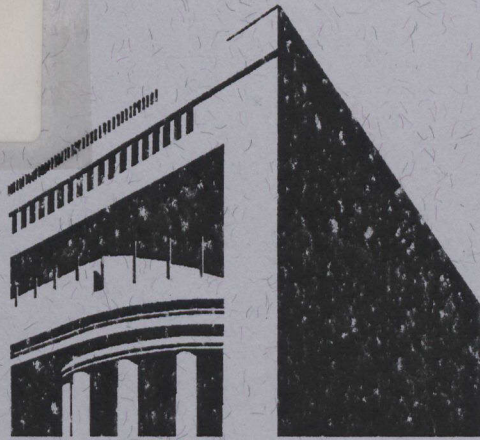


doc
CA1
EA980
97F11
ENG



Canadian Studies Grant Programs

Factors Affecting Transfer Pricing and Income
Shifting(?) Between Canadian and United
States Transnational Corporations

Susan C. Borkowski
La Salle University, Philadelphia

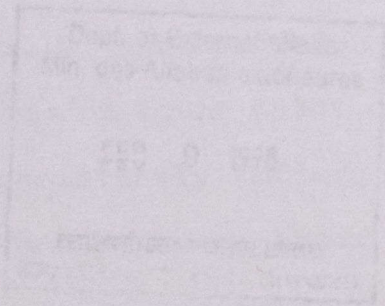
Canadian Embassy/Ambassade du Canada
Washington, D.C.
1997

This manuscript is a product of the Canadian Studies Research Grant Program. The program promotes research in the social sciences, journalism, business, trade, environment, and law with a unique relevance to Canada, or in the context of the bilateral or North American relationship; and the social, cultural, political, and economic issues that impact on these relationships in the 1990s.

Research grants are designed to assist individual American scholars, a group of scholars, and/or scholars working with a cooperating Canadian institution, in writing an article-length manuscript of publishable quality that contributes to the development of Canadian Studies in the United States and reporting their findings in scholarly publications.

According to the terms and conditions of the grant, the rights of the manuscript remain the exclusive property of the researcher. Copies of the manuscript are provided to the Embassy and the Department of Foreign Affairs and International Trade.

Steven C. Borkowski
Assistant Professor
Department of Accounting
La Salle University
Philadelphia, PA 19141
215-261-1491
FAX 215-261-1386
borkow2@lasalle.edu



This study was funded by the Government of Canada through its Canadian Studies Research Grant Program.

FACTORS AFFECTING TRANSFER PRICING AND INCOME SHIFTING(?) BETWEEN CANADIAN AND UNITED STATES TRANSNATIONAL CORPORATIONS

Abstract: An analysis of organizational and financial factors indicates that income shifting may occur among TNCs in the U.S. and Canada. Some differences in tax rates and experience are partially explained by the larger U.S. TNCs, which experience higher rates of return and greater non-market related activities. Canadian TNCs, with lower rates of return, prefer market methods. Do U.S. TNCs enjoy higher rates of return due to tax advantages? Shifting is explained by differences in effective tax rates between the U.S. and Canada. Are transfer prices used to manipulate income and minimize tax payments? The higher return on assets and income enjoyed by domestic subsidiaries of Canadian TNCs due to income shifting and the higher U.S. subsidiaries in this study, the differences in financial results compared with the audit history of U.S. TNCs, may provide some evidence of income shifting.

These transfer pricing methods used by TNCs to optimize their tax strategies. However, transfer pricing manipulations are constrained

FACTORS AFFECTING TRANSFER PRICING AND INCOME SHIFTING(?) BETWEEN CANADIAN AND UNITED STATES TRANSNATIONAL CORPORATIONS

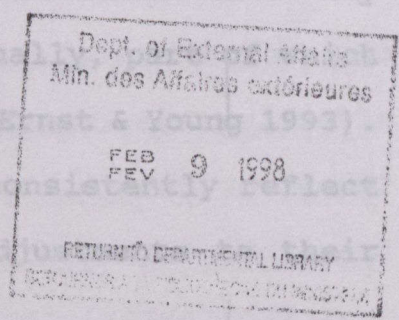
An underlying assumption of most tax authorities is that TNCs are able to shift income to and from subsidiaries to reduce and/or avoid host/home country income taxes. Non-U.S.-based TNCs may understate their U.S. taxes by \$11 billion annually (Ernst & Young 1993). TNCs in Japan, the United States and Canada consistently report the highest Internal Revenue Service (IRS) taxable income.

At issue is why TNCs choose particular transfer pricing methods. Do organizational and financial factors influence a TNC's choice, or are methods chosen primarily to facilitate income

This study was funded by the Government of Canada through its Canadian Studies Research Grant Program.

53068734

Susan C. Borkowski
Associate Professor
Department of Accounting
La Salle University
Philadelphia, PA 19141
215-951-1491
FAX 215-951-1886
borkowsk@lasalle.edu

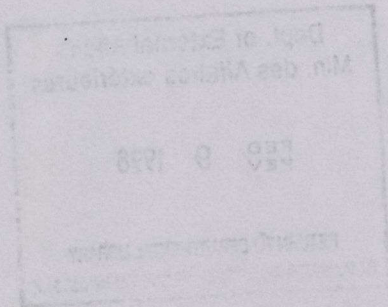


**FACTORS AFFECTING TRANSFER PRICING AND INCOME SHIFTING(?) BETWEEN
CANADIAN AND UNITED STATES TRANSNATIONAL CORPORATIONS**

Abstract: An analysis of organizational, environmental and financial factors indicates that income shifting may occur among TNCs in the U.S. and Canada. Some differences in rates of return are partially explained by the larger U.S. TNCs, which experience higher rates of return and prefer non-market methods. Smaller Canadian TNCs, with lower rates of return, prefer market methods.

Do U.S. TNCs enjoy higher rates of return due to income shifting spurred by differentials in effective tax rates between the U.S. and Canada? Are transfer prices used to manipulate income and minimize tax payments? Are the higher return on sales and income enjoyed by domestic subsidiaries of Canadian TNCs due to income shifting from their U.S. subsidiaries? In this study, the differences in financial measures, coupled with the audit history of U.S. TNCs, may provide some evidence of income shifting.

Key words: Income shifting, transfer pricing.



Susan C. Borkowski
Associate Professor
Department of Accounting
La Salle University
Philadelphia, PA 19141
215-951-1491
FAX 215-951-1886
borkowsk@salle.edu

This study was funded by the Government of Canada through its Canadian Studies Research Grant Program.

FACTORS AFFECTING TRANSFER PRICING AND INCOME SHIFTING(?) BETWEEN CANADIAN AND UNITED STATES TRANSNATIONAL CORPORATIONS

Transnational corporations (TNCs) create subsidiaries to lower manufacturing costs on a global basis by strategically exploiting technological advantages, reputation, trademarks, brand names, and economies of scale (Rome 1992). Cross-border subsidiaries

increase the stock of investment and capital (in the host country), provide employment opportunities and tax revenues, increase national output and raise welfare. They also transfer technology by the simple process of establishing factories to produce goods using new technology. (Rugman 1985, 179)

Transfer pricing is one technique used by TNCs to optimize these strategies. However, transfer pricing manipulations are constrained by tax regulations which theoretically prevent income shifting among subsidiaries to minimize and/or avoid taxes on income.

An underlying assumption of most tax authorities is that TNCs are able to shift income to and from subsidiaries to reduce and/or avoid host/home country income taxes. Non-U.S.-based TNCs may understate their U.S. taxes by \$11 billion annually, part of which is attributable to transfer pricing practices (Ernst & Young 1993). TNCs in Japan, the United Kingdom and Canada consistently reflect the highest Internal Revenue Service (IRS) adjustments to their reported taxable income.

