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An Empirical Study of the Consequences of U.S. Tax Rules for International Acquisitions by U.S. Firms

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ABSTRACT

This article examines the effect of tax factors on the equity values of U.S. multinational corporations making foreign acquisitions. Abnormal stock returns are found to be related to a tax variable that captures differences in the international tax status of acquiring firms but not related to a naive tax variable that captures differences between tax rates in target countries and the United States. Our evidence suggests that aggregate intercountry differentials in after-tax returns are competed away, while firm-specific, tax-related advantages (or disadvantages) are reflected in abnormal returns around the announcement date of the acquisition.

THE INCREASING GLOBALIZATION OF business during the last twenty years has drawn attention to the determinants of global competitiveness. Several authors have argued that tax regulations have an impact on U.S. competitiveness (see Burge (1992), Lessard (1989), and O'Leary (1989)). For example, the complexity of U.S. tax regulations covering foreign source income is such that there could be unintended and capricious effects on the competitiveness of some U.S. multinational corporations (MNCs).

The effective tax rate on the income from a new foreign acquisition is a function of both the overseas (target) tax rate and the tax status of the acquiring firm. To the extent that these factors affect the expected after-tax profitability of a foreign acquisition, they should be reflected in the abnormal stock returns to acquiring firms at the acquisition announcement. This study examines the abnormal returns evidence to show that U.S. firms are differentially affected by U.S. tax rules. The evidence contributes to the debate over the impact of U.S. tax rules on the competitiveness of U.S. firms and the formulation of tax policy.

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This study also provides useful findings for researchers in international tax. Since U.S. rules for taxation of MNCs are extraordinarily complex, there is a need to develop parsimonious models and simple measures of tax-related variables. This study demonstrates that even a highly stylized and simplified model of U.S. taxation of foreign income, when combined with a basic model of international competition for investments, provides useful insights into the consequences of U.S. tax rules.

Section I provides a review of the pertinent literature. Section II presents a brief outline of relevant Internal Revenue Service (IRS) rules for the taxation of foreign source income. Section III develops the hypothesis. Section IV describes the data, variable construction, and results. Their implications are discussed in Section V.

I. Literature Review

Opinions differ about the effect of tax policies on multinational operations. Some argue that the cross-national flexibility of MNCs allow them to shift profits, by transfer pricing and borrowing in tax-favorable jurisdictions for example, thereby arbitraging national tax systems (Lessard (1985), Lessard and Shapiro (1983), Rutenberg (1985)). This allows MNCs to pay lower taxes and gives them an advantage over domestic firms. In response to this view, the 1986 Tax Reform Act and subsequent Internal Revenue Code (IRC) §482 regulations specifying permissible transfer pricing methods were specifically designed to limit the ability of MNCs to shift profits to low-tax jurisdictions (Scholes and Wolfson (1992)).

Available empirical evidence does not support the view that U.S. MNCs enjoy tax advantages. For example, Morck and Yeung (1991) find no evidence that Tobin's q ratios of MNCs are affected by variables proxying for tax advantages from the ability to arbitrage tax systems (through transfer pricing for example), nor are the q ratios affected by the presence of the firm in a tax haven country. Hines (1988), using foreign profit and tax data, argues that the U.S. tax system prior to the 1986 Tax Reform Act discouraged foreign investment by U.S. MNCs but that the Act reduced this negative incentive. Doukas and Travlos (1988) find significant effects on the returns of U.S. acquiring firms around the announcement date of foreign acquisitions. In particular, abnormal returns are larger when firms make investments in less developed countries and in new geographic markets. However, these effects could be attributed to either operating factors, such as economies of scope arising from operating flexibilities (Kogut (1985)), or to financial factors, such as tax arbitrage and the ability to shelter taxable income with otherwise unusable foreign tax credits.

There is considerable evidence that U.S. taxes affect investment location decisions. For example, Boskin and Gale (1987) find that the incentives favoring domestic investment in the 1981 Tax Act reduced the outward flow of investment by \$0.5 to \$1.0 billion per year and significantly stimulated

domestic investment. Wilson (1993), using an interview methodology, identifies several examples of corporate investment location decisions that were largely driven by tax factors. However, whether these investments earned above-normal returns to shareholders is not known.

