheless, we hypothesize that the measure of firm size adopted here, the natural logarithm of total affiliate assets (SIZE), will have a positive, but possibly weak effect on profitability.¹⁸

Trade Intensities

One of the special economic features of developing countries is their openness to international commodity trade. Moreover, MNC affiliates are often established specifically to engage in exports. Two measures of trade proclivity are total exports (EXP) expressed as a proportion of total subsidiary sales and total imports (IMP) as a proportion of total material production inputs. These simple trade intensities bear on the cost conditions of the affiliates. High export intensity may signal high technical efficiency, the achievement of most economies of scale,

¹⁸ In the pooled regressions, MSIZE (SIZE if a Mexican affiliate) and BSIZE (SIZE if a Brazilian affiliate) were substituted for SIZE.

or the receipt of special export promotion subsidies -- all of which will increase profits. The effect on performance of a high degree of reliance on imported components or raw materials (a high IMP value) is more difficult to predict.¹⁹

Two additional trade variables were designed to capture the performance effects of greater global planning and intergration within MNCs.²⁰ They are AFFEXP, the ratio of intra-MNC exports to total exports, and AFFIMP, the ratio of imports from affiliated firms to total material inputs employed.²¹ High AFFEXP and AFFIMP ratios both suggest greater latitude on the part of the MNC to engage in transfer pricing, but the precise effects of this activity on a given affiliate depends on institutional factors such as relative corporate income tax rates, tariff rates, and constraints on the international flow of intrafirm funds.

MNC Ownership

The percentage of ownership of voting stock (OWN) by the reporting U.S. MNC is also included as a means of modeling the advantage of strong headquarter's control. Normally, U.S. MNCs are unwilling to voluntarily relinquish management control to minority partners, especially local individuals. Moreover, individual minority stockholders may be expected to have shorter time horizons than the parent company and may have insisted on higher dividend payout ratios, possibly lowering subsequent profits. Thus, OWN is expected to have a positive effect on affiliate profits.

¹⁹ In the pooled regressions below, the variable MEXP is used. MEXP=EXP for Mexican subsidiaries, but takes a value of zero otherwise.

²⁰ The tendency of MNCs to coordinate their far-flung operations varies considerably with size, experience, and industry (Brooke and Remmers 1970). Two other indexes of parental control over their foreign affiliates were devised: (1) the percentage voting stock held by the parent corporation, directly or indirectly; and (2) the percentage of outstanding affiliate long-term debt held by the parent organization (rather than obtained from third parties). The results of these variables are reported in Connor (1976).

²¹ Only about 20 percent of the firms in our sample of manufacturing subsidiaries export at all, but well over half import some of their

Intracountry Affiliate Sales

The final variable referring to intra-MNC trade is SUPPLY, the sales of one affiliate to a sister affiliate within the same country, expressed as a ratio over total local sales. Thus, a high SUPPLY value indicates that a given subsidiary manufactures a portion of its output for another subsidiary of the same MNC. This variable may capture any advantages of domestically vertically integrated operations. It is expected to be positively related to profits.

III. Data Sources and Samples

The primary data utilized in this investigation are derived from a questionnaire survey of 197 U.S. MNCs and over 600 of their Brazilian and Mexican subsidiaries.²² The parent firms, selected from among the "Fortune 500" industrials in 1972, were directed to report if they held at least 25 percent ownership in one or more affiliates in Brazil or Mexico in 1972. In addition, each subsidiary with total assets or sales exceeding \$250,000 in 1972 was required to submit a more comprehensive

21 (continued)

material product inputs. On average, roughly 3 percent of an affiliate's sales were exports (EXP), but IMP averaged 7 to 8 percent. Moreover, over two-third of all exports were destined for related affiliates, while over 90 percent of all imports originated from within the same MNC.

In the pooled regressions below, the variables MAFFEXP, BAFFEXP, MAFFIMP, and BAFFIMP are used. The variable MAFFEXP=AFFEXP for Mexican subsidiaries, but is zero otherwise; BAFFEXP=AFFEXP for Brazilian subsidiaries, but is zero otherwise; and so on.

22

The special survey was sponsored by the U.S. Senate Subcommittee on Multinational Corporations of the Senate Foreign Relations Committee. Details on the sample, including a complete list of parent firms in the universe, and the response can be found in Appendix B of Newfarmer and Mueller (1975). In interpreting the statistical results reported in this study, it should be kept in mind that most previous empirical testing in industrial organization has used industries or the average of several large firms in an industry. Since there is usually considerable variance in the profit performance among the individual firms composing an industry, the theory loses some explanatory power when

questionnaire. The response rate was high and generally representative.²³

The sample consists of 70 Brazilian and 135 Mexican manufacturing affiliates of U.S. MNCs in 1972.²⁴ Of the original 625 subsidiaries in the special survey, about 480 were predominantly or exclusively manufacturing operations. From these 480, several deselection criteria were applied: (1) missing data that would affect the computation of any regression variable (including a large number of affiliates that reported negative equity); (2) dormant subsidiaries, i.e., zero sales and assets; (3) firms beginning operations after 1970;²⁵ and (4) extreme or highly erratic profit behavior.²⁶

22 (continued)

explaining the relative profitability of individual firms. This point is illustrated in FTC (1969, pp. 5-6) which reported that 23 percent of profit variance was explained when a sample of 62 firms was grouped into 17 industries, but only 4 percent of the variance was explained when the 62 observations were used as the observations.

23 The subsidiary questionnaire forms included data on income, costs, trade, ownership, assets, debt, product mix, local market shares, and identification of principal competitors. Of the 269 qualified companies, 197 (73 percent) completed questionnaires. However, these companies' affiliates reported assets and sales accounting for over 80 percent of the assets or sales of all U.S.-owned manufacturing subsidiaries in Brazil and Mexico. The industry distribution of the response is discussed in Newfarmer and Mueller (1975).

24 The small size (by U.S. standards) of these MNC affiliates is another factor that might contribute to low levels of explained variance in this study. In both countries 46 percent of the firms had total assets in 1972 of \$5 million or less.

25 The third condition excludes acquisitions made since 1970 and affected only about 22 observations. A Chow test was performed that indicated a highly significant difference when these observations were included.

26 Specifically, firms with: (1) net worth less than 5 percent of total assets (the average of these excluded firms was only 1 percent); (2) P/E rates less than -50 percent (the average was -190 percent); (3) P/E rates exceeding +100 percent (the average was +126 percent); or (4) the difference between 1970 and 1972 P/E rates exceeding 100 percent. These criteria applied to only 16 observations or 5.6 percent of all excluded manufacturing subsidiaries.

IV. Empirical Results

The model was estimated by generalized-least-squares regression analysis. Two procedures were used that depart somewhat from previous market structure-profits tests.

First, a novel method was used to correct for observed heteroskedasticity.²⁷ In order to determine the proper weight, we calculated the residuals of the best-fitting ordinary-least-squares (OLS) regression, e_i , and estimated by OLS the equation $e_i^2 = \alpha (AST)_i^{\beta_1}$ using its double-log transform, where AST is total affiliate assets. If β_1 , the estimated regression coefficient, is found to be significantly different from zero, then the appropriate weight to impose homoskedasticity is $(AST)_i^{-\beta_1/2}$. This procedure yielded weights for Brazil and Mexico of $(AST)^{0.16}$ and $(AST)^{0.15}$, respectively.²⁸

Second, a special transformation was used for CR4 in some of the regressions. Its choice was prompted by the expectation that the profit's effect of concentration may be best described by a function similar to the cumulative normal distribution function. That is, it is hypothesized that the effect of concentration on profitability is virtually absent below some low level (say, $CR4 < 40$ percent), that it is strongly positive over some middle range (say, $40 < CR4 < 80$), and that beyond some high level it produces no increased profits (say, $CR4 > 80$): The curve envisioned is monotonically nondecreasing throughout the range.

²⁷ Evidence of heteroskedasticity was inferred from the pattern of residuals plotted against the predicted value of the dependent variable (Draper and Smith 1966: 86-92). In previous structure-profit regression analyses, this condition has been attributed to the inverse correlation of profit rates variability with firm size. We are indebted to John Culbertson for proposing this weighting scheme.

²⁸ Separate regressions were estimated for each of the four dependent variables, so the weights shown represent an average of the four weights suggested by this method.

($0 < CR4 \leq 100$), but may have horizontal (or nearly so) portions at the extremes of the range. To represent this class of S-shaped or sigmoidal functions, we chose the Weibull function (see Hastings and Peacock 1975, pp. 124-129).²⁹ The choice of any particular function within the class of sigmoidal functions is admittedly somewhat arbitrary.³⁰

Brazil Results

Table 1 displays some of our least squares regression results for 70 Brazilian manufacturing subsidiaries of U.S. MNCs. All data, except for GRO, refer to the year 1972.³¹ Six equations are shown (1.1 to 1.6), the first three for simple after-tax profits over equity (P/E) and the last three for broad profitability (BP/E).³²

²⁹ The Weibull function is of the form $WCR4 = 1 - \exp(-(CR4/b)^c)$. The parameters, b and c , were chosen by an empirical method; a wide range of values at frequent intervals was tried for both b and c ; we selected the specific combination that minimized the sum of squares due to error of the regression equation. (In Brazil, the best pair was $b = 40$ and $c = 4$; in Mexico, $b = 60$ and $c = 4$). The Weibull function has an upper horizontal asymptote, and the estimated regression coefficient \hat{b}_1 of $WCR4$ represents the vertical height of that asymptote. That is, \hat{b}_1 is the maximum level of profitability that can be obtained as $CR4$ approaches infinity. An advantage of the Weibull function is that, for values of c less than or equal to one, it describes a curve very similar to an upward-bending parabola, except that unlike the parabola it becomes nearly flat for large values of $CR4$. The b parameter allows the function to shift horizontally while varying c changes the slope of the central section of the curve; for very large values of c , the function approximates a step function.

