# CORPORATE INVESTMENTS IN TAX HAVENS: EVIDENCE FROM INDIA

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## ABSTRACT

*Little is known about the drivers of corporate investments in tax havens from emerging markets. This paper offers extensive descriptive statistics and regression analysis to illustrate the patterns and motivations for tax haven investments by Indian firms over the 2007-2017 period. We find that the motivations for Indian firms to invest in tax havens are not only driven by the benefits of tax avoidance and secrecy of these jurisdictions, but also to seek strategic advantage and efficiency gains in global markets.*



**Keywords**: Tax havens; FDI; India; Emerging Markets; Internationalization


## INTRODUCTION

Interest in the internationalization of emerging market multinational corporations (EM MNCs) continues to grow in the international business literature (Hernandez & Guillen, 2018; Paul & Benito, 2018; Sahasranamam, Rentala & Rose, 2019). However, with very few exceptions (e.g., Taylor, Richardson, & Taplin, 2015; Chari & Acikgoz, 2015; Lee, Hemmert & Kim, 2014) little is known, at the country level, about the patterns of investment and the many possible drivers of investment by EM MNCs in tax havens. This lack of knowledge is concerning from two standpoints. On the one hand, understanding tax haven investments is important for strategic reasons, as it is seen as a mechanism to boost the firm's competitive advantage, especially in the presence of institutional voids (Chari & Acikgoz, 2015). At the same time, these investments also raise ethical concerns (Contractor, 2016) as they reduce a nation's revenue coffers, thus disadvantaging it, especially in emerging markets.

We draw on institutional theory and global strategy literature to contribute to knowledge in this area by studying the patterns of corporate tax haven investment by Indian firms, as well as selected drivers of such investment, using data drawn from corporate disclosures over the 2007 to 2017 period. We focus on four broad research questions in the Indian context:

*(1) What are the trends in usage of tax havens by Indian firms (in our case, the 2007-2017 period)? What jurisdictions do they target?*

*(2) How are these trends related to the regulatory environment, industry membership and firm-level characteristics?*

*(3) How are the tax haven investments financed?*

*(4) What are the underlying strategic motivations (such as asset/resource development, efficiency, and market seeking) of tax haven investments? What form do they take in terms of international entry-mode strategy choice (i.e., wholly owned subsidiary versus joint venture)?*

We answer these questions by (a) documenting trends based on the first-ever compilation of detailed monthly statistics from the Indian government (combined for analysis with other firm and industry-level data) as well as by (b) presenting the results of a multivariate analysis of firm and industry-level determinants of tax haven usage. India has emerged as the second fastest growing economy in the world (Paul & Mas, 2016) and is characterized by institutional voids (Khanna & Palepu, 2005), and these two features warrant a focus on this nation.

Increasingly, the international business literature is recognizing the need to focus more on tax havens which have become preferred destinations of investments (Luo & Tung, 2007), though they have not been studied in detail with regard to investments from EM MNCs (Chari & Acikgoz, 2015; Lee, Hemmert & Kim, 2014).

Research on tax havens has been quite scarce in the international business arena. With few exceptions (Chari & Acikgoz, 2015; Desai, Foley & Hines Jr., 2006a; Jones & Temouri, 2016), the active utilization of tax havens by MNCs has not been subjected to rigorous academic analysis, especially within a particular country context or as research beyond the determinants of FDI flows into tax havens. The importance of studying tax havens becomes particularly important when we consider the corporate strategy of Indian firms since, separate from tax avoidance motivations, Indian firms have historically used tax havens to facilitate investment both in India and abroad through wholly owned subsidiaries or through joint ventures.

For example, Tata Steel financed its acquisition of Corus partly through a consortium of banks at Tata Steel UK and partly through its subsidiary, Tata Steel Asia. These strategic investments were facilitated by bilateral tax avoidance agreements, such as the Double Tax Avoidance Agreement (DTAA) signed between India and Mauritius, that have exempted host countries from levying taxes on capital gains, and have allowed holding companies located in tax havens to repatriate earnings to their parent companies (Prasad, 2010). UK and US firms investing in India have also used these agreements to channel their investments through holding companies registered in Mauritius (Prasad, 2010). Phenomena such as these call for studying firm-level and industry-level motivations for investing in tax havens both in terms of individual case studies, as well as through large sample studies such as the one in this paper.

This paper is organized as follows. In the first section, we review the extant literature on the determinants of tax haven FDI and summarize the determinants that have been identified in the literature. In the second section, we present the methodology we have followed to review the tax haven investments of Indian firms in the period 2007-2017. In the third section, we discuss the implications of our study and provide some directions to motivate further research on tax havens in the context of EM MNCs.

## LITERATURE REVIEW & HYPOTHESES DEVELOPMENT

### Background on Tax Havens

Following the OECD (2010), tax havens may be defined by the following criteria (Stal & Cuervo-Cazurra 2011, p. 215): (1) nominal or non-existent taxes, (2) lack of transparency, (3) laws or practices limiting information exchange for tax purposes with other governments, (4) no requirement for substantial business activity. Tax havens allow non-resident MNCs to evade higher tax rates in their countries of residence by transferring profits from the high tax jurisdictions to low tax jurisdictions via arrangements that include transfer pricing and debt financing (Eden, 2009, Contractor, 2016). Contractor (2016) provides a comprehensive summary of the many approaches to tax reduction facilitated by tax havens.

Major corporate economic transactions have a legal dimension through the sovereign stamp of the territorial state under whose tax rules the transactions take place (Palan, Murphy & Chavagneux, 2010). Greater cross-border movement of goods, people and services increase the challenge associated with determining the jurisdiction of tax laws (Rixen, 2008). While each country has the sovereign right to define and implement its tax laws, it cannot dictate these to other states, opening up the possibility of dissociating the physical location from the legal location of a transaction. This concession leads to situations where transactions that physically occur in one country are legally registered or marked in another. Thus, international economic activities can generate overlapping tax claims, and tax havens that offer secrecy and lower or zero tax rates become lucrative destinations for tax avoidance by MNCs.

Since countries differ in the way they tax corporate profits, firms have the option to expand into jurisdictions with lower tax rates. As Jones & Temouri (2016) observe, the ownership advantage afforded by a financial blueprint of tax evasion along with the location advantages of low corporate taxes and secrecy offered by tax havens can combine to provide firms with global advantage vis-à-vis rivals. Chari & Acikgoz (2016), who found support for lower tax rates as a key determinant of inward investments into tax havens, also validate this inference. Further, Gumpert, Hines Jr. & Schitzer (2016) have shown that a one percentage point higher tax rate in the host country increases the likelihood of owning a tax haven affiliate by 2.3%. The secrecy offered by tax havens paves the way for fraud, tax evasion, escapism from financial regulations, insider trading, bribery and money laundering. Such arrangements eventually lead to a situation of double non-taxation, thereby allowing MNEs to avoid income tax across multiple jurisdictions. Thus, firms are motivated to pursue tax haven investments for lower tax incentives. The common method employed by firms to relocate profits involves the setting up of a subsidiary or affiliate in a tax haven. Tax havens have catered to the demand from such entities by designing an instrument known as the International Business Corporation (IBC). IBCs are versatile, limited liability companies set up either as subsidiaries of onshore companies or as independent companies whose principal focus is to enable the shifting of the profitable portion of a transaction to a low tax jurisdiction. On the other hand, IBCs can also operate offshore businesses and raise needed capital by issuing shares, bonds, and other instruments. In certain cases, IBCs are also employed to legally possess property rights, organize trading on financial markets, and manage investment funds as part of complex financial structures (Palan et al., 2010).

Serious ethical concerns are also potentially associated with the use of tax havens. These include the fact that many of the associated tax advantages are secured though strenuous lobbying and political influence by corporations for tax-haven advantages. Further, tax-haven subsidiaries usage often complements other beneficial arrangements in place such as the use of international licensing or royalty payments between affiliates, the charging of central fixed costs and overheads to the MNC's foreign affiliates, the use of intra-corporate loans, and advantageous transfer pricing on exports, among others (Contractor, 2016). While the MNC benefits from tax savings that may be used strategically for investment in vital research and development, and advertising, the loss of tax revenues to the country in question poses a possible ethical concern.

