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# Introduction

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In recent years, as multinational corporations have played a greater role in the global economy, interest in international aspects of capital income taxation has also rapidly increased. In the United States, discussions of problems of U.S. competitiveness and the position of the United States in the world economy have prompted public debate on international taxation issues. In Europe, policy discussions on capital income taxation have increased in the wake of the announcement that several European countries have liberalized capital flows, of the single European market, and of the Economic and Monetary Union. An experts' committee of the European Commission proposed, in early 1992, a substantial harmonization of corporate income tax structures. These developments raise the question of whether the existing structure of multinational taxation was viable only in the highly regulated international financial system and under the relative restrictive controls on international capital movements that characterized the world economy in the post–World War II period. Is the current system of taxing income—and multinationals in particular—inconsistent with the trend toward liberalized world financial flows and increased international commercial competition?

This question has begun to attract the attention of the academic community. Its answer depends on the effect of taxes on saving, on capital formation in different countries, on the pattern of international borrowing and lending, on international competitiveness, and on the opportunities for tax avoidance.

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Much of the recent research in this area combines newly developed models in the fields of public finance and international economics.

At the same time, policymakers in the United States have indicated a willingness to reconsider the entire system of taxation of income from inbound and outbound investment. In July 1992, the House Ways and Means Committee held hearings on a comprehensive and controversial package of tax proposals affecting U.S. and non-U.S. multinational businesses (H.R. 5270, The Foreign Income Tax Rationalization and Simplification Act of 1992). The Bush administration signaled its interest in reform of the international tax system when then Secretary of the Treasury Nicholas Brady directed Treasury's Office of Tax Analysis to launch its own economic analysis.

Broad-based studies of the international taxation system will have to reconcile results of the simplest theoretical models with the complex world of business finance and investment decisions in the global economy. Conceptual analyses of capital income taxes in open economies have produced extremely simple and intuitive propositions on the desirability of alternative international tax regimes. Among these, the least controversial and the best known is the proposition on the superiority, from a global perspective, of residence-based capital income taxes, under which the domestic and foreign incomes of residents of any given country are taxed at the same rate, irrespective of origin. Residence-based taxation satisfies the criterion of capital-export neutrality, often referred to in informal discussions of international capital income taxation. For multinationals, it is implemented by taxing their worldwide income and allowing an unlimited credit for taxes paid to governments.

Despite the great intellectual appeal of this proposition and despite the fact that many industrial countries have officially adopted the residence principle of taxation of international income, capital-export neutrality is not achieved in practice by any country. There is significant tax discrimination between domestic- and foreign-source capital income, caused by limitations of tax credit on foreign taxes paid, by the possibility of deferring foreign-source income, by countries' differences in the degree of integration between the taxation of corporate and personal income, and by the differences in the definitions of tax bases—including how foreign-source and domestic-source income are delineated.

Even if these problems could be eliminated, it is unlikely that a pure residence-based system of capital income taxation could be put in place, because tax enforcement is by its very nature territorial. The enforcement of tax laws can seldom, and only with great difficulty, be extended outside the boundaries of a country. The territorial nature of tax enforcement and the difficulties of recovering taxes from overseas income have led countries to tax income produced by foreign residents in their own territory. Hence, the movement to a pure residence-based system would require relinquishing tax revenue from income produced by foreign investments, a reform that would encounter substantial political resistance.

Do observed deviations from capital-export neutrality give rise to significant losses of efficiency? More generally, how does the world allocation of productive capital, research and development facilities, and tax revenues respond to tax incentives? These questions have straightforward answers in simple theoretical models, but answers in practice are more difficult because of the complexity of real-world tax rules, financial management, and investment decisions. This difficulty is compounded by the fact that the answers to these questions have important implications for the appropriate direction of policy. For example, if cross-country differences in corporate tax rates would give rise to significant income shifting but little incentive to shift production facilities, then international coordination efforts ought to be focused on harmonizing corporate statutory tax rates. If, alternatively, income shifting were insignificant but real investment were very sensitive to taxation, then attention should be given to effective tax rates, which depend not only on statutory tax rates but also on the definition of the tax base.