³⁰ For a similar approach to modeling $CR4$, see Marion, et al. (1977). Their sigmoid function requires the use of nonlinear (in the parameters) regression techniques.

³¹ A number of variations on these equations can be found in Appendix Tables A.2 to A.13. Simple correlations among the independent variables are shown in Appendix Tables A.14 to A.16.

³² For the t test, one-tailed tests are used where a specific direction is predicted by theory (i.e., for $CR4$, AD , $LEVER$, $R\&D$, $FRMS$, $COUNTRY$, and EXP). For other single-term expressions, the t test is two-tailed. For both the t and F tests, the a , b , and c superscripts indicated that the regression coefficient(s) is significantly different from zero at the 1, 5, and 10 percent levels of confidence, respectively. In addition, the coefficient of multiple determination R^2 and the overall F statistic (which tests the null hypothesis that $b_1 = b_2 = \dots = b_{n+m} = 0$) are supplied. In describing our results, we will regard coefficients meeting the 10 percent standard as significant.

Table 1 -- Regression Results of Profit Rates on Market Structure Variables, 70 Brazilian Manufacturing Affiliates of U.S. MNCs, 1972.

Independent variables	Profits over equity (P/E)			Broad profits over equity (BP/E)		
	1.1	1.2	1.3	1.4	1.5	1.6
	Regression coefficients (t statistics) ^{1/}					
Constant	16.63	18.17	-24.49	22.25	24.11	-24.56
CR4	0.16 ^b (1.96)			0.19 ^b (2.10)		
WCR4		9.99 ^c (1.48)	13.42 ^b (2.28)		11.48 ^c (1.56)	16.78 ^a (2.06)
FRMS	13.60 ^b (1.87)	12.38 ^b (1.69)	90.30 ^a (3.88)	13.12 ^c (1.66)	11.70 ^c (1.46)	101.9 ^a (3.98)
FRMS ²			-78.15 ^a (-3.51)			-90.63 ^a (-3.70)
AD	1.56 ^b (1.95)	1.50 ^b (1.78)	1.51 ^b (2.14)	1.87 ^b (2.14)	1.78 ^b (1.94)	1.91 ^a (2.46)
SIZE	-0.75 (-0.62)	-0.73 (-0.59)	-3.18 ^a (-2.73)	-0.99 (-0.75)	-0.95 (-0.71)	-3.69 ^a (-2.89)
GRO	-0.25 (-1.37)	-0.22 (-1.20)	-0.27 ^c (-1.72)	-0.34 ^c (-1.76)	-0.31 (-1.56)	-0.40 ^b (-2.29)
LEVER			129.1 ^a (4.09)			141.8 ^a (4.10)
LEVER ²			-115.9 ^a (-3.82)			-123.2 ^a (-3.70)
AFFEXP			13.77 ^a (-3.82)			15.37 ^a (3.10)
AFFIMP			-6.95 (-1.22)			-3.88 (-0.62)
OWN			0.19 ^b (1.91)			0.20 ^b (1.85)
R ²	0.62	0.62	0.78	0.62	0.61	0.78
R ²	0.59	0.58	0.74	0.59	0.58	0.73
F	17.74 ^a	17.05 ^a	17.59 ^a	17.71 ^a	16.88 ^a	17.14 ^a

^{1/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

In general the estimates are quite robust. Concentration, as expected, produces a highly significant and positive effect on profits. The Weibull transform of CR4 performs better in the more complex models, but in the simpler models the linear version of CR4 proves to be quite adequate. MNC affiliates selling in industries of average levels of concentration (CR4 = 65 percent) earn profits on equity that are 11 percentage points above those of firms in the least concentrated markets (CR4 = 25).³³ Like concentration, the firm's relative market share is also highly significant in both equations. But the shape of the influence of FRMS, like that of leverage, is an upward-bending parabola. That is, as FRMS increases, the effect on profit rate also increases up to some point and then declines beyond that point. In the case of FRMS, the critical point occurs at about 0.56, which is near the maximum value observed for FRMS. Profits on equity are raised by 5.5 percentage points when the average firm relative market share is compared to the situation where the leading firms would each have equal market share (i.e., FRMS = 0.25). Market advertising intensity AD is also positive and highly significant in all of the models shown. Net income is raised by 3 to 4 percentage points on net worth for affiliates in industries with average advertising rates (about 2 percent) relative to those with no advertising. Therefore, the existence of market power and the predictions of industrial organization theory are strongly verified in the case of U.S. MNC manufacturing affiliates operating in Brazil in 1972.³⁴

³³ Numerical illustrations of this kind will be based on the most fully specified equations shown and on the assumption that the other independent variables are being held constant at their mean values. There are several markets with concentration ratios below 25 percent; the 25 percent figure was chosen because it is the point above which the sigmoidal curve begins to rise precipitously. Most of the impact of concentration of profits is exhausted by CR4 = 60 percent.

³⁴ In Brazil, R&D intensity had no significant influence of profitability.

Among the control variables SIZE proves to have an unexpectedly negative impact upon both profit measures. Thus, in Brazil in 1972, there is no evidence that large affiliates enjoy larger profits due to absolute size alone. GRO also has a depressing influence on profits, lending credence to the view that the Brazilian economy was experiencing supply shortage or that the high-growth industries were subject to special policy constraints. The net effect of LEVER is positive over the entire range observation (0.09 to 0.96), but its effect on profits reaches a maximum at an intermediate point. Profits reach their maximum when the equity/assets ratio is about 0.6. Thus, the "optimal" debt for these Brazilian subsidiaries is predicted to be about 40 percent of total assets. As expected, the t statistics for the LEVER expression are considerably higher in equations using P/A and B/A than those using P/E or BP/E, which indicates the expected correction for interest payments.³⁵

The only consistently strong trade variable is AFFEXP; it is highly significant and positive throughout. The coefficient implies that those firms selling the average of one-fourth of their exports to sister affiliates enjoyed about 3.5 percentage points higher profits on equity than did affiliates exporting only at "arm's length". Another variable that captures some of the advantages of being closely integrated with the parent corporation, OWN, is also positive and significant.

The overall fit of Equations 1.1 to 1.6 is quite impressive, relative to previous studies using firm level data from only one year. Over two-

³⁵ Profits-over-assets equations are not shown in the present paper, though their fits are generally somewhat closer and the results concerning the significance of the independent variables highly similar to the profits-over-equity equations.

thirds of the variation in profit rates is explained by the best models.³⁶ The F test of significance for the whole equation reveals that there is a far less than 1 percent change that all of the coefficients could equal zero. Considering the imprecision of the estimates used for some of the independent variables (e.g., CR4 and GRO) these results are remarkably strong and stable.

Mexico Results

The Mexican analysis used data on 135 manufacturing affiliates of U.S. MNCs. As can be seen, most of the hypotheses verified for Brazil are also sustained in the Mexican case (Table 2).

In all three equations CR4 (or WCR4), FRMS, and AD are always positive, as predicted, but the levels of significance of FRMS and AD are lower. Advertising intensity is significant in four of the six regressions against profits.³⁷ Unlike the Brazilian case, R&D intensity in Mexico has a positive and generally significant effect on profits.

Most of the control variables behave as expected. The quadratic expression for LEVER is highly significant in all models, but its net effect on profits is negative over all of LEVER's range. As before, GRO has a negative coefficient, but in the present case it is never quite significant. Unlike the situation in Brazil, the Mexican affiliate size has a positive, albeit generally insignificant effect on profitability.

³⁶The weighting procedure tends to inflate the R^2 statistic by about 3 to 6 percentage points over the unweighted versions.

³⁷Unlike the other structural variables, AD appears to be quite sensitive to this choice of dependent variable. When regressed against the broad profit rates, AD was much stronger. The "t" values for AD were 3.95 and 2.98 when regressed against BP/E and BP/A, respectively. This implies that a number of firms in highly differentiated Mexican markets are making very large payments to their U.S. parents for technology or trademark rights. These firms are located in the food and beverage processing, drugs, soaps and cosmetics, tires, household appliances, radio and TV, phonographic, or medical instrument industries. Note

Table 2 -- Regression Results of Profit Rates on Market Structure Variables, 135 Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent variables	Profits over equity (P/E)			Broad profits over equity (BP/E)		
	2.1	2.2	2.3	2.4	2.5	2.6
	Regression coefficients (t statistics) ^{1/}					
Constant	4.93	4.08	1.22	7.77	11.52	-9.14
CR4	0.11 ^a (2.40)			0.10 ^b (1.72)		
WCR4		7.03 ^b (2.15)	8.60 ^a (2.68)		7.30 ^b (1.76)	7.63 ^b (1.80)
FRMS	30.4 ^b (1.93)	29.8 ^b (1.89)	21.4 ^c (1.42)	39.24 ^b (1.94)	38.67 ^b (1.91)	29.03 ^c (1.45)
FRMS ²	-29.6 ^b (-2.06)	-28.7 ^b (-1.99)	-20.6 ^c (-1.49)	-38.60 ^b (-2.09)	-37.79 ^b (-2.04)	-27.58 ^c (-1.51)
AD	0.21 (0.64)	0.18 (0.56)	0.48 ^c (1.51)	1.30 ^a (3.12)	1.27 ^a (3.06)	1.60 ^a (3.77)
SIZE	0.07 (0.08)	-0.12 (-0.14)	2.22 ^b (1.98)	0.01 (0.01)	-0.16 (-0.14)	2.89 ^c (1.96)
GRO	-0.41 (-1.29)	-0.43 (-1.35)	-0.36 (-1.12)	-0.38 (-0.92)	-0.40 (-0.96)	-0.42 (-1.00)
LEVER			-73.5 ^a (-2.79)			-51.80 ^c (-1.49)
LEVER ²			68.7 ^a (2.90)			46.12 ^c (1.47)
R&D	0.76 ^b (2.26)	0.79 ^a (2.36)	0.67 ^b (2.06)	0.62 ^c (1.44)	0.65 ^c (1.51)	0.54 (1.28)
AFFEXP			-10.1 ^a (-3.07)			-12.69 ^c (-2.88)
AFFIMP			7.22 (1.51)			10.69 ^c (1.69)
EXP			19.7 ^b (1.75)			16.39 (1.10)
IMP			-4.03 (-0.44)			-1.25 (-0.10)
SUPPLY			0.25 ^c (1.73)			0.30 ^c (1.62)
OWN			1.21 (1.10)			0.39 ^c (1.58)
R ²	0.61	0.61	0.67	0.65	0.65	0.70
R ²	0.58	0.58	0.63	0.63	0.63	0.66
F	24.62 ^a	24.68 ^a	15.35 ^a	29.87 ^a	29.91 ^a	17.07 ^a

^{1/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Another difference between Brazil and Mexico is the great explanatory power of the SUPPLY variable. The positive and highly significant coefficient of this control variable suggests that U.S. MNCs in Mexico derive benefits from operating vertically integrated operations.³⁸ Finally, parental ownership degree (OWN) is also positive for the Mexican sample, but only of marginal significance.