At issue is why TNCs choose a particular transfer pricing method. Do organizational and environmental factors influence a TNC's choice, or are methods chosen primarily to facilitate income shifting? Are financial factors of any consequence in the decision? Perhaps tax regulations override all factors, and the extent of income-shifting is exaggerated. However, if income shifting is the

prime motivator, transfer pricing regulations must be rewritten to preclude such behavior and insure fair and equitable distribution of tax revenues to both host and home countries.

This study extends previous research on transfer pricing choice in two ways: first, individual cross-border effects are isolated and analyzed, i.e. practices of Canadian TNCs with U.S. subsidiaries are compared with U.S. TNCs with Canadian subsidiaries; and second, financial measures, usually absent from transfer pricing research, as well as environmental and organizational influences, are analyzed with reference to transfer pricing method choice and for possible evidence of income shifting. Canadian-U.S. practices are analyzed because Canada is among the largest U.S. trading partners, is geographically proximate, economically similar to the U.S., and affected by NAFTA tax and tariff stipulations, and its TNCs have had large IRS adjustments due to understatement of income. The regulations and factors affecting the transfer pricing of intangible property differ from those for tangible goods; therefore, this study is limited to the transfer of tangible goods.

Substantial income adjustments and tax penalties assessed by U.S. and Canadian tax authorities on TNCs result from transfer pricing policy disagreements. Transfer pricing affects decision-making both internally (providing data to motivate subsidiary managers and evaluate both manager and subsidiary performance), and externally (affecting the rate of capital repatriation, the overall tax burden, and the shift of profits to minimize tariffs, duties

and income taxes on a global basis) (Rome 1992). Are Canadian and U.S. TNCs driven by internal factors, external factors, or some combination when choosing a transfer pricing method? Is income shifted between countries to minimize the TNC tax burden and deprive the tax authorities of their appropriate revenue? The findings of this study may have implications for U.S. and Canadian transfer pricing law and tax treaty conventions.

The next sections present the rationale for subsidiaries, and current Canadian and U.S. transfer pricing regulations. A summary of relevant literature is then presented, followed by a discussion of the variables and methodology of the study. An analysis of the data is then presented, ending with conclusions and the research and policy implications of the results.

Why Canadian/U.S. Cross-Border Subsidiaries?

Several motives drive TNCs to establish cross-border subsidiaries. Many Canadian-based TNCs "have firm-specific advantages in the production, distribution and trading of resource based products," which in the past were positively exploited by exporting, rather than by foreign direct investment (FDI) in the U.S. (Rugman 1986, 20). Geographic proximity is also an important factor in spurring cross-border activity by resource-based Canadian TNCs. However, a recent change in strategies from exporting to FDI is due partly to the need for TNCs "to retain knowledge about their firm-specific advantage within the network of the (TNC) rather than risk its dissipation on open markets," where this knowledge may be

marketing-, production-, or other-related (Rugman 1986, 21). Other factors which encourage the creation of Canadian subsidiaries include non-tariff barriers such as federal, state and municipal government regulations and controls.

U.S. FDI via its Canadian subsidiaries is often due to "government-imposed market imperfections such as tariffs, and the nature of the Canadian country-specific advantage," namely the availability of raw materials and resources (Rugman, 1986, 19). NAFTA has lessened the impact of tariffs, encouraging exports rather than continued U.S. FDI (U.S. Dept. of Commerce 1993).

The transfer of goods between cross-border subsidiaries leads to the problem of how the transferred good should be priced. Should profits be taxed in Canada or the U.S.? Should the transfer price be based on a comparable market price or be cost-based? If Canadian and U.S. regulations are incongruent, which regulations take precedence?

Canadian versus U.S. Transfer Pricing Regulations

Canadian TNCs are concerned with three tax issues: transfer pricing, the distinction between capital gains and ordinary income, and tax incentives (O'Connor 1992). The transfer pricing of tangible goods and intangible property is regulated by Revenue Canada in Sec. 69 of the Canadian Income Tax Act. These regulations assume that the arm's-length standard usually results in the price being set at fair market value.¹ This is in accordance with recently revised Organization for Economic Cooperation and

Development guidelines (OECD 1995).

Canada differs from the U.S. in that Revenue Canada does not provide detailed transfer pricing guidance or regulations for TNCs other than the six-page Information Circular 87-2. When Canadian TNCs deal with non-Canadian subsidiaries on other than an arm's-length basis, Circular 87-2 specifies the allowable transfer pricing methods. The allowable transfer pricing methods in preferred order are comparable uncontrolled price (CUP), cost-plus, resale, and other methods, including profit split, but excluding the comparable profits method (CPM).² If a CUP is not available, a functional analysis should be undertaken to identify the appropriate pricing mechanism. "Cost" must meet the Canadian definition, not that of the country in which the subsidiary is located (Revenue Canada, 1987).

When compared with other industrialized countries, the U.S. "subjects the foreign operations of its transnationals to the severest tax constraints and the heaviest tax burden," as well as with formidable administrative complexities (Haas 1991, 3-6). Sec. 482 of the Internal Revenue Code is a major component of this overall tax policy. While one paragraph in length, it requires almost two hundred pages of interpretation.

Sec. 482 regulates the use of transfer pricing methods to prevent income shifting and to guarantee payment of U.S. income taxes. It authorizes the IRS to reallocate improperly shifted income so that the true income taxable by the U.S. is properly reflected in the TNC's records. This income should be that which

would be earned by the TNC if transactions between the parent and its subsidiary(ies) were based on the arm's-length standard. Allowable methods for tangible goods include CUP, resale price, cost plus, CPM, and profit split methods. The use of CPM concerns the global community because CPM may violate the internationally accepted arm's length standard.³

Empirical Studies on Canadian and U.S. Transfer Pricing

An overview of selected empirical studies on Canadian and U.S. transfer pricing practices show a relative lack of consistency in findings across environmental and organizational factors. The inconsistencies may be attributed to differences in how factors are defined; who completed the survey, e.g. tax managers, international vice presidents; the lack of Canadian studies in both frequency and recency; and, the definition of the sample population. Existing studies also neglect possible financial influences, such as rates of return and statutory versus effective tax rates, on transfer pricing choices.⁴ Given that the transfer pricing method directly affects reported subsidiary income, it is possible that the effect of transfer pricing methods on financial measures may override organizational and environmental influences.

Canadian TNC Studies

Arpan (1971) surveyed 27 Canadian TNCs as part of a multi-country study. Of the eight TNCs identifying transfer pricing methods, seven used market-based transfer prices. Income tax considerations were paramount in determining the transfer price.

Transfer pricing objectives included the acceptability of the method to customs and tax authorities, and control over subsidiaries to meet profit goals.

Milburn (1976) surveyed twenty Canadian and thirteen U.S. public accounting partners about international transfer pricing issues. The choice of a transfer pricing method was an economic decision by the TNC, combining TNC organizational preferences with home and host countries' national interests. The arm's-length equivalent (market) price was the preferred method.

Fowler (1978) used published data for Canadian subsidiaries of U.S. TNCs in thirteen manufacturing and mining industries to examine profit maximization vis-a-vis low transfer prices. Due to the interaction of tariff and tax rates, "the impetus toward a high or low transfer price depends on the level of ownership in the subsidiary, the dividend payout ratios, the effective marginal tax rates...and the tariff on the goods transferred," supporting the contingency theory that "different levels of transfer price are optimal for different industries." (24)

Tang (1981) identified the major influences on Canadian TNC choice of a transfer pricing method as overall company profit, customs rates and regulations, and competition. Primary transfer pricing objectives were maximizing TNC profit and subsidiary performance evaluation. More recent Canadian studies could not be located.

