

DOES CORPORATE CITIZENSHIP INFLUENCE FINANCIAL REPORTING CREDIBILITY?

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Declaration of Original Work

I certify that this thesis does not incorporate without acknowledgement any material previously submitted for a degree or diploma in any university; and that to the best of my knowledge and belief it does not contain any material previously published or written by another person except where due reference is made in the text.

Signed: _____ On: 17/02/2018

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Abstract

The role of financial reporting in the efficient functioning of capital markets depends on investors' perceptions of its credibility. This thesis examines whether superior corporate citizenship enhances the perceived credibility of financial reporting. It argues that corporate citizenship performance affects the accumulation of social trust, which affects the credibility of the firm or its managers as the source of financial reporting information. Consequently, this thesis hypothesises a positive relation between corporate citizenship performance and the perceived credibility of financial reporting information. It examines three components of corporate citizenship that are not widely considered in prior literature that relates corporate citizenship or social responsibility to financial reporting: tax fairness, wage unfairness and philanthropy. Further, this study evaluates the perceived credibility of financial reports from the perspectives of auditors (who must assess risks attached to management's financial reports) and investors (as users of the audited financial reports). The study measures differences in auditors' perceptions of credibility, or information risk, using differences in audit fees. It measures investors' perceptions of financial reporting credibility in two ways: (1) valuation relevance, which is the extent to which reported earnings explain stock prices (using the Ohlson Model); and (2) information risk, which is implied by the cost of equity capital.

Consistent with source credibility hypothesis, this thesis finds evidence that higher citizenship performance, using all three measures, is positively related to auditors' perceived credibility of financial reporting information, as reflected in audit fees. The tests using corporate citizenship performance based on corporate philanthropy scores do not provide persuasive evidence in relation to investors' perceptions of financial reporting credibility. However, the findings show that citizenship performance based on tax fairness and wage unfairness is significantly associated with investors' perceived information relevance (using the Ohlson test) and perceived information risk (using the cost of equity test). Overall, the analysis provides strong evidence that corporate citizenship performance is positively associated with the credibility of financial reporting.

Contents

Declaration of Original Work	ii
Acknowledgements	iii
Abstract.....	iv
Contents	v
List of Tables.....	vii
List of Abbreviations	x
Chapter 1: Introduction	1
1.1 Introduction	1
1.2 Background and Motivation	1
1.3 The Concept of Corporate Citizenship.....	3
1.4 Key Theoretical Perspectives	5
1.5 Research Methods.....	9
1.6 The Contributions of the Study.....	11
1.7 The Organization of The Thesis	14
Chapter 2: Literature Review and Hypotheses Development.....	16
2.1 Introduction	16
2.2 Background.....	16
2.2.1 Role of Financial Reporting.....	16
2.2.2 Concern with Financial Reporting Credibility.....	17
2.3 Review of Perceived Credibility Associated with Information.....	19
2.3.1 Concept of Credibility in the Information Context	19
2.3.2 Information Credibility and Source Risk	20
2.3.3 Concept of Corporate Citizenship	24
2.4 Review of Auditors' Perceptions of Information Credibility.....	32
2.4.1 Audit Risk Factors.....	32
2.4.2 Audit Fees and Risk of Reporting Misstatements.....	33
2.4.3 Socially Responsible Firms and Auditors' Perceived Credibility	37
2.5 Review of Investors' Perceived Information Credibility	42
2.5.1 Investors' Perceived Information Credibility	42
2.6 Conclusion.....	49
Chapter 3: Research Methods.....	52
3.1 Introduction	52
3.2 Identifying Corporate Citizenship	52
3.2.1 Measuring Tax Fairness	52
3.2.2 Measuring Wage Unfairness.....	57
3.2.3 Measuring Philanthropy	60
3.3 Models.....	61
3.3.1 Regression Specification	61
3.3.2 Audit Fees Test	62
3.3.3 Equity Valuation Test.....	65
3.4 Conclusion.....	70

Chapter 4: Results—Samples and Descriptive Statistics	70
4.1 Introduction	70
4.2 Sample Description.....	70
4.2.1 Audit Fees Samples.....	70
4.2.2 Book Value of Equity Valuation Samples—Ohlson Test	75
4.2.3 Cost of Equity Samples	80
4.3 Summary of Statistics and Correlation	82
4.3.1 Audit Fees Test	82
4.3.2 Ohlson Model Test.....	93
4.3.3 Cost of Equity Test.....	103
4.4 Conclusion.....	111
Chapter 5: Results	114
5.1 Introduction	114
5.2 Audit Fees Test.....	114
5.2.1 Association between Audit Fees and Individual Corporate Citizenship Measures	115
5.2.2 Association between Audit Fees and Combined Corporate Citizenship.....	128
5.2.3 Additional Analyses	133
5.3 Equity Valuation Test	142
5.3.1 Book Value of Equity Valuation—the Ohlson Test	142
5.3.2 Cost of Equity Test.....	148
5.4 Summary of Results	154
Chapter 6: Conclusion.....	157
6.1 Introduction	157
6.2 Overview of the Study	157
6.3 Summary of the Findings	158
6.4 Theoretical Contributions.....	160
6.5 Practical Contributions.....	163
6.6 Limitations.....	164
6.7 Future research.....	166
References	167
Appendix.....	184

List of Tables

Table 1: Summary of Research Question, Hypotheses and Key Statistics.....	15
Table 2: Sample Selection Method for Audit Fees Test.....	74
Table 3: Sample Selection Method for BVE Test (Ohlson Test).....	77
Table 4: Sample Selection Method for Cost of Equity Test	81
Table 5: Audit Fees Test Descriptive Statistics of Corporate Citizenship (2001– 2013).....	84
Table 6: Distribution of Individual Corporate Citizenship Measures by Year for Audit Fees Test (2001–2013)	86
Table 7: Distribution Comparison in Individual Sample for Audit Fees Test (2001– 2013).....	90
Table 8: Summary of Correlation Matrix for Audit Fees Test (2001–2013).....	92
Table 9: Tax Sample Portfolio for Ohlson Test	95
Table 10: Correlation Matrix—Tax Sample Portfolio for Ohlson Test (2002–2014) (Using Non-Lagged Tax Fairness).....	97
Table 11: Descriptive Statistics—Wage Sample Portfolio for Ohlson Test (2002– 2014).....	99
Table 12: Correlation Matrix—Wage Sample Portfolio for Ohlson Test (2002–2014).....	100
Table 13: Philanthropy Sample Portfolio—Donors and Non-Donors for Ohlson Test (2002–2009).....	102
Table 14: Correlation Matrix—Philanthropy Sample Portfolio for Ohlson Test (2001–2009).....	103
Table 15: Descriptive Statistics—Tax Sample for Cost of Equity Test (2001–2014) .	105
Table 16: Correlation Matrix for Tax Sample for Cost of Equity Test (2001–2014) ..	106
Table 17: Descriptive Statistics—Wage Sample for Cost of Equity Test (2001–2014).....	108
Table 18: Correlation Matrix for Wage Sample for Cost of Equity Test (2001–2014)	109
Table 19: Descriptive Statistics—Philanthropy Sample for Cost of Equity Test (2001–2009).....	111
Table 20: Correlation Matrix for Philanthropy Sample (2001–2009).....	113

Table 21: Summary of Coefficients for Individual Corporate Citizenship Measure and Audit Fees (2001–2013).....	118
Table 22: Quantile Regression for Audit Fees on Tax Fairness (2001–2013).....	121
Table 23: Quantile Regression for Audit Fees on Wage Unfairness (2001–2013).....	124
Table 24: Quantile Regression for Audit Fees on Philanthropy (2001–2009)	127
Table 25: Quantile Regression for Audit Fees and Combined Corporate Citizenship, Excludes Philanthropy (2001–2013).....	130
Table 26: Quantile Regression for Audit Fees and Combined Corporate Citizenship, Including Philanthropy (2001–2009)	132
Table 27: Quantile Regression for Audit Fees and CEO Compensation Excess (2001–2013).....	134
Table 28: Quantile Regression for Audit Fees and Combined Citizenship using CEO Compensation Excess (2001–2009)	135
Table 29: Quantile Regression for Audit Fees and Tax Fairness, Different Audit Fees Quantiles (2001–2013).....	139
Table 30: Quantile Regression for Audit Fees and Wage Unfairness, Different Audit Fee Quantiles (2001–2013).....	140
Table 31: Quantile Regression for Audit Fees and Philanthropy, Different Audit Fees Quantiles (2001–2009).....	141
Table 32: OLS Regression for Price on Tax Fairness (2002–2014)	145
Table 33: OLS Regression for Price on Wage Unfairness (2002–2014).....	146
Table 34: OLS Regression for Price on Philanthropy (2002–2009)	146
Table 35: OLS Regression for Price on CEO Compensation Excess (2002–2013).....	147
Table 36: Quantile Regression for Cost of Equity on Tax Fairness (2001–2014).....	149
Table 37: Quantile Regression for Cost of Equity on Wage Unfairness (2001–2014)	150
Table 38: Quantile Regression for Cost of Equity on Philanthropy (2001–2009).....	152
Table 39: Quantile Regression for Cost of Equity on CEO Compensation Excess (2001–2014).....	153
Table A1: Variable Definition.....	184
Table A2: Audit Fees Test Descriptive Statistics of CEO Compensation Excess Measure (2001–2013).....	187
Table A3: Audit Fees Test Distribution of CEO Compensation Excess Measures (2001–2013).....	187

Table A4: Regression for Audit Fees on Combination A, Excludes Philanthropy (2001–2013).....	188
Table A5: Regression for Audit Fees on Combined Corporate Citizenship, Includes Philanthropy (2001–2009).....	190
Table A6: Regression for Audit Fees on CEO Compensation Excess (2001–2013) ...	192
Table A7: Regression for Audit Fees on Combined Corporate Citizenship Using Alternative Measure of Wage Unfairness, CEO Compensation Excess	194
Table A8: Regression for Audit Fees on Tax Fairness When Audit Fees At Top and Low Quantiles	199
Table A9: Regression for Audit Fees on Wage Unfairness When Audit Fees At Top and Low Quantiles	203
Table A10: Regression for Audit Fees on Alternative Measure of Wage Unfairness, CEO Compensation Excess When Audit Fees At Top and Low Quantiles	207
Table A11: Regression for Audit Fees on Philanthropy When Audit Fees At Top and Low Quantiles	211

List of Abbreviations

AAER	Accounting and Auditing Enforcement Releases
AICPA	American Institute of Certified Public Accountants
ARM	Audit risk model
BVE	Book value of equity
Cash ETR	Cash effective tax rate
CEO	Chief executive officer
CIK	Central Index Key
ETR	Effective tax rate
GAAP	Generally accepted accounting principles
GISC	Global Industry Classification Standard
OLS	Ordinary least squares
QREG	Quantile regression
ROA	Return on assets
ROE	Return on equity
SAS	Statements of Auditing Standards
SEC	Securities and Exchange Commission
SOX	<i>Sarbanes–Oxley Act</i>
US	United States

Chapter 1: Introduction

1.1 Introduction

This chapter introduces the study in the context of the current literature, develops the problem statement and provides an overview of the entire thesis. This chapter presents the background and motivation for the study (Section 1.2), the concept of corporate citizenship (Section 1.3), theoretical perspectives (Section 1.4), research methodology (Section 1.5), contributions of the study (Section 1.6) and the organization of the thesis (Section 1.7).

1.2 Background and Motivation

Financial reporting is an important source of information in the capital markets, but its usefulness depends on investors' perceived credibility. This study examines whether corporate citizenship performance influences the perceived credibility of financial reporting. Prior literature has suggested that corporate community engagements help corporations to accumulate social trust and reputational capital from their wider stakeholders (Fombrun 1996; Fombrun, Gardberg and Barnett 2000; Kramer and Tyler 1996). By acting as a 'good citizen'—for example, by actively providing benefits to the community and employees—a corporation signals its mutualistic relationship with society that can enhance trust (Fombrun, Gardberg and Barnett 2000). While trust is a critical factor in establishing an actor's credibility (Hovland, Janis and Kelley 1953; Pornpitakpan 2004), it is not known whether or how superior corporate citizenship performance positively affects financial reporting credibility.

Management literature has long argued about the benefits of social trust rewards for firms that behave socially responsibly (Fombrun, Gardberg and Barnett 2000; Waddock and Smith 2000). While this has been the theoretical foundation for corporate social initiatives, prior research has found mixed evidence of a link between social performance and financial benefits (Jiao 2010). However, more recently, empirical accounting and finance research provides increasing evidence to link superior social performance with pricing decisions that are consistent with the effects of perceived lower information risk. For example, superior social performance is associated with positive firm's valuation

from investors (Brammer, Brooks and Pavelin 2009; Dhaliwal, Tsang and Yang 2011; 2012; El Ghouli et al. 2011), lower audit fees (Koh and Tong 2012; Berglund and Kang 2013) and higher earnings quality (Laksmana and Yang 2009; Kim, Park and Wier 2012).

While all of these research works have documented the link between corporate social responsibility and financial reporting credibility, this study differs by drawing a link between broader corporate citizenship and financial reporting credibility, which is relatively under-explored. Specifically, this study addresses the following research question: **does corporate citizenship influence financial reporting credibility?**

This study is motivated by the under-exploration of the role of source credibility inferred from firm-wide reputation on financial reporting credibility. The existing source credibility research in a financial reporting information context often treats management credibility as synonymous with financial reporting credibility. However, this is disputable because financial reporting credibility is more than just management credibility (Mercer 2004). Therefore, this study investigates the effects of generalized trust on the overall perceived financial reporting information credibility.

Expectations of distrust in the source of corporate disclosures is pervasive in the management financial reporting literature, due to the separation of roles between managers and investors, and other capital providers. The information risk attached to management assertions in financial reporting is mainly attributable to the fact that the external users are not able to directly observe the quality of its production (Watkins, Hillison and Morecroft 2004). This leads to the expectations that the disclosures might be opportunistically presented by managers, consistent with agency theory predictions (Healy and Palepu 2001; Beyer, Cohen, Lys and Walther 2010). Uncertainties about the earnings information quality suggest that investors would rationally use price protection to reduce risks associated with a firm's financial reporting information credibility (e.g. Francis, Maydew and Sparks 1999; Easley and O'hara 2004). When it becomes too costly to raise external financing, the firm or managers have incentives to increase investors' confidence on its financial information reliability or quality (Healy and Palepu 2001).

In the US, the Securities and Exchange Commission (SEC) requires public firms to provide audited financial statements as a measure to address investors' concern about management misrepresentation of financial reporting and to promote investors'

confidence in the overall capital markets. The auditors are given access to examine the firm's financial documents, operations, internal controls and its employees to obtain an understanding of the extent of material risks associated with financial reporting information assertions (e.g. O'Keefe, Simunic and Stein 1996; Mock and Wright 1999; Beaulieu 2001). The auditors are expected to obtain sufficient evidence through audit procedures to provide an independent opinion as to whether the management representation of the financial reporting is fair and in accordance with the generally accepted accounting principles (GAAP) (AICPA 2006).

Since independent audit services are a standard requirement of the US public firms, the firm might attempt to send unique signals to increase perceived information quality by associating itself with reputable auditors and financial intermediaries (e.g. Menon and Williams 1991; Teoh and Wong 1993) or develop its own reputation (Fombrun 1996; Fombrun, Gardberg and Barnett 2000; Mayhew 2001). In markets with asymmetrical information, reputation helps differentiate credibility, which tends to send signals about the perceived quality (e.g. Menon and Williams 1991; Teoh and Wong 1993; Fombrun, Gardberg and Barnett 2000; Watkins, Hillison and Morecroft 2004). Good reputation in particular, provides assurance of value (Fombrun 1996; Fombrun, Gardberg and Barnett 2000; Watkins, Hillison and Morecroft 2004). Fombrun (1996) argues that a corporation's reputation is comprised not only of collective assessments of its financial signals, but also non-financial signals. As consequence, corporations tend to use the social responsibility outlet to accumulate support from its wider stakeholders and building corporate reputation in an attempt protect its license to operate (Fombrun, Gardberg and Barnett 2000).

1.3 The Concept of Corporate Citizenship

Good corporate citizenship constitutes corporate actions or policies that meet the expectations of society's laws and norms, and have direct contribution to the wellbeing of the society. Corporate citizenship conceptually resembles the human citizenship concept (Valor 2005), which consists of understanding that each citizen has equal rights and responsibilities to society, and violating those responsibilities leads to penalties (Scherer and Palazzo 2008). In practice, corporations often present corporate citizenship and CSR, and sustainability as interchangeable. This practice is also evident in recent literature. In this thesis, the conceptualisation of corporate citizenship is influenced by

earlier writing, such as Carroll (1991). Here, corporate citizenship is described as broader than corporate social responsibility because it embraces a corporation's voluntary acceptance of its responsibility to society at large, while corporate social responsibility is expected to address the stakeholders' demands in four dimensions: economic, legal, ethical and discretionary (Drucker 1993; Carroll 1991; 1998; Maignan, Ferrell and Hult 1999; Andriof and Marsden 2000; Birch 2001; Stebbins 2001; Scherer and Palazzo 2008).

Corporate citizenship is generally voluntary and its nature has been identified as philanthropic, with the intention of giving back to and enhancing society (Carroll 1991; 1998). In this sense, corporate citizenship describes voluntary corporate actions that are consistent with legitimacy theory. As a consequence, positive corporate citizenship actions can signal a mutualistic relationship between the corporations and the society (Fombrun 1996), which might also signal good corporate ethical behaviour. To capture the corporate citizenship actions associated with 'giving back', this study uses three forms of corporate contribution: tax fairness, wage unfairness and philanthropy. This thesis argues that, through these types of contribution, corporations signal the extent of their awareness of, and accordance with, societal expectations. Prior research finds that, on average, such corporate contributions have no significant relation with other CSR measures, such as product safety and employee relations, suggesting that these corporate contributions are more concerned with social legitimisation than with corporate social responsibility (Chen, Patten and Roberts 2008).

Tax fairness, wage fairness and philanthropy may be perceived as contrary to the interest of financial stakeholders to the extent that they redistribute their wealth to other stakeholders. This thesis argues that it would be costlier for the financial stakeholders for not performing positively in those social areas (e.g. Scherer and Palazzo 2008). The matter of tax fairness, wage fairness and corporate giving are salient issues to the society and therefore, the reputation risk for being associated with poor voluntary responsibility arising from tax avoidance, wage unfairness and lack of community support may increase the likelihood for a corporation to be labelled as a poor corporate citizen. Prior studies have shown that poor voluntary responsibility acceptance can affect the corporation social legitimacy and have direct effects on the corporation's cost such as an alleged case of tax avoidance by the UK Starbucks (Barford and Holt 2013; Khadim and Butt 2015; Chew 2016).

1.4 Key Theoretical Perspectives

The theory of source credibility suggests that trustworthiness along with expertise are persuasive in facilitating perceived higher information credibility (Hovland, Janis and Kelley 1953; McGinnies and Ward 1980). Hovland, Janis and Kelley (1953, p. 21) define expertise as “the extent to which a communicator is perceived to be a source of valid assertions”, and trustworthiness as “the degree of confidence in the communicator’s intent to communicate the assertions he considers most valid”. While most research on source credibility indicates that both the expertise and trustworthiness dimensions are persuasive, McGinnies and Ward (1980) find that trustworthiness may be important in enhancing credibility.

McGinnies and Ward examine the significance of expertise and trustworthiness components of source credibility using between-countries and within-countries analyses in four different countries: the US, New Zealand, Australia and Japan. They find that source trustworthiness is relatively persuasive in influencing source credibility. This is more in line with Aristotle’s view, in which he posits that:

“We believe good men more fully and more readily than others: this is true generally whatever the question is, and absolutely true where exact certainty is impossible and opinions are divided.”¹

To Aristotle, a speaker’s ethos is not only central to building trustworthiness, but it is also persuasive in judging the reliability of their statements.

Beaulieu (1994) investigates the effect of a loan applicant’s character on lenders’ evaluation of information risk and finding that negative character leads lenders to discount the credibility of accounting information produced by a loan applicant. Beaulieu’s research is important because it shows that source credibility applies to financial information risk assessment. In other research, Beaulieu (2001) examines the effect of the manager character’s signals on auditors’ perceived information risk and finds

¹ Aristotle (1954). *Rhetoric*. Trans. W. Rhys Roberts, p. 8.

that auditors are likely to provide for the likelihood of information risk if they perceive the manager as someone with poor character.

Trustworthiness is seated in the concept of morality (Hirschman 1984; Broudy 1981). Prior psychological research has suggested that it is internalized from “orientation towards society or others” (Staub 1978; Rushton 1980, as cited Kramer and Tyler 1996). Demonstrating concern on others’ welfare reduces perceptions of self-serving behaviour, in which has the tendency to fuel distrust. Prior social psychological research indicates that an individual’s decision to trust is affected by perceived social similarities and reciprocal experiences or expectations (Creed et al. 1996). ‘Social similarities’ refers to perceived similarities in social characteristics, such as sharing similar backgrounds; for example, shared ethnicity or membership of the same alma mater (Kramer and Tyler 1996). ‘Reciprocal experiences or expectations’ includes philanthropic acts, and suggests goodwill, consideration, compassion, thoughtfulness and public-spiritedness (Andriof and Marsden 2000; Birch 2001; Waddock 2001). Powell (1996) argues that reciprocity is central to motivate cooperation, which suggests trust.

Corporate citizenship may positively affect both perceived social similarities and reciprocity experiences or expectations, which would allow corporations to accumulate higher social trust. The citizenship factors examined here (tax fairness, wage fairness and philanthropy) may influence reciprocity because they entail contributing to society in ways that suggest concern for the well-being of others and meeting expectations. Thus, they may enhance perceptions of the corporations being ethically responsible in their relationship with the society.

Revealing voluntary acceptance of responsibilities to society has the potential for social trust ‘spillover’ effects to many stakeholders. Thus, the higher the corporate citizenship performance, the higher the social trust accumulates. Prior research shows that social trust helps build source credibility and is therefore persuasive in inducing credibility in the source’s message (see Pornpitakpan 2004), I thus hypothesize that a positive relation between the measure of corporate citizenship and the credibility of financial reporting. I conjecture that the increasing corporate citizenship engagements or performances increases the firm’s social trust base, which subsequently, influences its source credibility perception that extends to the credibility of financial reporting information communication.

The conceptual and empirical literature identifies numerous mechanisms that link corporate citizenship or corporate social responsibility with financial performance. The relation between corporate citizenship or corporate social responsibility and financial performance has been depicted as positive, negative and nonlinear (Brammer and Millington 2008).

Prior studies, which depict a positive linear relation between social investment and corporate financial performance argued that this linkage is possible because of increased revenues or reduced costs. For example, William and Siegel (2001) argue that corporate social performance can act as advertising tool that helps to differentiate the corporation from its relatively poor performing peers. Mohan, Norton and Deshpande (2015) investigate the impact of wage dispersion between the CEO compensation and average employee on customers' choices - they find that customers are more likely to buy from corporations that perceived are practicing fair compensation policy. Similarly, performing relatively poorly can lead to the corporations being penalised by consumers. For example, UK Starbucks suffered an organized 6-month boycott across the UK after several newspapers reported alleged Starbucks had avoid paying tax to the UK government for 5 years. Following the public pressure, UK Starbucks announced their willingness to pay 5 million of tax to UK government for the next two consecutive years. Koh and Tong (2012) study the financial consequences for corporations that engage in controversial activities and find that auditors are more likely to charge higher audit fees of 5.4 to 13.2% for firms with higher social concerns.

Prior research shows that corporate social performance can also affect financial performance positively by lowering the costs associated with information risks at firm-level. Recent empirical research finds evidence that higher social performance reduces the perceived risk associated with the corporate financial reporting information. For example, Kim, Park and Wier (2012) argue that managers have incentives to adhere to ethical behavior because such behaviors tend to benefit the corporations and find there is a negative relation between superior social performance and less opportunistic earnings-related reporting, suggesting higher earnings information quality. They find that socially responsible corporations are less likely to engage in: (1) accrual-based earnings management measured from the absolute value of discretionary accrual and multiple proxies of real activities manipulation (abnormal cash flow, production and discretionary

expenses), and (2) generally accepted accounting principles (GAAP) violations as reported in Accounting and Auditing Enforcement Releases (AAERs).

A contrary depiction of the relation between social performance and financial performance follows the proposition from Friedman (1970) that corporations have a specific social responsibility to generate profits, consistent with the traditional view of shareholder value-maximization. Milton Friedman (cited in Porter and Kramer 2002) argues that social contributions have negative implication because they limit the shareholders' rights to use "their" resources. Furthermore, managers might expropriate shareholders' residual resources to pursue their private interests that might have no financial benefits for corporations (Brammer and Millington 2008). Consequently, social investment can be viewed as an unethical managerial behaviour that is pursued at the expense of shareholders.

However, recent empirical research from accounting and finance has provided more evidence of the positive value of social performance on firms' valuation (Brammer, Brooks and Pavelin 2009; Dhaliwal, Tsang and Yang 2011; Dhaliwal et al. 2012; El Ghouli et al. 2011). For example, El Ghouli et al. (2011) find that every unit of increase in social performance leads to a 0.587 increase in Tobin's Q. In investigating corporations' incentives to report their social performance, Dhaliwal, Tsang and Yang (2011) find evidence that the corporations with a high cost of equity capital in the previous year are more likely to initiate standalone social reporting. Furthermore, their findings indicate that the initiator corporations are significantly more likely to benefit from a reduction of cost of equity capital if they perform relatively better than their industry peers. They also examine whether social reporting is associated with analysts' attributes that have the potential to lower investors' information asymmetry in valuations. They find evidence consistent with social reporting is associated a higher analyst following, higher forecast accuracy and lower forecast errors/dispersion.

A non-linear relation between social performance and financial performance as presented in Brammer, Brooks and Pavelin (2009), which reports evidence that, on average, corporations that are ranked in the Top 100 Best Corporate Citizens by Business Ethics earn small abnormal returns during the earnings announcement window. However, they find that those corporations yield negative abnormal returns up to 3 per cent in the

subsequent year. Brammer and Millington (2008) find that corporations with either extreme high or extreme low social performance have high financial performance; they explain that those low performers would likely to do best in short run returns and high performers in long run.

The relation between corporate social performance and financial performance has also been explained from conceptual frameworks drawn from strategic management literature including, but not limited to stakeholder management theory, institutional theory, ethical theory and legitimacy theory (Brammer and Millington 2008; Kim, Park and Wier 2012). These theories share a conceptualization of organization behaviours being as a result of their interactions or exchanges with the wider stakeholders (Brammer and Millington 2008). Under the stakeholder management theory, corporations are assumed able to identify their key stakeholders and managing their relationship effectively in order to maximise financial benefits (Brammer and Millington 2008). The institutional theory explains the influence of institutional environments in shaping the formal structure, work cultures, values and norms of the organizations (Campbell 2007).

Unlike corporate social responsibility, corporate citizenship research is normally restrictive to the premise of legitimacy theory in providing explanation for the corporation's incentives to engage with social activities. Legitimacy theory suggests that business organizations have incentives to respond to the changes of society demands in markets they operate, including meeting their expectations on norms in order to secure future operation (Chen, Patten and Roberts 2008). Corporations are viewed as legitimate when their goals, operation methods and outcomes are congruent with those who corporations seek legitimacy from (Lindblom 1994). Corporations, under the legitimacy framework, seek not only to respond to the demands but also to increase benefits of their key stakeholders in exchange for future sustainability.

1.5 Research Methods

This study uses the perspectives from two financial reporting users: (1) auditors and (2) investors to proxy for perceptions of financial reporting credibility. The Statements of Accounting Concepts recognize investors as one of primary users for the financial reporting (FASB 2010). The dissemination of financial reporting information is fundamentally intended to meet the information need of investors for their investment

allocation decisions. The auditors' perceptions of financial reporting credibility are examined consistent with their roles, which expect to assess the material risk associated with management unaudited financial reporting information (e.g. Beaulieu 2001; Khurana and Raman 2004; Koh and Tong 2012; Berglund and Kang 2013).

Auditors' perceptions of financial reporting credibility are proxied by audit fees, which reflect the extent of auditors' efforts in minimizing the audit risk. Investors' perceptions are examined in two ways: (1) the Ohlson test and (2) the cost of equity test. The Ohlson test estimates the relation between investors' pricing decisions and the corporation's book values of equity and abnormal earnings information (Ohlson 1995). The cost of equity estimates the rate of required return that investors expect in exchange for holding the corporation's stocks given a certain risk, and therefore, to certain extent it reflects investors' uncertainties relating to corporation's value estimate.

Consistent with the three measures of corporate citizenship: tax fairness, wage unfairness and philanthropy, this study uses three samples to examine auditors' and investors' perceptions of financial reporting information credibility. The main samples for the study span the period of fourteen years, that is from 2001 – 2014. The requirements imposed by the test models further restrict the samples to shorter period of study. Specifically, the sample period for the audit fees test, which has been reduced to thirteen years that is from 2001 – 2013. The sample period for the Ohlson test is also restricted to thirteen years, but spans from 2002 – 2014. The third test, the cost of equity test, has samples with a complete period of fourteen years that is from 2001 – 2014.

The corporate citizenship measures of tax fairness and wage unfairness used in this thesis distinguishes this work from prior studies that investigate the link between corporate social performance and financial performance. The tax fairness and wage unfairness measures are continuous in nature. This is different to the many prior research works that rely on categorical data provided by the MSCI-KLD database, which can limit the interpretation of the results. In attempt to be more varied, some have used the net effects from the total strength and concern in six social dimensions: (1) community, (2) diversity, (3) employee relations, (4) corporate governance, (5) environment and (6) product in the MSCI-KLD database (e.g., El Ghoul et al. 2011; Kim, Park and Wier 2012). Using slightly a different method to mainstream literature, Dhaliwal, Tsang and Yang (2011)

compare corporations' total social strength scores collected from six social dimensions in the MSCI–KLD category with industry-adjusted median performance scores.

In relation to the regression method, this thesis employs quantile regressions (or median regressions) for audit fees test and cost of equity test. The method in the OLS regression focuses on the mean, which often requires the outliers to be excluded from the sample or addressed in certain ways for example, winsorizing in order to avoid bias in the results. Contrary to the OLS regression, the quantile regressions allow focus on a more robust point, such as the median, without losing the potential information content of 'outliers'. I also argue that the quantile regression approach is more consistent with the interest of this study, which is to observe the behaviour of extreme firms. I do not use quantile regressions for the Ohlson test because the Ohlson test splits the sample according to Top and Low quantile groups, which takes account of the distribution of the performance measures.

1.6 The Contributions of the Study

This study contributes to current knowledge in fivefold. First, this study contributes to the literature by examining the relation between corporate citizenship performance and financial reporting information credibility. This study extends our understanding of the theoretical link between social trust, source credibility, corporate citizenship and perceived information credibility in a financial reporting information context. While the theorized role of social trust has been widely known to facilitate decision-makings (Berglund and Kang 2013), prior studies have not drawn its link from source credibility perspective. This study fills the gap in accounting literature by using wide-range literature from sociology, social psychological and communication research to establish a link between corporate citizenship and social trust, and thus, explains the extent to which its performance can influence the perceived credibility of a firm or its manager as the source of financial reporting information.

Secondly, this study contributes to the empirical research, which investigate information role of socially responsible concept firms by introducing two rigorous measures for corporate citizenship: tax fairness and wage unfairness, which have not been widely considered in prior literature that relates corporate citizenship or corporate social responsibility to the financial reporting information. Through tax fairness and wage

unfairness, this study addresses the lack of variations in measurement of corporate social performance in prior research, which tend to rely exclusively on social scores from MSCI-KLD database. Through tax fairness measure, this study contributes by examining the effects of corporation's actual taxes paid information on auditors' and investors' pricing decisions, which address the gap raised by Graham, Raedy and Shackelford (2012). To this study's knowledge that this is one of the first studies that attempts to observe the link between wage unfairness (proxied by CEO-employee relative pay) information and auditors' pricing. Prior research tends to focus on CEO pay structure and its effects on audit fees (e.g. Wysocki 2010).

Thirdly, this study complements the existing empirical accounting literature, which examines the financial benefits of socially responsible corporations. The findings of this study provide evidence consistent with the proportion that higher corporate citizenship performance enhances auditors' and investors' perceived financial reporting credibility. Although, this relation is observed to be relatively weaker for investors. Specifically, this study finds that superior corporate citizenship performance is significantly associated with auditors' perceived higher financial reporting credibility, consistent with the hypotheses in H1 (as described in Table 1). Evidence indicate that auditors charge lower audit fees to firms, which have higher performance in corporate citizenship, as measured by tax fairness, wage fairness (inversely implied from wage unfairness) and philanthropy. The results also provide evidence that not all kinds of philanthropy are effective in facilitating social trust. Evidence from findings suggests that while higher domestic philanthropy performance reduces auditors' perceived information risk, higher foreign philanthropy performance tends to heighten it.

In findings related to analyses involving investors' perceptions of financial reporting credibility, evidence indicates that as if investors associate firms that have higher tax fairness and wage fairness performance with perceived higher financial reporting credibility. This association however, does not extend to the firms, which have high performance in domestic philanthropy and foreign philanthropy. Thus, these findings provide support only for the hypotheses of H2 (a), H2 (b), H3 (a) and H3 (b) (as indicated in Table 1). These results are robust to (1) the Ohlson test, which examines the investors' perceived value-relevance of financial reporting information and (2) the cost of equity capital, which examines the investors' perceived information risk. Although, the cost for

equity capital test provides varying evidence to lend robust support on the negative effects of wage unfairness performance on investors' perceived information risk.

Four, this study relates to Dhaliwal, Tsang and Yang (2011), Kim, Park and Wier (2012), Koh and Tong (2012) and Berglund and Kang (2013), but differs in several important aspects. Firstly, all of these studies are restricted to the use of discrete data provided by the MSCI-KLD database. This provides certain limitations to the interpretation of the results of the research, since the measurement itself is more of an estimation of average effects. Without large sample sizes, the results could be meaningless. Furthermore, the ambiguity in KLD rating process adds to a lack of understanding how to use the data effectively. Mattingly and Berman (2006) show that the practice of using a net score, by subtracting total social concern scores from total social strength scores can have an offset effect, and therefore, could lead to lower predictability or inaccuracy in the estimation of results.

Five, this study relates to Kim, Park and Wier (2012). However, we differ in terms of the focus of stakeholders and therefore, this leads to differences in our measurements of construct. Kim, Park and Wier (2012) examine whether the socially responsible corporations have ethical incentives to prevent management from engaging with earnings management, by using accrual earnings quality as a proxy. However, contrary to the Kim, Park and Wier's (2012) focus on financial reporting users, this study focuses on the corporation's ethical responsibility to its wider stakeholders. This study differs to Koh and Tong (2012), which approach the issues of corporate social performance from reverse perspectives. The authors investigate the distrust cost for corporations for having poor performance in social aspects. Koh and Tong (2012) show that poor social performance through controversial activities increases auditor's perceived information risk. This study is more interested to observe whether corporate citizenship performance has a role to affect social trust function and subsequently, perceived credibility of financial reporting information.

Six, this study relates to Berglund and Kang (2013), but differs in measurement approach. The authors use diversity performance scores, which obtained from MSCI-KLD database to proxy for social dissimilarity effects on the social trust function. This is consistent with prior social science literature, which find social trust is a function of (1) perceived similar characteristics and (2) reciprocal experiences (Creed et al. 1996). This study differs by

focusing on the social trust effects from reciprocal experiences arising from good corporate citizenship. However, it is plausible that corporate citizenship might have positive effects on perceived similar characteristics as well. This is because of the cognitive power associated with the citizenship term, which has the advantages to persuade perceived similarities in the sense of social identity, values and beliefs. Thus, this leads to the expectations that corporate citizenship serves as comprehensive measure to capture trust as an element of social capital. Consequently, it is also expected that the term of corporate citizenship to provide stronger sense of emotion and familiarity than the term of corporate social responsibility.

1.7 The Organization of The Thesis

The rest of this thesis is structured as follows. Chapter 2 presents the literature review and hypotheses development. Chapter 3 outlines the research methods and describes the construction of the corporate citizenship variables and empirical models. Chapter 4 outlines the samples used to test the hypotheses. Chapter 5 presents the results of the analyses estimated using the models described in Chapter 3. Chapter 6 presents the conclusion to the thesis.

