Transfer pricing and cross-border arbitrage

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Today almost all large firms consist of multiple and sometimes hundreds of entities, both domestic and foreign affiliates, that are under the common control of a parent firm or headquarters. These entities regularly engage in transactions with their sister entities; for example, parts and components are assembled by a downstream manufacturer, trademarks and brand names are licensed to distributors, and centralized HR services are provided to the group. These related-party transactions must be priced, both for internal reasons (e.g., efficient resource allocation) and external reasons (e.g., reporting profits to tax authorities). The price of a transaction between commonly controlled entities is called a *transfer price* and the process by which the firm determines prices for internal transactions is referred to as *transfer pricing*.

Transfer pricing is a highly technical and specialized field. Inside the firm, transfer pricing policies are typically developed by a small group of highly trained professionals in the tax or finance departments at headquarters. These internal staff work with outside consultants (e.g., EY, PwC) to develop and implement transfer pricing policies at the entity level, record the related party transactions, and handle audits and disputes with tax authorities. Transfer pricing is viewed by firms as a normal and valued activity that raises the firm's after-tax profits and creates shareholder wealth as a tool for managing the firm's internal operations and evaluating managerial performance of the firm's entities. In addition, both in-house and external transfer pricing professionals view their work as a highly regulated and high-risk compliance exercise because so many governments now regulate transfer pricing.

Transfer pricing is highly regulated because it can be used to shift profits and arbitrage differences in government regulations across borders, which is referred to as *transfer price manipulation (TPM) or transfer mispricing*. While TPM can be used by a domestic firm inside a country, for example, to profit from differences in state-level corporate income taxes (CITs), TPM is most controversial when used by multinational enterprises (MNEs) to shift profits between countries. Governments are especially concerned about situations where TPM moves 'over the line' from legal TPM to unethical and/or illegal pricing of related-party transactions, which is referred to as *abusive transfer pricing* (Eden & Smith, forthcoming; OECD, 2013).

The ability to engage in transfer pricing is one of the important benefits of internalization (Buckley and Casson, 1976). Internalization enables the firm to substitute related-party transactions (i.e., the internal market) for arm's length transactions (i.e., the external market). There are at least three economic benefits from internalization (Eden, 2019b). First, internalization reduces transaction costs, such as the costs of search, negotiation, monitoring, and dispute settlement, which hamper trade between unrelated parties. Second, firms can transfer tacit resources such as non-codifiable knowledge more effectively between commonly controlled entities than between arm's length parties; internalization therefore facilitates cross-border transfer of intangible assets.

Third, at the international level, multinational enterprises (MNEs) gain extra benefits from internalization that are not available to domestic firms. MNEs can engage in arbitrage activities, taking advantage of differences in prices and endowments across countries, putting stages of the value chain where they offer the greatest after-tax net value added. MNEs can also integrate activities, taking advantage of economies of scale and scope on a regional or global basis to create centralized hubs for back- and front-office activities. Semi-globalization, i.e., incomplete cross-border integration (Ghemawat, 2003), offers the MNE many opportunities to profit from differences in (including the absence of) regulations across countries by shifting profits to less taxed or regulated locations (Rugman & Eden, 1985; Eden, 1998, 2009). Economists have long studied the external opportunities available to MNEs through TPM. Differences in corporate income taxes have received the most scholarly attention, but tariffs, export controls and foreign exchange controls are also external motivations for TPM.[1]

The opportunities for MNEs to raise global after-tax profits by using TPM to engage in regulatory arbitrage between countries have been a major concern of governments for many decades, one that prompted the development of the *arm's length standard* (Picciotto, 1992; Eden, 1998). To reduce MNE incentives to engage in abusive transfer pricing, CIT laws and regulations in more than 130 countries (EY, 2021b) now require MNEs to set transfer prices according to the *arm's length standard* (ALS), also referred to as the *arm's length principle*. The ALS requires the results of related-party transactions to be based on the results that unrelated parties would have negotiated for the same or similar transactions under the same or similar facts and circumstances (Eden, 1998, 2019b; Eden, Dacin and Wan, 2001). Both the OECD and United Nations now regularly publish guidelines that can be used by national tax authorities and MNEs to interpret and implement the ALS (OECD, 2022; UN, 2021).