Many tax practitioners argue that IRS regulations hamper U.S. firms' competitiveness because the IRS uses worldwide income as the basis for taxation. This is in contrast to the territorial approach of countries, such as France and the Netherlands, that normally exempt dividends received from a foreign subsidiary of a domestic corporation from home-country taxes. According to this argument, since foreign-source income of U.S. MNCs is always taxed locally but is also subject to tax in the U.S. on remission, U.S. MNCs' operations abroad can never be better off, and may be worse off, than local firms or foreign rivals in "tax exempt" countries. For example, a recent study (Price Waterhouse (1991)) suggests that U.S. MNCs face an effective tax rate of 35.2 percent on a typical foreign operation, while MNCs from Canada, France, Germany, Japan, The Netherlands, and the United Kingdom face an average of 29.2 percent on the same activity.

II. U.S. Taxation of Foreign Source Income

The Internal Revenue Code sections that govern the computation of tax liability arising from foreign-source income are complex. However, their essential features are captured in the following relatively simple description. The United States taxes U.S.-domiciled firms on their worldwide income. Income from foreign operations is known as foreign-source income. In general, the income from operations of foreign subsidiaries is taxable only upon repatriation¹ (i.e., remission of a dividend or equivalent from a foreign subsidiary to its U.S.-domiciled parent). At the time of repatriation, a credit can be taken for foreign taxes deemed to have been paid on the foreign source income out of which the dividend is paid (IRC §§901 and 902). The total foreign tax credit (FTC) usable in any one year cannot exceed the amount of U.S. tax that would have been paid (at the U.S. rate) on foreign source income. The overall foreign tax credit limitation can therefore be expressed approximately as follows:

Foreign Tax Credit Limitation

$$= U.S. \text{ marginal tax rate} * \text{foreign source income}^2 \quad (1)$$

Firms whose average foreign tax rate is greater than their U.S. marginal tax rate will typically generate FTCs in excess of the limitation. Firms with FTCs in excess of the limitation can carry them back 2 years or forward 5 years. FTCs not used within 5 years become worthless.

¹There are several exceptions to this, the most important being Subpart F income from passive investments, and income from subsidiaries incorporated as branches rather than separate corporations.

²The foreign tax limitation is actually calculated for separate income baskets (IRC §904(d)), which distinguish between different natures of foreign source income.

We define targets that operate in a country where the local tax rate on income is less (more) than the U.S. rate on an equivalent level of income as operating in a low (high) tax country.³ Repatriation of income from low-tax countries attracts additional U.S. tax unless the company has excess FTCs or can generate excess FTCs by repatriating income from a high-tax country. Conversely, remittances from high-tax countries will not, in general, attract additional U.S. taxes but will generate excess FTCs that may eventually expire unused if there is no foreign-source income from low-tax countries.

III. Development of Hypothesis

In contrast to a simple and intuitively appealing view that a lower income tax rate results in higher after-tax profits, Scholes and Wolfson (1992, p. 253) suggest that the benefits of lower foreign taxes abroad are largely illusory. They argue that, in equilibrium, (risk-adjusted) *after-tax* returns in different countries should be equal. Therefore, in countries where the tax rate on income is relatively low, one would expect international competition to force pretax returns to a level below those in high-tax countries, thus reflecting the difference in tax rates.

This has an important consequence for U.S. firms' foreign acquisitions. As Scholes and Wolfson (1992) point out, the lower pretax return on investments in low-tax countries represents an implicit tax that is not creditable against the U.S. tax liability. If an acquiring firm is unable to fully shelter income from an investment in a low-tax country (because it has no unused FTCs generated from other, high-tax countries), repatriation of dividends from those investments attracts additional U.S. taxes. As a result, the after-all-tax returns from low-tax countries will be lower than the returns from high-tax countries whose explicit taxes are creditable against U.S. taxes. If, however, the firm has unused FTCs, these can shelter income from low-tax countries. This means that investments in low-tax countries do not earn above-normal after-tax returns (as their low tax rate on income might suggest), but, at best, earn the global equilibrium rate of return when associated income can be fully sheltered from additional U.S. taxation on remission.