Table 1: Summary of Research Question, Hypotheses and Key Statistics**Research Question: Does Corporate Citizenship Influence Financial Reporting Credibility?**

(1) Audit Fees Test Hypotheses:		Key Statistics
H1 (a)	Tax fairness is negatively associated with auditors' perceived information risk, as reflected in audit fees.	Regression Coefficient
H1 (b)	Wage unfairness is positively associated with auditors' perceived information risk, as reflected in audit fees.	Regression Coefficient
H1 (c)	Philanthropy performance is negatively related to audit fees.	Regression Coefficient
H1 (d)	Foreign-based philanthropy performance is positively related to audit fees.	Regression Coefficient
(2) The Ohlson Test Hypotheses:		Key Statistics
H2 (a)	Tax fairness increases the value-relevance financial reporting information.	R-squared
H2 (b)	Wage unfairness decreases the value-relevance financial reporting information.	R-squared
H2 (c)	Philanthropy performance increases the value-relevance financial reporting information.	R-squared
H2 (d)	Foreign-based philanthropy performance decreases the value relevance of financial reporting information.	R-squared
(3) The Cost of Equity Test Hypotheses:		Key Statistics
H3 (a)	Tax fairness is negatively associated with investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.	Regression Coefficient
H3 (b)	Wage unfairness is positively associated with investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital	Regression Coefficient
H3 (c)	Philanthropy performance is negatively related to investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.	Regression Coefficient
H3 (d)	Foreign-based philanthropy performance is positively related to investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.	Regression Coefficient

Chapter 2: Literature Review and Hypotheses Development

2.1 Introduction

The purpose of this chapter is to synthesise the current knowledge related to the concept of, and factors pertaining to, financial reporting credibility to provide the basis for developing the hypotheses for this thesis. This chapter reviews the literature associated with financial reporting information credibility, including information credibility factors (Section 2.3), the link between the source credibility on perceived information credibility (Section 2.3.2), the assessment of information credibility specific to the financial context from the perspectives of auditors and investors (Section 2.4 and Section 2.5), which includes the relation between social trust and corporate citizenship information and how it influences source credibility perception.

2.2 Background

2.2.1 Role of Financial Reporting

The key challenge for any economy is the optimal allocation of resources. In the equity capital market specifically, the challenge is to match the preferences of investors to more widely distributed investment choices (Healy and Palepu 2001). The Financial Accounting Standards Board (FASB), in its statements of Financial Accounting Concepts No. 8, SFAS No. 8 (FASB 2010, p. 1), states that the purpose of financial reporting is ‘to provide financial information about the reporting entity that is useful to existing and potential investors, lenders, and other creditors in making decisions about providing resources to the entity’. The dissemination of financial reporting is purposely directed to facilitate the information needs of external users, such as investors who base their investment and resource allocation decisions on this information (FASB 2010).²

Financial reporting plays an important role in the efficient functioning of capital markets by facilitating investors’ investment or resource allocation decisions. Financial reporting can affect investors’ decision-making in two ways: (1) it provides reasonably complete

² FASB (2010, p. 1) identifies that the purpose of financial reporting includes addressing the information needs of existing and potential investors.

information about the firm in relation to its economic resources, obligations and changes in those resources and obligations that allow investors to assess firms' earnings prospects and estimate their value for future investment opportunities (FASB 2010); and (2) it allows investors to monitor and assess management performance in discharging their responsibilities through earnings information (Beyer et al. 2010; FASB 2010). However, because the production of financial reporting information is unobservable to external users and the management responsible for the production and issuance of financial reports may have interests that conflict with those of external users, it raises a concern about the extent to which financial reporting information is credible for use.

2.2.2 Concern with Financial Reporting Credibility

As noted by Mercer (2004), financial reporting can be useful to investors, but it must first be perceived as credible. The FASB (2010, p. 9), in its Statement of Accounting Concepts No. 8, SFAS No. 8, identifies that existing and potential investors, including lenders and other creditors, have 'the most critical and immediate need for the financial reporting information'. This suggests that information quality attributes, along with other reporting compliance, on which conditioned to the financial reporting is partly to meet the information needs of investors and help them make quality decisions. Thus, assessing investors' perceptions associated with financial reporting is critical to obtain an understanding of which factors influence their perceived information credibility.

There is a concern with financial reporting information credibility for two reasons: (1) the 'lemons' problem and (2) the management incentives problem (Healy and Palepu 2001; Beyer et al. 2010). The 'lemons', or valuation, problem refers to the information problem associated with management and business owners having incentives to overstate their firm's value (Beyer et al. 2010). The management incentives problem refers to the information problem arising from management incentives to expropriate their private information advantage over investors, which results in investors' expectations of opportunistic reporting (Beyer et al. 2010). Both problems increase the risk that the financial reporting information is incomplete, biased and incorrect, which increases the

risk of investors making poor-quality decisions (e.g., Francis, Olsson and Schipper 2005).³

In part of alleviating the investors' fears of management misrepresentations of financial reporting, the US Securities and Exchange Commission (SEC) requires public firms to a filing of audited financial statements (or 10-K filing). The role of audit is to provide fair assurance that firms' financial reporting representation complies with GAAP (DeFond and Zhang 2014). This suggests that auditors are concerned with nonconforming behaviour (DeFond and Zhang 2014) and judgements on material errors that affect their faithful representation (Statements of Auditing Standards [SAS] No. 107, American Institute of Certified Public Accountants [AICPA] 2006). The materiality aspect is quantitative in nature and signifies the threshold regarding whether any item, error or omission of information makes a difference to decision-makers (SAS No. 107, AICPA 2006; FASB 2008). This proposes that auditors' perceptions serve as a meaningful measure for providing estimations of the information risk of unaudited management-prepared financial reporting.

Lennox and Pittman (2011), which study the effect of shift from mandatory auditing to voluntary auditing in the UK in 2004, find that corporations that voluntarily choose to be audited received positive credit ratings and the corporations that choose not to be audited experience a reduction in their credit ratings. Since audit is mandatory in the US, it is difficult to observe the value of auditing. Therefore, management may seek to enhance their financial reporting information credibility by purchasing audit services from highly reputed auditors (Teoh and Wong 1993; Khurana and Raman 2004; Watkins, Hillison and Morecroft 2004) and increasing the level of voluntary disclosures (Lang and Lundholm 2000; Francis, Khurana and Pereira 2005), including social responsibility disclosure (Dhaliwal, Tsang and Yang 2011; Kim, Park and Wier 2012). In markets where it is challenging to observe the true quality, users tend to rely on reputation as a proxy for credibility. For example, Watkins, Hillison and Morecroft (2004) argue that perceived audit quality is influenced by two components: auditor monitoring strength and auditor reputation. However, because it is difficult to observe auditor monitoring strength and

³ The definition of information risk is consistent with the definition provided by FASB (2010, p. 1).

therefore, auditors send signals about its perceived quality using their reputation (Menon and Williams 1991).

2.3 Review of Perceived Credibility Associated with Information

2.3.1 Concept of Credibility in the Information Context

Credibility is usually defined as believability (Fogg 1999; Tseng and Fogg 1999; Fogg et al. 2001; Erdem, Swait and Louviere 2002). Thus, credible information means that the information is believable. Information credibility has been described as different, but it relates to the number of attributes of information quality, such as accuracy (Liu 2004) and reliability (Wathen and Burkell 2002). Credibility is the condition that does not necessarily represent the actual quality, but it pertains to the perceptions of information quality (e.g., Fogg 1999; Watkins, Hillison and Morecroft 2004).

Information credibility has been researched across a wide range of disciplines, including library and information science, webpage information, media communication, medical sciences, marketing and accounting (Liu 2004). For example, research into information credibility on websites indicates that credibility is perceived information quality, which relates to overall perceptions of the presentation of the content, perceived source reputation, users' experiences, risk preferences and trustworthiness of the information system (Fogg 1999; Tseng and Fogg 1999; McKnight and Kacmar 2007). In media communication research, credibility is evaluated through message credibility, source credibility and perceived bias (Pornpitakpan 2004).

Credibility research in marketing indicates that message accuracy, prior experience, brand (or source) credibility and third-party qualifications or endorsements are important in influencing customers' choices (Liu 2004). Research in medical science shows that prior belief serves as the biggest challenge in the communication of new information, but interactions with source credibility increase the acceptance of new information (Chang et al. 2012). In accounting research, information credibility is measured as relative to the presence of risk that affects information quality. Information credibility in the financial context broadly includes varying risk factors related to firm-specific information, internal and external assurance services, corporate governance systems and source credibility

(Beaulieu 1994, 2001; Khurana and Raman 2004; Mercer 2004; Kim, Park and Wier 2012).

Most empirical accounting research conceptualises financial reporting credibility in relation to the perspective of information risk, in which there is a risk that the representation of financial reporting information may be incomplete, incorrect and biased. This in turn may affect the quality of the decision-making (Francis et al. 2005). The breadth of the financial reporting credibility concept is therefore consistent with the varying risk factors that affect the quality of the financial reporting information (Francis, Maydew and Sparks 1999). Although diverse, existing financial reporting credibility research often captures information effects that embrace the varying degrees of financial reporting information reliability or quality (Dhaliwal, Tsang and Yang 2011; Kim, Park and Wier 2012).

2.3.2 Information Credibility and Source Risk

The literature reviewed in the previous section indicates that information credibility is assessed differently in different settings, but one factor that appears across all settings is source credibility. Literature from wide-ranging disciplines, including social science, psychological science, web communication, media communication, marketing and accounting, provide substantial evidence of source credibility effects in facilitating voluntary acceptance of decisions, attitude changes and behavioural compliance (Suzuki 1978; Birnbaum and Stegner 1979; Bamber 1983; Albright and Levy 1995; Beaulieu 2001; McKnight and Kacmar 2007). For example, in psychology, Suzuki (1978) finds that perceived higher source credibility is significantly persuasive in affecting one's judgement on whether to accept or reject information. Similarly, Albright and Levy (1995) find that feedback from higher source credibility receives more favourable evaluations in decision-making.

In the context of financial information research, the findings provide insights into the effects of source credibility in reducing the judgement of information risk. Beaulieu (1994) examines source credibility effects on loan application assessment and finds that perceived higher source credibility increases the likelihood of loan application approval. Beaulieu (1994) uses the differences in loan applicants' character to send positive or negative signals on source credibility. Bamber (1983) investigates the effects of source

credibility among audit members and finds that auditors' perceptions of information credibility are sensitively linked to source credibility. Bamber (1983) finds that even a minor difference in source credibility tends to influence judgement on information reliability. In another study, Beaulieu (2001) examines the effects of source credibility in increasing the reliability of management assertions of financial reporting information. Beaulieu (2001) finds that lower perceived source credibility of management tends to increase auditors' assessments of misstatement risks, as reflected in audit fees. Beaulieu (2001) suggests that poor management credibility affects auditors' perceptions on the extent of 'fair and full disclosure' of the financial reporting information.

2.3.2.1 Source Credibility Theory and Social Trust

The notion of source credibility was raised by Aristotle, who suggested that 'ethos', or a person's character, along with 'logos' (logic) and 'pathos' (emotion) influence the persuasiveness of a speaker's rhetoric (Aristotle 1954). Source credibility was reintroduced in modern literature by Hovland et al. (1953) as having two dimensions: 'expertness' and 'trustworthiness'. Subsequent research suggests that source credibility dimensions might incorporate other factors, such as likeability, authority and goodwill (e.g., McCroskey and Teven 1999), but the prevailing view is that source credibility can be assessed consistent with Hovland et al. (1953), using expertise or competency and trustworthiness (Pornpitakpan 2004).

Hovland et al. (1953, p. 21) define expertise as 'the extent to which a communicator is perceived to be a source of valid assertion'. The expertise dimension can be assessed from factors that infer the extent of the source's knowledge, skill, competency, education, training and experience (Birnbaum and Stegner 1979; Tseng and Fogg 1999). The second component of source credibility—trustworthiness—refers to 'the degree of confidence in the communicator's intent to communicate the assertions what considers as most valid' (Hovland, Janis and Kelley 1953).

While most research on source credibility indicates that both the expertise and trustworthiness dimensions are persuasive, McGinnies and Ward (1980) find that trustworthiness may be important in enhancing credibility. McGinnies and Ward analyse the significance of the expertise and trustworthiness components using between-countries and within-countries analyses in four different countries: the US, New Zealand, Australia

and Japan. They find that source trustworthiness is relatively persuasive in influencing source credibility. Birnbaum and Stegner (1979) argue that trustworthiness affects the source's communication by reducing the expectation that the information communicated might be incorrect and therefore perceived as more believable.

Credibility research associated with sources often involves the concept of trust, which is argued to be influenced by the judgement of motives (Hovland, Janis and Kelley 1953; Broudy 1981; McCroskey and Teven 1999) and responsibility (Earle and Cvetkovich 1995). Broudy (1981) suggests that credibility relates more to motives—in particular, whether they are good or bad, not true or false. This is because bad motives are likely to lead to bad consequences (Broudy 1981). The effects of motive on trustworthiness are also emphasised by Hovland et al. (1953), who refer to it as the source's 'intention towards receiver'.⁴ Aristotle posits that:

We believe good men more fully and more readily than others: this is true generally whatever the question is, and absolutely true where exact certainty is impossible and opinions are divided.⁵

Aristotle views that a speaker's *ethos* is not only central to influencing trustworthiness, but it is also persuasive in reducing uncertainty that affecting the reliability of their statements.

Salient work, which investigates the role of source credibility in a financial context is Beaulieu (1994, 2001), which have been discussed in previous section. In summary, Beaulieu (1994, 2001) research finds that source credibility influences perceived information risk. However, Beaulieu's research deals with an environment, in which the receiver has more direct engagement with the source. This contrasts with the challenges in capital markets, where investors process multiple information cues from various sources and have no direct connection with most sources. Thus, the persuasiveness of source credibility is less established.

⁴ Hovland, Janis and Kelley (1953) subsume the source's intention towards the receiver under the dimension of trustworthiness.

⁵ Aristotle (1954). *Rhetoric*. Trans. W. Rhys Roberts, p. 8.

2.3.2.2 Social Trust

The role of social trust in facilitating decision-making has been widely discussed in literature relating to transaction cost economics, management, psychological science and sociology (Bradach and Eccles 1989; Bromiley and Cummings 1989; Kramer and Tyler 1996; Fombrun, Gardberg and Barnett 2000). Distrust is pervasive in business relation due to separation roles in a corporation. Thus, trust serves as an important element in making organisations functional and durable in dealing with challenges (Burt and Knez 1996). Research shows that trust is correlated with other important variables—for instance, a ‘manager’s beliefs and philosophies’ (Creed et al. 1996) and cooperative behaviours within the organisation’s networks (Zucker et al. in Kramer and Tyler 1996).

Trust, which is interchangeably referred to as social trust because it is essentially a socially contextualised decision (Kramer and Tyler 1996), is defined as the expectation that one’s interests will not be taken advantage of by others (Earle and Cvetkovich 1995; Kramer and Tyler 1996). Earle and Cvetkovich (1995) argue that this definition tends to link social trust to judgement of responsibility. Findings from moral development studies show that trust can be conceptualised as ‘orientation towards society and towards others’ (Staub 1978; Rushton 1980 as cited in Kramer and Tyler 1996).

Social trust is generally influenced by two societal variables: perceived similar characteristics and reciprocal experience (Creed et al. 1996; Good 2000). Trust by perceived similar characteristics or incentives is induced by the identification of sharing a similar social group (Brewer and Kramer 1985). Brewer and Kramer (1985) examine the effect of social group identification on trust judgement and find that an individual’s willingness to trust others depends on perceived shared values. For example, graduates of the same university may seem to share similar work standards, which may suggest that they share similar social values and ethical perspectives. In addition to social similarity, reciprocity is argued to be central to developing trust (Creed et al. 1996). Reciprocity is history-based trust that requires iterative process. Under reciprocal-incentives-based trust, cooperation is motivated by the perception of mutual benefits and can be accelerated with the knowledge of shared purpose (Kramer and Tyler 1996).

In exploring trust in professional relationships, Lewicki and Bunker (1996) identify three forms of trust: (1) calculus-based trust, (2) knowledge-based trust and (3) identification-

based trust. Under calculus-based trust, trust is sustained by behavioural consistency, which is motivated by the benefits derived from consistency or costly consequences for being inconsistent. Knowledge-based trust is based on behaviour predictability and develops using prior information to predict the outcome of an interaction. Thus, knowledge-based trust relies on constant communication with others to obtain accuracy in predictions. Identification-based trust is determined through the identification of 'desires' and 'intentions'. In this form of trust, mutual interests or understanding lead to more effective interactions (Sheppard and Tuchinsky 1996).

Corporate citizenship tends to affect all these three forms of trust. Firms face threats from all of their stakeholders, including misunderstood customers, rogue employees, unhappy investors and defective partners, as well as penalties from regulators relating to compliance (Fombrun, Gardberg and Barnett 2000). Legitimacy theory suggests that firms develop incentives to assume their social responsibilities beyond the scope of interest of financial stakeholders to reduce threats to their licence to operate (Tilling 2004). Corporate citizenship can affect calculus-based trust by delivering consistency in employees' and firms' values. Since this information can be observed by outsiders, corporate citizenship programs serve as an avenue for firms to share this information. Corporate citizenship community programs provide an opportunity for outsiders to observe these values and make more accurate predictions about a corporation's working culture and ethics. Many citizenship programs are designed to deliver corporate philanthropy, which tends to reduce the less self-serving image of the corporation and builds goodwill among stakeholders and society.

2.3.3 Concept of Corporate Citizenship

Corporate citizenship refers to businesses recognising their wider roles in society, from which they seek a licence to operate (Carroll 1998; Marsden and Andriof 1998; Andriof and McIntosh 2001; Stebbins 2001). In this sense, corporate citizenship assumes the socio-political sense of human citizenship (Valor 2005). Whereby, corporations are viewed as active members of society (Drucker 1993). They are expected to meet social expectations on norms of behaviour, which implies among other things, that they have to be participative, responsible, philanthropic, morally conscious and fair (Carroll 1998; Birch 2001; Waddock 2001). Thus, good corporate citizenship requires managers to be

‘understanding and managing a company’s wider influences on society for the benefit of the company and society as a whole’ (Marsden and Andriof 1998).

Corporate citizenship encapsulates corporate social responsibility (Carroll 1998). The concept of socially responsible businesses has been widely discussed in two strands of separate, but complementary, literature: (1) corporate social responsibility and (2) corporate citizenship (Carroll 1979, 1991, 1998; Fombrun, Gardberg and Barnett 2000; Andriof and Marsden 2000; Matten, Crane and Chapple 2003; Valor 2005). Both concepts emerged as early as the 1950s (Carroll 1979, 1999; Gossett 1957). While there is a long-standing debate about the extent of any differences between these two concepts, Valor (2005) shows that corporate social responsibility and corporate citizenship have more similarities than differences.

Corporate citizenship and corporate social responsibility have both been criticised for their lack of clarity in definition, limited perspectives, broad perspectives, and lack of theoretical origin (Valor 2005). One factor that adds to the confusion regarding corporate social responsibility and corporate citizenship is the lack of consensus regarding the definition of both concepts. For instance, Dahlsrud (2008) shows that corporate social responsibility was defined in 37 ways from 1980 to 2003. Similarly, Matten, Crane and Chapple (2003) explain that corporate citizenship has been defined from at least three perspectives: (1) the communitarian context (Carroll 1991), (2) synonymous with corporate social responsibility (Carroll 1998; Maignan, Ferrell and Hult 1999) and (3) citizenship rights protector (Logsdon and Wood 2002).

Despite the differences in definitions, both corporate citizenship and corporate social responsibility share similar frameworks of social responsibilities (Carroll 1979, 1991, 1998). This leads to perceptions that these two concepts are synonymous. Carroll (1979) outlines four dimensions of responsibility for corporate social responsibility: economic, legal, ethical and philanthropic. The economic responsibility refers to the importance for a corporation to be committed to being profitable. The legal responsibility refers to the importance for a corporation to perform business within the expectations of laws and regulations. The ethical responsibility suggests the importance for a corporation to behave in a manner that consistent with of social and ethical norms. Lastly, the philanthropic responsibility, which refers to the importance of meeting the charitable expectations of society.

The corporate social responsibility framework in Carroll 1979; (1991) emphasises ethical and philanthropic responsibilities as the dimensions that reflect good corporate citizenship because they are discretionary and corporations are expected to first prioritise their economic interest. Subsequently, Carroll (1998) presents a framework for corporate citizenship, in which they mirrored the dimensions of corporate social responsibility. The only difference between these successive frameworks is that, while ethical and philanthropic responsibilities were described by Carroll (1979) as ‘expected’ or ‘desired’ for corporate social responsibility, they are portrayed as fundamental to corporate citizenship (Carroll 1991).

Carroll (1998) argues that ethical responsibility for corporate citizenship is concerned with corporate understanding on the distinction of good versus bad and fair versus unfair practices. The virtue of ethics manifested in a corporation’s decisions, policies and practices, reflects the virtue of a corporation’s character (Carroll 1998). The philanthropic responsibility for corporate citizenship refers to a corporation understanding to accept voluntary responsibility to society, that managing impacts on the lives of its employees and the society, which it seeks to operate (Carroll 1998; Andriof and Marsden 2000). Through corporate citizenship, a corporation is often expected to invest some amount of money to satisfy the obligation for good citizenship (Stebbins 2001), which can be constraining under corporate social responsibility since they are expected to prioritise the responsibility to make profits. Chen, Patten and Roberts (2008) examine this dilemma by examining the relation between social dimensions in corporate social responsibility and they find evidence that suggest corporate contributions is more of a tool of social legitimisation rather than area of corporate social responsibility. Chen and others do not find that corporate contributions have any significant relations with other social areas in corporate social responsibility.

2.3.3.1 Corporate Citizenship and Social Trust

The broad conceptualization of voluntary responsibility of corporate citizenship leads to it can be presented and measured in number of ways. Corporations can communicate their voluntary responsibility acceptance by increasing the benefits of all its stakeholders: (1) internal communities: employees and financial stakeholders and (2) external communities: suppliers, regulators or other government agencies and societies. Good corporate citizenship for the internal communities could be measured by several ways

including, but not limited to whether or not they have opportunity to participate in decision makings, rights to a fairer share of income and representation for example, fairer gender equality ratio, fair representation of women on board of committee and lower gender pay gap (Birch 2001; Herring 2009; Berglund and Kang 2013). This study however, focusses specifically on corporate acceptance of voluntary responsibility that increase the benefits of the society, in which the group of stakeholders that often badly affected by poor corporate decisions and domestic policies, but increasing important to guarantee its social legitimacy. Subsequently, this study has selected three corporate contribution attributes: tax fairness, wage unfairness and corporate philanthropy, as measures for corporate citizenship. This study argues that these three measures provide good estimates for measuring the continuum of corporate citizenship behaviour to the society because they have the breadth to capture the quality in corporate acceptance of voluntary responsibility for being discretionary in nature and communicate clear signal of corporations' efforts to positively empower the society's economically (Drucker 1993; Carroll 1991; 1998; Maignan, Ferrell and Hult 1999; Andriof and Marsden 2000; Birch 2001; Stebbins 2001).

2.3.3.1.1 Tax Fairness

Tax fairness reflects citizenship because it presents more of an ethical challenge than a legal challenge. The ethical dilemma in the area of corporate tax is that, while corporations are expected to fulfil their tax responsibility to the State, they are also expected to maximise the corporation's earnings after-tax for the benefits of financial stakeholders'. These conflicting provisions of responsibility create a legal loophole that managers opportunistically use to achieve competitive tax rates to reduce the corporation's tax burden. However, prior research has shown that the corporations tend to plan their tax planning aggressively to the extent that it is somewhat perceived as avoiding from fulfilling their tax responsibility.

Tax avoidance is a matter of concern to financial stakeholders, tax authorities and the public (Huseynov and Klamm 2012). Financial stakeholders are concerned about the management's responsibility to increase their after-tax earnings. Tax authorities are concerned about management abusing their tax responsibilities. Public stakeholders are probably the most affected group because corporate tax avoiders receive benefits from the public's tax contributions. Over the past two decades, US total income taxes have

more than doubled to US\$3.29 trillion in 2015 (Tax Policy Centre 2017). Despite the steady growth shown in US income tax revenues, corporate income taxes only represent around 10 per cent of total income taxes annually.

Evidence from recent research indicates that there has been a significant downward trend in corporate ETRs in the past 25 years (Dyreng et al. 2017). Dyreng et al. (2017) report that the cumulative decline in corporate tax rates is in the range of 5–10 percentage points, of which 10 percentage points is equal to US\$109 billion less than the level of taxes paid in 1988. In another report, the Inland Revenue Service finds that in 2012, 70 per cent of active US firms paid zero taxes, and 20 per cent of profitable firms report zero tax liability (Mathur 2016).

The public's growing awareness that firms are taking advantage of the public's services at the expense of their hard-earned wages is fuelling public distrust in firms, as well as the fairness of the entire tax system. For example, Starbucks in the United Kingdom (UK) faced a strong public backlash soon after it was reported by the media for allegedly avoiding taxes. The media reported that Starbucks in the UK had paid zero taxes for five consecutive years despite reporting £400 million sales in 2011 (Barford and Holt 2013). The UK public responded by organising a massive boycott of Starbucks' products, which led to the firm's agreement to pay £20 million in income taxes over the next two years (Barford and Holt 2013).

The problem with tax aggression from the approach of effective tax planning or any form of tax avoidance is that it undermines social trust in the legitimacy of the tax system (Konza 2014). The fundamental ethics hold that voluntary tax-paying behaviour relies on the belief that all taxable individuals in the state, including corporate legal entities, are paying their fair share of tax (Konza 2014). Therefore, tax avoidance and tax fairness reflect an ethical problem. Given the severity of injuries and the wide-scale effects of tax avoidance, good corporate citizens do not engage in such harmful activities. Thus, tax fairness is used as a measure of corporate citizenship.

2.3.3.1.2 Wage Unfairness

Wage unfairness is selected as a measure of corporate citizenship because wage fairness reflects ethical and voluntary responsibilities. Wage fairness has direct implications for employees' purchasing power parity. The higher the wage fairness, the greater the

increase in employees' living standards, their family's wellbeing, and subsequently, society as a whole. However, wage fairness is also open to interpretation by firms because it is not legally binding as long as it fulfils nominal standard regulations, such as the minimum wage, overtime payments and provision of paid leave. As a result, positive performance in wage fairness signals firms' ethical and voluntary initiatives in addressing the particular interests of their employees' stakeholders, and it indirectly affects the interests of public and financial stakeholders.

Wage is affected by quality and quantity in employees' production (Harris 2000). The wage efficiency theory suggests that, to attract better talents and skills, firms must offer a competitive wage above the market average (Akerlof 1984). This leads to differences in wage structure within a firm to reflect the differences in employees' efforts and performance levels. The hierarchical model of wage distribution suggests that the greater the wage dispersion, the more positive the effects on productivity, by increasing employees' incentives to perform who wishes to influence increase in their future wages (e.g., Heyman 2005). However, prior research argues that this model fails to consider the 'glass ceiling' and other barriers that limit employees' career advancement (Grund and Westergaard-Nielsen 2008). Most importantly, research also finds evidence that wider wage dispersion creates adverse reactions (Akerlof and Yellen 1990; Pfeffer and Langton 1993; Grund and Westergaard-Nielsen 2008).

The fair wage–effort hypothesis explains that the perception of wage fairness is important in motivating a sufficient amount of employees' efforts (Akerlof and Yellen 1990). Thus, perceived wage unfairness is likely to lead to reduced cooperation from employees (Pfeffer and Langton 1993). Prior research indicates that wider wage dispersion tends to have negative effects on employees' satisfaction (Akerlof and Yellen 1990; Pfeffer and Langton 1993), productivity (Levine 1991; Pfeffer and Langton 1993) and subsequently performance (Grund and Westergaard-Nielsen 2008). However, based on an extensive review of wage differences, Gupta, Conroy and Delery (2012) conclude that horizontal rather than vertical wage dispersion tends to have more severe effects on employees' performance. However, Bebchuk and Fried (2003) argue that extreme wage dispersion could lead to the public withdrawing its support.

In recent years, the escalating growth of CEOs' pay has raised significant concerns among investors, employees (Bebchuk and Fried 2003; Bebchuk and Grinstein 2005) and

customers (Mohan, Norton and Deshpande 2015). In statistics provided by The American Federation of Labour and Congress of Industrial Organizations (AFL-CIO) (2014), the ratio of US CEOs' pay to that of average employees was 48 times higher in 1983, 195 times higher in 1993, 301 times higher in 2003 and 331 times higher in 2013. Bebchuk and Grinstein (2005) state that this trend is alarming because they find no evidence to suggest that it is correlated to firm size, performance or industry factors. Bebchuk and Fried (2003, 2004) relate this extreme growth to an agency problem, which signifies greater 'managerial power influence'.

In particular, wage dispersion has implications for the interests of financial stakeholders because prior research finds no evidence to suggest that high CEO pay provides proportional returns on investments (Bebchuk and Fried 2003; Bebchuk, Cremers and Peyer 2011). Using the CEO pay slice, measured by the proportional differences of CEOs' pay to the other top five executives in the same firm, Bebchuk, Cremers and Peyer (2011) find that the CEO pay slice has a negative relation with firm value (proxied by Tobin's q). Investors may also develop incentives to withdraw their support from managers when it is perceived to influence customers' choices (Mohan, Norton and Deshpande 2015) and public criticism (Bebchuk and Fried 2003). Mohan, Norton and Deshpande (2015) find that firms with a high CEO pay ratio reduce their purchase intention relative to firms with a low CEO pay ratio. Bebchuk and Fried (2003) argue that CEOs' expropriation can only be curbed by the public's power, which they refer to as 'outrage cost'.

While public stakeholders serve more as an outside audience to the wage turmoil inside a firm, there is a reason to expect that wage dispersion may affect neighbourhood social structure and culture, and thus social trust. It is highly likely for firms to recruit talents and skills from the market in which it operates—especially relatively lower-skilled employees, or average employees. Thus, employees' interest reflects that of society. Prior research finds that the increasing wage dispersion is correlated with several social problems, such as poverty (Birdsall and Londoño 1997), mortality (Wilkinson 1990; Lynch et al. 2000) and crime rates (Blau and Blau 1982). This suggests that public stakeholders have reasons to resent the increasing wage dispersion because the negative social side effects have a 'spillover' effect on society. Thus, wider wage dispersion is expected to influence perceptions of wage unfairness, or vice versa. Given the extent to which wage unfairness negatively affects various stakeholders (employees, stockholders

and the public), it is expected that good citizenship firms will play an active role in promoting the fair distribution of employees' wages.

2.3.3.1.3 Philanthropy

Philanthropy can be described as a voluntary expression of commitment to the welfare of others or society (Schuyt 2004). The FASB (1993) defines corporate philanthropy as the 'unconditional transfer of cash or other assets to an entity or a settlement or cancellation of its liabilities in a voluntary nonreciprocal transfer by entity acting other than as an owner'. The act of philanthropy is perceived as a desire to contribute to the benefits of the consumption of others in society (Carroll 1998). This has a voluntary element that is deeply engrained in citizenship theory (Marshall 1950; Turner 1993). Consequently, corporate philanthropy is commonly linked to the theme of corporate citizenship (Carroll 1998).

The traditional view of corporate philanthropy is that firms have ethical incentives to 'give back' because they are good corporate citizens (Carroll 1998). Corporate philanthropy is shown to be correlated with managerial values (Finkelstein and Hambrick 1996) and firm size (Adams and Hardwick 1998; Boatsman and Gupta 1996). Managers exert their strongest individual characteristics in the area, which requires discretion (Finkelstein and Hambrick 1996). Thus, an ethical foundation in corporate citizenship is likely to signal the ethical values of the manager. However, Milton Friedman (cited in Porter and Kramer 2002) indirectly suggests that corporate philanthropy can also be viewed as unethical because it limits the rights of financial shareholders to determine how to spend their wealth.

The underlying theory of corporate philanthropy is that it generates goodwill from its recipients (Fombrun 1996; Fombrun, Gardberg and Barnett 2000). Based on this, corporations are expected to develop incentives to 'give back', and foster good relations that in exchange the corporations acquire their social legitimacy. However, the current views in relation to modern corporate philanthropy is that it serves more as marketing instrument (Porter and Kramer 2002; Godfrey 2005) or reputation enabler (Fombrun 1996; Fombrun, Gardberg and Barnett 2000). As a result, corporate philanthropy is used to strategically position the corporations in the society and investors can equally extract the benefits of goodwill from corporate philanthropy. However, this also provides

incentives for firms to counter the effects of a bad reputation associated with the nature of business. Porter and Kramer (2002) reveal that corporations that engaged in controversial activities (e.g., Philip Morris, the Tobacco giant) devoted as much as US\$75 million to corporate giving in 1999. This sends a mixed signal to the wider stakeholders (Porter and Kramer 2002).

Furthermore, it is unclear whether corporate philanthropy is strategically effective to promote goodwill or revenues. Prior research finds mixed evidence to suggest the superiority of corporate philanthropy to increase corporate financial performance (Seifert 2003; Brammer and Millington 2008). Prior research also argued that the managers may use financial stakeholders' wealth at their own discretion to develop a reputation for themselves (Haley 1991). However, this does not necessarily send a misguided signal about the manager's ethical values, because the psychological science research finds evidence to indicate that ethical initiatives tend to be self-governing (Staub 1979; Rushton 1980, as cited in Kramer and Tyler 1996). While managers may initiate corporate philanthropy with incentives other than ethical reasons, research shows that it can gradually disassociate them from seeking self-interests. For these reasons, this study expects corporate philanthropy to send a signal of good citizenship.

2.4 Review of Auditors' Perceptions of Information Credibility

2.4.1 Audit Risk Factors

In SAS No. 107, AICPA (2006) describes audit programs as a two-linked process developed from audit risk assessments and audit evidential planning. The auditing standards state that auditors should first assess the risk of material misstatements of financial reporting and take into accounts of earlier findings when designing audit evidential planning (AICPA 2006; IFAC 2009). The extent to which auditors' efforts are modified upward—for example, by increasing substantive audit testing—should provide information about the extent of risk of material misstatements identified in the financial reporting.

The relationship between auditors' efforts and the risk of material misstatements is explained by the audit risk model (ARM). Audit risk is concerned with reducing the probability of audit failure by identifying the material misstatements (SAS No. 107,

AICPA 2006). The ARM indicates that audit is a function of the inverse relationship between two risk components: (1) risk of material misstatements and (2) detection risk ($AR = RMM \times DR$). The second component—detection risk—reflects auditors' monitoring competency in detecting the first risk component (the risk of material misstatements). The higher the risk of material misstatements identified in management assertions of financial reporting, the greater the auditors' efforts to reduce the detection risk. The ARM allows for the auditors' perceived risk of material misstatements associated with the unaudited financial reporting to be estimated using audit fees, consistent with the expectation that auditors' efforts should be manifested in audit cost production or audit fees.

2.4.2 Audit Fees and Risk of Reporting Misstatements

Prior literature on audit fees finds that auditors' pricing of audit fees reflects either the risk of material misstatements or business risk, or both (Hay, Knechel and Wong 2006; DeFond and Zhang 2014). The risk of material misstatements reflects the risk that the management assertions of financial reporting information will have a material error (SAS No. 107, AICPA 2006). The business risk is broader, but consists of the risk of material misstatements (SAS No. 109, AICPA 2006). Business risk refers to firms' related risks in relation to its nature of business, including its objectives, strategies, industry context, regulations and other internal and external factors (SAS No. 109, AICPA 2006). Audit research often measures firms' related business risk using the likelihood of litigation risk as a proxy (e.g., Khurana and Raman 2004).

The risk of material misstatements is a function of two types of risk: inherent risk and control risk.⁶ Inherent risk entails the nature of transaction, which evaluate the risk of business environment and management-related credibility. Inherent risk involves assessment accounts that are more likely to be misstatements or susceptible to fraud—for instance, accounts that involve complex transactions, estimations and judgements. The

⁶ The SAS No. 107 Section 312 (AICPA 2006), 'Audit Risk and Materiality in Conducting an Audit', defines inherent risk as the risk of:

a relevant assertion to misstatements that could be material, either individually or when aggregated with other misstatements, assuming that there are no related controls'. The control risk is defined as 'the risk that a misstatement that could occur in a relevant assertion and that could be material, either individually or when aggregated with other misstatements, will not be prevented or detected on a timely basis by the entity's internal control.

complexity and estimation nature of accounts often increase the misstatement risk because of a high degree of information asymmetry. Further, auditors are required to assess the nature and cause of probable misstatements, such as compliance level through omission of information, inaccurate information, incorrect estimation method resulting from misinterpretation and management's judgements that affect these accounts' estimations.

Early audit research finds limited evidence to suggest that audit fees reflect inherent risk assessment (O'Keefe, Simunic and Stein 1994; Mock and Wright 1999). Mock and Wright (1999) investigate audit tests on account receivable accounts from actual audit engagement and find no evidence to support the relationship between clients' inherent risk factors and audit fees. In another study, O'Keefe, Simunic and Stein (1994) find that both audit hours and labour mix are associated with clients' size, complexity, leverage and inherent risk factors. However, there is no evidence of an association between audit fees and inherent risk. These results are consistent with the SEC reports, which identify that more than 50 per cent of GAAP violations are related to account receivables overstatements, and another 24 per cent are from an inventory overstatement (Feroz, Park and Pastena 1991). One reason for this conflicting result may be the small sample size used by experimental research compared with empirical research.