As a result, TPM, while financially rewarding in terms of raising after-tax global profits for the MNE, also comes with a variety of regulatory risks. For example, the burden of proof typically lies with the MNE to prove that its self-reported transfer price meets the ALS. Second, MNEs can be hit with huge penalties if a national tax authority disagrees with the MNE's transfer price and the MNE has failed to contemporaneously document its transfer pricing policies (Eden, 1998; Eden, Juárez Valdez & Li, 2005). Third, the variation across countries in terms of transfer pricing laws and regulations – even though they are all purportedly based on the ALS – can be overwhelming, particularly for smaller MNEs that cannot afford sophisticated tax planning advice from the Big Four accounting firms or boutique transfer pricing firms.

We explore these ideas in a simple example where an MNE uses transfer pricing to engage in regulatory arbitrage between two tax jurisdictions. Our example shows that TPM generates higher global after-tax profits for the MNE. However, the more aggressive the TPM, the greater the regulatory risk of the MNE being punished by one or both tax authorities, or of being caught between 'dueling' tax authorities.

Assume the MNE consists of a commonly controlled manufacturer in country 1 and a distributor in country 2, where the manufacturer exports a product to the distributor for final sale. The higher (lower) the transfer price, the larger (smaller) the MNE's share of profits declared in country 1 and the smaller (larger) the MNE's share of profits declared in country 2. We assume that the MNE's goal is to maximize its worldwide after-tax profits and that each government's goal is to maximize its tax revenues. In effect, this is a principal-agent problem where the transfer pricing policy of the agent (the MNE) is being monitored by two principals (the two governments).

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[1] The wide variation across countries, ranging from no transfer pricing rules in many tax havens to extensive rules in many OECD member countries, provide significant regulatory arbitrage opportunities that encourage profit shifting through TPM. See, for example, Bartelsman and Beetsma (2003), Clausing (2003, 2009, 2016), Eden and Rodriguez (2004), Li and Balachandran (1996), Fisman and Wei (2004), Goetzl (2005, Grubert and Mutti (1991), Jansky and Palansky (2019), Swenson (2001), Tomohara (2004), Vincent (2004), and the articles included in Eden (2019a).

[Figure 1 goes about here]

We assume both governments follow a territorial tax system[2] where they levy a corporate income tax at rate t_i on MNE profits declared in country i (where i=1,2). Each government applies the ALS and accepts the MNE's transfer price if it lies within the arm's length range as determined by the government.[3] If the transfer price falls outside the range, the government adjusts the MNE's transfer price to the midpoint of the range, and recalculates the tax owed. The government may also impose an additional inaccuracy penalty if the MNE's declared transfer price lies outside the arm's length range.

Assume, for simplicity, that there are only three possible pricing methods: comparable uncontrolled price (CUP, the open market price between arm's length firms), cost plus (average cost plus a gross markup), or resale price (retail price minus a gross margin).[4] The average cost of manufacturing is $4 and the retail price at which the finished product is sold in country 2 is $20. Contract manufacturers are available in country 1 that would produce the product for average cost plus a 50% markup. Contract distributors are also available in country 2 that would distribute the product for the retail price minus a 20% gross margin. There are products somewhat comparable to the intrafirm good available on the open market at $9. In this situation, the three possible transfer prices are $6 (cost plus), $9 (CUP), and $16 (resale price), with some arm's length range around each transfer price.[5]

We start by assuming that government 2 taxes profits declared by the MNE where they are earned and government 1 does not; thus, MNE profits declared n country 2 are taxed whereas profits declared in country 1 are not taxed. In this case, the MNE will use TPM to take advantage of the difference in tax rates. The MNE will choose the highest transfer price ($16, using the resale price method) because it raises the manufacturer's revenues and the distributor's costs, which shifts MNE profits out of country 2 and into country 1. With a CIT rate of 30% in country 2 and a zero CIT rate in country 1, every dollar increase in the transfer price shifts $1 of profit from country 2 to country 1, saving the MNE (alternatively, costing government 2 in lost tax revenues) 30 cents.

If the MNE's declared transfer price lies inside government 2's arm's length range of acceptable prices, then TPM is legal and noncontroversial. However, if the transfer price lies outside the government's arm's length range, the government sees TPM as illegal and an additional tax penalty over and above the corporate income tax may apply. Unless the MNE has perfect foresight and knows the government's arm's length range, there is transfer pricing risk for the MNE, especially if the MNE aggressively shifts profits out of country 2. There is also transfer pricing risk for the two governments since TPM shifts the MNE's tax base between the

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[2] Under a territorial tax system, the tax authority in the home country does not tax foreign source income (FSI) earned by MNEs that are headquartered in the home country; the FSI is taxed only in the host country where the income is earned (Eden, 1998).

