

**REGULATING CROSS-BORDER TRANSFER PRICING IN A CHANGING GLOBAL
ENVIRONMENT**

by

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Abstract

This paper provides a review of the literature on transfer pricing from the perspective of the regulator. A short description of the regulatory challenges posed by the vertically integrated firm and the multinational enterprise is presented, followed by literature relevant to the different economic models of transfer pricing, including first-best solutions and alternative models which address some of the short-comings of pricing at marginal cost. The literature on international cross-border intra-firm transactions is examined. The final section looks at transfer pricing in practice, to include the current international regime for taxing multinationals as well as some of its criticisms. It also highlights the challenges with the international consensus which relies on the arm's length principle and highlights the current environment in Canada. This paper concludes by questioning the continued appropriateness of the current international approach to transfer pricing as the global economic environment continues to become more complex and integrated, and involve new players.

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Table of Contents

Abstract.....	2
Acknowledgements	3
1. Introduction	5
2. Economies of Sequence: The Vertically Integrated Firm and Transfer Pricing	8
3. Economic Models of Transfer Pricing in the Literature	12
i. Assumptions of the First-Best Solution Disputed	13
ii. Second-Best Models of Transfer Pricing.....	17
4. Cross-Border Transfer Pricing.....	19
5. Regulation and Transfer Pricing: Objectives of the Regulator	22
6. Transfer Pricing in Practice	27
i. MNEs and Transfer Pricing in Practice.....	27
ii. Regulators and Transfer Pricing in Practice.....	29
7. The Arm’s Length Principle	33
i. The Arm’s Length Principle in Practice: Canadian Experience	36
8. An Alternative Approach: Formulary Apportionment.....	40
9. Conclusion	42
Works Cited	44

1. Introduction

As the structure of the world economy continues to change in the face of globalization, increased growth through mergers and acquisitions, global value chains, increased competition, technological change, financial deregulation and shifting market powers, global businesses are responding to these intensifying pressures with a focus on increasing efficiencies and lowering global costs. Additionally, the multinational enterprise (MNE) plays an increasingly important role in the global economy. In 2009, MNE value-added activities reached a “historic high of 11 per cent of world gross domestic product” (UNCTAD, 2010, p.16). In 2010, 42 of the 100 largest economies in the world were MNEs, not countries and total revenues of the five largest MNEs were larger than the combined gross domestic product of the world’s poorest 110 countries (Eden and Smith, 2011).

Moreover, the recent financial and economic crisis has caused substantial damage to the public finances of many countries around the world. Given the large stimulus programmes, bank bail-outs, increased welfare and unemployment payments and fewer tax receipts, governments around the globe are struggling to manage their balance sheets. The Organisation for Economic Cooperation and Development (OECD) estimates that the aggregate budget deficit for its member countries is expected to reach approximately 7.5% while public debt is forecast to be about 30% of GDP higher in 2011 than it was in 2007.

Faced with mounting pressures to balance national budgets, governments and tax administrations are challenged to come up with a fair way of allocating and taxing the profits in each country where global business is conducted. Regulators around the globe struggle to reconcile competing interests of fair taxation and providing an environment favourable for business. They must balance these competing factors, each of which contributes to economic growth and recovery from the crisis.

International trade within a MNE group is also increasing in relative importance. Exports of goods and services within MNE affiliates account for one-third of global exports (UNCTAD, 2010, p. 16). Historically, statistics on such intrafirm trade (within a MNE) have only been available for the United States and Japan. The OECD (2002, p. 164). estimates that 31% of Japanese exports and 24% of imports in 1999 were related party transactions; comparable results for the United States were 36% and 39% respectively. In 2010, US intrafirm trade has increased to an estimated 48% of US exports and 40% of US imports (The US Department of Commerce, 2010). That MNEs represent a very large share of world trade is particularly important because these firms have the ability to set prices for trade within the MNE group.

As a result, transfer pricing – the pricing of cross-border intrafirm transactions between related parties of a single firm - is becoming an increasingly important topic for regulators. Such payments, from one part of a multinational enterprise for goods or services provided by another, are now the top international taxation issues faced by multinational enterprises (Ernst and Young, 2010).

While commercial transactions between different parts of a MNE may not be subject to the same market forces shaping relations between two independent firms, transfer prices may diverge from market prices for reasons of marketing, financial policy, or to minimize taxes paid. On one hand, the transfer of goods and services between related entities within a MNE is a natural occurrence within an integrated firm operating in the global economy. On the other, transfer pricing is an effective tool for moving profits from a high to a low tax jurisdiction, raising concerns of aggressive tax planning and tax avoidance. The practice of transfer pricing describes the price setting of transactions between different divisions of the

same firm, distinguishing this behaviour from the setting of market prices on transfers between independent producers. Transfer pricing is reflective of a MNE's response to the international framework of policies, laws, regulations and other constraints which creates the environment in which it seeks to maximize profits.

Since every cross-border transaction involves at least two national governments regulating the transfer price, the possibility for conflict is high. As a result, the OECD has developed an international framework for regulating transfer pricing, which includes a web of bilateral agreements to deal with conflicts in the application of national tax laws. Nonetheless, transfer pricing remains complex and a challenge to regulators.

This paper examines transfer pricing from the regulator's perspective. A short description of the regulatory challenges posed by the vertically integrated firm and the multinational enterprise is presented. The next sections provide a survey of some of the literature relevant to the different economic models of transfer pricing, including first-best solutions and alternative models which address some of the shortcomings of pricing at marginal cost. The literature on international cross-border intra-firm transactions is examined. The final section looks at transfer pricing in practice, to include the current international regime for taxing multinationals as well as some of its criticisms. It also highlights the challenges with the international consensus which relies on the arm's length principle and highlights the current environment in Canada. This paper concludes by questioning the continued appropriateness of the current international approach to transfer pricing as the global economic environment continues to become more complex and integrated, and involving new players.

2. Economies of Sequence: The Vertically Integrated Firm and Transfer Pricing

As supply chains of production become increasingly global, many aspects of a MNE are vertically integrated across international borders. A vertically integrated firm is one which owns both the downstream production of inputs and the upstream manufacturing and distribution aspects of the business. The MNE is a vertically integrated firm which consists of several divisions located in different countries, under common control, with common goals and sharing a common pool of resources (Eden 1998). Often, vertically integrated oligopolies and monopolies are found where there is much invested in rapidly changing technologies and other intellectual property, such as in the production of a good using advanced manufacturing processes. Given that a firm's know-how is necessary in producing a good at a given quality and cost, this would allow the integrated firm to exercise a competitive advantage. For example, consider a pharmaceuticals manufacturer with an efficient, low cost production process that cannot easily be patented, or a food producer with valuable intellectual property in its recipes. Instances where the know-how and other intangible properties allow the firm to efficiently produce unique, high quality goods and services, the firm will choose to keep at least certain aspects of production in-house, through a network of subsidiaries. Problems of vertical integration are further intensified within a MNE, given that many of its upstream and downstream operating units are located in various countries around the world. A major advantage of vertical integration by the multinational firm is that the firm wants to take advantage of its price setting power, thereby avoiding the loss incurred by double marginalization (Tirole 1998). Vertical integration reduces the transactions costs, such as the costs of search, negotiation, monitoring, and dispute settlement, associated with the costs of trade between unrelated firms (Kogut and Zander, 1993).