Similar to findings in early inherent risk assessment studies, early research on control risk assessments find no evidence that audit fees incorporate control risk factors (O'Keefe, Simunic and Stein 1994). However, subsequent studies that examine data after the passing of the *Sarbanes–Oxley Act* (SOX) in 2002 find evidence that audit fees seem to reflect control risk information (Raghunandan and Rama 2006; Hogan and Wilkins 2008). Hogan and Wilkins (2008) compare audit fees data between 2003 and 2004 and find a 35 per cent increase in audit fees after the enforcement of Section 302 of SOX, which requires firms to disclose their internal control weaknesses. Using similar comparative analysis, Raghunandan and Rama (2006) study the effect of Section 404 SOX on audit fees between 2004 and 2005 and find that audit fees in the manufacturing sectors increased by 43 per cent on average. However, these findings are expected because Section 404 SOX has direct implications for auditors' efforts in that it requires auditors to validate firms' quarterly and annual internal control reports. Therefore, Hogan and

Wilkins's (2008) finding provides higher validity of control risk information implications for audit fees.

Hoitash, Hoitash and Bedard (2008) examine audit fees differentiation after considering both SOX 302 and 404 events, and they find that firms with internal weakness disclosure continue to pay higher audit fees in subsequent years, even though there is no problem being disclosed in Section 404. This suggests that auditors may price for risk on the likelihood of business risk from the disclosure of internal control weaknesses. Business risk is not a direct component of audit risk, but a residual to the probability of audit failure in detecting the risk of material misstatements in financial reporting (Brumfield, Elliott and Jacobson 1983). Findings from several studies show that auditors price for firm-related risks when they believe that those factors could impair their professional practice (Johnstone 2000). Empirical evidence from prior literature also shows that business risk assessments tend to increase in line with a litigious environment (Seetharaman, Gul and Lynn 2002), public ownership (Badertscher et al. 2013) and audit firms' size (Dye 1993; Khurana and Raman 2004).

In recent years, audit fees research has provided more evidence in relation to the effects of firms' related risk or business risk on auditor pricing. Firms' business risk often includes the risk of material misstatements because business risk naturally leads to financial consequences, and this is reflected in financial statements (SAS No. 109, AICPA 2006). DeFond and Zhang (2014) review a wide range of prior audit fees literature and find that auditors are more likely to adjust firms' business risk into audit fees in an attempt to reduce auditors' expected losses (or residual risk).⁷ Badertscher et al. (2013) examine litigation risk factors on audit fees and find that public firms incur 17 per cent higher audit fees than private firms when the legal regime is held constant. Seetharaman, Gul and Lynn (2002) find that UK auditors charged higher fees to US clients because of higher perceived business risk in relation to the US litigious environment. Similarly, Dhaliwal et al. (2017) find that auditors in China are more likely to issue a modified audit opinion prior to audit reports when the clients received negative media coverage in a period of high litigation risk (2006–2009). However, Johnstone (2001) finds that auditors

⁷ Auditors' residual risk refers to the risk of reputation or economic loss resulting from auditors' close associations with financial reporting (SAS No. 107, AICPA 2006).

prefer to avoid rather than engage clients with high business risk (e.g., financial and litigation risk).

The risk of material misstatements and business risk gives rise to a unique risk—namely, auditor residual risk (SAS No. 107, AICPA 2006). Brumfield, Elliott and Jacobson (1983) refer to auditor residual risk as auditor business risk, in which the risk is that an auditor's professional reputation is likely to suffer damage from litigation risk, reputation risk, sanctions from regulatory bodies and economic loss associated with the audit engagement (Brumfield, Elliott and Jacobson 1983). Prior research that examines the effects of audit failure in detecting the risk of material misstatements finds that the lack of credibility of financial reporting has a 'spillover' effect to the overall perceived credibility of auditors' reputation to produce a quality audit (Chaney and Philipich 2002, Krishnamurthy, Zhou and Zhou 2002; Don, Billingsley and Schneller 2009).

Chaney and Philipich (2002) examine the 'spillover' effects of Enron's audit failure on Arthur Andersen's other clients and find that their stock prices were negatively affected subsequent to Enron's scandal disclosure. Krishnamurthy, Zhou and Zhou (2002) investigate market reactions to impaired perceptions of auditor credibility using Enron's unique event and find that firms that dismissed Arthur Andersen earlier were able to maintain positive abnormal returns. It is difficult to determine auditors' residual risk effect on audit fees, but it is expected to increase with the increasing risk of misstatements and the firm's business risk because auditors have incentives to manage the audit residual risk.

Recently, audit research has begun to explore the relation between the credibility of management and firms as sources of financial reporting information with auditors' perceived information risk, or perceived information credibility (Beaulieu 1994, 2001; Kim, Park and Wier 2012). Using an experiment approach, Beaulieu (2001) examines the effect of differences in 'management integrity' on auditors' risk judgements and finds that auditors tend to increase their risk assessments or efforts when they perceive that the source credibility is lower. Beaulieu (2001) argues that low management integrity influences auditors' inherent risk assessment of the extent of managers' willingness to make a 'fair and full disclosure'. The other line of research, which indirectly implied for source credibility effects, is from accounting research that investigates socially responsible firms (e.g., Kim, Park and Wier 2012; Koh and Tong 2012).

Empirical accounting research finds evidence that social performance reduces auditors' perceived information risk associated with financial reporting (Kim, Park and Wier 2012; Koh and Tong 2012; Berglund and Kang 2013). This effect is consistent with the effects of the source credibility role in reducing information uncertainty, as indicated by prior communication and webpage information credibility literature (Suzuki 1978; Birnbaum and Stegner 1979; McGinnies and Ward 1980; Fogg 1999; Tseng and Fogg 1999; Fogg et al. 2001; Pornpitakpan 2004). This raises a question of whether the social trust associated with socially responsible firms increases the perception of credibility of the financial reporting information.

A common approach in most accounting research is to link source credibility to management credibility (Beaulieu 1994, 2001). However, external users may not be able to observe management credibility directly; therefore, they would use the most apparent indicator for perceived good character, which is firm-wide reputation. In addition, the former always drives the latter; therefore, the credibility of management and firms can be sticky to the overall perceived credibility of the financial reporting. However, unlike external users, auditors have access to managers. This suggests that auditors' perceptions may have significant implications for the extent to which credibility management adds or reduces the credibility of firms as a source of financial reporting credibility.

2.4.3 Socially Responsible Firms and Auditors' Perceived Credibility

Considering the level of interest in the socially responsible business concept, it is expected that some will attempt to explore its information role in relation to auditors' risk assessment (auditors' efforts), and therefore auditors' pricing decisions. On average, research finds that high social responsibility performance reduces auditors' perceived information risks associated with financial reporting information (Koh and Tong 2012; Berglund and Kang 2013).

Kim, Park and Wier (2012), Koh and Tong (2012) and Berglund and Kang (2013) all rely on corporate social performance scores provided by the MSCI-KLD database. Berglund and Kang (2013) hypothesise that diversity strength increases social dissimilarity, which in turn reduces information transfer quality. Therefore, they expect that higher performance of diversity (strength) is likely to affect audit risk assessment. Berglund and Kang (2013) address the findings of Mattingly and Berman (2006), which indicate that

the diversity scores of strength and concern have a different loading mechanism than other social dimensions in the MSCI–KLD database.

Koh and Tong's (2012) approach the corporate social responsibility role from the perspective of social concern (using the concern score from MSCI–KLD). This is different to methods used by Kim, Park and Wier's (2012) and Berglund and Kang (2013). Kim, Park and Wier's (2012) use the net social score obtained by subtracting the total social concern scores from the total social strength scores. Berglund and Kang (2013) focus only on examining the total strength score.⁸ Koh and Tong (2012) argue that firms' controversial activities are likely to affect auditors' perceived information risk negatively. Koh and Tong (2012) use only four out of six social dimensions provide by the MSCI–KLD database, reason being that these social dimensions tend to produce effects that overlap each other. Koh and Tong (2012) identify firms as undertaking controversial activities if they have at least one concern out of four social categories in MSCI–KLD. Koh and Tong (2012) find that audit fees increase with firms' increasing controversial activities. Their research is different than Koh and Tong (2012) because they show the financial consequences associated with relatively poor social performance.

In other research, Huseynov and Klamm (2012) use the tax avoidance approach, which they declare is the first-time tax avoidance has been used as a measurement of corporate social responsibility. The premise of their argument on tax avoidance is similar to the argument presented in this study, except that they examine the role of corporate social responsibility in mediating the relation between tax avoidance and auditor-provided tax services. Huseynov and Klamm (2012) find that high and low corporate social performance affect the relation between tax management fees and tax avoidance. Though they find that tax fees are related to lower GAAP effective tax rate or ETR (a proxy for tax avoidance) regardless of whether firms have high or low performance. They also find that community concern, which measures (among others) the tax dispute, is likely to affect the relation between tax management fees and GAAP ETR and Cash ETR (the former is the short-term tax avoidance proxy and the latter is the long-term tax avoidance proxy).

⁸ However, Berglund and Kang (2013) use both total strength and total concern scores.

2.4.3.1 Tax Fairness and Auditors' Perceived Information Credibility

There are several reasons why tax fairness is expected to reduce auditors' perceived information risk because of the potential of good management's character signals associated with it. Income tax accounts include a high management estimation, which contributes to the complexity of the accounts (Graham, Raedy and Shackelford 2012; Dhaliwal et al. 2017). Thus, tax accounts are likely to develop high information asymmetry between management and investors and other financial reporting users (Graham, Raedy and Shackelford 2012). As consequence, the complexity with tax accounts in overall, is expected to drive auditors' efforts nonetheless. However, a firm that demonstrate positive performance in tax fairness might benefit from marginal reduction in audit cost due to perceived good management's or corporate's character associated with its tax fairness practice.

Beaulieu (2001) suggests that perceived good character of management influence auditors in the extent of management willingness to make 'fair and full disclosure'. As noted by Finkelstein and Hambrick (1996), matters that involve management discretionary provides the strongest signal about source credibility attributes. While corporate tax contribution is viewed as a legal responsibility, corporations have the flexibilities to arrange their competitive tax rates. Therefore, positive performance in tax fairness tends to provide signal that is more in line with corporate ethical awareness towards their voluntary acceptance of responsibility to increase benefits to society.

Moreover, tax plays a significant role in ameliorating the wellbeing of society, and performing poorly may subject firms to bad coverage from the media, as well as public adversity. Consequently, auditors have incentives to increase audit efforts to identify and price the risk related to the likelihood of tax avoidance or aggression in an attempt to reduce audit risk. Therefore, this study expects that tax fairness will facilitate social trust and therefore, extends to the credibility of management as a source of financial reporting credibility:

H1 (a): Tax fairness is negatively associated with auditors' perceived information risk, as reflected in audit fees.

In addition, evidence from prior research shows that managers are using income tax accounts to manage earnings (Graham, Raedy and Shackelford 2012; Dhaliwal, Gleason

and Mills (2004). In an extensive review of studies of earnings management using tax information, Graham, Raedy and Shackelford (2012) show that Bauman et al. (2001) and Frank and Rego (2006) find that managers are using tax valuation allowance accounts to meet and beat analysts' earnings forecast. In another study, Dhaliwal, Gleason and Mills (2004) find that firms are likely to use income tax accounts to lower firms' ETR at the fourth quarter, after all other pre-tax accrual earnings have been exhausted, to meet analysts' earnings forecasts. This suggests that management willingness to use tax to achieve favourable earnings outcome.

2.4.3.2 Wage Unfairness and Auditors' Perceived Information Credibility

Prior studies provide evidence that perceived wage unfairness in wage distribution (or wider wage dispersion) has negative effects on employees' performance, management expropriation (Bebchuk and Grinstein 2005) and public approval (Bebchuk and Fried 2003). Evidence from prior research shows that perceived wage unfairness is likely linked to low employee satisfaction (Akerlof and Yellen 1990; Pfeffer and Langton 1993), productivity (Levine 1991; Pfeffer and Langton 1993) and subsequently, poor firm performance. This can directly influence auditors' efforts during inherent risk assessments.

To determine the level of inherent risk, auditors must assess the extent of the quality of employees and managers in estimating the probability of material errors associated with the financial reporting information. If auditors have negative perceptions of employees' satisfaction or productivity, it could impair the perceived credibility of managers as a source of financial reporting information. This is because managers tend to rely on information provided by low-level employees. If employees' motivation is poorly affected by perceived wage unfairness, it may affect the information quality provided to the management.

In contrast, auditors' perceived credibility of the management may be directly affected by the increasing perception of wage unfairness (extreme wage dispersion). Auditors may perceive this as a signal of management's greed—particularly when they observe that the dispersion is less likely to be correlated with firms' profitability growth and performance (e.g., Bebchuk and Fried 2003; Bebchuk and Grinstein 2005; Bebchuk, Cremers and Peyer 2011). Auditors may also develop incentives to increase business risk assessments:

the higher the perceived wage unfairness, the higher the likelihood that the firm will be exposed to reputation risk. High perceived wage unfairness often triggers media coverage, which may lead to public awareness of firms' extreme wage distribution, thereby fuelling their distrust. Thus, this study expects wage unfairness to increase auditors' perceived information risk, as reflected in audit fees:

H1 (b): Wage unfairness is positively associated with auditors' perceived information risk, as reflected in audit fees.

2.4.3.3 Philanthropy and Auditors' Perceived Information Credibility

Corporate philanthropy may affect auditors' judgement of misstatement risk in two ways: (1) as a manager's ethical signal or (2) as a manager's expropriation signal. Finkelstein and Hambrick (1996) suggest that managers' strongest attributes are observable in the discretionary dimension. Given that corporate philanthropy is closely associated with ethical values, it is expected that auditors will associate increasing corporate philanthropy with increasing credibility. Therefore, it is expected that increasing corporate philanthropy performance will reduce auditors' perceived information risk, as reflected by audit fees.

However, corporate philanthropy may also send a signal of management expropriation because management should be using the financial resources effectively and responsibly (e.g. Brammer and Millington 2008). Thus, from this perspective, auditors might increase their inherent risk assessment due to management expropriation increases poor credibility perception. However, regardless of its incentives, corporate philanthropy is likely to influence wider stakeholders' perceptions. Corporate philanthropy may affect the accumulation of social trust from the goodwill of wider stakeholders. Therefore, this study expects that this will have social 'spillover' effect on auditors. As consequence, it is expected that higher corporate philanthropy performance will reduce auditors' perceived information risk and, consequently, audit fees:

H1(c): Philanthropy performance is negatively related to audit fees.

Depending where they operate, corporations—especially large ones—will seek to undertake community engagements to communicate their citizenship responsibilities. However, this study expects that, contrary to domestic-based philanthropy, foreign-based

philanthropy is likely to increase auditors' efforts. This is because foreign-based philanthropy sends multiple signals—one of which is multinational activities (Haskins and Williams 1988; Hay, Knechel and Wong 2006). Auditors might also be concerned regarding the nature of these philanthropy contributions. Contrary to domestic philanthropy, auditors might have lack of information about foreign institutions or individuals that the firms send their contributions to. Thus, this may influence auditors' perceived information risk and subsequently, inherent risk assessment. As a result, contrary to domestic-based philanthropy, this study expects higher foreign-based performance to increase auditors' perceived information risk:

H1(d): Foreign-based philanthropy performance is positively related to audit fees.

2.5 Review of Investors' Perceived Information Credibility

Financial reporting is expected to assist investors in investment and resource allocation decisions (SFAS No.8, FASB 2010). However, the extent to which financial reporting information be of useful to investors depending on their perceptions of its credibility. Prior research provide evidence that investors are sensitive to the differences of financial reporting credibility. Following are the factors identified by prior literature which shown to influence investors' perception of financial reporting information credibility.

2.5.1 Investors' Perceived Information Credibility

2.5.1.1 Management Credibility

Prior literature from communication and accounting have examined the importance of management credibility as a source of financial reporting information (Beaulieu 2001; Goodman et al. 2013). Research on management credibility is approached either from the perspective of management's performance or character. The former sends signals about managers' expertise or competency, and the latter sends signals regarding their ethics and trustworthiness. Graham, Harvey and Rajgopal (2005) conduct a survey of more than 400 managers and find that earnings information is critical to investors. The FASB (1978), in its statements of accounting concept SFAS No. 1, states that investors and other external users may use earnings performance to evaluate management performance.

Prior research finds that investors perceive that the credibility of financial reporting entails management's ability to forecast future earnings (Goodman et al. 2013). Several studies identify significant stock price changes before the public release of management earnings forecasts (Penman 1980; Waymire 1984). Goodman et al. (2013) examine the association between management forecast quality and capital investment decisions and find that management forecasting accuracy is positively associated with acquisition announcement returns and post-acquisition operating performance.

Goodman et al. (2013) argue that the higher the management forecast accuracy, the greater management's competency on reflecting inside information about the firm. Investors use analysts' earnings forecasts to determine the extent of management forecast accuracy (Hirst, Koonce and Miller. 1999). Several studies find that stock prices are highly sensitive to whether management are meeting and beating analysts' forecasts (DeFond and Park 2001; Kasznik and McNichols 2002; Bartov, Givoly and Hayn 2002). Although management credibility is one factor that affects financial reporting information, it is not the only factor (Mercer 2004).

2.5.1.1.1 Circumstantial Incentives

Credibility assessment entails the identification of motives (Broudy 1981). For example, an agency problem suggests that management has incentives to report good news; thus, reporting bad news tends to be perceived as more credible than good news (e.g., Mercer 2004). Prior empirical research provides evidence that there is a relation between bad news and analysts' large forecast revisions (Williams 1996) and stock price reactions (Cairney and Richardson 1999; Hutton, Miller and Skinner 2003). Thus, it is expected that managers will delay reporting bad news or engaging in opportunistic reporting when they are facing career concerns or backlash resulting from bad performance (Koch 2002; Kothari 2009). Kothari (2009) finds evidence that managers tend to delay releasing bad news in an attempt to reduce negative effects on stock reactions.

Koch (2002) uses analysts' earnings forecasts as a proxy for investors' beliefs to examine whether the different financial circumstances of firms affect investors' perceived credibility. He finds that managers from financially distressed firms are more likely to have incentives to issue positively upward earnings forecasts, and that investors also tend to react negatively to their positive earnings announcements. Koch (2002) argues that

investors' reactions indicate as if they perceive good earnings news from firms with poor financial performance as being less credible. Investors might think it is unlikely that poorly performing firms can produce positive earnings. This leads to users' perceptions of motivated, or biased, reporting, with management perceived as consciously 'playing the crowd', because the financial report does not fairly reflect the firm's true economic conditions.

2.5.1.2 Perceived Information Quality Signal

Ample evidence from audit research shows that investors analyse the perceived credibility of financial reporting using reputation as a signal of perceived quality (e.g., Teoh and Wong 1993; Khurana and Raman 2004). Among the most widespread research in accounting literature is the role of auditors' reputation in influencing perceived information quality (Francis, Maydew and Sparks 1999). Watkins, Hillison and Morecroft (2004) state that audit quality consists of two components: (1) auditors' monitoring strength, which influences information quality; and (2) auditors' reputation, which influences information quality. Given the difficulty of observing auditors' monitoring strength, investors compensate by using auditors' reputation, which is usually proxied by the size of the auditors' market share.

Prior research provides evidence that auditors' reputation has favourable effects on stock mispricing during the initial public offering, as well as firms' stock price valuations following the auditor switch (Titman and Trueman 1986; Balvers, McDonald and Miller 1988; Teoh and Wong 1993). For instance, Teoh and Wong (1993) find that investors show positive reactions to a firm's stock price when it switches to higher-reputation auditors.

Studies generally find that firm owners and investment bankers have incentives to engage a high-reputation auditor to reduce financial information uncertainty (Titman and Trueman 1986; Balvers, McDonald and Miller 1988). Studies on auditor switching find that market responses positively affect clients' stock prices when clients switch from a lower-reputation auditor to a higher-reputation auditor (Teoh and Wong 1993).

2.5.1.3 Socially Responsible Reputation Signal

Prior studies find mixed evidence to link social performance with firms' valuations (Wright and Ferris 1997; McWilliams and Siegel 2001; Brammer, Brooks and Pavelin 2009; Dhaliwal, Tsang and Yang 2011, 2012). For instance, Dhaliwal et al. (2012) examine the effect of releasing standalone social reporting for the first time in the US, and they find that initiator firms with superior social performance are significantly likely to benefit financially in relation to having a lower cost of equity capital, large analysts' following and lower analyst forecast errors.

In another study, which uses cross-country analysis, Dhaliwal et al. (2012) find that, on average, initiator firms tend to have lower analyst forecast errors. Specifically, they find that the relationship is significantly stronger in countries that have stronger stakeholder orientation and 'opaque' financial reporting. However, Dhaliwal et al.'s (2012) findings on US settings is not consistent with their findings in Dhaliwal et al. (2011). Dhaliwal et al. (2012) argue that it is possible that the study in 2011 has a large sample size bias in the MSCI-KLD database. Accordingly, Dhaliwal et al. (2012) argue that social reporting is likely to be more useful for large firms.

Kim, Park and Wier (2012) examine the role of corporate social responsibility in curbing firms' likelihood to manage earnings. They find that firms with superior corporate social responsibility performance are significantly likely to show lower opportunistic behaviour, proxied by discretionary accruals, real activities manipulation and GAAP violations according to AAERs. Kim, Park and Wier's (2012) findings suggest the link between corporate social responsibility and higher earnings quality. However, the results may be limited to the extent to which the net score of corporate social performance explains the firm-level social performance differences. Mattingly and Berman (2006) provide evidence that net score practice tends to offset the effect of strength and concern. They also find that firms with environmental strength also listed in environmental concerns.

Using an experimental approach, Elliott et al. (2013) find that the social responsibility reputation of firms has unintended effects in influencing investors' initial valuations about firms' fundamental value. However, they find that these effects reduce when investors conduct explicit assessments of a firm's value. Elliott et al.'s (2013) finding is consistent with Brammer, Brooks and Pavelin's (2009) study, which finds that new firms

that made the Top 100 Best Corporate Citizens ranking are likely to experience abnormal positive returns, but their mean return quickly reverts even before the next financial period. The existing firms the Top 100 Best Corporate Citizens, which only earn small abnormal returns. Brammer, Brooks and Pavelin (2009) suggest that these results indicate more of an overreaction.

2.5.1.4 Tax Fairness and Investors' Perceived Information Credibility

Until recently, management efficiency in reducing firms' tax cost structure has been viewed as a management act that is consistent with the interests of investors (Desai and Dharmapala 2009; Rego 2003). This is primarily because the tax authority's losses result in investors' gains. While tax avoidance or aggression poses a serious concern to tax authorities, as long as investors believe that the management acts out of their interest to maximise the firm's after-tax earnings, they may be less likely to be concerned by management aggression in planning the firm's ETR. As a result, this provides little support to suggest that tax fairness provides a signal of positive value.

However, in recent years, the empirical tax literature has provided increasing evidence that tax avoidance or aggression is positively associated with poor earnings quality. Prior research finds evidence that corporate tax avoidance is incremental in explaining erosion in accounting earnings quality (Mills and Newberry 2001; Desai and Dharmapala 2005; Hanlon 2005). In addition, evidence from empirical tax research indicates that investors no longer perceive poor corporate tax-paying behaviour as a good signal (Hanlon and Slemrod 2009). Hanlon and Slemrod (2009) examine investors' pricing in relation to corporate poor tax-paying behaviour and find that tax avoidance or aggression has a negative effect on investors' valuations, as reflected by lower share prices. Although tax avoidance is not illegal, concerns relate more to the level of aggression in tax planning. Desai, Foley and Hines (2007) suggest that corporate tax avoidance or aggression provides signals to investors regarding managers' aggression towards shareholders' welfare. Therefore, the more aggressive the firm towards exploiting the loopholes in tax laws, the more likely it is to affect investors' perceptions of managers' integrity and, subsequently, credibility.

Thus, contrary to tax avoidance, tax fairness is expected to provide a positive signal regarding the credibility of managers (i.e., less aggressive). As a form of corporate social

contribution, it is possible that positive performance in tax fairness will place a constraint on firms' cash flow, and investors might perceive this negatively. However, investors might have incentives to invest in positive performance relating to tax fairness because of a bad reputation associated with litigation risk or penalties from tax authorities, as well as public backlash resulting from the label of poor corporate citizen (e.g., Slemrod and Hanlon 2009). As a result, the following hypotheses examine the relation between tax fairness and firms' cost of equity capital (H2 a) and valuation (H2 b):

H2 (a): Tax fairness increases the value relevance of financial reporting information.

H3 (a): Tax fairness is negatively associated with investors' risk assessment for financial reporting information, as reflected in the cost of equity capital.

2.5.1.5 Wage Unfairness and Investors' Perceived Information Credibility

Wage unfairness can have positive or negative effects on investors' perceptions of credibility of financial reporting information. The wage efficiency theory suggests that investors may perceive wage unfairness—that is, high wage differences between the CEO and average employees—as an indicator of management's superior talents and skills. Thus, from the perspective of wage efficiency theory, investors are more likely to approve increased CEO pay.

Conversely, investors may follow the fair wages—efforts hypothesis, in which increasing wage unfairness influences their perceived information risk. However, evidence in prior research provides little evidence to suggest that investors are aware of the increasing CEO pay as a signal of information risk (e.g., Bebchuk and Grinstein 2005; Bebchuk, Cremers and Peyer 2011).⁹ There are reasons to expect that investors' perceptions of credibility may depend on the differences in spread between the CEO and average employees.

First, perceived wage unfairness affects employees' motivations and happiness level (Akerlof and Yellen 1990; Levine 1991; Pfeffer and Langton 1993). Although investors have a lower likelihood of directly interacting with firms' employees, they have the opportunity to observe employees during investors' relation events, annual general

⁹ Bebchuk and Grinstein (2005) and Bebchuk et al. (2011) provide no discussion on whether investors are aware of this increasing growth of CEO pay.

meetings and other community events organised or participated in by the firm. This subsequently allows investors to develop perceptions of the credibility of management, and therefore their representation on financial reporting information.

Second, perceived wage unfairness increases firms' reputation risk and threatens the value of the firm (e.g., Fombrun, Gardberg and Barnett 2000). Increasing wage unfairness increases the likelihood for media coverage. This increases firms' visibility and further exposes firms to public criticism. If investors have limited prior information to determine management's credibility, they may use publicly available information from the media for their credibility judgement. Thus, investors' perceived credibility of financial reporting depends on the support or trust that a firm can extract from the wider stakeholders. Based on the above argument, it is less likely for wage unfairness to produce good support from employee and public stakeholders. As a result, investors have incentives to associate good citizenship as a credible source and bad citizenship as a less credible source. Subsequently, the following hypotheses are provided:

H2(b): Wage unfairness decreases the value relevance of financial reporting information.

H3(b): Wage unfairness is positively associated with investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.

2.5.1.6 Philanthropy and Investors' Perceived Information Credibility

Prior research suggests that corporate philanthropy can send different signals. First, it can send a signal of managerial ethical values (Healey 1991). This view is more reflective to the citizenship virtue, which is fundamental to corporate philanthropy. Under the corporate citizenship context, corporate philanthropy is viewed as a means of 'giving back' to society (Carroll 1998). Second, it can send a signal of management expropriation. This is because management has access to use firms' resources at their discretion (Haley 1991). At the same time, it can send signals loaded with profit-maximising incentives (e.g., Porter and Kramer 2002). This study leans towards the first view, which is that corporate philanthropy sends a signal of ethical responsibility of citizenship. If corporate philanthropy provides different signals other than ethical responsibility, it is expected that corporate philanthropy will be positively correlated with investors' perceived information

risk (because the other two signals are likely to reduce the perception of management credibility). The hypotheses are as follows:

H2(c): Philanthropy performance increases the value relevance of financial reporting information.

H3(c): Philanthropy performance is negatively related to investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.

Corporate philanthropy may send different signals compared with good citizenship; thus, this study argues that, other than domestic-based philanthropy, other philanthropy may send a contrary signal. As a result, foreign-based philanthropy is expected to affect investors' perceived information risk differently than domestic-based philanthropy.

H2(d): Foreign-based philanthropy performance decreases the value relevance of financial reporting information.

H3(d): Foreign-based philanthropy performance is positively related to investors' risk assessment for the financial reporting information, as reflected in the cost of equity capital.

2.6 Conclusion

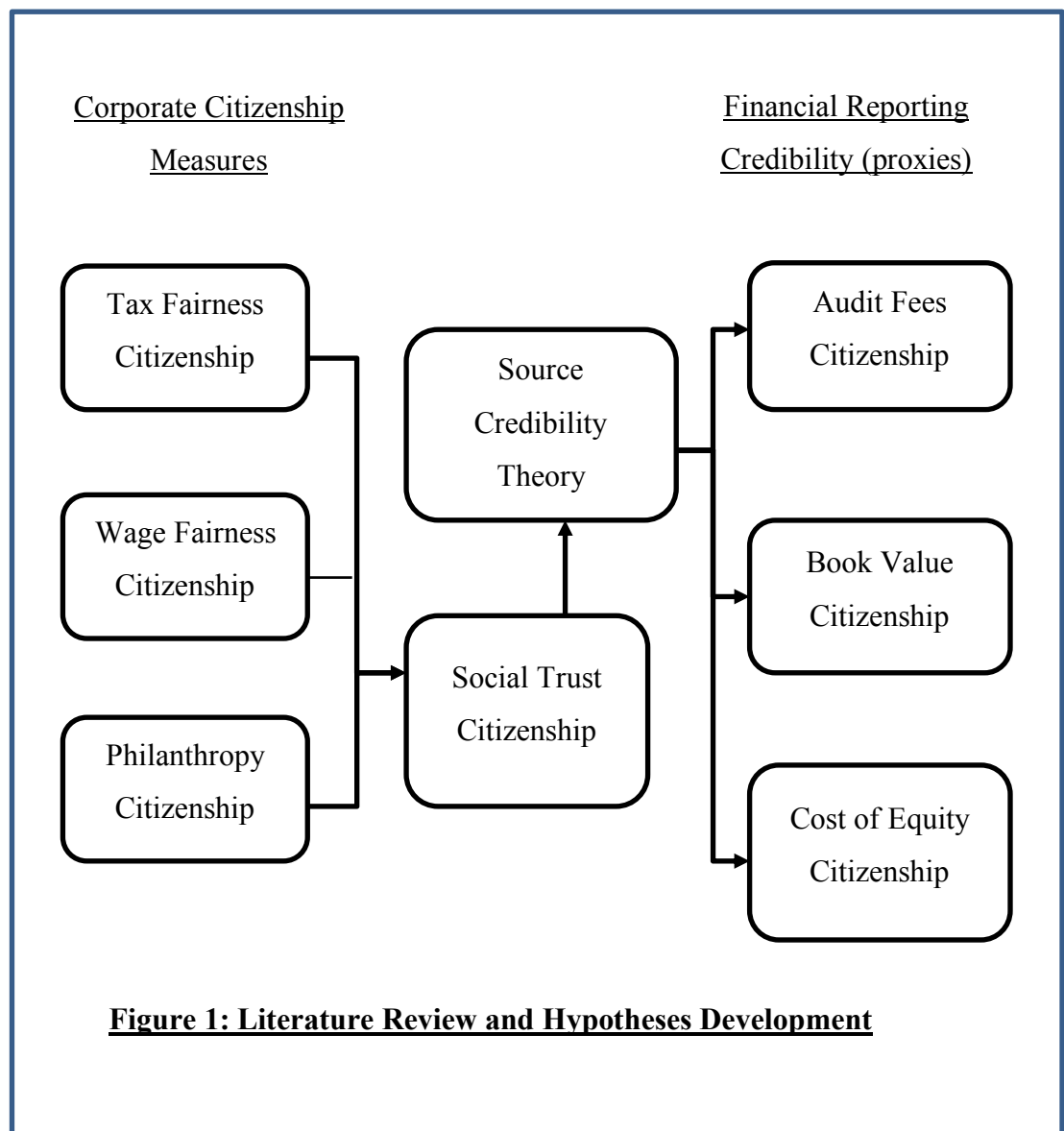
This chapter reviews the extent of literature that provides a basis to the hypothesis development of this study. Borrowing from the communication theory of source credibility, this study hypothesises that higher corporate citizenship performance can influence auditors' and investors' perceptions of the credibility of financial reporting information. Higher source credibility is shown to be effective in facilitating information credibility by reducing resistance to new information, changing prior belief and increasing the use of information (Suzuki 1978; Birnbaum and Stegner 1979; Bamber 1983; Albright and Levy 1995; Beaulieu 2001; Wathen and Burkell 2002; Pornpitakpan 2004; McKnight and Kacmar 2007).

Prior research in accounting and accounting recognises the importance of trust in influencing perceptions of financial reporting credibility (e.g. Berglund and Kang 2013) but the theory that can explain the reason for trust to influence the financial reporting

information credibility is not fully developed. In this chapter, I further develop the trust-related reasoning by articulating the link between reciprocal experiences or perceived similar social characteristics and social trust, and how this may reduce perceived risk. Social trust is one of the dimensions of trustworthiness, which, together with perceived expertise, can enhance perceived source credibility (Pornpitakpan 2004). In another line of literature, prior management research argues that increased trust is a consequence of corporations doing social good (Fombrun 1996; Fombrun, Gardberg and Barnett 2000; Kramer and Tyler 1996). In this chapter, I have used findings from both conceptual and empirical research in communications, psychological science, marketing, accounting and corporate finance to establish a consistent view how corporate social performance may signal source credibility that can extend to the auditors' and investors' perceived credibility of financial reporting information.

In response to an importance of social information role, it is becoming imperative for the corporations to communicate their social initiatives and practice effectively to the financial audience. In investigation of assurance impacts on a stand-alone social reporting information credibility, Pflugrath, Roebuck, and Simnett (2011) find that its perceived credibility of information is dependent of whether it is assured and the type of assurance provider. Thus, this increase the importance of assuring the level of confidence on a standalone social reporting to increase the effectiveness of its communication in guiding users in making financial decisions. To address this concern, Dando and Swift (2003) suggests for a third-party assurance and a standard guideline to audit the ethical, social and environment reporting. The current accounting standards are deemed too restrictive and insufficient to provide adequate assurance guidelines in relation to this type of reporting. Dando and Swift (2002) argue for the use of the new AA1000S Assurance Standard, developed by the Institute of Social and Ethical Accountability, for addressing these gaps.

The below diagram, Figure 1 provides an overview highlighting the different literatures discussed in Chapter 2, in which used to develop the hypotheses of the study. The diagram shows the relation between the literature of corporate citizenship, social trust, source credibility theory and perceived credibility of the financial reporting information (proxied by audit fees, book value relevance and cost of equity capital).



The following chapter describes the selection of measures and models to test the hypotheses developed in this chapter.

Chapter 3: Research Methods

3.1 Introduction

This chapter discusses the methods used to test the hypotheses relating to the effects of corporate citizenship performance on auditors' and investors' perceptions of financial reporting credibility (Section 3.3). The chapter is divided into two sections. The first section discusses the measures of corporate citizenship (Section 3.2), the second section describes the models used to test the hypotheses (Section 3.3.2 and Section 3.3.3) and the third section summarizes the chapter (Section 3.4).

3.2 Identifying Corporate Citizenship

Three corporate social contributions are used to measure corporate citizenship: tax fairness, wage unfairness and philanthropy. Thus, corporate citizenship performance is determined by firms' performance in relation to these three measures.

3.2.1 Measuring Tax Fairness

Firms' performance in tax fairness is measured as the inverse behaviour of tax avoidance. Tax avoidance includes any tax planning or strategies that reduce tax payments.¹⁰ Prior tax literature usually examines corporate tax behaviour from the perspective of tax avoidance or aggression rather than from the perspective of tax fairness, although it has a reverse implication for tax fairness. As a result, the measure on corporate tax fairness is approached as an inverse perspective to tax avoidance behaviour.

The usual approach for measuring corporate tax avoidance is by using the following three methods: (1) book-tax difference, (2) ETR and (3) cash ETR. The first method—the book-tax difference—refers to the differences between the pre-tax book income reported to the publicly disclosed financial reporting and the taxable income reported to the tax authority (Hanlon 2003; Plesko 2004; Desai and Dharmapala 2009). These differences

¹⁰ This study is in an agreement with the definition by Hanlon and Heitzman (2010), including by Donohoe and Knechel (2014), which argue that tax avoidance may involve certain illegal strategies such as tax haven.

mainly occur because of the differences in accounting concepts and rules, which affect the measurement and treatment of income and expenses in each reporting system.

Prior studies show that book–tax differences were large and increasing throughout the 1990s (Desai 2003; Plesko 2004; US Department of Treasury 1999). Subsequent studies argue that book–tax differences may have information content on tax avoidance related to firms that are actively engaging in tax shelter activities. The dissimilarities in accounting treatments for financial and tax reporting are likely to create two types of measurement differences: temporary and permanent (Plesko 2004). While temporary differences can be reversed using financial data from the subsequent period, permanent differences, for which adjustments only occur during tax reporting, are simply irreversible. This leads to the hypothesis that firms are actively using the means of permanent differences to lower their taxable income.