In contrast to investments in low-tax countries, investments in high-tax countries earn normal after-tax returns because they earn higher pretax returns. However, for U.S.-based MNCs, these investments generate excess FTCs in addition to the normal after-local-tax rate of return. If an MNC's existing foreign operations are generally in low-tax countries, it will have no unused FTCs. The excess FTCs generated by a new investment in a high-tax country are then valuable because they can be used immediately to shelter income from other low-tax operations. The tax-related benefit of an investment in a high-tax country to a firm without unused FTCs is that it earns normal after-local-tax returns locally *and* generates valuable FTCs. If the

³It follows that it is possible that the same country can be defined as "high-tax" for one firm and "low-tax" for another.

acquiring firm's existing operations are generally in high-tax countries, the additional FTCs provide no tax-related benefit because the firm already has excess FTCs.

The analysis suggests the following categorization of the attractiveness of foreign locations for incremental investments as a function of the tax status of the acquiring firm and the target-country tax rate:

Firm Characteristic	Host-Country Tax Rate	
	<i>Low</i>	<i>High</i>
<i>Excess FTCs</i>	neutral	neutral
<i>No excess FTCs</i>	unattractive	attractive

Note the counterintuitive result that if a firm has no excess FTCs, or might reasonably expect to have no excess FTCs, then investments in *high*-tax countries will allow the firm to earn incremental system-wide returns *above* the global equilibrium rate, while investments in *low*-tax countries earn *below* the global equilibrium rate.

Based on the above analysis, we formulate the following hypothesis:

HYPOTHESIS 1: *Firms with no excess foreign tax credits that acquire firms in low-tax countries will earn lower abnormal returns than firms with no excess foreign tax credits that acquire firms in high-tax countries.*

IV. Data, Variable Construction, and Results

A. Sample and Data Description

Our sample, U.S. MNCs that made international acquisitions over the nine-year period from 1975 to 1983, was obtained by searching the "Foreign Acquisitions Roster" of *Mergers and Acquisitions* and the *Wall Street Journal Index*.⁴ The event date of each foreign acquisition is the date of the initial announcement of the offer in the *Wall Street Journal*. The base sample comprises 301 acquisitions made by 202 firms that had no concurrent major events for the fifteen-day period prior to the announcement day.⁵ The tax and geographical segment footnotes to the annual reports of each of these firms were read to identify the amount of foreign tax and foreign income earned prior to the acquisition and to identify whether the firm reported net operating losses or foreign tax credit carryovers in the year of acquisition. Finally, in order to gauge the magnitude of the tax effect of the transaction, the value

⁴Significant tax law changes occurred after our data collection, most notably the Tax Reform Act of 1986, which reduced the top corporate tax rate from 46 to 34 percent. This decrease in tax rate likely increased the incidence of firms generating excess FTCs and thus being tax neutral with respect to foreign acquisitions.

⁵This sample is the one used by Doukas and Travlos (1988).

of the acquisition as reported in the *Wall Street Journal* was identified. Firms that did not report this information were deleted from the sample. The remaining sample comprises 103 acquisitions made by 76 firms.

The distribution of the base sample and the final sample of these acquisitions over the years 1975 to 1983 is shown in Table I. The higher percentage of acquisitions retained in the final sample for the latter years is the result of more complete tax and geographical segment reporting.

B. Foreign Tax Credit Status

We identify those firms whose average foreign tax rate was lower than their U.S. marginal rate for the three-year period prior to the announcement date as unlikely to have unused FTCs and those firms whose foreign tax rate was higher than their U.S. marginal rate as likely to have unused FTCs. We calculate the average tax rate on foreign income prior to the acquisition as foreign current and deferred taxes divided by foreign pretax income.^{6,7}

The U.S. marginal tax rate is set equal to zero if the firm reported net operating loss carryovers or foreign tax credit carryovers in the year of acquisition. Otherwise, the U.S. marginal tax rate is set equal to the top U.S. marginal rate in the year of acquisition.