The Tax Justice Network, an advocacy group, estimated that an approximate $21 to $32 trillion is invested tax-free in over eighty jurisdictions around the world (Henry, 2012). In response, developed economies have attempted to curb tax avoidance by legislating suitable reforms. In the April 2009 G20 summit in London, for example, close to 300 tax agreements were signed, signaling the commitment of signatory countries on matters of tax transparency and effective exchange of information. The OECD also launched the Base Erosion and Profit Sharing (BEPS) project in 2013 to prevent tax avoidance strategies that exploit gaps and mismatches in tax rules. Firms employ three major mechanisms to lower taxes through tax havens: round tripping, treaty shopping and transfer pricing. In round-tripping, local firms use offshore holding companies to divert money back to the parent company. For example, Mauritius-based entities pay zero tax on income from Indian operations because according to Mauritian laws, entities can become residents by registering their firms locally. Such practices aid the evasion of capital gains tax in India as well as in China where Chinese MNCs created offshore holding companies to essentially own onshore domestic subsidiaries by taking advantage of favorable legislations for inward foreign investments (Luo & Tung, 2007; Ning & Sutherland, 2012). Further, in terms of other motivations, some Russian firms have engaged in geographical diversification of assets to protect against domestic instability. Luo & Tung (2007) observed a rapid increase of both inflows and outflows in Russia simultaneously, partially due to this form of round tripping by Russian MNCs.

In treaty shopping, a firm incorporated in a third country takes advantage of a favorable fiscal treaty between two contracting states. For example, foreign investors in a third country possessing high income and bearing relatively high rates of taxation on income and profits use the Mauritius route to bring their investments into India by taking advantage of the DTAA agreement between India and Mauritius. It has been anecdotally observed that many US and UK-based companies took advantage of the DTAA to use Mauritius as a conduit for investing in India without being assessed income tax in the Indian jurisdiction (Chari & Acikgoz, 2016).

For diversified firms that typically operate in vertical industries, the potential for transfer pricing is another important reason for tax haven investments. Transfer pricing helps minimize corporate tax liability by allowing a firm to set suitable prices for intra-firm transactions and defer taxation to later periods. MNCs can take advantage of the weak regulation and secrecy provided by tax havens to exploit and create competitive advantages by leveraging cross-country differences in the tax code. These opportunities help reduce corporate funding costs, and thus the cost of capital, in a manner unavailable to non-MNCs (Oxelheim, Randøy & Stonehill, 1998).

Contractor (2016) discusses other methods for tax avoidance, beyond round tripping and transfer pricing on invoice values, including royalty payments, intra-corporate loans, allocation of central MNC/parent overhead and costs, and inversions. Reviewing the evidence on government enforcement and audits, the lack of a world tax authority, and limited intra-government information exchange, Contractor (2016) observes: "…MNCs can, and do, push the envelope to minimize global tax payments, their proclivities limited only by ethical self-restraint. (p. 38)". The importance of studying tax haven usage is thus underscored.

**EM MNCs, institutional voids and tax havens**

Businesses in India operate in an environment characterized by weak market-supporting institutions and significant government discretion (Khanna & Palepu, 1997). Moreover, governments in less-developed markets often engage in various forms of wealth expropriation such as arbitrarily changing tax rates and retrospectively taxing financial transactions (Chari & Acikgoz, 2016). Chari & Acikgoz (2016) argue that traditional motivations of international expansion do not convincingly explain firm investments into tax havens. In the context of cross-border acquisitions by the top 10 emerging market MNCs, they identify two alternative explanations: 'lowering taxes' and ‘escaping institutional weaknesses at home’ (especially in terms of lax historical enforcement of regulations) as determinants of tax haven investment activity. The Vodafone-Hutchison acquisition is India is a prominent example where the Indian Government taxed transfer of shares between two non-resident entities by changing a regulation with retrospective effect. The tax arm of the Indian government has periodically issued prosecution notices even for minor infractions, such as delayed payment of tax deducted at source or late filing of income tax returns (Roongta, 2018). To overcome regulatory scrutiny, firms often successfully rely on intra-group transactions coordinated through a complex structure of horizontally and vertically-connected affiliates (Su & Tan, 2018).

Establishing offshore companies in tax havens provides a way of addressing institutional voids and improving efficiency. Tax havens allow firms to overcome regulations on foreign investments in addition to providing them with opportunities to cross-subsidize unprofitable firms, manipulate tax payments and engage in tunneling among affiliates. Further, given that tax havens are often characterized by political stability and effective governments (Dharmapala & Hines, 2009), investing in tax havens provides firms with an opportunity to reduce transaction costs associated with institutional constraints and instability. Carrying out transactions through tax havens is thus an institutional mechanism that protects firms from expropriation of cash flows by their own governments (Chari & Acikgoz, 2016). In addition, firms also make unofficial payments to officials to escape regulatory interference, and having offshore companies in tax havens facilities such payments to anonymous accounts (Su & Tan, 2018). Emerging market MNCs, including Indian firms, significantly utilize offshore financial centers, tax havens and special purpose entities as vehicles for outward investment, an important subset of research on internationalization by firms. Data obtained from the Reserve Bank of India Foreign Exchange website shows that 15% of the net outward FDI engaged in by Indian firms in the financial year 2017-18 was invested in the top five global tax havens. Mauritius tops the list of tax haven destinations for Indian FDI with $926.8 million in investments, followed by the Cayman Islands, British Virgin Islands, Jersey and Cyprus.

The relatively few countries and territories classified as tax havens have become prominent destinations for internationalization by EM MNCs (Morck, Yeung, & Zhao, 2008; Chari & Acikgoz, 2016). However, what drives such investments into tax havens has received very scant attention in the literature, with many salient questions unanswered. For example, do traditional motivations ascribed to international expansion of firms such as asset-seeking, efficiency-seeking, market-seeking and natural resource-seeking motivations apply to EM MNC investments in tax havens? Our research questions help target these gaps in existing knowledge.

**Institutional Development and Tax Haven FDI**

The Indian Government has promoted FDI as a route to economic development by setting up Special Economic Zones (SEZs), offering incentives in the form of tax sops, regulatory exemptions and other subsidies. In particular, India signed the Double Taxation Avoidance Agreement (DTAA) with 92 jurisdictions to exchange tax information reciprocally and make tax regulations consistent. According to the DTAA, the signatory jurisdictions would treat the income earned on cross border capital flows uniformly and divide taxation rights between them, thereby eliminating double taxation of the same income. Although the first such agreement was signed between India and Egypt in 1969, the lacunae in DTAA agreements, particularly in those signed with tax haven jurisdictions were abused for promoting round-tripping investments, treaty shopping and tax evasion. In particular, a disproportionate amount of outward FDI from India has been routed through tax haven destinations. Cobham and Jansky (2017) estimate this figure to be as high as $40 billion or 2.3 per cent of India's GDP in 2013.

Emerging economies such as India cannot afford to lose tax revenues from tax evasion as these could be used to help address the myriad social and environmental problems at this stage of its development. India's resolve to fix the abuse of tax evasion was reflected in its amendment of DTAA agreements with Cyprus and Mauritius in 2016 and its deregistration of 120,000 shell companies[1] for alleged tax evasion in 2018. Further, India has also demonstrated urgency in prosecuting[2] Vijay Mallya – an Indian businessman and lawmaker now on exile in the UK - for allegedly diverting loans extended to him to the tax havens of Cayman Islands and Mauritius in an act of money laundering. With the strengthening of the institutional mechanisms to curb tax evasion and intent on the part of the Indian Government to prosecute tax evaders, the investments into tax havens is expected to further decline in subsequent financial years.

India's resolve to tackle the problem of tax evasion was further evident in the renegotiation of tax treaties with Mauritius and Singapore to offer a beneficial tax rate of 7.5% on short-term capital gains on equity for investments made after April 1, 2017. The Indian Government is likewise displaying urgency[3] in implementing the General Anti Avoidance Rule (GAAR) from the assessment year 2018-19 to empower its revenue authorities to deny the tax benefits of transactions which lack any commercial substance or consideration other than achieving tax benefits. The use of tax information exchange agreements (TIEAs) between home countries and tax havens has also been effective in terms of curbing tax evasion. India used a TIEA with the British Virgin Islands, for example, to uncover how cash hidden by Indian nationals and firms in the British Virgin Islands was used to fund property purchases as well as obtaining information on offshore firms set up by Indians[4]. It is in the context of legal and regulatory changes such as these that studying the pattern of tax haven investments of Indian firms in recent years assumes special significance.

**Hypotheses on the role that firm characteristics play in influencing tax haven investments**

Following the background context, we develop hypotheses around the role of firm characteristics on tax haven investments by EM MNCs. Given the limited research in the context of tax haven investments by EM MNCs, our hypotheses are largely exploratory in nature.