Although the book–tax difference may provide an interesting prospect to investigate the tax avoidance hypothesis, there are several inherent problems in this measure that affect its construct validity to estimate tax avoidance with high accuracy. First, tax reporting is not available to the public (Hanlon 2003; Plesko 2004; Desai and Dharmapala 2009). Therefore, the taxable income must be estimated from financial statements to operationalise the book–tax difference. This gives rise to the second problem with the book-difference method, which is estimates tax avoidance with noise. Prior studies usually infer the taxable income by grossing-up the current tax expense in income statements by the statutory tax rate (Hanlon 2003). The problem with this method is twofold. First, in most cases, current tax expense measures firms’ current tax liability for the period with noise (Hanlon 2003). Second, simply grossing-up the current tax expense to the statutory tax rate, which is likely to be 35 per cent (the highest rate), will further exacerbate the noise in the tax liability estimate—particularly for firms, which are entitled to various tax credits, such as research and development tax credits and foreign tax credits.

The large part of the dispute on the book–tax difference measure primarily relates to the use of current tax expense to proxy for a firm’s current tax liability (e.g., Hanlon 2003). Current tax expense reflects the flows of accrual accounting, which are often likely to cause the firm’s current tax liability to be overestimated. In addition, the task of reconciling the deductions that only occur during tax reporting—permanent differences

(or tax cushion) to the current tax expense—can be challenging.¹¹ Contrary to prior studies' claims that taxable income can be practically implied from publicly available financial statements (e.g., Plesko 2004), Hanlon (2003) shows that this is almost impossible—especially for studies that plan to use macro data because of inconsistencies in tax-specific information disclosure provided by firms. Further, transactions that lead to permanent differences often involve a degree of management discretion; therefore, management has incentives not to disclose the related information freely if they are not specifically required to do so.¹² Thus, some tax reconciliation items may be more likely to be omitted from the inference calculation, leading to an under-estimation of the firm's actual current taxable income.

Complications with dissecting tax items from financial reporting disclosures increase the noise with the book–tax difference measure. Even in the simplest setting, where no complications should arise from consolidations and permanent differences, grossing-up current tax expenses using the statutory tax rate would only over-estimate the taxable income for firms that are entitled to research and development and foreign tax credits (Hanlon 2003; Dyreng, Hanlon and Maydew 2008). Given the severity of noise in the method of the book–tax difference, it is an inferior measure in estimating corporate tax behaviour for this study.

The next common method used by prior tax literature in measuring tax avoidance is the ETR. Prior to measuring tax avoidance, the ETR has long been used to measure firms' effective level of tax burden (Rego 2003). Siegfried (1974) hypothesises that larger firms are likely to have lower ETRs than smaller firms, which is consistent with their extensive resources that would possibly allow them to influence the legislation process, develop tax expertise and organise business activities for optimal tax savings. Motivated by Siegfried's (1974) hypothesis, ETR has often been used by subsequent researchers and policymakers as a measure of assessing firms' effective tax planning or rate (Rego 2003).

ETR is usually described as firms' current tax liability divided by pre-tax book income (Rego 2003; Donohoe and Knechel 2014). Consistent with the book–tax difference

¹¹ Although FAS 109 provides the standards for which tax accounts are to be disclosed, there are no further guidelines on the materiality level of these disclosures.

¹² Hanlon (2003) argues that firms that choose to accrue tax liability to cushion for cash outflow in future periods may not disclose this information freely for fear of being scrutinised by the tax authority.

method, prior research also tends to use current tax expense to proxy for firms' current tax liability (e.g., Hanlon and Slemrod 2009; Donohoe and Knechel 2014). Given the similarity in the use of a proxy, ETR is also likely to suffer similar problems, which have been discussed in the measurement of the book–tax difference—that is, overstating firms' actual current tax liability. In addition to the deferral effects caused by the tax payable and refundable (or temporary differences), certain deductions that occur in tax reporting (or permanent differences) are omitted from current tax expense. All of these lead to the current tax expense over-estimating firms' current tax liability rather than its actual tax liability. The estimation error is exacerbated when tax provisional accounts such as valuation allowance and contingency reserve are subjected to management discretion.

Several works have attempted to reduce the noise in the current tax expense by using total tax expense as a substitute, but this approach only aggravates the noise in the ETR. The total tax expense tends to reconcile any tax avoidance strategies that are using the inverse relation between the deferred tax expense and current tax expense. Dyreng, Hanlon and Maydew (2008) suggest that some of the tax avoidance cases involve lowering the current tax expense account balance by increasing and decreasing the transactions in the deferred tax expense. Dhaliwal, Gleason and Mills (2004) examine the likelihood for firms to use the tax expense to meet the earnings target, and they find evidence that indicates that firms' ETR in the fourth quarter is lower than the third quarter by 0.19 per cent for each cent that management missed the earnings target.

Other limitations with the ETR is that it measures tax avoidance in year-to-year variation (Hanlon 2003). This restricts the ETR from measuring the extent of tax avoidance comprehensively, and therefore accurately. Dyreng, Hanlon and Maydew (2008) argue that the annual variation in the ETR tends to omit firms that use long-term tax avoidance strategies. All of these limitations lead to a consideration for the next measure available in the tax literature—namely, Cash ETR—for a better measurement of tax avoidance.

Dyreng, Hanlon and Maydew (2008) introduce Cash ETR in an attempt to address the limitations in the ETR. The Cash ETR is computed by dividing the cash taxes paid over the pre-tax book income. Dyreng, Hanlon and Maydew (2008) argue that the Cash ETR provides a twofold solution to the limitations in the ETR: (1) excluding the effects from accrual accounting; and (2) including a longer period of observations to examine firms' tax planning. Given that the Cash ETR uses cash taxes paid rather than total tax expense

or current tax expense, not only will it exclude the accrual accounting effects in the process, but it will also capture the actual amount of tax paid by firms. In addition, the Cash ETR considers long-run effects in its measurement by summing up the cash tax paid to a certain period and proportioning it to pre-tax book income for the same period. This consequently increases the scope of measurement in the Cash ETR to allow for a complete view of the extent of firms' tax avoidance, and therefore to estimate corporate tax avoidance with higher accuracy.

Borrowing the concept in the Cash ETR, this study bases the measure on tax fairness, or *CASH_TPR*, which is computed by dividing the sum of cash taxes paid (*TXPD*, Compustat#843) over the sum of total sales (*SALE*, Compustat#749):

$$CASH_TPR_{NYR,t} = \frac{\sum_{t=1}^N \text{Cash taxes paid}}{\sum_{t=1}^N \text{Total sales}} \quad | \quad N = 0 \text{ to } 3 \quad (1)$$

The variation in firms' tax fairness, *CASH_TPR*, is measured using one-year, two-year and three-year cumulative performance (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}* and *CASH_TPR_{3YR, t}* respectively).

The difference between the measure of *CASH_TPR* and the Cash ETR lies in their denominators. *CASH_TPR* uses total sales, while the Cash ETR uses pre-tax book income. The objective of the Cash ETR is to assess firms' tax payments relative to the income available for tax. *CASH_TPR* aims to capture the extent of a firm's tax contribution in relation to their market engagement (as a society proxy for their presence). This measure is consistent with measures used in the media, which have long scrutinised the extremity between firms' cash tax payments and total sales or revenue. This method has been used to identify alleged tax avoidance cases, such as the cases with Google (2014), Apple (2004–2008), Starbucks (2004), UK Starbucks (2007–2011), UK Amazon (2011), Ikea (1991–2014) and AUS Transfield (2013–2014) (Barford and Holt 2013; Khadim and Butt 2015; Chew 2016).

In addition to better representing the public presence of firms, using sales as the scaling factor in measuring tax fairness reduces the problem of using profit, which is more likely to be affected by avoidance strategies.

3.2.2 Measuring Wage Unfairness

The second measure for corporate citizenship is wage unfairness, which has reciprocal implications for wage fairness. Prior studies describe fairness in wage as the actual wage or living wage, which is viewed as a measure of absolute fairness, and the relative wage, which relates the wage of one group to the wage of another group in an attempt to achieve bargaining powers parity between the players in the labour market (Harris 2000).

The conception of fairness with the actual or living wage requires employees to be compensated by a nominal wage that is sufficient to support a family (Harris 2000). This gives rise to the minimum wages requirement through the passage of state minimum wage laws and the US Fair Labour Standards Act (FLSA) at the federal level. Given that the minimum wage is well regulated in the US, it is not practical to approach wage unfairness from this perspective. Further, it is well known that the labour market consists of a range of talents and skills that may affect how employees are rewarded by employers, consistent with the wage efficiency hypothesis. However, the wage–effort hypothesis explains that employees are likely to withdraw their efforts if they perceive that they have been unfairly compensated (Akerlof and Yellen 1990). This draws the attention of this study to the second form of wage fairness—namely, the relative-wage approach.

The relative-wage approach evaluates wage fairness by comparing the wage of one employee group with the wage of another employee group (Skott 2005). This method is more representative and reflective of the main interest of this study, which aims to observe the total effects of perceived fairness or unfairness in wages, irrespective of employee groups. One of the most common methods used by researchers, journalists and policymakers is to evaluate the dispersion between the pay of the CEO and employees, which is sometimes referred to as the CEO pay-out ratio, or pay ratio. The debate regarding the dispersion between the pay of the CEO and average employees has been the subject of interest for investors, employees and consumers as recently as Mohan et al. (2015).¹³ A recent study by the American Union, AFL-CIO (2014) reveals that the pay ratio between the CEO and average employees in the US in 2013 was as high as 331 to 1. Bebchuk and Fried (2003, 2004) provide evidence that the high-top executive pay is

¹³ Mohan et al. (2015) find that consumers purchase intentions reduce for firms with higher pay ratio than lower pay ratio.

likely to be driven by managerial power hypothesis, which Gordon and Dew-Becker (2007) argue is the result of collusion among peer CEOs.¹⁴

The ample literature on CEO pay provides support to assume that the pay ratio is a well-established measure. Therefore, this study follows prior studies by adopting the CEO pay ratio to measure wage unfairness. The pay ratio between the CEO and average employees, *CEO_PAY_RATIO*, is measured by dividing the pay of the CEO (*TOTAL_CURR*, Execucomp#15) with that of the average employees. Average employee pay is calculated by dividing the total of employees' pay-out (*XLR*, Compustat#955) over the number of employees (*XLR*, Compustat#290):

$$CEO_PAY_RATIO_t = \frac{CEO's\ pay_t}{\frac{Employees'salaries_t}{(Number\ of\ employees_t)}} \quad (2)$$

The above CEO pay ratio aims to capture the dispersion between the pay of the CEO and the average employees. The increasing *CEO_PAY_RATIO* captures the increasing dispersion between the pay of the CEO and the average employees. Subsequently, the higher the *CEO_PAY_RATIO*, the higher the perceived wage unfairness of a firm. Given that wage unfairness has an inverse implication for wage fairness, decreased wage unfairness suggests increased wage fairness.

The measure of wage unfairness, *CEO_PAY_RATIO*, employed in this study has two limitations. First, it excludes the value of stocks and options grants or other forms of CEO benefits from the CEO pay computation. There are some inconsistencies in prior literature regarding the components of CEO pay, and this study adopts the method that is consistent with the average literature.

Second, the measurement of wage unfairness, *CEO_PAY_RATIO* described in Equation (2) causes a large amount of data loss.¹⁵ This is mainly because of the lack of employees' pay data, which subsequently affects the amount of data available for the denominator component of the CEO pay ratio, *CEO_PAY_RATIO*. To alleviate the concern specific to

¹⁴ The controversies surrounding the debate on the large and increasing pay ratio between the CEO and average employees push for a SEC ruling by Section 953(b) of the *Dodd-Frank Wall Street Reform and Consumer Protection Act*, which requires public firms to start making disclosures regarding the pay ratio in early 2018.

¹⁵ There are 823,849 and 1,272 numbers of firm-year observations for the audit fees test, the Ohlson test and the cost of equity test, respectively.

a small sample size bias associated with the wage unfairness measure, this study will develop a second measure that relies only on CEOs' pay data.

The second measure is termed CEO Compensation Excess. While the measure is developed as an attempt to avoid massive data loss caused by the lack of employees' data, it automatically excludes wage information from the employees' group. This group represents 90 per cent of the total population in the labour market; thus, the CEO Compensation Excess measure may not be fully representative of the overall perception of wage fairness. Therefore, this is a key limitation in the second measure of wage unfairness, or CEO Compensation Excess.

To determine CEO Compensation Excess, the relative differences of CEO compensation are identified against the industry's average rate. Specifically, CEO Compensation Excess is computed by subtracting the mean rate of pay for all CEOs in the same industry from the CEO pay. The *CEO_EXCESS1* is computed by dividing the CEO current pay and bonuses (*TOTAL_CURR*, Execucomp#15) from the total sales (*SALE*, Compustat#749).

$$CEO_EXCESS1 = \frac{CEO's\ pay_{firm\ j}}{Total\ sales_{firm\ j}} - \left(\sum_{j, ind} \frac{CEO's\ pay}{Total\ sales} \right) \quad (3)$$

Alternatively, CEO Compensation Excess is also scaled by net income (*NI*, Compustat#553). CEO Compensation Excess measures *CEO_ECXESS1*, and *CEO_ECXESS2* might have representative limitation, prior research shows that the public are paying attention to CEOs' pay growth (Bebchuk and Fried 2003; Bebchuk and Grinstein 2005). Thus, it provides the basis to this study to expect that the CEO Compensation Excess measures in Equation 3 can influence the overall perception of wage unfairness and, subsequently, the credibility of CEOs. Using sales and income (positive income) as a scaling factor increases the sensitivity of CEO Compensation Excess measures to determine the net effects of CEO expropriation for every unit of sales or income. Further, one of the advantages of CEO Compensation Excess measures is that they have significantly large sample sizes than the sample size using the main measure of wage unfairness, *CEO_PAY_RATIO*.

3.2.3 Measuring Philanthropy

The third selected measure for corporate citizenship is philanthropy. Philanthropy is usually manifested through the outlet of corporate contributions as the act of giving back to society (Carroll 1998). The FASB (1993) defines contribution as ‘an unconditional transfer of cash or other assets to an entity or a settlement or cancellation of its liabilities in a voluntary nonreciprocal transfer by another entity acting other than as an owner’. As a result, philanthropy is often associated with the purest exhibition of ethics for business and, therefore, citizenship. However, there has been a contradictory argument regarding the possibility that management may misuse corporate contributions to benefit their self-interests at the expense of shareholders (Haley 1991).

Given the broad view and ways in which to demonstrate philanthropy, MSCI-KLD datasets are used to identify the philanthropy dimensions. MSCI-KLD is an agency that provides a comprehensive dataset on binary ratings for corporate social performance (Koh and Tong 2012). It collects social information on corporations from multiple resources to build their social ratings through publicly available data, company websites and annual surveys (Waddock and Graves 1997). Although the MSCI-KLD database provides extensive social dimensions of corporations, only the community dimensions provide data that are pertinent to corporate philanthropy. The community dimension tracks firms’ philanthropy performance in the area of domestic donation (*com_str_a*), foreign donation (*com_str_f*), education (*com_str_b*), housing support (*com_str_c*) and innovative giving (*com_str_d*). The MSCI-KLD also provides additional ratings that consist of a combination of all components in the community dimensions (*com_str_num*).

Other donations above are excluded, except for domestic donation, *US_DON* and foreign donation, *NONUS_DON*. Only domestic donation, *US_DON* (*com_str_a*, MSCI-KLD#49) provides a superior signal in relation to citizenship, which is consistent with the theme of this study. This approach is consistent with the literature, which emphasises firms’ active roles in their neighbourhood society (or affected market).¹⁶ Although the firms that engage in foreign donation could argue that the society in which they choose to redistribute the wealth falls under the scope of the definition of an affected society, it is still difficult to disassociate its mixed signals. For firms to engage in foreign donation,

¹⁶ For example, Carroll (1998), Andriof and McIntosh (2001), Waddock (2001, 2002) and Stebbins (2001).

it is likely because they have at least one or more offshore operations. Therefore, foreign donation can also reflect multinational activities to a certain extent other than citizenship. Alternatively, foreign donation, *NONUS_DON* (*com_str_f*, MSCI-KLD#14) is also used as the second philanthropy variable. The other donation types (education, housing support and innovative giving) are not tested in this study to avoid measuring signals associated with the complexity of their various forms of assistance.

3.3 Models

3.3.1 Regression Specification

Quantile, or median regression, is used to test the hypotheses, except for the hypotheses in the BVE valuation, which uses the OLS regression, or mean regression). This study aims to observe perceived information credibility for firms that belong in the extremity of right and left tails, usually known as outliers. It is widely known that the OLS Model is not entirely adequate for estimating the probability of data with asymmetric distribution (Galarza Morales et al. 2017). The modelling in OLS only addresses the conditional mean or the average effects of the covariates or regressed variables, which tends to fit the outliers at the expense of the rest of the sample. As a result, it would be inappropriate to simply use OLS to model for the probability of distribution of an observed response where extremes are important.

Contrary to the OLS regression approach, the quantile regression is argued to be superior in dealing with asymmetric distributed data (Chen 2005). This is because, first of all, quantile does not impose normal error distribution assumptions such as those required by OLS, except for the assumption of zero quantile requirement (Chen 2005; Galarza Morales et al. 2017). Further, quantile regression has the flexibility to model the relationship between one or multiple covariates *X* with the observed response variable *Y* based on any conditional quantiles of *Y* (William 2016). This specific feature of the quantile regression allows this study to condition the regression to a more robust point for the dependent variable in cases with extremes—that is, at a median tendency. Given that it focuses on median rather than mean, it enables the quantile regression to resist the pull of outliers; therefore, it provides better coefficient estimates than OLS for heavy-tailed error distribution (William 2016). Alternatively, hypotheses will be tested using the

OLS regression in additional testing to provide a comparison for results with and without outlier effects.

While there are reasons to use the quantile regression for the audit fees test and the cost of equity test, it is unnecessary for the BVE valuation (the Ohlson Model). This is because, in an Ohlson test, the samples are using a subsample portfolio, which is based on whether the firm has high or low performance in corporate citizenship—namely, tax fairness, wage fairness and philanthropy. The subsample has appropriately grouped the corporate citizenship performance into its specific performance quantile. As a result, there is no reason to expect that the OLS Model will be inadequate for testing the hypotheses using the Ohlson test.

3.3.2 Audit Fees Test

To test the hypotheses H1 a – H1 d, the expanded audit fees model is used, which is primarily based on the standard audit fees model of Hay, Knechel and Wong (2006). The expanded audit fees model excludes the internal control variable from the set of control variables to avoid a small sample size outcome, and it includes several additional variables, which are the variables of interest of this study—namely, corporate citizenship variables ($CC_{1YR, 2YR, 3YR}$), foreign operation ($FOREIGN$), premium city ($PREM_CITY$), auditor geographic dispersion ($AUD_GEODISP$) and corporate social responsibility (CSR) controls (ENV_STR , ENV_CON , EMP_STR and EMP_CON). In the absence of publicly available data for the number of subsidiary, $FOREIGN_i$ indicator is used to proxy for the firm's complexity associated with multinationals. The expanded audit fees model is as follows:

$$\begin{aligned}
 LnAFee_t = & \beta_0 + \beta_1 CC_{1YR, 2YR, 3YR, t} + \beta_2 LnTA_t + \beta_3 IR_PROXY_t + \beta_4 LEV_t + \beta_5 LIQ_t \\
 & + \beta_6 ROA_t + \beta_7 M\&A_t + \beta_8 RESTRUC_t + \beta_9 FOREIGN_t + \beta_{10} BIG4_t \\
 & + \beta_{11} AUD_CHANGE_t + \beta_{12} PREM_CITY_t + \beta_{13} LnNASFee_t \\
 & + \beta_{14} LnAUDTENURE_t + \beta_{15} AUD_GEODISP_t + \beta_{16} RESTATE_t \\
 & + \beta_{17} G_CONCERN_t + \beta_{18} SqAUDLAG_t + \beta_{19} BUSY_SEASON_t \\
 & + \beta_{20} INVMILLS_t + \beta_{21} ENV_STR_t + \beta_{22} ENV_CON_t + \beta_{23} EMP_STR_t \\
 & + \beta_{24} EMP_CON_t + \sum IND_t + \sum YEAR_t \\
 & + \varepsilon_t
 \end{aligned} \tag{4}$$

Where $LnAFee_t$ is the natural logarithm of audit fees and the dependent variable. $CC_{1YR, 2YR, 3YR}$ is the corporate citizenship and the independent variable. Corporate citizenship is measured by a firms' performance in relation to tax fairness (H1 a), wage unfairness (H1 b) and philanthropy (H1 c and H1 d) (as discussed in Sections 4.1.1–4.1.3). All corporate citizenship variables are measured as one-year (annual) performance, except for the tax fairness, which extends to two- and three-year cumulative average performance to be consistent with prior tax literature, which usually uses a cumulative average measure. The discussion on control variables are provided in the following section.

3.3.2.1 Control Variables

Evidence from prior audit research shows that audit fees are more likely to be correlated with three types of audit supply factor: firm-related, auditor and audit engagement characteristics (Hay, Knechel and Wong 2006). Control variables from the firm-related characteristics usually include the risk related to the firm's size, $LnTA_t$, which is measured as the natural logarithm of the total assets (AT , Compustat#94), the firm's inherent risk level, IR_PROXY_t , which is proxied by the combination of total inventory (INV , Compustat#423) and total receivables ($RECT$, Compustat#709) divided to total assets (AT , Compustat#94). Financial risk ratios are measured using the leverage ratio and liquidity ratio, LEV_t and LIQ_t . LEV_t is computed by dividing the total liabilities (LT , Compustat#527) to the total assets (AT , Compustat#94), and LIQ_t is computed by dividing the total current assets (ACT , Compustat#49) over the total current liabilities (LCT , Compustat#499). The firm's profitability rate, ROA_t , is measured by ROA, which is computed by dividing the net income (NI , Compustat#553) to total assets (AT , Compustat#94). Restructuring activities are proxied by the merger and acquisition, $M\&A_t$, which is equal to 1 if the firm engages in merger and acquisition activities and 0 otherwise. Restructuring activities is also measured using year-to-year changes in total assets, $RESTRUC_t$ (AT , Compustat#94). Foreign operation, $FOREIGN_t$, which serves as a proxy for complexity¹⁷ or multinational is equal to 1 if the firm has pre-tax income foreign and 0 if the firm has not reported any pre-tax foreign income ($PIFO$, Compustat#620).

¹⁷ Prior research sometimes uses a number of subsidiaries, or foreign sales, to measure complexity.

The variables, which represent auditors' characteristics, include auditor reputation, $BIG4_t$, which is assessed by the extent of the auditor's market size divided by the auditor's audit fees to total audit fees ($AUDIT_FEES$, Audit Analytics#5). Auditor change, AUD_CHANGE_t , is equal to 1 if the firm's prior auditor is not the same as its current auditor for the period t ($AUDIT_FKEY$, Audit Analytics#1). Auditor's premium city, $PREM_CITY_t$, is equal to 1 if the auditor's city ($AUDIT_CITY$, Audit Analytics#9) is located in one of the top six expensive cities in the US. This list of cities is determined from five-year average results for US cities that top the cost-of-living list on the NUMBEO webpage. The inverse Mills ratio, $INVMILLS_t$, serves as a control for the $BIG4_t$ selection bias. The $INVMILLS_t$ is estimated using the probit regression, which regresses the probability of the audit firm being a $BIG4_t$ against the firm's leverage ratio, ROA and asset turnover. Asset turnover is computed by dividing the total sales ($SALE$, Compustat#749) over the total assets (AT , Compustat#94).

The control variables classified as audit engagement characteristics include the natural logarithm of non-audit fees ratio, $LnNASFee_t$, which is computed by dividing non-audit fees (NON_AUDIT_FEES , Audit Analytics#6) over audit fees ($AUDIT_FEES$, Audit Analytics#5). Audit tenure, $LnAUD_TENURE_t$, is measured as the natural logarithm of audit tenure for a specific auditor identified by the auditor's key ($AUDIT_FKEY$, Audit Analytics#1). Auditor geographic dispersion, $AUD_GEODISP$, is equal to 1 if the firm engages an auditor from a similar state ($AUDIT_STATE$, Audit Analytics#10). The indication of high-risk clients is proxied by audit restatement and the going concern opinion. The restatement, $RESTATE_t$, equals 1 if the firm's financial reporting is being restated, and 0 otherwise ($RESTATEMENT$, Audit Analytics#14). Going concern opinion, $G_CONCERN_t$, equals 1 if the firm receives a going concern opinion, and 0 otherwise ($GOING CONCERN$, Audit Analytics#8). The conflict or difficulty associated with the issuance of audited financial statements is proxied by the audit report lag, $SqAUD_LAG_t$, which is measured as the square root of differences between the date the financial year ended ($FISCAL_YEAR_ENDED$, Audit Analytics#4) and the signature date of the audited financial statements ($SIG_DATE_OF_OP_S$, Audit Analytics#7). Audit peak season, $BUSY_SEASON_t$, is identified from firms that have a financial year-end between November and January ($FISCAL_YEAR_ENDED$, Audit Analytics#4). In addition, the variables include industry, IND_t , and year fixed effects, $YEAR_t$, in the audit fees model.

3.3.3 Equity Valuation Test

Investors' perceptions of financial reporting credibility are examined in two ways: 1) BVE valuation test using the Ohlson Model (1995); and 2) the cost of equity test. The Ohlson Model aims to examine the differences in investors' perceived information relevance associated with firms' corporate citizenship performance, measured in relation to tax fairness, wage fairness and philanthropy (H2 a – H2 d). To observe corporate citizenship impacts on investors' value-relevance of financial reporting effectively, this study employs sample-portfolio analysis developed based on corporate citizenship performance. If corporate citizenship performance influences auditors' perceived value-relevance financial reporting information, it is expected that the firms-portfolio with high corporate citizenship performance to have significantly higher R-squared (R^2) values than the firms-portfolio with low corporate citizenship performance.

The cost of equity capital test aims to examine perceived information risks related to differences in corporate citizenship performance (H3 a – H3 d). The cost of equity capital estimates the rate of return required by the investors to hold the firm's risky stock. The higher the perceived risk associated with the firm-specific risk, the higher it influences the firm's cost of equity capital. If superior corporate citizenship performance reduces investors' perceived information risk, it is expected to be manifested in cost of equity capital (H3 a – H3 d). Firms' implied cost of equity is estimated using an earnings-based valuation model—namely, the Price/Earnings to Growth, PEG model (PEG).

3.3.3.1 Book Value of Equity Valuation Test (Ohlson Model)

The Ohlson Model (1995) relies on three assumptions. First, it assumes that the market valuation of the firm, or the share price, is equal to the present value of the expected future dividends (Dividend Discount Model). Thus:

$$P_t = \sum_{t=1}^{\infty} \frac{d_{t+1}}{(1 + k_e)^{t+1}} \quad (5)$$

Where P_t is the firm's current share price,¹⁸ d_{t+1} is the dividend in the next period and k_e is the required rate of return. Second, it assumes that the owner's equity accounting applies, which specifies a clean surplus relationship between the book value, earnings and dividends. Consequently, the period-to-period changes in the book value can be expressed as the book value at the beginning of the period plus earnings minus dividends:

$$BVE_t = BVE_{t-1} + E_t - d_t \quad (6)$$

Where BVE_t is the firm's BVE for period t , BVE_{t-1} is the firm's BVE for the period prior to t , E_t is the earnings for period t and d_t is the dividend expected at period t . BVE is computed by subtracting total liabilities (LT , Compustat#527) from total assets (AT , Compustat#94). The clean surplus relation assumption also implies the condition in which the dividends simply reduce the book value—not the current earnings.

Third, it assumes that the variability of abnormal earnings conforms to a linear process, or linear information dynamics, which is posited for the stochastic process of abnormal earnings and non-accounting as autoregressive (Lundholm 1995). Abnormal earnings are earnings in excess of current earnings (NI , Compustat#553) minus normal earnings. Normal earnings are estimated from a three-year rolling average of earnings:

$$AE_t = E_{t+1} + k_e \cdot BVE_t \quad (7)$$

Where AE_t is the abnormal earnings for period t , E_{t+1} is the earnings for the next period t and $k_e \cdot BVE_t$ represents the normal, or required, earnings for period t . Replacing assumptions (6) and (7) into Equation (5) expresses the firm's market value, or share price, as equal to the book value plus the present value of future expected from abnormal earnings. Subsequently:

$$d_t = E_t - (BVE_t - BVE_{t-1})$$

$$P_t = \sum_{t=1}^{\infty} \frac{E_t - (BVE_t - BVE_{t-1})}{(1 + k_e)^t}$$

¹⁸ The firm's share price, P is measured as the price at fiscal year-end following Barth, Beaver and Landsman (1998) and Lo and Lys (2000).

This can be simplified as:

$$P_t = BVE_t + \sum_{t=1}^{\infty} \frac{AE_t}{(1 + k_e)^t}$$

$$P_t = BVE_t + \sum_{t=1}^{\infty} \frac{E_t - (k_e \cdot BVE_{t-1})}{(1 + k_e)^t} \quad (8)$$

The linearity in the information dynamics allows the shocks from non-accounting information to become part of the autoregressive process for abnormal earnings, which in turn, is expected to flow in autoregressive fashion to the next period of abnormal earnings. Based on these assumptions, the linear dynamics lead to a linear solution and, in combination, the value of the firm can be derived as:

$$P_t = \beta_0 + \beta_1 BVE_t + \beta_2 AE_t + \varepsilon_t \quad (9)$$

Where P_t is the firm's current share price, BVE_t is the firm's book value for period t , AE_t is the abnormal earnings for period t and ε_t is the error term. Alternatively, expression (9) can be expressed on a per-share basis, where BVE_t , the firm's book value and AE_t , the abnormal earnings for period t , are scaled to common shares fully diluted (*CSHFD*, *Compustat#181*).

3.3.3.2 Cost of Equity Test

In this study, I estimate the implied cost of equity capital using one of the methods available for accounting-based valuation: the PEG model developed by Easton (2004). Other accounting-based valuation methods used by prior studies include, but not limited to: (1) the discounted dividend model (Botosan and Plumlee 2002; Penman and Sougiannis 2010), (2) residual income model (Gebhardt, Lee and Swaminathan 2001; Dhaliwal et al. 2005), (3) Ohlson model (Ohlson 1995), (4) Feltham - Ohlson model (Botosan 1997; Feltham and Ohlson 2005). All these models have their specific advantages and limitations, which make using one method for estimating the implied cost of equity capital may not be sufficient.

However, this study prefers to use only one method, that is the PEG model for estimating the implied cost of equity for the cost of equity test. This is in order to avoid confusion given the number of different samples already involved in the first two tests: audit fees

test and Ohlson test. This study selects the PEG model mainly because it yields simple formula for the cost of equity estimate and manages to take accounts of the differences in short-term expected earnings growth rate (Easton 2004), which increases its relevance in estimating the implied cost of equity. Thus, following Easton (2004), the implied cost of equity capital, COE , is estimated using the PEG Model, which can be expressed as:

$$COE_t = \frac{eps_{t+2} - eps_{t+1}}{P_t} \quad (10)$$

Where COE_t is the required rate of returns expected by the investors, or cost of equity capital, eps_{t+2} is the two-year-ahead consensus of analysts' earnings forecast, eps_{t+1} is the one-year-ahead consensus analysts' earnings forecast and P_t is the firm's current share price.

Hypotheses 3 predict that high rather than low corporate citizenship performance in tax fairness, wage fairness and philanthropy reduce investors' perceived risk associated with information risk, which leads to a lower cost of equity capital. H3 (a), H3 (b), H3 (c) and H4 (d) are tested by estimating the following model:¹⁹

$$\begin{aligned} COE_t = & \beta_0 + \beta_1 CC_{1YR, 2YR, 3YR} + \beta_2 LnTA_t + \beta_3 BETA_t + \beta_4 LEV_t + \beta_5 MTB_t \\ & + \beta_6 Ln_FOREDISP_t + \beta_7 LTG_t + \sum IND_t + \sum YEAR_t \\ & + \varepsilon_t \end{aligned} \quad (11)$$

Where COE_t is the cost of equity capital for period t and $CC_{1YR, 2YR, 3YR}$ is corporate citizenship and the independent variable. The two-year and three-year cumulative measures of corporate citizenship are only available for the tax fairness measure.

The control variables follow prior research, where $LnTA_t$ is the proxy of the firm's size, $BETA_t$ is the estimate of the firm's risk in the market, LEV_t is the leverage ratio of the firm, Ln_FEDISP_t is the dispersion of analysts' earnings forecasts and LTG_t is the earnings growth rate. Further, the industry and year fixed effects (IND and $YEAR$) are included. ε_t is the error term.

¹⁹ The cost of equity model is following Dhaliwal, Tsang and Yang (2011).

3.3.3.2.1 Control Variables

Prior research finds evidence that the cost of equity capital, COE_t , is negatively associated with firms' size and positively associated with the book-to-market ratio (Dhaliwal, Tsang and Yang 2011). Thus, this study includes the natural logarithm of total assets, $LnTAt$, as a proxy for firms' size (AT , Compustat#94), and market-to-book ratio, MTB_t , which is calculated by dividing the market value with the BVE. The market value is derived by multiplying the firm's price at fiscal year-end ($prcc_f$, Compustat#1,003) with the common shares fully diluted ($CSHFD$, Compustat#181). The BVE is calculated by subtracting total liabilities (LT , Compustat#527) from total assets (AT , Compustat#94).

The cost of equity capital is expected to have a positive association with firms' risk, $BETA_t$. $BETA_t$ is estimated using the market model with 24–60 prior monthly returns. Prior research suggests that increasing leverage increases the cost of equity capital (Fama and French 1992). Hence, leverage, LEV_t , is included and computed by dividing total liabilities (LT , Compustat#527) with total assets (AT , Compustat#94). Finally, Gebhardt, Lee and Swaminathan (2001) find that the dispersion of analysts' earnings forecasts from consensus has a negative association with the cost of equity capital. Therefore, the natural logarithm of analysts' forecast dispersion, Ln_FEDISP_t , is included in the model. Ln_FEDISP_t is calculated using the standard deviation of the median of forecasted earnings per share, eps , divided by the median of forecasted earnings per share estimated using a 90-day window prior to the earnings announcement date ($VALUE$, IBES#25).

Evidence from prior research finds that the cost of equity capital is positively associated with long-term growth rate (Gebhardt, Lee and Swaminathan 2001; Gode and Mohanram 2003). Thus, a proxy for long-term growth rate, LTG_t , is included, which is measured as the difference between the two-year-ahead analysts' consensus earnings forecast and the one-year-ahead analysts' consensus earnings forecast divided by the one-year-ahead consensus earnings forecast ($eps_{t+2} - eps_{t+1} / eps_{t+1}$). The analysts' consensus earnings forecast is estimated from the median of earnings per shares using a 90-day window prior to the earnings announcement date ($VALUE$, IBES#25).

3.4 Conclusion

This chapter describes the measurement for the test variables and models used to test the hypotheses developed in Chapter 2. The description of the samples to test the hypotheses is discussed in Chapter 3, and the results for the estimations of these models are presented in Chapter 4.

Chapter 4: Results—Samples and Descriptive Statistics

4.1 Introduction

This chapter describes the sampling method and the characteristics of the samples used to test the hypotheses. The chapter is divided into two sections. The first section describes the samples for the audit fees test (Section 4.2.1), the BVE valuation test (using the Ohlson Model) and the cost of equity capital test (Section 4.2.2 and Section 4.2.3).²⁰ The second section presents the descriptive statistics and pairwise correlation analysis for each sample used in the abovementioned tests (Section 4.3). The third section provides a conclusion (Section 4.4).

4.2 Sample Description

The samples used in this study span the period from 2001–2014. Consistent with three corporate citizenship measures, the study uses three samples for each test: (1) audit fees test, (2) Ohlson test and (3) cost of equity test. The model requirement reduces the sample period for the audit fees from 2001–2013, the Ohlson test from 2002–2014 and the cost of equity from 2001–2014.

4.2.1 Audit Fees Samples

Table 2 details the sampling method for the audit fees samples. These samples consist of matched US firm years between Compustat and Audit Analytics from 2001 - 2013. Consistent with three measures for corporate citizenship, this study uses three samples for the audit fees test: (1) Tax Sample, (2) Wage Sample and (3) Philanthropy Sample. Although different, all three samples require a similar set of control variables for the audit

²⁰ The second and third tests are sometimes referred to as the equity valuation test in this chapter.

fees model (as in Equation Model [4]); therefore, all three samples are drawn from the main sample. The samples differ only in relation to how their measurements bias their sample sizes.