In Mexico, the four controls for international and intrafirm trade play a generally more important explanatory role than they did in Brazil. The simple trade intensities EXP is positive in sign, while IMP is negative, though only EXP is significantly so. However, at average export and import intensities, their combined effects on profits are nevertheless considerably less than 1 percentage point. The two affiliate trade ratios also present a different prospect in Mexico than in Brazil. In both equations, 2.3 and 2.6, AFFEXP is negative, AFFIMP is positive, with AFFEXP consistently significant. If those variables are good proxies for the extent of transfer pricing, then in the Mexican case the parent corporations have evidently decided to pass profits vertically forward through the corporate system. That is, exporting affiliates tend to underprice intermediate goods shipped internationally to other sister affiliates. Since the mean of AFFEXP exceeds that of AFFIMP, the net marginal "transfer pricing" effect is negative, only about 1 percentage point.

In general, these Mexican results do not support the industrial organization explanation of supranormal profits quite as strongly as did the Brazilian regressions. While the overall fit is highly significant, the

37 (continued)

that in Brazil, where there are much smaller differences between narrow and broad profits, the effect of AD on profits does not depend so much on which profit rate is employed (cf., Equations 1.3 and 1.6). This result is not unexpected, because the Brazilian government taxes technology payments in the same way as dividends while Mexico does not.

³⁸ Another variable, however, the ratio of value added to sales, often suggested as a proxy for vertical integration within a firm, failed to demonstrate any significant relationship to firm profits.

models appear to "explain" about the same amount of variation profit rates. However, the structural variables are all of the correct sign and either statistically significant or closely so, and it should also be reemphasized that a smaller proportion of explained variance is to be expected when the firm, rather than the industry, is the unit of observation.³⁹

Pooled Results

The preceding analyses have found many similarities in both the market structure and performance of MNC manufacturing enterprises in Brazil and Mexico. To this point, however, the statistical tests have examined the structure-profits relationships in the two countries separately. This procedure has been followed to avoid any potential loss of detail that may have depended on country-specific economic conditions.

To determine whether the observed relationships were influenced by economic forces unique to each nation, we now test a relatively simple model using pooled data for both countries. That is, 206 U.S. MNC affiliates located in either Brazil or Mexico are combined in a single analysis which tests the hypothesis that the profit rates of affiliates, irrespective of their location, are influenced by the same basic market structure variables, after adjusting for differences in industry growth rates in the two nations. In order to determine whether on average any country-specific differences exist between Brazilian and Mexican affiliate profit performance, a new variable is introduced: COUNTRY. This variable takes a value of 0 if the observation is in Mexico and a value of 1 if it is in Brazil (34 percent of the observations are located in Brazil).⁴⁰

³⁹ See note 22 *supra*. Also note that the average total asset size of the affiliates in the Mexican sample (\$4.6 million) is markedly less than the Brazilian subsidiaries (\$8.5 million).

⁴⁰ COUNTRY is expected to have a positive effect on the simple profit rates (P/E, P/A) but no effect on broad profitability (BP/E, BP/A). The reason lies in the differential treatment accorded technology payments in Brazil versus Mexico. See note 37 *supra* and Appendix Table A.1.

Table 3 -- Regression Results of Profit Rates on Market Structure Variables, 206 Brazilian and Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent variables	Profits over equity (P/E)			Broad profits over equity (BP/E)		
	3.1	3.2	3.3	3.4	3.5	3.6
	Regression coefficients (t statistics) ^{1/}					
Constant	1.49	-23.36	-19.39	3.03	-28.91	-24.61
CR4	0.09 ^b (2.33)	0.10 ^a (2.54)		0.10 ^b (2.12)	0.11 ^b (2.26)	
WCR4			6.41 ^b (2.21)			7.59 ^b (2.19)
FRMS	41.2 ^a (2.92)	41.4 ^a (3.07)	42.2 ^a (3.12)	49.08 ^a (2.93)	48.83 ^a (3.02)	49.49 ^a (3.06)
FRMS ²	-35.8 ^a (-2.75)	-34.4 ^a (-2.75)	-34.9 ^a (-2.78)	-44.11 ^a (-2.85)	-42.02 ^a (-2.81)	-42.39 ^a (-2.83)
AD	0.66 ^b (2.17)	0.78 ^a (2.58)	0.78 ^a (2.55)	1.57 ^a (4.33)	1.68 ^a (4.64)	1.68 ^a (4.62)
MSIZE	-0.34 (-0.36)	0.47 (0.48)	0.31 (0.31)	-0.29 (-0.26)	0.52 (0.44)	0.32 (0.27)
BSIZE	-1.03 (-1.01)	-2.66 ^b (2.36)	-2.63 ^b (-2.31)	-1.13 (-0.93)	-2.76 ^b (-2.04)	-2.75 ^b (-2.03)
GRO	-0.01 (-0.73)	-0.01 (-0.83)	-0.01 (-0.82)	-0.07 (-0.40)	-0.01 (-0.65)	-0.01 (-0.66)
LEVER		36.1 ^b (1.74)	35.2 ^c (1.69)			52.50 ^b (2.11)
LEVER ²		-30.0 ^c (-1.58)	-29.7 ^c (-1.56)			-45.30 ^b (-1.99)
R&D	0.62 ^b (1.75)	0.59 ^b (1.75)	0.64 ^b (1.89)	0.50 (1.20)	0.49 (1.21)	0.55 ^c (1.35)
MEXP		25.6 ^b (2.05)	24.4 ^b (1.95)		21.60 ^c (1.45)	20.23 ^c (1.35)
MAFFEXP		-11.1 ^a (3.12)	-11.4 ^a (-3.21)		-12.39 ^a (-2.91)	-12.71 ^a (-2.98)
MAFFIMP		8.16 (1.64)	7.79 (1.57)		11.56 ^c (1.95)	11.26 ^b (1.90)
BAFFEXP		10.9 ^a (2.71)	11.2 ^a (2.77)		10.63 ^b (2.21)	11.04 ^b (2.29)
BAFFIMP		-12.1 ^b (-2.54)	-12.2 ^b (-2.56)		-10.52 ^c (-1.85)	-10.65 ^b (-1.87)
COUNTRY	9.62 (0.74)	30.1 ^b (2.24)	28.4 ^b (2.11)	6.88 (0.44)	26.86 ^b (1.67)	25.06 ^c (1.56)
OWN		0.09 ^b (2.03)	0.09 ^b (1.91)		0.13 ^b (2.31)	0.12 ^b (2.20)
R ²	0.61	0.66	0.66	0.64	0.66	0.69
R ²	0.59	0.63	0.63	0.62	0.62	0.66
F	30.07 ^a	20.59 ^a	20.34 ^a	34.75 ^a	22.93 ^a	22.79 ^a

^{1/}The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

The analysis uses four measures of profit performance, two of which are shown in Table 3. Each estimated regression equation is statistically highly significant, although the overall closeness of fit of the pooled regressions is slightly lower than the equations estimated for Brazil and Mexico separately. As expected, the rates of profit performance employing the broad earnings concept (BP/E) reveal a higher significance level for the market structure variables than does the narrower earnings definition (P/E).

Three structural dimensions (CR4, FRMS, and AD) have positive and highly significant impacts of firm profits, as predicted.⁴¹ R&D is also positive and significant. Brazilian affiliate size and industry growth are consistently negative in their impact on profits but only the former is significant. Incorporation of five trade variables raised the percentage of variance explained by about 5 points and also brought about a considerable increase in the "t" statistics for the three structural variables. The variable OWN also displayed its former positive, significant coefficient.

Finally, a key result is that U.S. MNC affiliates in both Brazil and Mexico that are in similar market environments reap similar profit rates. The positive coefficient on COUNTRY implies higher overall profitability, ceteris paribus, for the Brazilian subsidiaries of U.S. MNCs, but the difference in coefficients between Equations 3.1 to 3.3 and Equations 3.4 to 3.6 of about 3 percentage points attests to the different treatment of technology

⁴¹ However, variables representing the economies of scale and absolute-capital-cost barriers to entry failed to exhibit any explanatory power (see Connor 1976) thus lending some support to the notion that MNCs are easily able to surmount these barriers to entry (Caves 1974b, Gorecki 1976). Note that in the pooled sample, the linear specification of CR4 exhibits superior performance to the Weibull version (WCR4).

payments between Brazil and Mexico.⁴² Even though average profit rates are lower in Brazil than Mexico, the underlying market structure-profit relationships are statistically indistinguishable, as indicated by an application of the Chow test (Johnston 1963, p. 137).⁴³

The market structures of Brazil and Mexico are essentially homomorphic (Connor and Mueller 1978), and those structural elements generate essentially the same kind of profit performance for the manufacturing affiliates of U. S. multinational corporations in both countries. This implies that the fruits of market power transcend national boundaries and are similar despite differences in the cultural and institutional environment in which MNCs operate. That power enables its holders to engage in a variety of business strategies, including the restructuring of the host-country industries in which they operate (Newfarmer and Mueller 1975). The market structures of Brazil and Mexico have largely been shaped by the size of those markets, technological imperatives, or legal-institutional factors which we were not able to analyze statistically. But irrespective of the determinants of existing market structures in these nations, such structures clearly confer great economic power on many MNCs operating within them.