There are both internal and external motivations for the MNE to establish transfer prices for intrafirm trade in goods, business services and intangible property. The setting of transfer pricing can be internally driven, as a mechanism to motivate managers of a firm's international subsidiary as well as to monitor its progress. They also can be seen as a tool for the efficient allocation of resources within the organization (Gox and Schiller, 2006). These authors consider transfer prices to be a device for coordinating the actions of individual decisions makers in decentralized organizations. Transfer prices are also used to determine divisional profits, calculate product prices, and value inventories.

External factors largely encompass the fact that the MNE has to pay corporate income taxes on their domestic and foreign source income, making it necessary that intrafirm trade is priced for all cross-border trade flows. Customs officials also require that all intrafirm imports of parts, components and finished goods are priced for customs duties or rules of origin purposes. Transfer pricing is therefore necessary and required. Transfer price manipulation, however, is the over or under invoice of related party transactions in order to avoid government regulations and to exploit cross-border differences in tax rates. Firms can use these internal transfer prices to manipulate costs and profits for each subsidiary, effectively subsidizing one unit at the expense of the other. While taxable profits of affiliated units of a multinational are determined by separate accounting, it is often impossible to determine a true internal transfer price because of economies of sequence and integration. It is, therefore, reasonable to assume that multinationals have a range of opportunities to set internal transfer prices which are tax-optimal. As presented in Rugman and Eden (1985), the MNE views the differences in corporate income taxation systems around the world as exogenous market imperfections that can be arbitrated through transfer price manipulation. Ghemawat (2001). finds that MNEs can take advantage of differences in prices and endowments across countries, putting stages of the production chain such as processing, assembly and sales where they offer the greatest net value added for the MNE. Accordingly, the results of a study by

Overesch (2006) suggest that multinationals can evade taxation in high tax countries for the benefit of locations offering lower tax rates.

Clausing (2000) finds that an essential reason intrafirm trade may differ from trade between unrelated firms is the fact that MNEs may alter their transactions in order to minimize worldwide tax burdens. Using data on the operations of US parent companies and their foreign affiliates, Clausing finds that taxes have a substantial influence on intrafirm trade flows. She finds that, controlling for other factors that are likely to influence intrafirm trade balances, the data indicate that the United States has less favourable intrafirm trade balances with low-tax countries. Additional evidence indicates that trade between U.S. affiliates in different foreign countries is also likely influenced by tax considerations. Sales by affiliates based in low-tax countries are greater than otherwise expected relative to sales by affiliates based in high-tax countries. Clausing is able to demonstrate how the actual transactions of a MNE with intrafirm trade between countries are affected by transfer pricing strategies.

Collins, Kemsley, and Lang (1996) study the relationship between foreign tax rates and profit margins of US based MNEs and find evidence of tax motivated income shifting, particularly income shifting into the United States from high-tax countries. In their study, Harris et al (1993) examine the total tax liabilities of US MNEs and find the MNEs with subsidiaries located in tax havens have significantly lower tax liabilities than would otherwise be expected. Echoing these conclusions, Bartelsman and Beetsma (2003), Clausing (2002), Eden (1998), Eden and Rodriguez (2006), Swenson (2001) and Tomohara (2004) each present evidence that firms manipulate transfer prices to raise their after-tax profits.

In their Canadian-focused study, Bernard and Genest-Laplante (1995) found evidence of manipulative transfer pricing within the Canadian oil industry. The authors performed a regression analysis on a large data set of all oil shipments into the US and Canada over a ten year period (1974 to 1984). The authors

look at individual company behaviour and perform a direct test which was designed to determine whether transfer prices paid for Canadian crude oil imports were, on average, statistically different from prices of third-party transactions when crude oil and transaction characteristics are controlled for. Adjusting for multicollinearity, the authors find overwhelming evidence that the six largest Canadian affiliates of multinational oil companies, responsible for 84% or more of all Canadian crude oil import transactions between 1974 and 1984, paid prices equal to or lower than prices of third-party transactions. The result is consistent with the theory as the tax rate in Canada was lower than that of the US over the sample period.

Arbitrage of tax rate differentials is not the only motivation behind manipulative transfer pricing for multinationals. Chan and Chow (1997) found that foreign MNEs were engaged in manipulative transfer pricing to shift profits out of China not for reasons to tax rate arbitrage, finding that Chinese tax rates were lower than elsewhere, rather they were motivated by reasons of avoiding foreign exchange risks and controls. Rangan and Lawrence (1999) find that foreign exchange rate affect intrafirm trade in their study of the response of US MNEs to exchange rate fluctuations. Kahn (1991) further points to reasons of capital flight to motivate manipulative transfer pricing.

Therefore, given a multinational vertically integrated firm, the problem facing regulators is the potential for transfer price manipulation and the large grey area that exists in determining the “correct” pricing of intermediate goods. Regulators in each country are concerned with cross-border profit shifting in terms of protecting their respective tax base. In developing and enforcing transfer pricing regulations, regulators must balance the competing objectives of maximizing social welfare, regulating monopoly prices in a given industry, creating a competitive domestic economy, as well as maximizing tax revenues. In order to gain a better understanding of the motivating factors behind the MNEs transfer prices, some literature on the economic models of transfer pricing is presented.

3. Economic Models of Transfer Pricing in the Literature

Most of the models developed in the literature on transfer pricing attempt to identify the optimal transfer pricing methodology for a given set of assumptions about the organization or evaluate the usefulness of alternative transfer pricing methods for a varying set of assumptions. These models contribute to the regulator's understanding of transfer pricing in a range of environments.

Hirshleifer (1956) is widely regarded as having presented the first model of transfer pricing and is credited with developing the standard model in this area of research. This model solves the resource allocation problem within a vertically integrated firm by setting the correct transfer price. The model assumes a decentralized firm consisting of a headquarters and two divisions: an upstream division which produces an intermediate good and supplies it to the downstream division, which makes the final good and sells it to the consumer. Headquarters must find a transfer price that maximizes the aggregate firm profit. The efficient level of internal trade is implemented by setting the transfer price equal to the opportunity cost of the intermediate product. Hirshleifer finds that if a competitive market exists for the intermediate good, profits are maximized by setting the transfer price equal to the market price of the good. If there is no market for the intermediate good, then the profit maximizing transfer price becomes equal to the marginal cost of the intermediate product. In this case, the aggregate profit is maximized by producing and selling the quantity that equates the marginal revenue with marginal cost. The headquarters of the integrated firm will evaluate the marginal cost of the selling division to determine the optimal quantity and will set a constant transfer price. Faced with this transfer price, the downstream division will determine its internal demand. The first order profit maximizing conditions are found for each division based on the set transfer price.