Transfer pricing practices of Canadian oil companies (many of which are subsidiaries of U.S. parent TNCs) have been studied in

depth, with varying conclusions. Rugman's (1985) findings that TNCs in the petroleum industry used transfer prices that approximated or were less than market (arm's-length) prices contradicted those of Bertrand (1981), who found that TNCs charged inflated transfer prices for petroleum transfers, and therefore overcharged Canadian consumers. Bernard and Weiner (1992) found that over an eleven year period, transfer prices in the petroleum industry varied both above and below an arm's-length price, but overall were less than arm's-length, creating a favorable situation for Canada and Canadian consumers. Bernard and Genest-Laplante (1996) provided additional support to Rugman's findings by analyzing the six largest Canadian petroleum affiliates. As with Bernard and Weiner (1992), transfer prices were equal to or less than the arm's-length price. These findings support income-shifting by U.S. TNCs into Canada to take advantage of the lower Canadian tax rates.

U.S. TNC Studies

For U.S. TNCs, Tang (1979) found that overall company profit was the primary factor affecting method choice, while determination of subsidiary performance was the most important objective. No significant relationship between TNC size and transfer pricing method was found.

Wu and Sharp (1979) found that transfer pricing criteria differed by industry for U.S. TNCs. Primary criteria included compliance with tax and tariff regulations and profit maximization.

The most influential factors affecting transfer pricing decisions identified by Burns (1980) were market conditions and

competition in the host country, reasonable profit for the subsidiary, and U.S. income tax regulations.

Yunker (1982) found that larger firms tended toward market-based methods. Important environmental factors included overall market conditions and demand for the product, government regulations and restrictions, and economic conditions.

Borkowski (1992) found no relationship between transfer pricing method and industry, but found that smaller TNCs preferred cost-based methods. Transfer pricing decisions were affected by tax and customs rates and regulations, and the relative ease of using the transfer pricing method.

In a replication of his earlier study, Tang (1993) confirmed his prior findings of no TNC size/method relationship. The environmental factors affecting method choice were overall TNC profit, tax rate and regulation differences, and restrictions on repatriation of profits.

Variable Selection and Hypotheses

Do environmental and organizational factors influence transfer pricing choices? Prior research found a relationship among some of these factors, such as management criteria and transfer pricing method choice, and contradictory findings about other factors, such as size and industry. Many of the factors evaluated in this study are taken from research by Borkowski (1992) and Tang (1993). Other variables and financial measures which may be related to transfer pricing are discussed in the following paragraphs, and are included

in Table 1.

*** Insert Table 1 Here ***

Wilson (1993) found that operating decisions were unaffected by transfer pricing concerns, and that "tax transfer prices do not affect performance evaluations... either because they use separate transfer prices for managerial and tax purposes or because they use pretax evaluation measures that do not depend on transfer prices." (197) This finding is contrary to the results of Borkowski (1993) and Klassen et al. (1993). To determine the relationship between transfer pricing methods and performance evaluation, fourteen evaluation criteria were included as organizational variables, and are presented in the survey instrument (Question 12, Appendix A). These criteria were factor analyzed to yield four dimensions of performance evaluation: non-income measures, segment profit, other profit measures, and innovation measures.

Many criteria have been identified in prior studies as potential organizational (internal) and environmental (external) influences on transfer pricing method choice (Question 13, Appendix A). A factor analysis of these 31 criteria loaded the items on five factors: three organizational (practical, decision-making, performance evaluation), and two environmental (tax/trade regulations, and other transnational concerns). The effects of NAFTA are evaluated separately as an environmental factor in Canada-U.S. transfers.

If these factors affect TNC transfer pricing choice, differences should be evident when Canadian and U.S. TNC practices

are compared. The transfer pricing methods used, and the effects of organizational and environmental factors are tested in the following hypotheses:

H₁: There are no differences in transfer pricing methods used by Canadian and U.S. TNCs.

H_{2a}: There are no differences in organizational variables between Canadian and U.S. TNCs.

H_{2b}: Organizational variables and transfer pricing choice are not related.

H_{3a}: There are no differences in environmental variables between Canadian and U.S. TNCs.

H_{3b}: Environmental variables and transfer pricing choice are not related.

Financial factors and their relationship to transfer pricing decisions have not been studied in the same depth as organizational and environmental factors. Instead, there has only been indirect evidence of such effects.

In the 1980s, "the rate of return on assets and for net income (less deficits) as a percentage of total receipts have been far lower for foreign-controlled U.S. firms than for domestically controlled firms." (Hufbauer, 1992, 115) For all U.S. firms, the figure was 3.4%, compared with Canada at .9% and Japan at .1%. These financial measures indicating poor profit performance were attributed by Congress to transfer pricing manipulations and abuse, although other factors may have contributed to this disparity (Hufbauer, 1992).

Grubert et al. (1993) studied factors contributing to poor profit performance, including transfer pricing manipulations,

higher debt costs, foreign direct investment in the U.S. via acquisitions of both profitable and unprofitable U.S. corporations, start-up costs, and exchange rate fluctuations. Half of the foreign-domestic differential "is definitely attributable to the special characteristics of foreign-controlled companies and not to transfer pricing," leaving them with "a significant difference that we are unable to explain by forces other than transfer pricing." (Grubert et al. 1993, 269-271)

When performances are compared for a ten-year period, Rugman and McIlveen (1986) found that Canadian TNCs "earned a lower return and at greater risk...than their American counterparts." (302) Explanatory factors include narrower Canadian versus more diversified U.S. markets, and thinner, smaller Canadian versus more capital-balanced, larger U.S. TNCs. In terms of tax advantages, "in many cases combined effective Canadian federal and provincial corporate tax rates are lower than the combined effective U.S. federal, state, and dividend withholding tax rates payable in respect to U.S. subsidiary profits." (Boidman 1993, 5)

Given the disparity in profits between U.S. and non-U.S. based TNCs, Grubert and Mutti (1991) looked at the factors influencing income shifting and rate of return differentials. The statutory tax rate "appear(ed to be) a better determinant of income shifting than effective tax rates," so if TNCs are "shift(ing) taxable income to low-tax locations, the reported after-tax profit rate in a country should be negatively correlated with its tax rate." (Grubert and Mutti, 1991, 286-293) This was demonstrated by comparing after-tax

profit as a percentage of net sales and the after-tax rate of return on equity.

Differences in Canadian and U.S. TNC profit performance are measured in this study by the rate of return on assets (ROA), rate of return on equity (ROE), net income as a percentage of receipts (ROS), and both statutory and effective tax rates. These measures are either obtained from Disclosure archival files or calculated using data from corporate annual financial reports. Sales, assets, and income data are taken from corporate annual reports and/or Disclosure files. Analyses are performed at both TNC and subsidiary levels, and correlations between the financial variables and tax rates are analyzed for evidence of possible income shifting.

The effects of these financial factors are tested in the following hypotheses:

H_{4a}: There are no differences in financial variables between Canadian and U.S. TNCs.

H_{4b}: Financial variables and transfer pricing choice are not related.