⁴²Broad profitability is the more relevant measure because, unlike Mexico, Brazil treats the payments of royalties and fees to parent corporations as subject to its dividend withholding tax. For all reporting U.S. MNC manufacturing affiliates in 1972, broad profits over equity averaged 16.8 percent in Brazil and 16.9 percent in Mexico (Connor and Mueller 1977, p. 50).

⁴³The calculated F statistic was less than unity for all three profit rates models, thus failing to reject the hypothesis that the pooled sample and the Brazil (or Mexico) subsample are drawn from the same universe as the pooled sample. The Chow test is built on the assumption that the variances of the two subsamples are the same and that the two subsamples are homoskedastic; given that the second assumption is clearly violated by our data, it may be inappropriate to perform the test.

Table A.1 -- Descriptive Statistics for Variables Used in Regression Analyses

Variable	70 Brazilian affiliates		135 Mexican affiliates		206 Brazilian and Mexican affiliates	
	Mean	Standard deviation	Mean	Standard deviation	Mean	Standard deviation
CR4	63.85	26.76	68.91	24.82	68.94	25.57
WCR4	0.79	0.35	0.70	0.36	0.77	0.30
FRMS	0.39	0.26	0.42	0.28	0.41	0.27
AD	1.94	2.84	1.97	3.30	1.95	3.15
SIZE	9.05	1.55	8.43	1.24	8.64	1.38
GRO	43.13	11.00	13.32	3.51	82.47	80.00
R&D	0.55	1.31	0.99	3.28	0.84	2.77
LEVER	0.51	0.19	0.55	0.21	0.54	0.20
EXP	0.028	0.068	0.033	0.098	0.031	0.089
IMP	0.079	0.125	0.067	0.129	0.072	0.128
AFFEXP	0.26	0.41	0.21	0.38	0.22	0.39
AFFIMP	0.19	0.28	0.15	0.26	0.17	0.27
SUPPLY	6.02	19.47	1.67	10.09	3.24	14.19
COUNTRY	1.00	0.00	0.00	0.00	0.34	
OWN	90.86	17.50	82.99	24.43	85.43	22.83
MSIZE	-	-	-	-	8.01	
BSIZE	-	-	-	-	7.97	
MEXP	-	-	-	-	0.022	
MAFFEXP	-	-	-	-	0.14	
MAFFIMP	-	-	-	-	0.10	
BAFFEXP	-	-	-	-	0.09	
BAFFIMP	-	-	-	-	0.06	
P/E	17.89	16.27	13.94	13.66	15.24	14.71
P/A	19.05	8.20	7.68	7.25	8.13	7.61
BP/E	19.31	17.88	19.52	17.17	19.39	17.39
BP/A	9.92	9.61	10.64	9.16	10.37	9.31

Table A.2 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 70
Brazilian Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	2.1	2.2	2.3	2.4	2.5	2.6	2.7	2.8
Constant	0.99	16.63	-6.73	3.69	18.17	-8.82	-3.41	-24.49
CR4	0.12 ^c (1.58)	0.16 ^b (1.96)	0.16 ^b (2.09)					
WCR4				7.33 (1.14)	9.99 ^c (1.48)	14.39 ^a (2.40)	15.51 ^a (2.57)	13.42 ^b (2.28)
FRMS	13.62 ^b (1.88)	13.60 ^b (1.87)	86.46 ^a (3.62)	12.67 ^b (1.73)	12.38 ^b (1.69)	90.21 ^a (3.79)	92.50 ^a (3.88)	90.30 ^a (3.88)
FRMS ²			-76.00 ^a (-3.35)			-81.33 ^a (-3.58)	-83.50 ^a (-3.66)	-78.15 ^a (-3.51)
AD	1.73 ^b (2.18)	1.56 ^b (1.95)	1.55 ^b (2.24)	1.63 ^b (1.96)	1.50 ^b (1.78)	1.76 ^a (2.48)	1.67 ^a (2.35)	1.51 ^b (2.14)
SIZE		-0.75 (-0.62)	-3.02 ^b (-2.54)		-0.73 (-0.59)	-3.23 ^a (-2.71)	-3.38 ^a (-2.77)	-3.18 ^a (-2.73)
GRO		-0.25 (-1.37)	-0.23 (-1.39)		-0.22 (-1.20)	-0.24 (-1.49)	-0.30 ^c (-1.78)	-0.27 ^c (-1.72)
LEVER			123.41 ^a (3.77)			131.9 ^a (4.10)	123.5 ^a (3.79)	129.1 ^a (4.09)
LEVER ²			-113.66 ^a (-3.60)			-121.1 ^a (-3.92)	-115.6 ^a (-3.73)	-115.9 ^a (-3.82)
AFFEXP			15.19 ^a (3.39)			16.01 ^a (3.57)	15.02 ^a (3.30)	13.77 ^a (3.03)
AFFIMP			-7.66 (-1.29)			-7.36 (-1.26)	-6.64 (-1.13)	-6.95 (-1.22)
R&D							2.58 (0.82)	
R&D ²							-0.65 (-1.24)	
OWN								0.19 ^b (1.91)
R ²	0.61	0.62	0.77	0.61	0.62	0.77	0.78	0.78
R ²	0.59	0.59	0.72	0.58	0.58	0.73	0.73	0.74
F	26.04 ^a	17.74 ^a	17.54 ^a	25.29 ^a	17.05 ^a	18.05 ^a	15.54 ^a	17.59 ^a

^{1/}In this table, the profit rate used was after-tax net income as a percentage of stockholders' equity (P/E).

^{2/}The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.3 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 70 Brazilian Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	3.1	3.2	3.3	3.4	3.5	3.6	3.7	3.8
Constant	-5.42	4.43	-11.39	-2.36	6.23	-11.94	-9.88	-19.54
CR4	0.08 ^b (2.07)	0.10 ^a (2.50)	0.10 ^a (2.74)					
WCR4				3.55 (1.06)	4.98 ^c (1.43)	6.90 ^b (2.29)	7.26 ^b (2.38)	6.44 ^b (2.17)
FRMS	6.09 ^c (1.65)	5.99 ^c (1.63)	41.67 ^a (3.56)	5.38 ^c (1.42)	5.28 ^c (1.39)	42.57 ^a (3.55)	43.08 ^a (3.57)	42.62 ^a (3.63)
FRMS ²			-37.98 ^a (-3.42)			-39.86 ^a (-3.49)	-39.92 ^a (-3.45)	-38.31 ^a (-3.41)
AD	1.09 ^a (2.69)	1.01 ^a (2.49)	0.95 ^a (2.80)	0.96 ^b (2.23)	0.88 ^b (2.02)	0.94 ^a (2.64)	0.91 ^a (2.54)	0.82 ^b (2.30)
SIZE		-0.41 (-0.67)	-1.38 ^b (-2.38)		-0.36 (-0.57)	-1.40 ^b (-2.33)	-1.52 ^b (-2.47)	-1.37 ^b (-2.34)
GRO		-0.16 ^c (-1.78)	-0.15 ^c (-1.84)		-0.13 (-1.37)	-0.13 (-1.62)	-0.14 ^c (-1.70)	-0.15 ^c (-1.84)
LEVER	22.68 ^b (2.08)	8.11 ^b (1.71)	83.63 ^a (5.23)	8.88 ^b (1.84)	7.74 ^c (1.59)	88.82 ^a (5.48)	85.84 ^a (5.20)	87.46 ^a (5.50)
LEVER ²			-69.72 ^a (-4.51)			-75.00 ^a (-4.83)	-73.02 ^a (-4.65)	-72.44 ^a (-4.74)
AFFEXP			6.67 ^a (3.04)			6.73 ^a (2.98)	6.24 ^a (2.71)	5.65 ^b (2.47)
AFFIMP			-2.86 (-0.98)			-3.39 (-1.15)	-3.23 (-1.09)	-3.19 (-1.11)
R&D							1.69 (1.06)	
R&D ²							-0.32 (-1.21)	
OWN								0.09 ^b (1.84)
R ²	0.63	0.64	0.79	0.61	0.62	0.78	0.79	0.79
\bar{R}^2	0.60	0.60	0.75	0.58	0.58	0.74	0.74	0.75
F	21.86 ^a	16.25 ^a	20.01 ^a	20.18 ^a	14.72 ^a	19.14 ^a	16.17 ^a	18.54 ^a

^{1/}In this table, the profit rate used was after-tax net income as a percentage of total assets (P/A).