If a market for the intermediate good exists, then the production quantity of the intermediate product is not the same as the amount required in the production of the final good, as some of the intermediate product will be sold on the open market. The integrated firm will find the optimal quantity by equating its marginal cost and marginal revenue with the external market price.

i. Assumptions of the First-Best Solution Disputed

This model, which presents a first-best solution, has become the basis for most models of transfer pricing while attracting much criticism. Hirshleifer presents a model of standard cost-based transfer pricing, however his model does not explain why vertically integrated firms should rely on transfer pricing for coordinating the activities of each division. For example, if there is no market for the intermediate product, headquarters must know q^* to be able to set optimal transfer pricing. Gox and Schiller (2006) find that the model brings to question why the firm does not instruct the divisions to exchange the efficient quantities by granting free market access instead of achieving the same goal by means of transfer pricing. However, these authors do not consider the realities faced by the firm in protecting their “trade secrets” and other intellectual property by ensuring the goods are produced in house. Moreover, it is often the case where there is not a market for the highly specialized intermediate goods exchanged within a firm. Therefore, using an arm’s length, market based-price is not possible. If a perfectly competitive input market did exist, the pure economic rationale for a vertically integrated firm largely disappears.

Spulber (1989) presents a cost test for assessing the benefits of vertical integration. First, he finds the marginal cost of the downstream firm evaluated at the optimal input level. Efficient pricing of the intermediate input requires price to equal upstream marginal cost. If economies of scale exist upstream, marginal cost pricing will not cover upstream costs, complicating the choice between purchasing and producing inputs for the downstream firm. Spulber then finds that if technology is non-linked, then

decentralized production is efficient. In contrast, there may be returns to vertical integration of production. The model of vertical integration provides useful restrictions on the internal transfer pricing of intermediate inputs, because the transfer price cannot exceed average stand-alone costs of producing the input. Otherwise, non-integrated production of the input would appear desirable. Furthermore, he finds that the transfer price must be sufficient to cover the average internal cost of producing the intermediate input, which occurs under economies of sequence.

One of the major assumptions of Hirshleifer's model (among others) is that of perfect information. However, information asymmetry may, in itself, be a contributing factor to maintaining a decentralized structure. For example, Kaplan and Atkinson (1998 – in Vaysman 1996) show that each subsidiary of an integrated firm specializes in local knowledge, enabling it to best respond to local market conditions. Such specialization, while creating information asymmetries, is necessary because it would be too costly for the headquarters of a firm to maintain complete information. In this case, the first best solution is no longer attainable, as deriving the optimal transfer price requires complete knowledge of the cost functions.

Vaysman (1996) addresses the problem of transfer pricing under asymmetric information by incorporating effort of divisional managers into the model. Solving for the optimal transfer price uses a direct revelation mechanism such that headquarters can design individual compensation contracts for each manager and is able to direct its resource allocation centrally. Only the most productive manager provides the efficient level, while for all other types of managers, the effort level under asymmetric information is less than the first best solution because of privately held information about preferences and abilities, including shirking. Vaysman's cost-based model incorporates a reimbursement for the seller's cost of production as well as his personal cost of effort, plus a term capturing the agent's expected information

rent. The transfer pricing payment is not based on the actual effort level, rather on the target effort level, thus the model remains a standard cost-based model of transfer pricing.

Foster (1998) finds that while actual transfer pricing strategies within a firm will be feasible and easy to implement, ideal transfer pricing strategies are difficult to achieve in practice. Foster finds that there are many considerations in developing an intrafirm transfer pricing. Optimal transfer pricings will occur when the receiving division wants the same quantity of transfer product that the selling division wants to provide, however such internal coordination is difficult to achieve. Profit considerations, where the agreed-upon quantity of transfer product is the amount that maximizes overall corporate profit; and evaluation and fairness aspects, where divisional managers, being evaluated for promotion and bonuses based on divisional costs and profits; create perverse incentives whereby optimal transfer prices are rarely achieved. Concluding that ideal transfer-pricing policies are not easy to come by, and most firms struggle to find merely satisfactory ones, Foster finds that the internal governance structure of a profit maximizing multinational encounters substantial information requirements and disclosure problems. As a result, conflict often arises between the profit and evaluative fairness incentives, where, according to Eccles (1985, p.1) many managers within the firm regard the transfer pricing problem as 'unsolved or unsolvable'.

Schiller (1999) compares a traditional cost-based transfer pricing model, which depends of the volume of intrafirm trade with an alternative incentive scheme based on information on the buyer's revenue. He finds that if a division's performance is measured based on revenues, the firm's internal incentive system becomes based on cost-allocations. Here, costs are allocated among divisions and increase with the buying division's ability to bear the cost. This author shows that the cost-allocation method outperforms the traditional cost-based methods of determining a transfer price under circumstances of high revenue uncertainty or if controlling the manger's effort is a priority of the firm.

Williamson (1979) discusses the hold-up problem as it relates to transfer pricing. Consider a situation where the downstream division of a vertically integrated firm has the opportunity to invest in new technology which would reduce the variable cost of production. However, if the transfer price is equated to the marginal cost of production, the division has no incentive to make the investment because it would effectively be punished even though the overall profitability of the firm would increase. If the transfer price is based on full costs, the division is rewarded for its investment but the internal trade becomes distorted. A possible solution for this problem could be a two-part tariff with a marginal cost-based transfer price and an additional fixed fee for recovering the cost of investment. However, in reality, investments have limited outside value and are typically made under conditions of uncertainty such that future profitability of the investment is unknown. The beneficiary of the investment may renegotiate the initial terms of trade once the division has made the investment.

Holmstrom and Tirole (1991) and Edlin and Reichelstein (1995), among others, analyse the incentives provided by alternative transfer pricing mechanisms for undertaking specific division investment within firms. They find that all divisions will under invest because the return on this investment must be split between the divisions via the transfer pricing system, whereas the investment costs are exclusively born by the investors. There have been several proposed solutions to this problem by setting a unique default solution during subsequent rounds of renegotiation, all resulting in first-best solutions.

Specifically, Holmstrom and Tirole (1991) identify four organizational forms for a firm, which the authors then link to different transfer pricing policies. Holmstrom and Tirole predict that the greater the centralization of control in the firm, the more efficient the level of specific investment will be. The authors find that hierarchical coordination comes at the expense of performance incentives provided by decentralization. In their model, hierarchical coordination induces optimal asset specialization prior to

trade. Similar conclusions are drawn in Shelanski (2004), where hierarchy plays a role after investments are sunk by more efficiently adapting the parties' reaction functions to changed circumstances than the parties would if let to renegotiate autonomously. Shelanski focuses on pricing within a single firm and uses transaction-level data to examine the choice between administered and negotiated transfer pricing (as discussed above), and finds support to the predictions that transaction-specific investment and quality requirements increase the likelihood that the firm's headquarters will centrally administer the pricing of transactions between divisions.