First, we recognize that firms are motivated to achieve efficiencies through economies of scale. Economies resulting from the firm's scale of operations are especially salient in this regard. Prior work by Scholes, Wilson and Wolfson (1992) found evidence of income shifting by firms in response to a known schedule of decline in tax rates. Based on a sample of 938 US firms, they identified that income shifting was prominent for sample firms belonging

[1] See https://www.livemint.com/Politics/QezF00YdFhnQiv4Nb4l0wN/Shell-companies-crackdown-Govt-to-deregister-120-lakh-more.html, accessed on 20th April 2018
[2] See https://www.dnaindia.com/business/report-vijay-mallya-diverted-rs-4000-crore-to-tax-havens-2182859, accessed on 20th April 2018
[3] See Press Release http://pib.nic.in/newsite/PrintRelease.aspx?relid=157712, accessed on 20th April 2018
[4] See https://indianexpress.com/article/india/india-news-india/tracking-the-cash-trail-how-mossack-fonseca-stonewalled-delhi/, accessed on 20th April 2018

to the three largest size quintiles, suggesting that larger firms demonstrate an inclination for opportunistic tax planning. This view is supported by Rego (2003), who has claimed, for example, that larger firms have the potential to achieve scale economies by careful tax planning, using incentives and resources as needed to reduce the overall group tax.

Supporting this logic, empirical work by Taylor et al., (2015) studying the drivers of tax haven investment by publicly listed Australian firms over the 2006-2010 period, found that firm size is indeed a significant driver of tax haven investment along with other factors such as transfer pricing, withholding taxes, intangible assets, corporate governance and multinationality. In the Indian context, there is anecdotal evidence of larger firms making significant investments in tax havens. Using market capitalization as an indicator of firm size, companies such as Reliance Industries, Bharti Airtel, Godrej Consumer Products and Vedanta feature in the list of top 100 firms by market capitalization and also in in the list of top 10 firms by tax haven usage. Thus, in accordance with the greater efficiencies derived from firm size, we hypothesize that:

*H1: Firm size will be positively related to tax haven investment*

Financial performance characteristics have also been argued to be related positively to tax avoidance by firms. More financially profitable firms, *ceteris paribus*, can expect to pay more in taxes, and thus have greater incentives to avoid taxes, and tax aggressiveness surges during profitable periods (Armstrong et al., 2012). Taylor et al., (2015) finds some empirical support for ROA as a significant driver of tax haven investment. Bennedsen & Zeume (2017) also note that firms with tax haven subsidiaries have significantly higher ROA.

Legal, institutional and political differences between countries provide static arbitrage opportunities that favor tax haven usage from a profits point of view. Debt contracts are one such mechanism of arbitrage, and provide the opportunity to set off profits earned in one part of the world against expenses incurred in another. Firms making cross-border acquisitions, for example, have to pay interest on the debt used to finance the deal. When such overseas acquisitions are undertaken by holding companies located in tax havens, interest payments on debt can be deducted against the profits earned from other overseas operations. Ghemawat (2007) explains how News Corporation placed its US acquisitions in the Cayman Islands and adjusted its interest payments against the profits generated by its newspaper operations in Britain. Given that these deductions from profits are more valuable for firms located in high tax countries such as Britain, firms will be inclined to finance acquisitions in high tax countries with as much debt as possible. This route to tax planning helps MNEs choose the terms of their debt contracts by leveraging their multinationality (Hines Jr. & Rice, 1994) and helps retain tax liabilities as profits. Based on these arguments and evidence, we hypothesize that:

*H2: Firm profitability will be positively related to tax haven investment*

Minimization of tax liability can also be effected by other means. In addition to the debt contracts mentioned above, transfer pricing is another mechanism through which firms minimize their tax liability by setting suitable prices for intra-firm transactions. Such transactions reduce the taxable portion of firm income in the higher tax jurisdiction by the amount of the purchase made by another part of the firm located in the tax haven (Desai, Foley & Hines Jr., 2006). For example, if a patent obtained by a firm in the United States is licensed to a tax haven affiliate, the firm can successfully shift profits outside the US if the royalty payment it earns in return is lower than the true value of the patent license. The company *Bausch & Lomb* adopted this approach when it established a subsidiary in Ireland to produce contact lenses based on a technology that was developed in New York. The lenses produced from the Irish facility were subsequently sold to the parent and to affiliates in other countries. In exchange for the profits shifted to Ireland, the Irish subsidiary paid a minimal royalty fee (equivalent to 5% of its sales) for the technology transferred from New York. However, it is important to note that transfer pricing benefits do not always result in zero tax liability at the tax haven jurisdiction. Even if transactions are serialized in tax havens at nominal interest rates, the savings produced by such deductions oftentimes far exceed the tax liability on profits in tax haven jurisdictions.

Another mechanism used by firms to engage in administrative arbitrage, called income factoring, involves transferring the accounts receivable portion of a firm's balance sheet to a subsidiary located in a tax haven. The factor then assumes the responsibility of collecting accounts receivable from the buyer in exchange for commission or fees from the firm. The difference in the sale price of the receivables account and the present value of the money represents factoring income earned by the tax haven subsidiary (Hines Jr. & Rice, 1994).

A firm's tax situation, *vis-a-vis* its tax liability is likely, ceteris paribus, to lead it to demand more tax relief, especially if the firm chooses to be aggressive with respect to tax reduction, due to incentives provided to managers, for example, a strong motivation for tax directors to reduce the tax liability (Armstrong et al., 2012). An effective way to obtain tax relief is to utilize tax havens. Thus, we hypothesize that:

*H3: Firm's tax liability will be positively related to tax haven investment*

The role of the treasury function in a corporation is to monitor current and projected cash flows to ensure that the firm has sufficient cash to fund its operations and excess cash, if any, is properly invested. Prior research has identified that firms can facilitate the smooth flow of capital between group members by incorporating their treasury function in tax havens (Richardson & Taylor, 2015). This incorporation helps firms manage their liquidity while allowing them to bypass the stringent requirements surrounding information flows and capital management. The preservation of liquidity is an important motivation for firms in growing markets such as emerging economies, and this preservation can be related to tax reduction, since taxes paid are paid by reducing current assets, and current assets' ability to cover current liabilities is the key dimension of corporate liquidity. Empirically, it has been observed that firms with a proclivity to preserve liquid assets may favor tax policies that achieve this end (Graham & Tucker, 2006). Consequently, we hypothesize that the firm's financial slack (as reflected, for example, in its current ratio) will be positively related to the use of tax havens. Consequently, we hypothesize that:

*H4: Firm financial slack will be positively related to tax haven investment*

## DATA AND METHODS

***Data***

Data on outward FDI by Indian firms was obtained from the RBI (Reserve Bank of India) Foreign Exchange Department website. Since June of 2007 this website provides a monthly report on the outflows of overseas direct investment (ODI) by Indian companies that represents a compilation of information reported by authorized dealers in ODI. It includes details on the mode of international entry, host country and financial commitment (i.e., equity, loan and guarantees issued in USD million) made towards the entry. Following prior literature (Dharmapala & Hines Jr., 2009; Diamond & Diamond, 2002), we identified forty-one jurisdictions that are typically considered tax havens, and find that Indian firms have engaged in outward FDI only in the following locations: Mauritius, British Virgin Islands, Cyprus, Cayman Islands, Channel Islands, Jersey, Bermuda, Isle of Man, Panama, Liberia, Bahamas, Guernsey and Seychelles. These jurisdictions collectively accounted for investments worth $60,363.73 million in the study period. The investments during the study period were spread over these 13 tax havens and 51 industries, with the manufacturing sector accounting for 43.2% and the services sector accounting for 26.7% of the net FDI outflows.

The second data source, PROWESS, contains data on firm-level and industry-level variables and is maintained by the Center for Monitoring of the Indian Economy (CMIE). PROWESS reports financial statements, share prices, and other relevant data for publicly traded Indian corporations from 1989-90 onwards, and covers both listed and unlisted companies. For listed companies, information is sourced from stock exchanges and annual reports. PROWESS has been widely used in prior research for data on Indian firms (Agnihotri & Bhattacharya, 2015; Sahasranamam, Arya & Sud, 2019). We used firm-level and industry-level data from PROWESS for the period 2007-2017.

Data from the RBI and PROWESS databases were merged to construct the dataset used in this study. This resulted in a total of 3207 FDI-based entries, each representing an Indian firm's investment into an overseas tax haven in a particular period. The tables and figures in this paper have all been drawn up from this composite dataset. We coded host and home industries to use standardized industry segments using the National Industry Classification (NIC) 2008 format.