The efficiency of factor allocation is not the only criterion by which international tax policy must be judged in practice. The distribution of tax revenues across countries is also a continuing concern, especially since some countries deliberately set their tax structure to make it attractive for the multinational corporation to shift taxable income into their jurisdiction. Attempts by other countries to limit the loss of revenue because of income shifting have contributed to the extreme complexity of the tax rules that apply to multinationals. This complexity exacts a resource cost not only through the expenses incurred in complying with the rules but also in the difficulty and uncertainty added to the long-term planning process. Although equity and simplicity of operation should be kept in mind as criteria for judging international tax policy, because of the difficulty of analyzing these issues most economic research has to this point focused on the incentive effects of taxation on factor allocation.

Some recent attempts to identify the tax incentives to international investments that account in a realistic way for the existing tax rules are the cost-of-capital calculations based on the methods developed by King and Fullerton (1984). Devereux and Pearson (1991) use the King-Fullerton techniques to compute the cost of capital of a number of cross-border investments and find that, at least for European countries, differences in the cost of capital for different types of cross-border investments are very large. This puzzling evidence adds to less systematic descriptions, typically found in publications of accounting firms, of the opportunities offered by the numerous loopholes created by international inconsistencies in national tax rules. Even the Devereux-Pearson calculations are based on very rudimentary assumptions about the details of how multinationals are taxed and the dimensions in which firms can adjust their financial and accounting behavior in response to taxes.

Very large differences in costs of capital and a bewildering variety of legal means that allow multinational corporations to significantly reduce their taxes paid have not been exploited fully; that is, such profit opportunities apparently have not been taken to the limit. This puzzle raises questions about the appropriateness of many models currently used in international taxation that predict the (often instantaneous) disappearance of these profit opportunities and on which welfare evaluations of alternative tax regimes are based. In other words, if apparent profit opportunities are not eliminated by arbitrage, existing models are likely not accounting for important factors that influence the finance and investment decisions of multinational corporations in the real world.

It is clear that the conceptual models that frame our understanding of international taxation policy have not caught up to the new realities of the financial and investment decisions in the global economy. Before building new models, however, we believe that it is important to examine the relevant empirical facts. That is the goal of this volume. The papers that follow exploit a variety of data sets, many of which are new, to provide evidence on three crucial aspects of multinational corporations' responses to international tax incentives: (1) international financial management, (2) international investment, and (3) international income shifting. Only with an understanding of these issues can we assess the likely impact of alternative tax regimes and evaluate these alternatives according to their economic impact, their simplicity of operation, and their distribution of tax revenues across countries.

## International Financial Management

The first two papers are concerned with the effect of taxation on international financial management. Roger H. Gordon and Joosung Jun investigate the implications of the fact that the tax law treats differently the two ways individuals can buy equity in foreign firms—directly by purchasing these shares in the securities market (portfolio investment) or indirectly by investing in a domestic corporation that then uses the funds to invest in foreign firms (foreign direct investment). Either approach allows investors to take advantage of the potentially more favorable returns abroad and to diversify their portfolios. Of course, the relative importance of portfolio equity investment versus foreign direct investment will be affected by more than just tax factors. When corporations invest abroad, they acquire both ownership and control over the foreign firms, whereas portfolio investors merely acquire ownership. This makes corporate investments more attractive to the extent to which there are synergy gains from joint operations of the domestic and foreign firms. In addition, through use of capital controls, some countries attempt to discourage portfolio investment abroad.

Gordon and Jun analyze empirically how tax and nontax factors affect the relative importance of portfolio equity investments versus foreign direct investments, using aggregate data from ten foreign countries on the composition of portfolio and direct ownership of U.S. equity for the period 1980–89.

Their analysis of these data shows that the composition of equity flows does differ dramatically among these countries and that at least part of the explanation appears to be tax differences. However, behavior did not seem to change much during the 1980s, in spite of the many large changes in tax rates that occurred during that period. Part of the explanation for the lack of response appears to be the importance of capital controls in many of the sample countries. Another problem, making inference more difficult, is that tax policy itself appears to have been endogenous—countries in which investors could more easily invest abroad were more likely to have lower tax distortions and to impose capital controls. In principle, the increasing international integration of financial markets and the steady reduction of capital controls should lead to increasing responsiveness of the composition of international capital flows to tax distortions. As a result, countries will be under increasing pressure to reduce these tax distortions, and past behavior suggests that they will in fact respond to this pressure.

In the second paper, Roy D. Hogg and Jack M. Mintz examine the impact of U.S. and Canadian tax reforms on the financing of U.S. multinationals operating in Canada. They use a unique time-series data file, compiled by Arthur Andersen & Co., with information on twenty-eight U.S. companies operating in Canada.