These first-best solutions are preferred by regulators, as they often lead to maximal levels of social welfare. However, the ability of a regulator to both set and enforce marginal cost pricing of intermediate goods remains difficult, if not impossible, given the asymmetric information it faces. Not only is there limited access to complete information within the vertically integrated firm, regulators lack the necessary information to evaluate first-best transfer prices. In the case of a publically held MNE, reporting requirements are such that the aggregate financial statements must be audited and made available to the public, however the financial information of each subsidiary is rarely presented. Moreover, the rational firm presents only the minimum required financial information to each of the domestic tax authorities, with additional data provided only upon specific request, if ever. Thus regulators do not have full information upon which to base their analysis. Given that MNE's face incentives and constraints beyond those included in standard cost-based models of transfer pricing, "correct" transfer prices become increasingly ambiguous. Some of the second-best models of transfer pricing are discussed below.

ii. Second-Best Models of Transfer Pricing

Sahay (2003), Lengsfeld and Schiller (2005) and Pfeiffer, Schiller and Wagner (2011) present models of transfer pricing based on the actual cost of production – including both the variable costs of production

and a mark-up to cover a part of the fixed costs. Sahay (2003) examines various types of full cost mark-ups and finds that additive mark-ups provide superior investment incentives to multiplicative mark-ups. The firm faces a trade-off between providing the right incentives for specific investments and intrafirm trade, and the optimal mark-up balances the cost of inefficient trade against the cost of under-investment. This results in a second-best solution. Moreover, this author finds that the cost of the trade distortion arising from providing incentives in the form of additive mark-ups is often higher than the benefits from the seller's investment incentives. Pfeiffer, Schiller and Wagner (2011) find that transfer pricing serves a dual purpose, whereby it provides incentives for both value-enhancing investment decisions and guides intrafirm trade under asymmetric cost information.

Eccles (1985) finds that firms generally rely on one of two types of transfer pricing policies which are sub-optimal (as second best solutions), but are simple and rely on available data. Cost-based methods of transfer pricing build the transfer price from supplying division variable or full unit cost. The particular formula may be based on actual cost or standard cost, and may or may not add a fixed mark-up to match the company's current or target return on investment. Market-based methods of transfer pricing start from an external price of transactions comparable to the internal transfers, perhaps discounted for estimated selling, marketing and administrative expenses not incurred on internal transactions. Yunker (1982) presents a survey of multinational corporation transfer-pricing policies and found that market-based methods were by far the most widely used, followed by mark-ups on standard full and actual full unit cost. Yunker found that a third policy option is also common, whereby divisional managers negotiate the transfer price.

4. Cross-Border Transfer Pricing

Each of the models discussed above present the transfer pricing problem of a vertically integrated firm within the boundaries of a single country, where national laws apply equally to all subsidiaries. However, many authors discuss the further challenges of cross-border transfer pricing, where semi-autonomous subsidiaries of an MNE exist in different nations, subject to different regulations and tax rates. A MNE maximizes post-tax profits by manipulating the transfer price to reduce the burden of differential taxation or regulation.

For example, Horst (1971) presented a simple model to show how a MNE chooses a transfer price in order to maximize profit, after-tax. Horst's model analyzes the choices of a monopolistic firm simultaneously selling in two countries, where the firm's earnings are equal to its after-tax profits in the two countries plus a term to demonstrate the impact of intrafirm trade. This generates a situation in which a firm chooses either the lowest or highest transfer price possible, depending on a comparison of the relative differential in tax rates between the importing and exporting countries with the tariff rate. Copithorne (1971), Eden (1985) and Diewert (1985) have also demonstrated that similar transfer pricing of an MNE can affect intrafirm trade.

National governments are both defined and limited by their borders, while a MNE is defined by its activities across national borders. By definition, regulating a MNE creates inter-jurisdictional challenges for national regulators. The MNE faces risks of the same dollar of their global profit being taxed by more than one tax authority, where governments are challenged to determine which government has the right to tax the MNE's profits. A division of a vertically integrated firm located in a high-tax jurisdiction can reduce its accounting profits (and taxes paid) if other divisions overcharge it for supplies and/or underpay

it for purchases. The challenge to regulators, then, is to develop a model or strategy which incorporates these incentives when it comes to international transfer pricing.

Buus and Brada (2008) review Hirshleifer's model where the optimal transfer price should be equal to the marginal cost of the supplying company and set by centralized decision makers of a vertically integrated MNE. Rather, this paper argues that the optimal transfer price should be set equal to the average cost of the supplying division plus part (or whole) economic profit of the MNE, independent of the market conditions (for either the intermediate good or final product). Similar to Spulber (1989), the authors find that setting transfer price on the level of marginal cost is inefficient and would eventually lead to the loss of the MNE's ability to compete against its rivals. Theory and practice are quite different when it comes to determining the optimal transfer price such that marginal cost based pricing can only be employed under conditions which in reality are never met.

Prusa (1990) presents an incentive compatibility approach to the cross-border transfer pricing problem. He finds that if the MNE's transfer price is not regulated, it will most certainly manipulate the transfer price in order to maximize net global profit. While current tax regimes impose penalties in order to reduce manipulative transfer pricing, Prusa incorporates the informational asymmetries that encourage misreports in his incentive compatibility model, such that the optimal regulatory policy has self-enforcing properties so the MNE will find it profit maximizing to report its true costs. High-cost firms are compensated with high prices, but overly high reports are punished with low production quotas. Building on Diewert's (1985) model, this approach provides firms with incentives to truthfully reveal its costs, while recognizing that the government cannot regulate all the firm's activities and uses only those instruments that the host government has an ability to control. Gresik and Nelson (1994) extend this

analysis to show that regulations need to induce honest transfer pricing because the government host of a MNE division is better off.

Janeba (1995) and Konan (1997) (in Eden 1998) address corporate tax competition in the presence of multinational firms. They examine the optimal taxation of corporate profits when governments can choose both the rate and the base of the corporation tax, but are constrained by a requirement to collect a given amount of corporate tax revenue. A standard two-period model of investment and international mobility of capital is employed, with the conclusion being that when foreign direct investment is permitted and firms can shift profits between countries through transfer pricing, it will be optimal for each government to distort investment decisions of the firms in order to reduce tax rates faced by companies and limit the incentive for profit shifting. This result was shown to be independent of the shadow price of public funds, which may be below the marginal utility of private income when a source-based corporation tax falls partly on foreign owners of the domestic firm. Moreover, Gordon and MacKie-Mason (1995) model the trade-off for a home and a host government of employing either a corporation tax or a tax on wages. They find that an increase in the corporation tax leads to international income shifting via transfer pricing while a positive tax differential between the tax rates on wages and profits will induce domestic income shifting from labour income to profit income.

5. Regulation and Transfer Pricing: Objectives of the Regulator

The vast majority of transfer pricing literature is focused on the MNE's optimal transfer pricing behaviour without discussing how a government might regulate the MNE in order to induce welfare increasing transfer pricing. This being said, there are three major areas of concern of the regulator (Pauwels and Weverbergh, 2005). First, it must determine which instruments it has under its control. Second, it must determine the market structure in which the multinational firm is operating (a competitive market or monopolist). Lastly, the regulator must decide which objective function it will seek to maximize, deciding whether it is interested in social welfare or in tax revenue.

Bond and Gresik (1996) assume that the regulator has no control over transfer prices. Rather, they believe that based on the arm's length principle, transfer prices are equal to existing prices on the world market. If this is not the case, it is because there is asymmetric information which does not allow any direct control of transfer prices by governments. Mansori and Weichenrieder (2001) and Raimondos-Moller and Scharf (2002) hold the opposing view, whereby they argue that regulators have direct control of transfer prices, such that each government uses an accounting price which determines the taxable profit in all countries involved. In this case, double taxation may occur, whereby the firm's profits may be taxed more than once in different jurisdictions.