C. Tax Effect Variable

We capture the effect of taxes by estimating the present value of the tax benefit (if positive) or cost (if negative) associated with the foreign acquisition. This present value, scaled relative to the size of the acquiring firm, is included in a regression model of abnormal market returns to the acquiring firm around the acquisition announcement date. Consider first the magnitude of the benefit of an acquisition in a high-tax country for a firm without excess FTCs. Recall that this benefit arises because the acquisition generates a stream of excess FTCs that can be used to shelter the remittances from the acquiring firm's existing operations in low-tax countries from additional U.S. taxes. The value of these FTCs can be approximated as the excess of the local tax rate in the target's country (target tax rate) over the acquiring firm's U.S. marginal tax rate multiplied by the expected future annual income of the target firm. The expected target income is not observable, but its capitalized value is the value of the acquisition transaction available from *Mergers and*

⁶To constrain outliers, if average foreign tax rate is greater than 100 percent (14 acquisitions), it is set equal to 100 percent. To avoid spurious negative tax rates where either foreign pretax income or foreign taxes are negative, if average foreign tax rate is less than zero (2 acquisitions), it is set equal to zero. Deleting these observations does not significantly alter reported results.

⁷An alternative specification of average foreign tax rate is calculated using current foreign taxes rather than the sum of current and deferred taxes. The results of tests using this alternative measure are similar to those reported here.

Table I
Frequency Distribution by Year of the Announcement Dates
of the Base and Final Sample of Foreign Corporate Takeovers
by U.S. Firms

The base sample of firms was obtained by searching the Foreign Acquisitions Roster of *Mergers and Acquisitions* and the *Wall Street Journal Index* for the years 1975 to 1983. The final sample of firms contains only those that reported information sufficient to measure variables of interest.

Year	Base Sample		Final Sample	
	Frequency	%	Frequency	%
1975	14	4.6	2	1.9
1976	25	8.3	4	3.9
1977	20	6.6	4	3.9
1978	36	12.0	7	6.8
1979	60	19.9	27	26.2
1980	46	15.3	18	17.5
1981	31	10.3	16	15.5
1982	42	14.0	15	14.6
1983	27	9.0	10	9.7
Total	301	100.0	103	100.0

Acquisitions.⁸ Thus, the present value of the tax benefit is calculated in the following manner:

$$\text{TAX VALUE} = (\text{TARGET TAX RATE} - \text{U.S. TAX RATE}) \\ * \text{TRANSACTION VALUE} \quad (2)$$

The target tax rate is calculated as the combined effect of the local income tax and withholding tax on foreign dividends at the time of the acquisition,⁹ obtained from various issues of Ernst & Young and Price Waterhouse international tax publications.

If the acquisition is a very large one, or the tax rate on existing foreign operations is very close to the U.S. marginal tax rate, then it is possible that the amount of FTCs generated by the new acquisition will exceed the incremental U.S. tax due on remission of profits from existing operations. Therefore, the upper bound on the value of these FTCs (in annual terms) is the firm's total foreign income from existing operations multiplied by the difference between its U.S. marginal rate and the (lower) average foreign tax rate. To compare this annual upper bound to the capitalized value of the

⁸This assumes that the acquisition price is a competitive one reflecting the value of the acquisition to other potential bidders but not fully reflecting any acquirer-specific value, such as tax-related benefits. Thus the transaction price and its implied capitalization rate reflect local taxes but not any additional tax savings (or costs) relating to the tax status of the successful acquirer, which are reflected in the acquirer's abnormal return.

⁹For example, a 30 percent income tax and 10 percent withholding tax on the remitted after-tax income constitutes an effective 37 percent tax rate, $(0.3 + 0.1 * (1 - 0.3)) = 0.37$.