To develop the main sample for the audit fees test, this study first collects the financial variables from Compustat on all available US firms from 1997 to 2014. The financial variables are collected three years prior to develop the variables, which requires computation of average, for example, to compute for the first corporate citizenship, two- and three-year cumulative average tax fairness (e.g., $CASH_TPR_{2YR,t}$ and $CASH_TPR_{3YR,t}$), and normal rate of ROE, ROE , for the use of the second test (the Ohlson test). It then matches the US firm-year cases from Compustat to Audit Analytics using the Central Index Key, CIK .²¹ Audit Analytics provides data on audit fees and other auditor-related characteristics. This process restricts the initial sample to 91,263 firm-year observations and the period 2000–2014, because Audit Analytics only provides data from 2000.

This study then merges the matched US firm years of Compustat and Audit Analytics to three other databases—Execucomp, BoardEX and MSCI–KLD—to obtain data on CEOs’ pay, philanthropy and other measures of social corporate performance (CSR). It further excludes the matched firm years to non-zero total assets and non-missing Global Industry Classification Standard (GISC) industry code, non-missing GISC industry code and those with positive return on assets, ROA . This study excludes the loss-making firms from the main sample for two reasons: (1) it is a common practice in prior tax literature to exclude loss-making firms for a meaningful interpretation of the results;²² and (2) positive net income can serve as a control for managerial expertise in regression analyses. According to source credibility theory, two components are important in influencing an information source’s credibility—namely, expertise and trustworthiness (Pornpitakpan 2004). As discussed in Chapter 3, this study measures source trustworthiness using three corporate citizenship components in relation to tax fairness, wage unfairness and philanthropy. Prior literature uses several methods to measure managerial expertise or abilities, including by measuring management forecast accuracy (Bartov, Givoly and Hayn 2002;

²¹ The Central Index Key (CIK) is a unique number assigned to firms by the US Securities and Exchange Commission (SEC) to identify their specific disclosure.

²² The loss-making firms are not required to pay tax. Further, under the US corporate tax system, losses can be carried back two years to reduce their current tax liability (Appendix 5.4.1 OECD-10: Treatment of losses).

Graham, Harvey and Rajgopal 2005; Goodman et al. 2013), managerial ability score (Demerjian et al. 2012), managers' reputation (Milbourn 2003; Francis et al. 2008) and superior historical earnings (Farrell and Whidbee 2003; Fee and Hadlock 2003).

Given that there are a number of ways to measure managers' abilities and expertise, this study selects positive income performance as the simplest approach. This might serve as a broad measure for capturing managerial abilities; however, it should be adequate and effective because this study is more concerned with the trustworthiness component of source credibility. Using positive income as a control is also consistent with prior tax literature practice, which usually excludes loss-making firms. Further, prior literature shows that financially distressed firms are likely to increase concern for opportunistic reporting (Koch 2002). Therefore, controlling for loss-making firms allows for less variation caused by upward bias reporting related to bad earnings performance.

To develop the Tax Sample, the sample is restricted to firms that have non-missing tax fairness measures and non-missing control variables required by the audit fees model, as stated in Equation Model (4). The control variables include firms' social performance in environment and employee welfare protection (CSR controls). The CSR controls limit the Tax Sample to 12,851 firm-year observation and a sample period of 2001–2013. To develop the Wage Sample, employees' and CEOs' pay data are required. An early assessment of Compustat shows a lack of employees' pay data. This affects the second corporate citizenship measure, wage unfairness, *CEO_PAY_RATIO*. In addition, the firm-year search on Execucomp from 2000 to 2014 provides only 36,942 observations after restricting to the non-missing matching variable, *GVKEY* and non-missing annual CEOs' pay. The annual CEO describes the executive who serves the longest during the financial period. The annual CEO's pay is selected because their pay is more representative of the firm's reputation in that period. The concern with a large number of missing employees' data and small number of firm-year observations in Execucomp raises a concern that wage unfairness is likely to produce a small sample size.

To address the lack of employee's pay data, CEOs' pay data are collected from BoardEx to develop an alternative measure of, and therefore an alternative sample for, wage unfairness. The alternative measure for wage unfairness, CEO Compensation Excess (*CEO_EXCESS*), has zero reliance on employees' pay data; therefore, it can serve as an alternative sample to the main wage unfairness measure (*CEO_PAY_RATIO*). However,

CEOs' pay data from BoardEx are shown to be less helpful. After imposing similar sorting procedures on CEOs' pay used in Execucomp, BoardEx provides up to 67,260 firm-year observations for CEOs' pay data. However, of these observations, 83 per cent have missing CEOs' pay data. The rest (17 per cent) are mostly already available from Execucomp. Therefore, collecting from BoardEx does not seem to add value to CEOs' pay data from Execucomp. In addition, there is no variable in BoardEx to allow for similar sorting for the annual CEO, as in Execucomp. For this reason, CEOs' pay in BoardEx is restricted to the highest-paid CEO. The sorting procedure carried out in Execucomp is inconsistent and is therefore a limitation of the Wage Sample.

To develop the Philanthropy Sample, data are collected on corporate giving and donation in the community dimension, which is one of the six main social dimensions available in the MSCI-KLD database.²³ A detailed examination of the community dimension and other social dimensions in the MSCI-KLD database raises considerable concerns related to the reliability of the philanthropy data and, consequently, its effects on the results. First, it is not certain how each individual component's score builds up to the total score in each social category. The lack of explanation regarding the ranking procedure leads to ambiguity when determining the basis for the MSCI-KLD social score. There is also a noticeable number of reclassifications and discontinuations in subcategories across the six main social categories. This suggests that there is significant inconsistency in the data, as well as comparability issues with social performance data in MSCI-KLD. This probably explains why some researchers prefer to use the net score to measure firms' social performance in the MSCI-KLD database, although Mattingly and Berman (2006) suggest that using net score may lead to result bias. Therefore, this study uses an individual score from two types of philanthropy: domestic donation and foreign donation. However, domestic donation data were discontinued after 2009, and foreign donation were discontinued after 2011. This restricts the Philanthropy Sample from 2001 to 2009, with a sample size of 8,505 firm-year observations.

²³ MSCI-KLD provides more than six social dimensions, but prior research usually limits corporate social activities to six main dimensions: (1) community, (2) diversity, (3) employee, (4) corporate governance, (5) environment and (6) product.

Table 2: Sample Selection Method for Audit Fees Test

	N		
Initial sample—matched US firm years between Compustat and Audit Analytics (2000–2014)	91,263		
Less:			
Number of firm years with zero total assets	369		
Number of firm years with missing GISC	292		
Number of unmatched firm years with Execucomp and BoardEx	38,239		
Number of unmatched firm years from MSCI-KLD	25,765		
Number of firm years from the financial sector (GISC 40)	4,978		
Number of firm years with negative ROA*	3,803		
Main sample	17,817		
	Tax Sample N	Wage Sample N	Philanthropy Sample N
From the main sample	17,817	17,817	17,817
Less:			
Number of firm years with missing current cash taxes paid	2,031		
Number of firm years with missing CEOs' pay data		3,845	
Number of firm years with missing employees' pay data		11,203	
Number of firm years with missing philanthropy			8,108
Number of firm years with missing required variables	2,935	1,946	1,204
	12,851	823	8,505

This table describes the sampling procedures for audit fees samples using one-year tax fairness performance, $CASH_TPR_{1YR, i}$, one-year wage unfairness, $CEO_PAY_RATIO_{1YR, i}$, and one-year domestic donation, $US_DON_{1YR, i}$.

4.2.2 Book Value of Equity Valuation Samples—Ohlson Test

The BVE samples consist of US firms from 2001 to 2014. Three different samples are used—Tax Sample Portfolio, Wage Sample Portfolio and Philanthropy Sample Portfolio—to reflect three different corporate citizenship measures. Table 3 describes the sampling method for BVE samples in detail. To create these three sample portfolios, the readily available matched US firm years between Compustat and Audit Analytics are used as the initial sample, and the samples are built according to the financial variable required, as prescribed in the Ohlson Model (Equation Model [9]).²⁴ Most of the financial variables required by the Ohlson Model, such as earnings, BVE and share prices at the end of the fiscal period, are available from the Compustat file.

The initial data exclusions in the Tax Sample are similar to the initial data-cleaning procedures conducted for the Tax Sample for the audit fees test, in which the sample is also restricted to non-zero total assets and non-missing GISC industry code. However, in contrast with the audit fees samples procedure, the BVE sample includes all industry sectors. It excludes firms with negative BVE, negative three-year ROE average, ROE larger than 0.5 and missing data on required variables as shown in Equation Model (9). It is common practice in the valuation literature to exclude firms with negative BVE for meaningful financial implications (Frankel and Lee 1998; Gregory, Saleh and Tucker 2005). It is also unusual for public-listed firms to yield a return of more than 50 per cent; therefore, these firms are excluded. From the remaining sample, the firms are ranked using five levels of quantiles based on their performance in tax fairness. The firms at the 75th quantile represent the Top 25 performers in tax fairness, and those at the bottom 25th quantile represent the Low 25 performers in tax fairness. The Top 25 quantile in the Tax Sample Portfolio has 10,028 firm-year observations, and the Low 25 quantile in the Wage Sample Portfolio has 10,249 firm-year observations.

²⁴ The samples for the book value of equity valuation (BVE) test are the sub-samples from Wage Samples used in Audit Fees Test (hypotheses 1 (b)) prior to a merger with philanthropy data, in which the data required to develop the third and final corporate citizenship measures. The factors that lead to small sample size for the wage sample portfolios, including the concerns on generalisability and possible solutions have been discussed in detail in previous section – Section 4.2.1 Audit Fees Samples.

To develop the Wage Sample Portfolio, this study uses the merged sample between Compustat, Audit Analytics, Execucomp and BoardEx, which was prepared for audit fees tests. It then repeats similar exclusion procedures used in the Tax Sample Portfolio, thereby excluding those with negative BVE, negative three-year ROE average, ROE larger than 0.5 and missing data on required variables, as shown in Equation Model (9). The remaining sample is divided into five quantiles, with 25 per cent in each of four of the quantiles. Those that are equal to, or higher than, the 75th quantile represent firms with high wage unfairness, and those that are equal to, or lower than, the 75th quantile represent firms with low wage unfairness. The Top 25 quantile in the Wage Sample Portfolio has 848 firm-year observations, and the Low 25 quantile has 849 firm-year observations. Given that wage unfairness has inverse implications for wage fairness, the Top 25 quantile also represents firms with poor performance in wage fairness, and the Low 25 quantile represents firms with good performance in wage fairness.

The Philanthropy Sample Portfolio is a result of matched US firm-year between Compustat, Audit Analytics, Execucomp, BoardEx and MSCI-KLD. A similar sampling procedure is repeated as the one used for the Tax Sample Portfolio and the Wage Sample Portfolio. Table 2 describes the sampling procedure using one-year domestic donation performance, $US_DON_{1YR, t}$. Given that the philanthropy data are provided in binary scores between 1 and 0, the Philanthropy Sample Portfolio is reduced to whether a firm is a donor or a non-donor. The final Philanthropy Sample produces an asymmetric sample for the donor and non-donor portfolio. Domestic donors have 25 firm-year observations and non-domestic donors have 10,547 firm-year observations.

Table 3: Sample Selection Method for BVE Test (Ohlson Test)

1) Tax Sample Portfolio		N	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)		91,263	
Less:			
Number of firm years with zero total assets		369	
Number of firm years with missing GISC		292	
Number of firm years with negative BVE		8,683	
Number of firm years with negative ROE		26,774	
Number of firm years with missing three-year average of ROE		7,451	
Number of firm years with ROE larger than 0.5		1,907	
Number of firm years with missing required variables		9,293	
		36,494	
Less:			
Number of firm years smaller than 75th quantile of tax fairness		26,246	
Number of firm years in Top 25 quantile (2002–2014)			10,248
Number of firm years larger than 25th quantile of tax fairness		26,245	
Number of firm years in Low 25 quantile (2002–2014)			10,249

This table describes the sampling procedures for the Tax Sample Portfolio for the Ohlson test based on one-year tax fairness performance, $CASH_TPR_{1YR, i}$.

Table 3 (*continued*)

2) Wage Sample Portfolio		N	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)		91,263	
Less:			
	Number of firm years with zero total assets	369	
	Number of firm years with missing GISC	292	
	Number of unmatched firm years with Execucomp and BoardEx	38,239	
	Number of firm years with negative BVE	597	
	Number of firm years with negative ROE	15,196	
	Number of firm years with missing three-year average of ROE	1,907	
	Number of firm years with missing CEOs' pay data	15,463	
	Number of firm years with missing employees' pay data	15,894	
	Number of firm years with ROE larger than 0.5 ^c	110	
	Number of firm years with missing required variables	2,092	
		1,104	
Less:			
	Number of firm years smaller than 75th quantile of wage unfairness	256	
Number of firm years in Top 25 quantile (2002–2014)			848
	Number of firm years larger than 25th quantile of wage unfairness	255	
Number of firm years in Low 25 quantile (2002–2014)			849

This table describes the sampling procedures for the Wage Sample Portfolio for the Ohlson test based on one-year wage unfairness performance, $CEO_PAY_RATIO_{1YR, t}$.

Table 3 (*continued*)

3) Philanthropy Sample Portfolio		N	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)		91,263	
Less:			
Number of firm years with zero total assets		369	
Number of firm years with missing GISC		292	
Number of unmatched firm years with Execucomp and BoardEx		38,239	
Number of unmatched firm years from MSCI–KLD		25,765	
Number of firm years with ROE larger than 0.5 ^c		417	
Number of firm years with missing required variables ^d		12,414	
		13,767	
Less:			
Number of firm years smaller than 75th quantile of domestic philanthropy		13,511	
Number of firm years in Top 25 quantile (2002–2014)			256
Number of firm years larger than 25th quantile of domestic philanthropy		3,220	
Number of firm years in Low 25 quantile (2002–2014)			10,547

This table describes the sampling procedures for the Philanthropy Sample Portfolio for the Ohlson test based on one-year domestic donation performance, $US_DON_{1YR, i}$.

4.2.3 Cost of Equity Samples

Three different samples are used: (1) Tax Sample, (2) Wage Sample and (3) Philanthropy Sample. Table 4 illustrates the sampling method for cost of equity samples. The Tax Sample consists of matched US firm years from Compustat, Audit Analytics, IBES Detail, CRSP files and Beta Suite by WRDS. The financial variables required for developing the control variables for the cost of equity model are available from Compustat. The implied cost of equity is estimated using the PEG Model following Easton (2004). Thus, the sample firms in the Tax Sample must satisfy the data requirement for one-year- and two-year-ahead future earnings data. These future earnings are collected from earnings forecast data from IBES Detail.

Firms' beta is collected from Beta Suite by WRDS. However, to obtain beta data, US firm-year data were first collected from CRSP files to obtain the PERMNO and CIK variables. Using the PERMNO number, the US firms from CRSP were matched with the firm-year beta data from the Beta Suite WRDS database. This is because the Beta Suite WRDS database has limited matching variables, and two of its matching variables—PERMNO and TICKER—are available in the CRSP file. Using TICKER for matching might be problematic because it is common for TICKER to be reused. For this reason, these databases are matched using PERMNO. Subsequently, US firm-year data from Compustat and Audit Analytics are matched to IBES Detail and to merged data from the CRSP file and Beta Suite WRDS. Financial variables are available from Compustat. This multilevel merging produces a Tax Sample with 7,388 firm-year observations.

The Wage Sample consists of matched US firm years from Compustat, Audit Analytics, IBES Detail, CRSP file, Beta Suite by WRDS, Execucomp and BoardEx. The Philanthropy Sample is a result of merging between the Wage Sample and the MSCI-KLD database. Both the Wage Sample and the Philanthropy Sample employ similar data-sorting procedures as described for the Tax Sample. The Wage Sample produces 1,272 firm-year observations, and the Philanthropy Sample has 3,932 firm-year observations.

Table 4: Sample Selection Method for Cost of Equity Test

1) Tax Sample	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)	91,263
Less:	
Number of firm years with zero total assets	369
Number of firm years with missing GISC	292
Number of unmatched firm years with IBES detail	48,744
Number of unmatched firm years with an intersect between CRSP file and Beta Suite by WRDS ^a	2,901
Number of firm years with missing required variables	31,569
Number of firm years for Tax Sample (2001–2014)	7,388
This table describes the sampling procedures for the Tax Sample for the cost of equity test based on one-year tax fairness performance, $CASH_TPR_{iYR, t}$.	
2) Wage Sample	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)	91,263
Less:	
Number of firm years with zero total assets	369
Number of firm years with missing GISC	292
Number of unmatched firm years with Execucomp and BoardEx	38,239
Number of unmatched firm years with IBES detail	10,520
Number of unmatched firm years with an intersect between CRSP file and Beta Suite by WRDS ^a	6,961
Number of firm years with missing required variables	33,610
Number of firm years for Wage Sample (2001–2014)	1,272
This table describes the sampling procedures for the Wage Sample for the cost of equity test based on one-year wage unfairness, $CEO_PAY_RATIO_{iYR, t}$.	
3) Philanthropy Sample	N
Number of matched US firm years between Compustat and Audit Analytics (2000–2014)	91,263
Less:	
Number of firm years with zero total assets	369
Number of firm years with missing GISC	292
Number of unmatched firm years with Execucomp and BoardEx	38,239
Number of unmatched firm years from MSCI-KLD	25,765
Number of unmatched firm years with IBES detail	2,024
Number of unmatched firm years with an intersect between CRSP file and Beta Suite by WRDS ^a	1,022
Number of firm years with missing required variables	19,620
	3,932
This table describes the sampling procedures for the Philanthropy Sample for the cost of equity test based on one-year domestic donation, $US_DON_{iYR, t}$. The other samples, which are using foreign donation ($NONUS_DON_{iYR, t}$) have similar number of firm-years observations to one-year domestic donation, $US_DON_{iYR, t}$.	

4.3 Summary of Statistics and Correlation

4.3.1 Audit Fees Test

4.3.1.1 Summary of Statistics by Corporate Citizenship Measures

Table 5 presents the summary statistics of three corporate citizenship measures—namely, tax fairness, wage unfairness and philanthropy—for the audit fees test. As shown in Table 5, Panel A, one-year tax fairness, $CASH_TPR_{1YR, t}$, has the largest sample size, with 12,851 firm-year observations. The lagged and non-lagged tax fairness measures report a median (mean) with high concentration around zero—that is, between 0.019 and 0.021 (0.027–0.028).²⁵ These distributions indicate that, on average, firms in full sample (Tax Sample) contribute less than 3 per cent of their total sales to taxes. The maximum distribution also indicates that their tax contributions are not higher than 10 per cent of total sales, except for the one-year lagged and two-year cumulative lagged tax fairness, $CASH_TPR_{1YR, t-1}$ and $CASH_TPR_{2YR, t-1}$, which have abnormally high tax fairness performance.

The exceptionally high maximum range for $CASH_TPR_{1YR, t-1}$ and $CASH_TPR_{2YR, t-1}$ relate to three firms in particular, which reflects large tax payments from gains in legal settlements and the reversal effects from *Financial Interpretation No. 48, Accounting for Uncertainty in Income Taxes: An Interpretation of FASB Statement No. 109* (FIN 48; FASB 2006). While the high maximum range for these three firms raises some concerns regarding their effects on the results, the standard deviation for these measures indicates that each measure has relatively low variations. Further, the quantile regression tends to eliminate bias from outliers by distributing the sample into quantiles. However, lagged tax fairness is expected to report more stable results because of their less volatile distribution.

²⁵ Consistent with the median regression (quantile regression) used in this study, the discussion of descriptive statistics focuses on the median distribution, although the discussion of mean distribution will not be omitted completely for comparability with prior studies, which usually report on mean distribution.

Panel (B) in Table 5 presents descriptive statistics for the main measure for wage unfairness. The one-year wage unfairness, $CEO_PAY_RATIO_{1YR, t}$, and one-year lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t-1}$, have similar distribution, in the median (mean) value, that is within the range of 18.634 - 18.779 (37.131 – 37.229). These statistics indicate that, at the median, the CEO in the Wage Sample earns approximately 19 times more than the average employee and, on average, CEOs earn about 37 times more. The large differences between the median and mean values for the wage unfairness variables suggests that the results would be substantially different if the analyses are using the OLS regression (which uses mean tendency) rather than the quantile regression (using median tendency).

Panel (C) in Table 5 reports the distribution for the philanthropy measure from 2001 to 2009. The samples for philanthropy span the period 2001–2009 because data are unavailable from the MSCI–KLD database beyond 2009. The samples for philanthropy also differ from the rest of the corporate citizenship measures by measurement. The philanthropy measures are binary scores that equal 1 if a firm has high performance in philanthropy specific to the type of donation (domestic or foreign donations), and 0 for poor performance.

The main philanthropy variable of interest, one-year domestic donation, $US_DON_{1YR, t}$, indicates that a larger proportion of firms in the sample have zero, or poor, performance in philanthropy. This distribution has implications for auditors' efforts. If higher domestic donation performance has trust effects, then the results associated with performing better, or lower, would have asymmetric effects on auditors' perceived information risk; therefore, their differential effects can be observed from the results. If having higher performance in domestic donations instead increases auditors' efforts, the reverse effects on auditors' pricing can be significantly observed from the results.

The second philanthropy variable, one-year foreign donation, $NONUS_DON_{1YR, t}$, has similar median and mean distribution as the one-year domestic donation, which is highly concentrated around zero. Lagged domestic donation and foreign donation, $US_DON_{1YR, t-1}$ and $NONUS_DON_{1YR, t-1}$, exhibit similar median (mean) distribution as their non-lagged measures. Overall, the variations in domestic donation and philanthropy donation suggest that the tests would provide different results for firms that have high and low performance in each philanthropy measure.

Table 5: Audit Fees Test
Descriptive Statistics of Corporate Citizenship (2001–2013)

Variables	N	Mean	Median	Std Dev.	Min.	Max.
(Panel A) Tax Fairness						
<i>CASH_TPR_{1YR, t}</i>	12,851	0.028	0.020	0.035	−0.735	0.877
<i>CASH_TPR_{2YR, t}</i>	12,722	0.027	0.020	0.033	−0.370	0.887
<i>CASH_TPR_{3YR, t}</i>	12,530	0.027	0.020	0.030	−0.245	0.850
<i>CASH_TPR_{1YR, t-1}</i>	11,602	0.027	0.019	0.035	−0.250	1.050
<i>CASH_TPR_{2YR, t-1}</i>	11,467	0.027	0.019	0.044	−0.142	3.453
<i>CASH_TPR_{3YR, t-1}</i>	11,257	0.028	0.021	0.031	−0.245	0.850
(Panel B) Wage Unfairness						
<i>CEO_PAY_RATIO_{1YR, t}</i>	823	37.131	18.779	59.437	0.000	575.856
<i>CEO_PAY_RATIO_{1YR, t-1}</i>	803	37.229	18.634	60.772	0.000	575.856
(Panel C) Philanthropy (2001 -2009)						
<i>US_DON_{1YR, t}</i>	8,505	0.021	0.000	0.144	0.000	1.000
<i>NONUS_DON_{1YR, t}</i>	8,505	0.020	0.000	0.138	0.000	1.000
<i>US_DON_{1YR, t-1}</i>	6,820	0.024	0.000	0.152	0.000	1.000
<i>NONUS_DON_{1YR, t-1}</i>	6,820	0.021	0.000	0.145	0.000	1.000

This table presents the descriptive statistics of corporate citizenship measures from 2001 – 2003 except for the philanthropy variables, which spans from 2001 – 2009 due to data unavailability. The variables are defined in the Table A1, Panel A.

4.3.1.2 Sample Distribution by Year for Audit Fees Test

Panel A in Table 6 presents the distribution for corporate citizenship measures by year from 2001 to 2013. Overall, non-lagged tax fairness measures provide a relatively higher number of firm-year observations than lagged tax fairness measures, although all measures have a significantly low number of observations in the early sample period.²⁶ The firm-year observations for non-lagged tax fairness measures increase abruptly from around 400 firm-year observations in 2002 to more than 1,000 firm-year observations in

²⁶ The year 2000 is dropped from testing because of the scarce number of observations available. The test results show no significant differences with or without the year 2000 in the samples. The year with dramatic decrease in data that is, from 2008-2009 is also been excluded in the additional analyses, but their results remain consistent with the results when both years are included in the analyses.

2003. The increase may be related to an increase in firm-year data collected by MSCI-KLD (Koh and Tong 2012). However, firm-year observations for non-lagged tax fairness show a decrease in 2008 and 2009, with firm-year observations decreasing by 100–200 firm-year observations before resuming to the normal rate of observations in 2010. The reduced number of firm-year observations in 2008 and 2009 may be related to the effects of the Global Financial Crisis.

Panel B in Table 6 presents the distribution of wage unfairness measures from 2001 to 2013. Both lagged and non-lagged wage unfairness indicate a low number of firm-year observations within the range of 15–77 throughout the 13-year sample period. The low number of firm-year observations is mainly because of a lack of employees' pay data. To alleviate concern regarding the small sample size for wage unfairness, an alternative measure is developed using only CEOs' compensation data. The alternative measure of wage unfairness—that is, CEO Compensation Excess, *CEO_EXCESS*—provides a much higher number of firm-year observations (as high as 10,060 firm-year observations) than the main measure of wage unfairness (Table A4). In total, one-year and one-year lagged wage unfairness, *CEO_PAY_RATIO*_{1YR, t} and *CEO_PAY_RATIO*_{1YR, t-1}, have distributions of 823 and 803 firm-year observations respectively, spanning from 2001 to 2013.

Panel C in Table 6 presents the distribution of philanthropy measures for the period 2001–2009. Both non-lagged domestic donation and foreign donation, *US_DON*_{1YR, t} and *NONUS_DON*_{1YR, t}, respectively have a relatively higher number of observations—almost parallel to the number of firm-year observations provided by the tax fairness variables. In addition, the philanthropy measures have a smaller number of firm-year observations in the early sample period, which is similar to the pattern identified in other corporate citizenship measures.

Table 6: Distribution of Individual Corporate Citizenship Measures by Year for Audit Fees Test (2001–2013)

Panel A: Tax Fairness												
Year	Non-Lagged						Lagged					
	$CASH_TPR_{1YR,t}$		$CASH_TPR_{2YR,t}$		$CASH_TPR_{3YR,t}$		$CASH_TPR_{1YR,t-1}$		$CASH_TPR_{2YR,t-1}$		$CASH_TPR_{3YR,t-1}$	
2001	293	2.3%	289	2.3%	287	2.3%	143	1.2%	142	1.2%	142	1.3%
2002	431	3.4%	430	3.4%	425	3.4%	363	3.1%	358	3.1%	355	3.1%
2003	1,108	8.6%	1,091	8.6%	1,077	8.6%	465	4.0%	462	4.0%	458	4.1%
2004	1,259	9.8%	1,237	9.7%	1,212	9.7%	1,063	9.2%	1,046	9.1%	1,030	9.1%
2005	1,127	8.8%	1,105	8.7%	1,077	8.6%	981	8.5%	963	8.4%	940	8.3%
2006	1,172	9.1%	1,155	9.1%	1,125	9.0%	1,006	8.7%	983	8.6%	955	8.5%
2007	1,108	8.6%	1,098	8.6%	1,071	8.5%	988	8.5%	970	8.5%	939	8.3%
2008	943	7.3%	929	7.3%	917	7.3%	832	7.2%	825	7.2%	800	7.1%
2009	920	7.2%	914	7.2%	898	7.2%	834	7.2%	819	7.1%	806	7.1%
2010	1,113	8.7%	1,108	8.7%	1,101	8.8%	999	8.6%	994	8.7%	980	8.7%
2011	1,124	8.7%	1,120	8.8%	1,114	8.9%	1,057	9.1%	1,052	9.2%	1,045	9.3%
2012	1,170	9.1%	1,165	9.2%	1,158	9.2%	1,024	8.8%	1,019	8.9%	1,011	9.0%
2013	1,083	8.4%	1,081	8.5%	1,068	8.5%	894	7.7%	885	7.7%	877	7.8%
2014	0	0.0%	0	0.0%	0	0.0%	953	8.2%	949	8.30%	942	8.4%
Total	12,851		12,722		12,530		11,602		11,467		11,280	

Table 6 (continued)

Panel B: Wage Unfairness								
Year	Non-Lagged				Lagged			
	<i>CEO_PAY_RATIO</i> _{IYR, t}				<i>CEO_PAY_RATIO</i> _{IYR, t-1}			
2001	25	3.0%			15	0.8%		
2002	42	5.1%			36	2.0%		
2003	69	8.4%			44	2.4%		
2004	74	9.0%			69	3.8%		
2005	64	7.8%			64	3.5%		
2006	64	7.8%			57	3.2%		
2007	74	9.0%			58	3.2%		
2008	64	7.8%			59	3.3%		
2009	68	8.3%			63	3.5%		
2010	77	9.4%			71	3.9%		
2011	69	8.4%			69	3.8%		
2012	69	8.4%			70	3.9%		
2013	64	7.8%			59	3.3%		
2014	0	0.0%			69	3.8%		
Total	823				803			

Panel C: Philanthropy (2001–2009)								
Year	Non-Lagged				Lagged			
	<i>US_DON</i> _{IYR, t}		<i>NONUS_DON</i> _{IYR, t}		<i>US_DON</i> _{IYR, t-1}		<i>NONUS_DON</i> _{IYR, t-1}	
2001	294	3.5%	294	3.5%	145	2.1%	145	2.1%
2002	437	5.1%	437	5.1%	369	5.4%	369	5.4%
2003	1,133	13.3%	1,133	13.3%	471	6.9%	471	6.9%
2004	1,294	15.2%	1,294	15.2%	1,091	16.0%	1,091	16.0%
2005	1,149	13.5%	1,149	13.5%	1,015	14.9%	1,015	14.9%
2006	1,185	13.9%	1,185	13.9%	1,032	15.1%	1,032	15.1%
2007	1,129	13.3%	1,129	13.3%	1,004	14.7%	1,004	14.7%
2008	955	11.2%	955	11.2%	848	12.4%	848	12.4%
2009	929	10.9%	929	10.9%	845	12.4%	845	12.4%
2010	0	0.0%	0	0.0%	1,019	14.9%	1,019	14.9%
Total	8,505		8,505		7,839		7,839	

This table provides sample distributions for each variable of interest: tax fairness (Panel A), wage unfairness (Panel B) and philanthropy (Panel C), as non-lagged and lagged effects. The variables are defined in the Table A1, Panel A.

4.3.1.3 Statistics Comparison by Corporate Citizenship Measures for Audit Fees

Table 7 presents the descriptive statistics comparison for all three corporate citizenship measures based on samples from one-year tax fairness ($CASH_TPR_{1YR, t}$, $N = 12,851$), wage unfairness ($CEO_PAY_RATIO_{1YR, t}$, $N = 823$) and domestic donation ($US_DON_{1YR, t}$, $N = 8,505$). As shown by the number of firm-year distributions in each sample, tax fairness has the largest sample size, followed by the sample provided by the philanthropy measure and the wage unfairness measure. The extremely low number of firm-year observations in wage unfairness—henceforth called the Wage Sample—leads to the development of an alternative measure for wage unfairness—namely, the CEO Compensation Excess. The CEO Compensation Excess provides a much larger sample size of 10,068 firm-year observations compared with 823 firm-year observations from the main measure of wage unfairness, $CEO_PAY_RATIO_{1YR, t}$.

As shown in Table 7, by comparison, the Wage Sample reports a much higher audit fee value, $AFee_t$, with a median (mean) value of US\$1.588 million (US\$3.521 million). The Wage Sample also has high distribution in total assets, as measured by the natural logarithm of total assets, $LnTA_t$, with a median (mean) of 7.780 (8.010). Consistent with its high distribution of audit fees and total assets, the Wage Sample is also highly leveraged (median = 0.562, mean = 0.574). Despite reporting consistently high statistics on audit fees, total assets and leverage ratio, the Wage Sample has lower statistics in inherent risk ratio, liquidity ratio and ROA compared with the other samples. Further, the Wage Sample has a number of firms with zero foreign operations. The characteristics of the Wage Sample show that it is biased towards large firms without foreign operations, but with low liquidity and performance. All of these might have positive implications for audit fees, because the higher the firm size, the more it drives auditors' efforts (Hay, Knechel and Wong 2006). In addition, with lower liquidity and performance, auditors might increase their inherent risk assessment because of concerning financial risk indicators. It is also expected that firms in the Wage Sample might be excluded from the Philanthropy Sample because most philanthropic firms have a high level of cash flow (Seifert 2003; Seifert, Morris and Bartkus 2004).

In contrast to the Wage Sample, the Tax Sample and the Philanthropy Sample exhibit similar characteristics. They each have relatively similar median (mean) values for $AFee_t$, of US\$1.375 million (US\$2.378 million) and US\$1.252 million (US\$2.513 million)

respectively. The median (mean) distribution for their total assets, $LnTA_t$, are within a similar range of 7.161 (7.312) and 7.021 (7.187) respectively. Both the Tax Sample and the Philanthropy Sample have a higher inherent risk ratio, liquidity ratio and ROA, but a lower leverage ratio than the Wage Sample. The Tax Sample and the Philanthropy Sample exhibit characteristics that are biased towards large firms that have offshore operations and a higher cash flow. All of these firms' characteristics are shown to lower auditors' efforts, except for the inherent risk proxy.

Contrary to firms' characteristics, which are discussed above, auditors' characteristics in the Tax Sample, the Wage Sample and the Philanthropy Sample indicate less variability. All samples report high statistics of auditor reputation, $BIG4_t$, non-audit fees ratio, $LnNASFee_t$, financial year-end during audit peak season, long audit tenure, AUD_TENURE_t of 5–7 years and an audit report lag, AUD_LAG_t , of less than 60 days. All of these are likely to drive audit fees upward.

4.3.1.3.1 Correlation Analysis for Audit Fees Test

Table 8 presents the results of the Pearson Correlation Analysis between corporate citizenship measures and audit fees, and several control variables. The corporate citizenship measures of tax fairness, wage unfairness and domestic donation show no significant correlation with audit fees, $LnAFee_t$. These results suggest that while tax fairness (negative relation) and wage unfairness (positive relation) behave according to the expectations in hypotheses H1 (a) and H1(b) with audit fees, the correlations are minimal. Both tax fairness and wage unfairness have a positive low correlation with ROA_t . This suggests that higher-performing firms relate to both tax fairness (good citizenship) and wage unfairness (poor citizenship).

Foreign donation has at least a low correlation with audit fees, $LnAFee_t$. This contrary to the relation indicated with domestic donation, which is weak and against the prediction in H1(c). Foreign donation also shows at least a low correlation with firm size and both environmental indicators (strength and concern) because rationally larger corporations usually have international operations. However, these correlations suggests that most of these firms also have a high environmental risk, and this is consistent with Mattingly and Berman (2006). Given the relation between foreign donation and large firm size and the environmental factor, foreign donation is expected to drive audit fees.