Pauwels and Weverbergh (2005) assume that governments and multinational firms operate in an international context where transfer prices are regulated according to the standard OECD guidelines, which aim to limit tax evasion and to avoid double taxation¹. Domestic tax authorities require the vertically integrated company to demonstrate that the transfer price is applied within the arm's length

¹ Discussed further in the following section

range (that is, with in a range of results established by companies operating at arm's length, as is discussed further in the following sections) and therefore leads to an acceptable taxable profit base in each of the countries concerned. In this framework, regulators can choose to apply either a profit tax or an import (export). tariff. Import tariffs are based on quantities sold and thus have a direct impact on the marginal cost of the firm, affecting the price-quantity decision of the monopolist. The model presented by Pauwels and Weverbergh assumes only profit taxes.

The authors define social welfare as the sum of consumer surplus, producer surplus and tax revenue and note that maximization in the traditional sense may lead to zero tax revenue. A multinational monopoly is analysed, which fixes the transfer price between the limits set by the regulators and also determines the final consumer price. The regulators control the boundaries of the arm's length interval as well as the tax rates on profits. If the two governments cooperate to maximize world welfare, they should set the price charged to the consumer in the distributing country as close as possible to the cost. The "golden rule" established by the authors implies that world welfare will be maximal if the tax rate in the retailing country sufficiently exceeds that in the manufacturing country. This will drive the retail price down to the transfer price so that profits in the retailing country disappear. If the tax rate in the retailing country exceeds that in the manufacturing country, and if tax rates cannot be manipulated by the regulator, then the upper bound of the transfer price interval should be adjusted such that the equality between retail price and transfer price is obtained at the lowest possible transfer price. Profits in the retailing country will disappear.

Under a non-cooperative solution, each government maximizes domestic social welfare; the authors find that the monopolist will always choose the lowest acceptable price in the manufacturing country and the highest acceptable price in the retailing country. The authors then show that the governments of both

countries can manipulate their tax rates such that the monopolist will decrease his retail price until it is equal to the upper bound of the transfer price interval. This realises a clear welfare gain. A similar outcome can be obtained if the two countries appropriately manipulate the transfer price interval for given tax rates. They conclude that, under these circumstances, the golden rule also applies when the countries do not cooperate as long as the arm's length principle applies.

Following this analysis, Bond and Gresik (1996) present the problem of optimal regulation of an MNE under incomplete information about a firm's cost function by multiple governments. The authors find that when a government imposes cost-based taxes or regulations on a multinational with private cost information, it may initiate countervailing regulations by another government where a subsidiary of the MNE operates. Using a common agency approach with adverse selection, the authors focus on the game played by competing governments and depict that non-cooperative behaviour of the multiple governments not only reduces the total welfare of each nation, but also reduces firm profits. The governments (the principals) choose trade taxes to regulate an MNE (the agent) with private cost information. The article then examines how the relative weights the home country government places on tax revenues and how profits of the MNE affect the efficiency of the regulations. Comparing the welfare levels of the governments and the firm under non-cooperative regulation with those obtained when the governments cooperate in setting regulations the authors arrive at an interesting conclusion: When there is complete cooperation between governments, the governments will share information about the firm's costs but still prefer to set their individual trade taxes non-cooperatively. A government will still prefer to exclude his rival government from tax revenues by creating incentives for a firm to operate (and pay taxes) within its own jurisdiction.

Schjelderup and Sorgard (1997) incorporate two aspects of MNE behaviour absent from previous models of transfer pricing: strategic interaction with other firms in local markets and the delegation of authority to national affiliates concerning the price or quantity decisions. They find that the existence of a local rival in the importing country implies that the transfer price should deviate from the marginal costs of the exporting division, even in the absence of taxes or tariffs. They conclude that the optimal transfer price generally depends on the nature of competition. Under Cournot competition the transfer price should be less than the marginal costs of the exporting affiliate. For example, setting a low transfer price to an importing division will cause the importing division to become a low cost firm that behaves aggressively in the market, by selling a large quantity. Such aggressive behaviour encourages its rival to set a lower quantity, which benefits the MNE. This result is reversed under Bertrand competition. They conclude that any introduction of tax policies by the regulator will simply reinforce or dampen this pricing strategy.

Concern about manipulative transfer pricing by MNEs has led national tax authorities to devise increasingly sophisticated regulations. However, Kant (1990) analyzes the effects of transfer pricing on changes in intra-firm trade and of partial ownership of a subsidiary by a MNE, on government revenues and arrives at some unexpected conclusions. He finds that when the importing country has a low tax rate, a low transfer price can actually increase the exporting country's total revenue when the tax rate is higher than that of the importing country; while a higher transfer price increases the importing country's total revenue irrespective of the relative magnitudes of the two country's tax rates. Kant (1995) broadens the model to consider the impact of deferring foreign profits on intrafirm trade, and finds that intrafirm exports originate in the country with the higher marginal cost. Thus, contrary to Horst (1971), one country's gain of tax revenue may not be at the direct expense of the other country, implying that the two countries need not have their transfer price bounds in opposite directions. Kant (1990) further finds that transfer pricing can actually increase the global taxes paid by the MNE. While much of the literature

considers transfer price to be almost synonymous with tax avoidance, Kant shows that transfer pricing can increase overall tax burden on the MNE. He concludes by stating “to form value judgements on transfer pricing one should look at its effects on total economic welfare rather than on tax revenue alone” (Kant, 1990, p.136)

While the majority of models present transfer pricing as a problem of tax revenue maximization by the relative governments, very different results are attained under models which consider social welfare.

6. Transfer Pricing in Practice

Modelling the economics of transfer pricing and optimization of the regulators problem requires a set of assumptions which create a simplified reality. The literature presents several models each providing insight to the regulation of cross-border transfer pricing, however challenges persist because of the complex nature of transfer pricing in today's multinational enterprises. Often, MNE's perform highly complex, highly integrated functions under imperfect information. Regulators do not have access to the same information nor do they have a perfect understanding of the business activities performed. Moreover, regulators are challenged to determine how the common costs of the MNE should be allocated, given that national borders and regulations distort this allocation and increase transactions costs. While sharing common resources are a source of efficiency and competitive advantage of a vertically integrated firm, they also pose practical problems to regulators who must disentangle the MNE's costs and income for tax purposes. Additionally, regulators must value the intra-firm transfer of goods and services that are highly integrated and exploitive of economies of scale otherwise not available between competitive firms. This means that the transfer prices of traded goods, services and intangible properties within the various units of the MNE are simply accounting prices set by the necessity of national tax regulations. National regulators fear that the MNE will abuse its transfer prices, especially those of complex transactions, to shift profits into low tax jurisdictions.

i. MNEs and Transfer Pricing in Practice

Cravens (1997) surveyed 82 US-based multinationals on the objectives of their international transfer pricing. Specifically, the author asked survey respondents to rank the top three objectives for their firm's transfer pricing strategy. He found that the highest ranked goal was managing the tax global burden (28%), followed by maintaining a globally competitive position (17%). Interestingly, motivations were

almost equally split between internal objectives (for example, managerial and operational) and external objectives (such as government, other external). Tang (2002) performed a similar survey of 86 MNEs a year later and found results similar to Cravens: 42% of respondents stated that maximizing consolidated after-tax profits was their most important transfer-pricing objective. Twenty-four per cent stated that determining the performance of domestic and foreign divisions was their most important objective. Finally, 11% responded with global by tax minimization. Tong concluded that government regulations and corporate profits were the two overriding considerations.