FTCs, we capitalize this upper bound at a rate k equal to 10 percent.¹⁰ Thus the present value of the acquisition's tax benefit is:

$$\begin{aligned} \text{TAX VALUE} = & \min\{(\text{TARGET TAX RATE} - \text{U.S. TAX RATE}) \\ & * \text{TRANSACTION VALUE, FOREIGN PRETAX INCOME} \\ & * (\text{U.S. TAX RATE} - \text{FOREIGN TAX RATE})/k\} \quad (3) \end{aligned}$$

We scale the variable *TAX VALUE* by the preacquisition market value of the acquiring firm's equity to obtain the variable *TAX EFFECT* that is used in regressions (Christie (1987)). The scaled variable *TAX EFFECT* reflects the relative magnitude of the tax benefit to the acquiring firm.

We now consider acquisitions by firms without excess FTCs in countries with low marginal tax rates relative to the U.S. whose tax values are negative. These firms' annual tax cost is the expected income from the acquisition, multiplied by the additional U.S. taxes payable upon remission. As before, the annual income stream is capitalized as the value of the transaction. The present value of the additional taxes payable is, therefore, also given by equation (2), and the variable *TAX EFFECT* is again obtained by scaling *TAX VALUE* by the market value of the acquiring firm's equity. The mean of the *TAX EFFECT* variable is not significantly different from zero (0.01 percent) with a maximum value of 0.73 percent and a minimum value of negative 1.75 percent. For comparison, the mean (standard deviation) of the two-day cumulative abnormal return for the sample is 0.01 percent (2.0 percent).¹¹

D. Measurement of Abnormal Stock Returns

Abnormal returns surrounding the date on which the acquisition offer is first announced in the *Wall Street Journal* are calculated using the standard market model specified in Fama (1976), using the return on the CRSP equally weighted index as the market proxy and estimated in the period from $t = -136$ to $t = -16$ relative to the announcement day of the acquisition. The cumulative abnormal return over the two-day announcement period ($t = -1$ to $t = 0$), $CAR_{j(-1,0)}$, is the dependent variable specified in the regression.¹²

¹⁰ We also capitalize the savings at 50 and 100 percent. The results of tests using these alternative measures of annual return on the acquisition are similar to those reported here.

¹¹ To check for outliers, we compare each *TAX EFFECT* variable to the cross-sectional mean calculated using all available observations. Two observations are more than three standard deviations from the mean. Tests are conducted using these two observations censored at three standard deviations above or below the mean. This Winsorizing procedure limits the influence of outlier observations without reducing sample size (Kendall and Stuart (1979)). The results of these tests are substantially similar to those reported. For this reason, results are reported using uncensored measures of the *TAX EFFECT* variable.

¹² Tests are also performed using two-day ($t = -1$ to $t = 0$) standardized cumulative abnormal return over the announcement period. The results are similar to those reported in the article.

E. Other Factors that May Affect Returns on International Acquisitions

Kogut (1985) argues that a primary advantage of an MNC lies in its flexibility to transfer resources across borders, thereby arbitraging institutional restrictions. This suggests that investments by MNCs into new countries add to their flexibility and are, therefore, more valuable than investments in countries in which they already have a presence. Moreover, to the extent that the host country is less developed than the United States, the opportunities available to the MNC to exploit distortions in production costs or financial markets appear greater (Doukas and Travlos (1988)). Finally, it is well documented in the strategy literature that the value of an acquisition is a function of its relatedness to the acquiring firm's core business (Rumelt (1982) and Varadarajan and Ramanujam (1987)). Because of their potential importance, we control for these factors in tests of our hypothesis. *INTROD* is a dummy variable that controls for the preexisting presence of the firm in the country of the acquisition (*INTROD* = 1 if the firm is moving into a new country ($n = 30$), 0 otherwise ($n = 73$)), *CNTRD* controls for the level of development of the host country (1 for less developed countries ($n = 21$),¹³ 0 otherwise ($n = 82$)), and *RELATD* controls for the relatedness of the acquisition (1 for acquisitions with the same 2-digit Standard Industrial Classification as the acquiring firm ($n = 47$), 0 otherwise ($n = 56$)).