Methodology, Analysis and Interpretation

Canadian TNCs are drawn from the population of Canadian-based corporations, and are included in the sample if they are listed on either the Canadian Business Corporate 500 or the Directory of Corporate Affiliates, have at least one subsidiary in the U.S., and are in an industry identified in prior studies as likely to use transfer pricing. Similarly, U.S. TNCs are drawn from the population of U.S.-based corporations, and are listed on the

Fortune 500, Business Week 1000, or the Directory of Corporate Affiliates, have at least one Canadian subsidiary, and are in relevant industries. Initial and follow-up mailings were sent to the Canadian sample of 126 TNCs with U.S. subsidiaries, and to the U.S. sample of 261 TNCs with Canadian subsidiaries. One hundred sixty-seven TNCs responded from the combined sample of 387, for an overall response rate of 43%. Of the 71 Canadian surveys returned (56% response rate), 28 transferred tangible goods, 2 transferred only intangible property, and 41 did not use transfer pricing in conjunction with their U.S. subsidiaries. Of the 106 U.S. surveys returned (41% response rate), 62 transferred tangible goods, 1 transferred only intangible property, 38 did not use transfer pricing with their Canadian subsidiaries, and 5 cited company policy in not answering surveys. There were no significant differences in size or industry between early and late respondents, or between nonrespondents and respondents, by country.

Transfer pricing methods of Canadian and U.S. TNCs reported in this study are compared with prior studies in Table 2. One major difference between this and prior studies is that the current samples of Canadian and U.S. TNCs are limited to those with Canadian/U.S. cross-border subsidiaries in order to isolate specific Canada-U.S. interactions, while prior samples included all Canadian and U.S. TNCs, regardless of subsidiary location.

*** Insert Table 2 Here ***

Non-parametric statistics are used in the initial analysis because of the categorical and/or ordinal nature of many of the

variables. The Wilcoxon two-sample test is used to compare the responses of Canadian and U.S. TNCs, and market/non-market-based transfer pricing methods.

Differences in Transfer Pricing Methods

The hypothesis of no differences between Canadian and U.S. TNC transfer pricing practices can be rejected. Canadian TNCs prefer market methods, while U.S. TNCs prefer other methods, as shown in Table 2 and Table 3, Panel A. If permitted to change methods with no regulatory restrictions, TNC reactions by home country are significantly different (Table 3, Panel B). Ten (42%) market U.S. TNCs would change to non-market methods while only three (8%) non-market TNCs would switch to market methods. In Canada, five (28%) market TNCs would change to non-market methods, compared to only one (10%) non-market TNC switching to a market method.

*** Insert Table 3 Here ***

Organizational Variables

The hypothesis that organizational variables do not differ between Canadian and U.S. TNCs cannot be rejected. As shown in Table 4 (Panel A), TNCs differ by country only by size as measured in overall sales, sales to U.S. subsidiaries, and assets invested in U.S. subsidiaries. All size, asset and income measures are calculated in U.S. dollars. The significant size differences between U.S. and Canadian TNCs and their subsidiaries are representative of the TNC population in each country: in both the sample and the overall TNC population, U.S. TNCs are five times as large as Canadian TNCs in sales revenues.

*** Insert Table 4 Here ***

In their performance evaluation of domestic and foreign subsidiary managers, Canadian and U.S. TNCs are very similar. Segment profit, the only significantly different criterion, is more important to U.S. TNCs than to Canadian TNCs in evaluating managerial performance. In the criteria applied when choosing transfer pricing methods, both countries rate the practical aspects (ease of understanding and cost of administration) as most important in the choice process.

When organizational factors are compared by market/non-market transfer pricing methods in Table 4 (Panel B), data regarding size are not significant. However, the data are in the same direction as those of most prior research findings, with larger TNCs choosing market, and smaller choosing non-market methods.

Of interest is the significant difference between market and non-market TNCs regarding preferred transfer pricing methods. Of market TNCs, 36% would prefer to change to non-market methods, while only 8% of non-market TNCs would change to market methods. This is important because the U.S. IRS audits non-market TNCs more frequently than those using market methods, as discussed in the next section.

Market TNCs stress other profit measures (ROA, ROI, ROE) significantly more when evaluating both domestic and foreign subsidiary managers than non-market TNCs do. However, the latter emphasize innovation measures in managerial evaluations more strongly than their market counterparts, but only for managers

stationed in the U.S..

The final analysis of organizational factors by transfer pricing method by country is presented in Table 4 (Panel C). The significant size variables are the same as found in the analysis by country. Additionally, non-market TNCs differ by size of their Canadian subsidiaries. A country-specific finding regarding industry is that all Canadian metal/mining TNCs use market transfer prices, while all U.S. metal/mining TNCs use cost-based methods.

The size findings in Panels A, B and C illustrate the still unresolved relationship between TNC size and transfer pricing practices. Research suggests that larger TNCs use non-cost based methods (Tang 1992), that full-cost TNCs are smaller (Borkowski 1992), or that larger TNCs tend to use market-based prices (Al-Eryani 1987; Yunker 1982). These findings are supported by the transfer pricing choices of U.S. TNCs (market-based sales of \$10,322 million versus non-market sales of \$5,025 million), but not by Canadian TNCs, where market-based TNCs averaged \$1,504 million in sales, less than the non-market-based average of \$1,528 million.

Environmental Variables

The hypothesis that environmental variables do not differ between Canadian and U.S. TNCs cannot be rejected. As shown in Table 5 (Panels A,B,C), only prior audit status is significant across both country and method. Of the 62 U.S. TNCs, 31 (50%) had unfavorable adjustments to income as a result of IRS audits based on Sec. 482, and 24 (39%) as a result of Revenue Canada audits based on Sec. 69 (see Panel A). Eighteen of these had bilateral

adjustments. Canadian TNCs fared much better, with only one receiving adjustments from both the IRS and Revenue Canada, and another three experiencing a Revenue Canada modification, for a total of 14%. When compared by method in Panel B, the IRS adjusted 10 of 42 market TNCs (24%) and 22 of 48 non-market TNCs (46%). Revenue Canada revised 15 of 42 market TNCs (36%) and 13 of 48 non-market TNCs (27%). When compared by method by country, as shown in Panel C, U.S. TNCs were more likely to have unfavorable IRS Sec. 482 and/or Revenue Canada audits, regardless of transfer pricing method. It seems likely that U.S. TNCs are (or have been) more likely than Canadian TNCs to apply more liberal interpretations of transfer pricing regulations than intended by Revenue Canada and the U.S. IRS.

*** Insert Table 5 Here ***

An *a priori* assumption was that the tax and trade regulation criterion resulting from the factor analysis in Table 5 would be significant. When the data did not support this assumption, the items comprising this factor were analyzed individually for an explanation. When the criterion is broken down by item, the effects of U.S. Sec. 482 are significantly more important than Canadian Sec. 69 both across and within countries. This is not surprising: although Sec. 69 is similar in its recommendations to Sec. 482, it is more loosely interpreted by Revenue Canada and less subject to penalties. Given their audit status, however, it seems that Canadian TNCs are better or more conscientious at choosing a method in accordance with Sec. 482, and/or that U.S. TNCs choose methods

less is accordance with Sec. 482, challenging the IRS and undergoing an audit. Canadian TNCs also prefer market methods, which are more likely to pass IRS scrutiny than the non-market methods currently preferred by U.S. TNCs. These results suggest that U.S. and not Canadian tax regulations are influencing the choice of transfer pricing methods, regardless of TNC home country.⁵

There are no differences between countries in the practices adopted to address the effects of their given transfer pricing methods in Table 5, Panel A. However, when compared by method in Panel B, non-market TNCs are more likely to keep two sets of books (tax/finance/local versus management control) and to include the effects of transfer pricing in their budgets so managers are not evaluated on parent company usage of transfer prices to achieve certain goals, such as tax minimization. When compared by method by country in Panel C, all market Canadian TNCs addressed transfer pricing effects when evaluating subsidiary performance, and none accounted for transfer pricing adjustments in their budgets, compared to 71% and 83% of their U.S. market counterparts. Of the TNCs using non-market methods, 50% of Canadian TNCs disregarded transfer pricing effects when evaluating performance compared to 18% of the U.S. non-market TNCs. These practices by non-market TNCs, particularly keeping two sets of books, may contribute to the high audit experience of U.S. TNCs.