[3] In transfer pricing there is almost never a single "right" price, rather there is a range of possible arm's length prices, which is referred to as the *arm's length range* (Eden, 1998).

[4] In fact, the situation is likely to be much more complex because there are multiple acceptable transfer pricing methods, and they vary by the type of transaction (e.g., goods, services, intangibles, loans). In addition, governments can and do have different rules as to how and when each method can be applied in practice (see Eden, 1998). We ignore the real-world complexities of the "devil is in the details" below.

[5] CUP is the open market price, which is $9. Cost plus is average cost ($4) plus the markup contractor manufacturers would charge (50%), which is $4 x 1.5 = $6. Resale price is the retail price ($20) minus the gross margin that contract distributors would charge (20%), which is $20 (1-.2) = $16.

two countries.

Let us make the case more complicated by assuming that government 1 taxes MNE profits earned by the manufacturing affiliate in country 1. Now both governments tax MNE profits that are earned in each country. Here, arbitrage through TPM can separate where profits are earned from where they are declared, which is called *profit shifting*. The MNE will use TPM to arbitrage the difference in CIT between the two countries, shifting profits into the lower taxed jurisdiction.

Both tax authorities may also have incentives to affect the MNE's transfer price by changing the acceptable transfer pricing method and/or the arm's length range. Assume each government's goal is to maximize its tax revenues. In this case, government 1 has an incentive to select the highest acceptable transfer price ($16, the resale price) because that method puts the largest share of the MNE's total tax base (global pre-tax profits) in country 1. Government 2 has an incentive to select the lowest acceptable transfer price ($6, cost plus), which places the largest share of the tax base in country 2. Each government's desire to maximize tax revenues therefore generates conflicts not only with the MNE but also with each other because the agent (the MNE) is being monitored by two principals (the two governments) and all three have conflicting goals.

What should the MNE do? We assume that the MNE cannot declare different transfer prices to the two tax authorities (i.e., it cannot keep two sets of books) but must choose one transfer price to report to both tax authorities. How the MNE responds depends on its knowledge of the two arm's length ranges and whether they overlap or not.

Suppose the two arm's length ranges overlap so there is a potential zone of agreement between the two governments. If the MNE has perfect foresight and can determine where the two arm's length ranges overlap, the MNE sets its transfer price within the zone of agreement. Within the common zone of agreement, the transfer price by definition is acceptable to both governments and no additional tax or penalties will be levied by either government. Depending on the two CIT rates, the MNE sets its transfer price close to the floor (if $t_1 > t_2$) or the ceiling (if $t_1 < t_2$) of the zone of agreement, shifting profits to the lower-taxed jurisdiction.

The threat of transfer pricing inaccuracy penalties may also influence the MNE's choice since the penalty costs of picking a transfer price outside of the zone of agreement may be higher than the profits saved through tax arbitrage (Eden, 1998; Eden et al., 2005). If the two countries have a bilateral tax treaty, the existence of a MAP (mutual agreement procedure) for settling tax disputes between the two countries may also affect the MNE's transfer price (Markham, 2017).

If there is no zone of agreement, the MNE is caught between the two governments. Assuming the MNE must declare the same transfer price to both governments, that price will fall outside the arm's length range for one or both governments, exposing the MNE not only to additional taxation but also potentially to tax penalties. The MNE faces double taxation because the two governments disagree as to the best method and the arm's length range – even though both transfer pricing methods comply with the ALS.