^{2/}The subscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.4 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 70 Brazilian Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	4.1	4.2	4.3	4.4	4.5	4.6	4.7	4.8
Constant	1.04	22.25	-5.56	4.32	24.11	-7.95	-2.18	-24.56
CR4	0.14 ^c (1.59)	0.19 ^b (2.10)	0.20 ^a (2.49)					
WCR4				7.75 (1.10)	11.48 ^c (1.56)	17.81 ^a (2.71)	19.06 ^a (2.88)	16.78 ^a (2.06)
FRMS	13.16 ^c (1.65)	13.12 ^c (1.66)	97.54 ^a (3.73)	12.12 ^c (1.51)	11.70 ^c (1.46)	101.8 ^a (3.90)	104.5 ^a (4.00)	101.9 ^a (3.98)
FRMS ²			-87.67 ^a (-3.53)			-94.00 ^a (-3.78)	-96.83 ^a (-3.87)	-90.63 ^a (-3.70)
AD	2.10 ^a (2.40)	1.87 ^b (2.14)	1.95 ^a (2.58)	1.96 ^b (2.14)	1.78 ^b (1.94)	2.18 ^a (2.80)	2.07 ^a (2.66)	1.91 ^a (2.46)
SIZE		-0.99 (-0.75)	-3.52 ^a (-2.71)		-0.95 (-0.71)	-3.74 ^a (-2.87)	-3.85 ^a (-2.88)	-3.69 ^a (-2.89)
GRO		-0.34 ^c (-1.76)	-0.36 ^b (-2.00)		-0.31 (-1.56)	-0.36 ^b (-2.07)	-0.43 ^b (-2.36)	-0.40 ^b (-2.29)
LEVER			133.9 ^a (3.74)			144.8 ^a (4.10)	135.6 ^a (3.80)	141.8 ^a (4.10)
LEVER ²			-118.9 ^a (-3.44)			-128.8 ^a (-3.81)	-122.8 ^a (-3.62)	-123.2 ^a (-3.70)
AFFEXP			16.85 ^a (3.44)			17.74 ^a (3.61)	16.76 ^a (3.36)	15.37 ^a (3.10)
AFFIMP			-4.41 (-0.68)			-4.31 (-0.67)	-3.47 (-0.54)	-3.88 (-0.62)
R&D							2.27 (0.66)	
R&D ²							-0.64 (-1.12)	
OWN								0.20 ^b (1.85)
R ²	0.60	0.62	0.76	0.60	0.61	0.77	0.78	0.78
R ²	0.58	0.59	0.71	0.57	0.58	0.72	0.73	0.73
F	25.16 ^a	17.71 ^a	17.26 ^a	24.36 ^a	16.88 ^a	17.67 ^a	15.21 ^a	17.14 ^a

^{1/} In this table, the profit rate used was broad profits as a percent of stockholders' equity (BP/E).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.5 -- Regression Results of Profit Rates^{1/} on Market Structure Variables. 70
Brazilian Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	5.1	5.2	5.3	5.4	5.5	5.6	5.7	5.8
Constant	-0.80	6.21	-10.51	-3.42	8.26	-11.24	-8.96	-19.55
CR4	0.09 ^b (2.03)	0.12 ^a (2.56)	0.13 ^a (3.03)					
WCR4				4.02 (1.04)	5.99 ^c (1.50)	9.06 ^a (2.54)	9.49 ^a (2.62)	8.54 ^a (2.42)
FRMS	5.68 ^c (1.33)	5.55 ^c (1.32)	48.56 ^a (3.52)	4.85 (1.11)	4.71 (1.08)	49.78 ^a (3.51)	50.51 ^a (3.53)	49.83 ^a (3.57)
FRMS ²			-45.19 ^a (-3.45)			-47.69 ^a (-3.53)	-48.11 ^a (-3.50)	-45.99 ^a (-3.44)
AD	1.31 ^a (2.81)	1.21 ^a (2.60)	1.21 ^a (3.02)	1.17 ^b (2.36)	1.06 ^b (2.13)	1.20 ^a (2.84)	1.17 ^a (2.73)	1.07 ^a (2.52)
SIZE		-0.53 (-0.75)	-1.72 ^b (-2.51)		-0.48 (-0.66)	-1.74 ^b (-2.46)	-1.85 ^b (-2.52)	-1.71 ^b (-2.46)
GRO		-0.21 ^b (-2.01)	-0.23 ^b (-2.41)		-0.18 ^c (-1.65)	-0.21 ^b (-2.17)	-0.23 ^b (-2.25)	-0.22 ^b (-2.37)
LEVER	28.89 ^b (2.29)	10.35 ^b (1.91)	89.20 ^a (4.73)	11.50 ^b (2.07)	9.93 ^b (1.77)	95.97 ^a (5.01)	92.56 ^a (4.73)	94.48 ^a (5.00)
LEVER ²			-71.65 ^a (-3.93)			-78.52 ^a (-4.27)	-76.27 ^a (-4.09)	-75.72 ^a (-4.17)
AFFEXP			7.86 ^a (3.04)			7.95 ^a (2.98)	7.46 ^a (2.73)	6.77 ^b (2.49)
AFFIMP			-0.82 (-0.24)			-1.50 (-0.43)	-1.27 (-0.36)	-1.28 (-0.37)
R&D							1.55 (0.81)	
R&D ²							-0.32 (-1.02)	
OWN								0.10 ^b (1.70)
R ²	0.61	0.63	0.77	0.59	0.61	0.76	0.76	0.77
R ²	0.58	0.59	0.72	0.55	0.56	0.71	0.71	0.72
F	19.97 ^a	15.30 ^a	17.68 ^a	18.45 ^a	13.79 ^a	16.75 ^a	14.06 ^a	16.08 ^a

^{1/}In this table, the profit rate used was broad profits as a percentage of total assets (BP/A).

^{2/}The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.6 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 135 Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent variables	Regression coefficients (and t statistics) ^{2/}							
	6.1	6.2	6.3	6.4	6.5	6.6	6.7	6.8
Constant	1.49	4.93	5.62	4.08	9.00	12.95	10.63	1.22
CR4	0.11 ^b (2.28)	0.11 ^a (2.40)	0.13 ^a (2.67)					
WCR4				7.03 ^b (2.15)	7.86 ^a (2.44)	8.46 ^a (2.62)	8.41 ^a (2.63)	8.60 ^a (2.68)
FRMS	27.3 ^b (1.77)	30.4 ^b (1.93)	23.6 ^c (1.57)	26.3 ^b (1.69)	29.8 ^b (1.89)	24.3 ^c (1.60)	23.3 ^c (1.55)	21.4 ^c (1.42)
FRMS ²	-27.6 ^b (-1.95)	-29.6 ^b (-2.06)	-23.4 ^b (-1.71)	-26.3 ^b (-1.85)	-28.7 ^b (-1.99)	-23.4 ^b (-1.69)	-22.6 ^c (-1.65)	-20.6 ^c (-1.49)
AD	0.35 (1.15)	0.21 (0.64)	0.56 ^b (1.74)	0.33 (1.06)	0.18 (0.56)	0.49 ^c (1.53)	0.53 ^c (1.64)	0.48 ^c (1.51)
SIZE		0.07 (0.08)	1.68 ^c (1.85)		-0.12 (-0.14)	1.23 (1.35)	1.52 ^c (1.65)	2.22 ^b (1.98)
GRO		-0.41 (-1.29)	-0.32 (-0.99)		-0.43 (-1.35)	-0.37 (-1.13)	-0.33 (-1.03)	-0.36 (-1.12)
LEVER			-74.0 ^a (-2.81)			-71.3 ^a (-2.69)	-74.9 ^a (-2.84)	-73.5 ^a (-2.79)
LEVER ²			70.7 ^a (2.99)			67.4 ^a (2.84)	71.0 ^a (3.00)	68.7 ^a (2.90)
R & D		0.76 ^b (2.26)	0.66 ^b (2.07)		0.79 ^a (2.36)	0.71 ^b (2.18)	0.71 ^b (2.20)	0.67 ^b (2.06)
AFFEXP			-8.96 ^a (-2.78)			-9.05 ^a (-2.80)	-9.28 ^a (-2.90)	-10.1 ^a (-3.07)
AFFIMP			8.73 ^c (1.85)			7.87 ^c (1.66)	8.16 ^c (1.73)	7.22 (1.51)
EXP			20.9 ^b (1.85)			22.0 ^b (1.95)	20.0 ^b (1.77)	19.7 ^b (1.75)
IMP			-4.21 (-0.46)			-5.04 (-0.55)	-4.37 (-0.48)	-4.03 (-0.44)
SUPPLY			0.27 ^c (1.90)				0.25 ^c (1.79)	0.25 ^c (1.73)
OWN								1.21 (1.10)
R ²	0.59	0.61	0.67	0.58	0.61	0.66	0.67	0.67
\bar{R}^2	0.57	0.58	0.63	0.57	0.58	0.62	0.62	0.63
F	36.66 ^a	24.62 ^a	16.32 ^a	36.40 ^a	24.68 ^a	16.89 ^a	16.27 ^a	15.35 ^a

1/ In this table, the profit rate used was after-tax net income as a percentage of stockholders' equity (P/E).

2/ The superscripts a, b, and c represent statistical significance at the 1, 5 and 10 percent levels, respectively.

Table A.7 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 135 Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	7.1	7.2	7.3	7.4	7.5	7.6	7.7	7.8
Constant	-7.95	-7.39	-7.70	-7.03	-5.82	-4.58	-5.65	-10.12 ^c
CR4	0.04 ^b (1.80)	0.04 ^b (1.82)	0.05 ^b (2.24)					
WCRA				2.80 ^b (1.82)	2.96 ^b (1.91)	3.44 ^b (2.19)	3.42 ^b (2.03)	3.51 ^b (2.24)
FRMS	13.24 ^b (1.83)	13.63 ^b (1.81)	13.63 ^c (1.59)	12.70 ^b (1.74)	13.36 ^b (1.77)	11.99 ^c (1.62)	11.52 ^c (1.57)	10.62 ^c (1.44)
FRMS ²	-13.28 ^b (-2.00)	-13.50 ^b (-1.96)	-11.46 ^b (-1.72)	-12.69 ^b (-1.90)	-13.14 ^b (-1.90)	-11.55 ^b (-1.71)	-11.18 ^b (-1.67)	-10.22 ^c (-1.51)
AD	0.08 (0.60)	0.02 (0.14)	0.16 (1.04)	0.07 (0.46)	0.01 (0.08)	0.13 (0.86)	0.15 (0.96)	0.13 (0.83)
SIZE		0.16 (0.38)	0.71 (1.59)		0.09 (0.21)	0.51 (1.14)	0.64 (1.43)	0.97 ^b (1.78)
GRO		-0.14 (-0.91)	-0.14 (-0.86)		-0.15 (-0.97)	-0.16 (-0.99)	-0.14 (-0.89)	-0.15 (-0.97)
LEVER	19.47 ^a (7.37)	19.03 ^a (6.95)	-4.99 (-0.39)	19.40 ^a (7.37)	18.92 ^a (6.94)	-3.71 (-0.29)	-5.35 (-0.42)	-4.72 (-0.37)
LEVER ²			22.43 ^b (1.95)			20.88 ^b (1.80)	22.53 ^b (1.95)	21.47 ^b (1.85)
R&D		0.17 (1.06)	0.12 (0.75)		0.18 (1.14)	0.14 (0.85)	0.14 (0.86)	0.12 (0.75)
AFFEXP			-3.39 ^b (-2.16)			-3.42 ^b (-2.17)	-3.52 ^b (-2.26)	-3.90 ^b (-2.44)
AFFIMP			4.99 ^b (2.16)			4.61 ^b (2.00)	4.75 ^b (2.07)	4.30 ^c (1.85)
EXP			11.39 ^b (2.07)			11.96 ^b (2.17)	11.01 ^b (2.00)	10.89 ^b (1.98)
IMP			-3.88 (-0.87)			-4.25 (-0.94)	-3.93 (-0.88)	-3.77 (-0.84)
SUPPLY			0.13 ^c (1.80)				0.12 ^c (1.70)	0.11 ^c (1.65)
OWN								0.10 (1.07)
R ²	0.69	0.70	0.74	0.69	0.70	0.73	0.74	0.74
R ²	0.68	0.68	0.70	0.68	0.68	0.70	0.70	0.70
F	48.50 ^a	32.39 ^a	22.27 ^a	48.53 ^a	32.50 ^a	23.23 ^a	22.21 ^a	20.92 ^a