Cools, Emmanuel and Jorissen (2008) examined the effect of complying with transfer pricing regulations on the design and application of management control systems. The authors' focus was on a single MNE that used the same transfer prices for regulatory compliance and for internal management purposes. The authors conclude that changes to management control systems would not be feasible without an appreciation of the transfer pricing compliance process. Evidence from surveys described above also demonstrates that most firms delegate responsibility for transfer pricing decisions to the parent, which suggests that where there are multiple conflicting objectives the MNE moves decision making to the headquarters level. Tang (2002), for example, found that 69% of MNE respondents allocated the responsibility for setting transfer prices to top executives of the parent company and almost one-third of these decisions were made without prior consultation with divisional executives. Cools, Emmanuel and Jorissen found that only 18% of transfer prices were set exclusively by divisional managers. These results were similar to those Tang found in similar previous surveys he conducted.

Elliott and Emmanuel (2000) provide justification for centralizing transfer pricing decision making. Through interviews with 12 MNEs based in the UK, the authors found that: "It proved impossible for our participants to describe a single intra-group transaction in isolation from the group's operations as a

whole” (2000, p. 218). In almost all instances, participants commented on the commercial reality required the vertical integration and inter-connectedness of the parts of the group as the fundamental reason for their difficulty in isolating a specific transaction. The authors attributed this inseparability to market forces (the market was global or displayed economies of sequence such as around the clock global trading) and vertical integration. As a result, the decision to buy or sell in external markets, as well as setting transfer prices, was determined centrally and considered an important strategic decision. However, the authors observed that centrally determined transfer prices were sometimes adjusted for local market conditions, such as subsidiaries in start-up situations, or for fiscal reasons, for example to take advantage of tax holidays.

Ernst & Young publishes a transfer pricing survey biannually which demonstrates that transfer pricing is treated as a strategic decision for the MNE over the past decade. Their 2001 survey showed that only 29% of parent firms and 35% of subsidiaries saw transfer pricing as part of strategic planning; 28% of parents and 20% of subsidiaries determined transfer prices after strategic decisions were made and an even larger percent (39% of parents and 38% of subsidiaries). treated transfer pricing as a tax compliance issue. The 2010 report argues that MNEs view transfer pricing not only as their top international tax concern, but also strategically important for the MNE as a whole.

ii. Regulators and Transfer Pricing in Practice

The global reach of an MNE threatens the social, economic and political goals of national governments. National regulators and MNEs are not the only stakeholders with concerns about transfer pricing. Non-governmental organizations have begun to speak out against corporate fraud, focusing on abusive financial behaviours and transfer price manipulation (Tax Justice Network, 2008; Christian Aid, 2009).

For example, the World Council of Churches (2000, section III) stated that “developing countries annually lose millions, perhaps billions, of dollars because of transfer pricing”. Christian Aid has published reports that describe transfer pricing as “scams,” “tax dodging,” “secret deals,” which are used to “rob the poor to keep the rich tax-free” depriving income from developing countries (Christian Aid, 2009). Sikka and Willmott (2010) extend these arguments through their examination of the ‘dark side’ of transfer pricing, which is presented as a vehicle employed by corporations to avoid taxes and facilitate capital flight. The authors focus on the politics of transfer pricing and provide multiple examples of abusive and manipulative transfer pricing.

Public tolerance for additional oversight by regulators has increased since Enron and again with the fall out of the global financial crisis. For example, the UN Global Compact presents a set of norms to govern firm behaviour in areas of human rights, labour standards, environment protection and corruption. The UN Global Compact is designed to define and formalize a “standard of what constitutes global corporate citizenship” (Kell, 2005, p. 78). More surprising, however, is the OECD’s (2012) series of new reports on Principles of Corporate Governance which have been adopted by all member countries. This series of reports indicates the obligations and responsibility of a MNE’s board of directors to minority shareholders and as corporate citizens. Similar to the UN Global Compact, these reports include environmental issues, human rights, labour standards, corruption and *transfer pricing*. Transfer pricing has become a distinct focus area of good corporate governance. Manipulative transfer pricing was also included in the Wolfsberg Group’s (2009) principles to guide the banks involved in providing trade finance. The Wolfsberg Principles outline seven types of mispricing that can facilitate money laundering: over/under invoicing, multiple invoicing, short shipping, over shipping, deliberate obfuscation of the type of goods and phantom shipping. While these principles deal with issues of fraud, they certainly bring manipulative transfer pricing to the public’s attention.

Regulators must balance the competing goals of facilitating trade, investment and national economic growth with raising revenue through corporate income taxes. The OECD has developed an international framework for transfer pricing, based on the consensus of its member states. It has created the norms, rules and procedures for taxing MNEs through its Model Tax Conventions, used as a basis of bilateral tax treaties between countries, and the *Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations* which was recently updated in August 2010. The solution that tax authorities in OECD member states have adopted to reduce the probability of transfer price manipulation is to develop specific transfer pricing regulations as part of the corporate income tax code. These regulations are based on the concept of the arm's length principle, which requires that two related parties set the same transfer price for an intrafirm transaction as two unrelated parties would have set if they had been engaged in the same or similar transaction under the same or similar circumstances (OECD, 2010). This means that each division of the MNE is treated as a separate entity for tax purposes, in OECD member countries and the arm's length price is reflective of the price that two unrelated companies would have reached through bargaining in the competitive market. According to Eden (1998) there has been a growing uniformity in acceptable transfer pricing methods across OECD countries since the mid-1990s and today, more than 50 governments regulate transfer prices using a version of the OECD guidelines (Eden and Smith, 2011).

The OECD Guidelines provide guidance on the application of the arm's length principle for the valuation of cross-border transactions between related parties. The framework helps regulators to ensure that the taxable profits of MNEs are not artificially shifted out of their jurisdiction while limiting the risks of double taxation of the MNE's profits. Under these OECD Guidelines, a national government has the right to tax business profits earned in that country. Thus, each government taxes the worldwide income of its residents (which includes corporations), and the domestic source income of its non-residents. The OECD Guidelines further set out the acceptable methods of determining the arm's length price for national

regulators. These methods include both transactional methods (where the regulator develops the transfer price based on comparable products or functions). and profit-based methods, where the regulator compares the profitability of similar firms.

The OECD has recognized that there is no single “correct” transfer price, but rather a range of acceptable solutions. As a result, national regulators often arrive at different proposals for the correct transfer price (The proposed transfer prices by each tax authority often divergent from that proposed by the MNE.) Such disputes result in double taxation of the MNE, and are resolved either through bilateral negotiations between the foreign tax authorities or can be taken through one country’s national court system.

7. The Arm's Length Principle

The international consensus to regulating transfer pricing is based on the arm's length principle, such that where conditions between related enterprises are different from those between independent enterprises, the profits may be included in the profits of that domestic enterprise and taxed accordingly by that national government (OECD 2010). Specifically, the arm's length principle is described in Article 9(1) of the OECD Model Treaty:

“Where [...] conditions are made or imposed between two enterprises in their commercial or financial relations which differ from those which would be made between independent enterprises, then any profits which would, but for those conditions, have accrued to one of the enterprises, may be included in the profits of the enterprise and taxed accordingly.”

