

**School of Accounting**

**Three Essays on Tax Haven Utilization, Cash Holdings and  
Determinants of Corporate Social Responsibility Disclosures:  
Evidence from Chinese Listed Firms**

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**This thesis is presented for the Degree of**

**Doctor of Philosophy**

**Of**

**Curtin University**

**November 2017**

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## **Declaration**

To the best of my knowledge and belief, this thesis contains no material previously published by any other person except where due acknowledgement has been made.

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university.

Signature:

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## **Acknowledgements**

During my time at Curtin I have had many amazing experiences, encountered remarkable individuals and been lucky enough to work with many of them. This thesis is the result, but first, I would like to thank the wonderful people involved.

First and foremost I wish to thank to my main supervisor, Associate Professor Grantley Taylor, deputy head of school at Curtin University's School of Accounting. He has been a great mentor since I first tutored accounting classes upon the completion of my masters studies. From the very beginning, he has supported my professional and academic career. Grantley gives the most generous and complementary references, so much so that I often wonder was it because that I sounded so unbelievably good that I didn't get a few "real" accounting jobs I applied for...? I cannot thank Grantley enough for supporting me, not only by guiding my research (Grantley helped me to come up with the topics and was involved in every step of the progress over the past four years), but also by providing emotional and moral support through frustrating times. I also want to thank him for the gentle reminders (something like "We should be ready to submit this week right?" on a Thursday...). As a result, I have been educated in how to make other people extremely guilty when they cannot meet agreed deadlines.

I am also eternally grateful to my co-supervisor, Associate Professor Alistair Brown, who also supervised my Honours thesis. I am deeply apologetic for dragging him into four more years of supervision after the first one and a half years of Honours studies. He is the most encouraging supervisor one could ever hope to have. Alistair used to correct every single line of my writing and would still use a very genuine tone

to say that I had done a fantastic job. He is also the most romantic accounting researcher, a true inspiration in so many ways (he is the only person who can make accounting theories so exciting!). Thanks to him, I understand drawing smiley faces can work just as effectively as writing “more theory please”.

To both of my supervisors, you made me the luckiest student.

Many more people have helped me during this journey. Dr Ahmed Alhadi and Dr-to-be Baban Eulawi have helped me immensely, by tutoring me in STATA and statistics. They are extremely smart. It is an absolute honour to know and work with them.

I would also like to thank the Head of School, Professor Saurav Dutta. Saurav only came to the school in July of this year, however, he made my last stage of PhD life so much more enjoyable than the past few years.

One special person I need to thank is Professor Yadong Luo from the University of Miami. I learned valuable lessons from him during a few hours of seminars and a short coffee catch up.

I also have many friends to thank (sounds unbelievable from an accounting nerd, I know). A very special thanks to Joseph Oliver, whom I have taken so much advantage of. Thanks for putting up with all of my nonsense, and proof reading everything I write (including these acknowledgements). I especially admire the generosity he has lent me in correcting my writing, knowing that my words of choice are “appalling” and my thesis is basically a grammatical landmine. Thanks to my Australian mum, “Captain” Maxine Duncan, who has lent her generous motherly love from the first day I met her. She is my hero. Thanks to Siew Cheng (another Dr-to-be also), who offered me my first

tutoring job at Curtin University. Siew is probably more responsible for the fact that I am not working as a 'real' accountant, than Grantley's generous reference letter. Thanks to Dr Yinhang Fan, who has been generously mentoring me to be a nice person (obviously, her job is not even half complete, positively speaking). Many thanks to my friends and colleagues who have remained friends with me: Professor Carmela Brigulio, Associate Professor Nena Lim, Dr Janine Rutledge, Dr S Zaung Nau, Dr-to-be Chris Symons, our teaching team members and many other great colleagues. All of you have made the university such an inspirational place to work at. Thank you to my friends who have cooked me dinners so many times when I was starving finishing work late. I am so lucky to have all of you in my life.

Lastly, I would like to thank my family, especially my parents (I was reminded several times). I understand they would have greatly preferred that I had invested my valuable time in getting myself married and possibly giving them a few grandchildren. Hopefully, one day, they will appreciate me for being a responsible adult, when their peers' children start to get divorced and their grandchildren become irritable teenagers. Thank you truly for your support, even though it is incomprehensible sometimes (the true Chinese style of love, I guess).

Leah Meng

November 2017

Curtin University

## **Abstract**

This study examines elements of tax avoidance activity, incentives to hold cash and determinants of corporate social responsibility (CSR) of Chinese listed firms over the 2006 to 2013 period. Evolution in compliance around tax avoidance and firms' CSR practices is particularly important in the Chinese context. Prior research has largely been carried out on the tax avoidance activities of firms in the U.S. or Europe, with little corresponding research in the Chinese context (Cai and Liu 2009; Chan et al. 2013). Because capital flows into and out of China are important in assisting with economic growth, Chinese multinational firms trade extensively with overseas jurisdictions. This provides opportunities for those firms to engage in financial, regulatory, taxation and reporting arbitrage. Additionally, in January 2008, the Chinese State Administration of Taxation (SAT) introduced new tax rules relating to aggressive tax avoidance activities, including rules relating to the use of tax havens (Sutherland, Matthews and El-Gohari 2012). The determinants of Chinese firms' cash holding levels and the extent of CSR disclosure are of importance, given the rapid changes in governance structures and reporting requirements of firms in the face of rapid regulatory change and economic growth. Three essays are developed that separately examine each of the aforementioned attributes: tax haven utilization, level of cash holdings, and extent of CSR disclosures.

The first chapter of the thesis gives an overall introduction to the three essays. It presents the motivation and the background of the thesis, and a summary of the main findings from each study.

The first essay presented as Chapter Two, examines the association between CSR and tax haven utilization of Chinese listed firms. Supported by tenets of agency and legitimacy theory, regression results show that the extent of positive CSR activities

reflected by way of existence of CSR awards, increased CSR disclosure levels, and the existence of CSR related donations is negatively associated with tax haven utilization. The more extensively firms engage in activities designed to enhance their connections with society, including the community, shareholders, and government, the less likely they are to use tax haven jurisdictions. Tax haven jurisdictions provide avenues for Chinese multinational firms to engage in obscure and complex taxation or financial arrangements that may be reflected in a lack of legitimacy by those firms. In addition, a statistically significant positive association between strength of governance structures and tax haven utilization demonstrates that efficiency in governance regimes assists firms utilizing and engaging complex arrangements via tax haven utilization. This essay contributes to the existing CSR and sparse tax avoidance literature in the Chinese context.

The second essay, presented as the third chapter, examines the determinants of Chinese firms' cash holdings. Regression results show that tax haven utilization has a significant positive association with firms' level of cash holdings. Further, a statistically significant positive association between the strength of governance structures and firms' level of cash holdings is evident. In China, round tripping of foreign direct investment funds is evident, particularly in the case of large, profit-making public State-Owned Enterprises (SOEs). Tax havens provide a platform to facilitate the circular transfer of funds into and out of China because of the secrecy granted transactions in those jurisdictions, including secrecy regarding the establishment and use of bank accounts. In fact, tax haven use assists Chinese firms to reduce their business costs, negates the effect of regulatory impediments relating to the use of funds and assists in expanding their capital markets. The potential benefits associated with the use of tax havens appear to exceed potential costs, leading to the observed positive association between firms'

cash holdings and tax haven utilization. Chinese firms with large controlling shareholders and better governed firms are expected to have lower agency costs. This potentially reduces market frictions, such as adverse selection (where firms may invest excess funds in poor projects) or rent extraction (where funds are used for the benefit of directors or minority parties at the expense of shareholders). This essay contributes to the literature on firms' incentives to hold cash in a major relations-based economy.

Using tenets of legitimacy theory tenets, the third essay presented as chapter four, examines the determinants of Chinese listed firms' CSR disclosures. Regression results show that the extent of CSR disclosures are negatively related to firms' use of tax haven jurisdictions and positively related to the monitoring pressure applied by the Chinese Ministry of Environmental Protection by way of an environment watch-list registrar, the quantum of philanthropic donations made by a firm, and receipt of environmental and social awards by a firm. This research is timely and important, given the rapid economic growth and industrialization of China and the increased importance placed by the Chinese government on the reporting and accountability of firms.

Lastly, chapter five concludes the thesis and presents directions for future research.

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## List of Abbreviations

CSR	Corporate social responsibility
MEP	Ministry of Environmental Protection of China
MOC	Ministry of Commerce of China
MOFCOM	Ministry of the People's Republic of China
OFDI	Outward foreign direct investment
SAT	Chinese State Administration of Taxation
SOE	State owned enterprise
SSE	Shanghai Stock Exchange

# Chapter 1

## **Three essays on tax haven utilization, cash holdings and determinants of CSR disclosures: evidence from Chinese listed firms**

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### **1.1 Introduction**

Chapter One discusses the objectives, motivation, and the contribution of this research. Collectively, three essays examine the determinants and consequences of tax haven utilization, firms' level of cash holdings and determinants of CSR disclosure practices.

Over the past decade, Chinese firms have had to implement CSR initiatives and integrate CSR into a wide range of their business practices. Support for CSR plans, strategies and disclosures has come about through regulatory changes, Chinese firms international dealings and the publication of articles regarding the benefits of sustainability on both the Shenzhen and Shanghai Stock Exchanges. Whilst key stakeholders such as consumers and shareholders may drive CSR disclosure practices of Western firms (such as those in the US or Australia), government influence appears to be the driving force behind increased CSR disclosures of Chinese firms. State Owned Enterprises (SOEs) have encouraged compliance of Chinese firms with sustainability practices as they promote this as being of immense benefit to the government. Interestingly, CSR practices of Chinese firms are inter-linked with such activities as education programs or assistance with welfare, community services and healthcare. The

social practices and involvement of Chinese companies may therefore be far-reaching and encompass a diverse range of community initiatives. Given the pervasive effect of social and environmental issues on Chinese firms, an important research question to consider is to examine the key determinants of Chinese firms' disclosure practice. Additionally, the payment of taxes by corporations in China is considered to be the right thing to do for the government, thus firms' use of tax havens, which are invariably associated with secrecy, obscurity and complex tax avoidance activities, raise significant concerns about firms' legitimacy.

## **1.2 Structure of the thesis and summary of findings**

This thesis is structured in a three-essay format. The three essays examine distinct but interrelated issues surrounding Chinese listed firms' tax haven utilisation, cash holdings and CSR behaviour. Collectively, the thesis investigates important aspects of Chinese public firms' contemporary behaviour, including their justification of the controversial utilisation of tax havens, cash holding behaviour and broad CSR activities. Overall, the thesis contains five chapters. The remainder of the thesis is structured as follows:

**Chapter 2** presents the first essay, which investigates the association between firms' utilization of tax havens and their legitimacy-driven activities (which include CSR related activities and corporate governance). According to Zheng, Luo, and Maksimov (2015), managers' perceptions of different forms of pressure affect firms' CSR behaviour. A firm's choice to use tax havens may be of great concern to the firms' core stakeholders, such as shareholders and employees. On the other hand, firms' CSR activities, such as corporate philanthropy, awards gained by involvement in various community commitments and CSR disclosure, on the other hand, attempt to address

broader stakeholders' legitimacy concerns, and are not used as justification of firms' tax havens use.

The regression results show that the extent of positive CSR-driven activities reflected by way of corporate philanthropy, CSR awards, and CSR disclosures, are positively associated with not utilising tax havens. Further, the empirical results provide evidence to suggest a statistically significant positive association between strength of governance structures and tax haven utilization. This suggests that managers aim to justify their involvement in tax havens by adopting a better governance practices.

**Chapter 3** presents the second paper of the thesis. It examines the determinants of Chinese firms' cash holdings. Specifically, this study investigates if ownership structures, the utilisation of tax havens, and the strength of corporate governance structures are associated with firms' levels of cash holdings. Outward foreign direct investment (OFDI) by large Chinese enterprises has become increasingly prevalent in recent years (WIR 2008). Interestingly, the destinations of China's OFDI are highly concentrated in three offshore financial centres and tax havens: Hong Kong, the British Virgin Islands and the Cayman Islands. Few accounting and finance studies have examined the association between the level of cash holdings and the utilisation of tax havens. In addition, agency conflicts also play a significant role in forming the cash holdings policy of firms. While studies based in the US and other western countries focus on the agent-principal conflict, the Chinese market also experiences another type of agency conflict, which is principal-principal conflict (Young et al. 2008). This is due, in part, to the highly concentrated shareholding structure of large Chinese firms. Hence, this study further examines the effect of ownership structures and governance structures in shaping the cash holding policies of Chinese firms.

The empirical results show that tax haven utilization is positively associated with firms' levels of cash holdings. This result suggests that Chinese firms with a large amount of cash are more likely to utilize tax havens in order to seek potential benefits, such as saving costs on transactions, regulatory arbitrage and business secrecy. Further, results of the multiple regression show that there is a significant positive association between ownership concentration, the strength of governance structures and firms' levels of cash holdings. This suggests that managers of firms which have large controlling shareholders and stronger governance structures may be constrained from investing excess funds in projects with poor returns. They may also be prevented from extracting funds for self-interest or the interests of major parties at the expense of small shareholders.

**Chapter 4** presents the third essay of the thesis. Based on the legitimacy perspective of CSR, corporations employ various strategies to obtain and maintain their desirability in society (Suchman 1995). A key goal of legitimacy concerns managing the perception of stakeholders, which involves strategic communication about social and environmental issues. This essay examines the extent of CSR disclosure.

Regression results show that extent of CSR disclosure is negatively related to firms' use of tax haven jurisdictions. The results also suggest that factors such as the monitoring pressure applied by the Chinese Ministry of Environmental Protection by way of an environment watch-list registrar, the quantum of philanthropic donations made by a firm, and receipt of environmental and social awards by a firm, are significant drivers of the extent of Chinese public firms' CSR disclosure. This research is timely and important given the rapid economic growth and industrialization of China and the

increased importance the Chinese government is placing on the reporting and accountability of firms.

**Chapter 5** provides a summary of the major findings and an overall conclusion to the three essays. This chapter also discusses policy implications and possible directions for future research.

## Chapter 2

# The relationship between corporate social responsibility and corporate governance on tax haven utilization: empirical evidence from Chinese firms

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### 2.1 Introduction

Corporate social responsibility (CSR) is multi-dimensional in nature, with firms adopting CSR practices for environmental, social, cultural and financial reasons (Deegan and Shelly 2013). Following Moser and Martin (2012), a broad perspective of CSR is utilized that encapsulates all corporate actions which affect firms' stakeholders. Specifically, the association between tax haven<sup>1</sup> utilization and the CSR communication practices of publicly-listed Chinese firms is examined in this study because CSR engagement with stakeholders affects the risk-shifting behaviour of a firm's management. This may have flow-on consequences in terms of management's propensity to use tax haven jurisdictions for tax avoidance practices to facilitate capital management objectives or to take advantage of financial and regulatory arbitrage opportunities.

The motivation to undertake this study stems from several key factors. First, there is limited research investigating the use of tax haven jurisdictions by Chinese firms (Cai and Liu 2009; Chan, Lin and Mo 2010; Zeng 2010; Wu et al. 2012; Chan et al. 2013). The tax haven utilization of U.S. firms has been studied far more extensively.

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<sup>1</sup> Various governmental and academic sources define tax havens on the basis of certain key characteristics (e.g. Hines and Rice 1990; Wilson 2009); U.S. Government Accountability Office (GAO), 2008a; GAO, 2008b; the Organisation for Economic Cooperation and Development (OECD), 2012). Tax havens are jurisdictions where there are nominal (or no) taxes, have laws or administrative practices that enable a lack of transparency relating to financial and taxation arrangements and limited access to financial records (Desai). A list of tax havens identified by the OECD is given in Appendix 2.A.

Second, aggressive use of tax haven domiciled entities is a mechanism that may facilitate aggressive tax avoidance. As a result, Chinese firms' use of tax havens has become a recent area of focus for the State Administration of Taxation, and is now included in the recent Chinese General Anti-Avoidance (GAAR) tax reforms (SAT 2014). Hence, it is important to investigate whether firms consider the use of tax havens contradictory to the positive, socially responsible images they are building. Further, if firms are found to be involved in tax haven operations, will they conform to their internal legitimacy demands by establishing a higher standard corporate governance structure?

The regression results are based on a data sample of 704 firm-years covering publicly listed Chinese firms during the 2006-2013 period. They show that the extent of positive CSR driven activities (reflected by way of CSR related donations, CSR awards, and the extent of CSR disclosures), has a significant negative association with tax haven utilization by these firms. Further, a statistically significant positive association between strength of governance structures and tax haven utilization is found. The results are robust to alternative proxy measures of tax haven utilization and a series of other robustness checks. This study contributes to the existing CSR and tax avoidance literature by investigating the link between these variables.

This study makes the following contributions. First, it provides unique empirical evidence that assesses the association between CSR communication practices and tax haven utilization. A negative association is evident. This finding suggests that firms engage in and report on CSR activities as a risk management strategy. It also suggests that firms use CSR related activities and reporting as a mechanism to legitimize their operations and to sustain or enhance firms' linkages with key stakeholders, in particular

the Chinese government (Godfrey 2005; Chalmers and Godfrey 2004). Second, this study extends the tax avoidance literature by demonstrating that firms in China may regard the aggressive use of tax havens as contrary to the Chinese government's policy on tax avoidance. Therefore, firms may choose to engage in more CSR communication and less tax haven utilization to ensure that they are behaving responsibly based on societal expectations. This association is likely to be relevant to firms, as it may affect whether they are able to engage in other business activities that require licenses from the government. Overall, this study provides important evidence regarding the implications of CSR performance for firms' risk management and their propensity to engage in aggressive tax avoidance activities vis-a-vis tax haven utilization. This study extends (and differs) from the work of Lenssen and Preuss (2010), Preuss (2012) and Col and Patel (2016) in two ways. First, it examines the relationship between the extent of CSR reporting and tax haven use in a major relations-based economy (China). Second, it examines how this relationship changed based on implementation of new tax rules China introduced in January 2008.

The rest of the paper proceeds as follows. Section 2.2 outlines the background to the study, section 2.3 provides the theory and section 2.4 develops the hypotheses. Section 2.5 discusses the research design, including the sample and statistical techniques. Section 2.6 summarizes the empirical results and section 2.7 concludes the paper.

## **2.2 Background**

### **2.2.1 Tax havens**

Past research has been undertaken on tax avoidance practices in the U.S., Europe and Australia. However, limited research has been conducted on corporate tax avoidance practices of Chinese listed firms and in particular their use of tax havens. China is the focus of this study for a number of reasons. First, the tax avoidance practices of Chinese firms have gained increasing attention, particularly with regard to the abusive use of tax havens (Buckley et al. 2015; Sutherland, Matthews and El-Gohari 2012). Chinese authorities have reported significant losses in tax revenue as a consequence of tax haven utilisation. In January 2008, new Chinese legislation was introduced, which included measures to limit the use of tax havens as a means to avoid paying tax. The OECD, and tax authorities such as the Internal Revenue Service (IRS) in the United States, consider the use of tax havens to be an important mechanism for firms to reduce their tax liabilities. Such utilisation has also been reported by the OECD to be the main reason why an increasing number of firms have experienced a long-run decline in effective tax rates. The State Administration of Taxation (SAT) has stated that the use of tax havens is an area in which they are focusing compliance resources. In recent years, the role of tax havens in assisting with the economic, financing and taxation objectives of firms has gained a considerable amount of notoriety (Desai, Foley and Hines 2006a; Desai and Dharmapala 2006).

Tax havens are characterised by relatively low tax rates and poor information exchange, transparency and accountability. A relatively low corporate tax rate is the basic feature of tax havens. The lack of transparency and accountability also contributes to the existence of tax havens. As an OECD requirement, to be a transparent tax regime,

taxes must be imposed and collected in accordance with relevant legislation and the details of the tax system must be available to the tax authorities of other countries. Desai and Dharmapala (2006) suggest that tax haven operations facilitate tax avoidance by permitting firms to allocate taxable income away from high-tax jurisdictions and also by reducing the burden of home country taxation of foreign income. Profits of multinational corporations are assigned to the jurisdiction where it is earned (Desai, Foley and Hines 2006b). Desai and Dharmapala (2006) believe that larger tax havens are used to reallocate income while smaller tax havens are used to defer tax. Subsidiaries incorporated in tax havens can become an important part of a multinational corporation's tax plan. Tax havens usually have their own secrecy policies, including policies covering banking secrecy and the protection of corporate information.

Large multinationals are more likely to use tax havens, suggesting that there are economies of scale in using them to avoid taxes (Rego 2003). Indeed, firms that incorporate subsidiaries in tax havens are often associated with tax avoidance activities that are often reflected in greater accounting income to taxable income (book-tax) differences and lower effective tax rates (Wilson 2009; Lisowsky 2010). Chinese firms tend to use Hong Kong, the Cayman Islands and the British Virgin Islands as offshore financial centres (Buckley, Sutherland, Voss, & El-Gohari, 2015; Sutherland et al., 2012). By 2003, the Cayman Islands accounted for some 28.3 per cent of total Chinese Foreign Direct Investment (FDI). FDI from China to the Cayman Islands then increased to 44 per cent (US \$7.83 billion) by 2006 (Sutherland et al., 2012). By this time, the British Virgin Islands (BVI) and Cayman accounted for 47.5 per cent of Chinese outward FDI flows by 2006. Although the BVI was a less important destination for outward capital flows from China, that jurisdiction formed an important conduit for capital flowing back into China (Sutherland et al., 2012).

There are a number of incentives for Chinese firms to utilize offshore tax havens. Firstly, the utilization of tax havens enables some businesses to hide or protect their property from changes to, or inconsistencies in the application of China's laws. China's legal system is known for its uncertainty in making and implementing laws (Xu, Zeng and Zhang 2011). According to Xu, Zeng, and Zhang (2011), China's SAT is able to amend the tax legislation at any time to serve its own agenda, as the SAT has the ultimate right to interpret tax law in China. The lack of legally protected property rights would encourage Chinese firms to use tax havens to commit tax avoidance or tax evasion (Wong and Chun 2016).

Secondly, the use of tax havens provides firms with opportunities for institutional arbitrage (Boist and Meyer 2008). Chinese outbound FDI to tax havens is generally thought to involve assets transferred outside of the country through tax havens. This is with the aim of accomplishing preferential treatment of foreign capital, both domestically and internationally (Luo and Tung 2007).

Finally, there is mounting evidence suggesting that tax haven operations may involve tax evasion, money laundering and other unlawful activities (Weichenrieder and Xu 2015). For example, tax haven affiliated subsidiaries have been found bribing government officials (Gordon 2009). According to Sharman (2010, 129), "transactions processed through the corporate account of such shell company become effectively untraceable – and thus very useful for those looking to hide criminal profits, pay or receive bribes, financial terrorists, or escape tax obligation." In a similar vein, Hebous and Lipatov (2014) find that the demand for tax haven operations is higher in highly corrupt countries. Further, Schwarz (2011) maintains that tax havens encourage money laundering by refusing to implement regulations and policies that would expose money

laundering activities. In addition, many researchers argue that the utilization of tax havens produces more harmful effects in developing countries than it does in developed countries (Schjelderup 2015). The secrecy of tax haven jurisdictions can also encourage crime and corruption (Sikka 2010). Collaboration amongst accounting firms, law firms, financial institutions and not-for-profit organizations enabled large multinational firms to legally transfer their profits to tax havens to avoid paying domestic and foreign tax (Sikka 2010; Sikka and Willmott 2010; Sikka and Hampton 2005). Some researchers, such as Slemrod and Wilson (2009), refer to tax havens as parasitic in nature and claim that the removal of some tax havens would benefit the public in general. Overall, tax havens have been identified as a prime cause of the progressive reduction in firms' effective tax rates over the past 15 years (SAT 2014).

### **2.2.2 CSR issues and development in China**

In 2010, China became the second largest economy in the world, only smaller than America ("Second in Line" 2010). China's economy grew rapidly during the global financial crisis, performing better than many other OECD and emerging economies during that time (OECD 2013). However, as China consumes more energy and raw materials, it has become one of the largest emitters of greenhouse gases and other pollutants. China has already become one of the largest contributors to global climate change, and since 2007 has been the world's leading emitter of sulphur dioxide and carbon dioxide (EPA 2008). In 2012, China accounted for 27% of global carbon dioxide emissions, exceeding the combined total of the USA (14%) and the EU (7%) (Arup 2013).

Following China's rapid economic reform, social issues, especially violations of labour rights, have also become pertinent. The logo "Made-in-China" is not only

associated with cheap products, but is also associated with wage arrears, dangerous working environments and prolonged working hours (Lin 2010). It was not until 2008 that the government toughened the Labour Contract Laws to protect disadvantaged workers (Hao and Chen 2014). Recent food safety scandals also revealed some appalling behaviour by companies that pursued profit at the expense of human welfare. For example, in 2008, Sanlu Group (one of the largest dairy companies in China) produced baby formula with melamine contaminated milk causing thousands of children to be hospitalised (Yan 2012). New parents were reported to have serious concerns about domestic brands and indicated a preference for imported milk if they could afford it (Hatton 2013).

As increasingly serious social and environmental problems have been posed, China has implemented a number of regulatory and legislative changes to deal with them (Chan and Welford 2005). China enacted its first Environmental Protection Law in the late 1970s, and by the year 2000 it had enacted some 43 environmentally related laws (Zhang 2001). Legislative changes have recently included new laws relating to environmental disclosures in firms' reporting media. For instance, CSR is explicitly written into recent Chinese company law (2006) such that

“in the course of doing business, a company must comply with laws and administrative regulations, conform to social morality and business ethics, act in good faith, subject itself to the government and the public supervision, and undertake social responsibility” (Lin 2010, 8).

A “Guide Opinion on the Social Responsibility Implementation for the State-Owned Enterprises controlled by the Central Government” was released in 2008 by the State-Owned Assets Supervision and Administration Commission (SASAC). It

encourages state-owned enterprises to follow sound CSR practices and report on CSR activities ("Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges" 2012). Further, the "Green Securities" policy requires listed companies to disclose more information about their environmental record. The "Green IPO" policy issued by the SASAC requires enterprises in energy-intensive industries to undergo an environmental assessment by the Ministry of Environment Protection before initiating an IPO or obtaining refinancing from banks ("Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges" 2012).

In addition, the Shanghai Stock Exchange (SSE) issued the "Shanghai CSR Notice" and the "Shanghai Environmental Disclosure Guidelines". Both of these are designed to strengthen listed companies' accountability regarding social responsibility. SSE listed companies that promote CSR are offered incentives, including priority election into the Shanghai Corporate Governance Sector, or simplified requirements for examination and verification of temporary announcements. The SSE has also developed the concept of social contribution value per share (SCVPS) to measure a company's value creation relating to CSR activities. An SSE social responsibility index based on SCVPS was created and started trading on 30th June 2009(Shanghai Stock Exchange Social Responsibility Index Information 2009). The aim of this index is to promote positive social and environmental behaviour and also to attract ethical investment. The Shanghai Environmental Disclosure Guidelines allow for the SSE to take "necessary punishment measures" against companies that violate of disclosure rules ("Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges" 2012, 4).