Table 7: Distribution Comparison in Individual Sample for Audit Fees Test (2001–2013)

Variable	(1) Tax Sample			(2) Wage Sample			(3) Philanthropy Sample (2001 -2009)		
	<i>CASH_TPR_{IYR,t}</i> (<i>N</i> = 12, 851)			<i>CEO_PAY_RATIO_{IYR,t}</i> (<i>N</i> = 823)			<i>US_DON_{IYR,t}</i> (<i>N</i> = 8, 505)		
	Mean	Median	Std Dev.	Mean	Median	Std Dev.	Mean	Median	Std Dev.
Dependent variable									
<i>AFee_t</i> (\$k) ¹	2,737.4	1,375.0	4,161.12	3,520.7	1,588.0	5,572.0	2,512.8	1,252.0	3,849.2
<i>LnAFee_t</i> (\$k) ¹	7.296	7.226	1.067	7.437	7.370	1.157	7.195	7.132	1.086
Control variable									
<i>TA_t</i> (\$m) ¹	6,440.3	1,287.6	19,384.1	9,670.9	2,393.1	14,901.3	5,522.5	1,119.5	16,570.1
<i>LnTAt</i>	7.312	7.161	1.599	8.010	7.780	1.594	7.187	7.021	1.577
<i>IR_PROXY_t</i>	0.238	0.215	0.159	0.163	0.132	0.137	0.241	0.216	0.160
<i>LEV_t</i>	0.499	0.498	0.237	0.574	0.562	0.209	0.490	0.492	0.239
<i>LIQ_t</i>	2.476	1.924	2.052	1.603	1.372	0.989	2.507	1.900	2.206
<i>ROAt</i>	0.075	0.060	0.064	0.071	0.059	0.047	0.075	0.062	0.063
<i>M&At</i>	0.166	0.000	0.372	0.130	0.000	0.337	0.075	0.000	0.263
<i>RESTRUC_t</i>	0.179	0.084	0.385	0.143	0.071	0.347	0.248	0.091	4.747
<i>FOREIGN_t</i>	0.591	1.000	0.492	0.392	0.000	0.489	0.552	1.000	0.497
<i>BIG4_t</i>	0.922	1.000	0.268	0.973	1.000	0.161	0.932	1.000	0.252
<i>AUD_CHANGE_t</i>	0.035	0.000	0.183	0.022	0.000	0.146	0.040	0.000	0.195
<i>NASFee_t</i> (\$k) ¹	960.479	282.000	2,816.8	1,375.9	298.000	4,291.3	1,007.9	287.000	3,032.7
<i>LnNASFee_t</i> (\$k) ¹	5.578	5.642	1.666	5.679	5.697	1.841	5.616	5.659	1.649
<i>AUD_TENURE_t</i> (YEARS)	6.425	6.000	3.473	6.883	7.000	3.423	4.969	5.000	2.327

Table 7 (*continued*)

Variable	Mean	Median	Std Dev.	Mean	Median	Std Dev.	Mean	Median	Std Dev.
<i>LnAUD_TENURE_t</i>	1.685	1.792	0.636	1.775	1.946	0.601	1.472	1.609	0.548
<i>PREM_CITY_t</i>	0.187	0.000	0.390	0.112	0.000	0.315	0.190	0.000	0.392
<i>AUD_GEODISP_t</i>	0.849	1.000	0.358	0.894	1.000	0.308	0.845	1.000	0.362
<i>RESTATE_t</i>	0.134	0.000	0.341	0.124	0.000	0.330	0.157	0.000	0.363
<i>G_CONCERN_t</i>	0.001	0.000	0.029	0.000	0.000	0.000	0.002	0.000	0.041
<i>AUD_LAG_t (DAYS)</i>	58.587	58.000	22.881	53.891	56.000	14.315	59.022	58.000	27.102
<i>SqAUD_LAG_t</i>	7.563	7.616	1.181	7.269	7.483	1.026	7.559	7.616	1.372
<i>BUSY_SEASON_t</i>	0.751	1.000	0.432	0.857	1.000	0.351	0.747	1.000	0.435
<i>INVMILLS_t</i>	0.215	0.176	0.171	0.146	0.116	0.127	0.229	0.193	0.176
<i>ENV_STR_{t-1}²</i>	0.312	0.000	0.608	0.442	0.000	0.718	0.299	0.000	0.584
<i>ENV_CON_{t-1}²</i>	0.425	0.000	0.632	0.609	0.000	0.738	0.470	0.000	0.637
<i>ENV_STR_t²</i>	0.288	0.000	0.746	0.284	0.000	0.723	0.170	0.000	0.516
<i>ENV_CON_t²</i>	0.264	0.000	0.714	0.338	0.000	0.860	0.298	0.000	0.765
<i>EMP_STR_{t-1}²</i>	0.312	0.000	0.608	0.442	0.000	0.718	0.299	0.000	0.584
<i>EMP_CON_{t-1}²</i>	0.425	0.000	0.632	0.609	0.000	0.738	0.470	0.000	0.637
<i>EMP_STR_t²</i>	0.327	0.000	0.629	0.473	0.000	0.741	0.283	0.000	0.568
<i>EMP_CON_t²</i>	0.390	0.000	0.614	0.571	0.000	0.731	0.497	0.000	0.651

Table 7 presents the sample distribution for each variable of interest: tax fairness (using measure of *CEO_TPR_{1YR, t}*), wage unfairness (using measure of *CEO_PAY_RATIO_{1YR, t}*) and philanthropy (using measure of *US_DONI_{1YR, t}*). The variables are defined in Table A1, Panel A.

¹ Variable is reported in thousands, (\$k) and millions (\$m) respectively.

² The CSR controls, which indicate the firm's environmental performance (strength and concern) and employee-related performance is an interacted-indicator specified as one and two-level of performance in regression.

Table 8: Summary of Correlation Matrix for Audit Fees Test (2001–2013)

Variables	<i>LnAFee_t</i>	<i>LnTA_t</i>	<i>IR_PROXY_t</i>	<i>LEV_t</i>	<i>LIQ_t</i>	<i>ROA_t</i>	<i>FOREIGN_t</i>	<i>BIG4_t</i>	<i>ENV_STR_t</i>	<i>ENV_CON_t</i>	<i>EMP_STR_t</i>	<i>EMP_CON_t</i>
<i>LnAFee_t</i>												
<i>CASH_TPR_{1YR,t}</i> (N=12,851)	−0.029	−0.001	−0.112	−0.143	0.149	0.398	0.038	−0.042	0.014	0.011	0.044	−0.028
<i>CASH_TPR_{2YR,t}</i> (N=12,722)	−0.034	0.006	−0.128	−0.151	0.154	0.374	0.043	−0.041	0.019	0.016	0.058	−0.027
<i>CASH_TPR_{3YR,t}</i> (N=12,530)	−0.040	0.013	−0.142	−0.155	0.155	0.369	0.042	−0.038	0.027	0.017	0.065	−0.033
<i>CASH_TPR_{1YR,t-1}</i> (N=11,602)	−0.031	0.018	−0.121	−0.133	0.123	0.318	0.046	−0.020	0.019	0.015	0.057	−0.028
<i>CASH_TPR_{2YR,t-1}</i> (N=11,467)	−0.031	0.015	−0.105	−0.105	0.092	0.238	0.036	−0.013	0.015	0.016	0.046	−0.016
<i>CASH_TPR_{3YR,t-1}</i> (N=11,257)	−0.050	0.025	−0.147	−0.151	0.141	0.351	0.044	−0.025	0.029	0.012	0.070	−0.037
<i>CEO_PAY_RATIO_{1YR,t}</i> (N=823)	0.079	0.076	−0.149	0.042	−0.178	0.192	0.134	0.034	0.005	−0.018	−0.040	0.233
<i>CEO_PAY_RATIO_{1YR,t-1}</i> (N=803)	0.100	0.085	−0.137	0.044	−0.166	0.204	0.135	0.032	0.013	−0.022	−0.043	0.222
<i>US_DON_{1YR,t}</i> (N=8,505)	0.090	0.134	−0.014	0.035	−0.049	0.022	0.041	0.017	0.183	0.064	0.126	0.055
<i>NONUS_DON_{1YR,t}</i> (N=8,505)	0.231	0.235	−0.023	0.025	−0.045	0.061	0.103	0.035	0.271	0.236	0.229	0.095
<i>US_DON_{1YR,t-1}</i> (N=7,839)	0.088	0.133	−0.021	0.046	−0.054	0.024	0.031	0.026	0.175	0.074	0.117	0.060
<i>NONUS_DON_{1YR,t-1}</i> (N=7,839)	0.247	0.245	−0.022	0.018	−0.046	0.081	0.103	0.039	0.260	0.236	0.235	0.095

Table 8 provides the results of the correlation analysis for each variable of interest: tax fairness, wage unfairness and philanthropy. All the variables span the period from 2001-2013 with exception to philanthropy variables, which is restricted to 2001 – 2009. The variables are defined in Table A1, Panel A.

4.3.2 Ohlson Model Test

4.3.2.1 Descriptive Statistics—Tax Sample Portfolio for Ohlson Test

Panels (A) and (B) of Table 9 present the descriptive statistics for the Tax Sample Portfolio used in the Ohlson test, which is based on firms' high or low tax fairness performance. The Low 25 quantile consists of firms with tax fairness performance at the 25th quantile and lower. Thus, firms in the Top 25 quantile are identified as those with high corporate citizenship, and firms in the Low 25 quantile are those with low corporate citizenship performance. While the descriptive statistics of audit fees focuses on median rather than mean, consistent with the use of median regression (quantile regression) to test the hypotheses, the discussion of descriptive statistics for the Ohlson test focuses on mean rather than median, consistent with the use of OLS regression in the hypotheses testing.

Panel (A) in Table 9 describes the Tax Sample Portfolio, which is using non-lagged tax fairness. The Top 25 quantile for non-lagged tax fairness has a high mean share price, P_t , and this trend is similar to the Top 25 quantiles for lagged tax fairness. The Top 25 quantile for the three-year cumulative lagged tax fairness, $CASH_TPR_{3YR, t-1}$, reports the highest mean, P_t , of US\$1,187.858, while the one-year cumulative lagged tax fairness, $CASH_TPR_{1YR, t-1}$, reports the lowest mean, P_t , of US\$80.948. In stark contrast, the Low 25 quantiles report a mean (median) range of between US\$17.786 and US\$18.469 (US\$10.450–US\$10.970).

This has implications for the results because high share prices often indicate effects associated with earnings. Given the distribution in share prices above, it is expected that Top 25 quantile firms will have higher R-squared in the results consistent with earnings effects. Further investigation showed that the extremely high share price belonged to a firm called Berkshire Hathaway, which has been well known since the 1980s for having an above average share price. BVE_t for the Top 25 quantile firms is exceptionally volatile and high compared with the BVE_t for the Low 25 quantiles. BVE_t is specifically lower for

the three-year cumulative tax fairness, $CASH_TPR_{3YR, t}$, which is inconsistent with its mean share price, P_t , which is reported to be exceptionally high.²⁷

4.3.2.1.1 Correlation Analysis—Tax Sample Portfolio for Ohlson Test

Table 10 provides the results of the Pearson Correlation Analysis for the Tax Sample Portfolio using non-lagged tax fairness. The correlation analysis for lagged tax fairness produces similar results. Thus, only results based on analysis of non-lagged tax fairness are reported. Of the Top 25 quantiles, only one-year tax fairness, $CASH_TPR_{1YR, t}$ reports a strong correlation between the price, P_t , and the abnormal earnings, AE_t ($r = 0.858$). The three-year cumulative tax fairness, $CASH_TPR_{3YR, t}$, indicates moderate to strong correlation between the price, P_t , and BVE, BVE_t , in its Top and Low 25 quantiles ($r = 0.994$ and $r = 0.557$, respectively). These results provide the expectation that lagged and non-lagged three-year cumulative tax fairness will drive significant results and R-squared in regressions.

²⁷ Additional analyses have been conducted to exclude the highest data point - \$141,600 of P per share, \$586,624 of BVE per share and \$2,671 of AE per share and the results indicate a weaker correlation, but remain consistent with the results provided in the Thesis.

Table 9: Tax Sample Portfolio for Ohlson Test

Panel A: Descriptive Statistics—Tax Sample Portfolio (2002–2014) (Using Non-Lagged Tax Fairness)												
1) One-year Tax Fairness, $CASH_TPR_{1YR,t}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	10,248	74.243	24.780	2,084.3	0.011	141,600.0	10,249	16.245	9.340	28.063	0.000	1,349.0
BVE_t	10,248	154.159	12.062	8,211.4	0.007	586,624.0	10,249	59.205	7.193	4,838.2	0.000	489,794.0
AE_t	10,248	0.509	0.111	35.797	−488.1	2,671.8	10,249	−0.626	−0.064	7.892	−79.830	730.501
2) Two-year Cumulative Tax Fairness, $CASH_TPR_{2YR,t}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	9,937	86.160	24.300	2,379.6	0.011	141,600.0	9,938	16.994	9.790	31.398	0.000	1,349.0
BVE_t	9,937	108.322	12.023	5,966.1	0.007	575,399.0	9,938	61.010	7.139	4,913.4	0.000	489,794.0
AE_t	9,937	−0.066	0.072	50.241	−3,593.7	2,671.8	9,938	−0.450	−0.015	8.001	−79.830	730.50
3) Three-year Cumulative Tax Fairness, $CASH_TPR_{3YR,t}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	9,522	105.353	23.965	2,707.6	0.011	141,600.0	9,523	17.031	10.100	27.137	0.003	1,349.0
BVE_t	9,522	62.187	12.027	1,707.4	0.008	79,819.5	9,523	11.266	7.110	46.492	0.000	4,163.0
AE_t	9,522	−0.217	0.044	51.995	−3,593.7	2,671.8	9,523	−0.406	−0.003	2.882	−72.849	167.811

This table presents the descriptive statistics for the variables required by the Ohlson model [9] using Tax sample-portfolio from 2002 - 2014. P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

Table 9 (*continued*)

Panel B: Descriptive Statistics—Tax Sample Portfolio for Ohlson Test (2002–2014) (Using Lagged Tax Fairness)												
1) One-year Lagged Tax Fairness, $CASH_TPR_{1YR, t-1}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	10,008	80.948	23.370	2,232.7	0.011	141,600.0	10,009	17.786	10.450	36.187	0.000	1,991.0
BVE_t	10,008	104.196	11.908	5,914.2	0.008	575,399.0	10,009	110.851	7.314	6,997.6	0.000	500,244.0
AE_t	10,008	−0.498	0.030	48.375	−3,593.7	2,671.8	10,009	−0.491	0.002	21.360	−1,919.0	730.501
2) Two-year Cumulative Lagged Tax Fairness, $CASH_TPR_{2YR, t-1}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	9,591	93.776	23.050	2,510.9	0.011	141,600.0	9,592	18.325	10.970	39.24	0.003	1,991.0
BVE_t	9,591	58.105	11.908	1,698.5	0.006	87,546.7	9,592	64.363	7.252	5,108.0	0.000	500,244.0
AE_t	9,591	−0.828	0.010	41.073	−3,593.7	1,285.8	9,592	−0.505	0.004	20.501	−1,919.0	167.81
3) Three-year Cumulative Lagged Tax Fairness, $CASH_TPR_{3YR, t-1}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	9,060	117.858	22.940	2,930.8	0.011	141,600.0	9,060	18.469	10.890	37.887	0.003	1,991.0
BVE_t	9,060	73.288	11.927	1,955.0	0.006	87,546.7	9,060	11.862	7.295	55.723	0.000	4,163.0
AE_t	9,060	−0.544	0.003	46.398	−3,593.7	1,558.8	9,060	−0.462	0.001	20.398	−1,919.0	167.811

This table presents the descriptive statistics for the variables required by the Ohlson model [9] using Tax sample-portfolio (tax fairness variables in lagged effects) from 2002 - 2014. P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

Table 10: Correlation Matrix—Tax Sample Portfolio for Ohlson Test (2002–2014)
(Using Non-Lagged Tax Fairness)

1) One-year Tax Fairness, $CASH_TPR_{1YR,t}$								
	Top 25Q				Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	10,248				10,249			
2) BVE_t	10,248	0.151			10,249	0.008		
3) AE_t	10,248	0.858	-0.009		10,249	0.035	0.917	
2) Two-year Cumulative Tax Fairness, $CASH_TPR_{2YR,t}$								
	Top 25Q				Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	9,937				9,938			
2) BVE_t	9,937	0.251			9,938	0.009		
3) AE_t	9,937	0.224	-0.040		9,938	0.085	0.918	
3) Three-year Cumulative Tax Fairness, $CASH_TPR_{3YR,t}$								
	Top 25Q				Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	9,522				9,523			
2) BVE_t	9,522	0.994			9,523	0.557		
3) AE_t	9,522	0.164	0.103		9,523	0.233	0.530	

This table presents the results of correlation analysis for the variables required by the Ohlson model [9] for Tax sample-portfolio (2002 -2014) using lagged tax fairness variables. P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

4.3.2.2 Descriptive Statistics—Wage Sample Portfolio for Ohlson Test

Table 11 describes the sample distribution for the Top and Low 25 quantiles of the Wage Sample used in the Ohlson test, sorted according to firms' performance in wage unfairness. The Top 25 quantile groups the firms with high wage unfairness, and the Low 25 quantile groups the firms with low performance in wage unfairness. In reverse, the Top 25 quantile is therefore implied for firms with poor corporate citizenship in terms of wage fairness, and the Low 25 quantile is implied for firms with high corporate citizenship performance in wage fairness.

Overall, the mean price, P_t , for the Top 25 quantile firms is relatively higher than the Low 25 quantile firms for both lagged and non-lagged wage unfairness, $CEO_PAY_RATIO_{1YR,t-1}$ and $CEO_PAY_RATIO_{1YR,t}$. The mean for price, P_t , for the Top 25 quantile firms for $CEO_PAY_RATIO_{1YR,t-1}$ and $CEO_PAY_RATIO_{1YR,t}$ is US\$43.2571 and US\$42.264 respectively.

The mean P_t for the Low 25 quantile firms is relatively lower, but not significantly different from the Top 25 quantile firms. Both $CEO_PAY_RATIO_{1YR, t-1}$ and $CEO_PAY_RATIO_{1YR, t}$ have a mean price of US\$32.362 and US\$33.354 respectively. The mean of BVE, BVE_t , for both the Top and Low 25 quantiles of wage unfairness have less significant differences—that is, between 19.290 and 20.407. Abnormal earnings, AE_t , have a positive mean for the Top 25 quantile and a negative mean for the Low 25 quantile for both lagged and non-lagged wage unfairness. These statistics suggest that firms that perform high in wage unfairness have similar characteristics to over-performing firms.

4.3.2.2.1 Correlation Analysis—Wage Sample Portfolio for Ohlson Test

Table 12 provides the results for the Pearson Correlation Analysis for the Wage Sample Portfolio. Both lagged and non-lagged wage unfairness, $CEO_PAYOUT_RATIO_{1YR, t-1}$ and $CEO_PAYOUT_RATIO_{1YR, t}$, have a price, P_t , that is moderately strongly correlated with BVE, BVE_t ($0.660 \geq r \leq 0.731$) in the Top and Low 25 quantiles. These results are consistent with the expectation of the hypothesis in H2 (b). Abnormal earnings for both lagged and non-lagged wage unfairness indicate only a weak correlation with BVE_t in either the Top or Low 25 quantiles.

Table 11: Descriptive Statistics—Wage Sample Portfolio for Ohlson Test (2002–2014)

1) One-year Wage Unfairness, $CEO_PAY_RATIO_{1YR,t}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	848	42.264	34.225	35.996	1.39	357.56	849	33.354	23.73	42.9	0.51	686
BVE_t	848	19.29	14.602	18.662	1.354	176.382	849	20.354	13.989	27.4	0.191	323.9
AE_t	848	0.082	0.21	1.804	−21.272	10.494	849	−0.696	0.008	3.302	−37.175	16.472
2) One-year Lagged Wage Unfairness, $CEO_PAY_RATIO_{1YR,t-1}$												
Variable	Top 25Q						Low 25Q					
	N	Mean	Median	Std. Dev.	Min	Max	N	Mean	Median	Std. Dev.	Min	Max
P_t	818	43.257	35.280	36.051	1.560	357.560	819	32.362	22.911	40.082	0.360	686.000
BVE_t	818	19.550	15.027	18.339	1.354	176.382	819	20.407	13.985	27.606	0.191	323.871
AE_t	818	0.011	0.191	1.997	−21.272	10.494	819	−0.681	0.031	3.716	−47.153	16.472

This table presents descriptive statistics for the variables required by the Ohlson model [9] for the Wage sample-portfolio from 2002 -2014. P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

**Table 12: Correlation Matrix—Wage Sample Portfolio for Ohlson Test
(2002–2014)**

1) One-year Wage Unfairness, $CEO_PAY_RATIO_{1YR,t}$								
	Top 25Q				Low 25Q			
	N	1	2	3	N	1	2	3
1) P_t	848				849			
2) BVE_t	848	0.679			849	0.676		
3) AE_t	848	0.259	0.156		849	0.184	-0.083	
2) One-year Lagged Wage Unfairness, $CEO_PAY_RATIO_{1YR,t-1}$								
	Top 25Q				Low 25Q			
	N	1	2	3	N	1	2	3
1) P_t	818				819			
2) BVE_t	818	0.66			819	0.731		
3) AE_t	818	0.216	0.051		819	0.191	-0.018	

This table presents the results of correlation analysis for the variables required by the Ohlson model [9] for Wage sample-portfolio (2002 -2014). P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

4.3.2.3 Descriptive Statistics—Philanthropy Sample Portfolio for Ohlson Test

Table 13 provides the descriptive statistics for the Philanthropy Sample Portfolio from 2001 to 2009 for the Ohlson Model test. The Top 25 quantile represents firms with high performance in philanthropy, and the Low 25 quantile represents firms with low performance in philanthropy. As shown in Panel A of Table 13, the Low 25 quantile shows a similar mean and median distribution for lagged and non-lagged one-year domestic donation, $US_DON_{1YR,t}$, and foreign donation, $NONUS_DON_{1YR,t}$. The distribution in the Top 25 quantile has more variations, with foreign donation, $NONUS_DON_{1YR,t}$, reporting a relatively higher mean (median) in price, P_t , BVE, BVE_t and abnormal earnings, AE_t . The results suggest that firms with high foreign donation might drive significant results in the Ohlson test, which is inconsistent with this study's expectation.

4.3.2.3.1 Correlation Analysis—Philanthropy Sample Portfolio for Ohlson Test

Table 14 provides the results from the Pearson Correlation Analysis for the Philanthropy Sample Portfolio. The results indicate that BVE, BVE_t , has a correlation at moderate strength with the firm's share price, P_t , in all Top and Low 25 quantiles. However, the

correlation is consistently stronger for the Low 25 quantile for both lagged and non-lagged domestic donations and foreign donations. Although it is unexpected that the Low 25 quantile firms, in which the firms with low philanthropy performance would have P_t to be highly correlated with BVE_t , it is likely that these correlations are driving the significantly large sample size in the Low 25 quantile.

Table 13: Philanthropy Sample Portfolio—Donors and Non-Donors for Ohlson Test (2002–2009)

1) One-year Domestic Donation, $US_DON_{IYR,t}$												
Top 25Q							Low 25Q					
Variable	N	Mean	Median	Std Dev.	Min.	Max.	N	Mean	Median	Std Dev.	Min.	Max.
P_t	265	39.019	36.030	22.281	1.230	184.000	10,547	32.497	26.890	42.402	0.159	1,765.0
BVE_t	265	17.535	15.538	10.936	0.885	67.671	10,547	15.891	12.214	28.744	0.040	1,249.3
AE_t	265	-0.426	0.092	3.634	-48.316	4.600	10,547	-0.345	0.055	2.937	-65.448	105.828
2) One-year Foreign Donation, $NONUS_DON_{IYR,t}$												
Top 25Q							Low 25Q					
Variable	N	Mean	Median	Std Dev.	Min.	Max.	N	Mean	Median	Std Dev.	Min.	Max.
P_t	188	50.374	40.135	36.084	3.020	226.640	10,624	32.343	26.910	42.067	0.159	1,765.0
BVE_t	188	16.901	11.453	15.750	0.885	108.554	10,624	15.914	12.298	28.616	0.040	1,249.3
AE_t	188	-0.293	0.090	4.144	-48.316	5.855	10,624	-0.348	0.056	2.931	-65.448	105.828
3) One-year Lagged Domestic Donation, $US_DON_{IYR,t}$												
Top 25Q							Low 25Q					
Variable	N	Mean	Median	Std Dev.	Min.	Max.	N	Mean	Median	Std Dev.	Min.	Max.
P_t	272	39.159	35.96	23.447	1.23	209.23	11,864	32.436	26.5	45.352	0.159	1,991.00
BVE_t	272	18.057	15.726	11.35	0.885	68.092	11,864	16.094	12.257	30.93	0.04	1,452.80
AE_t	272	-0.365	0.115	3.573	-48.316	4.6	11,864	-0.299	0.054	2.885	-65.448	105.828
4) One-year Lagged Foreign Donation, $NONUS_DON_{IYR,t}$												
Top 25Q							Low 25Q					
Variable	N	Mean	Median	Std Dev.	Min.	Max.	N	Mean	Median	Std Dev.	Min.	Max.
P_t	193	50.841	40.27	34.335	3.02	226.64	11,943	32.291	26.49	45.081	0.159	1,991.00
BVE_t	193	18.556	12.445	18.583	0.885	144.7	11,943	16.099	12.329	30.784	0.04	1,452.80
AE_t	193	-0.393	0.122	4.277	-48.316	5.855	11,943	-0.299	0.054	2.875	-65.448	105.828

This table presents the descriptive statistics for the variables required by the Ohlson model [9] for the Philanthropy sample-portfolio from 2002 - 2014. P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

Table 14: Correlation Matrix—Philanthropy Sample Portfolio for Ohlson Test (2001–2009)

1) One-year Domestic Donation, $US_DON_{1YR,t}$								
Top 25Q					Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	265				10,547			
2) BVE_t	265	0.494			10,547	0.878		
3) AE_t	265	0.215	0.036		10,547	0.094	−0.078	
2) One-year Foreign Donation, $NONUS_DON_{1YR,t}$								
Top 25Q					Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	188				10,624			
2) BVE_t	188	0.801			10,624	0.878		
3) AE_t	188	0.187	0.076		10,624	0.094	−0.078	
3) One-year Lagged Domestic Donation, $US_DON_{1YR,t-1}$								
Top 25Q					Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	272				11,864			
2) BVE_t	272	0.555			11,864	0.889		
3) AE_t	272	0.205	0.066		11,864	0.223	0.087	
4) One-year Lagged Foreign Donation, $NONUS_DON_{1YR,t-1}$								
Top 25Q					Low 25Q			
	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>N</u>	<u>1</u>	<u>2</u>	<u>3</u>
1) P_t	193				11,943			
2) BVE_t	193	0.723			11,943	0.890		
3) AE_t	193	0.146	−0.087		11,943	0.224	0.089	

This table presents the results of correlation analysis for the variables required by the Ohlson model [9] for Philanthropy sample-portfolio (2002 -2014). P_t is the firm's share price, BVE_t is the BVE per share and AE_t is the abnormal earnings for the period per share. Common shares fully diluted (*CSHFD*, Compustat#181) is used for scaling. All variables are defined in Table A1, Panel A and Panel B.

4.3.3 Cost of Equity Test

4.3.3.1 Descriptive Statistics—Tax Sample for Cost of Equity Test

Panel (A) in Table 15 presents the descriptive statistics for the Tax Sample for the cost of equity test. The cost of equity, COE_TAX_t , in the Tax Sample has a median (mean) of 9.5 (11.7) per cent. The median and mean for the cost of equity are fairly consistent with what

have been reported in prior studies (Botosan 1997; Easton 2004; Lee and Wang 2010 El Ghouli et al. 2011; 2). For example, Lee and Wang (2010) report the median (mean) cost of equity estimate of 10.86 (10.76) per cent. In another study, Easton (2004) reports marginally higher statistics for cost of equity median, that is at 11.3 per cent. Comparatively, Lee and Wang (2010) has more similarities to this study in terms of sample period and also, more recent. Although, Easton's (2004) study has longer sample period that is 19-years range where he is using the data is from 1981 - 1999.

As for the variables of interest, both lagged and non-lagged tax fairness have median (mean) concentration of near zero and not greater than 0.032. This suggest that on average and at median, the sample firms perform poorly with respect of tax fairness – that is most firms are having their tax payment not larger than 3.2 per cent out of their sales. In relation to distribution on beta, $BETA_t$, the Tax Sample has a median (mean) of 1.056 (1.161). This statistic number is consistent with the distribution reported in prior literature. For example, El Ghouli et al. (2011) find that their sample has a beta mean of 1.05. Other studies that also report relatively similar mean distribution on beta are Ali, Hwang and Trombley (2003) and Botosan (1997), which have beta mean of 1.06 and 1.14 respectively.

Turning to control variables, none in the Tax Sample has shown unusual distribution when compared to prior studies. The total assets, $LnTA_t$ has a high median (mean) of 7.849 (7.990) but this is similar to the statistics reported in El Ghouli et al. (2011), which has total assets mean of 7.85. The Tax Sample is also highly leveraged, LEV_t , with a median (mean) of 0.573 (0.568). While it is marginally higher than distribution of leverage reported in for instance, El Ghouli et al. (2011) at 0.47, it is not significantly different. As for the long-term growth, LTG_t , this sample has a mean of 9.30 per cent that is, lower when compared to 14.21 percent as reported in El Ghouli et al. (2011).

4.3.3.1.1 Correlation Analysis—Tax Sample for Cost of Equity Test

Table 16 provides the results of the Pearson Correlation Analysis for the Tax Sample. The results indicate that all the variables of interest have negative correlations with the cost of equity capital, COE_TAX_t , which are consistent with the prediction in H3 (a). However, none of these correlations are significantly strong although, one-year tax fairness, $CASH_TPR_{1YR,t}$ has at least a weak correlation that is, at $r = -0.121$. The results

on non-lagged tax fairness and their lagged effects exhibit results with strong correlations at lowest, $r = 0.663$ and at highest, $r = 0.966$ indicating data stickiness. None of the tax fairness variables have significant correlations with other control variables except for, $BETA_t$ where they have weak correlations within in a range of $-0.134 \geq r \leq -0.194$.

In relation to other control variables, four out of six have at least weak correlations with the cost of equity capital, COE_TAX_t . These variables are the natural logarithm of total assets, $LnTA_t$ where its correlation strength is at $r = -0.107$, the firm's risk, $BETA_t$ that is, at $r = 0.193$, and the natural logarithm of forecast error dispersion, Ln_FEDISP_t and the long-term growth rate, LTG_t , which are at $r = 0.230$ and $r = 0.236$ respectively. Other than that, control variables that indicate correlations with each other are; 1) the natural logarithm of total assets, $LnTA_t$ and beta, $BETA_t$ ($r = -0.186$), 2) leverage, LEV_t , and the natural logarithm of total assets, $LnTA_t$ ($r = 0.526$), 3) leverage, LEV_t , and beta, $BETA_t$ ($r = -0.253$).

Table 15: Descriptive Statistics—Tax Sample for Cost of Equity Test (2001–2014)

Variable	N	Mean	Median	Std. Dev.	Min	Max
<i>Dependent variable</i>						
COE_TAX_t	7,388	0.117	0.095	0.095	0.001	2.850
<i>Independent variable</i>						
$CASH_TPR_{1YR, t}$	7,388	0.029	0.019	0.037	-0.378	0.598
$CASH_TPR_{2YR, t}$	7,256	0.030	0.021	0.034	-0.140	0.405
$CASH_TPR_{3YR, t}$	7,096	0.030	0.022	0.032	-0.115	0.340
$CASH_TPR_{1YR, t-1}$	6,984	0.032	0.022	0.039	-0.220	0.598
$CASH_TPR_{2YR, t-1}$	6,609	0.031	0.022	0.035	-0.176	0.405
$CASH_TPR_{3YR, t-1}$	6,421	0.031	0.022	0.033	-0.103	0.340
<i>Control variable</i>						
$LnTA_t$	7,388	7.990	7.849	1.694	3.065	14.761
$BETA_t$	7,388	1.161	1.056	0.727	-0.864	6.489
LEV_t	7,388	0.568	0.573	0.226	0.000	0.999
MTB_t	7,388	3.265	1.941	14.279	0.051	738.318
LN_FEDISP_t	7,388	-3.877	-3.676	2.879	-19.649	5.111
LTG_t	7,388	0.930	0.184	5.857	0.000	238.000

This sample provides descriptive statistics for the Tax Sample for the cost of equity test. The distribution of the control variables in the table is according to the largest sample, which uses the $CASH_TPR_{1YR, t}$ sample. The implied cost of equity is estimated using the PEG Model following Easton (2004). All variables are defined in Table A1, Panel A and Panel C.

Table 16: Correlation Matrix for Tax Sample for Cost of Equity Test (2001–2014)

		<i>COE_TAX_t</i>	<i>CASH_TPR_{1YR, t}</i>	<i>CASH_TPR_{2YR, t}</i>	<i>CASH_TPR_{3YR, t}</i>	<i>CASH_TPR_{1YR, t-1}</i>	<i>CASH_TPR_{2YR, t-1}</i>	<i>CASH_TPR_{3YR, t-1}</i>	<i>LnTA_t</i>	<i>BETA_t</i>	<i>LEV_t</i>	<i>MTB_t</i>	<i>Ln_FEDISP_t</i>
1	<i>COE_TAX_t</i>												
2	<i>CASH_TPR_{1YR, t}</i>	-0.038											
3	<i>CASH_TPR_{2YR, t}</i>	-0.012	0.922										
4	<i>CASH_TPR_{3YR, t}</i>	-0.007	0.873	0.966									
5	<i>CASH_TPR_{1YR, t-1}</i>	-0.121	0.664	0.665	0.670								
6	<i>CASH_TPR_{2YR, t-1}</i>	-0.077	0.872	0.836	0.816	0.910							
7	<i>CASH_TPR_{3YR, t-1}</i>	-0.048	0.862	0.919	0.902	0.851	0.962						
8	<i>LnTA_t</i>	-0.107	0.074	0.081	0.083	0.086	0.075	0.075					
9	<i>BETA_t</i>	0.193	-0.145	-0.151	-0.155	-0.141	-0.134	-0.135	-0.186				
10	<i>LEV_t</i>	0.047	0.025	0.014	-0.006	0.024	-0.002	-0.013	0.526	-0.253			
11	<i>MTB_t</i>	-0.033	0.009	0.011	0.011	0.027	0.018	0.018	-0.016	0.006	0.077		
12	<i>Ln_FEDISP_t</i>	0.230	-0.090	-0.083	-0.075	-0.102	-0.090	-0.085	0.040	0.121	0.011	-0.016	
13	<i>LTG_t</i>	0.236	-0.043	-0.038	-0.035	-0.065	-0.057	-0.051	-0.049	0.062	-0.013	-0.010	0.168

This table presents the results of correlation analysis for the Tax Sample for the cost of equity test. All variables are defined in Table A1, Panel A and Panel C.

4.3.3.2 Descriptive Statistics—Wage Sample for Cost of Equity Test

Table 17 presents the descriptive statistics for the cost of equity test on wage unfairness for the Wage Sample, including the control variables. This sample reports a similar distribution for the cost of equity capital, COE_WAGE_t (by marginally lower) as prior research works. The COE_WAGE_t for the Wage Sample has a mean (median) of 10.40 (8.40) per cent. This number is lower than the mean of cost of equity reported by for example, Botosan (1997), Easton (2004) and Lee and Wang (2010), which are 20.1, 11.3 and 10.76 per cent respectively. It is expected that the main reason for a considerably higher cost of equity mean in Botosan (1997) as compared to other studies, including this study is due to it is using only one sample period.

As for the distribution of beta, $BETA_t$, the Wage Sample has similar trend to the Tax Sample, in which it also reports a relatively lower median (mean) as compared to prior studies. As indicated in Table 17, the $BETA_t$ has the median (mean) distribution of 0.845 (0.928). However, this number is relatively smaller than what is reported in Tax Sample and also lower than Botosan and Plumlee (2002), Ali, Hwang and Trombley (2003) and El Ghouli et al. (2011), which report beta mean of 1.106, 1.03 and 1.05 respectively.

However, contrary to the lower median (mean) of cost of equity and beta, the Wage Sample has rather high median (mean) for the natural logarithm of total assets, $LnTA_t$ and leverage, LEV_t . Prior research such as Chen, Jorgensen and Yoo (2004) and El Ghouli et al. (2011) have reported lower size of assets, that are 7.20 and 7.85 respectively. The market-to-book ratio, MTB_t is lower than reported in the Tax Sample, indicating significantly lower book equity compared to the market value for the sample firms. The distribution of wage unfairness indicates that the median (mean) of firms in the sample consists of those with lower performance in wage unfairness (in reverse, implied for high performance in wage fairness).

4.2.3.2.1 Correlation Analysis—Wage Sample for Cost of Equity Test

Table 18 provides the results of the Pearson Correlation Analysis for the Wage Sample. Out of both wage unfairness variables, only the non-lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t}$, is correlated with the cost of equity capital, COE_WAGE_t , at a weak level of $r = -0.118$. Although, this correlation is weak, the negative sign suggests that the results are expected to be against the direction of hypothesis H3(b). As expected,

due to data stickiness, the non-lagged wage unfairness, $CEO_PAY_RATIO_{IYR, t}$ indicates a strong correlation with its lagged effects, $CEO_PAY_RATIO_{IYR, t-1}$ at $r = 0.852$.

Turning to control variables, four out of six control variables, which are the natural logarithm of total assets, $LnTA_t$, the firm's risk, $BETA_t$, the natural logarithm of earnings forecast errors dispersion, Ln_FEDISP_t and the long-term growth rate, LTG_t have correlations with the cost of equity capital, COE_WAGE_t , at $r = -0.107, 0.193, 0.230$ and 0.236 respectively. The control variables, which have correlations with each other are the firm's risk, $BETA_t$ and both the natural logarithm of total assets, $LnTA_t$ ($r = -0.186$) and leverage, LEV_t ($r = -0.253$), the natural logarithm of total assets, $LnTA_t$ and leverage, LEV_t ($r = 0.526$) and the natural logarithm of earnings forecast dispersion, Ln_FEDISP_t and the long-term growth rate, LTG_t ($r = 0.168$). These correlations are consistent with the analysis results, which provided in the Tax Sample.