After a thorough review of the tax reforms in the United States and Canada, the authors present three hypotheses about the impact of these reforms: (1) that U.S. subsidiaries in Canada would increase local debt financing, (2) that they would increase cross-border charges, and (3) that they would increase dividends paid out to the U.S. parent corporation. The authors conclude that in general these hypotheses are confirmed by the data although, they note, there are both tax and nontax explanations of the results. They find a dramatic increase both in the number of companies issuing dividends and in dividend payout ratios from the 1983–85 subperiod to the 1987–89 subperiod. In the latter subperiod, the average ratio of dividends paid to net income was close to 100 percent when companies chose to pay dividends.

Companies that tended to pay dividends also paid more of their income to U.S. parents in the form of cross-border charges. Hogg and Mintz found little change in aggregate debt-asset ratios over the two subperiods, but on a firm-by-firm basis the debt-asset ratios increased for a majority of companies and fell for the remainder; the increase in debt-asset ratios was found to be significant. They did not, however, find a significant increase in cross-border charges, as would have been expected after the Tax Reform Act of 1986.

A final way in which tax policy affects international financial management decisions of multinational corporations is its influence on dividend policy decisions within the multinational enterprise. Rosanne Altshuler and T. Scott Newlon, in chapter 3, use new data from 1986 corporate income tax returns to study effects of taxes on decisions by foreign subsidiaries to repatriate dividends to U.S. parent corporations. The authors stress three features of the treatment of foreign-source income under U.S. tax laws: (1) deferral (because U.S. tax on foreign-source income of U.S. firms is delayed until the income is remitted to the parent), (2) foreign tax credits (through which credit for foreign taxes paid on foreign-source income is allowed against U.S. tax liability), and (3) the overall limitation on foreign tax credits (restricting such credits so as not to exceed the U.S. tax otherwise payable on foreign-source income).

Altshuler and Newlon extend approaches taken in earlier studies using firm-level data by examining dynamic aspects of U.S. taxation of foreign-source income (in particular, the possibility that the overall credit position of the parent may change over time, affecting the tax consequences of dividend repatriation decisions). They find that changes in the tax price of dividend remittances have statistically significant and economically important effects on the level of dividend remittances from foreign subsidiaries to U.S. multinational parent corporations. Their results suggest that U.S. parent companies are able to alter the flows of income from their foreign subsidiaries in such a way as to reduce their worldwide tax paid by foreign-source income. Pursuing the Altshuler-Newlon analysis further will require more recent data, since the Tax Reform Act of 1986 changed incentives for dividend repatriation decisions in important ways. Such an extension may provide valuable evidence for policymakers analyzing the economic effects of changes in deferral or the foreign tax credit limitation.

## Business Investment

A second area of multinational corporations' decisions potentially affected by tax policy encompass investment decisions. Three papers in the volume concentrate on investment decisions—in particular relating to tax incentives for (1) the level and location of research and development activities, (2) foreign direct investment, and (3) location and sourcing decisions generally.

Although most models of investment suggest that tax policy should affect foreign domestic investment, econometric studies of inbound (to the United States) foreign direct investment have generated few robust conclusions. In their paper, Alan J. Auerbach and Kevin Hassett argue that distinctions between financial flows and investment data and between investment in new capital (e.g., a start-up) versus investment in old capital (e.g., an acquisition) account for much of the confusion in the existing literature.

Auerbach and Hassett extend a simple model of investment to incorporate explicitly the different tax treatment accorded to old and new capital under U.S. law. This extension is important because, as the authors note, a substantial portion of the increase in foreign direct investment during the late 1980s came not from new investment but through foreign acquisitions of existing capital. They argue that, given the differences in tax treatment of new investment and acquisitions and the likely effects of the Tax Reform Act of 1986 on acquisitions, attributing the increase in foreign direct investment to tax changes is not likely to be correct. Simulations of their model do not corroborate some earlier studies' findings of strong tax effects on foreign direct investment generally and the relative increase in foreign direct investment from certain countries. Indeed, Auerbach's and Hassett's suggestive results indicate the importance of carefully specifying tax incentives for alternative forms of investment. Application of their approach to panel data on individual firms in future research will permit them to distinguish effects of tax factors from those of nontax factors—including exchange rate shifts and the liberalization of financial markets—on foreign direct investment decisions. The results will provide useful evidence for thinking about effects of future tax reforms on foreign direct and portfolio investment in the United States.