## 2.3 Theory

CSR suggests how businesses manage the social and environmental effect of their activities on society (Deegan and Shelly 2013). These activities may generate economic benefits for both society and the firm (Moser and Martin 2012). China has no regulatory requirements mandating disclosure of CSR activities by listed firms. Firms voluntarily disclose CSR activities and a likely consequence is that the reporting of such activities will vary widely. There is increasing evidence that firms communicate their CSR activities as part of a risk-management strategy designed to enhance the reputation of firms and management. In fact, an increasing number of firms that value a good relationship with their stakeholders, include the government, regulatory bodies, employees, customers and the general public (Hartnett 2008). Reporting and engaging in CSR activities may thus protect the firm from the risk of adverse environmental, social, political or legal impediments and sanctions (Godfrey 2005; Minor and Morgan 2011). Poor CSR reporting practices are likely to reflect a firm's weak CSR orientation and may lead to loss of firm or management reputation, increased political or regulatory pressure, and fines or increased liabilities. Alternatively, CSR engagement and reporting may generate financial benefits for a firm. Indeed, the combined benefits of CSR engagement may out-weigh any associated costs. Accordingly, firms could, to some degree, manage their financial and reputational disposition by increasing CSR activities and reporting (Godfrey 2005). A firm's attitude and actions in relation to CSR also encapsulates broader considerations regarding legality and ethics (Schön 2008)).

Prior studies that examined the relationship between CSR reporting and tax avoidance initially suggested that socially irresponsible firms are more likely to engage

in aggressive tax avoidance activities (Christensen and Murphy 2004; Hartnett 2008; Freedman 2003). Using a sample of 408 Australian public firms, Lanis and Richardson (2015) provide evidence that suggests a negative association between CSR disclosure and aggressive tax behaviour. Considering there is a gap between firms' voluntarily disclosed CSR and their actual CSR performance, Lanis and Richardson (2015) find that socially responsible firms are less likely to be tax aggressive. This result is consistent with Hoi, Wu, and Zhang (2013)'s findings, which show a positive association between firms having excessive socially irresponsible activities and the likelihood of incorporating tax sheltering activities. This study examines the association between firms' CSR related activities (including specific CSR reputation management and firms' disclosure practices) and the utilisation of tax havens. It also extends prior research that has examined the association between CSR performance or reporting and tax avoidance. This is done by incorporating some unique explanatory factors that encapsulate positive CSR evaluations, philanthropy, and ultimately, firms' strategic disclosure of broad CSR activities in CSR reports.

Both prior studies and government reports have shown that firms use tax havens for multiple reasons. These can include tax avoidance (as firms are subject to nominal or no taxes in those jurisdictions), augmenting the flow of funds amongst group entities, reducing business costs and overcoming legal or regulatory impediments. Tax havens also assist firms to expand their markets and to compete effectively with their peers. Overall, firms use tax havens for legitimate financial or legal activities as well as to assist in a reduction of group tax liabilities (Womack and Drucker 2011).

## **2.4 Hypothesis Development**

### **2.4.1 CSR activities and tax havens**

The relationship between corporations' social and sheltering behaviour is sophisticated and gives rise to voluminous debate. The sophisticated relationship is due to vastly diverged perceptions and expectations of the two concepts in light of different cultural, social, political and economic contexts. Despite the fact that the CSR industry (which captures data, advocates, researches and advises) continue to mature, there is still yet to be unanimous agreement as to what precisely falls under social responsibility. There will probably never be a closed boundary, as the scope of CSR constantly evolves and expands. Corporations' tax paying behaviour has only been brought under the microscope of CSR studies in recent years (Sikka 2010; Christensen and Murphy 2004; Dowling 2014; Davis, Guenther, Krull, & Williams, 2016; Hoi et al., 2013). For the purpose of this study, the use of tax havens is not taken as a proxy of tax avoidance as they serve multiple purposes for businesses. It is argued that incorporating registered subsidiaries in tax havens facilitates overall business operation by seeking efficient cash flow management, taking advantage of regulatory benefits, reducing transaction costs and competing in a global market. In addition, this study does not obtain direct evidence linking the utilisation of tax havens to firms' tax avoidance outcomes. Thus, it is not the intention of this study to examine the relationship between tax avoidance and corporations' CSR behaviour. Nonetheless, the utilisation of tax havens is considered a moral hazard, and contradictory behaviour by firms who claim that they are socially responsible (Schjelderup 2015). In other word, this study considers the involvement of tax haven dealings will damage firms' social reputation. Despite all the legitimate business reasons behind corporate decisions to incorporate in offshore tax havens, such

behaviour is undoubtedly associated with illegal activities, such as “market rigging, insider trading, making illicit political donations, embezzlement, fraud, and payment of bribes and commission kickbacks” (Christensen 2011, p.178). The incorporation of subsidiaries in tax havens, therefore, gives rise to a general perception of secretive dealings, which is contradictory to any positive and transparent efforts to build social capital (such as CSR disclosures).

Based on risk management theory (see Godfrey 2005; Col and Patel 2016), a consistent CSR approach predicts firms that are engaging in CSR activities will be less likely to rely on the use of tax havens for financial assistance. Firms with a positive CSR orientation may have reputational capital at stake and as such may be less inclined to use tax havens for taxation, financial or regulatory arbitrage opportunities. The reason for this is that firms which successfully engage in CSR activities are likely to reap the general financial benefits of doing so, and thus may be less likely to pursue aggressive tax avoidance practices through the use of tax havens. Additionally, firms engaged in tax haven use have come under increased scrutiny from taxation and other government agencies. In fact, as a consequence of using tax havens, many U.S. multinational firms have received negative media coverage (such as Apple, Google and Starbucks). Firms which have built a positive reputation with stakeholders through CSR engagement may not want to lose their good reputation by simultaneously participating in the complex and obscure practices typically associated with tax haven use. Tax havens are typified by a lack of information exchange and weak reporting of financial transactions, due to the weaker regulatory regimes common in such jurisdictions. Thus, firms that are actively engaged in CSR activities and communicate information about them in their annual report are not likely to be simultaneously engaging in a lack of information exchange and transparency by using tax havens.

Corporate culture theory (see Col and Patel 2016), suggests firms should be paying their fair share of taxes based on a “shared belief” of right behaviour. Using tax havens to avoid taxes and the reporting of financial transactions is an ethical issue. Thus, in accordance with corporate culture theory, a firm is not likely to simultaneously engage in effective CSR practices and tax haven use. A negative association between CSR disclosure practices and tax haven use is thus likely. Christensen (2016) finds that CSR reports have monitoring and insurance mechanism, which provides guidance to firms’ economic, social and environmental activities. Additionally, Christensen (2016) find firms that actively engage in CSR disclosure are less likely to associate with high-profile misconduct such as bribery and harassment.

However, it is evident that many corporations claim they are socially responsible while avoiding paying their fair share of tax (Dowling 2014). Sikka (2010) highlights the disparities between corporations’ double standards in saying and doing as hypocritical. In forming the hypothesis 1, this study takes organisational hypocrisy into consideration. However, the empirical evidence of the relationship between CSR related activities and the utilization of tax havens is largely untested in accounting and finance literature, especially in Chinese context. Consequently, this study develops the hypothesis based on risk management theory and corporate culture theory that firms extensively engaging in CSR activities are less likely to use tax haven incorporated subsidiaries than their counterparts. Therefore the following (directional) hypothesis is developed:

H1: Chinese firms’ use of tax havens is negatively associated with the extent of CSR-driven activities reflected in corporate philanthropy, community achievements and CSR disclosure.

## **2.4.2 Governance structure and tax havens**

This study also examines the association between the strength of governance structures and firms' use of tax havens. The association between governance structures and tax avoidance in general has been extensively researched, but few studies have examined the association between firms' governance structures and tax haven use. Recent evidence suggests that firms' governance structures have an important effect on the propensity of management to engage in tax planning (see Desai and Dharmapala 2006; Dharmapala 2008; Hanlon and Slemrod 2009; Richardson, Taylor and Lanis 2013a). There is conflicting evidence as to whether effective governance structures will assist firms to be more successful at tax avoidance or not. Similarly, it is an empirical question as to whether stronger governance structures will affect firms' use of tax havens and if so, what the direction of that relationship is.

Research undertaken by Dyreng, Hanlon, and Maydew (2010) and Richardson, Taylor, and Lanis (2013b) found that boards of directors affect firms' propensity to engage in tax avoidance through their monitoring and oversight roles, and also by influencing the compliance framework of the firm. It is considered that a board of directors with effective governance characteristics (e.g. independence, a different chairman and managing director, consistent meeting attendance) is less likely to engage in risky tax avoidance activities that may include the use of tax havens. Effectively governed firms are less likely to engage in complex and obscure tax arrangements and may be less inclined to actively engage in aggressive tax planning (Desai and Dharmapala 2006; Richardson, Taylor and Lanis 2013b).

While strong corporate governance structures are likely to reduce the incidence of corporate tax avoidance, effective governance structures may reflect higher levels of efficiency in terms of resource use and ability to compete with peers. Minnick and Noga (2010) find that effective governance structures are positively associated with corporate tax avoidance. Specifically, they find that better governed firms assist management to make more informed and more effective investments and to use the firms' resources more efficiently - which also includes making effective tax arrangements. Effective tax management can increase management's use of tax havens because tax havens assist in resource allocation, reducing income tax expense and creating shareholder wealth (Minnick and Noga 2010). Whilst the board of directors serves as an internal control monitoring mechanism, certain governance factors may increase firms' strategic use of tax havens. For instance, independent directors may be able to draw upon their industry experience to increase a firm's competitive abilities through the use of tax havens. Similarly, independent directors may be willing to divert resources to tax haven use to ensure firm competitiveness, an increase in investment opportunities and enhanced firm performance. Minnick and Noga (2010) suggest that firms where the roles of CEO and chairman are carried out by the same person underperform relative to their peers. These firms tend to have lower levels of tax management as they are less motivated to perform well. Similarly, boards that have a separate CEO and chairman are motivated to use tax havens as a mechanism to enhance firm performance.

In a Chinese corporate governance reform of 2002, the China Securities Regulatory Commission (CSRC) issued a U.S. style "code of corporate governance" for listed companies. In addition to prescribing specific board structure requirements, the code grants legal powers to minority shareholders so that they have equal status with other shareholders (Conyon and He 2011; Rajagopalan and Zhang 2008). Under

the U.S. style of corporate governance structures, a well governed board with attentive and experienced board members can effectively oversee capital expenditure or scrutinize management's spending (Harford, Mansi and Maxwell 2008). It also increases the transparency of the firm's operations. Tax haven dealings can significantly jeopardise a strong board's efforts and create increased information asymmetry. A strong internal governance structure can be reflected by factors such as BOD independence, directors' outside directorship, directors' age, meeting attendance and CEO and chairman duality (Taylor, Tower and Neilson 2009; Eng and Mak 2003; Barros, Boubaker and Hamrouni 2013; Ho and Wong 2001; Chua, Eun and Lai 2007). Whilst examining the efficacy of adopting the "code" is not within this study's scope, companies compliant with the suggested code of conduct are expected to achieve efficient governance mechanisms over the long term. Firms with stronger internal governance may restrict or even stop the firms' usage of tax haven incorporated subsidiaries.

H2: All else being equal, strength of corporate governance structure is positively associated with tax haven utilization.

## **2.5 Research design**

### **2.5.1 Sample selection and data source**

This chapter examines the tax haven utilization of the top 100 Chinese firms (by total assets) listed on the Shanghai Stock Exchange (SSE) over the period 2006–2013. This period was chosen because it includes the January 2008 implementation of new tax rules (GAAR) in China in. Two criteria were applied when selecting sample firms: continuous financial data must be available for the 2006–2013 period and firms must

have had a continuous listing on the SSE during this time. The top 100 companies were ranked according to total assets in 2013. This study chose the largest Chinese listed firms as these are more likely to use tax havens and to report on their CSR activities, consistent with the approach followed by Gao (2008).

The initial sample comprised the top 200 non-financial and non-insurance firms listed on the SSE during the 2006-2013 period. The sample was reduced to 100 firms (704 firm-year observations) after excluding firms without at least four years of CSR reports. Consistent with Gao (2008), large Chinese firms play an exemplary role in Chinese CSR practice. This is not only because these companies have the resources to engage in CSR disclosure, but also because of the increasing societal demand for such information to be more transparent to the public (Gao 2008). Other data was obtained from Capital IQ. Overall, 704 firm-year observations were available for empirical testing. Financial and insurance firms were excluded because of the differences in reporting and regulatory practices of these firms. Finally, tax haven and CSR data was hand collected from the annual reports to obtain relevant data for the measurement of the variables, not all of which were available in electronic form in public databases. Under *IAS 24 Related Party Transactions* and *IAS 27 Consolidated and Separate Financial Statements*, it is a requirement for publicly listed Chinese firms' annual report to contain a list of their subsidiaries (including the country in which they are incorporated). Therefore, the data relating to the use of subsidiaries incorporated in tax havens can be identified for the purpose of this study.

### **2.5.2 Dependent variable**

The dependent variable is represented by the occurrence of material tax haven operations (TH\_LN) as disclosed in firms' annual reports. Firms' use of tax havens is

measured as a dummy variable (TH\_Dummy), coded as 1 if the firm has at least one subsidiary incorporated in an OECD (2006) listed tax haven<sup>2</sup>, or 0 otherwise. The use of a dummy variable to measure the utilization of tax havens has been applied in previous research by Desai and Dharmapala (2006), Dharmapala and Hines (2009) and Taylor and Richardson (2012).

### **2.5.3 Independent variables**

The independent variables in this study comprise CSR-driven activities and the strength of corporate governance. Three variables are examined to test the first hypothesis, which is the association between the utilisation of tax havens and CSR-driven activities. They are corporate donations (Don\_In), awards (Awards\_In) and a CSR disclosure index (TotCSR). Firms' donations (Don\_In) represent the donation expense recorded in their annual reports. This variable is used as an explanatory variable because charitable contributions are considered to be an important component of CSR. They are associated with a positive corporate image and possible financial returns (Godfrey 2005; Brammer and Millington 2006; Brammer and Millington 2008).

Undoubtedly, philanthropic donations made by Chinese corporations are likely to be heavily influenced by the Chinese government. According to Lin et al. (2015), Chinese corporate donors accounted for two-thirds of their country's philanthropic donations in 2010, whilst in America that figure was only five percent. The significant difference is partly due to extensive Chinese government intervention, which creates the demand for (and the supply of) politically oriented CSR activities (Lin et al. 2015).

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<sup>2</sup> The Organization for Economic Cooperation and Development (OECD) identifies three key factors in considering whether a jurisdiction is a tax haven: (1) no or nominal taxes; (2) lack of effective exchange of information; and (3) lack of transparency. The OECD (2006) recognizes a total of 33 tax havens around the world. The OECD's (2006) complete list of 33 tax havens is reported in Appendix 2.A.

China's economic reforms have been transforming the nation's government-controlled economic model to a market-oriented one. However, the government, at both central and local levels, still has absolute control over essential resources such as land use rights, access to financial capital and energy including electricity, gas and petrol prices (Chen et al. 2011). In addition, the government has discretionary power to grant businesses "fiscal subsidies, tax benefits, low-cost land, and waivers of enterprise liabilities" or impose extra fees and fines when the government needs discretionary income to supplement insufficient tax revenues (Chen et al. 2011, 231). It is therefore important for firms to establish political connections in order to minimise such discretionary charges. Under such institutional settings, corporate philanthropy is adopted as a legal form of political rent-seeking strategy which in turn benefits firms economically (Gao 2011).

However, achieving political legitimacy is not the only motivation for Chinese firms to engage in philanthropic donations. Empirical studies have found that corporate donations are positively associated with corporations' financial performance (Wang and Qian 2011). To this end, corporate philanthropy aligns with firms' economic rationality. Donations often attract media attention, which is essential in building a positive public image and reputation. Hence, corporate philanthropy can be viewed as a strategic marketing mechanism which can effectively enable firms to address non-business societal issues and gain social capital to sustain economic performance (Zhang, Rezaee and Zhu 2009).

Chinese firms' philanthropy behaviour cannot be solely explained as a political response. As the China's transitional economy grows, the government is no longer the sole player in society. Consumers (or the larger community) have become a large force

with their own voice. To this end, corporate donation is also a pro-social behaviour which is driven by the public exerting pressure (Gao, Faff and Navissi 2012). For example, consider the philanthropic donations to disaster relief, made in response to China's Wenchuan Earthquake of 2008 for example.<sup>3</sup> Massive donations were made by Chinese firms to the affected areas. While the Chinese government played a significant role in encouraging the business sector to make contributions in aftermath of this catastrophic event, the general public also overwhelmingly influenced firms' donations. Vanke Co., Ltd, one of the largest public property developers, initially donated 2 million RMB donation. They were later forced to make another 100 million RMB donation due to overwhelming complaints from Chinese communities. The criticism caused a dramatic fall in the company's share price. This market reaction provides clear evidence that firms' donations are economic decisions which affect firms' access to scarce societal recourses other than political alliances with the government.

A negative association between the use of tax havens and corporate philanthropy is predicted for two reasons. Firstly, corporations engage in charitable donations in order to raise their corporate reputation and gain better public relationships with relevant stakeholders. Chen et al (2016) find that the publicity corporations gain from charitable donations attracts public and media monitoring, and eventually will result in decreased information asymmetry between firms and external stakeholders. They find that managers who are actively participating in philanthropic causes are less likely to engage in tunnelling activities<sup>4</sup>, which may damage their public image and

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<sup>3</sup>The Wenchuan Earthquake which registered at 8.0 Richter scale occurred in Wenchuan County, Sichuan Province, on May 12<sup>th</sup> 2008. More than 87,000 people died and many more were injured. It also caused enormous economic losses with an estimated total of 845.1 trillion RMB (CCTV.com 2008).

<sup>4</sup>In a contemporary Chinese market context, tunnelling refers to actions taken by parent companies to extract private profit from their subsidiaries (Chen et al. 2016). For example, these

career prospects. This study argues that associating with tax haven dealings will have similar consequences that raise public distrust of businesses. Thus, it is unwise for firms that contribute significant charitable donations to allow the negative publicity of tax haven dealings to compromise their efforts.

Secondly, due to the role Chinese government plays in corporate donations, a negative association between donation levels and tax haven use is predicted. Corporate charitable giving in China has largely been driven by political interference (Li, Song, & Wu, 2014; Chen et al. 2016). This was most evident following the Sichuan earthquake, when the government explicitly requested firms to donate towards disaster relief (Jia & Zhang, 2011). Li et al. (2014) find that highly politically connected firms are also more likely to donate. Therefore, the amount of donations should reflect the government's coercion or power to influence corporate philanthropic actions. Given the fact that the Chinese government is clearly opposed to firms avoiding taxes (Wang 2016) by using tax havens<sup>5</sup>, it is expected that those firms who make charitable donations as a result of the government's influence are less likely to be found to have in tax haven dealings.

The association between a unique reputational risk management factor, Awards\_In and tax haven use is further examined. According to Unerman (2008), firms have reputational capital at stake and are aware of the fact that their financial and competitive positions may be determined by how they engage with society. In order to develop and actively manage a strong social reputation, firms try to avoid negative

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actions include not repaying funds borrowed from subsidiaries and transferring economic resources from subsidiaries in form of dividends (Chen, Jian and Xu 2009).

<sup>5</sup>In 2014, the SAT issued specific rules targeting companies who have transactions with related parties located in tax havens (PWC 2014). Specifically, the SAT issued a circular, "Gonggao No.16", which denies the deductibility of royalty and intangible payments to related parties that are not deemed as substantially functioning (Wang 2016).

publicity and actively publicize their positive achievements. Awards\_In is measured as the natural logarithm of the total number of awards disclosed in a firm's annual report. Consistent with Dyreng, Hoopes, and Wilde (2016), in response to public pressure, firms would be less inclined to engage in aggressive tax planning if they seek to maintain their reputational capital in society. Therefore, firms that actively manage a positive social image would be less likely to use tax havens to engage in aggressive tax planning. Total CSR disclosure (TotCSR) is measured as an index based on the Global Reporting Index (GRI) version 3.0 that comprises a maximum of 70 social and environmental items. TotCSR is the natural logarithm of the CSR score. Essentially, CSR disclosure can be seen as a manager's attempt to reduce information asymmetry between the firm and the general public, with the aim of maintaining their licence to operate in society and enhance performance (Cho, Lee and Pfeiffer 2013).

The corporate governance score (Gindex) consists of five variables: the proportion of the board that are independent directors; the proportion of the board with outside directorships; the board of directors' average age; board meeting attendance and duality of the CEO and chairmanship. Consistent with Dyreng, Hanlon, and Maydew (2010), firms' top executives are likely to influence firms' decisions to incorporate subsidiaries in tax havens. Both poorly-governed and well-governed firms have incentives to utilize offshore tax havens; however, well-governed firms are more inclined to incorporate subsidiaries in tax havens. Tax havens offer a number of perceived benefits that would appeal to management. These benefits could potentially include improved credit ratings, a reduced cost of debt, and increased market capitalization (Graham and Tucker 2006; McGill and Outslay 2004; Desai and Dharmapala 2006). Well-governed firms are motivated to engage in complex tax planning and are often rewarded instead of penalized by the market, because tax haven

is consistent with shareholder wealth creation (Wilson 2009). These governance items are individually assessed as dichotomous variables, scored as '1' if they are above the median value of each variable or '0' otherwise, and as a corporate governance index (Gindex), calculated as the sum of the five governance items scaled by 5.

#### **2.5.4 Control variables**

The control variables for this study are denoted by the book to market ratio (BVMV), firm size (SIZE), return on assets (ROA), foreign revenue (FORE), net property, plant and equipment (TANG), intangible assets (INTG), research and development (RD), politically connected directors (POL), big-4 auditors (BIG4), audit fees (AUDFEE), government ownership (GOV), industry sector (INDSEC) effects and year (YEAR) effects. BVMV is included in the model to control for differences in firm growth. According to Desai, Foley, and Hines (2006b), firms with higher growth are more likely to establish tax haven operations to achieve economies of scale. Similarly, Chen et al. (2010) find that firms with high growth or investment opportunities are likely to pursue a more complex operational and/or tax environment in order to efficiently control the flow of funds and reduce the cost of capital (Kim and Li 2014). BVMV is measured as the book value of equity over the market value of equity.

SIZE is also included as a control variable in the regression model, following Chen et al. (2010)'s findings that smaller sized firms in China are less likely to incorporate subsidiaries in tax havens. Similarly, Rego (2003) claims that larger firms are more capable of utilizing complex tax strategies (including incorporating in tax havens) to achieve economies of scale in order to reduce corporate taxes. Further, reflecting the potential non-tax incentives of tax haven utilization, larger firms are likely to achieve economies of scale in their ability to borrow or raise capital at lower costs

and are better able to sustain earnings than smaller firms (Klassen et al. 2004). SIZE is measured as the natural logarithm of total assets. ROA is included in regression models to control for operating performance and firm profitability. As most of the tax havens offer very low or zero tax rates, firms are attracted to utilizing subsidiaries incorporated in tax havens to strategically manage their tax payments by moving profits from high taxing jurisdictions to lower taxing ones (Taylor and Richardson 2012). Kim and Li (2014) also find that more profitable firms can rely on their availability of resources to establish tax haven registered entities, particularly offshore financial centres. ROA is measured as pre-tax profit scaled by total assets. FORE is controlled for in the regression models because firms with foreign operations, especially those that have significant foreign income, would be more likely to utilize tax havens to strategically manage their financial position (Wilson 2009). Desai, Foley, and Hines (2006b) also find that firms with extensive foreign operations are more likely to establish foreign subsidiaries in tax havens. FORE is measured as the natural logarithm of total foreign revenue. The total net value of property, plant and equipment (TANG) is included as a control variable to control for capital intensity (Bradshaw, Liao and Ma 2012). TANG is measured as net property, plant and equipment over total assets.

Prior research has demonstrated that firms use intangibles and research and development to avoid tax (Clausing 2009; Sikka and Willmott 2010). Therefore, both intangible assets (INTG) and research and development (RD) are incorporated into the model as control variables. INTG is measured as total intangible assets scaled over total assets and RD is measured as total R&D expenditure scaled over total assets. POL is included in the regression model to control for the political power and connections of members of the board of directors. POL may affect management's decision to incorporate entities in tax haven. It may affect the risk or strategic orientation of

management, in relation to how aggressively they could use tax havens to manage the firm's tax burden. As Kim and Zhang (2016) identified, politically connected board members bring valuable political resources to firms. This may empower these firms to engage in riskier investments and potentially aggressive tax planning activities. There is compelling evidence to suggest firms that are highly politically connected are less financially transparent (Houston et al. 2014; Leuz and Oberholzergee 2006). Using tax havens enhances firms' financial secrecy (Kudrle 2009). POL is measured as the total number of politically connected BOD members scaled over the total number of BOD. A politically connected director is either a member of the Chinese Communist Party or member of the People's National Congress. Employment of Big 4 accounting firms (Big4) is included in the regression model to control for the likely involvement of elite accounting firms in incorporating of subsidiaries in tax havens for their clients. It is commonly accepted that the big four accounting firms provide higher quality audits as they have the required resources and processes with which to conduct an audit (Taylor and Richardson 2012).

Also included are two variables to control for audit effects in the regression. First, Big-4 audit firms are also accused of orchestrating complex tax planning strategies which often involve establishing tax haven operations (Sikka and Hampton 2005; Sikka and Willmott 2010). This is also evident in the results as 21.5 percent of the Big 4 accounting firms are associated with 43.5 percent of the number of tax havens. Therefore, Big 4 employment is incorporated as a control variable. Big4 is measured as a dichotomous variable, coded as '1' if the firm's annual report is audited by one of the Big 4 accounting firms, or '0' otherwise. Similarly, audit fee is also included as a control variable to control for the audit firm's financial dependence of the on the client. AUDFEE is measured as the natural logarithm of total audit fees.

Furthermore, government ownership is also included as a control variable as the sample includes state-owned enterprises (SOE). Due to their allegiance to controlling shareholders (the government), when compared to non-SOEs, SOEs may be less likely to use tax havens to avoid paying tax to the Chinese government (Bradshaw, Liao and Ma 2012; Chen, Firth and Xu 2009; Wu, Rui and Wu 2013). Government ownership is measured as a dichotomous variable, coded as '1' if the firm is an SOE (the government controls more than 50% of the equity in the firm), or '0' otherwise.

Finally, the effects of industry and year are fixed. IND dummy variables, defined by the two-digit Global Industry Classification Standard (GICS) codes, are included as control variables in the regression model as tax haven use can fluctuate across different industry sectors (Rego 2003). Eight IND dummies are included in the study: consumer discretionary, consumer staples, energy, healthcare, industrials, materials, telecommunication services and utilities (with consumer discretionary being the omitted sector in the regression model). No sign predictions are made for the IND dummies. YEAR dummy variables are also included in the regression model to control for differences in tax haven activities that could possibly exist over the 2006–2014 sample years.