**Table 17: Descriptive Statistics—Wage Sample for Cost of Equity Test
(2001–2014)**

Dependent variable	N	Mean	Median	Std Dev.	Min.	Max.
COE_WAGE_t	1,272	0.104	0.084	0.085	0.006	0.880
Independent variable						
$CEO_PAY_RATIO_{IYR, t}$	1,272	20.181	12.510	30.133	0.000	529.856
$CEO_PAY_RATIO_{IYR, t-1}$	1,226	21.964	13.313	33.458	0.000	458.801
Control variable						
$LnTA_t$	1,272	8.920	8.778	1.808	4.920	14.761
$BETA_t$	1,272	0.928	0.845	0.588	-0.656	3.846
LEV_t	1,272	0.718	0.817	0.219	0.088	0.990
MTB_t	1,272	2.805	1.860	7.298	0.134	236.956
LN_FEDISP_t	1,272	-4.000	-3.896	2.512	-18.922	2.782
LTG_t	1,272	0.853	0.128	6.150	0.001	154.000

This sample presents the descriptive statistics for the Wage Sample for the cost of equity test. The distribution of control variables in the table is according to the largest sample, which uses the $CEO_PAY_RATIO_{IYR, t}$ sample. The implied cost of equity is estimated using the PEG Model following Easton (2004). All variables are defined in Table A1, Panel A and Panel C.

Table 18: Correlation Matrix for Wage Sample for Cost of Equity Test (2001–2014)

	<i>COE_WAGE_t</i>	<i>CEO_PAY_RATIO_{1YR, t}</i>	<i>CEO_PAY_RATIO_{1YR, t-1}</i>	<i>LnTA_t</i>	<i>BETA_t</i>	<i>LEV_t</i>	<i>MTB_t</i>	<i>Ln_FEDISP_t</i>
1 <i>COE_WAGE_t</i>								
2 <i>CEO_PAY_RATIO_{1YR, t}</i>	−0.071							
3 <i>CEO_PAY_RATIO_{1YR, t-1}</i>	−0.118	0.852						
4 <i>LnTA_t</i>	−0.107	0.095	0.069					
5 <i>BETA_t</i>	0.193	−0.108	−0.077	−0.186				
6 <i>LEV_t</i>	0.047	−0.015	−0.035	0.526	−0.253			
7 <i>MTB_t</i>	−0.033	0.190	0.094	−0.016	0.006	0.077		
8 <i>Ln_FEDISP_t</i>	0.230	−0.074	−0.062	0.040	0.121	0.011	−0.016	
9 <i>LTG_t</i>	0.236	−0.036	−0.033	−0.049	0.062	−0.013	−0.010	0.168

This table presents results of correlation analysis for the Wage Sample for the cost of equity test. All variables are defined in Table A1, Panel A and Panel C.

4.3.3.3 Descriptive Statistics—Philanthropy Sample for Cost of Equity Test

Table 19 presents the descriptive statistics for the Philanthropy Sample. This sample has a median of cost of equity, COE_DON_t , of 9.5 (11.18) per cent, which is consistent with prior studies (Chen, Jorgensen and Yoo 2004; Easton 2004; El Ghouli et al. 2011). This statistic is relatively higher than the cost of equity, reported in the Wage Sample (mean = 10.4 per cent, median = 8.5 percent) but rather in close approximation to what reported in Tax Sample (mean = 11.7 per cent; median = 9.5 per cent).

The other control variables in the Philanthropy Sample are also showing fairly similar distributions as control variables in the Tax Sample. Although, the Philanthropy sample has higher mean in the natural logarithm of total assets, $LnTA_t$, leverage ratio, LEV_t and the natural logarithm of earnings forecast dispersion, Ln_FEDISP_t . However, despite having higher distribution in size, debt-load and errors dispersion, the sample firms in the Philanthropy has lower beta, $BETA_t$ with a mean of 1.121 (median = 0.971).

4.3.3.3.1 Correlation Analysis—Philanthropy Sample for Cost of Equity Test

Table 20 provides the results of the Pearson Correlation Analysis for the Philanthropy Sample. All philanthropy variables of interest – domestic donation and foreign donation have negative correlations with the cost of equity, COE_DON_t , which provide supports to H3 (c) and H3 (d). Although, none of these correlations are significant. The non-lagged domestic donation and foreign donation variables indicate stickiness with their lagged effects where the correlations are strongly significant at $r = 0.792$ and $r = 0.862$ respectively.

Furthermore, it is also observed that there are at least weak correlations between the domestic donation, US_DON_t and foreign donation, $NONUS_DON_t$ not higher than $r = 0.202$. Similar pattern is observed for their lagged effects as well with correlations are not higher than $r = 0.228$. The donation variables indicate no significant correlations with other control variables except for the natural logarithm of total assets, $LnTA_t$. This correlation suggests that firms in Philanthropy Sample are likely large in size.

On an interesting note, the correlation strength is noticed to be marginally higher between the cost of equity, COE_DON_t and the beta, $BETA_t$ ($r = 0.200$), the natural logarithm of

earnings forecast errors dispersion, Ln_FEDISP_t ($r = 0.249$) and the long-term growth rate, LTG_t ($r = 0.241$) when compared to the results as documented in the Tax Sample and Wage Sample. Furthermore, the natural logarithm of total assets, $LnTA_t$ show no significant correlation at all with the cost of equity, COE_DON_t . This result is contrary to the correlation analysis results that are reported in the Tax Sample and Wage Sample, but consistent with the correlations observed between donation variables and the of total assets, $LnTA_t$, which suggests size is not significantly different for firms in Philanthropy Sample.

Table 19: Descriptive Statistics—Philanthropy Sample for Cost of Equity Test (2001–2009)

Dependent variable	N	Mean	Median	Std Dev.	Min.	Max.
COE_DON_t	3,932	0.118	0.095	0.103	0.001	2.850
Independent variable						
$US_DON_{IYR, t}$	3,932	0.031	0.000	0.173	0.000	1.000
$NONUS_DON_{IYR, t}$	3,932	0.023	0.000	0.150	0.000	1.000
$US_DON_{IYR, t-1}$	3,764	0.031	0.000	0.172	0.000	1.000
$NONUS_DON_{IYR, t-1}$	3,764	0.022	0.000	0.146	0.000	1.000
Control variable						
$LnTA_t$	3,932	8.008	7.856	1.669	3.688	14.593
$BETA_t$	3,932	1.121	0.971	0.793	-0.864	6.489
LEV_t	3,932	0.581	0.584	0.236	0.043	0.999
MTB_t	3,932	3.149	2.019	13.240	0.137	738.318
LN_FEDISP_t	3,932	-3.960	-3.753	2.896	-19.649	2.782
LTG_t	3,932	0.919	0.188	6.112	0.000	238.000

The distribution of the control variables in the table is according to the largest sample, which uses the $US_DON_{IYR, t}$ sample. The implied cost of equity is estimated using the PEG Model following Easton (2004). All variables are defined in Table A1, Panel A and Panel C.

4.4 Conclusion

This chapter presents descriptive statistics for the samples used for testing hypotheses H3 (a), (b), (c) and (d), and results of correlation analyses for the variables required by the cost of equity test model (as the Equation Model 11). Overall, the distributions of the cost of equity capital, beta and other control variables for all three samples: Tax Sample (H3 a), Wage Sample (H3 b), Philanthropy Sample (H3 c and d), appear fairly consistent with those reported in prior studies (see Easton 2004; El Ghoul et al. 2011). The Tax Sample and Philanthropy Sample share consistencies in most of control variables although, the

latter is observed to have firms with higher concentration in total asset, but with much lower mean statistic for the firm's beta.

The Wage Sample however, has firms with high debt-load as measured by the leverage ratio, comparatively to other two samples: Tax Sample and Philanthropy Sample. Another notable aspect in all samples used in the cost of equity test is that, only the long-term growth rate, LTG_t has a mean that is significantly higher than its median. This suggests that the central tendency specification in OLS regression might biased the results and therefore, using the quantile regression for this study serves as a suitable treatment to reduce such potential bias.

As for the correlation analyses of all three samples: Tax Sample, Wage Sample and Philanthropy Sample, the results indicate that the correlations between the cost of equity and the variables of interest are consistent with the expectations in H3 (a), (c) and (d), but not (b). Although, none of these correlations are strongly significant. Both Tax Sample and Wage Sample exhibit similar pattern of correlations on all control variables. The correlations increase marginally in Philanthropy Sample for the same variables, which observed to have weak correlations in both Tax Sample and Wage Sample. It is also observed in Philanthropy Sample, that the natural logarithm of assets, which is a proxy for the firm's size, has a weak correlation with all four donation variables, but appear to have no correlation at all with the cost of equity. These correlations suggest that the Philanthropy Sample has high representation of large firms. The following chapter discusses on the results of analyses on samples that have been described in this chapter.

Table 20: Correlation Matrix for Philanthropy Sample (2001–2009)

		COE_DON_t	$US_DON_{1YR, t}$	$NONUS_DON_{1YR, t}$	$US_DON_{1YR, t-1}$	$NONUS_DON_{1YR, t-1}$	$LnTA_t$	$BETA_t$	LEV_t	MTB_t	Ln_FEDISP_t
1	COE_DON_t										
2	$US_DON_{1YR, t}$	-0.043									
3	$NONUS_DON_{1YR, t}$	-0.042	0.196								
4	$US_DON_{1YR, t-1}$	-0.045	0.792	0.202							
5	$NONUS_DON_{1YR, t-1}$	-0.046	0.203	0.862	0.228						
6	$LnTA_t$	-0.078	0.156	0.192	0.161	0.177					
7	$BETA_t$	0.200	-0.057	-0.031	-0.052	-0.032	-0.214				
8	LEV_t	0.058	0.080	-0.006	0.078	-0.006	0.544	-0.243			
9	MTB_t	-0.038	0.020	0.006	0.021	0.008	-0.025	-0.002	0.075		
10	Ln_FEDISP_t	0.249	0.005	-0.009	0.002	-0.004	0.025	0.130	0.014	-0.029	
11	LTG_t	0.241	-0.015	-0.015	-0.014	-0.015	-0.037	0.067	-0.008	-0.013	0.169

This table presents the results of the correlation analysis for the Philanthropy Sample for the cost of equity test. All variables are defined in Table A1, Panel A and Panel C.

Chapter 5: Results

5.1 Introduction

This chapter discusses the results for the hypotheses developed in Chapter 2 using the models explained in Chapter 3. The first section presents the results for the hypotheses using audit fees to test the effects of corporate citizenship (Section 5.2). The second section presents the results for the hypotheses on the effects of corporate citizenship on investors' perceived credibility of financial reporting using the Ohlson test (Section 5.3.1) and the cost of equity test (Section 5.3.2). The third section provides a summary of the overall results (Section 5.4).

5.2 Audit Fees Test

In this section, this study first presents and discusses the results from the main analyses of three corporate citizenship measures: tax fairness, wage unfairness and philanthropy. This is followed by a discussion of the full regression results, with a focus on the control variables. This is followed by a summary and discussion for the full regression results of these three measures when they are regressed in combination. Lastly, this study presents and discusses the results of the additional analyses. This includes the results from the alternative measure for wage unfairness, the CEO compensation excess and the main measures of corporate citizenship when audit fees are at different quantiles.

In H1, this study hypothesises that superior corporate citizenship performance, which is measured from a firm's performance in (1) tax fairness, (2) wage fairness (inversely implied from wage unfairness) and (3) philanthropy, has a negative association with audit fees. For the auditors, this implies a perceived lower risk associated with financial reporting credibility. Specifically, H1 (a) predicts that tax fairness has a negative association with audit fees. H2 (b) predicts that wage unfairness has a positive association with audit fees. H1 (c) and H1 (d) expect that domestic donation and foreign donation have negative and positive associations with audit fees, respectively.

As discussed in Chapter 4, the quantile regression is used for the analyses to alleviate concerns about outlier effects and to allow for the variability relations across strata. Table 21 presents the summary of coefficients for the hypotheses H1 (a), (b), (c) and (d) for

each corporate citizenship measure—tax fairness, wage unfairness and philanthropy (using domestic donation and foreign donation as proxies)—respectively. Tables 22–24 present the full results for the regression of audit fees on corporate citizenship measures, individually as well as jointly. Tables 25 and 26 present a summary of coefficients of audit fees on corporate citizenship measures as combination. Tables 27 and 28 present a summary of coefficients of audit fees on corporate citizenship measures by combination with the alternative measure of wage unfairness instead of the preferred measure of wage unfairness.

5.2.1 Association between Audit Fees and Individual Corporate Citizenship Measures

Table 21 summarises the coefficients of audit fees on the individual corporate citizenship measures of tax fairness, wage unfairness and philanthropy using domestic donation and foreign donation as proxies. The full regression results for each measure are reported and discussed later in this chapter. Overall, the results indicate that all corporate citizenship measures are significantly associated with audit fees, with their expected signs consistent with the hypotheses in H1.

As shown in Table 21, both lagged and non-lagged tax fairness measures indicate negative coefficients with audit fees, significant at $p < 0.001$, which provides support to H1 (a). These negative relations are robust to using one-year and two-year and three-year cumulative average tax fairness ($CASH_TPR_{1YR, t}$, $CASH_TPR_{2YR, t}$, $CASH_TPR_{3YR, t}$). On average, these results suggest that auditors charge lower audit fees for firms with higher tax fairness performance. These results relate to the results from prior research on tax avoidance for example, Hanlon and Slemrod 2009; Donohoe and Knechel 2014, which find that the higher corporate tax avoidance (or tax aggression), the higher is audit fees. The stronger coefficients of three-year cumulative average tax fairness, in the lagged measure in particular ($CASH_TPR_{3YR, t-1}$), suggest that the longer-term measure has a higher significance to explain the increase in audit fees. This result supports finding from Dyreng, Hanlon and Maydew (2008) indicating long-term measure is more effective method in estimating tax behaviour.

In relation to the results involving the second measure of corporate citizenship: wage unfairness, the significantly positive coefficients of wage unfairness provide support to

H1 (b), which expects auditors to charge higher audit fees to firms with high performance in wage unfairness (in reverse, implied low performance in wage fairness). While both lagged and non-lagged measures indicate significant results, the coefficient is stronger for the non-lagged wage unfairness, $CEO_PAY_RATIO_{IYR, t}$, compared with the lagged measure, $CEO_PAY_RATIO_{IYR, t-1}$ (coeff. = 1.2134, $p = 0.036$; coeff. = 1.1688, $p < 0.001$, respectively). Although, the result for the lagged measure shows a relatively higher R^2 value. The positive association between the wage unfairness and audit fees suggests that, the higher proportion of CEO's pay to an average employee's, the higher auditors' perception of material risk of misstatements. These results relate to Wysocki (2010), which provides a number of empirical evidence from prior research that links an increased firm risk to higher audit fees. Wysocki (2010) shows that firms with higher risk tends to be associated with higher litigation risk and reward their CEOs higher as a form of compensation to bear the risk

Turning to results on the third measure of corporate citizenship, the negative coefficient of domestic philanthropy and positive coefficient of foreign donation provide support to H1 (c) and H (d), respectively. This suggests that while auditors charge lower audit fees to firms with high performance in domestic donations, they charge higher audit fees to firms with high performance in foreign donation. The results are not only consistent when regressions are using the lagged effects, but also, are observed to have higher coefficient specifically, for the domestic donation, $US_DONIYR, t-1$. The coefficients of the lagged domestic donation, $US_DONIYR, t-1$ is at -0.1724 , $p < 0.001$ and the lagged foreign donation, $NONUS_DONIYR, t-1$ is at 0.1133 , $p = 0.027$. While the coefficients of the non-lagged domestic donation, US_DONIYR, t is at -0.1688 , $p < 0.001$ and the non-lagged foreign donation, $NONUS_DONIYR, t$ is at 0.1141 , $p = 0.027$.

Evidence from prior empirical research indicates that corporate philanthropy tends to improve revenues and consequently, reduce cost (Sen and Battacharya 2001; Lev, Petrovis and Radhakrishnan 2009). Sen and Battacharya (2001) argue that corporate philanthropy can serve as an advertising tool that potentially increase customer demand and reduce price sensitivity. This line of argument is supported by findings from Lev, Petrovis and Radhakrishnan (2009), which find corporate contribution and corporate revenues to be significantly associated with each other. Alternatively, the other arguments suggest that social performance improves employees' productivity and therefore, increase

saving in cost production. While Su and Yun (2015) find results to suggest corporations with higher social performance are likely to experience better financial performance consistent with their higher employee productivity, but they also find that these corporations tend to have higher employee cost compared to peer firms.

However, none of all the above works explain how corporate philanthropy performance specifically, domestic-based philanthropy performance and not foreign-based philanthropy improves auditors' perceived credibility of the financial reporting information. The results produced by domestic-philanthropy in this study are more consistent with the theory of source credibility, which explains the reciprocal experiences through corporate contribution facilitate social trust. Auditors might identify the corporate values through corporate philanthropy structure and performance to send signal about the 'corporate character'. Consequently, the higher domestic philanthropy performance, the higher perceived credibility of the corporation or its manager and subsequently, facilitates financial reporting information credibility. As explained earlier, foreign-based philanthropy performance has contrary effects on audit fees, in which increases it. This result can be explained by prior research works, which find that foreign-related factors can suggest complexity and positively influence auditors' efforts (Haskins and Williams 1988; Hay, Knechel and Wong 2006).

Table 21: Summary of Coefficients for Individual Corporate Citizenship Measure and Audit Fees (2001–2013)

		Non- Lagged			Lagged		
Variable	Pred. Sign	N	Coeff.	R ²	N	Coeff.	R ²
(Panel A) Tax Fairness							
CASH_TPR _{1YR, t}	–	12,851	–1.1413*** (< 0.001)	79.9%	11,602	–1.0538*** (< 0.001)	79.5%
CASH_TPR _{2YR, t}	–	12,722	–1.3109*** (< 0.001)	80.0%	11,467	–1.1641*** (< 0.001)	79.4%
CASH_TPR _{3YR, t}	–	12,530	–1.4667*** (< 0.001)	80.1%	11,280	–1.5358*** (< 0.001)	79.6%
(Panel B) Wage Unfairness							
CEO_PAY_RATIO _{1YR, t}	+	823	1.2134** (0.036)	82.8%	803	1.1688*** (< 0.001)	83.5%
(Panel C) Philanthropy							
US_DON _{1YR, t}	–	8,505	–0.1688*** (< 0.001)	78.8%	7,839	–0.1724*** (< 0.001)	77.90%
NONUS_DON _{1YR, t}	+	8,505	0.1141* (0.027)	78.8%	7,839	0.1133* (0.027)	77.90%
Control Variables			Yes			Yes	
Industry and Year Included			Yes			Yes	

This table summarises the correlation coefficients of audit fees on the individual corporate citizenship measures of (1) tax fairness, (2) wage unfairness and (3) philanthropy, estimated using the quantile regression using the Equation Model (4) as described in Section 3.3.2. The full regression results are reported in Table 22 (tax fairness), Table 23 (wage unfairness) and Table 24 (philanthropy). The p values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.1.1 Discussion of Audit Fees and Tax Fairness Model

Table 22 presents the full regression results for the audit fees test on tax fairness following the audit fees model presented in Section 3.3.2. The columns for Model 1 to Model 3 report the results using non-lagged tax fairness measures ($CASH_TPR_{1YR, t}$, $CASH_TPR_{2YR, t}$, $CASH_TPR_{3YR, t}$). Those for Model 4 to Model 6 present the results using the lagged tax fairness measures ($CASH_TPR_{1YR, t-1}$, $CASH_TPR_{2YR, t-1}$, $CASH_TPR_{3YR, t-1}$). A discussion of coefficients on tax fairness has been provided in the previous section (Table 21, Section 5.2.1). The following discussion focuses specifically on control variables and model consistency.

As shown in Table 22, the control variables are significantly associated with audit fees, ($LnAfee_t$). However, the control variables that are not significant are auditor geographic dispersion ($AUD_GEODISP_t$), restatement ($RESTATE_t$) and going concern, ($G_CONCERN_t$). These results are probably driven by the high proportion of $AUD_GEODISP_t$ (84.9%) and the low proportion of $RESTATE_t$ (13.4%) and $G_CONCERN_t$ (less than 1 in 10) in the sample. Return on assets (ROA_t), merger and acquisition ($M\&A_t$), level-one interacted-indicator of employee strength ($EMP_STR_t == 1, t$) and level-two interacted-indicator of employee concerns, $EMP_CON_t == 2, t$, have inconsistent results in terms of significance across models.

The results for ROA_t were unexpected; for this reason, I attempted the regression excluding ROA_t . Results indicate no significant differences. For example, for Model 6, after dropping ROA , the coefficient for $CASH_TPR_{3YR, t-1}$ reported a coefficient result of 0.1039 ($p < 0.001$). For brevity, the following discussion focuses on the results from Model 6, which used the three-year cumulative average lagged tax fairness ($CASH_TPR_{3YR, t-1}$). The correlation coefficients of control variables for other models are similar to the results shown in Model 6.

Firm size ($LnTA_t$), inherent risk proxy (IR_PROXY_t), leverage ratio (LEV_t), liquidity ratio (LIQ_t) and foreign operation ($FOREIGN_t$) are significantly associated with audit fees, consistent with signs in the prior literature. Firm size ($LnTA_t$) is positively associated with audit fees with a coefficient of 0.5631, indicating that the variation of firm size is highly significant for the variation in audit fees. Inherent risk proxy (IR_PROXY_t) also shows a positive relation with audit fees, but at a larger coefficient of 0.5908 than firm size,

indicating that the inherent risk factor is highly significant for audit fees. Leverage ratio (LEV_t) and foreign operation ($FOREIGN_t$) both have positive and moderate associations with audit fees at coefficients of 0.3055 and 0.3622, respectively. Liquidity ratio (LIQ_t) is negatively associated with audit fees at a lower coefficient of -0.0161 .

Auditor reputation ($BIG4_t$), natural logarithm of non-audit fees ratio ($LnNASFee_t$), square root of audit report lag ($SqAUD_LAG_t$), audit busy season ($BUSY_SEASON_t$) and inverse mills ratio ($INVMILLS_t$) are all significantly and positively associated with audit fees, with coefficients of 0.1356, 0.0988, 0.0823, 0.1176 and 1.1585, respectively, indicating that these variables are fairly incremental to audit pricing. The lower correlation coefficient of $BIG4_t$ is due to the sample having a large concentration of $BIG4_t$ (Table 6 reports that the distribution of $BIG4_t$ is high at 93.2% in Model 6). The new control variable, premium city ($PREM_CITY_t$), which I first introduced to the audit fees model for this study, indicates significant and positive associations with audit fees with a coefficient of 0.1504 ($p < 0.001$). This coefficient is stronger than auditor reputation ($BIG4_t$). Auditor change (AUD_CHANGE_t) and the natural logarithm of audit tenure ($LnAUD_TENURE_t$) indicate negative associations with audit fees, with coefficients of -0.1436 ($p < 0.001$) and -0.0306 ($p = 0.041$), respectively.

There are no specific predictions provided for the direction of coefficients of non-audit fees ratio ($LnNASFee_t$), auditor change (AUD_CHANGE_t), and audit tenure, ($LnAUD_TENURE_t$) because of the presence of mixed arguments in the prior literature. However, based on the results in Model 6, I find that evidence consistent with increased non-audit fees ($LnNASFee_t$) explains the increase in audit fees, contrary to the efficient information transfer hypothesis. The negative relation of audit tenure ($LnAUD_TENURE_t$) provides support to the hypothesis, which suggests that longer tenure increases audit efficiency and, therefore, reduces audit fees. The negative coefficient of auditor change is due to a higher proportion of auditor change from $BIG4_t$ to non- $BIG4_t$. Prior research suggests that auditor change from non- $BIG4_t$ to $BIG4_t$ has a positive influence on audit fees (Teoh & Wong 1993).

CSR lagged controls, environmental protection and employee-related performance (by one-level and two-level interacted indicators) report mixed results. In addition, some of these CSR lagged controls show signs inconsistent with the predictions. Lagged environmental concern (ENV_CON_{t-1}) is expected to have a positive association with

audit fees, while lagged environmental strength (ENV_STR_{t-1}) is expected to have a negative relation with audit fees. However, results indicate that both ENV_CON_{t-1} and ENV_STR_{t-1} have positive relations with audit fees (coeff. = 0.0582, $p < 0.001$ and coeff. = 0.0261, $p = 0.005$, respectively). These results suggest that auditors charge higher audit fees no matter whether the firm performs high or low in environmental protection. The reasonable explanation for this is likely that the disclosure of both environmental strength and concern would require high audit judgement because of its complex nature. Thus, this tends to influence audit fees upward. Further, Mattingly and Berman (2006) in their assessment of social performance scores in the MSCI-KLD (formerly known as KLD) database, find that firms that have high environmental concerns are also likely to have high environmental strength. The relatively stronger coefficient shown by environmental concern than environmental strength is consistent with Chatterjee, Levine and Toffel (2009), who find environmental concern has a higher information role.

The lagged two-level interacted-indicator employee strength ($EMP_STR = 2, t-1$) is negatively and significantly associated with audit fees (coeff. = -0.1440, $p < 0.001$), consistent with expectations. However, the test finds no significant result on one-level interacted-indicator lagged employee strength ($EMP_STR = 1, t-1$). Inversely, the one-level interacted-indicator lagged employee concern ($EMP_CON = 1, t-1$) has a significant and positive relation with audit fees (coeff. = 0.0328, $p = 0.016$). The two-level interacted-indicator lagged employee concern ($EMP_CON = 2, t-1$) shows no significant association with audit fees. The different results for different levels of employee strength and concern suggest that while high performance in employee strength is significantly important to explain reduced audit fees, the relatively higher employee concern has no incremental role to explain the increase in the audit fees.

Table 22: Quantile Regression for Audit Fees on Tax Fairness (2001–2013)

Variable	Pred. Sign	Non-Lagged Tax Fairness			Lagged Tax Fairness		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
$CASH_TPR_{1YR, t}$	–	–1.1413*** (< 0.001)			–1.0538*** (< 0.001)		
$CASH_TPR_{2YR, t}$	–		–1.3109*** (< 0.001)			–1.1641*** (< 0.001)	
$CASH_TPR_{3YR, t}$	–			–1.4667*** (< 0.001)			–1.5358*** (< 0.001)
$LnTA_t$	+	0.5529*** (< 0.001)	0.5515*** (< 0.001)	0.5576*** (< 0.001)	0.5582*** (< 0.001)	0.5627*** (< 0.001)	0.5631*** (< 0.001)
IR_PROXY_t	+	0.5562*** (< 0.001)	0.5474*** (< 0.001)	0.5571*** (< 0.001)	0.6167*** (< 0.001)	0.5941*** (< 0.001)	0.5908*** (< 0.001)
LEV_t	+	0.2806***	0.2839***	0.2902***	0.2940***	0.2959***	0.3055***

Variable	Pred. Sign	Non-Lagged Tax Fairness			Lagged Tax Fairness		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)
<i>LIQ_t</i>	–	–0.0173*** (< 0.001)	–0.0179*** (< 0.001)	–0.0172*** (< 0.001)	–0.0185*** (< 0.001)	–0.0183*** (< 0.001)	–0.0161*** (< 0.001)
<i>ROA_t</i>	–	0.1297* (0.091)	0.2032** (0.015)	0.2176** (0.036)	–0.0057 (0.959)	0.0392 (0.676)	0.1039 (0.315)
<i>M&A_t</i>	+	0.0286** (0.023)	0.0277** (0.046)	0.0248 (0.150)	0.0347** (0.041)	0.0314** (0.028)	0.0307** (0.044)
<i>RESTRUC_t</i>	+	–0.0237** (0.040)	–0.0365*** (0.007)	–0.0360** (0.034)	–0.0728*** (< 0.001)	–0.0740*** (< 0.001)	–0.0746*** (< 0.001)
<i>FOREIGN_t</i>	+	0.3613*** (< 0.001)	0.3661*** (< 0.001)	0.3623*** (< 0.001)	0.3640*** (< 0.001)	0.3633*** (< 0.001)	0.3622*** (< 0.001)
<i>BIG4_t</i>	+	0.1480*** (< 0.001)	0.1442*** (< 0.001)	0.1437*** (< 0.001)	0.1378*** (< 0.001)	0.1384*** (< 0.001)	0.1356*** (< 0.001)
<i>AUD_CHANGE_t</i>	+/-	–0.1565*** (< 0.001)	–0.1444*** (< 0.001)	–0.1437*** (< 0.001)	–0.1440*** (< 0.001)	–0.1410*** (< 0.001)	–0.1436*** (< 0.001)
<i>LnNASFee_t</i>	+/-	0.0976*** (< 0.001)	0.0971*** (< 0.001)	0.0981*** (< 0.001)	0.0972*** (< 0.001)	0.0980*** (< 0.001)	0.0988*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/-	–0.0413*** (< 0.001)	–0.0378*** (0.002)	–0.0362** (0.020)	–0.0312* (0.054)	–0.0313** (0.025)	–0.0306** (0.041)
<i>PREM_CITY_t</i>	+	0.1353*** (< 0.001)	0.1371*** (< 0.001)	0.1381*** (< 0.001)	0.1472*** (< 0.001)	0.1482*** (< 0.001)	0.1504*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	–0.0007 (0.954)	–0.0042 (0.752)	–0.0048 (0.770)	–0.0091 (0.598)	–0.0135 (0.356)	–0.0159 (0.308)
<i>RESTATE_t</i>	+	–0.0195 (0.125)	–0.0186 (0.183)	–0.0217 (0.210)	–0.0246 (0.188)	–0.0245 (0.122)	–0.0204 (0.228)
<i>G_CONCERN_t</i>	+	0.2049 (0.142)	–0.1050 (0.512)	–0.1199 (0.560)	–0.227 (0.290)	–0.2018 (0.291)	–0.2101 (0.298)
<i>SqAUD_LAG_t</i>	+	0.0808*** (< 0.001)	0.0795*** (< 0.001)	0.0822*** (< 0.001)	0.0793*** (< 0.001)	0.0824*** (< 0.001)	0.0823*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1288*** (< 0.001)	0.1286*** (< 0.001)	0.1282*** (< 0.001)	0.1159*** (< 0.001)	0.1165*** (< 0.001)	0.1176*** (< 0.001)
<i>INVMILLS_t</i>	+	1.0009*** (< 0.001)	0.9892*** (< 0.001)	1.0364*** (< 0.001)	1.1453*** (< 0.001)	1.1623*** (< 0.001)	1.1585*** (< 0.001)
<i>*ENV_STR_t</i>	+	0.0515*** (< 0.001)	0.0519*** (< 0.001)	0.0524*** (< 0.001)	0.0581*** (< 0.001)	0.0573*** (< 0.001)	0.0582*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0334*** (< 0.001)	0.0366*** (< 0.001)	0.0350*** (< 0.001)	0.0276*** (0.008)	0.0254*** (0.004)	0.0261*** (0.005)
<i>*EMP_STR = 1_t</i>	–	–0.0385*** (0.002)	–0.0337** (0.016)	–0.0335* (0.052)	–0.0342* (0.051)	–0.0330** (0.026)	–0.0252 (0.109)
<i>*EMP_STR = 2_t</i>	–	–0.1356*** (< 0.001)	–0.1293*** (< 0.001)	–0.1337*** (< 0.001)	–0.1431*** (< 0.001)	–0.1458*** (< 0.001)	–0.1440*** (< 0.001)
<i>*EMP_CON = 1_t</i>	+	0.0486*** (< 0.001)	0.0483*** (< 0.001)	0.0491*** (< 0.001)	0.0372** (0.013)	0.0351*** (0.006)	0.0328** (0.016)
<i>*EMP_CON = 2_t</i>	+	0.0318* (0.090)	0.0271 (0.188)	0.0234 (0.356)	0.0297 (0.250)	0.0244 (0.265)	0.0165 (0.478)
<i>Constant</i>	?	0.2878***	0.3329***	0.0874	0.2549*	1.0618***	1.0608***
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		12,851	12,722	12,530	11,602	11,467	11,280
<i>R²</i>		79.9%	80.0%	80.1%	79.50%	79.40%	79.60%
<i>VIF</i>		2.17	3.64	2.17	3.73	3.72	3.71

This table reports the full regression results for audit fees and tax fairness, and the control variables as shown in Equation Model (4) in Section 3.3.2. The columns for Model 1 to Model 3 present the results of coefficients for non-lagged tax fairness measures (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}*, *CASH_TPR_{3YR, t}*). Columns for Model 4 to Model 6 present the results of coefficients for lagged tax fairness measures (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}*, *CASH_TPR_{3YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.1.2 Discussion of Audit Fees and Wage Unfairness Model

Table 23 presents the regression results for audit fees and wage unfairness, and the control variables as in Equation Model (4). A discussion of the association between audit fees and wage unfairness has been provided earlier in Section 5.2.1 (Table 21). Therefore, the following paragraphs discuss only the results of the correlation coefficients regarding control variables in the wage unfairness models (Model 1 and Model 2). Model 1 uses one-year wage unfairness ($CEO_PAY_RATIO_{1YR, t}$) and Model 2 uses one-year lagged wage unfairness ($CEO_PAY_RATIO_{1YR, t-1}$).

According to the results for Model 1 and Model 2, only a few control variables are statistically significantly associated with audit fees ($LnAfee_t$). These are firm size ($LnTA_t$), inherent risk proxy (IR_PROXY_t), foreign operation ($FOREIGN_t$), natural logarithm of non-audit fees ratio ($LnNASfee_t$), premium city ($PREM_CITY_t$), square root of audit report lag ($SqAUD_LAG_t$), audit busy season ($BUSY_SEASON_t$) and inverse mills ratio ($INVMILLS_t$). $LnTA_t$ is positively associated with audit fees, with coefficients of 0.5743 and 0.5135, significant at $p < 0.001$ for Model 1 and Model 2, respectively.

The relation between inherent risk proxy (IR_PROXY_t) and audit fees shows a stronger relation than firm size and audit fees with a coefficient of 1.2207 ($p < 0.001$) in Model 1 and of 1.3955 ($p < 0.001$) in Model 2. The high coefficient of IR_PROXY_t is consistent with the prior literature, only relatively higher. Foreign operation ($FOREIGN_t$) has a positive relation with audit fees in both Model 1 (coeff. = 0.4569, $p < 0.001$) and Model 2 (coeff. = 0.5149, $p < 0.001$). Similarly, the natural logarithm of non-audit fees ratio ($LnNASFee_t$) indicates a positive coefficient, but with a lower strength in the range of 0.1241 and 0.1454, significant at $p < 0.001$ for both Model 1 and Model 2, respectively.

Other control variables that have significant and positive relations with audit fees are inverse mills ratio ($INVMILLS_t$), premium city ($PREM_CITY_t$) and square root of audit report lag ($SqAUD_LAG_t$). The premium city indicator ($PREM_CITY_t$) has a relatively stronger coefficient of 0.2524 ($p < 0.021$) and 0.3406 ($p < 0.001$) in both Model 1 and Model 2, respectively. This is followed by $INVMILLS_t$, which indicates a positive association with audit fees for both Model 1 and Model 2 at 2.1703 ($p = 0.005$) and 1.8790 ($p < 0.001$), respectively. Square root of audit report lag ($SqAUD_LAG_t$) is positively

associated with audit fees in both model 1 and Model 2, but at different significant levels (coeff. = 0.0872, $p = 0.02$ and coeff. = 0.0850, $p < 0.001$, respectively).

None of the CSR controls have significant relations with audit fees except for higher employee concern, proxied by the two-level employee concern ($EMP_CON=2_t$) (coeff. = 0.1845, $p = 0.081$ and coeff. = 0.1941, $p < 0.001$ for Model 1 and Model 2, respectively). Employee performance was included since it was expected to affect perceptions of corporate citizenship performance, and probably has a moderating effect on wage unfairness. The results for regression without employee performance control indicate no significant effect on the relation of variable of interest. For example, the regression result for lagged wage unfairness excluding employee performance score reports a coefficient of 1.1475.