F. Results

We test the hypothesis using the following regression:

$$CAR_{j(-1,0)} = a_0 + a_1 TAX\ EFFECT_j + a_2 CNTRD_j + a_3 INTROD_j + a_4 RELATD_j + e_j \quad (4)$$

Table II reports results of different versions of the regression model described above. Tests of the regression residuals indicate no evidence of heteroskedasticity (White 1980). The coefficient on the variable *TAX EFFECT* has the predicted positive sign in each of the four regressions. It is significant after controlling for country effects, suggesting that, at the margin, tax effects influence returns on overseas investments. This finding is consistent with the hypothesis that firms with no excess foreign tax credits that invest in high-tax countries earn abnormal returns in excess of similar firms that invest in low-tax countries. It supports the view that taxes play an important role at the margin in determining the benefits from international acquisitions. Consistent with the results observed in Doukas and Travlos

¹³This classification is based on the standards of the International Monetary Fund and the Organization of Economic Cooperation and Development. Countries identified as developed include Canada, the United Kingdom, other European Union countries, and Japan. Countries identified as less developed include Latin American, African, and Asian countries, excluding Japan.

Table II
Regression Results

Estimated coefficients and *t*-statistics (in parentheses) from regressing 103 two-day ($t = -1$ to $t = 0$) cumulative abnormal returns, $CAR_{j(-1,0)}$, for U.S. bidding firms at the announcement of international takeover bids on the tax effect of the transaction (*TAX EFFECT*, equal to the estimated tax value of the acquisition scaled by the market value of the acquiring firm's equity), the degree of economic development of the target firm's country (*CNTRD*, equal to 1 for less developed countries, 0 otherwise), the degree of prior international operations of the bidding firms (*INTROD*, equal to 1 if the acquiring firm is moving into a new country, 0 otherwise), and the degree of industrial relatedness between the acquiring and target firms (*RELATD*, equal to 1 for acquisitions which have the same two-digit SIC code, 0 otherwise).

$CAR_{j(-1,0)} = a_0 + a_1 TAX\ EFFECT_j + a_2 CNTRD_j + a_3 INTROD_j + a_4 RELATD_j + e_j$							
	a_0	a_1	a_2	a_3	a_4	R^2 (%)	Sig. F (%)
1	0.000 (0.02)	1.229 (1.23)				1.47	22.18
2	-0.003 (-1.36)	1.817 (1.88)*	0.014 (2.97)**			9.44	0.70
3	-0.002 (-0.70)	1.866 (1.93)*	0.015 (3.12)**	-0.005 (-1.16)		10.65	1.07
4	-0.003 (-1.01)	1.831 (1.89)*	0.015 (3.14)**	-0.004 (-1.03)	0.003 (0.75)	11.15	1.97

*Significant at 0.10, two-tail test.

**Significant at 0.01, two-tail test.

(1988), the coefficient on the country variable, *CNTRD*, is positive and significant at customary levels, indicating that firms earn positive abnormal returns by expanding operations into less developed countries. The significance of this variable in the presence of the *TAX EFFECT* variable suggests that the value of acquisitions in developing countries arises, not as a result of tax benefits,¹⁴ but as a result of other factors such as market opportunities.

We also test a simple and intuitively appealing model of the tax effects of foreign acquisitions that returns on investments in low-tax countries are higher than returns on investments in high-tax countries, using an indicator variable termed the *NAIVE TAX EFFECT* variable (a 1,0 dummy variable to capture the tax rate in the host country relative to the U.S. tax rate) in place of the *TAX EFFECT* variable in equation (4). The coefficient on the *NAIVE TAX EFFECT* variable is not significantly different from zero in any of the regressions, suggesting that differences in host country tax rates, in themselves, has no effect on abnormal returns.

¹⁴This excludes investment-specific tax benefits that might have been negotiated between the acquiring company and the host government, and whose effect is, therefore, not reflected in the *TAX EFFECT* variable.

V. Discussion and Implications for Future Research

Taken together, our results support the view that the operation of the Internal Revenue Code creates circumstances under which U.S. MNCs making foreign acquisitions can gain (incur) incremental benefits (costs). The benefits are associated with an MNC's ability to use its international financial networks to selectively repatriate dividends in a tax-beneficial manner so that they earn competitive, normal after-tax returns in high-tax countries. Furthermore, the MNCs use the excess FTCs created by the approach of the United States to taxation of foreign income to reduce the adverse effect of the U.S. tax code on after-tax returns on existing operations in low-tax countries. However, the interaction of these regulations with the reality of global competition for foreign investment causes U.S. MNCs' investments in low-tax countries to earn below-normal, after-tax returns. An acquisition that enhances a firm's ability to repatriate funds to the United States results in a favorable market reaction, while one that is likely to result in income that will trigger additional U.S. taxes upon repatriation results in an unfavorable market reaction.