### **2.5.5 Regression model**

The regression model used to examine the tax haven utilization is represented as follows: <sup>6</sup>

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<sup>6</sup> Note that after taking into account the binary nature of TH\_Dummy, logit regression analysis is employed to empirically test the hypotheses. TH\_LN is a continuous variable, so the hypotheses are tested by using ordinary least squares (OLS) regression analysis. Furthermore, to obtain robust standard errors, the Huber/White/Sandwich estimator of standard errors is used for the regression models (Wooldridge 2010). Also all continuous variables are winsorized (reset) at the 1st and 99th percentiles to mitigate the effect of outliers significantly influencing the empirical results.

$$\begin{aligned}
\text{TH\_LN}_{it} = & \alpha_{0it} + \beta_1 \text{Don\_ln}_{it} + \beta_2 \text{Awards\_ln}_{it} + \beta_3 \text{TotCSR}_{it} + \beta_4 \text{Gindex}_{it} + \\
& \beta_5 \text{BVMV}_{it} + \beta_6 \text{SIZE}_{it} + \beta_7 \text{ROA}_{it} + \beta_8 \text{FORE}_{it} + \beta_9 \text{TANG}_{it} + \beta_{10} \text{INTG}_{it} + \beta_{11} \text{FORE}_{it} + \\
& \beta_{12} \text{RD}_{it} + \beta_{13} \text{POL}_{it} + \beta_{14} \text{BIG4}_{it} + \beta_{15} \text{AUDFEE}_{it} + \beta_{16-23} \text{YEAR}_{it} + \beta_{24-31} \text{INDSEC}_{it} + \varepsilon_{it}
\end{aligned}
\tag{1}$$

where: *i* is firms 1–100; *t* is financial years 2006–2013; TH\_LN is measured as the natural logarithm of the total number of tax haven subsidiaries for each firm in year *t*; Don\_ln = the natural logarithm of the total donation expense incurred by the firm; Awards\_ln = the natural logarithm of the total number of awards disclosed in the company’s annual report; TotCSR = the natural logarithm of the number of environmental and social items, based on GRI 3.0 disclosures in firm *i*’s CSR report in year *t*; Gindex = the corporate governance score, comprising five governance items scaled by 5; BVMV = the book value of equity over the market value of equity; SIZE = the natural logarithm of total assets; ROA = pre-tax profit over total assets; FORE = the natural logarithm of total foreign revenue; TANG = net property, plant and equipment scaled by total assets; INTG = the total intangible assets scaled by total assets; RD = the total R&D scaled by total assets; POL = the total number of politically connected BOD scaled by the total number of BOD; BIG4 = a dichotomous variable, coded as ‘1’ if the firm’s annual report is audited by one of the Big 4 accounting firms, or ‘0’ otherwise; AUDFEE = the natural logarithm of total audit fees; YEAR = a dummy variable, coded as ‘1’ if the year falls within the specific year category, or ‘0’ otherwise; IND = a dummy variable, coded as ‘1’ if the firm is represented in the particular two-digit GICS industry category, or 0 otherwise; and  $\varepsilon$  is the error term.

## **2.6 Empirical results**

### **2.6.1 Summary statistics**

Table 2.1 (Panel A) provides the sample industry distribution based on the GICS. The sample includes a greater proportion of firms in industrials (40 percent), materials (21 percent), and consumer discretionary (12 percent) sectors compared to the other industry categories. Moreover, Table 2.1 (Panel A) reports descriptive statistics of TH-Dummy by industry classification (GICS). The incidence of at least one subsidiary firm incorporated in an OECD (2006) listed tax haven is more prevalent in the consumer discretionary (28.83 percent), industrials (27.93 percent) and materials (19.82 percent) sectors.

**Table 2. 1 Summary Statistics**

<b>Panel A: Industry Distribution</b>								
<b>Industry Name</b>	<b>Total number of observations</b>	<b>Percentage (%) of observations</b>	<b>TH_Dummy (No. of firm years)</b>	<b>TH_Dummy Relative Frequency (%)</b>	<b>Ranking</b>			
<b>Consumer Discretionary</b>	96	12	32	28.83	1			
<b>Consumer Staples</b>	56	7	6	5.41	6			
<b>Energy</b>	64	8	12	10.81	4			
<b>Healthcare</b>	40	5	0	0	7			
<b>Industrials</b>	320	40	31	27.93	2			
<b>Materials</b>	168	21	22	19.82	3			
<b>Telecommunication Services</b>	8	1	8	7.21	5			
<b>Utilities</b>	48	6	0	0	7			
<b>Total</b>	800	100	111	100%	N/A			
<b>Panel B: Descriptive Statistics</b>								
<b>Variable</b>	<b>N</b>	<b>Mean</b>	<b>S.D.</b>	<b>Min</b>	<b>0.25</b>	<b>Med</b>	<b>0.75</b>	<b>Max</b>
<b>TH_LN</b>	704	0.13	0.32	0	0	0	0	1.79
<b>Don_In</b>	704	0.51	1.74	-4.61	-0.22	0	1.54	6.41
<b>Awards_In</b>	704	1.2	1.14	0	0	1.39	2.2	4.84
<b>TotCSR</b>	704	2.04	1.09	0.69	0.69	2.25	2.89	3.95
<b>Gindex</b>	704	0.65	0.2	0	0.6	0.6	0.8	1
<b>BVMV</b>	704	2.58	2	0	1.19	1.94	3.35	10.29
<b>SIZE</b>	704	9.98	1.31	8	9	10	11	14
<b>ROA</b>	704	0.07	0.06	-0.17	0.03	0.06	0.09	0.66
<b>FORE</b>	704	4.22	4.27	0	0	4.98	7.52	24
<b>Tang</b>	704	0.55	0.35	0	0.25	0.52	0.82	1.49
<b>INTG</b>	704	0.05	0.06	0	0.01	0.03	0.06	0.31
<b>RD</b>	704	0.01	0.01	0	0	0	0.01	0.06
<b>POL</b>	704	0.24	0.22	0	0.08	0.2	0.33	1
<b>BIG4</b>	704	0.27	0.45	0	0	0	1	1
<b>AUDFEE</b>	704	7.38	1.17	5.63	6.62	7.09	7.77	11.85
<b>GOV</b>	704	0.78	0.42	0	1	1	1	1

Table 2.1 (Panel B) reports the descriptive statistics for the dependent variable (TH\_LN), independent variables (Don\_In , Awards\_In, TotCSR, and Gindex) and control variables (BVMV, SIZE, ROA, FORE, TANG, INTG, RD, POL, BIG4, AUDFEE and GOV). The dependent variable (TH\_LN) has a mean of 0.13. For the independent variables, Don\_In, Awards\_In, TotCSR, and Gindex have means of 0.51, 1.2, 2.04 and 0.65, respectively. The descriptive statistics of alternative measures for the dependent variable are provided in Panel C. The dependent variable TH\_Dummy has a mean of 0.146, indicating that approximately 14.6 percent of the firms in the sample incorporated at least one subsidiary in a tax haven. The mean, median and range of the control variables are also reported in Table 2.1 (Panel B).

### **2.6.2 Correlation results**

The Pearson correlation results are reported in Table 2.2. Significant correlations are found between TH\_LN and TH\_Dummy and the independent variables Don\_In, Awards\_In, TotCSR, and Gindex ( $p < 0.10$  or better) and the control variables BVMV, SIZE, ROA, FORE, INTG, RD, POL, BIG4, and AUDFEE ( $p < 0.10$  or better). Table 2.2 also shows that only moderate levels of collinearity exist between the majority of explanatory variables.<sup>7</sup> Finally, variance inflation factors (VIFs) are calculated when estimating the regression models to test for signs of multi-collinearity between the explanatory variables. The untabulated results confirm that none of the explanatory variables' VIFs exceed four. Thus multi-collinearity does not present a problem for the study (Hair et al. 2006).

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<sup>7</sup> As per Hair et al. (2006), if the correlation coefficient for a pair of explanatory variables lies between  $\pm 0.25$  and  $\pm 0.75$ , then there is a moderate level of collinearity between the two variables.

**Table 2.2: Pearson Correlation**

	TH_LN	TH-Dummy	Don_In	Awards_In	TotCSR	Gindex	BVMV	SIZE	ROA	FORE	Tang	INTG	RD	POL	BIG4	AUDFEE	GOV
<b>TH_LN</b>	1																
<b>TH_Dummy</b>	0.9601*	1															
<b>Don_In</b>	0.0495	0.061	1														
<b>Awards_In</b>	0.073**	0.0821*	0.172***	1													
<b>TotCSR</b>	0.093***	0.0902*	0.240***	0.775***	1												
<b>Gindex</b>	0.059*	0.0348	-0.119***	-0.109***	-0.217***	1											
<b>BVMV</b>	-0.099***	-0.0800*	0.054	-0.150***	-0.134***	-0.038	1										
<b>SIZE</b>	0.254***	0.2384*	0.403***	0.369***	0.521***	-0.194***	-0.227***	1									
<b>ROA</b>	-0.094***	-0.0824*	0.151***	-0.142***	-0.129***	0.05	0.317***	-0.089**	1								
<b>FORE</b>	0.264***	0.2860*	0.165***	0.118***	0.236***	0.01	0.036	0.221***	-0.011	1							
<b>Tang</b>	-0.004	-0.046	0.114***	0.017	0.106***	-0.039	-0.046	0.229***	0.041	-0.148***	1						
<b>INTG</b>	-0.067*	-0.0742*	0.019	0.099***	0.070**	-0.011	-0.065*	-0.049	0.131***	-0.112***	-0.053	1					
<b>RD</b>	0.066*	0.0792*	0.024	0.262***	0.291***	0.001	-0.03	0.081**	-0.045	0.264***	-0.145***	0.076**	1				
<b>POL</b>	0.116***	0.0792*	0.132***	0.055	0.140***	-0.113***	-0.107***	0.438***	0	0.051	0.166***	-0.01	-0.084**	1			
<b>BIG4</b>	0.160***	0.1434*	0.245***	0.117***	0.191***	-0.172***	-0.088**	0.449***	-0.022	0.243***	0.122***	0.133***	-0.034	0.284***	1		
<b>AUDFEE</b>	0.173***	0.1638*	0.418***	0.265***	0.439***	-0.193***	-0.136***	0.756***	-0.031	0.287***	0.097***	0.031	0.002	0.443***	0.637***	1	
<b>GOV</b>	-0.005	-0.0138	-0.082**	-0.004	0.105***	-0.203***	-0.046	0.199***	0.049	0.077**	0.178***	0.137***	-0.027	0.291***	0.224***	0.148***	1

\*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

### 2.6.3 Regression results

The regression results are presented in Table 2.3 (with standardized coefficient estimates; t-statistics are in parentheses). Table 2.3 shows that the regression coefficient for Don\_In has a significant negative association with tax haven utilization ( $p < 0.01$ ), thus H1 is supported. The more charitable donations firms make, the less likely they are to use tax havens. The regression coefficient for Awards\_In is negative and significantly associated with tax haven utilization ( $p < 0.1$ ), thus providing support for H1. The regression coefficient for TotCSR is negative and significantly associated with tax haven utilization ( $p < 0.05$  or better), so H1 is supported. Firms that intend to provide more extensive CSR disclosures are less likely to use tax havens. The regression coefficient for Gindex is positive and significantly associated with tax haven utilization ( $p < 0.05$  or better), so H2 is supported. Firms that are well-governed are more likely to use tax havens. Finally, regarding the control variables, the regression coefficients for SIZE and FORE are positive and significantly associated with tax haven utilization ( $p < 0.01$  or better). TANG is negative and significantly associated with tax haven utilization ( $p < 0.10$  or better).

**Table 2.3: Regression results**

	TH_LN			
	Model 1a	Model 2a	Model 3a	Model 4a
<b>Don_In</b>	<b>-0.0219***</b> (-2.81)			
<b>Awards ln</b>		<b>-0.0209*</b> (-1.65)		
<b>TotCSR</b>			<b>-0.0403**</b> (-2.53)	
<b>Gindex</b>				<b>0.1356**</b> (2.39)
BVMV	-0.0046 (-0.60)	-0.0048 (-0.61)	-0.0041 (-0.52)	-0.0050 (-0.64)
SIZE	0.0495*** (3.13)	0.0384** (2.35)	0.0486*** (3.07)	0.0422*** (2.72)
ROA	-0.1940 (-1.00)	-0.2675 (-1.37)	-0.2968 (-1.54)	-0.2963 (-1.54)
FORE	0.0159*** (5.11)	0.0011*** (2.73)	0.0165*** (5.25)	0.0147*** (4.66)
Tang	-0.0852** (-2.21)	-0.1057*** (-2.71)	-0.0756* (-1.94)	-0.0984** (-2.53)
INTG	-0.2178 (-1.11)	-0.3734* (-1.89)	-0.2222 (-1.13)	-0.2468 (-1.25)
RD	0.1293 (0.13)	1.5925 (1.61)	0.3347 (0.33)	0.1279 (0.13)
POL	0.0477 (0.80)	0.0767 (1.27)	0.0591 (0.99)	0.0589 (0.99)
BIG4	0.0229 (0.69)	0.0315 (0.93)	0.0212 (0.64)	0.0318 (0.95)
AUDFEE	-0.0108 (-0.59)	0.0025 (0.14)	-0.0121 (-0.67)	-0.0154 (-0.85)
GOV	-0.0437 (-1.49)	-0.0110 (-0.38)	-0.0243 (-0.84)	-0.0108 (-0.36)
Intercept	-0.1342 (-1.06)	-0.0813 (-0.67)	-0.1064 (-0.86)	-0.1335 (-1.03)
YEAR FE	YES	YES	YES	YES
IND FE	YES	YES	YES	YES
N	704	704	704	704
adj. R-sq	0.233	0.207	0.232	0.231

Variable definitions: TH\_LN refers to the natural log of the total number of tax haven subsidiaries from the entire sample. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively.

<sup>a</sup>Standardized coefficient estimates with t-statistics in parentheses.

#### **2.6.4. Robustness check – alternative tax haven utilization measure**

A robustness check of the main regression results (see Table 2.4) is performed based on an alternative measure of tax haven utilization (TH\_Dummy). Specifically, TH\_Dummy is measured as a dummy variable, coded as 1 if there is at least one subsidiary incorporated in a tax haven. Consistent with the main regression results presented in Table 2.3, statistically significant regression coefficients are shown for Don\_In, TotCSR and Gindex ( $p < 0.05$  or better). However, Awards\_In is negatively but not significantly associated with TH\_Dummy. These findings provide additional support for H1 and H2. Finally, for the control variables, Table 2.4 shows that the SIZE, ROA, FORE, TANG and INTG regression coefficients are positively and significantly associated with TH\_Dummy ( $p < 0.10$  or better) in some of the regression models.

**Table 2.4: Logit Regression Results - alternative measure**

	TH_Dummy			
	Model 1 <sup>a</sup>	Model 2 <sup>a</sup>	Model 3 <sup>a</sup>	Model 4 <sup>a</sup>
<b>Don_In</b>	<b>-0.2614***</b> (-2.84)			
<b>Awards_In</b>		<b>-0.1959</b> (-1.31)		
<b>TotCSR</b>			<b>-0.6036***</b> (-2.86)	
<b>Gindex</b>				<b>1.6696**</b> (2.32)
BVMV	0.0393 (0.39)	0.0337 (0.34)	0.0574 (0.55)	0.0480 (0.48)
SIZE	0.4636** (2.20)	0.3903* (1.83)	0.4713** (2.23)	0.3740* (1.82)
ROA	-4.9008 (-1.64)	-4.3730 (-1.60)	-6.7192** (-2.24)	-6.8354** (-2.34)
FORE	0.1769*** (4.37)	1.8456*** (3.51)	0.1894*** (4.57)	0.1631*** (4.03)
Tang	-1.3081** (-2.33)	-1.1223** (-2.05)	-1.1430** (-2.00)	-1.3741** (-2.39)
INTG	-8.2100** (-2.09)	-7.9524** (-2.12)	-7.5343* (-1.94)	-8.6415** (-2.22)
RD	11.3835 (1.02)	22.5236** (2.15)	12.3721 (1.11)	11.1176 (1.03)
POL	-0.2260 (-0.26)	0.4163 (0.50)	0.0917 (0.11)	-0.0644 (-0.07)
BIG4	0.2705 (0.57)	0.0680 (0.15)	0.1978 (0.42)	0.3360 (0.70)
AUDFEE	-0.0979 (-0.38)	0.0308 (0.12)	-0.1260 (-0.48)	-0.1675 (-0.65)
GOV	-0.6946** (-2.00)	-0.2596 (-0.78)	-0.4116 (-1.22)	-0.3138 (-0.92)
Intercept	-4.0996** (-2.50)	-4.2375*** (-2.87)	-3.6899** (-2.27)	-3.8948** (-2.29)
YEAR FE	YES	YES	YES	YES
IND FE	YES	YES	YES	YES
N	616	616	616	616
adj. R-sq	0.234	0.213	0.235	0.229

Variable definitions: TH\_Dummy = a tax haven dummy variable, coded as 1 if the firm has at least one tax haven subsidiary, or 0 otherwise. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. The p-values are one-tailed for directional hypotheses and two-tailed otherwise. <sup>a</sup>Standardized coefficient estimates with t-statistics in parentheses.

### **2.6.5 Robustness check - Firm fixed effects**

As previously mentioned, inferences about the association between tax havens and the independent variables (Don\_In, Awards\_In, TotCSR and Gindex) are based on a pooled sample and time-series regression analysis, where multiple annual observations for the same firm are used. The standard errors are adjusted for heteroskedasticity and the within-firm clustering (Petersen 2009) in the main regression models helps to alleviate this concern. However, the robustness of the regression results is considered by estimating a firm fixed-effects regression model version of Eq. (1), in which every firm and every year in the sample is assigned a dummy variable (similar to Wooldridge 2010). The regression results in table 2.5 indicate that the regression coefficients for TH\_In are statistically significant ( $p < 0.05$  or better) for all independent variables. Hence, these regression results show that the main results are not necessarily driven by any omitted time-invariant firm characteristics (Wooldridge 2010).

**Table 2.5: Fixed effects**

	TH_LN			
	Model 1 <sup>a</sup>	Model 2 <sup>a</sup>	Model 3 <sup>a</sup>	Model 4 <sup>a</sup>
<b>Don_In</b>	<b>-0.0219***</b> (-2.81)			
<b>Awards_In</b>		<b>-0.0209*</b> (-1.65)		
<b>TotCSR</b>			<b>-0.0403**</b> (-2.53)	
<b>Gindex</b>				<b>0.1356**</b> (2.39)
BVMV	-0.0046 (-0.60)	-0.0048 (-0.61)	-0.0041 (-0.52)	-0.0050 (-0.64)
SIZE	0.0495*** (3.13)	0.0384** (2.35)	0.0486*** (3.07)	0.0422*** (2.72)
ROA	-0.1940 (-1.00)	-0.2675 (-1.37)	-0.2968 (-1.54)	-0.2963 (-1.54)
FORE	0.0159*** (5.11)	0.0011*** (2.73)	0.0165*** (5.25)	0.0147*** (4.66)
Tang	-0.0852** (-2.21)	-0.1057*** (-2.71)	-0.0756* (-1.94)	-0.0984** (-2.53)
INTG	-0.2178 (-1.11)	-0.3734* (-1.89)	-0.2222 (-1.13)	-0.2468 (-1.25)
RD	0.1293 (0.13)	1.5925 (1.61)	0.3347 (0.33)	0.1279 (0.13)
POL	0.0477 (0.80)	0.0767 (1.27)	0.0591 (0.99)	0.0589 (0.99)
BIG4	0.0229 (0.69)	0.0315 (0.93)	0.0212 (0.64)	0.0318 (0.95)
AUDFEE	-0.0108 (-0.59)	0.0025 (0.14)	-0.0121 (-0.67)	-0.0154 (-0.85)
GOV	-0.0437 (-1.49)	-0.0110 (-0.38)	-0.0243 (-0.84)	-0.0108 (-0.36)
Intercept	-0.1415 (-1.08)	-0.0719 (-0.57)	-0.0814 (-0.65)	-0.1493 (-1.11)
YEAR FE	YES	YES	YES	YES
Firm FE	YES	YES	YES	YES
N	704	704	704	704
adj. R-sq	0.224	0.197	0.222	0.221

Variable definitions: TH\_Dummy = a tax haven dummy variable, coded as 1 if the firm has at least one subsidiary incorporated in tax haven, or 0 otherwise. \*, \*\*, and \*\*\* indicate significance at the 0.10, 0.05, and 0.01 levels, respectively. The p-values are one-tailed for directional hypotheses and two-tailed otherwise. <sup>a</sup>Standardized coefficient estimates with t-statistics in parentheses.

### **2.6.6 Blundell-Bond general methods of moments (GMM) regression analysis**

As another endogeneity check of the baseline regression results reported in Table 2.3, this study employs the Blundell-Bond general methods of moments (GMM) regression analysis to more accurately control for potential time-invariance correlated with omitted variables in this study (Wintoki, Linck and Netter 2012; Kubick and Masli 2016; Tian and Lau 2001). To estimate the system GMM, the lagged dependent variable and the TH\_LN are treated as endogenous variables. The results of the Blundell-Bond GMM regression analysis are reported in Table 2.6.

Table 2.6 shows that the regression coefficient for dependent variables [Don\_log, Awards\_In, TotCSR and (Gindex)] are negatively (positively) and significantly associated with TH\_LN across all regression model specifications ( $p < 0.05$  and better). Hence, this particular set of results provides additional support for the hypothesis. The results also find that some of the regression coefficients for the control variables are significantly associated with TH\_LN in the regression models such as SIZE, ROA, FORE, TANG, BIG4, AUDFEE, and GOV ( $p < 0.10$  or better with predicted signs). In addition, further post-estimation tests are conducted to test the inference. Untabulated results find that measures of autocorrelations (1) and (2) confirm the existence of first order autocorrelations, but not the second order. Finally, the ‘Sargan test’ confirms the exogeneity and validity of the instruments used.

**Table 2.6: Blundell-Bond general methods of moments (GMM) regression analysis**

	TH_LN			
	Model 1 <sup>a</sup>	Model 2 <sup>a</sup>	Model 3 <sup>a</sup>	Model 4 <sup>a</sup>
<b>L.TH_LN</b>	0.9637*** (183.05)	0.9604*** (47.66)	1.0377*** (341.33)	0.9747*** (206.65)
<i>Don_log</i>	<b>-0.0076***</b> <b>(-2.86)</b>	-	-	-
<i>Awards_In</i>	-	<b>-0.0426**</b> <b>(-2.04)</b>	-	-
<i>TotCSR</i>	-	-	<b>-0.0164***</b> <b>(-7.08)</b>	-
<i>Gindex</i>	-	-	-	<b>0.0358**</b> <b>(2.21)</b>
<i>BVMV</i>	0.0010 (0.96)	-0.0004 (-0.19)	0.0009 (1.12)	0.0002 (0.24)
<i>SIZE</i>	0.0047* (1.82)	0.0126* (1.71)	0.0035** (2.23)	0.0026 (1.47)
<i>ROA</i>	-0.0371** (-2.30)	-0.1134* (-1.74)	-0.0750*** (-3.29)	-0.0544*** (-2.18)
<i>FORE</i>	0.0012** (2.50)	0.0011 (0.84)	0.0006 (1.64)	0.0008 (1.57)
<i>TANG</i>	0.0203** (2.46)	0.0183 (0.89)	0.0185*** (3.88)	0.0033 (0.51)
<i>INTG</i>	-0.0195 (-0.83)	-0.0021 (-0.04)	-0.0085 (-0.39)	0.0076 (0.37)
<i>RD</i>	0.1215 (0.73)	0.0069 (0.01)	-0.1517 (-1.61)	-0.1243 (-1.04)
<i>POL</i>	-0.0047 (-0.55)	0.0054 (0.27)	-0.0053 (-0.74)	0.0038 (0.44)
<i>BIG4</i>	-0.0016 (-0.27)	0.0106 (0.88)	-0.0077* (-1.86)	-0.0026 (-0.64)
<i>AUDFEE</i>	0.0043 (1.40)	-0.0036 (-0.54)	0.0048** (2.47)	0.0013 (0.47)
<i>GOV</i>	-0.0187*** (-2.94)	-0.0164 (-1.20)	-0.0093 (-1.52)	-0.0073 (-1.15)
<i>Intercept</i>	-0.0521 (-1.61)	-0.0026 (-0.06)	-0.0293* (-1.94)	-0.0535** (-2.16)
Year Dummies	YES	YES	YES	YES
Ind Dummies	YES	YES	YES	YES
N	630	630	630	630
R1	0.003	0.003	0.002	0.003
R2	0.409	0.279	0.281	0.692
Sargan Test	0.441	0.501	0.189	0.524

Coefficient estimates with t-statistics reported in brackets. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

## 2.7 Conclusions

This study examines the association between the extent of CSR-driven activities, strength of governance structures and tax haven utilization of Chinese listed firms. Based on a sample of 704 publicly listed Chinese firm-years data covering the 2006–2013 period, regression results show that the extent of CSR disclosures has a significant negative association with tax haven utilization by these firms. The results are robust to alternative proxy measures of tax haven utilization, CSR disclosures and a series of robustness checks. This study contributes to the existing CSR and tax avoidance literature by investigating the link between these variables. It provides unique empirical evidence that assesses the association between the extent of CSR disclosure and tax haven utilization. A negative association is evident. This finding suggests that firms engaging in and reporting on CSR activities, providing donations, or receiving CSR related awards do so for legitimacy reasons. This supports the conjecture that CSR disclosure practices and reporting are used to sustain or enhance a firm's reputation capital (Godfrey et al. 2009). Further, this study extends the literature by examining the association between CSR performance and tax haven utilization, and by arguing that CSR disclosure practices constitute a set of risk management strategies. These strategies affect firm financial performance and the motivation of management to engage in aggressive strategies via use of tax havens. This association is likely to be relevant to numerous stakeholders, particularly the Chinese government. Further, a positive association between the strength of governance structures and tax haven use is evident. This suggests that firms with effective governance structures are able to compete and use resources more efficiently via the use of tax havens. Ultimately, this may enhance firm performance. Overall, this study provides important evidence

regarding the implications of CSR communication practices for firms' tax avoidance strategies.

## **Appendix 2.A: List of OECD (2006) cited tax havens**

The OECD's (2006) 33 tax havens are Anguilla, Antigua and Barbuda, Bahamas, Bahrain, Bermuda, Belize, British Virgin Islands, Cayman Islands, Cook Islands, Cyprus, Dominica, Gibraltar, Grenada, Guernsey, Isle of Man, Jersey, Liberia, Malta, Marshall Islands, Mauritius, Montserrat, Nauru, Netherlands Antilles, New Caledonia, Panama, Samoa, San Marino, Seychelles, St. Lucia, St. Kitts and Nevis, St. Vincent and the Grenadines, Turks and Caicos Islands and Vanuatu.

## Appendix 2.B: Variable Definitions and Measurement

### A. Dependent variables

Variable name	Variable measurement
<i>TH_LN</i>	A continuous variable, measured as the natural logarithm of the total number of tax haven subsidiaries from the entire sample.
<i>TH_Dummy</i>	1 if a firm used a tax haven, otherwise 0.