***Measures***

The dependent variable *tax haven usage* is measured as the ratio of cumulative investments into tax havens upto time t as a ratio of assets. The firm-level independent variables include firm size, financial performance measured as return on assets (ROA), financial slack (current ratio), and corporate taxes paid. We operationalize *firm size* as the logarithm of assets of the firm in year t. *Corporate tax paid* is measured as the ratio corporate tax to income, in order to weight it appropriately. In addition, we include industry dummies in regression analyses. There is also some evidence that a firm's leverage (e.g. its debt to equity ratio) may lead it to be more efficient (Richardson & Lanis, 2007). One straightforward way of increasing cash flow to cover the debt payments is through minimization of taxes through the use of tax havens and other modes of corporate tax aggressiveness. We therefore control for *firm leverage, operationalizing it as the debt to equity ratio.* We also control for *firm age* measured as the number of years since incorporation. We categorize firm age into four categories, which we detail in a subsequent section.

In addition, we classify each tax haven investment made by Indian firms in the observation period based on their FDI motivations (Asset/Resource, Efficiency and Market-seeking) through a coding process. The process of identifying investment motivations of firms was facilitated through design of a codebook. In cases where the motivations accompanying firm investments were explicitly mentioned in annual reports, news aggregator databases and press releases, we used such information to directly identify the category of investment motivations. We assigned labels '1', '2' and '3', representing no specific hierarchy or order, to asset-seeking, efficiency-seeking and market-seeking investment motivations respectively. Since we manually carried out the coding for investment motivations, the coding procedure was tested for conformity with three doctoral students based on randomly drawn samples of 30 FDI entries each. The coders concurred with our assessment on 78 of the 90 entries, corresponding to percentage conformity of 86.4 per cent. In cases where there were disagreements, a discussion with the coders revealed that the cases involved more than one motivation accompanying a firm's overseas investments. In such cases, the dominant motivations for those entries were finalized subsequent to an independent discussion with the coders. In case of FDI entries where motivation information was not explicitly mentioned, we relied on indirect methods to infer the investment motivation.

***Analyses***

In the results presented below, we display a variety of trends of investment patterns of Indian MNC investments in tax havens. We also provide results from statistical analyses like t-tests and ANOVA, as well as a multivariate regression analysis of the drivers of tax investment by Indian MNCs. The multivariate regression model is described below:

$$\textit{Tax haven usage} = a + b_1{*}\textit{Firm Size} + b_2{*}\textit{ROA} + b_3{*}\textit{Corporate Tax paid} + b_4{*}\textit{Current Ratio} + b_5{*}\textit{Firm Age} + b_6{*}\textit{Debt-to-Equity Ratio} + b_7{*}\textit{Services Dummy} + b_8{*}\textit{High-technology Dummy} + b_9{*}\textit{Mining Dummy} + b_{10}{*}\textit{Agricultural Dummy} + b_{11}{*}\textit{Construction Dummy} + \textit{Year Dummies} + \textit{error}$$

## RESULTS

### Profiling Firm-Level Patterns of Tax Haven Investments from India

We begin by looking at patterns of tax haven investment activity by Indian firms over the period 2007-2017. The pattern of FDI into tax havens as well as the total FDI on an annual basis for this period is shown in Figure 1.

[Insert Figure 1 about here]

Indian investments in tax havens have displayed an overall declining trend since 2010. The significant decline in tax haven investments, particularly since 2011, is likely attributable to the signing of various agreements between India and tax haven jurisdictions, governing double tax avoidance and free exchange of tax information in this period - Bermuda (7th October, 2010), British Virgin Islands (9th February, 2011), Cayman Islands (21st March, 2011), Isle of Man (4th February, 2011) and Jersey (3rd November, 2011).

This trend largely mirrors  India's weak enforcement of tax agreements. Despite the signing of the Double Taxation Avoidance Agreement (DTAA) between the Indian government and Egypt in 1969, for example, enforcement was largely absent until around 2010, when the agreements listed above with Bermuda, Cayman Islands and other major tax havens were signed or amended. This reflects an aspect of weak Indian institutions that were exploited by firms (Doh, Rodrigues, Saka-Helmhout, Makhija, 2017; Khanna & Palepu, 2005) to avoid taxes (see also Reddy, 2016 for more on tax concerns in weak institution countries such as India).

There are other noteworthy reasons for the declining trend in the later part of our observation period. For example, in 2016, India signed an accord with Mauritius to revamp a 33-year-old DTAA to plug loopholes that encourage treaty shopping and round-tripping. Previously, foreign companies earning fees for providing technical services in India avoided paying tax by taking refuge in the lack of explicit stipulation in the previous treaty. Under the new regime, in contrast, foreign investors do not have any incentive to route their business with India through Mauritius. Moreover, India also decided to tax the interest earned by Mauritius tax residents at a maximum rate of 7.5%. Further, the introduction of the General Anti-Avoidance Rule (GAAR) from 2013 is also likely to have strengthened the powers of the Indian tax authorities to crackdown structures that result in tax avoidance through offshore jurisdictions.

We next surveyed the affiliation of Indian firms that invested significantly in tax havens in the period of our study. As Table 1 (representing the top 15 Indian firms investing in tax havens) shows, a significant proportion of these firms are associated with business groups, have rich international experience, earn billions in revenues, and represent the mining, energy, infrastructure and healthcare sectors. With the sole exception of ONGC - a state-owned oil exploration firm, tax haven investments are dominated by large, private organizations. Further, given their high degree of internationalization and geographical distribution of revenues, these firms benefit from diversification of investments, deferring taxes, asset protection, tax-free compound investment earnings, greater privacy and flexibility in banking, reduced taxation, avoidance of currency restrictions and currency diversification, among other benefits (Barber, 2006).

[Insert Table 1 about here]

As highlighted earlier, a sizable proportion of Indian firms using tax havens in our sample were owned by Indian business groups. Business group-affiliated firms engage in extensive internal selling and buying of intermediate and final goods. In Korean chaebols, internal transactions have been found to account for close to 73% of the total sales of firms (Chang & Hong, 2000). Such internal trade can cross-subsidize other businesses through internal pricing schemes, can avoid taxes and facilitate the flight of capital (Sikka & Willmott, 2010). In fact, extant literature relates large size and higher corporate control in business groups to a higher propensity to redistribute profits among other businesses and geographies (Bertrand, Mehta & Mullainathan, 2002; George & Kabir, 2008). This ensures that the location of the 'taxable event' is moved away from the parent country and from countries with high corporate tax rates to offshore locations through a complex holding structure. Figure 2 plots tax haven-related FDI by firms associated with business groups versus total FDI over the study period.

[Insert Figure 2 about here]

We next investigated the tax haven locations favored by Indian firms. Figure 3 shows the distribution of tax haven-related FDI over these jurisdictions. Mauritius emerged as the single largest destination accounting for 65% of FDI outflows from India in the observation period. British Virgin Islands (11.5%), Cyprus (10%), and Cayman Islands (6%) were the next three preferred tax haven destinations for Indian firms. Collectively, close to 94% of India's outward FDI in tax havens is concentrated in these four jurisdictions.

[Insert Figure 3 about here]

We also considered how Indian firms are financing their investments into tax havens, and found that in terms of raising capital for overseas expansion, the most preferred route for tax haven investments has been through the issue of bank guarantees. International expansion through guarantees accounts for 51.2% of the total tax haven investments made by Indian firms, followed by equity issues (34.4%) and loans (14.4%). We observe hat manufacturing firms prefer investments through bank guarantees as close to 56% of the tax haven investments came from this source. As discussed earlier, Indian firms use their existing Wholly owned Subsidiaries (WOS), Joint Ventures (JVs) or Special Purpose Vehicles (SPVs) to fund acquisitions through leverage buyouts in a bid to reduce risk on domestic balance sheets. A substantial portion of these investments are made through SPVs set up for this purpose in offshore locations. The funding for such investments is often arranged through overseas banks backed either by shares or assets of the target company and/or guarantees by the Indian parent (Khan, 2012).