Regarding NAFTA, both U.S. and Canadian respondents feel that Mexico received the most benefits compared to their home countries.

When comparing both method and country, 90% of non-market Canadian TNCs were neutral, and 10% positive, about the effect of NAFTA on trade with their U.S. subsidiaries. In contrast, non-market U.S. TNCs were more positive (55%) about NAFTA's effect on trade with their Canadian subsidiaries.

Financial Variables

The hypothesis that financial factors do not differ between Canadian and U.S. TNCs can be rejected. As shown in Table 6 (Panel A), all financial ratios (returns on equity, assets and sales) are lower, and, in six of seven cases, significantly lower, for Canadian TNCs. These findings may lend support to Hufbauer (1992) and Grubert et al. (1993), who attribute some part of the poor profit performance by U.S. subsidiaries of Canadian TNCs to possible transfer pricing manipulations. The lower returns and size variables in Table 4 may also support Rugman and McIlveen's (1986) explanation that Canadian TNCs are less diversified and smaller than their U.S. competitors, therefore exhibiting poorer relative performance.

*** Insert Table 6 Here ***

Differences in effective tax rates indicate that Canadian TNCs could minimize taxes by charging higher prices to their U.S. subsidiaries, therefore keeping income in lower-taxed Canada, as suggested by Boidman (1993). This is supported by the significantly higher ROS of 5.12 for domestic Canadian subsidiaries when compared with their U.S. subsidiaries' ROS of -14.76. U.S. TNCs might also be encouraged to shift income into Canada given the latter's lower

effective rate. This may be supported by the lower ROA (9.74) and ROS (7.31) for domestic U.S. subsidiaries when compared with their Canadian subsidiaries (14.56 and 10.57 respectively).

However, there is disagreement as to which tax rate is the better determinant of income shifting. The statutory rate is preferred by Grubert and Mutti (1991) because it is prior to any non-transfer-pricing-related adjustments to the effective rate. Therefore, income should be shifted by Canadian TNCs to their U.S. subsidiaries, and by Canadian subsidiaries to their U.S. parent TNCs, due to the significant differences in their statutory tax rates. This is not supported by the rates of return reported by the TNCs in this study. If income shifts are occurring, it is due to the effective, and not the statutory, tax rate differentials.

As shown in Table 6 (Panel B), an analysis by transfer pricing method shows no relationship with financial factors, so the final hypothesis cannot be rejected. Five of the seven rates of return were higher for non-market TNCs, but none were significantly different from those of market TNCs.

When compared by both method and country in Table 6 (Panel C), the patterns found in the comparison by country are found in market TNCs, by country. All U.S.-TNC associated rates of return are higher than Canadian returns, and market Canadian subsidiaries, whether foreign or domestic, have higher return rates than their U.S. counterparts. Differences between Canadian and U.S. market TNCs, however, are not significantly different. For non-market TNCs, as before, all U.S. returns are higher than, and many are

significantly higher than, Canadian returns.

Implications and Conclusions

Canadian TNCs exhibit opposite preferences for market and non-market transfer pricing methods (64% and 36% respectively) when compared with U.S. TNCs (39% and 61% respectively). However, organizational and environmental factors do not seem to influence either country's choice. While prior audit experience is consistently significant, the logical interpretation is that the method chosen by the TNC induces the audit, and not the reverse. The significant size difference simply reflects the size of the Canadian and U.S. TNC population, and is not significant when transfer pricing methods are compared.

When compared by country by method, TNC practices used to counter transfer pricing effects differ significantly. Again, it is the transfer pricing method driving these practices, and not vice versa. TNCs using two sets of books were more likely to be using non-market methods and were more likely to be audited by the IRS. This area needs further investigation: Are U.S. TNCs more willing than Canadian TNCs to challenge IRS Sec. 482 and risk audits, given the former's larger size and available resources?

Financial factors differ by TNC country, but not by transfer pricing method. An analysis indicates that income shifting may occur among TNCs in the U.S. and Canada. Non-market TNCs, while smaller in size (measured by sales and assets), report larger absolute income and generally better rates of return than market

TNCs. This is partially explained by the larger U.S. TNCs, which experience higher rates of return and prefer non-market methods, while the smaller Canadian TNCs, with lower rates of return, prefer market methods. However, do U.S. TNCs enjoy higher rates of return due to income shifting spurred by differentials in effective tax rates between the U.S. and Canada? Are U.S. TNCs using transfer prices to favorably manipulate income and minimize tax payments? Are the higher return on sales and income enjoyed by domestic subsidiaries of Canadian TNCs due to income shifting from their U.S. subsidiaries? The differences found in this study in financial measures, coupled with the audit history of U.S. TNCs, provide some evidence of income shifting based on effective tax rates. Determining the true extent of such shifting is an area for future research, and beyond the scope of this study.

Given the lack of significant organizational and environmental factors, transfer pricing methods may be chosen by Canadian TNCs to meet tax regulations while facilitating income shifting. Given their audit history, however, U.S. TNCs may be using transfer pricing as an income shifting mechanism. If further research supports this behavior, existing regulations should be updated to discourage such behavior, perhaps through more severe penalties and fewer, but equally acceptable, transfer pricing methods.

References

- Al-Eryani, M. 1987. Policies of U.S. Multinational Corporations on Pricing Intercompany Transfers with Foreign Affiliates in More and Less Developed Countries. Dissertation.
- Arpan, J. 1971 International Intracorporate Pricing: Non-American Systems and Views. New York: Praeger Publishers.
- Bernard, J., and R. Weiner. 1992. "Transfer Prices and the Excess Cost of Canadian Oil Imports: New Evidence on Bertrand versus Rugman." Canadian Journal of Economics 25(1) February, 22-40.
- Bernard, J. and E. Genest-Laplante. 1996. "Transfer Pricing by the Canadian Oil Industry: A Company Analysis." Applied Economics Letters 3(5) May, 333-340.
- Bertrand, R. 1981. The State of Competition in the Canadian Petroleum Industry. Ottawa: Supplies and Services Canada.
- Boidman, N. 1993. "Canadian Perspectives on Intercompany Transfer Pricing." Tax Management Transfer Pricing Special Report 2(1) May 12, 1-21.
- Borkowski, S. 1992. "Organizational and International Factors Affecting Multinational Transfer Pricing." Advances in International Accounting 5, 173-192.
- _____. 1993. "International versus Domestic Managerial Performance Evaluation: Some Evidence." International Journal of Accounting 28, 129-130.
- Burns, J. 1980. "How IRS Applies the Intercompany Pricing Rules of Section 482: A Corporate Survey." The Journal of Taxation 52 (May), 308-314.
- Coopers and Lybrand. 1993. International Transfer Pricing. Oxfordshire: CCH International.
- Ernst & Young. 1993. IRS Examination of Foreign Controlled Organizations. Press Release, June 7.
- Fowler, D.J. 1978. "Transfer Prices and Profit Maximization in Multinational Enterprise Operations." Journal of International Business Studies 9(3) Winter, 9-26.
- Grabski, S. 1985. "Transfer Pricing in Complex Organizations: A Review and Integration of Recent Empirical and Analytical Literature." Journal of Accounting Literature 4, 33-75.

Grubert, H. and J. Mutti. 1991. "Taxes, Tariffs and Transfer Pricing in Multinational Corporate Decision Making." Review of Economics and Statistics 73(2), 285-293.