### B. Independent variables

<i>Don_In</i>	A continuous variable measured as the natural logarithm of the total donation expenses incurred by the firm.
<i>Awards_In</i>	A continuous variable, measured as the natural logarithm of the total number of awards disclosed in the company's annual report
<i>TotCSR</i>	A continuous variable, measured as the natural logarithm of the total GRI 3.0 (0-70) items observed from each company's CSR report.
<i>Gindex</i>	A continuous variable, measured as a corporate governance score (0-5) scaled by 5. The corporate governance score consists of five dichotomous variables: <ul style="list-style-type: none"> <li>▪ independent directors: coded as 1 if the percentage of independent directors exceeds the median (which is 0.3333), or 0 otherwise;</li> <li>▪ board of directors' age: coded as 1 if the average age of the directors is lower than the median (which is 52), or 0 otherwise;</li> <li>▪ individuals on the board of directors (BOD) with outside directorship: coded as 1 if the percentage of directors holding outside directorship exceeded the median (which is 0.1538), or 0 otherwise;</li> <li>▪ board meeting attendance: coded as 1 if the percentage of directors attending all meetings exceeds the median (which is 0.8181), or 0 otherwise;</li> <li>▪ duality of CEO and chairmanship: coded as 1 if the CEO of the company did not hold chairmanship, or 0 otherwise.</li> </ul>

### C. Control variables

<i>BVMV</i>	A continuous variable, measured as the book value of equity over the market value of equity (i.e. market capitalization).
<i>SIZE</i>	A continuous variable, measured as the natural logarithm of total assets
<i>ROA</i>	A continuous variable, measured as profit over total assets.
<i>FORE</i>	A continuous variable, measured as the natural logarithm of total foreign revenue.
<i>Tang</i>	A continuous variable, measured as the total value of net property, plant and equipment over assets.
<i>INTG</i>	A continuous variable, measured as total intangible assets over total assets.
<i>RD</i>	A continuous variable, measured as total R&D over total assets.
<i>POL</i>	A continuous variable, measured as the total number of politically connected BOD members over the total number of BOD members.
<i>BIG4</i>	A dichotomous variable, coded as 1 if the firm's annual report was audited by one of the big 4 accounting firms, or 0 otherwise.
<i>AUDFEE</i>	A continuous variable, measured as the natural logarithm of total audit fees.

## Appendix 2.C: CSR indices according to GRI 3.0

EN1	Materials used by weight or volume.
EN2	Percentage of materials used that are recycled input materials.
EN3	Direct energy consumption by primary energy source.
EN4	Indirect energy consumption by primary source.
EN5	Energy saved due to conservation and efficiency improvements.
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.
EN8	Total water withdrawal by source.
EN9	Water sources significantly affected by withdrawal of water.
EN10	Percentage and total volume of water recycled and reused.
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.
EN13	Habitats protected or restored.
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.
EN16	Total direct and indirect greenhouse gas emissions by weight.
EN17	Other relevant indirect greenhouse gas emissions by weight.
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.
EN19	Emissions of ozone-depleting substances by weight.
EN20	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions by type and weight.
EN21	Total water discharge by quality and destination.
EN22	Total weight of waste by type and disposal method.
EN23	Total number and volume of significant spills.
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.
EN30	Total environmental protection expenditures and investments by type.
LA1	Total workforce by employment type, employment contract, and region.
LA2	Total number and rate of employee turnover by age group, gender, and region.
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.
LA4	Percentage of employees covered by collective bargaining agreements.
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.
LA8	Education, training, counselling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.
LA9	Health and safety topics covered in formal agreements with trade unions.

<b>LA10</b>	Average hours of training per year per employee by employee category.
<b>LA11</b>	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.
<b>LA12</b>	Percentage of employees receiving regular performance and career development reviews.
<b>LA13</b>	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.
<b>LA14</b>	Ratio of basic salary of men to women by employee category.
<b>HR1</b>	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.
<b>HR2</b>	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.
<b>HR3</b>	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.
<b>HR4</b>	Total number of incidents of discrimination and actions taken.
<b>HR5</b>	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.
<b>HR6</b>	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.
<b>HR7</b>	Operations identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour.
<b>HR8</b>	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of
<b>HR9</b>	Total number of incidents of violations involving rights of indigenous people and actions taken.
<b>SO1</b>	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of
<b>SO2</b>	Percentage and total number of business units analysed for risks related to corruption.
<b>SO3</b>	Percentage of employees trained in organization's anti-corruption policies and procedures.
<b>SO4</b>	Actions taken in response to incidents of corruption.
<b>SO5</b>	Public policy positions and participation in public policy development and lobbying.
<b>SO6</b>	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.
<b>SO7</b>	Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes.
<b>SO8</b>	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.
<b>PR1</b>	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.
<b>PR2</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.
<b>PR3</b>	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.
<b>PR4</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling, by type of outcomes.
<b>PR5</b>	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.
<b>PR6</b>	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.
<b>PR7</b>	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.
<b>PR8</b>	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.
<b>PR9</b>	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.

## Chapter 3

# The Effect of Tax Haven Utilization, Ownership Structure and Strength of Governance Structure on Corporate Cash Holdings: Evidence from Chinese Firms

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### 3.1 Introduction

Prior research shows that corporate investment strategies and the level of agency conflicts are important determinants of corporate cash holding decisions (Dittmar, Mahrt-Smith and Servaes 2003; Bates, Kahle and Stulz 2009; Lin et al. 2016; Lins, Servaes and Tufano 2010; Kusnadi, Yang and Zhou 2015; Megginson, Ullah and Wei 2014; Gao, Harford and Li 2013). While studies conducted in the Chinese context have examined the effect of cash flows on firms' over-investment and under-investment (Chen, Sun and Xu 2016; Huang et al. 2011), little research has examined the association between firms' ownership and governance structures, investments in offshore tax havens, and their level of cash holdings. Further, cash flows can be viewed as the lifeblood of a business' survival (Guariglia and Yang 2016). As a result, the choice of how to deploy cash flows is deeply embedded in the conflicts between businesses' core stakeholders, such as managers and shareholders (Harford 2008). As noted by Harford, Mansi, and Maxwell (2008), agency problems play a key role in determining the level of corporate cash holdings. Whilst the general notion of agency problems in developed countries lies in relations between agents and principals (Jensen 1986; Dittmar, Mahrt-Smith and Servaes 2003), agency relations may differ in developing and emerging economies where state owned enterprises (SOEs) play a dominant role. As ownership is concentrated in a small number of shareholders, which is often the case in emerging economies, the level of principal-principal conflicts increases (Li and Qian 2013; Young et al. 2008). The main objective of this

chapter is to examine the role of tax havens, ownership structures, and strength of governance structures in the determination of corporate cash holding levels in China.

Prior research shows that tax havens<sup>8</sup> assist firms to reduce their income tax payable (Levin 2012; Gravelle 2009; Bucovetsky 2014; Oxfam 2016).<sup>9</sup> Additionally, tax havens are often accused of providing a platform for round-tripping and regulatory arbitrage (Haberly and Wójcik 2015). This is particularly evident in the case of China. Firstly, China's foreign direct investment (FDI) is dominated by large, profit-making public SOEs (Kolstad and Wiig 2012) which represent politically-enforced monopolies (Morck, Yeung and Zhao 2008).<sup>10</sup> Secondly, China's FDI is highly concentrated in a small number of offshore financial centres. For example, in 2006, three offshore financial centres (namely Hong Kong, the British Virgin Islands and the Cayman Islands) hosted approximately 80 percent of China's total outbound direct investment (ODI) of USD 69.5 billion (OECD 2008). However, it is purported that a large amount of China's ODI took a round trip and returned to China in the form of FDI. This phenomenon provides an incentive to examine the association between Chinese firms that have reported tax haven operations and their cash holding levels.

Studies have shown that Chinese firms derive a string of benefits from the utilization of tax havens (Dyreng and Lindsey. 2009). These benefits include a reduction in business costs,

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<sup>8</sup> The OECD (2006, 2013) has developed a list of 33 tax havens. The full list can be found in Appendix 2A.

<sup>9</sup> A recent Oxfam report shows that the top-50 U.S. firms paid an effective tax rate (ETR) of 26.5%, accumulated around \$1.4 trillion in offshore funds and disclosed the utilization of 1,608 subsidiaries domiciled in offshore tax havens (Oxfam 2016).

<sup>10</sup> The most popular FDI statistics are provided by the Ministry of the People's Republic of China (MOFCOM). However, the statistics from MOFCOM do not consider the final destinations of the cash flows, or the amount of the reverse cash flows. Therefore, the volume and destination of Chinese ODI remains unclear (Garcia-Herrero, Xia and Casanova 2015). This chapter aims to examine the cash holding behaviour of some of China's largest listed firms. These firms are incapable of conducting ODI and FDI activities without the presence of subsidiaries registered overseas. The limitations of MOFCOM statistics do not affect our firm-level statistical analysis. Further, capital flows to and from tax havens identified on the OECD list are considerably larger than capital flows to and from jurisdictions not on the OECD list.

secrecy in financing arrangements and an expanded set of markets (Klassen, Lang and Wolfson 1993; Dyreng and Lindsey. 2009; Womack and Drucker 2011; Levin 2012; Grubert 2003). Use of tax havens clearly leads to significant savings in transaction costs. China imposes stringent controls on domestic companies' capital flows (Garcia-Herrero, Xia and Casanova 2015; Morck, Yeung and Zhao 2008). However, as an incentive to encourage foreign investment, the Chinese government allows a much greater freedom of capital exchange for foreign-invested enterprises (FIEs). In addition, investments in tax havens are treated with confidentiality, which allows firms to conceal core business information from almost all government authorities (Morck, Yeung and Zhao 2008). Many Chinese multinational companies utilise tax havens, but they appear to utilise them less than multinational firms in the U.S.

On the other hand, the utilization of tax havens by Chinese firms can also involve substantial costs relating to lack of transparency, agency costs, tax penalties and fines, and reputational costs (Scholes and Wolfson 1992; Dhaliwal, Lee and Pincus 2009). The use of tax havens by Chinese firms raises an important research question concerning how these potential benefits and costs affect firms' level of cash holdings.

This study is motivated to analyse the association between companies' tax haven utilization and their cash holding behaviour. It is a well-known fact that tax havens are frequently used to significantly reduce income tax expenses (Womack and Drucker 2011; Levin 2012; Gravelle 2009, 2015). However, whilst there is considerable research on the use of tax havens by U.S. multinational firms, there is a lack of empirical research regarding Chinese firms' utilization of tax havens. According to the U.S. research and advocacy group Global Financial Integrity, China was subject to a US\$3.79 trillion illegal capital outflow between 2000 and 2011 (Kar and Freltas 2012). Of the US\$2.83 trillion that illicitly flowed out of China from 2005-2011, a total of US\$595.8 billion ended up in tax havens in the form of

cash deposits and financial assets (such as stocks, bonds, mutual funds and derivatives) (Kar and Freltas 2012).

This study develops two competing arguments to explain the potential effect of tax haven utilization on firms' cash holdings. The first argument is that the utilization of tax havens could lead to a higher level of cash holdings. For instance, tax haven utilization can generate significant tax savings (Gravelle 2015), potentially resulting in an increased level of cash. Further, tax havens may significantly reduce firms' business expenses, resulting in higher future cash flows, particularly for those firms that have successfully utilized tax havens over the long term. Kim and Li (2014) suggest that tax haven operations could assist a firm to expand its investment opportunities by allowing firms to shift funds, in a tax effective manner, to markets outside of the parent company's country of domicile. Additionally, accumulated earnings and cash flows may not be subject to regulatory or legislative barriers, thereby increasing firms' level of cash holdings. Globally, it is evident that large corporations with subsidiaries incorporated in tax havens have accumulated a large amount of earnings. According to McIntyre, Phillips, and Baxandall (2015), whilst most of the United States' Fortune 500 companies disclosed offshore operations in 2014, some have more cash parked in tax havens than others. For instance, 6 percent of these companies are responsible for 65 percent (US\$1.4 trillion) of offshore cash.

The second argument is that tax haven utilization may result in a lower level of cash holdings. For example, tax haven use may increase the costs of business by creating obscure and complex financing arrangements that lead to investor and government uncertainty. These costs could increase a firm's level of systematic risk. An adverse selection problem, reduced liquidity and a lower level of cash holdings through higher transaction costs (i.e. a higher cost of capital) may occur (Amihud and Mendelson 1986). Agency related problems may also

increase a firm's exposure to rent extraction by management as they exploit information asymmetry issues throughout the firm, potentially leading to inefficient investments and poor management of firms' cash holdings (Chen et al. 2011). Costs of tax haven utilization could also include tax penalties, fines (Scholes and Wolfson 1992) and reputational costs (Hanlon and Slemrod 2009). These could negatively affect a firm's expected future cash flows, resulting in lower levels of cash (Dhaliwal, Lee and Pincus 2009). These contrasting effects suggest that tax haven utilization could possibly be associated with either a lower or a higher level of cash. On balance, it is expected that tax haven utilization is likely to increase firms' cash holdings by reducing income tax expenses and overall business costs.

Employing a sample of 778 publicly-listed Chinese firm-years covering the 2006–2013 period, regression results show that tax haven utilization has a significant positive association with firms' cash holdings. Further, a statistically significant positive association between the strength of a firm's corporate governance structure and its cash holdings is evident. The results are robust to alternative proxy measures of cash holdings and additional tests. The potential cost savings associated with use of tax havens appears to exceed the potential costs, leading to the observed positive association between these variables. On average, a one-standard deviation increase in tax haven utilization leads to firms' cash holdings increasing by around 5 percent. A one-standard deviation increase in shareholdings of the top five shareholders leads to firms' cash holdings increasing by around 9 percent. A one-standard deviation increase in the strength of corporate governance leads to firms' cash holdings increasing by around 10 percent.

This chapter makes the following contributions. First, it extends the accounting and finance literature by providing robust empirical evidence of a significant positive association between Chinese firms' tax haven utilization and cash holdings. The findings are also

economically significant. Hence, tax haven utilization plays an important role in the development of Chinese firms' liquidity positions. Second, this study is one of the first to specifically investigate the financial consequences of firms' tax haven utilization. Further, the majority of studies that focus on the determinants of cash holdings have been conducted in high investor protection countries such as the U.S. (Dittmar, Mahrt-Smith and Servaes 2003; Opler et al. 1999; Bates, Kahle and Stulz 2009) and European countries (Hall et al. 2015; Ferreira and Vilela 2004). Far fewer studies have been undertaken in China. The investigation into the strength of governance structures suggests high shareholder concentration and strong corporate governance structures are positively associated with a higher level of cash holdings. These findings should therefore be of interest to a number of capital market participants, including shareholders, financial analysts, regulatory bodies and tax authorities.

The remainder of this chapter is organized as follows. Section 3.2 considers the extant literature, which forms the theoretical background of this chapter. Section 3.3 develops the hypothesis. The research design employed is described in section 3.4, followed by a report of the empirical findings in section 3.5. Finally, section 3.6 concludes the chapter.

## **3.2 Determinants of Cash Holdings**

### **3.2.1 Tax Havens and Cash Holdings**

Three key motives have been advanced to account for firms' levels of cash holdings. According to the 'transaction motive', a firm's optimal level of cash is derived from the net effect of the marginal costs and marginal benefits of holding cash (Opler et al. 1999). The 'precautionary motive' for holding cash posits that firms hold cash as a buffer to deal with adverse shocks, such as an increase in the cost of external financing (Han and Qiu 2007). The 'pecking order motive' purports that there is a hierarchy of financing choices pursued by

companies. Because of market frictions such as information asymmetry and agency costs, the cost of external financing could be higher than the equivalent costs of internal financing (Chen, Sun and Xu 2016), leading firms to use internally generated cash before they obtain externally derived funds.

The effect of utilising tax havens on firms' cash holdings can be explained by all three motives for holding cash. Firstly, based on the 'transactional motive', tax havens are likely to assist firms to sustain or increase their cash holdings. The marginal benefits of tax haven use relating to financial flexibility, reduced regulatory impositions, lower business costs and lower tax expenses are likely to exceed the marginal costs. Secondly, based on the precautionary motive, tax haven use by Chinese listed firms may also increase their level of cash holdings. Despite the government's financial support to firms "going abroad", overseas expansion poses significant investment risks (Morck, Yeung and Zhao 2008).<sup>11</sup> This may result in firms retaining a high level of cash. Finally, based on the 'pecking order motive', tax haven use may lead to increased cash holdings because internal generation of cash (either through profits or tax and other savings) could be preferred over more costly external funding. Furthermore, tax haven use enables Chinese firms to deposit excess cash overseas and re-invest it when needed (Kolstad and Wiig 2012).

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<sup>11</sup> "Going abroad" is a policy endorsed by the central government, officially initiated in 2000. Luo, Xue, and Han (2010) document a number of promotional policies under the "going abroad" strategy which include: 1) tax incentives, which align with its international peers thus allowing Chinese firms operating overseas to be subject to single income tax principle; and 2) interest incentives, which allow firms to borrow RMB and foreign currency at no more than the benchmark interest rate set by the central bank, People's Bank of China.

### **3.2.2 Strength of Corporate Governance Structures, Ownership Structure and Cash Holdings**

The strength of governance structures is also considered to be an important determinant of Chinese firms' levels of cash holdings. Specifically, this study examines the association between a firm's level of cash holdings and its ownership structure. A critical determinant of a firm's internal governance and control is its ownership structure (Gul, Kim and Qiu 2010; Fan and Wong 2002; Harford, Mansi and Maxwell 2008). Concentrated ownership creates conflict between controlling shareholders and outside investors. Prior research shows that controlling shareholders are capable of exercising entrenchment power to prioritise managerial self-interests (Gul, Kim and Qiu 2010; Morck, Yeung and Zhao 2008). Compared to their Western counterparts, large Chinese listed firms have different shareholder structures. Even after the 2005 share market reform, the Chinese state continues to be the majority shareholder of large listed companies. This reform required Chinese listed companies to convert their previous non-tradable shares into tradable shares. One of the objectives of this reform was to align monitoring efforts with increases in share price. According to Chen et al. (2012), the reform appeared to be effective in affecting firms' cash management. Using a data set of 1293 firm-years, Chen et al. (2012) find the average ratio of corporate cash holdings to non-cash assets dropped from 23.5 percent to 20.8 percent.<sup>12</sup> However, this reform has had little effect on the composition of ownership structures. Megginson, Ullah, and Wei (2014) suggests that the state continues to exercise control via retained ownership. As captured in the study, 78 percent of the firms observed in the sample are SOEs. Unlike large western firms, in large Chinese firms the shareholders are not private individuals or families; instead, they are state controlled organisations. This key characteristic ensures that the managers, who are often appointed by

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<sup>12</sup> Our sample size is smaller than the Chen et al. (2012) study, yet shows a similar ratio of 19.6 percent.

the government (Li, Long and Song 2015), are there to ensure the party and the state's interests are prioritised above everything else.<sup>13</sup> Inevitably, these firms are responsible for assisting with some political tasks, such as reducing unemployment and increasing social welfare. For instance, the Chinese government often allocates donation tasks to businesses in order to provide funding for natural disaster relief (Tan and Tang 2014; Li, Song and Wu 2014). Under Megginson, Ullah, and Wei (2014)'s soft-budget perspective, SOEs hold less cash due to easy access to debt funding through state-owned banks. However, this notion neglects the cash requirements for SOE's non-investing activities. Bank borrowing is considered to be conditional liquidity which requires the borrower to provide collateral and continue to meet covenants (Lins, Servaes and Tufano 2010). In contrast, cash provides unconditional liquidity which can be used either to achieve political aims or to serve other managerial entrenchment purposes (Chen et al. 2012).

Compared to SOEs, large shareholders in privately owned firms have different motives for holding cash. They are less pressured by the government's political agenda. So the question is, do private firms with sound governance characteristics hold similar levels of cash to SOEs. There are a number of reasons for non-SOEs to hold more cash. Firstly, from a transaction cost perspective, the state-owned banks in China apply a much higher level of scrutiny over non-SOEs,<sup>14</sup> motivating non-SOEs to hold more cash. Secondly, the corporate ownership structure in China is highly concentrated in both SOEs and non-SOEs (Gul, Kim and Qiu 2010). This

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<sup>13</sup>Dharwadkar, George, and Brandes (2000) suggest the agency issues in emerging countries' post-privatised SOEs are more related to the fact that managers in SOEs prioritise the state's objectives rather than achieving enterprise efficiency. Specifically following Cho (1999), Dharwadkar, George, and Brandes (2000) point out that in addition to the traditional agency-principal problems, post-privatised SOEs have principle-principle issues which suggests that large state owners take advantage of minority private shareholders.

<sup>14</sup> Several studies suggest Chinese state-owned banks apply a different approach when lending to non-SOEs (Megginson, Ullah and Wei 2014; Brandt 2005). For example, non-SOEs are expected to provide more collateral than SOEs (Brandt 2005). Consequently, non-SOEs retain more free cash flow under this tight budget constraint (Megginson, Ullah and Wei 2014).

characteristic, together with weak investor protection, created an environment that allows the large shareholders or controlling shareholders to promote private interests at the expense of other shareholders (Dharwadkar, George and Brandes 2000; Gul, Kim and Qiu 2010; Johnson et al. 2000; Bertrand, Mehta and Mullainathan 2002). Using a sample of 11,000 firms from 45 countries, Dittmar, Mahrt-Smith, and Servaes (2003) find that companies from countries where investor protection is low hold more cash. Highly concentrated shareholdings in non-SOEs, which are more likely held by controlling families, are inclined to result in the retention of company savings in the form of cash, rather than distributing cash dividends to shareholders (Dittmar, Mahrt-Smith and Servaes 2003). In regard to the influence of corporate governance in privately owned firms, well governed firms are expected to have lower agency costs, potentially reducing the chances of investing excess cash in less profitable projects (Gao, Harford and Li 2013).

### **3.3 Hypothesis Development**

#### **3.3.1 Tax haven utilization and cash holdings**

There are two competing arguments about the potential effect of tax haven utilization on firms' level of cash holdings. The first argument is that the utilization of tax havens may result in a higher level of cash holdings. For example, tax haven utilization can help a firm to increase their level of cash through significant tax savings (Gravelle 2015). Moreover, if outside investors perceive that future cash flows will be higher for firms that have been successful in long-term tax haven utilization. This may also lead to higher levels of cash. This is because the firm is likely to access capital at a lower rate of return based on the higher expected current and expected future earnings (Dhaliwal, Lee and Pincus 2009; Kim and Li 2014). It is also possible that the weak legal or regulatory framework existing in tax havens, this could help a firm to increase its investment opportunities (Kim and Li 2014). The net effect

is that its earnings and cash flows can be sustained without being subject to regulatory or legislative barriers, thereby reducing overall business costs, and potentially resulting in higher cash holdings.

The second argument is that, tax haven utilization may give rise to a lower level of cash holdings. For instance, tax haven utilization encompasses increased financial, legal and organizational complexity, and reduced information transparency, generating uncertainty for investors which could increase a firm's level of systematic risk. This, in turn, may reduce firms' cash holdings because of the higher business costs associated with tax haven use (Amihud and Mendelson 1986). Agency related problems may also increase a firm's exposure to risk and reduced investment efficiency leading to a lower level of cash holdings (Chen, Sun and Xu 2016). The costs of tax haven utilization could also include tax penalties, fines and reputational costs which could negatively influence a firm's expected future cash flows and current level of cash holdings (Dhaliwal, Lee and Pincus 2009). These contrasting effects indicate that tax haven utilization could be associated with a higher or a lower level of cash holdings. On balance, however, we expect that tax haven utilization is likely to have a favourable effect on cash flows. The following (directional) hypothesis is developed:

H1: Tax haven utilization is positively associated with a firm's cash holdings.

### **3.3.2 Strength of corporate governance structures and cash holdings**

With regard to internal corporate governance determinants, both ownership structure and board characteristics can affect the level of corporate cash holdings. Central to these two determinants is the co-existence of agent-principal and principal-principal conflicts. According to Jensen (1986) free cash flow perspective, when agent-principal conflicts are prevalent, managers are motivated to hold excess cash in order to maximize personal interests. In order

to mitigate agent-principal conflicts, two options can be exercised by Chinese firms. One option to mitigate agent-principal problems is to appoint controlling shareholders as agents, or at least, appoint agents who can represent the controlling shareholders. This ultimately gives rise to principal-principal conflicts where large controlling shareholders have overarching power to monitor every aspect of the business. Two possible consequences arise. One is that, the direct monitoring mechanism endorsed by high ownership concentration could suppress opportunistic managerial behaviour and strengthen internal control (Dharwadkar, George and Brandes 2000; Chen et al. 2012). The other one is that principal-principal conflicts can create information asymmetry which potentially provides controlling shareholders with opportunities to expropriate private benefits at the expense of outside shareholders (Li and Qian 2013). These potential outcomes of high ownership concentration may both lead to a higher level of corporate cash holdings, but for distinct purposes. Firstly, managers affiliated with controlling shareholders may be motivated to make rational and informed decisions about how to dissipate internal funds, due to close monitoring by dominant controllers (Young et al. 2008). To this end, funds could be prioritized for investment and transaction purposes as informed by the transaction, precautionary and pecking order motives. Secondly, managers' cash deployment decisions will be loosely coupled with the transaction and precautionary motives when information asymmetry between controlling shareholders and minority shareholders is high. As suggested by Jensen (1986) free cash flow theory, managers motivated by self-interest will hold excess cash in order to gain discretionary power over investment decisions.

Based on the above analysis, this study develops the following directional hypothesis:

H2: Shareholder concentration is positively associated with a firm's cash holdings.

The other option to mitigate agent-principal problems is to adopt the Anglo-American style of corporate governance structures. In 2002, the China Securities Regulatory Commission

(CSRC) issued a U.S. style “code of corporate governance” for listed companies. In addition to prescribing specific board structure requirements, the code grants legal powers to outside shareholders so that they have equal status with other shareholders (Conyon and He 2011; Rajagopalan and Zhang 2008). Under the U.S. style of corporate governance structures, a well governed board with attentive and experienced board members can effectively oversee capital expenditure or scrutinize management’s spending (Harford, Mansi and Maxwell 2008). The structure of the board of directors (BOD) can be reflected by factors such as BOD independence, directors’ outside directorship, directors’ age, meeting attendance and CEO and chairman duality (Taylor, Tower and Neilson 2009; Eng and Mak 2003; Barros, Boubaker and Hamrouni 2013; Ho and Wong 2001; Chua, Eun and Lai 2007). Whilst examining the efficacy of adopting the “code” is not within this study’s scope, companies compliant with the suggested code of conduct are expected to have efficient internal control mechanisms over the long term. Harford, Mansi, and Maxwell (2008) suggest that firms which protect shareholder rights get rewarded with more cash as they gain trust from shareholders. On the basis of the aforementioned discussion, the following directional hypothesis is proposed:

H3: Strength of corporate governance structures is positively associated with a firm’s cash holdings.