In the case of equity financing, we observe that firms in the manufacturing sector are the most prominent issuers of equity (37%), followed by those in the mining and extraction sectors (18.4%). Overseas investments, particularly in extractive industries, support rapid economic growth, industrialization and urbanization in the domestic economy and guarantee a long-term, stable supply of natural resources to a country to hedge against rising commodity prices. To this end, the Indian Government accorded particular importance to this sector through favorable concessions. While banks in India are usually not permitted to fund the equity contributions of the promoters, domestic banks extended financial assistance to Indian companies for acquiring equity in overseas JVs/WOSs or in other new or existing overseas companies from a strategic perspective (Khan, 2012). The Reserve Bank of India –the central bank with adequate supply of foreign exchange in its reserves, relaxed the norms for domestic companies investing abroad by removing the ceiling for raising funds through pledge of shares, domestic and overseas assets. These actions go a long way in explaining the observed trend in issuing equity to capitalize investments into tax havens.

Debt financing contributes to 14.4% by way of the outward investments made by Indian firms into tax havens. There are potentially many reasons for the conservatism of Indian firms in using debt financing . First, a high level of debt in OFDI may constrain firms from borrowing additional funds and subject them to stringent debt-servicing covenants. Second, firms can use limited resources in this effort and miss the opportunity of engaging in new, profitable investments. Third, debt-financing firms are more likely to be exposed to the uncertainties of recession, litigation, changes in the regulatory environment or outright liquidation. We see in our sample that preference for debt financing was only prominent among financing, leasing and credit granting firms (23.5%).

**Strategic Motivations for Tax Haven Investments**

The international business literature has identified four strategic motivations that govern a firm's FDI investments in foreign markets: resource seeking, market seeking, efficiency seeking and asset seeking (Buckley et al., 2009). Since both resource-seeking and strategic asset-seeking FDI motives reflect exploration of advantages abroad, we follow Buckley et al (2009) and use these terms interchangeably in this paper.

Table 2 provides the distribution of tax haven investments by FDI motivation type. We see in Table 2 that 80% of the investments made by Indian firms into tax havens were guided by the pursuit of efficiency, followed by market-seeking (14%) and asset/resource seeking (6%) considerations. The dominance of efficiency seeking investments corroborates the findings of Desai, Foley, & Hines Jr. (2006b) who argue that investments in tax havens lead to an increase in firm efficiency and decreases tax competition. For example, Godrej Consumer Products, a diversified Indian firm, used its two Mauritius-based subsidiaries to service its loans. Bharti Airtel, the Indian telecommunications company with overseas presence in Africa, used its Mauritius subsidiary to de-layer and simplify its holding structure and synergies[5]. Given that tax havens enable tax planning in a way that offsets revenue erosion, firms can in turn invest their savings into non-tax havens. Dharmapala (2008) validates this view by pointing to the fact that corporate tax collection in US and UK has increased despite the prevalent usage of tax havens.

[Insert Table 2 about here]

**Profiling Industry-Level Patterns of Tax Haven Investments from India**

We next study domestic industry sectors that display tax haven investment activity. Jones & Temouri (2016) noted that technology-intensive manufacturing firms, with their high levels of intangible assets, are likely to invest in tax havens, as this enables them to transfer their high-value intellectual assets to tax havens to minimize taxation at home. They found too that firms in service industries display a higher likelihood of investment into tax havens. We find evidence to support their claims in our study. Among manufacturing firms, we see dominant participation from technology-intensive pharmaceutical firms and computer/electronic/optical product firms in tax havens. We also notice strong participation by financial service firms and IT/IT-enabled service firms in tax havens in our study. The mining and extraction sectors, particularly that of extraction and refining of crude/petroleum, emerged the single largest industry that had exposure to tax havens. We have provided the list of top 15 sectors with tax haven investments in Table 3.

[Insert Table 3 about here]

**Results from Statistical Analyses**

We profiled firms engaging in FDI in tax havens based on their incorporation period to get a broad sense of whether firm age influences the participation decision. Older firms, for example, may have more concerns over

[5] See https://www.business-standard.com/article/economy-policy/indian-corporates-invested-5-6-bn-abroad-through-mauritius-in-2016-17-117052600151_1.html, accessed on 20th April 2018

legitimacy and reputation and this may dissuade them from tax haven usage. We adapt the classification scheme of Nayyar (2008) and Pradhan (2007) and divide firms into four 'age' groups that closely mirror the maturation phases of the Indian economy. The phases include: (a) The Post-Independence Phase (Pre-1970s), (b) The Pre-liberalization or the Restrictive Policy Phase (1970s to 1990s), (c) The Permissive Policy Phase (1990–2005) and (d) The Liberal Policy Phase (2005 onwards). We utilized an ANOVA that tested differences in tax haven usage across four periods of incorporation (pre-1970, 1970-1991, 1991-2005, post 2005) that correspond to various key transition periods in terms of India's economic development since 1947. We see significant differences across these periods with increasing usage taking place in later as compared to earlier periods of incorporation in Table 4.

[Insert Table 4 about here]

We next utilized t-tests to see whether some plausible firm-related variables such as firm age, size, current ratio, debt-to-equity ratio, return on assets and corporate tax paid varied systematically across the two modes of entry (wholly owned subsidiary versus joint venture) in tax havens. We observed that t-test for most of these variables were not significant, except for firm size, which was significantly higher ($p < .05$) for firms employing the joint venture mode of entry (see Table 5).

[Insert Table 5 about here]

Finally, we utilized a random effects panel regression model to test our exploratory hypotheses about the factors that may plausibly affect the tax haven investments by Indian firms across our sample period. Descriptive statistics and correlation matrix are provided in Tables 6 and 7 respectively. From Table 6, we note that the average firm size of the sample is 26 years. We also note that a significant proportion of the sample includes firms from services (39%) and high technology industry (33%), which closely mirrors with the dominance and global recognition that Indian firms have had in Information Technology (IT) services and pharmaceutical sectors (Chatterjee & Sahasranamam, 2018). The results from the regression model are presented in Table 8.

[Insert Table 6, 7, 8 about here]

The specified multivariate regression (see Table 8) estimated using panel regression model indicates that firm size does not significantly influence the usage of tax havens. Thus, we do not find support for Hypothesis 1. Firm age – employed here as a control – also displays no significant effect. Similarly, the relationship between financial performance and tax haven usage is also not significant, leading to no support for Hypothesis 2. These effects differ from earlier findings by Taylor et al., (2015) for publicly traded Australian firms and arguments related to efficiency seeking (Rego, 2003). However, we believe that it is possible that our findings for larger, older and high financial performance firms may be attributed to these firms being more concerned with adverse reputational effects from the use of tax havens that are related to being seen as less concerned with the national interest than are younger and smaller firms (Sahasranamam, Arya & Sud, 2019). We find a positive significant relationship ($\beta = 0.292$; $p < 0.1$) between corporate tax paid and tax haven usage. This supports Hypothesis 3, suggesting that firms paying more in corporate taxes are more likely to use tax havens to avoid taxes. Further, firms with more liquidity are found to use tax-havens to a greater extent ($\beta = 0.009$; $p < 0.05$) and this may be related to these firms proclivity to preserve liquid assets. This supports Hypothesis 4.

## DISCUSSION AND CONCLUSION

The globalization of Indian businesses has resulted in an increased use of offshore financial centers, tax havens and other special purpose entities for channeling outward investments. However, the list of countries that are considered tax havens, and their roles and functions have not changed much since the 1980s (Palan et al., 2010). While these tax havens may individually not appear very large, collectively they play an important role in the global economy. By undermining the regulatory processes of jurisdictions, they provide a cloak that protects banks, other financial institutions, and international business transactions from regulatory scrutiny. Further, due to this lack of transparency, they can help misallocate the costs and benefits of globalization in favor of the global elite. This places tax havens at the epicenter of globalization; therefore understanding how firms use them has implications for businesses and policymakers alike. As the first to investigate in some detail the utilization of tax havens by Indian MNCs, our research contributes to this narrative and suggests potential research questions for investigation.

### *Theoretical implications*

Our multivariate regression findings add to the sparse literature on intra-country determinants of tax havens usage, in contrast to prior studies (Jones & Temouri, 2016) that investigate cross-country determinants. Our analysis of intra-country determinants within the Indian context complements the work of Taylor et al. (2015) that investigates the determinants of tax haven utilization by 200 publicly listed Australian firms. Their work focuses principally on the impact of transfer pricing, intangible assets and their interaction. We focus, in contrast, on more fundamental variables such as firm size, profitability, financial leverage, financial slack, corporate tax payments, firm age and industry classification as determinants, finding significant positive effects for corporate tax paid and financial slack.