Over the past two decades, policymakers have been concerned about the way in which taxation can affect decisions by multinational corporations regarding the level and location of research and development (R&D) performed. The United States has attempted to stimulate R&D by U.S. companies, following the view of many economists that the social return to R&D exceeds the private return. After a particularly generous tax treatment in the Economic Recovery Tax Act of 1981 for R&D performed in the United States by certain multinational firms, Congress changed the tax laws pertaining to R&D on several occasions during the 1980s. Indeed, by the early 1990s, the United States had still not proposed a permanent policy toward the R&D activities of multinational corporations. In the summer of 1992, the Treasury Department extended the R&D expense allocation rules for eighteen months, with a view toward studying the appropriate long-run policy.

In chapter 5, James R. Hines, Jr., models the incentives provided in U.S. tax law for the level and location of R&D undertaken by multinationals. Using a special panel data set drawn from Compustat (with significant detail on foreign pretax earnings and foreign taxes paid that is not generally contained in Compustat), he estimated the effects of changes in the tax price of R&D on the level of R&D performed in the United States by U.S. firms. Hines is careful to consider the effect of a multinational's foreign tax credit position on the tax price of R&D and the effects of merger and acquisition activity on the characteristics of firms in the sample. He finds that changes in the after-tax price of R&D have a statistically significant effect on spending decisions of U.S. multinationals. The economic importance of this effect is, however, more difficult to gauge. As Hines notes, one would have to compare any externality benefits of domestically performed R&D with the costs of raising alternative revenue to fund more-generous tax incentives for R&D by multinational corporations.

Finally, tax policy can affect location and sourcing decisions generally. G. Peter Wilson's paper contains descriptive evidence from a careful field study of location (capacity expansion) and sourcing (capacity utilization) decisions in nine U.S. multinational manufacturing corporations. Wilson initiates a research agenda to identify and characterize nontax benefits and costs of particular strategies in order to formulate better economic models of location, investment, transfer pricing, and financial policy decisions. Wilson focuses on three categories of nontax factors: product- or industry-specific characteristics (e.g., the production process, importance of distance to market, economies of scale, and entry strategies), country-specific characteristics (encompassing regulation or infrastructure characteristics), and firm-specific characteristics (including intrafirm coordination issues, and information and incentive problems).

Wilson's interviews gathered information on the firms' location and sourcing decisions in twenty-five countries over the 1960s, 1970s, and 1980s. He concludes that nontax considerations are very important for manufacturing location decisions. In particular, part of the apparent insensitivity to tax considerations could reflect the link between taxes paid and the provision of important infrastructure (e.g., in education and transportation support). Second, where nontax considerations are not particularly important (e.g., for administrative or distribution centers), tax considerations are paramount. Third, the effectiveness of transfer pricing in reducing multinationals' worldwide tax burdens is limited by nontax factors. Interestingly, government restrictions dominate problems in intrafirm coordination in this respect. In principle, firms' use of transfer pricing for tax planning could be reduced by the need to evaluate managers for compensation or other purposes. Wilson finds that firms can effectively use information from multiple accounts to guide tax planning on the one hand and managerial evaluation and compensation on the other. Case studies such as Wilson's can help researchers identify nontax factors limiting the international tax arbitrate implied by some theoretical models.

## Income Shifting

Multinational companies by definition operate in many different countries, all of which assert the right to tax income earned within their borders and some of which attempt to tax, with limited credit for taxes paid to foreign governments, the worldwide income of their resident multinationals. Because tax rates, bases, and rules differ across countries, it is generally not a matter of indifference to the companies where income is reported. Furthermore, there is some flexibility available to multinationals in reporting where the income is earned. For example, through the pricing of intercorporate transactions, taxable income can be shifted from one jurisdiction to another. Most countries have elaborate rules, often complex and always controversial, governing such transfer prices and other avenues for income shifting. The final two papers in the volume attempt to measure the quantitative significance of income shifting in two different settings: foreign-controlled companies operating in the United States and U.S.-resident multinationals.