### **3.4 Research Design**

#### **3.4.1 Sample**

This study examines the cash holdings of the top 100 firms (by total assets) listed on Shanghai Stock Exchange over the financial reporting periods 2006–2013. The following criteria were applied when selecting the sampled firms: (1) financial data must be available for every year in the 2006–2013 period; and (2) firms must have had a continuous listing on either

the Shanghai stock exchanges over the 2006–2013 period. The top 100 companies were ranked according to the level of total assets in the 2013 financial period. The largest Chinese listed firms are chosen as these are more likely to use tax havens, have issues relating to agency considerations, and have cash holdings reflected by SOE influence.

The initial sample comprised the top 200 Shanghai Stock Exchange listed non- financial and insurance firms from the 2006-2013 periods. The sample was reduced to 100 firms (778 firm-year observations) after excluding firms without the data required to calculate the independent and control variables. Overall, 778 firm-year observations were available for empirical testing. Financial and insurance firms are excluded because of the differences in reporting and regulatory practices of these firms. Finally, tax haven data was hand collected from the annual reports to obtain relevant data for the measurement of the variables, not all of which are available in electronic form in public databases. Other data was obtained from Capital IQ. It is a disclosure requirement for publicly-listed Chinese firms to provide a list of their subsidiaries (including the country in which they are incorporated) in their annual reports under IAS 124 Related Party Transactions and IAS 127 Consolidated and Separate Financial Statements. Hence, the data in relation to tax haven subsidiaries can be collected.

#### **3.4.2. Dependent variable: Cash holdings**

The dependent variable is represented by firms' level of cash holdings. In line with prior literature, firms' level of cash holdings is measured using two models. Similar to Bates, Kahle, and Stulz (2009), the primary ratio is the ratio of cash and cash equivalents to total assets (Cash\_TA). Two alternative measurements of cash holdings are also used. The alternative ratios are the ratio of cash and cash equivalents plus marketable securities to total assets (CashSTI\_TA) and the ratio of cash and cash equivalents to total assets minus cash and

cash equivalents (Cash\_NA). Each of the three measures is employed as a separate dependent variable across three separate regression models.

### **3.4.3 Independent Variables**

The first independent variable used in this study is represented by the occurrence of material tax haven operations (TH\_LN) as disclosed in firms' annual reports. TH\_LN is measured as the natural logarithm of the number of subsidiaries incorporated in an OECD (2006) listed tax haven.<sup>15</sup> Following Desai and Dharmapala (2006), Dharmapala and Hines (2009) and Taylor and Richardson (2012), a dummy variable measuring the existence of tax havens (TH\_D) is also included as an alternative measurement for tax haven operations.

Two internal governance control mechanism measures are used to gauge the potential impact of agency related conflicts on firms' level of cash holdings costs. These are ownership concentration and board characteristics. It is argued that concentrated ownership reduces agent-principal conflicts but amplifies principal-principal conflicts for two reasons in the Chinese context. First, concentrated ownership saves coordination costs and reduces information asymmetry (Dharwadkar, George and Brandes 2000). Second, considering China's weak investor protection laws, large controlling shareholders are capable of exercising entrenchment power to prioritise self-interests at the expense of outside investors (Morck, Yeung and Zhao 2008; Gul, Kim and Qiu 2010). Where such ownership structures exist, managers tend to hoard cash to please the holders of large, controlling shareholdings. Following Wu, Xu, and Yuan

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<sup>15</sup> The Organization for Economic Cooperation and Development (OECD) identify three key factors in considering whether a jurisdiction is a tax haven: (1) no or nominal taxes; (2) lack of effective exchange of information; and (3) lack of transparency. The OECD (2006) recognizes a total of 33 tax havens around the world. The OECD's (2006) complete list of 33 tax havens is reported in Appendix 3.A.

(2009), the ownership concentration is measured by referencing a modified Herfindahl concentration index (H\_SH) of the largest five shareholders (SH5) using the formula:

$$H\_SH = \ln SH5 / (1 - SH5)$$

The index,  $SH5 / (1 - SH5)$ , gives a measure of top five shareholders' shareholdings in relation to the rest of shareholders' shareholdings. The logarithm is applied to this measurement to enable an approximate normal distribution. SH5 is the percentage of the largest five shareholders' shareholdings. SH5 is also used as an alternative measurement for ownership concentration.

A governance index (Gindex) consisting of five board of director characteristics is used as a measure of the strength of governance of a firm. Similar to Ahmed and Duellman (2007), Al-Hadi, Hasan, and Habib (2016) and Taylor, Richardson, and Taplin (2015), the five governance items are i) the proportion of independent directors on the board, ii) the proportion of the BOD with outside directorships, iii) board directors' average age, iv) board meeting attendance, and v) duality of CEO and chairmanship. The Gindex is calculated by the total of the five observations scaled by 5. The development of the Gindex is justified by reference to extant literature. The 2002 corporate governance reform specifically required that there must be at least two independent directors from June 2003 onwards Rajagopalan and Zhang (2008). The purpose of introducing this rule is to safeguard the interests of shareholders (Chen and Firth 2006). In addition, the index also includes the percentage of board members holding additional outside directorships and the BOD age as proxies for the experience of board members. Following Fama and Jensen (1983), additional outside directorship contributes to the level of monitoring expertise. In addition, older individuals are more likely to be conservative and traditional (Huang, Rose-Green and Lee 2012; Sundaram and Yermac 2007). Based on Chen and Firth, Fung, and Rui (2007) and Chen et al. (2006), the percentage of

meetings attended is included as a proxy for board members' activeness. Lastly, the separation of the roles of chairman and CEO is included in the Gindex. The concern of having the same person holding the two top positions is that the person may have too much power with which is enough to undermine any attempt at monitoring (Firth, Fung and Rui 2007; Lin et al. 2016). Overall, construction of the governance index is based on objective evidence including development of governance requirements in recent Chinese regulatory reforms.

These five governance items are also individually assessed in the models. Where the original variable is a continuous variable, the median value of the variable is used, values above the median are coded one, and values below the median are coded 0. The mean and median values of the board characteristics are presented in Table 3.1.

#### **3.4.4 Control variables**

Consistent with prior cash holdings research (Azar, Kagy and Schmalz 2016; Megginson, Ullah and Wei 2014), the regression models control several firm-level and industry level variables. The control variables for this study are denoted by firm size (SIZE), leverage (LEV), Tobin's Q (Q), cash flows from operations (CFO), net working capital (NWC), net property plant and equipment (NPPE), dividends (DIV), government ownership (SOE), research and development (R&D), foreign subsidiaries (Fsub) industry sector (INDSEC) effects and year (YEAR) effects.

Larger firms are more likely to have a greater capacity to obtain resources, including cash. This makes larger firms less financially distressed than smaller firms and hence less likely to stockpile cash (Ozkan and Ozkan 2004). Further, larger firms are likely to achieve economies of scale, hence they are less motivated to hold cash to cover transaction costs (Bates, Kahle and Stulz 2009). SIZE is measured as the natural logarithm of total assets. Leverage

(LEV) is included in the regression model to control for differences in firms' capital structures. Firms that have excess cash tend to reduce leverage (Gao, Harford and Li 2013; Bates, Kahle and Stulz 2009). LEV is measured as short term and long term liabilities scaled over total assets. Following Duchin (2010) and Agha (2013), Tobin's Q (Q) is measured to control growth opportunities. Q is calculated as the sum of the market value of equity and the difference between book value of total assets and book value of equity in year t, scaled by the book value of total assets in year t.

Cash from operations (CFO) is used to control for cash flow volatility from operating activities (Megginson, Ullah and Wei 2014). CFO is calculated as cash from operation activities scaled by total assets. Net working capital (NWC) is included in the model to control for differences in operating performance (Opler et al. 1999; Gao, Harford and Li 2013; Ferreira and Vilela 2004). NWC is measured as working capital less cash and cash equivalents scaled by total assets. NPPE is included in the model to control for asset tangibility (Yun 2009; Agha 2013). It is measured as total net property, plant and equipment scaled by total assets. Dividends are included in the model to control for differences in distribution of retained earnings as dividends across firms (Ozkan and Ozkan 2004; Kusnadi, Yang and Zhou 2015; Harford, Mansi and Maxwell 2008; Ferreira and Vilela 2004; Wu, Rui and Wu 2012). According to Morck, Yeung, and Zhao (2008), large Chinese firms are more inclined to retain excessive earnings for empire-building rather than distributing earnings back to shareholders. Similarly, Guney, Ozkan, and Ozkan (2007) argue that better shareholder protection is often related with lower levels of cash holdings. Hence, firms that pay dividends are likely to associate with lower managerial cash holding needs. DIV is measured as a dichotomous variable, coded as 1 if the firm pays a dividend in a particular year.

Furthermore, government ownership is also included as a control variable as the sampled firms includes a large number of state-owned enterprises (SOE). Management of SOEs may adopt more conservative investment practices which may in turn influence firms' cash holdings (Bradshaw, Liao and Ma 2012). SOE is measured as a dichotomous variable, coded as 1 if the firm is an SOE (the government controls more than 50 percent of the equity of the firm), or 0 otherwise. Following Foley et al. (2007) and Gao, Harford, and Li (2013), R&D is included as a control for two main reasons. First, technological innovation has consistently been a primary focus of government economic policy in guiding domestic firms as well as inward FDI (Davies 2013). Second, better governed firms with excess cash are likely to increase investment in intangible assets in order to improve competitiveness and profitability (Harford, Mansi and Maxwell 2008; Opler et al. 1999; Gao, Harford and Li 2013; Morck, Yeung and Zhao 2008; Dhaliwal, Lee and Pincus 2009). R&D is measured as R&D expenditure scaled by total assets. Considering that the level of cash holdings is closely associated with the firms' overseas expansion (Morck, Yeung and Zhao 2008; Megginson, Ullah and Wei 2014), the existence of foreign subsidiaries is included as a control variable. Similar to Foley (2007), Fsub is coded as 1 if firm *i* has a foreign subsidiary and 0 otherwise.

Finally, industry and year dummy variables are included in the models. IND dummy variables, defined by the two-digit Global Industry Classification Standard (GICS) codes, are included as control variables in the regression model as firms' level of cash holdings can fluctuate across different industry sectors (Rego 2003). Eight INDSEC dummy variables included in this study: consumer discretionary, consumer staples, energy, healthcare, industrials, materials, telecommunication services and utilities (with consumer discretionary being the omitted sector in the regression model). No sign predictions are made for the INDSEC dummies. YEAR dummy variables are also included in the regression model to control for differences in tax haven activities that could possibly exist over the 2006–2013

sample years (with 2006 being the omitted year in the regression model). No sign predictions are made for the INDSEC or YEAR dummies.

### 3.4.5 Regression model

The multivariate regression model for examining the association between tax haven utilization, ownership and governance structure and level of cash holdings is estimated as follows:

$$\begin{aligned} \text{Cash\_TA}_{it} = & \alpha_{0it} + \beta_1 \text{TH\_ln}_{it} + \beta_2 \text{H\_SH}_{it} + \beta_3 \text{Gindex}_{it} + \beta_4 \text{SIZE}_{it} + \beta_5 \text{LEV}_{it} + \beta_6 \text{Q}_{it} \\ & + \beta_7 \text{CFO}_{it} + \beta_8 \text{NWC}_{it} + \beta_9 \text{NPPE}_{it} + \beta_{10} \text{DIV}_{it} + \beta_{11} \text{SOE}_{it} + \beta_{12} \text{R\&D}_{it} + \beta_{13} \text{Fsub}_{it} + \beta_{14-} \\ & \beta_{21} \text{INDSEC}_{it} + \beta_{22-29} \text{YEAR}_{it} + \varepsilon_{it}, \end{aligned} \quad (1)$$

where:  $i$  = firms 1–778;  $t$  = financial years 2006–2013; Cash\_TA = firms' level of cash holdings measured as the ratio of cash and cash equivalents to total assets; TH\_ln = the natural logarithm of the number of subsidiaries incorporated in an OECD (2006) listed tax haven; H\_SH = the natural logarithm of the proportion the top five shareholders' shareholdings to the remaining shareholdings; Gindex = the firm-level corporate governance score which consists of 5 internal governance items scaled by 5; SIZE = the natural logarithm of total assets; LEV = short term and long term liabilities scaled over total assets; Q = the sum of the market value of equity and the difference between book value of total assets and book value of equity; CFO = calculated as cash from operating activities scaled by total assets; NWC is measured as working capital less cash and cash equivalents scaled by total assets; NPPE = The total net property, plant and equipment scaled by total assets; DIV = a dichotomous variable, coded as '1' if a firm  $i$  pays dividends in year  $t$ , and '0' otherwise; SOE = a dichotomous variable, coded as '1' if the government controls more than 50 percent of the firm's equity, and '0' otherwise; R&D = R&D expenditure scaled by total assets; Fsub = a dichotomous variable, coded as '1' if a subsidiary is registered in a non-tax haven foreign country, and '0' otherwise. INDSEC =

a dummy variable, coded as '1' if the firm is represented by a specific SIC industry, and '0' otherwise; YEAR = a dummy variable, coded as '1' if the year falls within the specific year category, and '0' otherwise; and  $\varepsilon$  = the error term.

Chen et al. (2012) find that the average cash holdings of Chinese public firms reduced significantly after the split share structure reform of 2005. However, privately owned companies and firms with weaker governance structures reduced cash holdings when compared to SOEs and with stronger governance structures. Their findings imply that the ownership type could interact with governance characteristics to influence firms' cash holding decisions. Accordingly, a further test is conducted to test if the role of governance characteristics has different influences on SOE and non-SOE cash holding decisions, and if they are different, which type of firm is more likely to hold more cash. The base OLS regression model in Eq. (1) is extended as follows:

$$\text{Cash\_TA}_{it} = \alpha_{0it} + \beta_1 \text{Gindex}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{Q}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{NWC}_{it} + \beta_7 \text{NPPE}_{it} + \beta_8 \text{DIV}_{it} + \beta_9 \text{SOE1}_{it} + \beta_{10} \text{R\&D}_{it} + \beta_{11} \text{Fsub}_{it} + \beta_{12-19} \text{INDSEC}_{it} + \beta_{20-27} \text{YEAR}_{it} + \varepsilon_{it},$$

(2)

$$\text{Cash\_TA}_{it} = \alpha_{0it} + \beta_1 \text{Gindex}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{LEV}_{it} + \beta_4 \text{Q}_{it} + \beta_5 \text{CFO}_{it} + \beta_6 \text{NWC}_{it} + \beta_7 \text{NPPE}_{it} + \beta_8 \text{DIV}_{it} + \beta_9 \text{SOE0}_{it} + \beta_{10} \text{R\&D}_{it} + \beta_{11} \text{Fsub}_{it} + \beta_{12-19} \text{INDSEC}_{it} + \beta_{20-27} \text{YEAR}_{it} + \varepsilon_{it},$$

(3)

where: SOE1 = the government controls more than 50% of the firm's equity and SOE0 = private owned firms.

Table 3.5 reports the regression coefficient for corporate governance characteristics to the three measurements of the dependent variables, Cash\_TA (as model 1), CashSTI\_TA (as model 2) and Cash\_NA (as model 3). The regression coefficient is also tested after partitioning

the whole sample into two groups, SOE and non-SOE, across the three models. The coefficient estimates for the control variables are not tabulated. The regression results suggest that whilst strong corporate governance is significantly associated with the level of cash holdings in the whole sample, it enhances the association in the SOE group and plays no significant role in the non-SOE group. The coefficient estimates of Gindex in the three models are 0.0766 (t-statistic = 4.42), 0.0722 (t-statistic = 4.15) and 0.1044 (t-statistic = 3.99) respectively for SOE firms. All models are significant at better than the 1% level and have higher values than the coefficient estimates of Gindex for the whole sample. The coefficient estimates are negative between Gindex and cash holding levels, however, all three models appear to be insignificant. The results support Chen et al. (2012) findings that corporate governance characteristics influence SOEs and private-owned firms' cash holding decisions differently. SOEs with stronger governance are likely to have higher levels of cash savings than SOEs with weaker governance. The strength of corporate governance plays no significant role in non-SOE firms' cash savings policies.

Finally, Appendix 3.A summarizes the variable definitions and measurement details for all of the variables employed in this study.

### **3.5 Empirical findings**

#### **3.5.1 Summary statistics**

Table 3.1 (Panel A) provides the industry distribution of the sample based on the GICS classification. The sample includes a greater proportion of firms in industrials (40 percent), materials (21 percent), and consumer discretionary (12 percent) sectors compared to the other industry categories. Moreover, Table 3.1 (Panel A) reports descriptive statistics of Cash\_TA, CashSTI\_TA and Cash\_NA by industry classification (GICS). The results find higher

Cash\_NA ratios in the consumer staples (34.78 percent), healthcare (31.91 percent), consumer discretionary (23.37 percent) and industrial (20.09 percent) sectors compared to other sectors. On the contrary, utilities and telecommunication services have extraordinarily low levels of Cash\_NA ratio at 3.21 percent and 4.63 percent.

Table 3.1 (Panel B) reports the descriptive statistics for the dependent variables, independent variables and control variables. The dependent variable Cash\_TA has a mean of 0.15. For the purpose of interpreting meaningful statistics, the alternative measurements for tax haven utilization (TH\_D) and top 5 shareholders' shareholdings (SH5) are reported. TH\_D, SH5 and Gindex have means of 0.144, 0.605 and 0.667 respectively, indicating that 14.4 percent of the sampled companies have incorporated at least one subsidiary in a tax haven. The top 5 shareholders own a mean of 60.5 percent. The mean of Gindex is 66.7 percent. The mean, median and range of the control variables are also reported in Table 3.1 (Panel B).

**Table 3.1: Summary Statistics**

<b>Panel A: Industry Distribution</b>						
Industry Name	Total number of observations	Percentage of observations	Cash_TA	CashSTI_TA	Cash_NA	Ranking
<b>Consumer Discretionary</b>	96	12%	17.75%	18.24%	23.37%	3
<b>Consumer Staples</b>	54	7%	23.11%	23.47%	34.78%	1
<b>Energy</b>	64	8%	11.60%	12.00%	14.29%	6
<b>Healthcare</b>	40	5%	22.40%	22.60%	31.91%	2
<b>Industrials</b>	313	40%	15.82%	16.49%	20.09%	4
<b>Materials</b>	168	21%	12.84%	13.06%	16.29%	5
<b>Telecommunication Services</b>	8	1%	4.39%	4.39%	4.63%	7
<b>Utilities</b>	48	6%	3.07%	3.22%	3.21%	8
<b>Total</b>	791	100%	N/A	N/A	N/A	N/A

  

<b>Panel B: Descriptive statistics</b>						
Variable	N	Mean	Standard deviation	25 Percentile	Median	75 Percentile
Cash_TA	735	0.15	0.113	0.065	0.125	0.203
TH_In	735	0.144	0.352	0	0	0
H_SH	735	0.605	0.16	0.516	0.609	0.698
Gindex	735	0.667	0.198	0.6	0.6	0.8
SIZE	735	9.952	1.261	9.153	9.662	10.537
LEV	735	0.265	0.173	0.126	0.255	0.375
Q	735	1.982	2.167	0.948	1.275	2.107
CFO	735	0.068	0.071	0.022	0.062	0.11
NWC	735	-0.108	0.162	-0.201	-0.107	-0.013
NPPE	735	0.413	0.261	0.175	0.381	0.646
DIV	735	0.984	0.127	1	1	1
SOE	735	0.777	0.417	1	1	1
R&D	735	0.005	0.01	0	0	0.004
Fsub	735	0.495	0.5	0	0	1

### 3.5.2 Correlation results

The Pearson correlation results are reported in Table 3.2. Significant correlations are found between control variables Cash\_TA, CashSTI\_TA and Cash\_NA and the independent variables H\_SH and Gindex and the control variables SIZE, LEV, Q, CFO, NWC, NPPE, SOE and R&D. Table 3.2 also shows that only moderate levels of collinearity exist between the majority of explanatory variables. Finally, the variance inflation factors (VIFs) are calculated when estimating regression models to test for signs of multi-collinearity between the explanatory variables. The un-tabulated results confirm that none of the VIFs exceed four for any of the explanatory variables; thus multi-collinearity does not present a problem for this study (Hair et al. 2006).<sup>16</sup>

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<sup>16</sup> As per Hair et al. (2006), if a value of the correlation coefficient for a pair of explanatory variables lies between  $\pm 0.25$  and  $\pm 0.75$ , then there is a moderate level of collinearity between the two variables.

**Table 3.2: Pearson correlation**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cash_TA	1															
CashSTI_TA	0.990***	1														
	0.000															
Cash_NA	0.934***	0.923***	1													
	0.000	0.000														
TH_In	0.047	0.050	0.054	1												
	0.186	0.161	0.132													
H_SH	-0.080**	-0.084**	-0.063*	-0.008	1											
	0.030	0.022	0.086	0.823												
Gindex	0.120***	0.117***	0.113***	0.129***	0.118***	1										
	0.001	0.001	0.002	0.000	0.001											
SIZE	-0.180***	-0.172***	-0.171***	0.204***	0.519***	-0.003	1									
	0.000	0.000	0.000	0.000	0.000	0.000	0.928									
LEV	-0.413***	-0.420***	-0.452***	-0.065*	-0.151***	-0.152***	0.002	1								
	0.000	0.000	0.000	0.070	0.000	0.000	0.955									
Q	0.093***	0.107***	0.115***	0.051	0.022	0.014	0.087**	-0.098***	1							
	0.010	0.003	0.001	0.154	0.559	0.694	0.015	0.006								
CFO	0.085**	0.080**	0.158***	0.009	0.172***	0.050	0.055	-0.295***	0.072**	1						
	0.017	0.026	0.000	0.800	0.000	0.158	0.124	0.000	0.043							
NWC	0.072**	0.083**	0.107***	-0.068*	0.003	0.048	-0.144***	-0.322***	0.089**	-0.166***	1					
	0.044	0.019	0.003	0.057	0.940	0.180	0.000	0.000	0.013	0.000						
NPPE	-0.499***	-0.517***	-0.481***	-0.051	0.216***	-0.061*	0.155***	0.404***	-0.050	0.272***	-0.505***	1				
	0.000	0.000	0.000	0.149	0.000	0.087	0.000	0.000	0.165	0.000	0.000					
DIV	0.039	0.021	0.027	0.039	-0.032	-0.181***	0.262***	0.029	0.055	0.061*	0.007	0.000	1			
	0.269	0.552	0.446	0.271	0.387	0.000	0.000	0.408	0.124	0.088	0.846	0.991				
SOE	-0.062*	-0.065*	-0.044	-0.005	0.372***	0.004	0.165***	-0.073**	0.009	0.042	-0.087**	0.150***	-0.037	1		
	0.081	0.069	0.218	0.877	0.000	0.905	0.000	0.039	0.794	0.238	0.014	0.000	0.295			
R&D	0.228***	0.251***	0.129***	0.077**	-0.028	0.061*	0.028	-0.199***	0.089**	-0.032	0.037	-0.170***	-0.014	0.010	1	
	0.000	0.000	0.000	0.029	0.440	0.085	0.428	0.000	0.013	0.376	0.297	0.000	0.703	0.773		
Fsub	0.031	0.043	0.032	0.279***	0.127***	0.318***	0.113***	-0.143***	0.049	0.037	0.128***	-0.081**	-0.138***	-0.111***	0.175***	1
	0.382	0.224	0.362	0.000	0.001	0.000	0.001	0.000	0.169	0.302	0.000	0.023	0.000	0.002	0.000	

\*, \*\*, \*\*\* correspond to 1%, 5% and 10% levels of significance, respectively

### 3.5.3 Base Regression Results

The regression results for tax haven utilization, internal governance structure variables and cash holdings are presented in Table 3.3. Table 3.3 shows that the regression coefficient for TH\_In has significant positive association with firms' cash holdings across three models (coefficients of 0.019, 0.019 and 0.04 for Cash\_TA, CashSTI\_TA and Cash\_NA respectively), thus H1 is supported. Each of the four models employs a different measure of cash holdings. Firms that utilize tax havens more intensively tend to have a higher level of cash holdings. This supports the contention that efficiency in tax planning and strategic use of tax haven incorporated subsidiaries can assist the firm in managing its overall investments, may assist in achieving tax savings and may improve the flow of funds amongst group members. The estimated coefficients of TH\_LN in models 1, 4 and 7 suggest a 5 percent, 5 percent and 7 percent increase in Cash\_TA, Cash\_STI\_TA and Cash\_NA respectively for firms utilizing tax havens.<sup>17</sup> The estimated coefficients of H\_SH in models 2, 5 and 8 suggest a 9 percent, 8 percent and 6 percent increase in the three cash measurements for firms with high concentrated shareholdings. Lastly, the estimated coefficients of Gindex suggest a 10 percent, 9 percent and 9 percent increase in the three cash holding measurements for firms with quality BOD governance characteristics. Further, many of the control variables are significantly associated with firms' cash holdings including SIZE, LEV, NWC, and NPPE. Each of these control variables has a significant association with firms' level of cash holdings. Q and CFO have a significant positive association with

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<sup>17</sup> Calculated as the SD of the independent variable times the regression coefficient of the independent variable divided by the SD of dependent variable.

all all three cash measurements. While R&D has a significant positive association with CASH\_TA and CashSTI\_TA, its correlation with Cash\_NA is not significant.