^{1/} In this table, the profit rate used was after-tax net income as a percentage of total assets (P/A).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.8 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 135 Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	8.1	8.2	8.3	8.4	8.5	8.6	8.7	8.8
Constant	4.10	7.77	4.37	6.47	11.52	11.64	8.73	-9.14
CR4	0.10 ^b (1.66)	0.10 ^b (1.72)	0.11 ^b (1.75)					
WCR4				6.56 ^c (1.59)	7.30 ^b (1.76)	7.33 ^b (1.71)	7.27 ^b (1.71)	7.63 ^b (1.80)
FRMS	36.30 ^b (1.85)	39.24 ^b (1.94)	32.85 ^c (1.65)	35.33 ^b (1.79)	38.67 ^b (1.91)	33.89 ^b (1.68)	32.62 ^c (1.63)	29.03 ^c (1.45)
FRMS ²	-36.51 ^b (-2.04)	-38.60 ^b (-2.09)	-32.00 ^b (-1.76)	-35.32 ^b (-1.96)	-37.79 ^b (-2.04)	-32.41 ^b (-1.76)	-31.41 ^b (-1.72)	-27.58 ^c (-1.51)
AD	1.43 ^a (3.65)	1.30 ^a (3.12)	1.71 ^a (4.02)	1.41 ^a (3.59)	1.27 ^a (3.06)	1.64 ^a (3.84)	1.68 ^a (3.95)	1.60 ^a (3.77)
SIZE		0.01 (0.01)	1.70 (1.41)		-0.16 (-0.14)	1.20 (0.99)	1.56 (1.28)	2.89 ^c (1.96)
GRO		-0.38 (-0.92)	-0.37 (-0.84)		-0.40 (-0.96)	-0.41 (-0.96)	-0.37 (-0.87)	-0.42 (-1.00)
LEVER			-53.57 ^c (-1.53)			-49.90 ^c (-1.41)		-51.80 ^c (-1.49)
LEVER ²			50.18 ^c (1.60)			45.94 ^c (1.46)		46.12 ^c (1.47)
R&D		0.62 ^c (1.44)	0.58 ^c (1.35)		0.65 ^c (1.51)	0.61 ^c (1.42)	0.61 ^c (1.44)	0.54 (1.28)
AFFEXP			-10.66 ^b (-2.49)			-10.67 ^b (-2.49)	-10.95 ^b (-2.58)	-12.46 ^a (-2.88)
AFFIMP			12.98 ^b (2.06)			12.10 ^c (1.92)	12.47 ^b (2.00)	10.69 ^c (1.69)
EXP			17.66 (1.18)			19.42 ^c (1.29)	16.86 (1.13)	16.39 (1.10)
IMP			-1.78 (-0.15)			-2.74 (-0.22)	-1.89 (-0.16)	-1.25 (-0.10)
SUPPLY			0.33 ^b (1.76)				0.32 ^b (1.69)	0.30 ^c (1.62)
OWN								0.39 ^c (1.58)
R ²	0.64	0.65	0.69	0.64	0.65	0.68	0.69	0.70
R ²	0.63	0.63	0.65	0.63	0.63	0.65	0.65	0.66
F	47.07 ^a	29.87 ^a	17.85 ^a	46.93 ^a	29.91 ^a	18.60 ^a	17.82 ^a	17.07 ^a

^{1/} In this table, the profit rate used was broad profits as a percentage of stockholder's equity (BP/E).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.9 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 135 Mexican Manufacturing Affiliates of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	9.1	9.2	9.3	9.4	9.5	9.6	9.7	9.8
Constant	-7.85	-6.89	-10.27	-7.20	-5.77	-7.40	-8.71	-18.38 ^c
CR4	0.03 (0.99)	0.03 (1.00)	0.04 (1.25)					
WCR4				2.07 (1.02)	2.22 (1.08)	2.58 (1.21)	2.55 (1.20)	2.75 ^c (1.30)
FRMS	18.61 ^b (1.95)	19.12 ^b (1.92)	17.46 ^b (1.75)	18.19 ^b (1.89)	18.87 ^b (1.89)	17.98 ^b (1.79)	17.41 ^b (1.74)	15.47 ^c (1.55)
FRMS ²	-18.61 ^b (-2.13)	-18.98 ^b (-2.08)	-17.04 ^b (-1.87)	-18.16 ^b (-2.06)	-18.69 ^b (-2.04)	-17.31 ^b (-1.89)	-16.85 ^b (-1.85)	-14.78 ^c (-1.62)
AD	0.57 ^a (2.95)	0.50 ^a (2.41)	0.64 ^a (3.03)	0.56 ^a (2.91)	0.49 ^a (2.38)	0.62 ^a (2.88)	0.63 ^a (2.98)	0.59 ^a (2.79)
SIZE		0.20 (0.36)	0.70 (1.15)		0.14 (0.27)	0.49 (0.81)	0.65 (1.06)	1.37 ^c (1.86)
GRO		-0.19 (-0.91)	-0.20 (-0.94)		-0.20 (-0.94)	-0.22 (-1.04)	-0.20 (-0.95)	-0.23 (-1.10)
LEVER	22.83 ^a (6.56)	22.21 ^a (6.13)	12.68 (0.72)	22.79 ^a (6.56)	22.14 ^a (6.14)	14.42 (0.82)	12.43 (0.71)	13.79 (0.43)
LEVER ²			9.41 (0.60)			7.46 (0.47)	9.46 (0.60)	7.15 (0.65)
R&D		0.15 (0.71)	0.13 (0.59)		0.16 (0.75)	0.14 (0.64)	0.14 (0.65)	0.10 (0.48)
AFFEXP			-3.56 ^c (-1.67)			-3.54 ^b (-1.65)	-3.67 ^b (-1.73)	-4.49 ^b (-2.08)
AFFIMP			6.65 ^b (2.12)			6.30 ^b (2.01)	6.46 ^b (2.07)	5.50 ^c (1.75)
EXP			8.84 (1.18)			9.70 ^c (1.30)	8.55 (1.14)	8.29 (1.12)
IMP			-3.55 (-0.58)			-3.96 (-0.65)	-3.58 (-0.59)	-3.23 (-0.54)
SUPPLY			0.15 ^c (1.57)				0.14 ^c (1.52)	0.14 ^c (1.45)
OWN								0.21 ^b (1.71)
R ²	0.71	0.72	0.74	0.71	0.72	0.73	0.74	0.74
R ²	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.71
F	53.17 ^a	35.21 ^a	22.29 ^a	53.20 ^a	35.27 ^a	23.43 ^a	22.26 ^a	21.38 ^a

^{1/} In this table, the profit rate used was broad profits as a percentage of total assets (BP/A).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.10 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 206 Brazilian and Mexican Manufacturing Subsidiaries of U.S. MNCs, 1972.