Grubert, H., T. Goodspeed and D. Swenson. 1993. "Explaining the Low Taxable Income of Foreign-Controlled Companies in the United States." in Studies in International Taxation edited by A. Giovannini, R. Hubbard and J. Slemrod. Chicago IL: University of Chicago Press.

pp 237-275

Haas, Raymond. 1991. "The Competitive Burden: Taxation of U.S. Multinational." in Private Investments Abroad. Washington DE: The Tax Foundation.

Hufbauer, G. and J. van Rooij. 1992. U.S. Taxation of International Income: Blueprint for Reform. Washington DC: Institute for International Economics.

Internal Revenue Service. 1994. Final Regulations (TD 8552) Relating to Intercompany Transfer Pricing under Section 482. Washington DC: U.S. Department of the Treasury.

International Chamber of Commerce. 1994. Transfer Pricing. Document 180/373, March 15, ICC, Brussels: ICC.

Klassen, K., M. Land and M. Wolfson. 1993. "Geographic Income Shifting by Multinational Corporations in Response to Tax Rate Changes." Journal of Accounting Research 31(Supplement), 141-173.

Leitch, R. and K. Barrett. 1992. "Multinational Transfer Pricing: Objectives and Constraints." Journal of Accounting Literature 11, 47-92.

Milburn, J. 1977. International Transfer Pricing in a Financial Accounting Context. Dissertation, University of Illinois at Urbana-Champaign.

O'Connor, W. 1992. "A Comparative Analysis of the Major Areas of Tax Controversy in Developed Countries." Journal of International Accounting, Auditing & Taxation 1(1), 61-79.

Organization for Economic Cooperation and Development, Committee on Fiscal Affairs. 1995. Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrators. Paris: OECD.

Revenue Canada, International Bureau of Fiscal Documentation. 1987. Information Circular 87-2: International Transfer Pricing and Other International Transactions. February 27.

Rome, M. 1992. "I.R.C. Section 482 and Restricted Foreign Income Reallocations Before and After Procter and Gamble." Texas International Law Journal 27(Winter), 259-314.

Rugman, A. 1985. "Transfer Pricing in the Canadian Petroleum Industry." in Multinationals and Transfer Pricing edited by A. Rugman and L. Eden. New York: St. Martin's Press.

_____. 1986. "The Role of Multinational Enterprises in U.S.-Canadian Economic Relations." Columbia Journal of World Business 21 (Summer), 15-27.

_____ and J. McIlveen. 1986. "Canadian Foreign Direct Investment in the United States." in Research in International Business and Finance Volume 5 edited by H. Gray, Greenwich CT: JAI Press Inc.

Tang, R. 1979. Transfer Pricing in the United States and Japan. Toronto: Butterworth & Co.

_____. 1981. Multinational Transfer Pricing: Canadian and British Perspectives. Toronto: Butterworth & Co.

_____. 1993. Transfer Pricing in the 1990s: Tax and Management Perspectives. Westport CT: Quorum Books.

United Nations Secretariat. 1995. Transfer Pricing and Taxation of International Income in Developing Countries. ST/SG/AC.8/1995/L.8. August 15, Geneva: United Nations.

U. S. Department of Commerce. 1993. Foreign Direct Investment in the United States: An Update. Washington DC: Economics and Statistics Administration.

Wilson, G. 1993. "The Role of Taxes in Location and Sourcing Decisions." in Studies in International Taxation edited by A. Giovannini, R. Hubbard and J. Slemrod. Chicago IL: University of Chicago Press.

Wu, F. and D. Sharp. 1979. "An Empirical Study of Transfer Pricing Practice." International Journal of Accounting 14 (Spring), 71-99.

Yunker, P. 1982. Transfer Pricing and Performance Evaluation in Multinational Corporations. New York: Praeger Publishers.

Endnotes

1. A transaction "meets the arm's length standard if the results of the transaction are consistent with the results that would have been realized if uncontrolled taxpayers had engaged in the same transaction under the same circumstances". [IRS 1.482-3(b)]

2. These methods assume the arm's length standard, so that the final transfer price between related (controlled) subsidiaries would have been the same if the transfers had been between unrelated (uncontrolled) entities. Generally, comparable uncontrolled price (CUP) is the market price for the transferred good. Cost-plus assumes the gross profit mark-up which would have been added to the production cost if the subsidiaries were unrelated. Resale price is the price at which the transferred good would have been resold to an unrelated entity, less some gross profit percentage. The profit split divides profits between subsidiaries using some economically valid basis that approximates the division of profits that would have occurred had the subsidiaries been unrelated. The comparable profits method (CPM) uses profit measures (such as the return on assets or operating income to sales) to determine a return that would equal that realized by a comparable independent enterprise. There is some debate over the arm's length nature of CPM, in that it depends on profit comparisons rather than price and/or transaction comparisons and functional analysis. For a detailed review of transfer pricing methods and definitions, see Coopers and Lybrand (1993), US Sec. 482 (1994) and OECD guidelines (1995).

3. This standard "has been adopted by nearly every country as the guiding principle for determining transfer prices between members of a group" [UN Secretariat 1995, p. 3], as well as by the United Nations, the OECD and the International Chamber of Commerce [ICC 1994].

4. A detailed review of empirical, theoretical and model building research is provided by Grabski [1985], Leitch and Barrett [1992], and Tang [1993].

5. This may not be the case in the future because Revenue Canada is currently updating its transfer pricing regulations. Changes will require additional documentation requirements and impose significant penalties for non-compliance with transfer pricing regulations effective with the 1997 tax year.

* Limited to Canadian FIC with U.S. subsidiaries
** Limited to U.S. FIC with Canadian subsidiaries
Income by FIC
Income by U.S. and Canadian subsidiaries
NOTE: Other studies used all Canadian and U.S. subsidiaries
subsidiary location

TABLE 1: VARIABLES UNDER CONSIDERATION

ORGANIZATIONAL VARIABLES:

Size (sales) by TNC

Size (sales) by U.S. and Canadian subsidiaries

Assets by U.S. and Canadian subsidiaries

Industry

Performance evaluation criteria by U.S. and Canadian managers

- Non-income measures

- Segment profit

- Other profit measures

- Innovation measures

Transfer pricing method criteria - internal

- Practical concerns (ease/cost)

- Usefulness in decision-making

- Usefulness in performance evaluation

ENVIRONMENTAL VARIABLES:

Effects of NAFTA

Economic stability - TNC and subsidiary

TNC/subsidiary government relations

Prior IRS/Revenue Canada audit experience

Transfer pricing method criteria - external

- Tax and trade regulations

- Other transnational concerns

TNC practices to counter effects of transfer pricing method

FINANCIAL VARIABLES:

Return on equity

Return on assets - TNC

Return on assets - U.S. and Canadian subsidiaries

Return on sales - TNC

Return on sales - U.S. and Canadian subsidiaries

Statutory tax rate

Effective tax rate

Income by TNC

Income by U.S. and Canadian subsidiaries

TABLE 2: CURRENT AND PRIOR STUDIES ON CANADIAN AND U.S. TRANSFER PRICING METHODS

CANADIAN TRANSNATIONAL CORPORATIONS
(in percentages)

	Arpan [1971] N=8	Tang [1981] N=78	XXXXXXXXXX [Current] N=28*
Full cost		25.9	21.4
Variable cost		5.5	
Other cost		1.9	3.6
Total cost	12.5	33.3	25.0
Market		37.1	64.3
Negotiated		25.9	3.6
Other		3.7	7.1
Total noncost	87.5	66.7	75.0
Total	100.0	100.0	100.0

UNITED STATES TRANSNATIONAL CORPORATIONS
(in percentages)