**Table 3.3: Determinants of cash holdings**

	<i>OLS</i>								
	<i>Cash_TA</i>			<i>CashSTI_TA</i>			<i>Cash_NA</i>		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8	Model 9
<i>TH_ln</i>	<b>0.0185</b> (1.88)*	-	-	<b>0.0188</b> (1.93)*	-	-	<b>0.0432</b> (2.26)**	-	-
<i>H_SH</i>	-	<b>0.012</b> (2.37)**	-	-	<b>0.0113</b> (2.23)**	-	-	<b>0.0141</b> (1.75)*	-
<i>Gindex</i>	-	-	<b>0.0584</b> (4.01)***	-	-	<b>0.0531</b> (3.62)***	-	-	<b>0.0842</b> (3.60)***
<i>SIZE</i>	-0.0096 (-3.78)***	-0.0142 (-4.52)***	-0.009 (-3.67)***	-0.0098 (-3.86)***	-0.0143 (-4.53)***	-0.0093 (-3.73)***	-0.0159 (-3.76)***	-0.0214 (-3.88)***	-0.0144 (-3.54)***
<i>LEV</i>	-0.1621 (-5.11)***	-0.1534 (-4.50)***	-0.1539 (-4.90)***	-0.1585 (-5.09)***	-0.1485 (-4.44)***	-0.1509 (-4.89)***	-0.3519 (-7.80)***	-0.3418 (-7.57)***	-0.3391 (-7.64)***
<i>Q</i>	0.0044 (2.01)**	0.0041 (1.86)*	0.0048 (2.21)**	0.0044 (1.95)*	0.004 (1.78)*	0.0047 (2.11)**	0.0095 (2.53)**	0.0088 (2.39)**	0.01 (2.73)***
<i>CFO</i>	0.2242 (3.50)***	0.2234 (3.34)***	0.2207 (3.50)***	0.2356 (3.69)***	0.235 (3.53)***	0.2322 (3.69)***	0.5486 (4.89)***	0.5588 (4.76)***	0.542 (4.91)***
<i>NWC</i>	-0.2024 (-7.25)***	-0.2162 (-7.37)***	-0.2035 (-7.41)***	-0.1993 (-7.15)***	-0.2127 (-7.28)***	-0.2007 (-7.31)***	-0.2912 (-6.32)***	-0.3097 (-6.31)***	-0.2955 (-6.40)***
<i>NPPE</i>	-0.2289 (-12.64)***	-0.237 (-12.47)***	-0.2296 (-12.83)***	-0.2373 (-13.27)***	-0.2454 (-13.02)***	-0.2382 (-13.48)***	-0.393 (-12.60)***	-0.4071 (-12.00)***	-0.3963 (-12.82)***
<i>DIV</i>	-0.006 (-0.19)	-0.0076 (-0.22)	0.0028 (-0.09)	-0.0054 (-0.17)	-0.0081 (-0.23)	0.0028 (-0.09)	-0.0296 (-0.55)	-0.0236 (-0.43)	-0.0149 (-0.28)
<i>SOE</i>	0.0056 (-0.74)	0.0007 (-0.09)	0.0054 (-0.72)	0.0042 (-0.56)	-0.0003 (-0.04)	0.0041 (-0.54)	0.0192 (-1.42)	0.0143 (-1.01)	0.019 (-1.43)
<i>R&amp;D</i>	1.5256 (2.38)**	1.6258 (2.45)**	1.5727 (2.49)**	1.7718 (2.78)***	1.8493 (2.81)***	1.8148 (2.88)***	0.4554 (-0.87)	0.4838 (-0.89)	0.526 (-1.01)
<i>Fsub</i>	-0.0022 (-0.31)	0.0019 (-0.25)	-0.0062 (-0.87)	-0.0011 (-0.16)	0.003 (-0.4)	-0.0045 (-0.63)	-0.0042 (-0.36)	0.0049 (-0.38)	-0.008 (-0.65)
<i>YEAR FE</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES
<i>INDSEC FE</i>	NO	NO	NO	NO	NO	NO	NO	NO	NO
<i>Constant</i>	0.2986 (7.00)***	0.3444 (6.96)***	0.2489 (5.74)***	0.3041 (7.06)***	0.3495 (6.98)***	0.2584 (5.92)***	0.4625 (6.35)***	0.5117 (6.28)***	0.3864 (5.31)***
<i>N</i>	778	732	778	778	732	778	778	732	778
<i>adj. R-sq</i>	0.441	0.442	0.449	0.452	0.452	0.458	0.45	0.451	0.454

Coefficient estimates with t-statistics reported in brackets. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

### 3.5.4 Blundell-Bond general methods of moments (GMM) regression analysis

Following Arellano and Bond (1991), Agha (2013) and Agha (2016), this study employs Blundell-Bond general methods of moments (GMM) regression to address the potential problem of endogeneity. OLS assumes 1) there are no linear relationships among the independent variables (TH\_LN, H\_SH and Gindex) and 2) the error term is uncorrelated with each independent variable (Roberts and White – endogeneity in empirical corporate finance). Table 3.3 shows regression models are robust to alternative measurements of dependent variables, however, potential endogeneity issues arise from possible correlation between the utilization of tax havens (Th\_LN) and internal governance characteristics (H\_SH and Gindex) are not resolved.<sup>18</sup> In addition, unobserved and omitted variables also pose potential endogeneity issues. To estimate the system GMM, the lagged dependent variable and the CASH\_TA are treated as endogenous variables. The results of Blundell-Bond GMM regression analysis are reported in Table 3.4.

Table 3.4 shows that the regression coefficient for independent variables TH\_LN, and H\_SH and Gindex across all regression model specifications ( $p < 0.05$  and better). Hence, it provides additional robustness support to the hypotheses. Further, some regression coefficients for the control variables are found to be significantly associated with CASH\_TA in the regression models such as SIZE, LEV, Q, CFO, NWC, NPPE, and R&D ( $p < 0.10$  or better). In addition, several post-estimation tests are conducted for inference. The un-tabulated results find that measures of autocorrelations (1) and (2) confirm the existence of first order autocorrelations, but not the second order.

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<sup>18</sup> Desai and Dharmapala (2006), Dharmapala, (2008), and Richardson et al (2013) find that firms' governance characteristics have influence on the propensity of management to engage in aggressive tax planning.

We also find that the Hansen test confirm the exogeneity and validity of the instruments used.

Table 3.4: Blundell-Bond general methods of moments (GMM)

	Cash_TA		
	MODEL 1	MODEL 2	MODEL 3
<i>L.cash_ass_w</i>	0.0874*** ( 3.68)	0.2840*** ( 10.65)	0.2594*** ( 9.94)
<i>TH_ln</i>	0.0298*** ( 2.83)	-	-
<i>H_SH</i>	-	0.0280*** ( 2.75)	-
<i>Gindex</i>	-	-	0.0441** ( 2.00)
<i>SIZE</i>	-0.0066* (-1.74)	-0.0173*** (-4.35)	-0.0059** (-2.13)
<i>LEV</i>	-0.1195*** (-4.97)	-0.0683*** (-3.71)	-0.0825*** (-4.34)
<i>Q</i>	0.0029*** ( 4.24)	0.0015** ( 2.37)	0.0025*** ( 3.95)
<i>CFO</i>	0.3028*** ( 7.24)	0.2828*** ( 7.90)	0.2769*** ( 6.57)
<i>NWC</i>	-0.1473*** (-5.52)	-0.1463*** (-5.95)	-0.1562*** (-7.53)
<i>NPPE</i>	-0.2164*** (-9.61)	-0.2119*** (-11.13)	-0.1690*** (-8.90)
<i>DIV</i>	( 0.01) (-1.56)	( 0.00) (-0.54)	( 0.00) (-0.64)
<i>SOE</i>	-0.0001 (-0.01)	-0.0066 (-0.59)	0.0146* ( 1.82)
<i>R&amp;D</i>	0.7874*** ( 2.97)	0.7888*** ( 3.92)	0.9109*** ( 4.15)
<i>Fsub</i>	-0.0053 (-0.93)	0.0049 ( 1.22)	0.0027 ( 0.64)
<i>_cons</i>	0.2789*** ( 6.92)	0.3337*** ( 7.49)	0.1852*** ( 5.33)
<i>YEAR</i>	YES	YES	YES
<i>INDUSEC</i>	YES	YES	YES
<i>N</i>	679	653	679
<i>ARI</i>	0.009	0.000	0.000
<i>AR2</i>	0.393	0.837	0.867
<i>Hansen</i>	0.119	0.072	0.078

Coefficient estimates with t-statistics reported in brackets. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

Table 3.5

	Whole sample			SOE			Non-SOE		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
<b>Gindex</b>	0.0584 <b>(4.01)***</b>	0.0531 <b>(3.62)***</b>	0.0842 <b>(3.60)***</b>	0.0766 <b>(4.42)***</b>	0.0722 <b>(4.15)***</b>	0.1044 <b>(3.99)***</b>	-0.0238 (-0.82)	-0.0307 (-1.03)	-0.0597 (-1.23)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N	778	778	778	605	605	605	173	173	173
adj. R-sq	0.449	0.458	0.454	0.472	0.481	0.499	0.373	0.37	0.337

### 3.6 Conclusions

Employing a sample comprised of 778 publicly-listed Chinese firm-years data covering the 2006–2013 period, the regression results show that tax haven utilization has a significant positive association with firms' cash holdings. Further, a statistically significant positive association is found between the ownership structure and strength of governance structure and firms' level of cash holdings. The results are robust to alternative proxy measures of cash holdings, and additional tests. It appears that the potential costs savings associated with the utilization of tax havens exceed the potential costs leading to the observed positive association. The positive association between firms' ownership structure and their level of cash holdings is likely to be driven by the high level of state ownership of sample firms. Similarly, strength of governance structure appears to act as a form of risk management mechanism which enhances firms' level of cash holdings. Further work on Chinese firms' level of cash holdings could focus on the effect of related party transactions on cash holdings.

### Appendix 3.A: Variable Definitions

#### Dependent Variable:

Cash Holdings Models:		
Model 1: Cash_TA	=	Total cash and cash equivalents to total assets
Model 2: CashSTI_TA	=	Total cash and cash equivalent plus short term investment to total assets
Model 3: Cash_NA	=	Total cash and cash equivalents to net assets, where net assets are measured as total assets minus cash and cash equivalents

#### Independent variable:

TH_ln	=	The natural logarithm of the total number of tax havens subsidiaries identified.
TH_D	=	1 if a firm adopt tax Haven, otherwise 0.
SH5	=	The percentage of shareholdings by the largest five shareholders
H_SH	=	$\text{Ln}\left(\frac{SH5}{1 - SH5}\right)$
Gindex	=	A continuous variable, measured as a corporate governance score (0-5) scaled by 5. The corporate governance score consists five dichotomous variables which are independent directors(coded as 1 if above the median of 33.33% of the board size, 0 otherwise); board directors' age (coded as 1 if above the median of 52 year-old, otherwise 0); outside directorship (coded as 1 if above the median of 15.38% of BOD has outside directorship, 0 otherwise), board meeting attendance (coded as 1 if the BOD attended more than the median of 81% of the meeting, 0 otherwise) and duality (coded as 1 if the CEO and the chairman are not the same person, 0 otherwise)

#### Control Variables:

SIZE	=	The natural logarithm of total assets
LEV	=	Total long-term and short-term debts scaled to total assets
Q	=	The sum of the market value of equity and the difference between book value of total assets and book value of equity in year t, scaled by the book value of total assets in year t
CFO	=	Cash from Operation scaled by total assets
NWC	=	The total net working capital less cash and equivalents
NPPE	=	The total net property, plant and equipment scaled by total assets
DIV	=	1 if a firm i pays dividend in year t, otherwise 0
SOE	=	1 if the government controls more 50% of the equity, otherwise 0
R&D	=	R&D expenditure scaled by total assets
Fsub	=	1 if the firm has a subsidiary registered outside China in a non-tax-haven country, otherwise 0

All continuous variables are winsorized (reset) at the 1st and 99th percentiles.

## Chapter 4

### **Determinants of Corporate Social Responsibility Disclosure Practices: An Empirical Analysis of Chinese Listed Firms**

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#### **4.1 Introduction**

During the post-Mao economic reform period (post late-1970s), Chinese leaders abandoned the state-planned economy and commenced with the development of a modern socialist market based economy. This was also the beginning of a period when profit maximization was the sole purpose of Chinese enterprises (Wang and Juslin 2009). As China shifted its focus towards development of a socialist market based economy, economic performance was the primary means by which the Communist Party attained legitimacy with society (Lamrad 2012). Prior research highlighted that this economic reform neglected the development of business ethics and professional morality (Harvey 1999; Shafer, Fukukawa and Lee 2006; Wang and Juslin 2009). Harvey (1999) suggests that the long-established Confucian values of trustworthiness and diligence have been replaced by the phenomenon of ‘money-worship’ as a result of market based economic reform.

This chapter is motivated for several reasons. First, China is a major contributor to greenhouse gas emissions from 2007 (EPA 2008), hence, there is growing concerns over businesses’ environmental performance. Second, there are frequent media releases that highlight severe environmental and social issues ranging from labour relations and wages to smog over some of the largest Chinese cities. Third, the relations-based regime that typifies China offers considerable scope to examine associations between social and environmental disclosures and

firms' risk management and directors' characteristics. Indeed, the establishment of relationships or connections with business partners is considered necessary in order to acquire resources, to obtain approvals or obtain bureaucratic privilege, to facilitate the achievement of business outcomes or to reduce risks that these outcomes will not be achieved which includes environmental and social targets (Hwang et al. 2009). Fourth, significant new regulations and legislation governing social and environmental disclosures were introduced in 2010 and firms, which traditionally focused on profit-maximization, now have to consider the nature and consequences of their CSR activities. Prior research on understanding the determinants of CSR disclosures in the Chinese context are fragmented and this study offers an ideal opportunity to provide a far more in-depth and rigorous study of those determinants.

China had become the second largest economy in the world after America in 2010 ("Second in Line" 2010). In particular, China's economy grew rapidly during the global financial crisis, and performed better than other OECD and many other emerging economies during that crisis (OECD 2013). However, as China increasingly consumes more energy and raw materials, it has become one of the largest emitters of greenhouse gases and other pollutants. In fact, China has already become one of the largest contributors to global climate change, and is the leading sulphur dioxide and carbon dioxide emitter globally since 2007 (EPA 2008). China accounted for 27% of the global carbon dioxide emission, being the largest greenhouse emitter that exceeds the combination of USA (14%) and EU (7%)'s total emissions in 2012 (Arup 2013).

Furthermore, social issues, especially violations of labour rights, have also become pertinent following China's rapid economic reform. The logo "Made-in-China" is not only associated with cheap products, but is also associated with wage arrears, dangerous working environments and prolonged working hours (Lin 2010). It is not until 2008 that the government toughened the Labour Contract Laws to protect disadvantaged workers (Hao and Chen 2014). Recent food safety scandals also revealed some appalling behaviour by companies that have pursued profit at the expense of human welfare. For example, one of the largest dairy companies in China (Sanlu Group) was found producing baby formula with melamine contaminated milk in 2008 (Yan 2012). This event caused thousands of children to be hospitalised (Yan 2012). New parents were reported to have serious concerns about domestic brands and prefer imported milk if they can afford them (Hatton 2013).

As social and environmental problems have posed increasingly serious issues, China has implemented a number of regulatory and legislative changes to deal with these issues (Chan and Welford 2005). China enacted its first Environmental Protection Law in the late 1970s, and by the year 2000, it had enacted some 43 environmental related laws (Zhang 2001). Legislative changes have recently included new laws relating to environmental disclosures in firms' reporting media. For instance, CSR is explicitly written in recent Chinese Company Law (2006) such that

"in the course of doing business, a company must comply with laws and administrative regulations, conform to social morality and business ethics, act in

good faith, subject itself to the government and the public supervision, and undertake social responsibility” (Lin 2010, 8).

A “Guide Opinion on the Social Responsibility Implementation for the State-Owned Enterprises controlled by the Central Government” released in 2008 by the State-Owned Assets Supervision and Administration Commission (SASAC), encourages state-owned enterprises to follow sound CSR practices and report on CSR activities (“Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges” 2012). Further, the “Green Securities” policy, requires listed companies to disclose more information about their environmental record and the “Green IPO” policy issued by SASAC, requires enterprises in energy-intensive industries to undergo an environmental assessment by the Ministry of Environment Protection before initiating an IPO or obtaining refinancing from banks (“Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges” 2012).

In addition, the Shanghai Stock Exchange (SSE) issued the “Shanghai CSR Notice” and the “Shanghai Environmental Disclosure Guidelines” designed to strengthen listed companies’ accountability regarding social responsibility. Shanghai listed companies that promote CSR are offered incentives including priority election into the Shanghai Corporate Governance Sector, or simplified requirements for examination and verification of temporary announcements. The SSE has also developed the concept of social contribution value per share (SCVPS) to measure a company’s value creation relating to CSR activities. An SSE Social Responsibility index based on SCVPS was also created and started trading on 30th June 2009(Shanghai Stock Exchange Social Responsibility Index Information

2009). The aim of this index is to promote social and environmental behaviour and also to attract ethical investment. The Shanghai Environmental Disclosure Guidelines allow for the SSE to take “necessary punishment measures” against companies for violation of disclosure rules (“Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges” 2012, 4).

Based on a sample of 704 publicly-listed Chinese firm-years data covering the 2006–2013 period, the regression results show that the extent of CSR disclosure is significantly negatively associated with firms’ use of tax haven incorporated subsidiaries, and significantly positively associated with a government controlled CSR watch-list, firms level of philanthropic donations, firms receipt of environmental awards and political connected board of directors. Results are robust to additional analyses and endogeneity checks.

This chapter contributes to the CSR literature in several ways. This study provides unique empirical evidence that assesses the association between CSR communication practices and elements of firms’ propensity to engage in social or environmental legitimacy by way of donations, awards, watch-lists, tax aggressiveness and political connections. In particular, Chinese firms may make claims about being socially and environmentally responsible, but at the same time may use tax haven jurisdictions extensively to reduce the payment of corporate taxes. Firms that use tax havens may insulate themselves from engaging in, and disclosing essential CSR information to stakeholders. Similarly, firm have incentives to disclose more CSR information in order to revamp their reputation after being placed on an environmental watch-list by the government. Chinese

firms may also legitimize operations through philanthropic activities such as making donations and flag these activities through CSR disclosures. Thus, legitimacy theory offers important insights into the motivation of Chinese firms' CSR disclosures practices.

The remainder of this chapter proceeds as follows. Section 4.2 outlines the theoretical framework for CSR disclosure in the Chinese context. Section 4.3 provides the theory and Section 4.4 develops the hypotheses. Section 4.5 discusses the research design and summarizes the empirical results. Finally, Section 4.6 concludes the paper.

## **4.2 Theoretical framework for CSR disclosure**

The motives for engaging in CSR activities and communication are complex. This is primarily due to the fact that there is a weak regime in place to regulate CSR disclosure in emerging economies (Gray 2010; Lanis and Richardson 2012). Consequently, firms' un-audited CSR disclosures are largely used to minimise risks relating to reputation, and the social and political milieu (Bebbington, Larrinaga and Moneva 2008; Gao 2008). In response to the complicated nature of CSR disclosure, empirical research has developed a wide range of theoretical constructs in order to explain this phenomenon (Unerman 2008; Bebbington, Larrinaga and Moneva 2008; Lanis and Richardson 2012). For instance, according to agency theory, CSR engagement is criticised as an attempt by managers to advance their own career and social agendas, at the costs of shareholders (Friedman 1970). Similarly derived from agency theory, de Villiers and van Staden (2010) document that CSR disclosure, specifically environmental disclosures, are in fact made in the interests of shareholders' and managers who

are responsible to provide legitimate information designed to ameliorate agency related problems.

Political economy theories such as stakeholder theory and legitimacy theory are also used to explain why corporations voluntarily disclose their CSR information. According to stakeholder theory, managers are motivated to disclose information designed to target powerful stakeholders (Deegan and Shelly 2013). Similarly, legitimacy theory suggests managers are motivated to supply information in order to secure resources that are deemed to be vital to the survival of the firm (Deegan and Shelly 2013). According to Reverte (2008), these two theories should not be seen as competing theories, but rather that they offer complementing insights in the understanding of firms' decision in disclosing CSR related information. This study applies legitimacy theory as the theoretical framework to explain firms' CSR communication patterns.

Legitimacy theory is defined as a "generalised perception or assumption that the actions of an entity are desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and definitions" (Suchman 1995, 574). The main tenet of legitimacy is the existence of a social contract (Shocker and Sethi 1973; Archel et al. 2009; Deegan, Rankin and Tobin 2002) with which organizations aim to comply with in order to continue using social resources (Dowling 2013; Dowling and Pfeffer 1975) and to retain their licence to operate (Deegan, Rankin and Tobin 2002). The importance of this theory is that it focuses on the legitimacy gap which is derived when organizations' actions do not conform to societal expectations (Archel et al. 2009). Consequently, one of the major assumptions of legitimacy theory is that, whenever there is a perceived

legitimacy gap which may affect the supply of critical resources to the organization, managers will pursue strategies to ensure the continued supply of those resources (Deegan, Rankin and Tobin 2002).

Legitimacy theory has been widely adopted in corporate social responsibility reporting research in the context of developed countries (Patten 2002; O'Donovan 2002; Deegan, Rankin and Tobin 2002). This chapter employs legitimacy theory as the theoretical framework to explain differences in the extent of CSR disclosures and the potential determinants of those disclosures. Significant legitimacy issues relating to social and environmental activities are prevalent in China. Based on legitimacy theory, it is expected that Chinese listed companies will engage in reporting social and environmental information in their annual reports or stand-alone CSR reports. This is partly due to the increasing number of social and environmental regulations implemented by the Chinese government and stock exchanges. Recently, China has been experiencing numerous societal and environmental problems. Some government reports indicate that the number of labour dispute cases filed climbed from 90,000 cases in 1998 to 500,000 in 2008 (Lin 2010). Workers' dissatisfaction mainly comes from low wages and poor working conditions which contribute to the country's recent labour shortage problem (Knight, Deng and Li 2011). The unfair wealth distribution has also contributed to economic inequality, which was once regarded as incompatible with a socialist system (Lin 2010). Researchers have criticized that the government's negligence in handling social issues and the exclusive focus on economic development are the main causes of social crises (Hao and Chen 2014). In addition, environmental degradation and pollution has become extreme in some parts of China. The Chinese government is openly concerned about these problems and has

admitted that the country is poorly prepared to tackle the impact of pollution (Cahan 2013).

### **4.3 Hypotheses Development**

In this section, it is argued that legitimacy and institutional incentives drive the extent of CSR disclosures by Chinese largest firms. These incentives can be reflected in corporate behaviour such as avoiding being perceived as unethical tax avoider and defending poor environmental or social performance. Firms may choose to disclose their CSR activities in order to gain or sustain community legitimacy. For instance, firms may engage in philanthropic donations and seek to pay their fair share of taxes as activities designed to legitimize themselves with the community or government. Political connections of firms' board members may also influence firms' propensity to engage in CSR related activities and to disclose information relating to those activities. Several factors are considered to be important drivers of Chinese firms CSR disclosure practices. These factors are firms' use of tax haven incorporated subsidiaries, whether the firm has been explicitly placed on an environmental watch-list by the government, the amount of philanthropic donations made by a firm, and political connections of firms' board members.

#### **4.3.1 CSR and tax havens**

Prior research has shown that corporate tax strategies are linked with the nature and disclosure of CSR practices (Christensen and Murphy 2004; Sikka 2010; Lanis and Richardson 2012; Hoi, Wu and Zhang 2013; Fisher 2014; Davis et al. 2016). Aggressive tax avoidance behaviour such as transfer pricing, income

shifting and incorporation of subsidiaries in tax haven jurisdictions are considered by the community to be fundamentally socially irresponsible and harmful to society as well as to the government (Christensen and Murphy 2004; Fisher 2014).

The association between the extent of firms' CSR disclosures and their propensity to use tax havens is examined to assess whether this assertion holds in the Chinese context. There are some empirical studies that have examined the association between CSR reporting and aggressive tax strategies (measured via effective tax rates or book-tax differences) (see e.g. Davis et al. 2016; Lanis and Richardson 2012). However, little work has examined the association between CSR reporting and tax haven use explicitly. Sikka (2010) accuses companies of being hypocritical when communicating that they are socially ethical while at the same time engaging in tax avoidance activities. Specifically, Sikka (2010) points out that it is important to have public scrutiny and debate on corporate hypocrisy and to keep pressuring firms to align their internal culture with their external claims. Recently, there has been increasing research that has demonstrated a link between tax avoidance in general and firms' CSR practices. Jenkins and Newell (2013) argue that firms must make three key commitments in order to endorse a socially responsible tax strategy comprising use of arm's length transfer pricing, avoiding or limiting incorporation of tax haven subsidiaries for tax avoidance purposes and avoiding constructing artificial financial arrangement for tax avoidance purposes. Conversely, firms that depict themselves as socially responsible should not rely on tax havens to pursue aggressive tax benefits.

Based on risk management theory (Godfrey 2005; Col and Patel 2016), the use of tax havens for tax and arbitrage (e.g. financial, regulatory) opportunities

may jeopardise the positive image CSR oriented firms aim to achieve. This is manifested in anecdotal evidence where some of the world's largest corporations were criticised widely as a consequence of unethically reducing tax obligations by exploiting tax benefits through different geographical jurisdictions (Sikka and Willmott 2010). Therefore, CSR legitimacy by way of increased CSR disclosure and tax haven utilisation may signal conflicting information to the market concerning firms' real intentions regarding CSR legitimacy. Whilst increased CSR disclosure reflects active communication by managers designed to minimise the extent of information asymmetry, the ongoing and committed use of tax havens signal firms' intentions to engage in secretive practices typified by the lack of information exchange.

Based on the weight of evidence from prior research, it is expected that firms that use tax havens more extensively are less likely to extensively disclose CSR activities than their counterparts. Therefore, the following (directional) hypothesis is developed:

H1: All else being equal, the extent of CSR disclosure is negatively associated with tax haven use of Chinese firms.

#### **4.3.2 CSR disclosure and adverse environmental publicity**

Prior CSR literature and legitimacy theory has found extensive evidence to suggest that legitimacy related incentives significantly drive accounting related voluntary disclosure. Chalmers and Godfrey (2004) argue that, at a time when there was a lack of definition and reporting requirements relating to derivative financial instruments in accounting standards, managers voluntarily disclosed such

information primarily due to societal legitimacy and institutional pressures which could have posed a threat to firms' reputation. Chalmers and Godfrey (2004) also argue that financial reputation can be preserved and enhanced by having highly experienced staff, quality auditors combined with compliance with regulatory standards as well as industry sectors' best practice guidelines.

Firms has changed their attitude towards CSR disclosure from one of generally being forced by their broader stakeholders to disclose to one where firms proactively seek benefits from CSR disclosure by managing the general public's perceptions of firms' image ((Bebbington, Larrinaga and Moneva 2008; Deegan, Rankin and Tobin 2002; O'Donovan 2002; Patten 2002). This trend is also evident in Chinese context. Lu, Abeysekera, and Cortese (2015) examine 100 listed companies in China and find the quality of CSR reporting significantly affect corporations' social reputation and that this relation has increased over time.

Legitimacy theory predicts that management will act on positive CSR strategies when their firms are exposed to adverse exposure (O'Donovan 2002). Specifically, firms with poor social and environmental performance would be more likely to provide more positive information in order to offset their shortcomings (Cho, Lee and Pfeiffer 2013). This is evident in the Chinese context. Du (2015) finds that some firms spending generously on advertising campaigns deliberately deceive consumers when they were found guilty of supplying toxic products to the Chinese market. Du (2015) also suggests that weak law enforcement is to blame, as the system is powerless to penalise firms that violate social or environmental laws.

Informed by legitimacy theory and empirical findings, Chinese listed firms that have been exposed to certain negative publicity in relation to their environmental and social conduct have incentive to release more CSR related information such as charitable contributions in order to divert public's attention from that bad news. Such information will evidently drive CSR disclosure coverage. An environmental watch list published by the Chinese Ministry of Environment Protection (MEP) lists China's biggest polluters who have violated environmental laws.<sup>19</sup> This name-and-shame mechanism can be damaging to firms' reputation, which may motivate these firms to disclose more CSR related information in annual and other reports. Therefore the following (directional) hypothesis is developed:

H2: All else being equal, the extent of CSR disclosure is positively associated with firms being recorded in the MEP's watch-list.

