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Taxation and income shifting: Empirical evidence from a quasi-experiment in China

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ABSTRACT

China's new *Corporate Income Tax Law* was passed in March 2007 and took effect on January 1, 2008. It terminated the dual corporate income tax regime by removing the preferential tax treatments offered to foreign investment enterprises (FIEs) and unifying the corporate income tax regime for FIEs and Chinese domestic enterprises (DEs). This article uses a difference-in-differences approach to determine whether FIEs responded to the law by shifting income out of China. Employing the Chinese Industrial Enterprises Database from 2002 to 2008 to implement the analysis, we find that FIEs have responded to the law by shifting income out of China; the treatment effect for Hong Kong-Macau-Taiwan (HMT) investment enterprises is less negative than that for other FIEs, which implies that HMT investment enterprises might be less capable of shifting income across countries than other FIEs. The treatment effect by restricting the control group to State-Owned Enterprises (SOEs) is less negative than that by restricting the control group to Private-Owned Enterprises (POEs), which is consistent with the perception that SOEs might enjoy more favorable treatment from the Chinese government than POEs. All three findings are consistent with tax-induced income shifting, and hence we conclude that taxation plays an important role in income shifting activities.

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1. Introduction

Cross-country differences in corporate tax rates are an enduring feature of the global fiscal environment. Multinational corporations (MNCs) are able to take advantage of the cross-country differences in corporate tax rates to reduce their overall tax burden by shifting income from high-tax countries to low-tax countries. By their very nature, MNCs trade goods, services, and intangible assets across national borders within their enterprises. MNCs can typically reduce their overall tax burden by artificially reducing transfer prices charged by affiliates in high-tax countries for goods, services, and intangible assets provided to affiliates in low-tax countries. In order to stem the flow of tax revenues overseas and to ensure that they can tax their *fair* share, most countries enforce tax laws based on the *arm's length principle*, which requires transfer prices for transactions between different parts of the same MNC to be set at the same level as prices for similar transactions between unrelated parties. However, strict application of the *arm's length principle* is often problematic in practice. For example, for many intra-corporation transactions, there simply exists no comparable market outside the corporation. This is particularly the case for intellectual property or knowledge-intensive intermediate goods that are developed or produced by one part of an MNC and used by other parts of the same MNC in other countries. In addition to a large and increasing potential for abuse in an era when much value is intangible and difficult to price, an additional difficulty, often underappreciated in the literature, is the fact that an MNC should have more profit than unaffiliated firms transacting at arms' length. Indeed, these internalization advantages are what create MNCs in the first place. Thus, even if MNCs were to (magically) adhere to the *arm's length principle*, there would be some extra profit left unallocated, which is one of the many weaknesses of the *arm's length principle*. Therefore, whether and to what extent MNCs engage in income shifting activities has long been an important topic of academic research and has also attracted the attention of policymakers.

Considerable anecdotal evidence suggests that MNCs respond to tax factors by shifting income from high-tax countries to low-tax countries. In addition to earlier anecdotal evidence (e.g., Wheeler, 1988),[1] more recent examples of income shifting have been documented and studied. For example, according to two recent Bloomberg articles (2010, 2011), the effective tax rate reported by Google, the owner of the world's most popular search engine, was less than half the average combined U.S. and state statutory rate of 39.2 percent. Google cut its taxes by $3.1 billion from 2007 to 2009 by income shifting. Sullivan (2010) provides another recent example of income shifting. He finds that, between 2000 and 2010, the foreign shares of both sales and employment at Microsoft grew from about 30 percent to about 40 percent, while foreign profits grew from less than 20 percent to more than 60 percent. In other words, the rise in Microsoft foreign profits is far out of proportion with the growth in its measurable foreign activities; this implies that Microsoft has engaged in income shifting activities. This example may not be unusual: Jane Penner, a spokeswoman for Google, said: "Google's practices are very similar to those at countless other global companies operating across a wide range of industries" (Bloomberg, 2010). Of course anecdotal evidence is not sufficient to establish the economy-wide prevalence of income shifting; we need a reliable estimate of the effect of taxation on income shifting.

There have been some attempts to uncover systematic evidence of income shifting. Almost all of the empirical studies on income shifting (e.g., Grubert and Mutti, 1991; Grubert et al., 1993; Harris et al., 1993; Klassen et al., 1993; Hines and Rice, 1994; Jacob, 1996; Rousslang, 1997; Collins et al., 1998; Grubert and Slemrod, 1998; Swenson, 2001; Clausing, 2003; Grubert, 2003)[2] concern the U.S. and, more specifically, income shifting from the U.S. to low-tax countries. In the past decade, more empirical studies on income shifting (e.g., Bartelsman and Beetsma, 2003; Mintz and Smart, 2004; Buettner and Wamser, 2007; Huizinga and Laeven, 2008; Weichenrieder, 2009) have been performed for other OECD countries. These studies provide some indirect empirical evidence of tax-induced

[1] Wheeler (1988) presents U.S. tax court cases where income was shifted for tax reasons. In one case, in 1975, G.D. Searle & Company had an average return on employed assets of −42.3% in the U.S. and 119% in Puerto Rico, where the effective tax rate is zero.

[2] See Hines (1997, 1999) for a thoughtful review of some of the earlier articles in this literature.