In chapter 7, Harry Grubert, Timothy Goodspeed, and Deborah Swenson address an issue that has attracted much recent attention in the press and in congressional hearings—that foreign-controlled companies in the United States report on average a much lower rate of return, and therefore pay lower taxes for a given level of assets, than domestically controlled companies. This has led to speculation that these companies are engaged in income shifting by means of abusive transfer pricing or other methods. Alternative explanations have been suggested—for example, that the foreign affiliates are newer companies that have not yet achieved profitability. (Congressional concern has been severe enough to prompt a proposal in H.R. 5270 to impose a formulary standard for foreign firms operating in the United States.)

Unlike previous examinations of this issue, this analysis makes use of several firm-level data files, including the actual tax returns filed by foreign-controlled companies. This allows the authors to separate the impact of determinants of profitability such as the newness of the operation. They find that about half of the initial foreign-domestic taxable income differential is attributable to the special characteristics of foreign-controlled companies and not to transfer pricing per se. First, the revaluation of the book value of assets following acquisitions can distort the comparison of the ratio of taxable income to assets. Second, a maturation process is indicated by the fact that the profitability of foreign-controlled manufacturing companies rises over time relative to comparable domestically controlled firms. Foreign investors may, therefore, accept initially lower returns in exchange for high long-run profits. Third, relative to their domestically controlled counterparts, the taxable income of foreign-controlled wholesale companies is found to rise as the real value of the dollar increases relative to other currencies. In particular, the large drop in the dollar since 1985 has depressed recent returns of foreign investors in wholesaling.

Other commonly suggested reasons for the foreign-domestic differential have less explanatory power. High debt-asset ratios and earnings stripping do not appear to be major reasons for the low taxable income of foreign-controlled companies. Although such companies have an apparent preference for operations with rising profit profiles, there is not much evidence that any advantage in the cost of equity capital explains the foreign income differential. Neither parent size nor whether a parent is from a capital-exporting country is important. Furthermore, foreign parents seem in general to be more profitable than the typical U.S. company. Finally, the evidence does not support the hypothesis that foreign firms tend to acquire relatively unprofitable firms. Another interesting result is that low profitability is a characteristic of foreign-controlled companies, irrespective of their country of origin; it is not restricted to companies based in only a few countries or operating in a narrow range of industries. The Goodspeed, Grubert, and Swenson analysis will no doubt lead to future studies of income shifting.

U.S.-resident multinationals are faced with incentives and constraints regarding income shifting that are similar to those faced by foreign-resident firms. In the paper that concludes the volume, David Harris, Randall Morck, Joel Slemrod, and Bernard Yeung attempt to assess quantitatively the importance of income shifting of U.S. multinationals.

Although firm-level anecdotal evidence and studies of highly aggregated data suggest that significant income shifting occurs, surprisingly little evidence based on firm-level data is available. This paper makes use of Compustat data for 1984 through 1988, supplemented by information from firms' annual reports and by data on the geographical location of operations, for a sample of 200 U.S. manufacturing firms. The basic strategy is to ascertain whether taxes paid to the U.S. government, as a ratio of either U.S. sales or U.S. assets, are related to the location of foreign operations, holding constant other determinants of profitability. To the extent that shifting occurs, the U.S. tax ratio should be lower than otherwise if the multinational operates in low-tax countries such as Ireland and higher than otherwise if it operates in high-tax countries such as Germany, reflecting the incentive to shift income into Ireland and out of Germany.

The authors find evidence that is consistent with tax-motivated income shifting. Having a subsidiary in a tax haven, Ireland, or in one of the "four dragon" Asian countries (all jurisdictions with low tax rates) was during this period associated with lower U.S. tax ratios. Furthermore, having a subsidiary in a high region generally was associated with a higher tax ratio. The income shifting that is consistent with this pattern of behavior reduces U.S. taxes substantially only for firms with an extensive multinational structure. For U.S. multinationals as a whole, income shifting leads to a moderate—and imprecisely estimated—reduction in U.S. tax payments, between 3 percent and 22 percent of total tax liability.

To summarize, the eight papers in this volume present new empirical contributions to the analysis of the effects of international taxation on financial management, business investment, and income shifting. Further empirical research in these areas should guide the development of new theoretical models in public finance and international economics, as well as inform the ongoing policy debate on reforming the taxation of multinational businesses in the United States and abroad.

## References

Devereux, M., and M. Pearson. 1991. Corporate tax harmonization and economic efficiency. Report Series no. 35. London: Institute for Fiscal Studies.

King, M., and D. Fullerton. 1984. *The taxation of income from capital: A comparative study of the U.S., U.K., Sweden, and West Germany.* Chicago: University of Chicago Press.