Simply stated, the arm's length principle is that transactions between related entities should be conducted as though the transactions were between parties operating at arm's length. Regulators have agreed on this principle and national tax authorities follow the OECD Guidelines to evaluate and implement this regime based on a comparison of prices or margins between non-arm's length parties on cross border transactions; or prices or margins on similar transactions between arm's length parties. Article 9(2) stipulates that if a state effectively does apply the arm's length principle, the other state should make an appropriate adjustment (the so-called corresponding adjustment). The relevance of Article 9(2) is that it emphasizes the fundamentally bilateral (or multilateral) character of the arm's length principle.

The OECD Guidelines (2010) explain that the reference to *independent enterprises in similar circumstances*, inevitably introduces the so-called separate entity approach. This approach concentrates attention on the nature of the dealings (that is, the transactions) between related enterprises. In this respect, it is significant that the glossary in the Guidelines defines the analytical fundamentals (functional analysis and comparability analysis) as relating to “transactions.”

The international consensus among national regulators then is to focus on individual transactions relating to intrafirm trade. In this view, and as articulated by the OECD Guidelines, as long as transactions between independent parties are a representative phenomenon in the economy (particular to a specific country, industry or market), the application of the arm's length principle can concentrate on comparisons at that level. The OECD Guidelines recommend a total of five methods to establish transfer prices. Namely, there are three traditional transaction methods (as defined by the OECD Guidelines): the comparable uncontrolled price (CUP), resale minus, and cost-plus methods. The traditional transaction methods serve to set and agree on prices, in advance of events, as would occur between third parties.

The final two transfer pricing methods recommended by the OECD Guidelines are termed the transactional profit methods and considered inferior to the traditional transaction methods, to be used only in circumstances of last resort (OECD 2010). The transactional profit methods are the profit split method and the transaction net margin method (TNMM). Respectively, these methods are defined as a “method whereby it is established what the [...] profit is [...], that should be divided” and a “method that analyses the net profit” (OECD 2010, para 1.6). This means that they are supposed to be used *after* the events have taken place. These methods are not focused on setting prices, as would occur in a contract between third parties, rather are focused on analysing the outcome of transactions and at an aggregated level which

means at the level of the operations of the entire firm over a period of time. Individual transactions are no longer the sole focus of the analysis.

As is discussed above, transfer pricing has presented a challenge to both MNEs and national regulators for a long time (the first versions of the OECD Guidelines was published in 1979), as MNEs are increasingly dominating global markets. As a result, it is often difficult, if not impossible, to find relevant arm's length transaction to establish an intrafirm transfer price. While the transactional profit methods are less precise in determining an "arm's length price," they are certainly used more often by both MNEs and national taxing authorities. Fris (2003) argues that because of the ambiguity that exists in relying on the arm's length principle as the basis of establishing transfer prices, the OECD Guidelines sacrifice a carrying element of the arm's length principle, (that parties define the price in advance of their dealings and not afterwards), in exchange for an emphasis on an element that is only a partial expression of the arm's length principle, the transactional focus. This is because a transaction is an expression of a relationship between parties, but not necessarily the only relationship that exists. Independent parties define the terms and conditions (and price) for their dealings, against the background of who "in their commercial and financial relations" (Art. 9 of the OECD Model Treaty) is responsible for which of the actual developments and which of the risks involved. As time passes and events occur, reality will always be different from what can be seen beforehand because of assumptions underlying expectations, forecasts and budgets (Fris 2003). The outcomes for each of the parties involved depend on which party has to bear the consequences of these deviations from the assumptions. The dynamics of this allocation process are driven by the terms and conditions agreed on beforehand, expressed in particular in the pricing *system* (terms and conditions) applied.

The OECD Guidelines specify that transfer pricing is not an exact science. For the reasons discussed above, among others, establishing and analyzing transfer prices will lead to disputes both between MNEs and national regulators, and between countries themselves. In fact, according to the most recent OECD statistics, the number of open mutual agreement procedures – transfer pricing disputes between two or more national taxing authorities for the right to tax the same income – was 3,328 or a 41.5% increase as compared to 2006. The average time to settle a dispute was well over two years (27.30 months) (OECD, 2011). At the same time, countries are continually finding new ways to work together to avoid transfer pricing manipulation. For example, many OECD member countries have begun to perform joint audits of a single MNE, whereby taxing authorities work together to audit the transfer pricing policies of an MNE. More countries are sharing information and regulators have established the Joint International Tax Shelter Information Centre (JITSIC). to coordinate a multi-country response to tax avoidance to include transfer pricing manipulation. However, despite international efforts, transfer pricing disputes continue to arise both between MNEs and taxing authorities and among national regulators largely because of the ambiguity created in applying the arm's length principle.

i. The Arm's Length Principle in Practice: Canadian Experience

Canada, as a member of the OECD, has adopted the OECD Guidelines as the basis for determining transfer prices in its national legislation. In particular, the OECD Guidelines are referenced in section 247 of the Canadian *Income Tax Act* and administrative guidance regarding the application of the OECD Guidelines can be found in Information Circular 87-2R *International Transfer Pricing*. As a result, Canadian regulators have adopted the arm's length principle as the basis of national regulations around transfer pricing and, as discussed above, have experienced some challenges in its application.

An equitable application of the arm's length principle in the absence of relevant transactional comparables requires an adequate identification of the facts and circumstances under which parties operate, given that the OECD Guidelines specify that a similarity of those circumstances is a necessary starting point for comparing the pricing practices of related parties with those of unrelated parties. However, even the determination of the similarity in facts and circumstances is not an exact science. For example, there have been a number of recent transfer pricing cases before the courts in Canada in which establishing the correct "facts and circumstances" are central to the litigation. Specifically, decisions, in three recent court cases, *GlaxoSmithKline v. The Queen*² (Glaxo), *General Electric Capital Canada Inc. v. The Queen*³ (GE Capital) and *Alberta Printed Circuits Ltd v. The Queen*⁴ (APCL) underscore an increasing emphasis on the facts and circumstances in determining arm's length transfer pricing. Each case is described below.

The Glaxo case dealt with the Canadian subsidiary's purchase of the active ingredient, (ranitidine), from a related firm based in Switzerland as an input for the production and sale of Zantac. During this period, the price paid by Glaxo Canada for the active ingredient was several multiples of that paid by Canadian generic manufacturers. Glaxo argued that the complimentary licensing agreement, with the UK parent Company, allowing it to sell the brand-name product, Zantac, prevented the purchase of the active ingredient at a price similar to that paid by the generic manufacturers. The Canada Revenue Agency (CRA) took the view that the purchase of active ingredient should be considered separately from the licensing agreement and the arm's length price would have been similar to the price paid by the generic manufacturers. The Tax Court of Canada (TCC) agreed with the CRA and ruled in favour of the CRA's

² *GlaxoSmithKline Inc v. The Queen* 2008 TCC 324, 2010 FCA 201 and 2011 16145 (SCC)

³ *General Electric Capital Canada Inc. v. The Queen* 2009 TCC 246 and 2010 FCA 344

⁴ *Alberta Printed Circuits Ltd. v. The Queen* 2011 TCC 232

transfer pricing adjustment, which increased Glaxo Canada's income (and taxes owing) in Canada. Canada's Federal Court of Appeal (FCA) subsequently concluded that the price of the active ingredient should take into account all relevant circumstances which an arm's length purchaser would have had to consider and the case was referred back to the TCC by the FCA for redetermination. The Supreme Court of Canada (SCC) recently heard the case and a decision is expected in the later months of 2012.