Our model assumes a competitive market for foreign investments, in which differential tax rates between countries are competed away. Our regression is therefore a joint test of this model and the hypothesized tax effect. If after-tax (risk-adjusted) returns to foreign investments are substantially the same in all countries (or are moving in that direction as a result of increasing levels of global competition), and the worldwide approach of the U.S. tax code places an additional tax burden on foreign source income from low-tax countries, serious doubts must exist about the long-term economic attractiveness of low-tax jurisdictions to U.S. MNCs.

REFERENCES

- Boskin, M., and W. Gale, 1987, New results on the effects of tax policy on the international location of investments, in M. Feldstein, Ed.: *The Effects of Taxation on Capital Accumulation* (National Bureau of Economic Research, Cambridge, Mass.) pp. 201-219.
- Burge, M., 1992, Foreign taxes: How you can pay less, *Price Waterhouse Review* 1, 14-23.
- Christie, A. A., 1987, On cross-sectional analysis in accounting research, *Journal of Accounting and Economics* 9, 231-258.
- Doukas, J., and N. Travlos, 1988, The effect of corporate multinationalism on shareholder wealth, *Journal of Finance* 43, 1161-1175.
- Fama, E., 1976, *Foundations in Finance* (Basic, New York).
- Hines, J., 1988, Taxation and U.S. multinational investment, in L. Summers, Ed.: *Tax Policy and the Economy* (MIT Press and the National Bureau of Economic Research, Cambridge, Mass.), pp. 33-61.
- Kendall, M., and A. Stuart, 1979, *The Advanced Theory of Statistics, Volume 2, Inference and Relationship* (Hafner, Riverside, N.J.).
- Kogut, B., 1985, Designing global strategies: Profiting from operational flexibility, *Sloan Management Review* Fall, 27-38.
- Lessard, D., 1985, Transfer prices, taxes, and financial markets: Implications of international financial transfers within the multinational corporations, in D. Lessard, Ed.: *International Financial Management* (J. Wiley & Sons, New York), pp. 426-447.

- , 1989, Corporate finance in the 1900's—Implications of a changing competitive and financial context, *Journal of International Financial Management and Accounting* 1, 209–231.
- , and A. Shapiro, 1983, Guidelines for global financing choices, *Midland Corporate Finance Journal* Winter, 68–80.
- Morck, R., and B. Yeung, 1991, Why investors value multinationality, *Journal of Business* 64, 165–187.
- O'Leary, P., 1989, Why it is critical to reexamine global tax strategies, *Financial Executive* Sept.–Oct., 31–35.
- Price Waterhouse, 1991, *U.S. International Tax Policy for a Global Economy*, Report prepared for the National Chamber Foundation.
- Rumelt, R. P., 1982, Diversification strategy and profitability, *Strategic Management Journal* 3, 359–369.
- Rutenberg, D., 1985, Maneuvering liquid assets, in D. Lessard, Ed.: *International Financial Management* (J. Wiley & Sons, New York), pp. 457–471.
- Scholes, M., and M. Wolfson, 1992, *Taxes and Business Strategy* Prentice-Hall, Englewood Cliffs, N.J.).
- Varadarajan, P., and V. Ramanujam, 1987, Diversification and performance: A re-examination using a new two-dimensional conceptualization of diversity of firms, *Academy of Management Journal* 30, 380–389.
- White, H., 1980, A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity, *Econometrica* 48, 817–838.
- Wilson, G. P., 1993, The role of taxes in location and sourcing decisions, in A. Giovannini, R. G. Hubbard, and J. Slemrod, Eds.: *Studies in International Taxation* (University of Chicago Press and National Bureau of Economic Research, Cambridge, Mass.), pp. 195–231.