	Tang [1979] N=85	Burns [1980] N=62	Yunker [1982] N=52	Borkowski [1992] N=79	Tang [1993] N=90	XXXXXXXXXX [Current] N=62**
Full cost	42.3		39.0	51.9	37.6	25.8
Variable cost	2.4				2.5	6.5
Other cost	1.2				1.3	4.8
Total cost	45.9	37.0	39.0	51.9	41.4	37.1
Market	31.8	43.0	34.0	32.9	45.9	38.7
Negotiated	16.4	15.0	17.0	15.2	12.7	11.3
Other	5.9	5.0	10.0			12.9
Total noncost	54.1	63.0	61.0	48.1	58.6	62.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

* Limited to Canadian TNCs with U.S. subsidiaries

** Limited to U.S. TNCs with Canadian subsidiaries

NOTE: Other studies used all Canadian and U.S. TNCs, regardless of subsidiary location

TABLE 3: CURRENT AND PREFERRED TRANSFER PRICING METHODS

PANEL A: TRANSFER PRICING METHODS CURRENTLY USED BY RESPONDENTS

	US TNCs		Canadian TNCs		Total	
MARKET METHODS	24	39%	18	64%	42	47%
Sales in US\$ millions	10,322		1,504		6,543	
OTHER METHODS	38	61%	10	36%	48	53%
Sales in US\$ millions	5,025		1,528		4,296	
TOTAL	62	100%	28	100%	90	100%
Sales in US\$ millions	7,075		1,512		5,345	

Wilcoxon 2 sample test probability .0478*

* Significant at alpha = .10

PANEL B: PREFERRED TRANSFER PRICING METHOD GIVEN U.S. SECTION 482 "BEST METHOD" RULE

	US TNCs		Canadian TNCs		Total	
CUP	17	27%	14	50%	31	34%
Cost plus	16	26%	7	25%	23	26%
Resale price	10	16%	4	14%	14	16%
Profit split	8	13%	1	4%	9	10%
CPM	11	18%	2	7%	13	14%
TOTALS	62	100%	28	100%	90	100%

Wilcoxon 2 sample test probability .0721*

* Significant at alpha = .10

* Limited to Canadian TNCs with U.S. subsidiaries
 ** Limited to U.S. TNCs with Canadian subsidiaries
 NOTE: Other studies used all Canadian and U.S. TNCs, regardless of subsidiary location

TABLE 4: DIFFERENCES IN ORGANIZATIONAL FACTORS

PANEL A: DIFFERENCES BY COUNTRY

	Wilcoxon 2 sample probability	US TNC N = 62 Means	Canada TNC N = 28 Means
Size (sales) by TNC	.0001**	7,075	1,512
Size (sales) to U.S. subsidiaries	.0001**	4,140	605
Size (sales) to Canadian subsidiaries	.6770	697	816
Assets by U.S. subsidiaries	.0001**	3,899	986
Assets by Canadian subsidiaries	.1719	613	2,912
Industry	.3049	N/A	N/A

PERFORMANCE EVALUATION CRITERIA#

- Non-income measures for U.S. managers	.3711	4.18	4.00
- Non-income measures for Canadian managers	.1105	4.20	3.93
- Segment profit for U.S. managers	.0513*	3.66	3.26
- Segment profit for Canadian managers	.1985	3.63	3.33
- Other profit measures for U.S. managers	.3246	3.73	4.08
- Other profit measures for Canadian managers	.5655	3.85	4.08
- Innovation measures for U.S. managers	.1315	3.69	3.27
- Innovation measures for Canadian managers	.9095	3.31	3.38

TRANSFER PRICING METHOD CRITERIA#

- Practical	.2976	4.38	4.57
- Decision-making	.4164	3.22	3.32
- Performance evaluation	.1513	3.18	3.39

* Significant at alpha = .10 ** Significant at alpha = .01
 Size and asset means are reported in millions of dollars.
 # Reported on a five point scale, where 1 = Very unimportant and
 5 = Very important

TABLE 4 (continued): DIFFERENCES IN ORGANIZATIONAL FACTORS

PANEL B: DIFFERENCES BY TRANSFER PRICING METHOD

	Wilcoxon 2 sample probability	Market N = 42 Means	Non-market N = 48 Means
Size (sales) by TNC	.6319	6,542	4,296
Size (sales) to U.S. subsidiaries	.8386	3,418	3,041
Size (sales) to Canadian subsidiaries	.7129	786	688
Assets by U.S. subsidiaries	.7904	4,278	2,168
Assets by Canadian subsidiaries	.2372	2,198	527
Industry	.7378	N/A	N/A
PERFORMANCE EVALUATION CRITERIA#			
- Non-income measures for U.S. managers	.1816	4.00	3.23
- Non-income measures for Canadian managers	.2113	4.00	4.21
- Segment profit for U.S. managers	.4566	3.46	3.59
- Segment profit for Canadian managers	.8916	3.51	3.55
- Other profit measures for U.S. managers	.0038**	4.26	3.48
- Other profit measures for Canadian managers	.0051**	4.26	3.64
- Innovation measures for U.S. managers	.0840*	3.34	3.74
- Innovation measures for Canadian managers	.9718	3.37	3.30
TRANSFER PRICING METHOD CRITERIA#			
- Practical	.9999	4.44	4.45
- Decision-making	.3064	3.37	3.15
- Performance evaluation	.6401	3.32	3.19
Preferred transfer pricing method	.0001**	N/A	N/A

* Significant at alpha = .10 ** Significant at alpha = .01
 Size and asset means are reported in millions of dollars.
 # Reported on a five point scale, where 1 = Very unimportant and
 5 = Very important

TABLE 4 (continued): DIFFERENCES IN ORGANIZATIONAL FACTORS

PANEL C: DIFFERENCES BY TRANSFER PRICING METHOD BY COUNTRY

	Wilcoxon Two Sample Probabilities	
	Market N _{US} =24 N _{CAN} =18	Non-Market N _{US} =38 N _{CAN} =10
Size (sales) by TNC	.0010**	.0065**
Size (sales) to U.S. subsidiaries	.0001**	.0062**
Size (sales) to Canadian subsidiaries	.7000	.2037
Assets by U.S. subsidiaries	.0001**	.0268*
Assets by Canadian subsidiaries	.9515	.0678*
Industry	.8269	.0833*

PERFORMANCE EVALUATION CRITERIA#

- Non-income measures for U.S. managers	.6078	.7466
- Non-income measures for Canadian managers	.2952	.3970
- Segment profit for U.S. managers	.4605	.0592*
- Segment profit for Canadian managers	.9019	.0840*
- Other profit measures for U.S. managers	.6858	.9250
- Other profit measures for Canadian managers	.9347	.7860
- Innovation measures for U.S. managers	.2600	.6265
- Innovation measures for Canadian managers	.5343	.4358

TRANSFER PRICING METHOD CRITERIA#

- Practical	.7784	.2015
- Decision-making	.2565	.7423
- Performance evaluation	.2004	.5340

* Significant at alpha = .10 ** Significant at alpha = .01
 Size and asset means are reported in millions of dollars.
 # Reported on a five point scale, where 1 = Very unimportant and 5 = Very important

TABLE 5: DIFFERENCES IN ENVIRONMENTAL FACTORS

PANEL A: DIFFERENCES BY COUNTRY

	Wilcoxon 2 sample probability	US TNC N = 62 Means	Canada TNC N = 28 Means
Effects of NAFTA on			
- TNC trade with subsidiary	.1062	3.61	3.32
- TNC overall	.7480	3.63	3.57
- TNC industry	.4656	3.66	3.54
- Canadian economy	.8797	3.53	3.50
- U.S. economy	.0190*	3.74	4.14
- Mexican economy	.7963	4.16	4.14
Economic stability of			
- TNC	.9269	4.34	4.32
- Subsidiary	.1675	3.85	4.18
TNC/subsidiary government relations	.2602	3.71	3.54
Prior IRS audit	.0001**	50%	4%
Prior Revenue Canada audit	.0332*	39%	14%
Transfer pricing method criteria			
- Tax and trade regulations	.3249	3.53	3.36
- Other transnational concerns	.8344	3.32	3.21
TNC practices to counter effects of transfer pricing method			
- Two sets of books	.1637	40%	25%
- Approximate market conditions	.6094	37%	43%
- Disregard transfer pricing effects	.6175	23%	18%
- Budget for transfer prices	.4598	21%	14%
- No practices used	.8258	19%	21%