In the GE Capital case, the TCC ruled in favour of GE allowing a deduction of a guarantee fee paid to its US parent for its 1996 through 2000 taxation years. During the years in question GE Capital borrowed funds from arm's length parties, with a guarantee from its US parent. For this support, GE Canada was charged a fee equivalent to 1% of the outstanding debt. The CRA denied the expense and argued that the parent corporation would have supported GE Canada regardless of the explicit fee. GE Capital argued that in the absence of the support, its standalone credit rating would have been much lower and therefore the interest rate charged on its debt would have been commensurately higher.

The TCC, while vacating the CRA's reassessment, confirmed the CRA's rationale (resulting in a win-win or lose-lose for both GE Capital and the Crown). In making its decision the court noted that absent an explicit guarantee, GE Capital's credit rating (stand-alone or accounting for implicit support), would have been substantially lower and the rate at which the debt would have been issued would have been higher than the 1% fee charged. Therefore the TCC concluded that the guarantee fee was reasonable. The decision was appealed to the FCA, where the court again decided in favour of GE Capital, but of particular significance, supported the Crown on the notion of implicit support. Specifically, the court held that "The task in any given case is to ascertain the price that would have been paid in the same circumstances if the parties had been dealing at arm's length. This involves taking into account all the

circumstances which bear on the price whether they arise from the relationship or otherwise” (GE Capital, 2010 FCA 344, para. 54).

In the APCL case, at issue was the transfer price paid to APCI Barbados, a related party, for the provision of set-up and other services in the production of integrated circuit boards. The fixed fee paid to APCI Barbados was the same as the fixed fee charged by APCL to arm’s length customers. The CRA argued that there was duplication between the set-up and square inch fee and that the transfer prices should have been supported by testing APCI Barbados with the use of a transactional net margin method (TNMM). APCL argued that because the set-up fee could be segregated on invoices to third party customers and was the same as the fee charged by APCI Barbados, it represented a comparable uncontrolled price (CUP) and demonstrated that the transfer price for set-up activities was correct. APCL further corroborated its transfer prices with the TNMM, but treated APCL as the tested party. In respect of the fixed fee, the TCC confirmed APCL’s transfer prices and approach: namely, to unbundle its transactions with third parties for purposes of extracting internal CUPs.

As previously articulated in the Glaxo and similarly implied in the GE Capital case the decision in this case reaffirms the need to properly evaluate the facts and circumstances. In addition, the decision emphasizes the obligation of the CRA to make efforts to adjust for the circumstances in evaluating proposed CUPs. In light of these cases, it would be reasonable to expect that an increased focus needs to be placed on evaluating the impact of the “facts and circumstances” on the intercompany transfer prices of MNEs. While there is often little debate on what the actual facts are, there can be highly disparate views on their interpretation and weighting. These can, in turn, lead to highly divergent evaluations of the arm’s length transfer price by both the MNE and the national regulator.

8. An Alternative Approach: Formulary Apportionment

The OECD has created a dynamic, yet imprecise regime for taxing multinationals. As a result, the arm's length approach it endorses has received a great deal of criticism, both in the literature and by some MNEs and national governments. A basic criticism of the model is that a separate accounting approach is inappropriate because of the difficulties involved in separating the contribution each division makes within an integrated MNE group. Moreover, the OECD's proposed methods are often difficult to apply in practice and can be easily abused. Vernon (1998) argues that in practice, the profit allocated to each country by an MNE is largely the result of the debating skills of each country's accountants, economists and lawyers. Such problems arise because each tax authority attempts to place an exact figure on a concept that does not exist – the “true” profits of an MNE that arise within national borders.

The alternative solution that is proposed is the taxation of MNEs on a worldwide consolidated basis using a method of unitary taxation, called global formulary apportionment. Under this approach, each affiliate's share of certain factors (such as assets, sales, or employment) as a percentage of worldwide MNE amount of these factors would be multiplied by the total worldwide income. According to Eden (1998), this approach requires three steps: determining the boundaries of the MNE for tax purposes, accurately estimating the MNE's global profits and establishing the formula for allocating these profits. This approach is supported by the Brookings Institute in the United States and is used by Canadian provinces and some US states to allocate sub-federal corporate tax revenues. Clausing and Avi-Yonah (2007) advocate for the use of formulary apportionment, based on arguments of simplicity, to remove tax incentives for profit-shifting. While reducing the complexity and administrative burden of the current international tax regime, they find that the proposed system is better suited to an integrated world economy. The OECD does not support this approach, which it considers arbitrary (OECD 2010)

Formulary apportionment, while simplistic in theory, presents challenges of implementation and

enforcement, as there is no clear method for determining the share of profits between governments; a problem likely to induce conflict.

9. Conclusion

Concern about inappropriate taxes (too much and particularly too little) paid by the MNE has led national tax authorities to devise increasingly sophisticated national tax systems to regulate transfer pricing. Moreover, disputes between multiple governments over taxes paid by MNEs have led governments to reach out to international institutions to develop a response, which currently includes a series of bilateral agreements guided by a common set of guidelines. However, as transactions within an MNE become more complex and MNEs more integrated, the current system based on the arm's length standard will become increasingly difficult to apply. As seen in Canada, disputes over the facts and circumstances of a particular intrafirm transaction have led to litigation in many instances, further demonstrating the difficulties inherent with the adopted approach to transfer pricing: the arm's length principle.

Vertical integration enables a MNE to become more efficient within the framework of a globalized economy. It allows the MNE to set prices throughout its value chain and effectively deal with some challenges previously presented by market failures – such as information asymmetries in negotiating prices with third parties. Given the rapid change in the global competitive environment, trends towards increased integration and greater efficiency gains will only intensify the challenges of regulating transfer prices, which traditionally dealt with the exchange of a well-defined intermediate good within a given firm. The circumstances under which MNEs operate are different from that of the market, as intermediate goods are rarely well-defined and similar transactions often simply do not exist. The rise of E-businesses, continual technological change, and 24-hour global trading are only some factors that national regulators will need to respond to. With additional pressures on regulators to increase tax revenues since the global financial and economic crisis, transfer pricing regulation is under scrutiny. Governments are acutely aware of the MNE's ability to price the internal transfer of goods to shift its profits from one country to another, effectively minimizing its overall tax burden.

This paper has provided a survey of some of the literature of transfer pricing. While outside the scope of this paper, additional research is required to better understand the challenges of pricing the transfer or ill-defined goods and services within ever increasing integration of the MNE. Specifically, regulators may want to consider how the facts and circumstances surrounding the relationship between the subsidiaries of the firm exist, as opposed to limiting their analysis to the facts and circumstances of a given intrafirm transaction. Models which incorporate some of these challenges will be of great assistance to national regulators, who are challenged to navigate transfer pricing in an increasingly global environment. In particular, models of formulary apportionment should be explored in the new literature, with attention given to the challenges faced in its application. New models of transfer pricing will enable national regulators to better understand the incentives faced by MNEs today and the most appropriate methods to maximize both social welfare and tax revenues.

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