Consistent with prior literature, we find support for tax liability as a key determinant of investments into tax havens. We expected this effect to be significant despite the visible decline in tax haven investments from India for two reasons. First, treaties such as the DTAA help only in reducing the investments made into India through the tax-haven route. They do not affect the capital flows from Indian firms into various tax havens. Second, separate legislations need to be formulated to ensure that companies pay taxes in jurisdictions where they generate profits and not in the countries where they are domiciled. This requires independent negotiations with individual countries to amend lopsided DTAA agreements. As we have argued earlier in this paper, the Indian Governments of the past have not been especially forthcoming in amending and enforcing these agreements. As Vaidyanathan (2017) observes, India has categorized tax evasion and capital flight as income tax related issues and not as economic offences that inflict damage on the national economy. We attribute this leniency primarily to two reasons. First, such unilateral measures could cost developing countries such as India significant foreign investments required for its development, and could also have geopolitical ramifications considering how they undermine the authority of OECD as the arbiter of global trade policies. Second, any stringency in taxing multinationals would pave the way for an increase in tax disputes, further diminishing the ease of doing business scores of the country. Such constraints considerably slow down the pace of reforms and provide avenues to firms looking to reduce tax liabilities through institutional arbitrage.

In addition to tax benefits, we infer that certain strategic considerations temper a firm's proclivity to use tax havens in pursuit of efficiency. On the one hand, we do not see any effect of firm age, firm size and financial performance on investment exposure to tax havens, possibly owing to reputational considerations. This finding relates to prior research that associates reputational costs with tax haven usage (Gordon, 1989; Hanlon & Slemrod, 2009). On the other hand, we do see firms with high liquidity being more likely to use tax havens. Both these findings support the existence of a thoughtful approach to tax haven usage that differs from the traditional explanations that have been advanced to explain corporate propensity to use tax havens. However, at present, we can only speculate on how the evident prioritizing of the pursuit of efficiency and other strategic considerations are driven by India's institutional context (Khanna & Palepu, 2005; Sahasranamam & Ball, 2018).

***Practical Implications***

India has turned its attention in recent years to cracking down on shell companies and revising its existing tax treaties with tax haven jurisdictions. Particularly, the amending of the DTAA agreements with several tax jurisdictions with prospective effect has already resulted in a decreasing trend of outward FDI routed through tax havens in the recent financial years as can be observed in Figure 1. From a public policy point of view, will these measures signal the end of the road for tax havens on the scale previously observed? Or will it be the case that Indian firms shift to uncooperative[6] tax regimes that do not measure up to the OECD standards of transparency and exchange of information? It will be interesting to see how these issues play out going forward.

Some initial, interesting trends might already be forming, however. For example, while Indian investments into Mauritius, British Virgin Islands and Cyprus have declined over FY 15-16 and FY 16-17, investments into Jersey and Panama have increased over the same period. Probing this disparity in investment patterns calls for deeper discussions in public policy around change dynamics in the economic geography of Indian corporate investments into tax havens.

In addition, practicing managers in India, and their counterparts overseas looking to invest in India may well find it useful to know what their more aggressive rivals in India are doing in terms of tax haven usage as well as their motivations for doing so. It is possible that variations in managerial characteristics such as managerial power may also drive tax aggressiveness, as has been found to be the case in China (Yang, Liu, Liu & Li, 2019). Managerial diversion of rents from activities such as tax evasion from stockholders to managers under conditions of weak governance and weak investor protection, as found in a twenty-eight country study by Atwood & Lewellen (2018) also may be a strong motivator, as may the role of equity provided to managers as shown in work by Desai & Dharmapala (2006) and Seidman & Stomberg (2008). Integrating these findings with our research could help in deliberations by corporate directors and managers in terms of (a) the decision to engage in tax avoidance through tax havens, (b) the formulation of related policies on the extent and transparency of disclosure that may help bolster firm

[6] See http://www.oecd.org/countries/monaco/listofunco-operativetaxhavens.htm for a list of uncooperative tax havens

reputation of firms operating in tax havens and perhaps lower its costs of transacting with stakeholders such as capital providers, and, (c) the formulation of other managerial responses to strategic tax-avoidance behaviors.

***Limitations and possible avenues for future research***

In this study, our ability to identify the extent to which the Indian context matters, has been limited by our data sources. Several key interesting questions remain: for example, what is the evidence on the strength of legal enforcement of tax legislation in India? Similarly, do efficiency and other strategic motivations reflect attempts to circumvent the limitations posed by institutional voids (Khanna & Palepu, 2005) in India? Future research can help address these questions. Future research could also expand on our initial analysis by investigating transfer pricing and other non-tax motivations as key determinants in India, as well as the flow of funds resulting from transactions between Indian firms and their tax haven affiliates. At present, data is not available on these variables. We are hopeful, however, that increased data availability on these and related variables would also permit testing theories of tax haven usage in light of exciting new theories in international business. For instance, the 'Casino Model' of internationalization that represents a variant on the Uppsala paradigm (Hakanson & Kappen, 2017) or the Paul & Sanchez (2018) model of firm internationalization that uses the typology of conservative, predictable, and pacemaker firms and markets (CPP). Within this CPP typology, for example, the existence of a tax agreement between two countries may generate a predictable market. Thus, studies focused on particular arrangements (e.g., India-Mauritius linking) within this predictable market context would be useful[7].

Earlier, we saw a clustering of tax haven investment activity in certain sectors such as financial services, mining/extraction, manufacturing of pharmaceuticals, and the like. While Dunning's location advantages are available to all firms investing in tax havens, these need to be combined with the ownership advantage of a 'tax-avoidance blueprint' to generate competitive advantage abroad. This requires generation of insights into how firms develop and nurture firm-specific advantages that assist in tax avoidance. Desai and Dharmapala (2006) investigated the role of organizational support systems and concluded that the institution of measures such as high-powered incentives increased the likelihood of managers employing tax havens for avoidance purpose. If incentives drive managers to engage in ethically-dubious practices, do other governance constraints and reputational concerns inhibit or encourage their proliferation as work by Atwood & Lewellen (2018) and Seidman & Stomberg (2017) suggests? Furthermore, what is the role of managerial characteristics such as power in terms of moderating these effects? It will also be interesting to understand how such organizational practices get legitimized across organizations of different sizes and levels of internationalization. Given the high workforce mobility among top-management talent in India, are such practices institutionalized within organizations by way of normative isomorphism? Another related area for future research would be from the corporate governance perspective to understand the role of top management teams and boards on the usage of tax havens by emerging market MNCs (Agnihotri & Bhattacharya, 2015; Sivakumar, Sahasranamam & Rose, 2017).

The focus of future studies could also be expanded to consider the role of multinationality (Rego, 2003), as well as ownership forms such as business groups, government, and family ownership (Cordeiro, Galeazzo, Shaw,

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[7] We are grateful to an anonymous reviewer for this insight.

Veliyath & Nandakumar, 2018; Sahasranamam, Arya & Sud, 2019) as determinants of tax haven usage. The ownership structure of tax evaders appears to matter, as there is evidence that internationally diversified business groups make use of tax differences across countries through intra-company transactions to reduce the overall tax rate (Eden, 2009; Rego, 2003). Likewise, family-controlled firms (Cordeiro et al., 2018) may favor tax havens for reasons of secrecy and freedom of action. This raises the question as to what ownership forms encourage use of tax havens to take advantage of arbitrage opportunities, and if so, why? Su and Tan (2018) shed initial light on this question by concluding that business groups with high levels of product and international diversification are more likely to invest in tax havens. It would be interesting to investigate this question across multiple emerging market contexts because business groups differ across these contexts in terms of their vertical and horizontal specializations.

International business scholars could also shift their focus from 'tax structures' *per se* to other factors that deserve equal, if not more importance going forward. For instance, past research has not extensively considered the political and economic stability of tax havens. For example, Montserrat is located in an active volcano zone, while Liberia is under constant threat of the after-effects of a civil war; and Mauritius recently witnessed political turmoil while facing climatic change threat with rising ocean levels. Future research can focus on such aspects of tax havens as well, and on whether existing theories of the location of FDI activity be adapted to explain the location choices of tax haven FDI investments taking political and economic considerations more fully into account.

Our study provides a large sample analysis of listed firms, relying on publicly available information on tax haven usage. As such, like the Taylor et al. (2015) study, it is limited in that it does not investigate unlisted firms and new ventures. In recent years, there has been a marked increase in the number of new ventures within India (Sahasranamam & Sud, 2016), many of which are unlisted. Therefore, exploring the tax haven usage by such firms is another area for future research.