#### **4.3.3 CSR and BOD's Political Connection**

Rowe, Guthrie, and Paton (2009) argue that it is necessary to consider firms' "guanxi business relationship" when studying the Chinese business environment. Guanxi refers to a type of relationship that at a certain point can become the facilitator of transactions via trust, communication and commitment (Ramasamy, Goh and Yeung 2006). Guanxi also incorporates gift giving and exchange of favour during the process of gaining specific privileges beyond societal norms as well as laws (Ramasamy, Goh and Yeung 2006). The nature of guanxi is such that it could potentially lead to a lack of transparency and monitoring by firm

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<sup>19</sup> The watch list is available for years 2004, 2009, 2010, 2011, 2012 and 2013 for the period this study covers.

management and the board of directors. In such situations, guanxi is capable of nurturing irresponsible, illegal behaviour as well as corruption (Harvey 1999). Lau and Young (2013), on the other hand, suggest that guanxi originates from Confucian family values that may assist in the development of rules and policies. Furthermore, the past three decades of economic reform have changed the country's cultural orientation such that there is sufficient evidence that the current behaviour of businesses is less ethical and less socially and environmental responsible (Shafer, Fukukawa and Lee 2006).

Political connection is a subset of guanxi in that it is used to gain an advantage from government agencies for business purposes. Fisman and Wang (2015) reveal that many coal mining companies with powerful political connections often provide ownership stakes to local officials as an incentive to promote profit over safety. Having gained such political favour, companies are more likely to conceal unsafe activities and information on pollution. In the Chinese context, BODs' personal political identity and connections assist firms' to gain financially from their political connections. For instance, Tu, Lin, and Liu (2013) provide evidence that political connections are more important in China where higher levels of corruption and law enforcement are experienced as compared to that in developed countries. Fan, Rui, and Zhao (2008) report that firms with politically connected CEOs underperform relative to those without connections while note that Communist Party membership helps private entrepreneurs to obtain loans from state financial institutions. Francis, Hasan, and Sun (2009) find that firms in China with greater political connections are characterized by higher offering prices in the IPO market. Taken together, prior research provides evidence of the importance of political connections in

determining business decisions and behaviour. It is therefore not unreasonable to assert that political connections shaped identity will significantly influence CSR disclosure patterns.

Further, legitimacy theory purports that managers will take various actions to ensure that their operations are perceived to be legitimate (Dowling and Pfeffer 1975). The majority of academic supported legitimacy strategies such as educating the public, changing perceptions of the relevant public, and deflecting attention, rely heavily on communication with the relevant parties (Lindblom 1994). However, when political connection is misused to cover up irresponsible behaviour, less information will generally be available to the public. Piotroski, Wong, and Zhang (2015) believe political affiliated individuals are motivated and capable of suppressing bad news and this factor overshadows factors that promote transparency. Therefore, the following (directional) hypothesis is developed:

H3: All else being equal, there is a negative association between existence of political connection of firms' board members and the extent of CSR disclosure of Chinese firms.

## **4.4 Research design**

### **4.4.1 Sample selection and data source**

This study examines the extent of CSR disclosures over the period 2006–2013, by some of the largest firms listed on the Shanghai Stock Exchange (SSE). This period was chosen because it transcends the introduction to the implementation of new Chinese CSR rules since 2010. Two criteria are applied in selecting the sampled firms: consecutive financial data must be available for the

2006–2013 periods, and firms must have had a continuous listing on the SSE over the 2006–2013 period. The top 100 companies are ranked according to the level of total assets in 2013. Following Gao (2008), the largest Chinese listed firms are considered to be more likely to disclose their CSR activities.

The initial sample comprised the top 200 non-financial firms listed on the SSE listed over the 2006-2013 period. The sample was reduced to 100 firms (704 firm-year observations) after applying the above selection criteria. Consistent with Y. Gao (2008), the larger Chinese companies play an exemplary role in Chinese CSR practice. This is not only because these companies have the resources to engage in CSR disclosure, but also because of the increasing societal demand for such information to be more transparent to the public (Gao 2008). Other data was obtained from Capital IQ. Overall, 704 firm-year observations were available for empirical testing. Financial and insurance firms are excluded because of the differences in reporting and regulatory practices of these firms. Finally, CSR and tax haven data was hand collected from the annual reports in order to obtain relevant data for the measurement of the variables, not all of which are available in electronic form in public databases. Other data was obtained from Capital IQ. Under the *IAS 124 Related Party Transactions* and *IAS 127 Consolidated and Separate Financial Statements*, it is a disclosure requirement for the annual reports of publicly-listed Chinese firms to include a list of their subsidiaries (including the country in which they are incorporated). Therefore the data relating to the use of tax havens can be identified from annual reports, which is then used to construct the tax haven measures.

#### 4.4.2 Base OLS Regression Model and Variables

The regression model used to examine the determinants of the extent of CSR disclosure is expressed as follows:

$$\begin{aligned} \text{CSR}_{it} = & \alpha_{0it} + \beta_1\text{TH}_{it} + \beta_2\text{WATCH}_{it} + \beta_3\text{DON}_{it} + \beta_4\text{Awards}_{it} + \beta_5\text{POL}_{it} + \\ & \beta_6\text{AF}_{it} + \beta_7\text{BIG4}_{it} + \beta_8\text{CG}_{it} + \beta_9 \text{GOV\_D}_{it} + \beta_{10}\text{BVMV}_{it} + \beta_{11}\text{SIZE}_{it} + \beta_{12}\text{ROA}_{it} + \\ & \beta_{13}\text{FI}_{it} + \beta_{14}\text{TANG}_{it} + \beta_{15}\text{INTANG}_{it} + \beta_{16}\text{RD}_{it} + \beta_{17-24}\text{IND}_{it} + \beta_{25-32}\text{YEAR}_i + \varepsilon_{it} \end{aligned} \quad (1)$$

where: *i* is firms 1–100; *t* is financial years 2006–2013; CSR = the natural logarithm of the number of environmental and social items, based on GRI 3.0, that are disclosed in firm *i*'s CSR report in year *t*; TH = a dichotomous variable, coded as '1' if firm *i* has at least one subsidiary resident in one of the tax haven countries in year *t*, or '0' otherwise; WATCH = a dichotomous variable, coded as '1' if firm *i* is identified as a significant polluter according to the MEP in year *t*, or '0' otherwise; DON = the natural logarithm of the total donation expense incurred by firm *i* in year *t*; AWARDS = the natural logarithm of the total number of awards disclosed in firm *i*'s annual report in year *t*; POL = the total number of politically connected BOD scaled by the total number of BOD members in firm *i* in year *t*; AUDFEE = the natural logarithm of total audit fees in firm *i* in year *t*; BIG4 = a dichotomous variable, coded as '1' if firm *i*'s annual report is audited by one of the Big 4 accounting firms in year *t*, or '0' otherwise; CG = corporate governance score comprising five governance items scaled by 5; GOV\_D = a dichotomous variable, coded as '1' if firm *i* is a state owned enterprise, or '0' otherwise; BVMV = the book value of equity over market value of equity; SIZE = the natural logarithm of total assets; ROA = pre-tax profit over total assets; FI = the natural

logarithm of total foreign revenue; NPPE = net property, plant and equipment scaled by total assets; INTG = total intangible assets scaled by total assets; RD = total R&D expenses scaled by total assets; YEAR = a dummy variable, coded as '1' if the year falls within the specific year category, or '0' otherwise; IND = a dummy variable, coded as '1' if the firm is represented in the particular two-digit GICS industry category, or '0' otherwise; and  $\varepsilon$  is the error term.

In attempting to assess the extent and determinants of CSR reporting by the top 100 firms from the SSE, this chapter uses the extent of CSR disclosure as the dependent variable. It uses independent variables, comprising firm's utilization of tax havens (TH), firms' environmental performance (WATCH), firms' level of philanthropic donations (DON), firms' intention to seek societal agreement (AWARDS), and board of directors' political connections (POL). It also uses control variables comprising level of auditing fees (AUDFEE), size of audit firm (Big4), strength of corporate governance structure (CG), government ownership (GOV), firms' market capitalization (BVMV), firm size (SIZE), profitability (ROA), foreign revenue income (FI), net asset value (NPPE), firms' investment in R&D (RD), industry sector and year fixed-effects. A summary of the variables' definitions and measurement are presented in Appendix 4.A.

The rationale for assessing the relationship between the extent of CSR disclosures and independent variables is as follows. There has been wide discussion in regard to whether corporations' tax payment behaviour is a CSR issue (Davis et al. 2016). However, empirical evidence of the association between Chinese firms' tax avoidance and CSR has been both limited and mixed (Lanis and Richardson 2012; Jenkins and Newell 2013). There is even less research

investigating the association between CSR disclosures and use of tax haven jurisdictions (e.g. Cai and Liu 2009; Chan, Lin and Mo 2010; Zeng 2010). Based on U.S. evidence, Davis et al. (2016) find that CSR disclosures is associated with tax avoidance and high spending on tax lobbying.

#### **4.4.3 Dependent variable: measurement of the extent of CSR disclosures**

This study adopts the social and environmental dimensions of the Global Reporting Initiative index (GRI G3) to measure the extent of Chinese listed firms' CSR disclosures. This study adopts the GRI guidelines because they are recognized for their international adoption and influence (Noronha et al. 2013; Du 2015). According to information on the GRI website, reporting type G4 appears to be the latest version of GRI index. However, the majority of the latest GRI reports uploaded to the GRI website by Chinese companies still follow reporting type G3. In addition the GRI also states that the G3 reporting style will continue to be recognised until the end of 2015. Therefore, GRI G3 is determined to be of greater relevance to the research period of this study. The disclosure index consists of a total of 70 items (see Appendix 2.C) that cover what are generally the two major dimensions of concern for companies, namely the social dimension (40 items) and the environmental dimension (30 items).

The original GRI G3 index also includes an economic dimension. As this study will use a number of financially-related items as independent variables, the economic dimension will not be included in the GRI index in this study. Further, the social dimension is divided by the GRI into four key performance aspects, namely labour practices (14 items), human rights (9 items), society (8 items), and product responsibility (9 items). The dependent variable is (CSR) measured as an

index based on Global Reporting Index (GRI) version 3.0 that comprises a maximum of 70 social and environmental items. CSR is measured as the natural logarithm of the aggregated CSR score. CSR disclosure can be seen as managers' attempts to reduce information asymmetry between the firm and the general public (Cho, Lee and Pfeiffer 2013).

#### **4.4.4 Independent variables**

This study examines five independent variables which are all related to firms' identity awareness and reputation management. These independent variables are represented by the existence of subsidiaries registered in tax havens (TH), being identified as a significant polluter by the MEP (WATCH),<sup>20</sup> the amount of donation (DON), the number of awards disclosed in companies' CSR reports (AWARDS) and BOD's political connection (POL). Each of these variables was hand collected from firms' annual reports and CSR reports. The Chinese Securities Regulatory Commission (CSRC) requires firms' annual reports to disclose details of all subsidiaries and directors. TH is a dummy variable, coded as '1' if the firm has at least one subsidiary registered in one of the OECD (2006) listed tax havens. The use of a dummy variable to measure the existence of tax havens has been applied in previous research by Desai, Foley, and Hines (2006b), Dharmapala and Hines (2009) and Taylor and Richardson (2012). WATCH is a dummy variable, coded as '1' if the firm is identified on the environmental watch list published by MEP.

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<sup>20</sup> The Watch list is released by the MEP ([http://www.zhb.gov.cn/gkml/hbb/bgt/201501/t20150107\\_293958.htm](http://www.zhb.gov.cn/gkml/hbb/bgt/201501/t20150107_293958.htm)). Firms are individually identified for data collection.

Legitimacy theory predicts that poor environmental performers generally disseminate more positive social and environmental information to offset their shortcomings (Cho and Patten 2013). Firms' donation (DON) represents the donation expense recorded in their annual reports. This variable is included as an explanatory variable because charitable contributions are considered to be an important driver of CSR disclosure and are associated with a positive corporate image and possible financial returns (Godfrey 2005; Brammer and Millington 2006; Brammer and Millington 2008). DON is measured as the natural logarithm of the total donation expense incurred by the firm. AWARDS is measured as the natural logarithm of the total number of awards disclosed in a firm's annual report. According to Unerman (2008), firms have reputational capital at stake and are cognizant of the fact that their financial and competitive position may be determined by how they engage with society. In order to actively manage and develop a socially strong reputation, firms would try to avoid negative publicity, whilst actively publicising their positive achievements. POL is measured as the proportion of the number of politically connected members on the board of directors. These measures of political connection are consistent with that used in prior literature (see e.g. Faccio 2006; Li, Long and Song 2015). A board member who is a member of the National People's Congress Party is considered to be a politically connected person (Chen et al. 2011; Li, Long and Song 2015). The National People's Congress (NPC) is the highest body of state power in China; appointments of government officials are approved by the NPC. In addition, board members who hold current or past positions in the government are also identified as having political connections.

#### **4.4.5 Control variables**

To control the other effects on the level of CSR disclosures by Chinese listed companies, several control variables are included in the models. Firstly, two variables that control for audit effects are included in the regression. Auditor quality, will be used to assess the relationship between audit characteristics and the extent of CSR disclosures. Secondly, the employment of Big-4 audit firms is included as these firms are more experienced in providing higher quality monitoring and assurance (Uyar 2017; Francis, Hasan and Sun 2009; Xiao and Yuan 2007). The big four are found to be responsible for providing integrity assurance for their clients' CSR reports (Uyar 2017). However, they are also the masterminds behind complex tax planning strategies which often involve establishing tax haven operations (Sikka and Hampton 2005; Sikka and Willmott 2010).

Corporate governance (CG) is also included as a control variable. A substantial amount of research has suggested that the strength of corporate governance structures is positively related to firms' performance (Tian and Lau 2001) and transparency in terms of mandatory and discretionary reporting (Taylor, Tower and Neilson 2009; Eng and Mak 2003; Barros, Boubaker and Hamrouni 2013; Ho and Wong 2001; Chua, Eun and Lai 2007). Under the corporate governance dimension, a firm can receive a score ranging between 0-5 depending on whether that firm has any of the five attributes indicative of effective governance. These five items represent core governance attributes specified in the 2002 Chinese Code of Corporate Governance for Listed Firms (Rajagopalan and Zhang 2008). This provides an objective source for use of these governance

attributes. Additionally, these items are commonly used in the literature to measure the strength of corporate governance (Taylor, Tower and Neilson 2009; Chua, Eun and Lai 2007). The five items are the proportion of independent directors, the board of directors' average age, the proportion of the board with outside directorship, board members' meeting attendance and duality of CEO and chairmanship. Each governance item will be unweighted, consistent with the methodology applied in prior disclosure literature.

In general, good corporate governance practices (such as board independence, the proportion of independent directors on the board, frequent board meeting, and separation of CEO and chairman roles are found to be positively associated with the extent of accounting disclosures (Barros, Boubaker and Hamrouni 2013; Cheng and Courtenay 2006; Khan, Muttakin and Siddiqui 2012). Evidence also suggests that China has been adopting international corporate governance norms, such as implementation of the "Code of Corporate Governance for Listed Firms" (Rajagopalan and Zhang 2008). This code, adopted in 2002, provides evidence of radical governance reforms in China (Kakabadse, Yang and Sanders 2010). Theoretically, firms that seek institutional legitimacy and sound internal control may attempt to adopt an effective governance structure in order to comply with social norms and values (Meyer and Rowan 1977). One of the positive outcomes of good corporate governance is the increased degree of transparency (Ho and Wong 2001). Effective governance is expected to transform companies from the "inside out" so that external legitimacy can be achieved through continuing corporate communication. However, empirical results have not found consistent evidence. Liao, Lin, and Zhang (2016) found that having large boards, female directors and separate CEO and chairman positions is more likely

to result in firms engaging in CSR assurance, but they also found independent directors and directors with overseas directorship experience are not statistically significantly associated with CSR assurance.

Furthermore, government ownership is also included as a control variable as there are a large number of state-owned enterprises (SOE) included in the sample. Management of SOEs may be more likely to disclose CSR information due to their allegiance with the controlling shareholder. Government ownership is measured as a dichotomous variable, coded as 1 if the firm is an SOE (the government controls more than 50% of the equity in the firm), or 0 otherwise. According to Desai, Foley, and Hines (2006a), firms with higher growth are more likely to establish tax haven operations to achieve economies of scale. Similarly, Chen et al. (2010) find that firms with high growth or investment opportunities are likely to pursue a more complex operational and/or tax environment in order to efficiently control the flow of funds and reduce the cost of capital (Kim and Li 2014). BVMV is measured as the book value of equity over market value of equity.

Following the findings of Chen et al. (2010) that smaller firms in China are less likely to incorporate in tax havens, SIZE is also included as a control variable in the regression model. Similarly, Rego (2003) claims that larger firms are more capable of utilizing complex tax strategies including incorporating in tax havens to achieve economies of scale in order to reduce corporate taxes. Further, reflecting the potential non-tax incentives of tax haven utilization, larger firms are likely to achieve economies of scale in their ability to borrow or raise capital at lower costs and are better able to sustain earnings than smaller firms (Pittman and Fortin 2004). SIZE is measured as the natural logarithm of total assets. ROA is included in the

regression model to control for operating performance and firm profitability. As most tax havens offer very low or zero tax, firms are attracted to the use of subsidiaries registered in these locations. This is because they can strategically manage their tax payments by moving profits from jurisdictions with high corporate tax rates to those with lower rates (Taylor and Richardson 2012). Kim and Li (2014) also find that more profitable firms can rely on their availability of resources to establish tax haven entities, particularly offshore financial centres. ROA is measured as pre-tax profit scaled by total assets. FORE is controlled for in the regression model because firms with foreign operations, especially those that have significant foreign income, would be more likely to strategically manage their financial position by utilising tax havens (Wilson 2009). Desai, Foley, and Hines (2006b) also find that firms with extensive foreign operations are more likely to establish foreign subsidiaries in tax havens. FORE is measured as the natural logarithm of total foreign revenue. The total net value of property, plant and equipment (TANG) is included as a control variable to control for capital intensity (Bradshaw, Liao and Ma 2012). TANG is measured as net property, plant and equipment over the total assets.

Prior research has demonstrated that firms use intangibles and research and development to facilitate their tax avoidance practices (Clausing 2009; Sikka and Willmott 2010). Therefore, both intangible assets (TANG) and research and development (RD) are incorporated in the model as control variables. TANG is measured as total intangible assets scaled over total assets and RD is measured as total R&D expenditure scaled over total assets. Use of tax havens enhances firms' financial secrecy (Kudrle 2009).

Finally, industry and year variables were included in the fixed effect model. IND dummy variables, defined by the two-digit Global Industry Classification Standard (GICS) codes, are included as control variables in the regression model as tax haven use can fluctuate across different industry sectors (Rego 2003). Eight IND dummy variables are included in this study. They are consumer discretionary, consumer staples, energy, healthcare, industrials, materials, telecommunication services and utilities (with consumer discretionary being the omitted sector in the regression model). No sign predictions are made for the IND dummies. YEAR dummy variables are also included in the regression model to control for differences in CSR reporting activities that could possibly exist over the 2006–2013 sample years (with the 2006 year being the omitted year in the regression model). No sign predictions are made for the YEAR dummies.

## **4.5 Empirical results**

### **4.5.1 Summary statistics**

Table 4.1 (Panel A) provides the sample industry distribution based on GICS. The sample includes a greater proportion of firms in industrials (40 percent), materials (21 percent), and consumer discretionary (12 percent) sectors compared to the other industry categories. Moreover, Table 4.1 (Panel A) reports by industry classification (GICS), descriptive statistics for individual and aggregated categories of CSR items. Aggregated CSR disclosure is more prevalent in the utilities (28.24 percent), consumer staples (22.96 percent) and Healthcare (21.07 percent) industry sectors as compared to the other industry sectors. The consumer discretionary sector is found to have the lowest response rate, even though it records the highest rate in terms of human rights disclosures (16.05 percent) among

the eight industry sectors. The energy and utilities sectors have the highest response rate on environmental disclosures, scoring 27.47 percent and 21.44 percent respectively.

Table 4.1 (Panel B) reports the descriptive statistics for the dependent variable (CSR), independent variables (TH, WATCH, DON, AWARDS, and POL) and control variables (AF, BIG4, CG, GOV\_D, BVMV, SIZE, ROA, FI, TANG, INTANG, and RD). To present useful results, total aggregated CSR scores are used, donations are recorded in millions of Chinese yuan (CNY), and the total number of awards is provided for in Panel B. The dependent variable (total aggregated CSR) has a mean of 12.933. The average number of GRI items disclosed by the sample firms is 12.933, which is 18.48 percent of the total 70 GRI items. The independent variables TH, WATCH, DON, AWARDS, and POL have means of 0.146, 0.398, 10.839, 5.32 and 0.326 respectively. Around 14.6 percent of firms sampled have at least one subsidiary incorporated in a tax haven. WATCH has a mean of 0.398, indicating that 39.8 percent of the firms studied were identified as significant polluters by MEP. DON reports a mean of 10.839, indicating that the average amount of donations made by firms sampled over the sample period is 10.839 million CNY. The standard deviation of DON is 46.785, which indicates a significant variability in the quantum of donations made. This suggests a relatively small number of firms contributed most of the donation. AWARDS reports a mean of 5.32, indicating that on average, firms report 5.32 awards in their CSR reports. Similar to DON, the standard deviation of AWARDS is also high (9.087), indicating a large variance in the amount of awards firms publicise in their CSR reports. POL reports a mean of 0.326, suggesting that 32.6%

of board members are politically connected. The mean, median and range of the control variables are also reported in Table 4.1 (Panel B).

**Table 4.1: Summary Statistics**

**Panel A: Sample distribution by industry sectors**

<b>Industry sector</b>	<b>Environment (30 items)</b>	<b>Labour Practices (14 items)</b>	<b>Human Rights (9 items)</b>	<b>Society (8 items)</b>	<b>Product responsibility (9 items)</b>	<b>Total CSR (70 items)</b>	<b>No. of Firm years</b>	<b>Ranking</b>
<b>Consumer Discretionary</b>	12.83%	32.38%	1.38%	15.65%	16.14%	16.01%	96	6
<b>Consumer Staples</b>	21.36%	42.57%	4.91%	24.29%	14.36%	22.96%	56	2
<b>Energy</b>	27.47%	48.34%	14.27%	27.48%	14.19%	28.24%	64	1
<b>Healthcare</b>	15.58%	36.20%	5.23%	17.00%	14.30%	18.43%	40	5
<b>Industrials</b>	12.22%	33.53%	3.42%	17.19%	9.88%	15.65%	320	8
<b>Materials</b>	14.73%	32.76%	2.36%	14.15%	7.86%	15.81%	168	7
<b>Tele- communication Service</b>	8.75%	33.75%	16.50%	44.00%	16.50%	19.82%	8	4
<b>Utilities</b>	21.44%	38.65%	8.58%	17.38%	8.25%	21.07%	48	3
<b>Total</b>	15.37%	35.49%	4.46%	17.96%	11.05%	17.75%	800	

**Panel B: Variable Summary**

<b>Variables</b>	<b>Mean</b>	<b>Std. Dev.</b>	<b>Minimum</b>	<b>Median</b>	<b>75th Percentile</b>	<b>Maximum</b>
<b>CSR</b>	12.933	12.260	2.000	9.500	18.000	52.000
<b>TH</b>	0.146	0.354	0.000	0.000	0.000	1.0000
<b>WATCH</b>	0.398	0.490	0.000	0.000	1.000	1.0000
<b>DON</b>	10.839	46.785	0.000	0.800	4.300	609.000
<b>AWARDS</b>	5.320	9.087	0.000	3.000	8.000	125.000
<b>POL</b>	0.236	0.221	0.000	0.200	0.333	0.9170
<b>AF</b>	7.384	1.167	5.635	7.090	7.773	11.849
<b>BIG4</b>	0.273	0.446	0.000	0.000	1.000	1.0000
<b>CORPG</b>	0.651	0.203	0.000	0.600	0.800	1.0000
<b>GOV_D</b>	0.776	0.418	0.000	1.000	1.000	1.0000
<b>BVMV</b>	2.580	1.997	0.000	1.936	3.353	10.288
<b>SIZE</b>	9.976	1.308	8.000	10.000	11.000	14.000
<b>ROA</b>	0.068	0.063	-0.166	0.056	0.087	0.659
<b>FI</b>	4.229	4.265	0.000	5.011	7.621	23.997
<b>TANG</b>	0.402	0.259	0.017	0.374	0.636	0.8870
<b>INTANG</b>	0.051	0.058	0.000	0.034	0.062	0.3130
<b>RD</b>	0.007	0.013	0.000	0.000	0.007	0.0590

*Note:*

Variable definitions are provided in appendix 4.A.

#### 4.5.2. Correlation results

The Pearson correlation results are presented in Table 4.2 along with p-values. Four independent variables (TH, WATCH, AWARDS and POL) are highly correlated to CSR, ranging from 0.091 to 0.776 ( $p < 0.01$ ), which provides some preliminary (univariate) support for H1, H2, H3b and H4. Specifically, the correlation coefficients of WATCH and AWARDS are the most significant, ranging from 0.368 to 0.776 ( $p < 0.01$ ), which is consistent with prior research (Du 2015). The regression results also find that the CSR measure is significantly associated with the control variables (AF, BIG4, CORPG, GOV\_D, BVMV, SIZE, ROA, FI, INTANG and RD). Table 4.2 also shows that collinearity among the explanatory variables is moderate (Hair et al. 2006).<sup>21</sup> The highest correlation coefficient of  $-0.556$  is between FSIZE and OCF ( $p < 0.01$ ). Finally, the variance inflation factors (VIFs) are tested for signs of multi-collinearity among the explanatory variables. The untabulated results suggest that all explanatory variables have VIFs well below 5; multi-collinearity is therefore not a problem in this study (Hair et al. 2006).

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<sup>21</sup> According to Hair et al. (2006), if a value of the correlation coefficient for a pair of explanatory variables lies between  $\pm 0.25$  to  $\pm 0.75$ , then there is a moderate level of collinearity between the two variables.