* Significant at alpha = .10 ** Significant at alpha = .01
 All factors reported on a five point scale, where
 1 = Very unimportant and 5 = Very important

TABLE 5 (continued): DIFFERENCES IN ENVIRONMENTAL FACTORS

PANEL B: DIFFERENCES BY TRANSFER PRICING METHOD

	Wilcoxon 2 sample probability	Market N = 42 Means	Non-market N = 48 Means
Effects of NAFTA on			
- TNC trade with subsidiary	.2538	3.41	3.63
- TNC overall	.6919	3.57	3.65
- TNC industry	.5097	3.55	3.69
- Canadian economy	.0918*	3.71	3.35
- U.S. economy	.3232	3.95	3.79
- Mexican economy	.2379	4.26	4.06
Economic stability of			
- TNC	.4173	4.40	4.27
- Subsidiary	.1492	4.12	3.81
TNC/subsidiary government relations	.9754	3.67	3.65
Prior IRS audit	.0254*	24%	46%
Prior Revenue Canada audit	.4150	36%	27%
Transfer pricing method criteria			
- Tax and trade regulations	.3752	3.53	3.43
- Other transnational concerns	.3135	3.39	3.19
TNC practices to counter effects of transfer pricing method			
- Two sets of books	.0307*	24%	46%
- Approximate market conditions	.1151	48%	31%
- Disregard transfer pricing effects	.3394	17%	25%
- Budget for transfer prices	.0353*	10%	27%
- No practices used	.4039	24%	17%

* Significant at alpha = .10 ** Significant at alpha = .01
 All factors reported on a five point scale, where
 1 = Very unimportant and 5 = Very important

TABLE 5 (continued): DIFFERENCES IN ENVIRONMENTAL FACTORS

PANEL C: DIFFERENCES BY TRANSFER PRICING METHOD BY COUNTRY

	Wilcoxon Two Sample Probabilities			
	Market		Non-Market	
	N _{US} =24	N _{CAN} =18	N _{US} =38	N _{CAN} =10
Effects of NAFTA on				
- TNC trade with subsidiary		.8883	.0270*	
- TNC overall		.9886	.7558	
- TNC industry		.2321	.6260	
- Canadian economy		.5838	.8511	
- U.S. economy		.1291	.1053	
- Mexican economy		.8041	.7608	
Economic stability of				
- TNC		.7615	.9228	
- Subsidiary		.7657	.1851	
TNC/subsidiary government relations		.2945	.6101	
Prior IRS audit		.0022**	.0170*	
Prior Revenue Canada audit		.0119*	.5477	
Transfer pricing method criteria				
- Tax and trade regulations		.6139	.2488	
- Other transnational concerns		.6435	.8888	
TNC practices to counter effects of transfer pricing method				
- Two sets of books		.3614	.6913	
- Approximate market conditions		.3862	.4022	
- Disregard transfer pricing effects		.0139*	.0441*	
- Budget for transfer prices		.0760*	.3145	
- No practices used		.6175	.5422	

* Significant at alpha = .10 ** Significant at alpha = .01
 All factors reported on a five point scale, where
 1 = Very unimportant and 5 = Very important

TABLE 6: DIFFERENCES IN FINANCIAL FACTORS

PANEL A: DIFFERENCES BY COUNTRY

	Wilcoxon 2 sample probability	US TNC N = 62 Means	Canada TNC N = 28 Means
Return on equity	.0098**	9.33	-4.02
Return on assets			
- TNC	.0519*	4.22	1.03
- U.S. subsidiaries	.0103*	9.74	-.01
- Canadian subsidiaries	.0006**	14.56	-.14
Return on sales			
- TNC	.0627*	3.94	1.34
- U.S. subsidiaries	.0178*	7.31	-14.76
- Canadian subsidiaries	.1940	10.57	5.12
Statutory tax rate	.0001**	35.00%	42.85%
Effective tax rate	.0453*	30.22%	22.17%
Income#			
- TNC	.0007**	94.19	-9.80
- U.S. subsidiaries	.0002**	96.24	-18.04
- Canadian subsidiaries	.0495*	53.61	54.09

* Significant at alpha = .10

** Significant at alpha = .01

Income means are reported in millions of dollars (U.S.)

TABLE 6 (continued): DIFFERENCES IN FINANCIAL FACTORS

PANEL B: DIFFERENCES BY TRANSFER PRICING METHOD

	Wilcoxon 2 sample probability	Market N = 42 Means	Non-market N = 48 Means
Return on equity	.3452	2.71	7.84
Return on assets			
- TNC	.4298	3.09	3.45
- U.S. subsidiaries	.2698	4.37	9.40
- Canadian subsidiaries	.2182	5.86	13.89
Return on sales			
- TNC	.8086	3.33	3.03
- U.S. subsidiaries	.3346	-5.10	6.73
- Canadian subsidiaries	.7865	9.97	8.13
Statutory tax rate	.0425*	38.22%	36.76%
Effective tax rate	.3833	28.42%	27.10%
Income#			
- TNC	.9301	15.52	107.23
- U.S. subsidiaries	.9126	-27.43	142.04
- Canadian subsidiaries	.7912	54.90	52.75

* Significant at alpha = .10

** Significant at alpha = .01

Income means are reported in millions of dollars (U.S.)

TABLE 6 (continued): DIFFERENCES IN FINANCIAL FACTORS

PANEL C: DIFFERENCES BY TRANSFER PRICING METHOD BY COUNTRY

	MARKET-BASED			NON-MARKET-BASED		
	Wilcoxon 2 sample probability	US N=24 Means	Canada N=18 Means	Wilcoxon sample probability	US N=38 Means	Canada N=10 Means
Return on equity	.0752*	9.01	-5.69	.1015	9.54	-.27
Return on assets						
- TNC	.3215	4.06	1.79	.1014	4.32	-.69
- U.S. subsidiaries	.1922	7.37	-.62	.0201*	11.23	1.05
- Canadian subsidiaries	.2161	8.89	1.06	.0016**	18.26	-1.96
Return on sales						
- TNC	.1509	4.38	1.94	.1686	3.67	.00
- U.S. subsidiaries	.2509	5.72	-23.12	.0294*	8.30	-.42
- Canadian subsidiaries	.8235	11.17	8.08	.0233*	10.18	.68
Statutory tax rate	.0001**	35.00	42.51	.0001**	35.00	43.46
Effective tax rate	.0722*	32.74	22.66	.2852	28.62	21.29
Income*						
- TNC	.0360*	-4.40	42.09	.0043**	156.45	-126.56
- U.S. subsidiaries	.0134*	-50.82	11.55	.0057**	188.16	-68.78
- Canadian subsidiaries	.7407	18.23	116.02	.0083**	78.01	-38.81

* Significant at alpha = .10

** Significant at alpha = .01

Income means are reported in millions of dollars (U.S.)

LIBRARY E A/BIBLIOTHEQUE A E



3 5036 20086771 4

DOCS

CA1 EA980 97F11 ENG

Borkowski, Susan C

Factors affecting transfer pricing
and income shifting(?) between
Canadian and United States
transnational corporations

50060704