Large scale studies such as ours that rely on secondary databases would benefit from augmentation through case studies and surveys of practicing managers and government officials, especially those in regulatory bodies. From Figure 1 and from earlier discussion on treaties signed by Indian governments with tax haven countries, we note that since 2011 there has been a decline in the use of tax havens. This opens up scope for future research to consider approaches like natural experiments that delineates different time periods (Sahasranamam, Rentala & Rose, 2019) to understand variations in firm antecedents and regulatory influences on tax haven usage. There is also need for qualitative research studies that draw on insights from case studies of particular tax haven usage arrangements (e.g. the India-Mauritius linkages) and aggregations of case study findings using small to medium sample approaches such as qualitative comparative analysis. We trust that future research will capitalize on the potential for such studies in this area.

**Conflict of interest statement**

On behalf of all authors, the corresponding author states that there is no conflict of interest.

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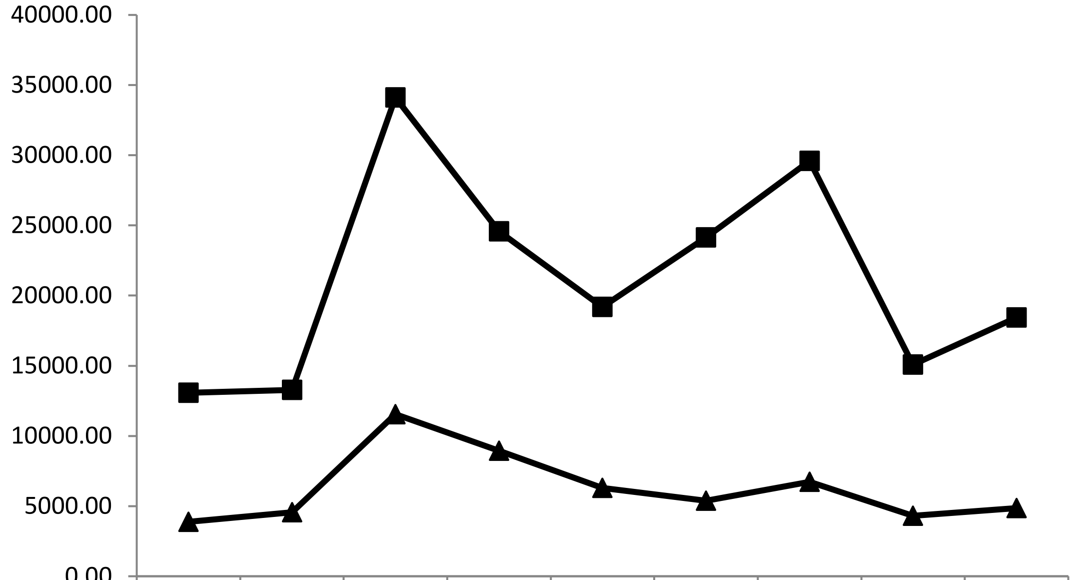
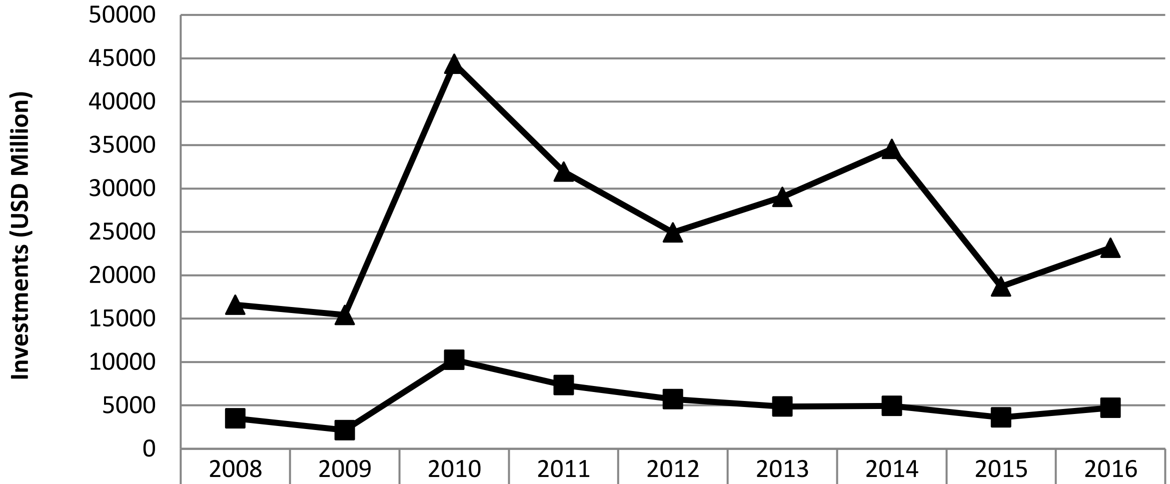
**FIGURE 1: TRENDS IN TAX HAVEN FDI AND TOTAL FDI FROM INDIA (in USD Million)**




| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|
| Total FDI | 13074.88 | 13274.89 | 34121.08 | 24577.92 | 19181.91 | 24152.13 | 29601.06 | 15077.57 | 18435.25 |
| Tax Haven FDI | 3880.41 | 4562.45 | 11546.96 | 8936.12 | 6293.32 | 5383.59 | 6720.14 | 4308.00 | 4860.35 |

**FIGURE 2: BUSINESS GROUP FDI VS. TOTAL FDI IN TAX HAVENS (in USD Million)**




| | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|---|---|---|
| Total FDI | 13074.88 | 13274.89 | 34121.08 | 24577.92 | 19181.91 | 24152.13 | 29601.06 | 15077.57 | 18435.25 |
| BG FDI | 3523.335 | 2153.81 | 10246.43 | 7349.752 | 5736.465 | 4881.779 | 4942.811 | 3610.434 | 4711.202 |