**Table 4.2: Pearson Correlation**

	CSR	TH	WATCH	DON	AWARDS	POL	AF	BIG4	CORPG	GOV_D	BVMV	SIZE	ROA	FI	TANG	INTANG	RD
CSR	1																
TH	0.091*** 0.010	1															
WATCH	0.368*** 0.000	-0.003 0.934	1														
DON	0.037 0.298	-0.093*** 0.009	0.032 0.362	1													
AWARDS	0.776*** 0.000	0.082** 0.020	0.227*** 0.000	0.005 0.893	1												
POL	0.141*** 0.000	0.079** 0.032	0.029 0.425	-0.065* 0.078	0.057 0.124	1											
AF	0.438*** 0.000	0.164*** 0.000	0.139*** 0.000	-0.078** 0.034	0.265*** 0.000	0.448*** 0.000	1										
BIG4	0.187*** 0.000	0.143*** 0.000	0.066* 0.068	-0.117*** 0.001	0.117*** 0.001	0.287*** 0.000	0.637*** 0.000	1									
CORPG	-0.222*** 0.000	0.035 0.326	-0.209*** 0.000	-0.029 0.406	-0.109*** 0.002	-0.111*** 0.002	-0.193*** 0.000	-0.172*** 0.000	1								
GOV_D	0.104*** 0.003	-0.014 0.697	0.064* 0.070	-0.191*** 0.000	-0.004 0.908	0.293*** 0.000	0.148*** 0.000	0.224*** 0.000	-0.203*** 0.000	1							
BVMV	-0.133*** 0.000	-0.080** 0.025	0.083** 0.020	0.121*** 0.001	-0.150*** 0.000	-0.107*** 0.004	-0.136*** 0.000	-0.088** 0.015	-0.038 0.283	-0.046 0.195	1						
SIZE	0.521*** 0.000	0.238*** 0.000	0.257*** 0.000	-0.068* 0.056	0.369*** 0.000	0.442*** 0.000	0.756*** 0.000	0.449*** 0.000	-0.194*** 0.000	0.199*** 0.000	-0.227*** 0.000	1					
ROA	-0.128*** 0.000	-0.082** 0.020	-0.032 0.374	0.157*** 0.000	0.142*** 0.000	-0.002 0.961	-0.031 0.394	-0.022 0.540	0.050 0.163	0.049 0.167	0.317*** 0.000	-0.089** 0.012	1				
FI	0.236*** 0.000	0.286*** 0.000	0.156*** 0.000	-0.020 0.584	0.118*** 0.002	0.052 0.163	0.287*** 0.000	0.243*** 0.000	0.010 0.791	0.077** 0.038	0.036 0.341	0.221*** 0.000	-0.011 0.774	1			
TANG	0.040 0.260	-0.046 0.196	0.173*** 0.000	-0.017 0.642	-0.043 0.232	0.143*** 0.000	0.005 0.889	0.001 0.986	0.031 0.386	0.150*** 0.000	-0.071** 0.048	0.146*** 0.000	0.044 0.221	-0.202*** 0.000	1		
INTANG	0.069* 0.053	-0.074** 0.037	0.096*** 0.007	0.043 0.231	0.099*** 0.005	-0.008 0.831	0.031 0.406	0.133*** 0.000	-0.011 0.760	0.137*** 0.000	-0.065* 0.069	-0.049 0.167	0.131*** 0.000	-0.112*** 0.003	-0.072** 0.044	1	
RD	0.293*** 0.000	0.079** 0.026	0.091** 0.011	-0.005 0.889	0.262*** 0.000	-0.084** 0.022	0.002 0.967	-0.034 0.344	0.001 0.975	-0.027 0.450	-0.030 0.395	0.081** 0.023	-0.045 0.213	0.264*** 0.000	-0.162*** 0.000	0.076** 0.034	1

Note:

\*, \*\*, \*\*\* correspond to 1%, 5% and 10% levels of significance, respectively.

Variable definitions are provided in appendix 4.A.

### **4.5.3 Baseline Ordinary least squares (OLS) regression results**

Table 4.3 reports results of the baseline OLS regression model that tests the association between the dependent and independent variables (with coefficient estimates and t-statistics provided in parentheses).

The regression coefficient for CSR is shown by Table 4.3 to be significantly associated with the variables TH, WATCH, DON, AWARDS ( $p < 0.05$  or better). These results provide strong support for H1, H2, H3a and H3b, indicating that CSR disclosure behaviour is highly correlated with legitimacy and reputation management. However, the regression results do not find evidence to support suggestions that political connections are related to firms' CSR disclosure practices. In terms of economic significance, on average, a one-standard deviation increase in sampled firms' TH results in a 0.092% (9 basis points) decrease in CSR. Additionally, on average, a one-standard deviation increase in sampled firms' WATCH, DON and AWARDS results in CSR increasing by 0.067%, 385% and 39.89% respectively. In addition, the regression coefficients suggest that the control variables, such as AF, CG, SIZE, FI, TANG and RD, are significantly associated (at  $p < 0.01$ ) with CSR.

**Table 4.3: Baseline OLS Regression Results**

	CSR		
	Model 1	Model 2	Model 3
TH	<b>-0.2605***</b> (-3.20)		
WATCH		<b>0.1371**</b> (2.08)	
POL			<b>-0.1035</b> (-0.71)
AF	0.1084** (2.55)	0.1198*** (2.80)	0.1186*** (2.73)
BIG4	-0.0803 (-1.01)	-0.0914 (-1.15)	-0.0854 (-1.07)
CG	-0.3796*** (-2.78)	-0.3596*** (-2.59)	-0.4044*** (-2.94)
GOV_D	0.054 (0.77)	0.0615 (0.87)	0.067 (0.93)
BVMV	0.0234 (1.26)	0.0202 (1.08)	0.0234 (1.25)
SIZE	0.2341*** (6.33)	0.2099*** (5.61)	0.2241*** (6.03)
ROA	-0.8630* (-1.87)	-0.7285 (-1.57)	-0.7769* (-1.68)
FI	0.0244*** (3.18)	0.0179** (2.35)	0.0200*** (2.63)
TANG	0.3627*** (2.94)	0.3630*** (2.92)	0.3869*** (3.11)
INTANG	0.1876 (0.40)	0.106 (0.22)	0.2652 (0.56)
RD	7.4902*** (3.11)	7.5930*** (3.13)	7.2669*** (2.98)
Intercept	-1.9797*** (-6.58)	-1.8957*** (-6.25)	-2.0062*** (-6.46)
YEAR	YES	YES	YES
IND	YES	YES	YES
N	704	704	704
Adjusted R-sq	0.6297	0.6265	0.6244

*Note:*

Coefficient estimates with t-statistics reported in parentheses. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

Variable definitions are provided in appendix 4.A.

#### **4.5.4 Firm Fixed Effects**

Inferences about the association between CSR disclosure and the independent variables (TH, WATCH, and POL) are based on a pooled sample and time-series regression analysis, where multiple annual observations for the same firm are used. Although the standard errors are adjusted for heteroscedasticity, within-firm clustering (e.g. Petersen 2009) in the main regression models helps to alleviate this concern. Further robustness is tested by estimating a firm fixed-effects regression model version of Eq. (1), in which every firm and every year in the sample is assigned a dummy variable (e.g., Wooldridge 2010). The tabulated regression results in Table 4.4 indicate that the regression coefficients for CSR are statistically significant ( $p < 0.05$  or better) for all independent variables except POL. This is consistent with the baseline OLS regression results. Thus, these sets of regression results show that the main results are not necessarily driven by any omitted time-invariant firm characteristics (Wooldridge 2010).

**Table 4.4: Fixed Effect Regression Results**

	CSR		
	Model 1	Model 2	Model 3
<b>TH</b>	<b>-0.2605***</b> (-6.14)		
<b>WATCH</b>		<b>0.1371**</b> (2.80)	
<b>POL</b>			<b>-0.1035</b> (-1.10)
AF	0.1084 (1.89)	0.1198* (2.21)	0.1186* (1.96)
BIG4	-0.0803 (-0.77)	-0.0914 (-0.88)	-0.0854 (-0.78)
CG	-0.3796* (-2.34)	-0.3596* (-2.07)	-0.4044* (-2.35)
GOV_D	0.054 (0.79)	0.0615 (0.86)	0.067 (0.99)
BVMV	0.0234 (0.99)	0.0202 (0.88)	0.0234 (1.00)
SIZE	0.2341*** (3.75)	0.2099** (3.39)	0.2241*** (3.75)
ROA	-0.863 (-1.80)	-0.7285 (-1.70)	-0.7769 (-1.74)
FI	0.0244*** (3.92)	0.0179** (2.97)	0.0200*** (3.55)
TANG	0.3627*** (3.76)	0.3630** (3.45)	0.3869*** (3.84)
INTANG	0.1876 (0.82)	0.106 (0.36)	0.2652 (1.01)
RD	7.4902*** (6.87)	7.5930*** (6.70)	7.2669*** (7.45)
Intercept	-1.0917 (-1.63)	-1.0458 (-1.60)	-1.1155 (-1.73)
YEAR	YES	YES	YES
IND	NO	NO	NO
N	704	704	704
Adjusted R-sq	0.3702	0.3895	0.3708

*Note:*

Coefficient estimates with t-statistics reported in parentheses. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

Variable definitions are provided in appendix 4.A.

#### 4.5.5 Interactions

Regression results show that there is no significant relationship between political connections and firms' level of CSR disclosure. The effect on firms' CSR disclosure behaviour that can be attributed to the interaction between political connections of board members and the other independent variables is investigated. Results are presented in Table 4.5.

The regression coefficient of the interaction term between politically connected boards and tax haven utilization (POL\*TH) is positive and significant. Meanwhile, the regression coefficient of the interaction term between politically connected boards and firms being on an environmental watch-list (POL\*WATCH) is negative and significant. These results show that politically connected boards enhance CSR disclosure levels, possibly because of the effect of political connections in driving CSR disclosure best practice and negating the effect that tax haven use may have in suppressing CSR disclosure. Firms with political connections that also use subsidiaries incorporated in tax havens are more likely to disclose greater amount of voluntary CSR information. This gives evidence to suggest that politically connected firms engaging in complex tax avoidance strategies may feel that it is necessary to manage their social reputation in order to direct the public's attention to their positive societal contributions (Lindblom 1994).

In contrast, when big polluters have strong political connection, they tend to release less CSR information. According to Marquis, Zhang, and Zhou (2011), while China's central government may have continued to address the environmental issues by setting up aggressive energy-saving plans and even empowering law enforcement to increase fines that apply to identified polluters, the implementation of the laws appears

to be inconsistent.<sup>22</sup> This may give big polluters who are also heavily subsidised by the government an opportunity to sacrifice the environment in order to achieve high economic growth. In other words, the government's prioritisation of economic success has undermined the country's efforts in environmental protection efforts.<sup>23</sup>

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<sup>22</sup> The MEP is a central government agency. It was upgraded from vice ministry level to ministry level in 1998. In 2008, the central government upgraded the agency again to cabinet ministry level (Zhang 2012).

<sup>23</sup> The different segments within the Chinese government often have different goals and these sometimes contradict each other. This is well documented in Marquis, Zhang, and Zhou (2011). The fact that the MEP's environmental protection programs and policies are frequently overridden by other ministries, such as bureaus of industry, commerce, and transportation, is the key reason for politically connected firms are not worrying about reputation management when they are being named and shamed.

**Table 4.5: Interaction Effects**

	CSR	
	Model 1	Model 2
<b>POL*TH</b>	<b>0.5533*</b>	
	<b>(1.69)</b>	
<b>POL*WATCH</b>		<b>-0.4770*</b>
		<b>(-1.92)</b>
TH	-0.3875***	
	(-3.50)	
WATCH		0.2489***
		(2.84)
POL	(0.18)	0.0650
	(-1.21)	(0.38)
AF	0.1150***	0.1323***
	(2.66)	(3.04)
BIG4	(0.08)	(0.09)
	(-1.03)	(-1.17)
CG	-0.3940***	-0.3597***
	(-2.88)	(-2.59)
GOV_D	0.0513	0.0684
	(0.72)	(0.96)
BVMV	0.0238	0.0163
	(1.28)	(0.87)
SIZE	0.2271***	0.2063***
	(6.07)	(5.49)
ROA	-0.8539*	(0.72)
	(-1.85)	(-1.56)
FI	0.0245***	0.0184**
	(3.18)	(2.41)
TANG	0.3995***	0.3299***
	(3.19)	(2.62)
INTANG	0	0
	(0.30)	(0.19)
RD	7.1098***	7.4828***
	(2.94)	(3.08)
Intercept	-1.9337***	-1.9428***
	(-6.18)	(-6.26)
YEAR FE	YES	YES
IND FE	YES	YES
N	704	704
Adjusted R-sq	0.6305	0.6277

*Note:*

Coefficient estimates with t-statistics reported in brackets. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively.

Variable definitions are provided in appendix 4.A.

#### 4.5.6 Blundell-Bond general methods of moments (GMM) regression analysis

As another endogeneity check of the baseline regression results reported in Table 4.3, the Blundell-Bond general methods of moments (GMM) regression

analysis is employed to more accurately control for potential time-invariant correlated variables omitted from this study (Wintoki, Linck and Netter 2012; Kubick and Masli 2016; Pan and Tian 2016). The lagged dependent variable and the CSR are treated as endogenous variables in order to estimate the system GMM. Table 4.6 reports the Blundell-Bond GMM regression analysis results.

The regression coefficients for dependent variables (including TH, WATCH, DON, AWARDS and POL) are shown by Table 4.6 to be significantly associated with CSR across all regression model specifications ( $p < 0.01$ ). Hence, this particular set of results provides additional support for the hypotheses. The results indicate that some of the regression coefficients for the control variables (including AF, GOV\_D, FI and RD) are significantly associated (at  $p < 0.10$  or better) with CSR in at least three regression models. Several post-estimation tests were also performed. In particular, the Sargan test and Hansen test confirm the validity of the instruments used in the GMM model.

**Table 4.6: Blundell-Bond general methods of moments (GMM) Results**

	CSR		
	Model 1	Model 2	Model 3
CSR	<b>0.1114***</b> (3.06)	<b>0.1571***</b> (3.16)	<b>0.1992***</b> (5.99)
TH	<b>-0.2283**</b> (-2.23)		
WATCH		<b>0.4673***</b> (3.00)	
POL			<b>0.5727**</b> (2.09)
AF	0.1419*** (3.00)	0.1711*** (2.70)	0.0494 (1.14)
BIG4	-0.0409 (-0.35)	-0.0636 (-0.55)	0.0056 (0.06)
CG	-0.0417 (-0.10)	1.8698*** (4.62)	0.4136 (1.23)
GOV_D	0.0874 (0.76)	0.2893*** (3.19)	0.1667* (1.72)
BVMV	0.0215 (1.56)	0.0053 (0.28)	0.0170 (1.26)
SIZE	0.0663 (1.19)	0.0222 (0.34)	0.1297*** (3.71)
ROA	-0.2041 (-0.54)	-0.4755 (-1.25)	-0.3185 (-0.88)
FI	0.0461*** (3.93)	0.0261*** (3.04)	0.0284*** (3.39)
TANG	-0.0027 (-0.02)	-0.2875 (-1.43)	0.1210 (0.86)
INTANG	0.2303 (0.54)	0.0644 (0.13)	0.6222 (1.55)
RD	4.2329*** (2.73)	5.7057*** (3.51)	4.9171*** (3.32)
Intercept	0.0324 (0.05)	-1.3143*** (-3.07)	-0.4078 (-0.96)
YEAR	YES	YES	YES
IND	YES	YES	YES
N	630	630	630
Hansen test of overid. restrictions:	0.673	0.516	0.607

Note:

Coefficient estimates with t-statistics reported in parentheses. \*, \*\*, \*\*\* correspond to 10%, 5% and 1% levels of significance, respectively. Variable definitions are provided in appendix 4.A.

## 4.6 Conclusions

Based on a sample of 704 publicly-listed Chinese firm-years' data, baseline regression results show that the extent of CSR disclosure is negatively related to firms' use of tax haven jurisdictions. It is also positively related to the monitoring pressure applied by the Chinese Ministry of Environmental Protection by way of an environment watch-list registrar, the quantum of philanthropic donations made by a firm, receipt of environmental awards by a firm having politically connected members of the board of directors. The results are robust to additional analysis and endogeneity tests. This research is timely and important, given the rapid economic growth and industrialization of China and the increased importance placed by China's government on firms' reporting and accountability of CSR activities.

This study contributes to the CSR literature in an economically significant and politically complex market. Unique empirical evidence is provided, assessing the association between CSR communication practices and elements of firms' propensity to engage in social or environmental legitimacy by way of donations, awards. In particular, Chinese firms may make claims about being socially and environmentally responsible, but at the same time they may use tax havens to reduce the payment of corporate taxes. Firms that use tax havens may insulate themselves disclosing essential CSR information to stakeholders. Similarly, firms may face incentives to disclose more CSR information in order to revamp their reputation after being placed on an environmental watch-list by the government. Chinese firms may also legitimize operations through philanthropic activities, such as making donations, with the consequence that management discloses more extensive CSR information. Thus, legitimacy theory offers important insights into

the motivation of Chinese firms' CSR disclosure practices. Future research in this area could examine the role of audit firms in facilitating compliance with CSR disclosure requirements, since the audit process in China is effectively governed and controlled by the Ministry of Finance.

## Appendix 4.A: Variable Definitions and Measurement

### Dependent Variables:

CSR = a continuous variable, measured as the natural logarithm of the total GRI 3.0 (0-70) items observed from each company's CSR report.

### Independent variables:

TH = 1 if a firm utilise tax havens, or 0 otherwise.

WATCH = 1 if a firm is identified on the watch list disclosed by MEP, or 0 otherwise

POL = The total number of politically connected BOD members scaled by the total number of BOD members

### Control Variables:

AF = a continuous variable, measured as the natural logarithm of the total audit fees

BIG4 = a dichotomous variable, coded as 1 if the firm's annual report was audited by one of the big 4 accounting firms, or 0 otherwise

CG = A continuous variable, measured as a corporate governance score (0-5) scaled by 5. The corporate governance score consists of five dichotomous variables:

- independent directors: coded as 1 if the percentage of independent directors exceeds the median (which is 0.3333), or 0 otherwise;
- board of directors' age: coded as 1 if the average age of the directors is lower than the median (which is 52), or 0 otherwise;
- individuals on the board of directors (BOD) with outside directorship: coded as 1 if the percentage of directors holding outside directorship exceeded the median (which is 0.1538), or 0 otherwise;
- board meeting attendance: coded as 1 if the percentage of directors attending all meetings exceeds the median (which is 0.8181), or 0 otherwise;
- duality of CEO and chairmanship: coded as 1 if the CEO of the company did not hold chairmanship, or 0 otherwise.

GOV = A dichotomous variable, coded as 1 if firm is a state owned enterprise, or 0 otherwise

BVMV = A continuous variable, measured as the book value of equity over market value of equity (i.e. market capitalisation)

SIZE = A continuous variable, measured as the natural logarithm of total assets

ROA = A continuous variable, measured as profit over total assets

FI = A continuous variable, measured as the natural logarithm of total foreign revenue

- Tang = A continuous variable, measured as total value of net property, plant and equipment over total assets
- INTG = A continuous variable, measured as total intangible assets over total assets
- RD = A continuous variable, measured as total R&D over total assets

All continuous variables are winsorized (reset) at the 1st and 99th percentiles.

## Chapter 5

### Conclusion

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#### 5.1 Introduction

This thesis examines different aspects of corporations' economic and societal behaviour. Specifically, this study investigates use of tax haven jurisdictions, incentives to hold cash and determinants of corporate social responsibility (CSR). The empirical evidence is examined in an emerging market (China) context. Data from some of the largest companies listed on Shanghai Stock Exchange covering 2006-2013 period are collected. The period selected witnessed the introduction of some major economic, tax and CSR policy reforms. A number of new laws and regulations were passed and took effect during this period. China implemented the new Corporate Income Tax law on 1 Jan, 2008. The new law has a profound effect on companies' choice of capital structure (An 2012). In regard to the promotion and regulation of CSR disclosure, the Ministry of Environmental Protection (MEP) launched "Green IPO" policy with China Securities Regulatory Commission (CSRC) in 2008. The policy requires meeting environmental standards as one of the conditions for equity and debt financing by energy-intensive companies; the SSE also undertook several initiatives in order to encourage and regulate listed companies' CSR disclosure ("Current Corporate Social Responsibility Disclosure Efforts by National Governments and Stock Exchanges" 2012).

This period has also witnessed the rise of significant environmental and societal issues that could potentially hinder the sustainable development of the country. China's

unprecedented economic development appears to have come with huge environmental and societal cost. Being the world's largest energy and resource consumer and the largest greenhouse gas (GHG) emitter, the Chinese government is under pressure to reduce the energy consumption and the intensity of GHG emissions (Liu et al. 2012). According to Liu et al. (2012), the Chinese government led a number of pollution combating initiatives since 2009. For instance, the government has since applied stringent assessments in opening new fossil fuel power plants. In the meantime, existing coal-burning power plants with inefficient capacity were required to be closed.

The period examined by this thesis (2006-2013) is best described as one of transition – a transition that is evident in the social and economic aspects of Chinese government's policies. It is also a transition period for Chinese business, as they change from a high energy consumption model to a low-carbon model. In light of the above changes in contemporary China's market, this study provides a timely assessment of three attributes: Chinese firms' tax havens utilization, cash holding policy and their disclosure practices relating to CSR issues.

## 5.2 Summary of Major Findings

A summary of major findings of each essay are presented in Table 5.1.

**Table 5.1: Summary of the findings**

<b>Chapter</b>	<b>Hypotheses</b>	<b>Findings</b>
Two	<p><b>i:</b> Chinese firms' use of tax havens is negatively associated with the extent of CSR-driven activities;</p> <p><b>ii:</b> The strength of corporate governance structure is associated with tax haven utilization.</p>	Strong Support
Three	<p><b>i:</b> Tax haven utilization is positively associated with a firm's cash holdings;</p> <p><b>ii:</b> Shareholder concentration is positively associated with a firm's cash holdings;</p> <p><b>iii:</b> The strength of corporate governance structure is positively associated with a firm's cash holdings.</p>	Strong Support
Four	<p><b>i:</b> The extent of CSR disclosure is negatively associated with tax haven use of Chinese firms.</p> <p><b>ii:</b> The extent of CSR disclosure is positively associated with firms being recorded in the MEP's watch-list.</p> <p><b>iii:</b> The extent of CSR disclosure is positively associated with the quantum of philanthropic donations made by Chinese firms.</p> <p><b>iv:</b> The extent of CSR disclosure is positively associated with the number of awards firms received in relation to environmental matters.</p>	Strong Support

The first essay presented as **Chapter 2** examines the association between CSR and firms' propensity to utilise tax havens. Overall, the level of tax haven utilisation by sampled firms is moderate. Approximately 14.6% of the firms sampled are identified as tax haven users. Supported by tenets of agency and legitimacy theory, regression results show that the extent of positive CSR activities reflected by way of the publicity of CSR achievements, increased CSR disclosure levels and existence of CSR related donations are negatively associated with tax haven utilization. The more extensively

firms engage in activities designed to enhance their connections with society, including the community, shareholders, and government, the less likely they will risk in employing tax havens as part of their business strategy. Tax haven jurisdictions provide avenues for Chinese multinational firms to engage in obscure and complex taxation or financial arrangements that may be reflected in lack of legitimacy by those firms. In addition, a statistically significant positive association between strength of governance structure and tax haven utilization demonstrates that efficiency in governance regimes assists firms in engaging in and utilizing complex arrangements via tax haven utilization.

Chapter 2 contributes to the existing CSR and sparse tax avoidance literature in the Chinese context. It extends the CSR literature by taking a number of unique CSR-driven activities into consideration. By doing so, the essay is able to present evidence that suggests Chinese firms achieve legitimacy by publicising their philanthropy donation, community recognition and other related CSR activities. Further, the empirical evidence is also able to demonstrate that firms which aim to achieve societal legitimacy are less likely to incorporate subsidiaries in tax haven jurisdictions. Finally, Chapter 2 also finds that stronger corporate governance structure of firms appears to drive the utilisation of tax havens. This provides importance evidence regarding the implication of corporate governance in strategic business decision making process.

The second essay presented as **Chapter 3** examines the determinants of Chinese firms' corporate cash holdings. The empirical results suggest that large listed firms in China generally hold high levels of cash. On average, the cash to total assets ratio from the sample selected firms during the period studied is 15%. Among the eight industry sectors identified, the consumer staples and healthcare industry sectors hold the highest

level of cash, having cash to total non-cash assets ratio of 34.78% and 31.91% respectively. The empirical regression results show that tax haven utilization has a significant positive association with firms' level of cash holdings. Further, a statistically significant positive association between the strength of governance structure and firms level of cash holdings is evident. This provides important evidence that suggest the purpose of using tax havens is not only simply to take advantage in the tradition sense, of tax avoidance, but also to facilitate their business transactions. In China, round tripping of foreign direct investment funds is evident particularly in the case of large, profit-making public SOEs. The potential benefits associated with use of tax havens appear to exceed potential costs, leading to the observed positive association between these variables. Chinese firms with large controlling shareholders and better governed firms are expected to have lower agency-principal costs potentially reducing market frictions taking hold such as adverse selection where firms may invest excess funds in poor projects or by engaging in rent extraction where funds are used for the benefit of directors or minority parties at the expense of shareholders.

Chapter 3 contributes to the literature on firms' incentives to hold cash in a major relations based economy. Despite some research having been conducted in the area of management (e.g.Garcia-Herrero, Xia and Casanova 2015; Morck, Yeung and Zhao 2008; Kolstad and Wiig 2012), there is only sparse research examining the impact of tax haven use on firms' cash flow policy in the accounting literature. This chapter highlights the important role tax haven utilization plays in assisting Chinese firms to reduce their business costs, taking advantage of regulatory arbitrage, and ultimately enabling firms to participate in an expanded set of capital markets.

The third essay presented as **Chapter 4** examines the extent of CSR disclosures of Chinese listed firms. Overall, the average level of CSR disclosure made by listed Chinese firms is still relatively low. The mean level of reporting of GRI items is 12.933, which is 18.48 of the total 70 reporting items listed under GRI3.0. This suggests that the CSR disclosure practice is regulation-driven. However, CSR disclosure enables firms to achieve political legitimacy by complying with the stock exchange's requirements.

Firms that tend to disclose CSR activities possess a number of unique attributes: First, they participate in philanthropic activities. These firms record a mean of 10.839 million CNY annual charitable donations over the studied period. Second, these firms actively publicise their CSR achievements, suggesting the Chinese firms consider receiving awards and trophies as symbolic evaluation of their CSR achievements. Finally, these firms are also big polluters. Some 39.8% of the firms studied are identified as big polluters and are under Ministry of Environmental Protection (MEP)'s watch-list.

The regression results show that extent of CSR disclosure is negatively related to firms' use of tax haven jurisdictions, positively related to the monitoring pressure applied by MEP by way of an environment watch-list registrar, the quantum of philanthropic donations made by a firm, and receipt of environmental and social awards by a firm. Further, regression results also find that firms disclose more CSR information are if they are politically connected, and use tax havens. This result may signal that politically connected board members may have pressure to be transparent on other matters, such as CSR, when they associate themselves with tax haven dealings. Finally, the empirical evidence also suggests that politically connected firms choose to be less

CSR transparent when they are named on the MEP's environmental watch-list. This result is consistent with extant evidence (e.g. Marquis, Zhang and Zhou 2011) that suggests MEP lacks power in implementing and penalising heavy polluters.

This essay contributes to the CSR literature by incorporating modern CSR disclosure practices in an economically significant and political complex market. This research is timely and important given the rapid economic growth and industrialization of China and the increased importance placed on reporting and accountability of firms by the Chinese government. In addition, this chapter also contributes to CSR literature by examining specific CSR-driven activities Chinese firms adopt as part of their legitimation strategies and their association with the extent of CSR disclosure in CSR reports.

### **5.3 Directions for future research**

The findings of the thesis add to our knowledge of the tax haven utilisation, corporate cash holdings behaviour and CSR disclosure practices of large listed Chinese firms. More research is needed to gain further knowledge of the association between the implications of the tax haven use and firms' tax savings and related party transactions. Further work on Chinese firms' cash holdings is also needed by examining the effect of related party transactions on cash holdings. In regard to future CSR studies, more knowledge is also needed to examine the role of audit firms in facilitating compliance with CSR disclosure requirements since the audit process is effectively governed and controlled by the Ministry of Finance in China.

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