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# The effect of tax and nontax country characteristics on the global equity supply chains of U.S. multinationals<sup>☆</sup>



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## ABSTRACT

We examine the global equity supply chains of U.S. multinationals to explore how tax and nontax country characteristics affect whether firms use foreign holding companies and where they locate them. We find that U.S. multinationals supply equity from headquarters to their foreign operating companies through foreign holding companies located in countries that lightly tax equity distributions. We also find that foreign holding companies tend to be located in countries with less corruption and investment risk than the countries in which the operating companies they own are located. In addition, we provide empirical evidence that the Netherlands, a well-known location for international tax planning, is a particularly popular site for foreign equity holding companies. Our findings contribute to a nascent literature that examines ownership chains in multinational companies and a larger literature on subsidiary location decisions for multinationals. The findings also provide empirical evidence that could be useful to governments in developed countries as they attempt to reform international tax policy.

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## 1. Introduction

Research on corporate tax avoidance has exploded in recent years, with studies examining both the causes and consequences of strategic actions taken by firms to minimize the corporate income tax bill. While the literature has shown a large number of associations between corporate income tax avoidance and myriad economic forces, little is known about whether and how firms are structured to tax-efficiently move internal equity capital throughout the organization. In

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addition, nontax country characteristics likely also influence the ownership structures of multinational firms. In this study, we investigate whether taxes, country-level corruption, and country-level foreign direct investment risks play a role in the global equity supply chains of U.S. multinational firms.

Our research is motivated by a dearth of knowledge on at least two fronts. First, academic research has made limited progress in understanding the reasons for the complex corporate structures observed in modern multinational firms. As economies across the globe have become more integrated, U.S. firms have expanded operations into foreign countries, resulting in a corresponding increase in the complexity of U.S. corporate ownership structures (Lewellen and Robinson, 2013). While some observations related to corporate complexity are intuitive (e.g., growth in China has resulted in more Chinese subsidiaries), other observations are more perplexing (e.g., the number of subsidiaries in Luxembourg has grown faster than the number of subsidiaries in China).<sup>1</sup>

Second, government officials and popular press commentators the world over (including the U.S.) have called for reforms to international tax rules arguing that multinational firms are not paying an equitable amount of tax to the government jurisdictions where the economic activities actually take place. Indeed, several government investigations of U.S. multinationals have claimed that a principal purpose of complex global ownership structures is to avoid taxes.<sup>2</sup> Failure to understand how corporate structures aid tax avoidance impedes international corporate tax reform efforts.

To be clear, the purpose of this study is not to examine the profit shifting of U.S. multinational firms. Extensive research documents that multinational firms are adept at allocating income across jurisdictions so that taxable profits are recognized in relatively low-tax jurisdictions. Firms have been shown to strategically set transfer prices, structure internal debt, and develop cost-sharing agreements within the firm so that affiliates in high tax jurisdictions disproportionately recognize expenses and affiliates in low tax jurisdictions disproportionately recognize income (see Clausing, 2003; Collins and Shackelford, 1997; Dharmapala and Riedel, 2013; Drucker, 2010; Gupta and Mills, 2002; Klassen and Shackelford, 1998; Martin, 2013, among many others). These strategies are designed to minimize corporate income tax payments and can take place between any two affiliates within a corporate organization, independent of a direct ownership link.<sup>3</sup> In contrast, the purpose of our study is to move one step beyond profit shifting to examine whether U.S. multinationals strategically structure their global equity supply chains to have the ability to tax-efficiently remit profits as dividends to the ultimate U.S. parent company and its shareholders.

While it may seem obvious that U.S. firms would organize subsidiaries to minimize the dividend tax obligations incurred as dividends move up the global equity supply chain, several competing economic forces affect the cost–benefit calculus, potentially relegating dividend taxation to secondary importance for U.S. multinational firms. First, most profit shifting mechanisms, such as royalty arrangements, cost-sharing agreements, and intercompany debt, are independent of ownership chains; royalties, for example, can be paid from any entity to any other entity within the multinational firm, regardless of any direct equity ownership link. It is possible that U.S. firms can arrange their affairs so that profits are strategically shifted and routed into an affiliate that is located in a country where the total tax burden will be minimized, thus pre-empting the need to pay dividends (in a tax-inefficient manner) from the foreign operating subsidiaries directly up the ownership chain to the ultimate parent company.

Second, many U.S. multinational firms repatriate only a fraction of their foreign profits to the ultimate U.S. parent firm, which has led to considerable scholarly and policy interest in foreign profits being “trapped” overseas (see Blouin et al., 2014; Graham et al., 2011; Hanlon and Heitzman, 2010, among others). Companies that have little intention of returning their foreign profits as dividends to the U.S. parent likely are not investing heavily in the dividend tax efficiency of their global equity supply chains. Third, foreign dividend withholding taxes generate a credit that may be used to offset the U.S. taxes. Assuming U.S. multinational firms are indifferent between paying taxes in foreign jurisdictions and paying taxes to the U.S. Treasury, tax efficiency may be a second order consideration in the design of the U.S. multinational firms’ global equity supply chains unless they are unable to immediately and fully utilize the foreign tax credits in computing the residual U.S. tax on repatriated foreign profits.

Nontax country characteristics also likely influence the design of corporate ownership structures. U.S. companies are keenly aware that profits could be lost through other channels, such as corruption and investment risk. For example, firms operating subsidiaries in Venezuela, where the risk of political expropriation is high, might be willing to pay dividends up the ownership chain, irrespective of dividend taxation. Moreover, firms may choose to limit the physical assets in the Venezuelan subsidiary. Rather, they may choose to physically locate them in a holding company country with a lower risk of investment expropriation.<sup>4</sup>

<sup>1</sup> We use data from Exhibit 21 of Form 10K, filed with the Securities and Exchange Commission (SEC) from 1996 to 2011, to substantiate these observations. See Dyreng and Lindsey (2009) for more details on the dataset.

<sup>2</sup> See, for example, reports about Apple Inc. (Schwartz and Duhigg, 2013) and Caterpillar Inc. (Rubin, 2014). This year’s wave of (attempted) inversions, including Medtronic and Covidien, AbbVie and Shire, and Pfizer and AstraZeneca are tax-motivated restructurings of the global equity supply chains that have triggered a new round of responses from policy makers in the U.S. and Europe.

<sup>3</sup> Throughout the paper, when we refer to profit shifting being independent of a direct ownership link, we mean that profits can be shifted to or from any entity within the U.S. multinational firm’s ownership structure. In contrast, an intra-company dividend payment is made only to the entity that directly owns the equity of the paying entity.

<sup>4</sup> An example of government expropriation is Venezuela’s nationalization of oil assets (see FACTBOX–Venezuela’s nationalizations under Chavez, 2011).

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