**FIGURE 3: TOP INDIAN TAX HAVEN INVESTMENT DESTINATIONS (in USD Million)**

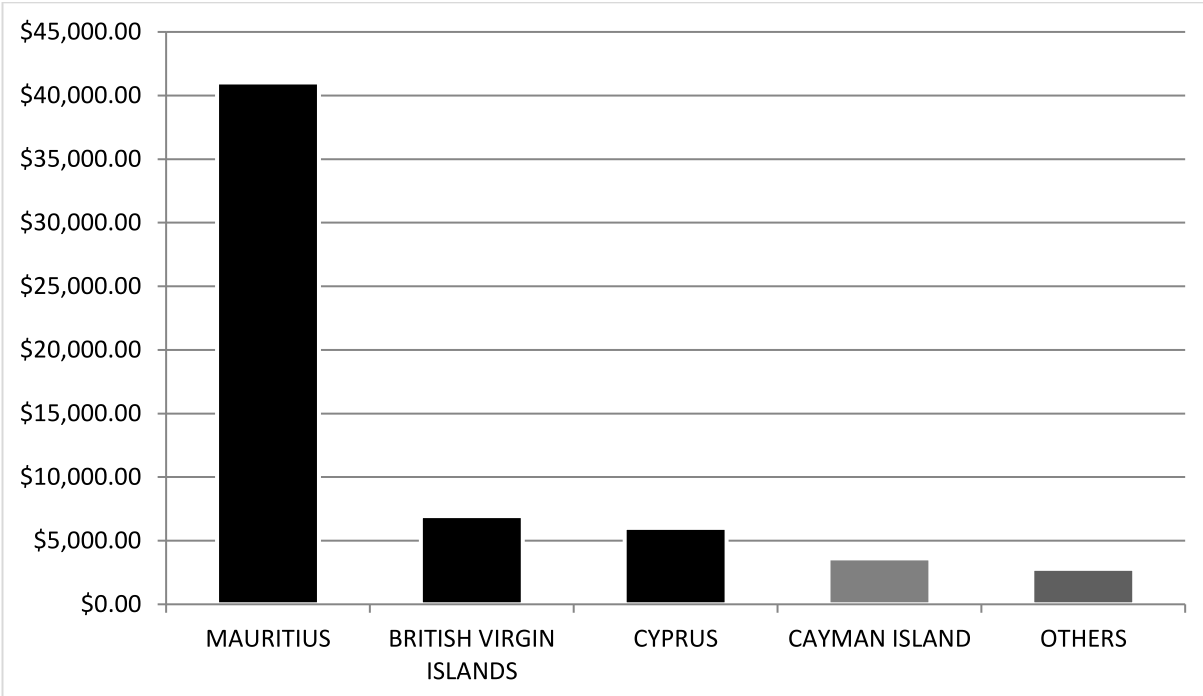


**TABLE 1: TOP 15 INDIAN FIRMS INVESTING IN TAX HAVENS (2007-2017)**

| ID | Name of the Indian Company | Sector of Activity (2- Digit NIC) | Investment (USD Millions) |
|---|---|---|---|
| 1 | Reliance Industries Ltd. | Manufacture of other petroleum | $8,539.55 |
| 2 | ONGC Videsh Ltd. | Extraction of crude petroleum | $3,659.92 |
| 3 | Videocon Oil Ventures Ltd. | Other non-specialized wholesale trade | $2,520.25 |
| 4 | Essar Steel India Ltd. | Manufacture of hot-rolled and cold-rolled products of steel | $2,411.35 |
| 5 | Bharti Airtel Ltd. | Activities of other wireless telecommunications | $2,381.11 |
| 6 | Vedanta Ltd. | Manufacture of basic precious and other non-ferrous metals | $2,200.00 |
| 7 | Godrej Consumer Products Ltd. | Manufacture of cosmetics and toiletries | $1,909.20 |
| 8 | Sun Pharmaceutical Industries Ltd. | Manufacture of allopathic pharmaceutical preparations | $1,867.79 |
| 9 | RHC Holding Private Ltd. | Other credit granting | $1,747.82 |
| 10 | GMR Infrastructure Ltd. | Other credit granting | $1,666.25 |
| 11 | Suzlon Energy Ltd. | Manufacture of engines and turbines | $1,653.06 |
| 12 | Videocon Industries Ltd. | Manufacture of televisions, television monitors and displays | $1,334.28 |
| 13 | Reliance Energy Generation & Distribution Ltd. | Electric power generation, transmission & distribution | $1,300.48 |
| 14 | United Spirits Ltd. | Distilling, rectifying and blending of spirits; ethyl alcohol production from fermented materials | $1,268.32 |
| 15 | Tata Power Company Ltd. | Electric power generation by non-coal based thermal | $1,258.79 |

**TABLE 2: STRATEGIC INVESTMENT MOTIVATIONS BY INDIAN FIRMS FOR TOTAL TAX HAVEN INVESTMENTS (2007-2017)**

| Investment Motivations | Value of Investment (USD Million) | Value as a percentage of Total Tax Haven Investments |
|---|---|---|
| Efficiency Seeking | 48448.37 | 80% |
| Market Seeking | 8584.99 | 14% |
| Resource/Asset Seeking | 3330.37 | 6% |

**TABLE 3: SECTORAL COMPOSITION OF INDIAN TAX HAVEN INVESTMENTS (2007-2017) – TOP 15 INDUSTRIES**

| Parent Industry (2- Digit NIC) | Investment (USD Millions) |
|---|---|
| Manufacture of Coke and Refined Petroleum Products | $8,632.83 |
| Extraction of Crude Petroleum and Natural Gas | $6,331.17 |
| Manufacture of Basic Metals | $5,972.81 |
| Financial Service Activities, except Insurance and Pension Funding | $5,374.51 |
| Manufacture of Chemicals and Chemical Products | $3,984.10 |
| Electricity, Gas, Steam and Air Conditioning Supply | $3,711.18 |
| Telecommunications | $2,503.68 |
| Computer Programming, Consultancy and Related Activities | $2,415.03 |
| Manufacture of Basic Pharmaceutical Products and Pharmaceutical Preparations | $2,317.43 |
| Manufacture of Machinery and Equipment | $1,708.61 |
| Wholesale Trade, except of Motor Vehicles and Motorcycles | $1,449.07 |
| Manufacture of Computer, Electronic and Optical Products | $1,378.56 |
| Manufacture of Beverages | $1,283.46 |
| Construction of Buildings | $1,206.22 |
| Accommodation | $1,079.90 |

**TABLE 4: ANOVA COMPARING TAX HAVEN USAGE BY FIRM INCORPORATION YEAR**

| **Firm Incorporation Period** | **Mean** | **Frequency** |
|---|---|---|
| Pre-1970 | 0.05 | 488 |
| 1971-1990 | 0.07 | 905 |
| 1991-2005 | 0.21 | 1,197 |
| 2006-Onwards | 2.74 | 362 |
| *ANOVA F-statistic* | *4.09*$^{**}$ | |

$^{**}p < 0.01$

**TABLE 5: T-TESTS COMPARING FIRM VARIABLES ON MODE OF ENTRY**

| **Variable** | **Joint Venture (mean value)** | **Wholly Owned Subsidiary (mean value)** | **p-value** |
|---|---|---|---|
| Firm Size | 0.09 | -0.01 | ***0.04*** |
| Firm Age | 0.10 | 0.06 | *0.29* |
| Return on Assets | 0.03 | 0.02 | *0.29* |
| Debt-to-equity ratio | 1.13 | 10.75 | *0.74* |
| Current ratio | 4.55 | 8.31 | *0.69* |
| Corporate tax paid | 0.03 | 0.04 | *0.68* |

**TABLE 6: DESCRIPTIVE STATISTICS**

| Variable | Mean | Standard Deviation |
|---|---|---|
| 1. Tax haven usage | 45.44 | 1723.66 |
| 2. Firm Size | 2076.19 | 17410.04 |
| 3. Firm Age | 26.01 | 20.28 |
| 4. Return on Assets | 0.02 | 0.25 |
| 5. Debt-to-equity ratio | 9.23 | 142.49 |
| 6. Current ratio | 8.82 | 106.47 |
| 7. Corporate tax paid | 0.04 | 0.30 |
| 8. Services industry dummy | 0.39 | 0.49 |
| 9. High technology industry dummy | 0.33 | 0.47 |
| 10. Mining industry dummy | 0.02 | 0.14 |
| 11. Agriculture industry dummy | 0.07 | 0.25 |
| 12. Construction industry dummy | 0.09 | 0.28 |

**TABLE 7: CORRELATION MATRIX**

| Variable | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. Tax haven usage | 1 | | | | | | | | | | | |
| 2. Firm Size | -0.00 | 1 | | | | | | | | | | |
| 3. Firm Age | -0.02 | 0.12* | 1 | | | | | | | | | |
| 4. Return on Assets | -0.03 | 0.00 | 0.08* | 1 | | | | | | | | |
| 5. Debt-to-equity ratio | -0.00 | -0.01 | -0.05* | -0.01 | 1 | | | | | | | |
| 6. Current ratio | 0.01 | -0.01 | -0.03 | -0.01 | -0.00 | 1 | | | | | | |
| 7. Corporate tax paid | -0.06* | -0.00 | -0.04* | -0.09* | 0.01 | 0.02 | 1 | | | | | |
| 8. Services industry dummy | -0.02 | 0.05* | -0.24* | -0.03 | 0.01 | 0.07* | 0.07* | 1 | | | | |
| 9. High technology industry dummy | 0.03* | -0.01 | 0.23* | 0.04* | -0.03 | -0.04* | -0.04* | -0.56* | 1 | | | |
| 10. Mining industry dummy | -0.01 | -0.01 | -0.03 | 0.01 | -0.01 | -0.01 | -0.00 | -0.11* | -0.09* | 1 | | |
| 11. Agriculture industry dummy | -0.01 | -0.01 | 0.02 | 0.00 | -0.01 | -0.01 | 0.01 | -0.21* | -0.18* | -0.03* | 1 | |
| 12. Construction industry dummy | -0.01 | -0.02 | 0.07* | -0.01 | 0.03* | -0.02 | -0.01 | -0.24* | -0.21* | -0.04* | -0.08* | 1 |

$^{*}p < 0.05$

**TABLE 8: MULTIVARIATE REGRESSION PREDICTING TAX HAVEN USAGE**

| Variable | Model 1 |
|---|---|
| **Firm size** | -0.276 |
| | (0.173) |
| **ROA** | -0.057 |
| | (0.039) |
| **Corporate tax paid** | 0.292+ |
| | (0.170) |
| **Current ratio** | 0.009* |
| | (0.005) |
| **Firm age** | 0.036 |
| | (0.045) |
| **Debt-to-equity ratio** | -0.039 |
| | (0.033) |
| **Services dummy** | 0.119 |
| | (0.139) |
| **High technology dummy** | 0.003 |
| | (0.111) |
| **Mining dummy** | -0.235 |
| | (0.173) |
| **Agriculture dummy** | -0.034 |
| | (0.146) |
| **Construction dummy** | -0.003 |
| | (0.144) |
| **Constant** | 1.369+ |
| | (0.817) |
| | Year dummies included |
| ***Overall $R^2$*** | *0.013* |
| ***Observations*** | *2,197* |

***Robust standard errors in parentheses***
***** p<0.01, * p<0.05, + p<0.1***