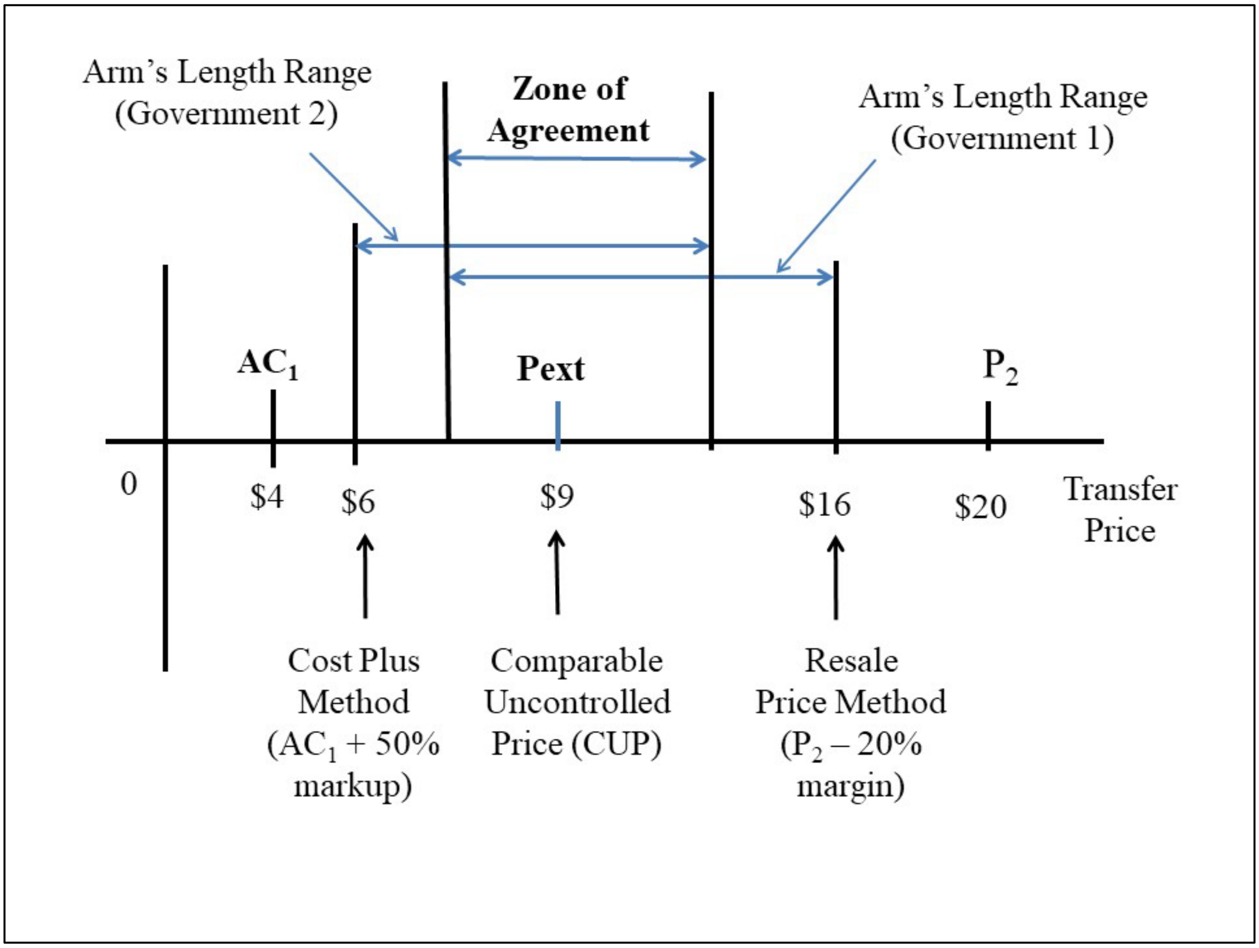
If the MNE can report different transfer prices to the two governments (i.e., have two sets of books), without the information being shared between the governments, it may be possible for the MNE to avoid double taxation in situations where there is no zone of agreement. However, TPM using 'two sets of books' amounts to deception with secrecy, which would likely be both illegal and unethical.

Another way to avoid double taxation when there is no zone of agreement is for the MNE and the two tax authorities to negotiate a Bilateral Advance Pricing Agreement (APA) committing them to a common transfer price (Markham, 2017). The MNE, however, must disclose any and all potentially relevant information to both regulators, which firms typically prefer not to do for confidentiality reasons. Still, bilateral and even trilateral APAs are becoming more frequent, particularly for MNEs with large intrafirm transactions since their tax risk is so high.

Given the potential for 'dueling' tax authorities, each selecting a transfer pricing method that moves taxable income into its jurisdiction, we argue that MNEs are often without a zone of agreement where they can safely declare acceptable transfer prices, even when both governments have adopted the ALS. As a result, MNEs are faced with the risk that their transfer prices will be declared illegal by one or more governments and hit with tax penalties. As the number of governments with transfer pricing regulations rises, and the complexity of the acceptable policies and of MNE activities increase, it is not surprising that MNE executives regularly report that transfer pricing is their highest international tax risk despite the benefits of engaging in regulatory arbitrage (EY, 2021a).

Figure 1

Transfer Pricing and Cross-border Arbitrage



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