Independent variables	Regression coefficients (and t statistics) ^{2/}							
	10.1	10.2	10.3	10.4	10.5	10.6	10.7	10.8
Constant	4.87	1.79	-12.94	-15.21	-23.36	1.08	-0.12	-19.39
CR4	0.10 ^a (2.47)	0.09 ^b (2.33)	0.09 ^b (2.22)	0.09 ^a (2.38)	0.10 ^a (2.54)			
WCR4						4.97 ^b (1.71)	5.84 ^b (1.95)	6.41 ^b (2.21)
FRMS	2.76 (0.76)	41.2 ^a (2.92)	42.4 ^a (3.10)	43.6 ^a (3.21)	41.4 ^a (3.07)	38.7 ^a (2.79)	42.9 ^a (3.01)	42.2 ^a (3.12)
FRMS ²		-35.8 ^a (-2.75)	-36.4 ^a (-2.88)	-37.2 ^a (-2.97)	-34.4 ^a (-2.75)	-34.2 ^a (-2.67)	-37.3 ^a (-2.83)	-34.9 ^a (-2.78)
AD	0.69 ^b (2.27)	0.66 ^b (2.17)	0.78 ^a (2.58)	0.87 ^a (2.86)	0.78 ^a (2.58)	0.67 ^b (2.23)	0.62 ^b (2.02)	0.78 ^a (2.55)
MSIZE		-0.34 (-0.36)	0.21 (0.21)	0.33 (0.34)	0.47 (0.48)		-0.70 (-0.73)	0.31 (0.31)
Bsize		-1.03 (-1.01)	-2.77 ^b (-2.42)	-2.76 ^b (-2.43)	-2.66 ^b (-2.36)		-0.91 (-0.89)	-2.63 ^b (-2.31)
GRO		-0.01 (-0.73)	-0.01 (-0.78)	-0.01 (-0.69)	-0.01 (-0.83)		-0.01 (-0.68)	-0.01 (-0.82)
LEVER			34.5 ^c (1.63)	34.2 ^c (1.63)	36.1 ^b (1.74)		25.8 (1.17)	35.2 ^c (1.69)
LEVER ²			-27.4 ^c (-1.42)	-27.5 ^c (-1.44)	-30.0 ^c (-1.58)		-23.5 (-1.17)	-29.7 ^c (-1.56)
R&D		0.62 ^b (1.75)	0.72 ^b (2.10)	0.67 ^b (1.96)	0.59 ^b (1.75)		0.70 ^b (1.96)	0.64 ^b (1.89)
MEXP				26.2 ^b (2.08)	25.6 ^b (2.05)			24.4 ^b (1.95)
MAFFEXP			-6.81 ^b (-2.08)	-9.65 ^a (-2.76)	-11.1 ^a (-3.12)			-11.4 ^a (-3.21)
MAFFIMP			8.65 ^c (1.74)	9.65 ^b (1.95)	8.16 (1.64)			7.79 (1.57)
BAFFEXP			12.7 ^a (3.18)	12.6 ^a (3.20)	10.9 ^a (2.71)			11.2 ^a (2.77)
BAFFIMP			-12.8 ^a (-2.65)	-12.8 ^a (-2.67)	-12.1 ^b (-2.54)			-12.2 ^b (-2.56)
COUNTRY	3.12 ^c (1.61)	9.62 (0.74)	24.9 ^b (2.15)	30.9 ^b (2.28)	30.1 ^b (2.24)	3.32 ^b (1.72)	5.62 (0.43)	28.4 ^b (2.11)
OWN					0.09 ^b (2.03)			0.05 ^b (1.91)
R ²	0.58	0.61	0.65	0.66	0.66	0.59	0.61	0.66
R ²	0.57	0.59	0.62	0.63	0.63	0.58	0.58	0.63
F	55.89 ^a	30.07 ^a	21.88 ^a	21.21 ^a	20.59 ^a	48.50 ^a	24.82 ^a	20.34 ^a

^{1/} In this table, the profit rate used was after-tax net income as a percentage of stockholders' equity (P/E).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.11 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 206 Brazilian and Mexican Manufacturing Subsidiaries of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	11.1	11.2	11.3	11.4	11.5	11.6	11.7	11.8
Constant	-4.63	-6.36	-14.16	-15.42	-20.53	-5.79	-8.17	-18.29
CR4	0.05 ^b (2.32)	0.04 ^b (2.21)	0.05 ^b (2.26)	0.05 ^a (2.43)	0.05 ^a (2.64)			
WCR4						1.99 ^c (1.35)	2.24 ^c (1.49)	2.78 ^b (1.92)
FRMS	0.96 (0.52)	18.10 ^a (2.53)	19.52 ^a (2.85)	20.19 ^a (2.97)	18.84 ^a (2.81)	17.38 ^a (2.49)	19.82 ^a (2.77)	19.57 ^a (2.89)
FRMS ²		-16.07 ^a (-2.44)	-17.23 ^a (-2.72)	-17.69 ^a (-2.82)	-15.95 ^a (-2.57)	-15.55 ^b (-2.41)	-17.60 ^a (-2.66)	-16.44 ^a (-2.62)
AD	0.31 ^b (2.04)	0.29 ^b (1.89)	0.33 ^b (2.16)	0.38 ^a (2.51)	0.32 ^b (2.15)	0.30 ^b (1.94)	0.25 ^b (1.63)	0.31 ^b (2.05)
MSIZE		-0.08 (-0.17)	-0.04 (-0.07)	0.03 (0.07)	0.12 (0.24)		-0.32 (-0.66)	0.06 (0.12)
BSIZE		-0.53 (-1.02)	-1.52 ^a (-2.65)	-1.52 ^a (-2.67)	-1.45 ^a (-2.59)		-0.44 (-0.86)	-1.40 ^b (-2.47)
GRO		-0.01 (-0.81)	-0.01 (-0.98)	-0.01 (-0.88)	-0.01 (-1.07)		-0.01 (-0.77)	-0.01 (-0.99)
LEVER		14.71 ^a (5.97)	41.56 ^a (3.92)	41.39 ^a (3.95)	42.58 ^a (4.12)	14.61 ^a (6.04)	36.58 ^a (3.32)	42.17 ^a (4.05)
LEVER ²			-22.97 ^b (-2.38)	-23.00 ^b (-2.41)	-24.58 ^a (-2.61)		-20.91 ^b (-2.07)	-24.61 ^a (-2.59)
R&D		0.16 (0.89)	0.21 (1.22)	0.18 (1.05)	0.13 (0.79)		0.21 (1.16)	0.16 (0.93)
MEXP				14.60 ^b (2.32)	14.27 ^a (2.30)			13.54 ^b (2.17)
MAFFEXP			-2.21 (-1.35)	-3.79 ^b (-2.16)	-4.71 ^a (-2.66)			-4.93 ^a (-2.77)
MAFFIMP			4.58 ^c (1.84)	5.14 ^b (2.08)	4.21 ^c (1.71)			3.89 (1.57)
BAFFEXP			7.10 ^a (3.56)	7.08 ^a (3.59)	5.99 ^a (3.00)			6.09 ^a (3.02)
BAFFIMP			-5.93 ^b (-2.45)	-5.91 ^a (-2.47)	-5.49 ^b (-2.32)			-5.62 ^b (-2.36)
COUNTRY	1.47 ^c (1.50)	5.52 (0.84)	14.49 ^b (2.11)	15.32 ^b (2.26)	14.83 ^b (2.22)	1.54 ^c (1.59)	2.71 (0.41)	13.88 ^b (2.06)
R ²	0.63	0.64	0.69	0.70	0.71	0.64	0.65	0.70
R ²	0.62	0.62	0.66	0.67	0.68	0.62	0.63	0.67
F	56.76 ^a	32.16 ^a	26.06 ^a	25.40 ^a	25.06 ^a	49.70 ^a	29.79 ^a	24.46 ^a

^{1/} In this table, the profit rate used was after-tax net income as a percentage of total assets (P/A).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.12 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 206 Brazilian and Mexican Manufacturing Subsidiaries of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	12.1	12.2	12.3	12.4	12.5	12.6	12.7	12.8
Constant	8.32	3.03	-15.87	-17.81	-28.91	2.97	-1.18	-24.61
CR4	0.10 ^b (2.33)	0.10 ^b (2.12)	0.10 ^b (2.09)	0.10 ^b (2.19)	0.11 ^b (2.26)			
WCR4						5.96 ^b (1.74)	6.62 ^b (1.87)	7.59 ^b (2.19)
FRMS	2.22 (0.51)	49.08 ^a (2.93)	50.75 ^a (3.11)	51.77 ^a (3.18)	48.83 ^a (3.02)	46.69 ^a (2.86)	51.27 ^a (3.04)	49.49 ^a (3.06)
FRMS ²		-44.11 ^a (-2.85)	-45.10 ^a (-2.99)	-45.80 ^a (-3.04)	-42.02 ^a (-2.81)	-42.47 ^a (-2.81)	-46.20 ^a (-2.97)	-42.39 ^a (-2.83)
AD	1.59 ^a (4.41)	1.57 ^a (4.33)	1.72 ^a (4.79)	1.80 ^a (4.97)	1.68 ^a (4.64)	0.58 ^a (4.45)	1.52 ^a (4.18)	1.68 ^a (4.62)
MSIZE		-0.29 (-0.26)	0.23 (0.19)	0.34 (0.28)	0.52 (0.44)		-0.78 (-0.69)	0.32 (0.27)
BSIZE		-1.13 (-0.93)	-2.90 ^b (-2.12)	-2.90 ^b (-2.12)	-2.76 ^b (-2.04)		-1.00 (-0.83)	-2.75 ^b (-2.03)
GRO		-0.007 (-0.40)	-0.01 (-0.55)	-0.01 (-0.48)	-0.01 (-0.65)		-0.007 (-0.37)	-0.01 (-0.66)
LEVER				50.93 ^b (2.03)			41.04 ^c (1.58)	52.50 ^b (2.11)
LEVER ²				-42.24 ^b (-1.84)			-37.51 ^c (-1.58)	-45.30 ^b (-1.99)
R&D		0.50 (1.20)	0.64 ^c (1.56)	0.59 ^c (1.45)	0.49 (1.21)		0.61 ^c (1.46)	0.55 ^c (1.35)
NEXP				22.31 ^c (1.48)	21.60 ^c (1.45)			20.23 ^c (1.35)
MAFFEXP			-7.96 ^b (-2.04)	-10.39 ^b (-2.46)	-12.39 ^a (-2.91)			-12.71 ^a (-2.98)
MAFFIMP			12.75 ^b (2.15)	13.60 ^b (2.29)	11.56 ^c (1.95)			11.26 ^b (1.90)
BAFFEXP			13.05 ^a (2.74)	13.02 ^a (2.75)	10.63 ^b (2.21)			11.04 ^b (2.29)
BAFFIMP			-11.48 ^b (-1.99)	-11.45 ^b (-1.99)	-10.52 ^c (-1.85)			-10.65 ^b (-1.87)
COUNTRY	-1.15 (-0.50)	6.88 (0.44)	26.65 ^c (1.63)	27.92 ^b (1.71)	26.86 ^b (1.67)		1.65 (0.11)	25.06 ^c (1.56)
OWN					0.13 ^b (2.31)			0.12 ^b (2.20)
R ²	0.62	0.64	0.67	0.68	0.69	0.63	0.64	0.69
R ²	0.61	0.62	0.65	0.65	0.66	0.62	0.62	0.66
F	65.65 ^a	34.75 ^a	24.60 ^a	23.43 ^a	22.93 ^a	57.55 ^a	29.10 ^a	22.79 ^a

^{1/}In this table, the profit rate used was broad profits as a percentage of stockholders' equity (BP/E).

^{2/}The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.13 -- Regression Results of Profit Rates^{1/} on Market Structure Variables, 206 Brazilian and Mexican Manufacturing Subsidiaries of U.S. MNCs, 1972.

Independent Variables	Regression coefficients (and t statistics) ^{2/}							
	13.1	13.2	13.3	13.4	13.5	13.6	13.7	13.8
Constant	-4.07	-7.12	-16.93	-17.97	-25.20	-6.11	-10.29	-22.85
CR4	0.05 ^b (2.00)	0.05 ^b (1.85)	0.05 ^b (1.96)	0.05 ^b (2.07)	0.06 ^b (2.31)			
WCR4						2.17 (1.22)	2.35 ^c (1.29)	3.15 ^b (1.78)
FRMS	0.51 (0.23)	22.47 ^a (2.58)	24.55 ^a (2.92)	25.10 ^a (3.00)	23.18 ^a (2.81)	21.81 ^a (2.58)	24.51 ^a (2.83)	23.86 ^a (2.88)
FRMS ²		-20.73 ^a (-2.58)	-22.49 ^a (-2.90)	-22.87 ^a (-2.96)	-20.41 ^a (-2.67)	-20.26 ^a (-2.59)	-22.61 ^a (-2.83)	-20.86 ^a (-2.72)
AD	0.73 ^a (3.92)	0.71 ^a (3.76)	0.75 ^a (4.04)	0.79 ^a (4.25)	0.71 ^a (3.86)	0.72 ^a (3.88)	0.66 ^a (3.52)	0.70 ^a (3.77)
MSIZE		-0.02 (-0.03)	-0.05 (-0.08)	0.01 (0.02)	0.13 (0.22)		-0.32 (-0.54)	0.06 (0.10)
BSIZE		-0.59 (-0.94)	-1.73 ^b (-2.46)	-1.73 ^a (-2.46)	-1.64 ^b (-2.38)		-0.50 (-0.80)	-1.59 ^b (-2.29)
GRO		-0.01 (-0.64)	-0.01 (-0.86)	-0.01 (-0.79)	-0.01 (-1.01)		-0.01 (-0.62)	-0.01 (-0.95)
LEVER	18.18 ^a (6.11)	17.88 ^a (5.96)	53.63 ^a (4.13)	53.49 ^a (4.14)	55.16 ^a (4.35)	17.78 ^a (6.07)	47.73 ^a (3.58)	54.72 ^a (4.29)
LEVER ²			-30.78 ^a (-2.60)	-30.80 ^a (-2.61)	-33.05 ^a (-2.86)		-28.40 ^a (-2.32)	-33.03 ^a (-2.84)
R&D		0.15 (0.71)	0.22 (1.04)	0.19 (0.92)	0.13 (0.62)		0.22 (1.00)	0.16 (0.75)
MEXP				12.01 ^c (1.55)	11.54 ^c (1.51)			10.78 ^c (1.41)
MAFFEXP			-2.28 (-1.13)	-3.58 ^c (-1.65)	-4.89 ^b (-2.25)			-5.11 ^b (-2.34)
MAFFIMP			5.95 ^c (1.95)	6.41 ^b (2.10)	5.08 ^c (1.68)			4.78 (1.57)
BAFFEXP			8.11 ^a (3.31)	8.09 ^a (3.32)	6.53 ^a (2.67)			6.66 ^a (2.70)
BAFFIMP			-5.01 ^c (-1.69)	-5.00 ^c (-1.69)	-4.39 (-1.51)			-4.52 (-1.55)
COUNTRY	-0.60 (-0.51)	4.59 (0.57)	13.99 ^b (1.67)	14.67 ^b (1.75)	13.97 ^b (1.70)	-0.53 (-0.45)	1.17 (0.15)	12.98 ^c (1.57)
OWN					0.08 ^a (2.95)			0.08 ^a (2.83)
R ²	0.65	0.67	0.70	0.71	0.72	0.66	0.67	0.72
R ²	0.64	0.65	0.68	0.68	0.69	0.65	0.65	0.69
F	62.84 ^a	35.59 ^a	28.08 ^a	26.77 ^a	26.79 ^a	55.79 ^a	33.45 ^a	26.37 ^a

^{1/} In this table, the profit rate used was broad profits as a percentage of total assets (BP/A).

^{2/} The superscripts a, b, and c represent statistical significance at the 1, 5, and 10 percent levels, respectively.

Table A.14 -- Matrix of Simple Correlation Coefficients for the Mexican Affiliate Sample^{1/}

<u>CR4</u>	<u>WCR4</u>	<u>FRMS</u>	<u>AD</u>	<u>R&D</u>	<u>SIZE</u>	<u>GRO</u>	<u>LEVER</u>	<u>EXP</u>	<u>IMP</u>	<u>AFFEXP</u>	<u>AFFIMP</u>	<u>SUPPLY</u>	
1.00	0.97	0.36	0.06	0.00	0.52	0.39	0.12	-0.07	0.16	0.05	-0.03	-0.11	CR4
	1.00	0.32	0.07	-0.03	0.47	0.37	0.11	-0.04	-0.04	0.07	-0.00	-0.07	WCR4
		1.00	-0.05	-0.10	0.36	0.25	0.22	-0.00	0.10	0.15	0.01	-0.03	FRMS
			1.00	0.06	0.23	-0.08	0.13	-0.01	-0.13	0.26	-0.10	-0.05	AD
				1.00	0.07	-0.02	-0.00	0.12	-0.06	0.12	0.03	0.004	R&D
					1.00	0.67	0.43	0.15	0.14	0.49	0.19	-0.14	SIZE
						1.00	0.13	0.10	0.24	0.37	0.34	-0.14	GRO
							1.00	0.10	0.02	0.16	-0.07	-0.08	LEVER
								1.00	0.14	0.40	0.03	0.10	EXP
									1.00	0.01	0.35	-0.09	IMP
										1.00	0.25	-0.14	AFFEXP
											1.00	-0.09	AFFIMP
												1.00	SUPPLY

^{1/}All variables weighted by affiliate total assets to the 0.15 power.

Table A.15 -- Matrix of Simple Correlation Coefficients for the Brazilian Affiliate Sample^{1/}

<u>CR4</u>	<u>WCRA</u>	<u>FRMS</u>	<u>AD</u>	<u>R&D</u>	<u>SIZE</u>	<u>GRO</u>	<u>LEVER</u>	<u>EXP</u>	<u>IMP</u>	<u>AFFEXP</u>	<u>AFFIMP</u>	
1.00	0.89	0.18	-0.46	0.15	0.08	0.53	0.04	0.08	0.02	0.17	-0.12	CR4
	1.00	0.26	-0.51	0.15	0.47	0.53	0.06	0.21	0.05	0.16	-0.01	WCRA
		1.00	-0.24	-0.09	0.28	0.17	0.16	0.18	0.05	0.10	0.02	FRMS
			1.00	-0.06	-0.05	-0.28	-0.03	-0.10	-0.12	-0.04	-0.01	AD
				1.00	0.28	-0.01	-0.06	0.12	-0.01	0.19	0.03	R&D
					1.00	0.49	0.30	0.20	0.09	0.56	0.09	SIZE
						1.00	0.01	0.27	0.13	0.33	0.28	GRO
							1.00	-0.07	-0.09	-0.18	-0.13	LEVER
								1.00	-0.02	0.44	0.27	EXP
									1.00	-0.07	0.31	IMP
										1.00	0.20	AFFEXP
											1.00	AFFIMP

^{1/}All variables weighted by affiliate total assets to the 0.15 power.

Table A.16 - Matrix of Simple Correlation Coefficients for the Pooled Affiliate Sample ^{1/}

<u>CR4</u> 1.00	<u>MCR4</u> 0.94	<u>FRMS</u> 0.32	<u>AD</u> -0.10	<u>R&D</u> 0.04	<u>GRO</u> 0.20	<u>LEVER</u> 0.14	<u>MSIZE</u> 0.07	<u>BSIZE</u> 0.31	<u>MEXP</u> -0.08	<u>MAFF- EXP</u> -0.02	<u>MAFF- IMP</u> -0.07	<u>BAFF- EXP</u> 0.29	<u>BAFF- IMP</u> 0.08	<u>COUN- TRY</u> 0.24	<u>CR4</u>
	1.00	0.31	-0.11	0.01	0.25	0.16	0.14	0.23	-0.03	0.05	-0.02	-0.02	0.02	0.16	MCR4
		1.00	-0.09	-0.09	0.20	0.21	0.13	0.10	-0.01	0.10	0.00	0.10	0.04	0.07	FRMS
			1.00	0.04	-0.13	0.08	0.11	-0.10	-0.01	0.21	-0.09	-0.01	-0.02	-0.01	AD
				1.00	-0.02	-0.01	0.08	-0.10	0.13	0.12	0.05	0.04	-0.02	-0.03	R&D
					1.00	-0.06	0.39	-0.27	0.04	0.20	0.32	-0.10	0.12	-0.31	GRO
						1.00	0.12	0.16	0.06	0.09	-0.07	-0.02	-0.01	0.12	LEVER
							1.00	-0.77	0.24	0.49	0.38	-0.38	-0.39	-0.83	MSIZE
								1.00	-0.17	-0.27	-0.30	0.64	0.47	0.98	BSIZE
									1.00	0.43	0.08	-0.09	-0.09	-0.18	MEXP
										1.00	0.32	-0.13	-0.14	-0.29	MAFFEXP
											1.00	-0.15	-0.15	-0.32	MAFFIMP
												1.00	0.37	0.57	BAFFEXP
													1.00	0.48	BAFFIMP
														1.00	COUNTRY

^{1/}All variables weighted by affiliate total assets to the 0.15 power.

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