Table 23: Quantile Regression for Audit Fees on Wage Unfairness (2001–2013)

Variables	Pred. Sign	Non-Lagged Wage Unfairness (Model 1)	Lagged Wage Unfairness (Model 2)
$CEO_PAY_RATIO_{1YR,t}$	+	1.2134** (0.036)	1.1688*** (< 0.001)
$LnTA_t$	+	0.5743*** (< 0.001)	0.5135*** (< 0.001)
IR_PROXY_t	+	1.3955*** (< 0.001)	1.2207*** (< 0.001)
LEV_t	+	0.2268 (0.219)	0.1353 (0.131)
LIQ_t	–	–0.0127 (0.742)	–0.0007 (0.971)
ROA_t	–	–0.7068 (0.334)	–0.8505** (0.013)
$M\&A_t$	+	0.0204 (0.832)	0.0529 (0.226)
$RESTRUC_t$	+	–0.0188 (0.775)	–0.1352** (0.013)
$FOREIGN_t$	+	0.4569*** (< 0.001)	0.5149*** (< 0.001)
$BIG4_t$	+	–0.0486 (0.805)	0.0723 (0.449)
AUD_CHANGE_t	+/-	–0.0154 (0.948)	0.0598 (0.612)
$LnNASFee_t$	+/-	0.1241*** (< 0.001)	0.1454*** (< 0.001)
$LnAUD_TENURE_t$	+/-	0.0903 (0.352)	0.1328*** (0.006)
EXP_CITY_t	+	0.2524** (0.021)	0.3406*** (< 0.001)
$AUD_GEODISP_t$	+	–0.0222 (0.831)	0.0724 (0.173)
$RESTATE_t$	+	–0.0786 (0.388)	–0.0788* (0.084)
$SqAUD_LAG_t$	+	0.0872** (0.020)	0.0850*** (< 0.001)
$BUSY_SEASON_t$	+	0.0683 (0.446)	0.1211*** (0.007)
$INVMILLS_t$	+	2.1703***	1.8790***

Variables	Pred. Sign	Non-Lagged	Lagged
		Wage Unfairness	Wage Unfairness
		(Model 1)	(Model 2)
<i>*ENV_STR_t</i>	+	(0.005) 0.0782 (0.181)	(< 0.001) 0.0572** (0.028)
<i>*ENV_CON_t</i>	+	-0.0818 (0.130)	-0.0387 (0.114)
<i>*EMP_STR=1, _t</i>	-	0.0673 (0.466)	0.0386 (0.359)
<i>*EMP_STR=2, _t</i>	-	-0.1202 (0.286)	-0.0740 (0.152)
<i>*EMP_CON=1, _t</i>	+	0.0011 (0.988)	0.0069 (0.840)
<i>*EMP_CON=2, _t</i>	+	0.1845* (0.081)	0.1941*** (< 0.001)
<i>Constant</i>	?	0.0295	0.3384
<i>Industry Included</i>		Yes	Yes
<i>Year Included</i>		Yes	Yes
<i>Observations, N</i>		823	803
<i>R²</i>		82.8%	83.50%
<i>VIF</i>		2.92	4.28

This table reports the full regression results for audit fees and tax fairness, and the control variables as shown in Equation Model (4) in Section 3.3.2. The column for Model 1 presents the result of coefficients for non-lagged wage unfairness measures ($CEO_PAY_RATIO_{1YR, t}$). Model 2 presents the result of coefficients for lagged wage unfairness measures ($CEO_PAY_RATIO_{1YR, t-1}$). The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.1.3 Discussion of Audit Fees and Philanthropy Model

Table 24 presents the regression results for audit fees and philanthropy, as measured by domestic donation (US_DON_t) and foreign donation ($NONUS_DON_t$), and the control variables included in Equation Model (4). The results for Model 1 and Model 4 concern the regression of audit fees on domestic donation and foreign donation jointly. Model 2, Model 3, Model 5 and Model 6 present results of regression for audit fees on the individual philanthropy measure (domestic donation and foreign donation, non-lagged and lagged measures, respectively).

As shown in Table 24, results indicate that auditors charge lower audit fees to firms with high domestic donation performance ($US_DON_{1YR, t}$) but charge higher audit fees to firms with high foreign donation performance ($NONUS_DON_{1YR, t}$). The results report a negative relation between one-year domestic donation ($US_DON_{1YR, t}$) and audit fees, and a positive relation between one-year foreign donation ($NONUS_DON_{1YR, t}$) and audit fees, robust to all six regression models (Model 1 to Model 6). These results suggest that types of donation affect auditors' pricing differently. The remaining discussion focuses on control variables according to the results in Model 4 for completeness because the model

examines the effects of domestic donation and foreign donation in combination. The results in other models are similar to the results reported for Model 4.

All control variables in Model 4 show significant association with audit fees ($LnAfee_t$), except for return on assets (ROA_t), merger and acquisition ($M\&A_t$), auditor geographic dispersion ($AUD_GEODISP_t$), going concern ($G_CONCERN_t$) and some CSR controls. Firm size ($LnTA_t$) and inherent risk proxy (IR_PROXY_t) are positively associated with audit fees with coefficients of 0.5728 ($p < 0.001$) and 0.3116 ($p < 0.001$). The high coefficients for these two variables are consistent with the coefficients reported in tax fairness and wage unfairness models, though the relations are exceptionally high in the latter model.

In this sample, the correlation coefficient of liquidity ratio, LIQ_t is as high as the firm size. Firm size, $LnTA_t$ is positively associated with audit fees at a coefficient of 0.5728 ($p < 0.001$), and liquidity ratio, LIQ_t , is positively associated with audit fees at a coefficient of 0.5734 ($p < 0.001$). While results from other samples (tax fairness and wage unfairness) report a negative relation for the liquidity ratio, it has a positive relation with audit fees in the Philanthropy Sample. This is probably one of the striking features of the Philanthropy Sample. However, this provides support to prior literature that found a significant association between corporate philanthropy and the firm's cash flow (e.g., Seifert, Morris and Bartkus 2004). Similarly, leverage ratio, LEV_t , shows a significant result, but against the expected sign (coeff. = -0.0171 , $p < 0.001$).

With the exception of auditor geographic dispersion, $AUD_GEODISP_t$, restatement, $RESTATE_t$, and going concern, $G_CONCERN_t$, all other auditor attributes and audit engagement variables are significantly associated with audit fees. The variables, which indicate positive associations with audit fees, are auditor reputation, $BIG4_t$ (coeff. = 0.1182, $p < 0.001$), natural logarithm of non-audit fees ratio, $LnNASFee_t$ (coeff. = 0.0978, $p < 0.001$), premium city, $PREM_CITY_t$ (coeff. = 0.1417, $p < 0.001$), square root of audit report lag, $SqAUD_LAG_t$ (coeff. = 0.0908, $p < 0.001$), busy season, $BUSY_SEASON_t$ (coeff. = 0.1736, $p < 0.001$) and inverse mills ratio, $INVMILLS_t$ (coeff. = 1.1097, $p < 0.001$).

In regard to the association between audit fees and lagged CSR controls, the results are mixed. While lagged environmental strength, ENV_STR_{t-1} , indicates significant and

positive coefficients (coeff. = 0.0767, $p < 0.001$), environmental concern shows no significant association. The results indicate that the effects of employee strength on audit fees are highly significant only at level two, EMP_STR_{t-1} (coeff. = -0.1749, $p < 0.001$). Inversely, the results for the effects of employee concern on audit fees indicate that only level one is significant (coeff. = 0.0435, $p < 0.002$). Overall, regression for the effects of audit fees on philanthropy provides relatively similar results to the regression results for the effect of audit fees on tax fairness.

Table 24: Quantile Regression for Audit Fees on Philanthropy (2001–2009)

Variables	Pred_Sign	Non-Lagged Philanthropy			Lagged Philanthropy		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
$US_DON_{1YR,t}$	–	–0.1688*** (< 0.001)	–0.1651*** (< 0.001)		–0.1724*** (< 0.001)	–0.1725*** (< 0.001)	
$NONUS_DON_{1YR,t}$	+	0.1141** (0.027)		0.0856* (0.090)	0.1133** (0.017)		0.0869* (0.065)
$LnTA_t$	+	0.5704*** (< 0.001)	0.5685*** (< 0.001)	0.5665*** (< 0.001)	0.5728*** (< 0.001)	0.5771*** (< 0.001)	0.5709*** (< 0.001)
IR_PROXY_t	+	0.3355*** (< 0.001)	0.3330*** (< 0.001)	0.3428*** (< 0.001)	0.3116*** (< 0.001)	0.3099*** (< 0.001)	0.3074*** (< 0.001)
LEV_t	+	–0.0146*** (< 0.001)	–0.0156*** (< 0.001)	–0.0145*** (< 0.001)	–0.0171*** (< 0.001)	–0.0178*** (< 0.001)	–0.0171*** (< 0.001)
LIQ_t	–	0.5770*** (< 0.001)	0.5660*** (< 0.001)	0.5805*** (< 0.001)	0.5734*** (< 0.001)	0.5830*** (< 0.001)	0.5661*** (< 0.001)
ROA_t	–	–0.1097 (0.312)	–0.1132 (0.292)	–0.1145 (0.287)	–0.0635 (0.581)	–0.0469 (0.655)	–0.0743 (0.520)
$M\&A_t$	+	–0.0267 (0.288)	–0.0269 (0.280)	–0.0278 (0.267)	–0.0128 (0.568)	–0.0057 (0.781)	–0.0074 (0.741)
$RESTRUC_t$	+	–0.0023*** (< 0.001)	–0.0023*** (< 0.001)	–0.0023*** (< 0.001)	–0.0773*** (< 0.001)	–0.0780*** (< 0.001)	–0.0768*** (< 0.001)
$FOREIGN_t$	+	0.3540*** (< 0.001)	0.3513*** (< 0.001)	0.3498*** (< 0.001)	0.3503*** (< 0.001)	0.3512*** (< 0.001)	0.3512*** (< 0.001)
$BIG4_t$	+	0.1352*** (< 0.001)	0.1334*** (< 0.001)	0.1331*** (< 0.001)	0.1182*** (< 0.001)	0.1195*** (< 0.001)	0.1144*** (< 0.001)
AUD_CHANGE_t	+/–	–0.1300*** (0.003)	–0.1301*** (0.003)	–0.1305*** (0.003)	–0.1227*** (0.006)	–0.1280*** (0.002)	–0.1340*** (0.003)
$LnNASFee_t$	+/–	0.0984*** (< 0.001)	0.1001*** (0.000)	0.1001*** (0.000)	0.0978*** (< 0.001)	0.0990*** (< 0.001)	0.0998*** (< 0.001)
$LnAUD_TENURE_t$	+/–	–0.0591*** (0.003)	–0.0616*** (0.002)	–0.0594*** (0.003)	–0.0528*** (0.007)	–0.0563*** (0.002)	–0.0545*** (0.006)
EXP_CITY_t	+	0.1300*** (< 0.001)	0.1343*** (< 0.001)	0.1337*** (< 0.001)	0.1417*** (< 0.001)	0.1453*** (< 0.001)	0.1431*** (< 0.001)
$AUD_GEODISP_t$	+	–0.0225 (0.215)	–0.0149 (0.408)	–0.0184 (0.307)	–0.0310* (0.087)	–0.0327** (0.048)	–0.023 (0.208)
$RESTATE_t$	+	–0.0324* (0.076)	–0.0306* (0.090)	–0.0286 (0.114)	–0.0324* (0.080)	–0.0319* (0.059)	–0.0326* (0.080)
$G_CONCERN_t$	+	0.0403	0.0512	0.0483	0.1314	0.1335	0.139

Variables	Pred._Sign	Non-Lagged Philanthropy			Lagged Philanthropy		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(0.797)	(0.742)	(0.757)	(0.386)	(0.335)	(0.361)
<i>SqAUD_LAG_t</i>	+	0.0857*** (< 0.001)	0.0866*** (< 0.001)	0.0874*** (< 0.001)	0.0908*** (< 0.001)	0.0906*** (< 0.001)	0.0922*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1968*** (< 0.001)	0.1953*** (< 0.001)	0.1973*** (< 0.001)	0.1736*** (< 0.001)	0.1717*** (< 0.001)	0.1762*** (< 0.001)
<i>INVMILLS_t</i>	+	1.0315*** (< 0.001)	1.0228*** (< 0.001)	1.0168*** (< 0.001)	1.1097*** (< 0.001)	1.1400*** (< 0.001)	1.1088*** (< 0.001)
<i>*ENV_STR_t</i>	+	0.0699*** (< 0.001)	0.0761*** (< 0.001)	0.0715*** (< 0.001)	0.0767*** (< 0.001)	0.0799*** (< 0.001)	0.0719*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0173 (0.130)	0.0216* (0.055)	0.0198* (0.082)	0.0167 (0.119)	0.0185* (0.059)	0.0177 (0.101)
<i>*EMP_STR=1_t</i>	−	−0.0171 (0.366)	−0.0113 (0.549)	−0.0169 (0.371)	−0.0322* (0.074)	−0.0295* (0.073)	−0.0288 (0.112)
<i>*EMP_STR=2_t</i>	−	−0.1472*** (< 0.001)	−0.1523*** (< 0.001)	−0.1597*** (< 0.001)	−0.1749*** (< 0.001)	−0.1673*** (< 0.001)	−0.1829*** (< 0.001)
<i>*EMP_CON=1_t</i>	+	0.0440*** (0.003)	0.0560*** (0.000)	0.0481*** (0.001)	0.0435*** (0.002)	0.0456*** (0.001)	0.0426*** (0.003)
<i>*EMP_CON=2_t</i>	+	0.0209 (0.415)	0.0278 (0.274)	0.0218 (0.391)	0.0182 (0.464)	0.0162 (0.478)	0.0207 (0.407)
<i>Constant</i>	?	−0.1049 (0.449)	−0.0998 (0.466)	−0.1072 (0.437)	0.9465*** (< 0.001)	0.9178*** (< 0.001)	0.9352*** (< 0.001)
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
Observations, <i>N</i>		8,505	8,505	8,505	7,839	7,839	7,839
<i>R</i> ²		78.8%	78.8%	78.8%	77.90%	77.90%	77.90%
<i>VIF</i>		2.74	2.77	2.78	2.12	2.13	2.14

This table reports the full regression results between audit fees and philanthropy measures, and control variables as shown in Equation Model (4) in Section 3.3.2. Model 1 and Model 4 present the coefficient results for when both domestic donation and foreign donation were regressed together (*US_DON_{1YR, t}* and *NONUS_DON_{1YR, t}*). Model 1 used the non-lagged measure and Model 4 used the lagged measure. Models 2 and 5 present the coefficient results for non-lagged and lagged domestic donation measures, respectively (*US_DON_{1YR, t}* and *US_DON_{1YR, t-1}*). Models 3 and 6 present the results of coefficients for non-lagged and lagged foreign donation measures, respectively (*NONUS_DON_{1YR, t}* and *NONUS_DON_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.2 Association between Audit Fees and Combined Corporate Citizenship

5.2.2.1 Combinations Excluding Philanthropy

Table 25 summarises the results for six different combinations of the association between audit fees and corporate citizenship variables, excluding the philanthropy variables. The philanthropy variables of interest are only available up to 2009. Therefore, the tests on combined corporate citizenship were conducted at two levels, with and without philanthropy variables.

In Table 25, Panel A, *Combinations A, B and C* provide the results for combinations of non-lagged tax fairness, $CASH_TPR_{1YR, t}$, $CASH_TPR_{2YR, t}$ and $CASH_TPR_{3YR, t-1}$, with one-year lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t}$. In Panel B, *Combination A, Combination B and Combination C* repeat the regression for the same variables except as lagged measures. Therefore, respectively, combines $CASH_TPR_{1YR, t-1}$, $CASH_TPR_{2YR, t-1}$ and $CASH_TPR_{3YR, t-1}$ with one-year lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t-1}$.

On average, both lagged and non-lagged combinations—*Combination A, Combination B and Combination C*—report significant associations with audit fees with their expected signs. Consistent with results on the tax fairness measure, *Combination C* shows the strongest relation for three-year cumulative tax fairness (coeff. = -5.5352 , $p < 0.001$ for $CASH_TPR_{3YR, t}$ measure and coeff. = -5.5352 , $p < 0.001$ for $CASH_TPR_{3YR, t-1}$ measure). However, the significance of coefficient of wage unfairness, $CEO_PAY_RATIO_{1YR, t}$, is noticeably weakened under *Combination C*. The coefficients of lagged tax fairness measures increase gradually for one-year to two-year cumulative average, and to three-year cumulative average tax fairness. The coefficients of non-lagged tax fairness are almost equally strong for shorter-term measures (one-year and two-year cumulative average, $CASH_TPR_{1YR, t}$ and $CASH_TPR_{2YR, t}$) than for longer-term measures ($CASH_TPR_{3YR, t}$). These results suggest that tax fairness, wage fairness and philanthropy have similar implications on audit fees as individual or combined measures. However, the strong relation between tax fairness and audit fees seems to weaken the relation between wage unfairness and audit fees. The full regression results in combination are presented in the Table A4.

Table 25: Quantile Regression for Audit Fees and Combined Corporate Citizenship, Excludes Philanthropy (2001–2013)

Panel A: Non-Lagged Tax Fairness and Wage Unfairness				
		<i>Combination A</i>	<i>Combination B</i>	<i>Combination C</i>
Variable	Pred. Sign	Coeff.	Coeff.	Coeff.
<i>CASH_TPR</i> _{1YR, <i>t</i>}	–	–4.4528*** (<0.001)		
<i>CASH_TPR</i> _{2YR, <i>t</i>}	–		–4.7294*** (<0.001)	
<i>CASH_TPR</i> _{3YR, <i>t</i>}	–			–5.5352*** (<0.001)
<i>CEO_PAY_RATIO</i> _{1YR, <i>t</i>}	+	1.2424*** (0.010)	1.1233*** (<0.001)	1.1393* (0.067)
Control Variables		Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes
Observations, <i>N</i>		798	796	789
<i>R</i> ²		84.3%	84.6%	84.9%
<i>VIF</i>		3.62	3.64	3.64
Panel B: Lagged Tax Fairness and Wage Unfairness				
		<i>Combination A</i>	<i>Combination B</i>	<i>Combination C</i>
Variable	Pred. Sign	Coeff.	Coeff.	Coeff.
<i>CASH_TPR</i> _{1YR, <i>t-1</i>}	–	–3.5570*** (<0.001)		
<i>CASH_TPR</i> _{2YR, <i>t-1</i>}	–		–4.5588*** (<0.001)	
<i>CASH_TPR</i> _{3YR, <i>t-1</i>}	–			–5.2831*** (<0.001)
<i>CEO_PAY_RATIO</i> _{1YR, <i>t-1</i>}	+	0.9020** (0.048)	0.8970*** (0.003)	0.8909** (0.026)
Control Variables		Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes
Observations, <i>N</i>		798	796	789
<i>R</i> ²		84.3%	84.6%	84.9%
<i>VIF</i>		4.22	2.92	2.92

This table summarises correlation coefficients for audit fees and combined corporate citizenship measures, which comprise (1) tax fairness and (2) wage unfairness, estimated using the quantile regression as shown in Equation Model (4) in Section 3.3.2. The full regression results are reported in the Table A5. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.2.2 Combinations Including Philanthropy

Table 26 presents a summary of coefficient results for combined corporate citizenship, which include philanthropy. This subsequently restricted the sample to 2001–2009.²⁸ The relation for domestic philanthropy is only visible in the non-lagged model, *Combination E* (coeff. = 0.4709, $p = 0.002$). However, the direction of the coefficient for domestic donation, $US_DON_{iYR, t}$ is positive, not negative as predicted. Under a similar combination, both two-year cumulative average tax fairness and wage unfairness also show significant associations, in which two-year cumulative average tax fairness reports a coefficient of -3.5178 at $p < 0.001$ and wage unfairness reports a coefficient of 0.8494 at $p = 0.023$.

Other than, for non-lagged *Combination E*, domestic philanthropy and wage unfairness show no significant role in audit fees. The significance of the effect of tax fairness on audit fees remains consistently strong for the two-year and three-year cumulative average tax fairness under the lagged combinations (*Combination E* and *Combination F*). The results indicate neither foreign donation nor wage unfairness have significant implications for audit fees in combination. These results suggest that tax fairness emerges as the strongest predictor for corporate citizenship when all three corporate citizenship aspects are examined in combination. Table 5 in the Appendix provides full regression results.

²⁸ The philanthropy data are only available from 2000–2009. I dropped year 2000 observations from the analysis because of scarce data. However, results showed no major differences when year 2000 was included in the analysis.

**Table 26: Quantile Regression for Audit Fees and Combined Corporate
Citizenship, Including Philanthropy (2001–2009)**

Panel A: Non-Lagged Corporate Citizenship				
		<i>Combination D</i>	<i>Combination E</i>	<i>Combination F</i>
Variable	Pred. Sign	Coeff.	Coeff.	Coeff.
<i>US_DON</i> _{1YR, <i>t</i>}	–	0.3465 (0.405)	0.4709*** (0.002)	0.4138 (0.568)
<i>NONUS_DON</i> _{1YR, <i>t</i>}	+	0.1882 (0.811)	0.2483 (0.282)	0.2074 (0.854)
<i>CASH_TPR</i> _{1YR, <i>t</i>}	–	–3.1080 (0.158)		
<i>CASH_TPR</i> _{2YR, <i>t</i>}	–		–3.5178*** (0.000)	
<i>CASH_TPR</i> _{3YR, <i>t</i>}	–			–4.6632 (0.300)
<i>CEO_PAY_RATIO</i> _{1YR, <i>t</i>}	+	0.9200 (0.404)	0.8494** (0.023)	0.8448 (0.651)
Control Variables		Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes
Observations, <i>N</i>		543	542	536
<i>R</i> ²		83.2%	83.5%	84.0%
<i>VIF</i>		3.55	3.01	3.58
Panel B: Lagged Corporate Citizenship				
		<i>Combination D</i>	<i>Combination E</i>	<i>Combination F</i>
Variable	Pred. Sign	Coeff.	Coeff.	Coeff.
<i>US_DON</i> _{1YR, <i>t-1</i>}	–	0.2888 (0.423)	0.2859 (0.176)	0.2085 (0.463)
<i>NONUS_DON</i> _{1YR, <i>t-1</i>}	+	0.2158 (0.774)	0.2644 (0.538)	0.2707 (0.633)
<i>CASH_TPR</i> _{1YR, <i>t</i>}	–	–2.4629 (0.156)		
<i>CASH_TPR</i> _{2YR, <i>t</i>}	–		–3.8181*** (0.003)	
<i>CASH_TPR</i> _{3YR, <i>t</i>}	–			–5.1135*** (0.006)
<i>CEO_PAY_RATIO</i> _{1YR, <i>t</i>}	+	0.2888 (0.423)	0.2859 (0.176)	0.2085 (0.463)
Control Variables		Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes
Observations, <i>N</i>		465	463	457
<i>R</i> ²		82.9%	83.5%	83.4%
<i>VIF</i>		2.96	4.03	4.09

This table summarises correlation coefficients for audit fees and combined corporate citizenship measures, which comprise (1) tax fairness and (2) wage unfairness and (3) Philanthropy estimated using the quantile regression as shown in Equation Model (4) in Section 3.3.2. The full regression results are reported in the Table A5. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.3 Additional Analyses

This section discusses the results for the alternative measures of wage unfairness, CEO Compensation Excess. The regression results for each corporate citizenship measure at different audit fee quantiles are also presented. The results on the alternative measures of wage unfairness provided support for the results using the preferred measure of wage unfairness (Section 5.2.3.1 – 5.2.3.2) and the different quantile regression for audit fees was a robustness check to explore whether auditors respond consistently to corporate citizenship measure at any quantile (Section 5.2.3.3 – 5.2.3.5).

5.2.3.1 Results Using Alternative Measures of Wage Unfairness and CEO Compensation Excess

In additional analyses, the audit fees are regressed on the alternative measures of wage unfairness and CEO Compensation Excess (*CEO_EXCESS1* and *CEO_EXCESS2*).²⁹ The alternative measure of wage unfairness has no reliance on employees' salary data, and therefore provided much larger sample sizes ($N = 10,068$ and $N = 10,067$ for the non-lagged *CEO_EXCESS1* and *CEO_EXCESS2*, respectively) than did the preferred measure of wage unfairness (*CEO_PAY_RATIO*). The limitation of this measure is that it does not provide a complete representation on the probability of wage unfairness because it does not consider the wage treatment of average employees. Thus, as previously discussed, it reflects executive remuneration fairness rather than wage fairness. In addition, the *CEO_EXCESS2* measure uses net income as a scaling factor and therefore might reflect auditors' concerns with variability in profits rather than CEO pay. Therefore, the CEO compensation measure serves better as a robustness check for the results on wage unfairness, *CEO_PAY_RATIO*_{1YR, t}.

As reported in Table 27, only the non-lagged *CEO_EXCESS2*_{1YR, t} is positively and significantly associated with audit fees (coeff. = 0.0429, $p = 0.007$). Both lagged and non-lagged *CEO_EXCESS1*_{1YR, t-1} and *CEO_EXCESS1*_{1YR, t}, and lagged *CEO_EXCESS2*_{1YR, t-1} show no significant relationship with audit fees. These results differ significantly to the results provided by the wage unfairness variables in Table 20. Full regression results for

²⁹ Notes: 1) *CEO_EXCESS1*_{1YR, t} measures the differences between the CEO compensation of the firm to the industry average, in which each has been scaled to total sales. 2) *CEO_EXCESS2*_{1YR, t} uses a similar approach, except with a positive net income as the scaling factor.

CEO Compensation Excess are given in the Table A6 including the vif results for the non-lagged *CEO_EXCESS1* (*vif* = 2.21) and *CEO_EXCESS2* (*vif* = 2.18), and their lagged effects (*CEO_EXCESS1*; *vif* = 2.16 and *CEO_EXCESS2*; *vif* = 3.47).

Table 27: Quantile Regression for Audit Fees and CEO Compensation Excess (2001–2013)

Variable	Pred. Sign	N	Non-Lagged		N	Lagged	
			Coeff.	R ²		Coeff.	R ²
<i>CEO_EXCESS1_{1YR, t}</i>	+	10,067	0.8794 (0.446)	80.2%	9,404	0.0223 (0.121)	79.90%
<i>CEO_EXCESS2_{1YR, t}</i>	+	10,068	0.0429*** (0.007)	80.2%	8,577	0.006 (0.956)	80.20%
Control Variables			Yes			Yes	
Industry and Year Included			Yes			Yes	

This table summarises correlation coefficients for audit fees and the alternative measures of wage unfairness and CEO Compensation Excess, estimated using the quantile regression as shown in Equation Model (4) in Section 3.3.2. The full regression results are reported in the Table A7. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.3.2 Results for Combined Corporate Citizenship Using the Alternative Measure, CEO Compensation Excess

In Table 28, Panels A and B provide results for combinations of lagged corporate citizenship variables using CEO Compensation Excess, excludes and includes philanthropy, as in Equation Model (4). The combination of tax fairness and CEO Compensation Excess excluding philanthropy, as reported by Table 28, Panel A, indicates that the results are only significant for *Combination G, H* and *I*, which use lagged CEO Compensation Excess scaled to total sales, *CEO_EXCESS1_{1YR, t-1}*. *CEO_EXCESS1* produces results inconsistent with the expected sign when it is regressed to the audit fees individually, but it shows a positive association with audit fees in combination regression. However, the significance of *CEO_EXCESS1* diminishes under the combination when combined with the philanthropy measure, as shown in Table 28, Panel B. Both tax fairness and philanthropy (domestic and foreign donations) remain highly significant for audit fees in all combinations. The Table A7, provides complete results for the regression.

Table 28: Quantile Regression for Audit Fees and Combined Citizenship using CEO Compensation Excess (2001–2009)

Panel A: Lagged Corporate Citizenship—Excludes Philanthropy							
		Combination G	Combination H	Combination I	Combination J	Combination K	Combination L
Variable	Pred. Sign	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
<i>CASH_TPR_{1YR, t-1}</i>	–	–1.0914*** (< 0.001)			–1.1816*** (< 0.001)		
<i>CASH_TPR_{2YR, t-1}</i>	–		–1.4589*** (< 0.001)			–1.6204*** (< 0.001)	
<i>CASH_TPR_{3YR, t-1}</i>	–			–1.7125*** (< 0.001)			–1.8222*** (< 0.001)
<i>CEO_EXCESS1_{1YR, t-1}</i>	+	0.2669*** (< 0.001)	1.2381*** (< 0.001)	0.0483*** (0.003)			
<i>CEO_EXCESS2_{1YR, t-1}</i>	+				–0.0082 (0.940)	–0.0149 (0.885)	0.0051 (0.961)
Control Variables		Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes	Yes	Yes	Yes
Observations, <i>N</i>		9,294	9,215	9,109	8,496	8,430	8,337
<i>R</i> ²		80.1%	80.1%	80.1%	80.4%	80.4%	80.4%
<i>VIF</i>		2.13	3.51	2.14	2.14	2.14	2.15

This table summarises correlation coefficients for audit fees and lagged corporate citizenship in combination—excluding philanthropy and using the alternative measure of wage unfairness and CEO Compensation Excess. Regression was estimated using the quantile regression as shown in Equation Model (4) in Section 3.3.2. The Table A7, Panel A, reports full regression results. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

Table 28 *continued*

Panel B: Lagged Corporate Citizenship—Includes Philanthropy							
Variable	Pred. Sign	Combination G	Combination H	Combination I	Combination J	Combination K	Combination L
		Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
<i>US_DON</i> _{1YR, t-1}	–	–0.1755*** (<0.001)	–0.1743*** (<0.001)	–0.1656*** (<0.001)	–0.1815*** (<0.001)	–0.1899*** (<0.001)	–0.1802*** (<0.001)
<i>NONUS_DON</i> _{1YR, t-1}	+	0.1172** (0.017)	0.1202*** (0.005)	0.1144*** (0.007)	0.1290** (0.022)	0.1398*** (0.007)	0.1244*** (0.009)
<i>CASH_TPR</i> _{1YR, t-1}	–	–1.0375*** (<0.001)			–1.1911*** (0.000)		
<i>CASH_TPR</i> _{2YR, t-1}	–		–1.7102*** (<0.001)			–1.8731*** (<0.001)	
<i>CASH_TPR</i> _{3YR, t-1}	–			–2.0256*** (<0.001)			–2.1254*** (<0.001)
<i>CEO_EXCESS1</i> _{1YR, t-1}	+	–1.3567 (0.356)	–0.9394 (0.465)	–0.9724 (0.451)			
<i>CEO_EXCESS2</i> _{1YR, t-1}	+				0.0465 (0.748)	0.0824 (0.574)	0.0391 (0.768)
Control Variables		Yes	Yes	Yes	Yes	Yes	Yes
Industry and Year Included		Yes	Yes	Yes	Yes	Yes	Yes
Observations, <i>N</i>		5,378	5,316	5,237	4,912	4,860	6,363
<i>R</i> ²		78.1%	78.2%	78.3%	78.4%	78.4%	78.4%
<i>VIF</i>		2.09	3.17	2.11	3.04	2.12	3.06

This table summarises correlation coefficients for audit fees and lagged corporate citizenship in combination—including philanthropy and using the alternative measures of wage unfairness and CEO Compensation Excess. Regression was estimated using the quantile regression as shown in Equation Model (4) in Section 3.3.2. The Table A8, Panel B, reports full regression results. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.2.3.3 Results for Tax Fairness when Audit Fees are at 75th, 50th and 25th Quantiles

For the robustness check, I regressed tax fairness against audit fees at the 75th, 50th and 25th quantiles (as shown in Equation Model 4, Section 3.3.2) to observe its comparative effects at different audit fee quantiles.³⁰ As reported in Table 29, Panels A and B, the summary of results indicates that tax fairness (*CASH_TPR*) is highly significant for audit fees and robust to different quantiles of audit fees (high, median or low). The lagged and non-lagged three-year cumulative tax fairness, *CASH_TPR*_{3YR, t-1} and *CASH_TPR*_{3YR, t}, show relatively stronger relations with audit fees at any audit fee quantile. These results provide further support to hypothesis H1 (a). Full regression results for audit fees on tax fairness at the 75th and 25th quantiles are in the Table A8. The full regression results at 50th quantile is earlier Section 5.2.1.1.

5.2.3.4 Results for Wage Unfairness when Audit Fees are at 75th, 50th and 25th Quantiles

Table 30, Panels A and B, provides a results comparison for the regression of audit fees on wage unfairness, and the alternative measures of wage unfairness and CEO Compensation Excess, as shown in Equation Model (4) (Section 3.3.2). The results show that lagged wage unfairness (*CEO_PAY_RATIO*) is significantly associated with audit fees and robust to different quantiles. Non-lagged wage unfairness is insignificantly associated with audit fees at the 75th quantile, in which the audit fees are at the higher end of the tail. The coefficient for CEO Compensation Excess is only significantly associated with audit fees with signs consistent with the prediction in H2 (b) when audit fees are at the lower quantile of the 25th. The variation in CEO Compensation Excess has no significance to variation on audit fees at the 75th quantile, and *CEO_EXCESS*_{1YR, t-1} is negatively associated with audit fees.

The audit fee results for wage unfairness and CEO Compensation Excess suggest that wage unfairness and CEO Compensation Excess are significantly associated with auditor pricing when the audit fees are at the median and lower 25th quantile but not when the

³⁰ The regression result at 50th quantile of audit fees, is the results from the main analyses, which has been discussed in Section 5.2.1.1 -5.2.1.3.

audit fees are at the 75th quantile and higher (see the Appendix, Tables 9 and 10, for complete regression results).

5.2.3.5 Results for Philanthropy when Audit Fees are at 75th, 50th and 25th Quantiles

Table 31, Panel A and B, provides a results comparison for the regression of audit fees on philanthropy, as in Equation Model (4), when the audit fees are at the 75th, 50th (main analyses) and 25th quantile. Contrary to the results for wage unfairness, results for domestic donation ($US_DON_{iYR, i}$) show that it is significantly associated with audit fees regardless of any audit fees quantiles, which provides further support to H1 (c). This result is robust to lagged measures of domestic donation ($US_DON_{iYR, t-1}$). The positive coefficient of foreign donation ($NONUS_DON$) is consistent with expectations in H1 (d). However, the significance for the lagged foreign donation diminishes when audit fees are at the 75th quantile (see the Table A11, for complete results).

Table 29: Quantile Regression for Audit Fees and Tax Fairness, Different Audit Fees Quantiles (2001–2013)

Panel A: Non-Lagged Tax Fairness								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>CASH_TPR_{1YR, t}</i>	–	12,851	–0.8694*** (< 0.001)	79.6%	–1.1413*** (< 0.001)	79.9%	–0.9481*** (< 0.001)	79.6%
<i>CASH_TPR_{2YR, t}</i>	–	12,722	1.1676*** (< 0.001)	79.7%	–1.3109*** (< 0.001)	80.0%	–1.2613*** (< 0.001)	79.7%
<i>CASH_TPR_{3YR, t}</i>	–	12,530	–1.4480*** (< 0.001)	79.7%	–1.4667*** (< 0.001)	80.1%	–1.4303*** (< 0.001)	79.8%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	
Panel B: Lagged Tax Fairness								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>CASH_TPR_{1YR, t-1}</i>	–	11,602	–0.9511*** (< 0.001)	79.10%	–1.0538*** (< 0.001)	79.50%	–0.8210*** (< 0.001)	79.20%
<i>CASH_TPR_{2YR, t-1}</i>	–	11,467	–0.9671*** (< 0.001)	79.10%	–1.1641*** (< 0.001)	79.40%	–1.1208*** (< 0.001)	79.20%
<i>CASH_TPR_{3YR, t-1}</i>	–	11,280	–1.6595*** (< 0.001)	79.30%	–1.5358*** (< 0.001)	79.60%	–1.4891*** (< 0.001)	79.40%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	

This table summarises correlation coefficients for audit fees and lagged and non-lagged tax fairness measure at different audit fees quantiles. The regression was estimated using the quantile regression as in Equation Model (4). The Table A8, Panel B, reports full regression results. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

Table 30: Quantile Regression for Audit Fees and Wage Unfairness, Different Audit Fee Quantiles (2001–2013)

Panel A: Non-Lagged Wage Unfairness								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>CEO_PAY_RATIO</i> _{1YR, t}	+	823	0.7046 (0.201)	81.9%	1.2134** (0.036)	0.828	1.0194*** (0.007)	82.6%
<i>CEO_EXCESS1</i> _{1YR, t}	+	10,067	−0.5870 (0.624)	79.9%	0.8794 (0.446)	80.2%	1.4853 (0.231)	80.0%
<i>CEO_EXCESS2</i> _{1YR, t}	+	10,068	0.0174 (0.286)	79.9%	0.0429*** (0.007)	80.2%	0.0800*** (< 0.001)	80.0%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	
Panel B: Lagged Wage Unfairness								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>CEO_PAY_RATIO</i> _{1YR, t-1}	+	803	0.7300** (0.049)	82.10%	1.1688*** (< 0.001)	83.50%	1.1942*** (0.006)	83.40%
<i>CEO_EXCESS1</i> _{1YR, t-1}	+	9,404	−0.0405*** (0.009)	79.60%	0.0223 (0.121)	79.90%	0.0832*** (< 0.001)	79.9% ⁷
<i>CEO_EXCESS2</i> _{1YR, t-1}	+	8,577	0.1317 (0.117)	80.00%	0.006 (0.956)	80.20%	0.2041** (0.046)	80.10%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	

This table summarises correlation coefficients for audit fees and (1) lagged and non-lagged main measure of wage unfairness, and (2) lagged and non-lagged alternative measure of wage unfairness and CEO Compensation Excess at different audit fee quantiles. Regression was estimated using the quantile regression as in Equation Model (4). The Table A8, Panel B, reports full regression results. The p values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

Table 31: Quantile Regression for Audit Fees and Philanthropy, Different Audit Fees Quantiles (2001–2009)

Panel A: Non-Lagged Philanthropy								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>US_DON_{1YR,t}</i>	–	8,505	–0.1642*** (0.002)	78.4%	–0.1651*** (<0.001)	78.8%	–0.1274*** (0.007)	78.6%
<i>NONUS_DON_{1YR,t}</i>	+	8,505	0.1296** (0.101)	78.4%	0.0856* (0.084)	78.8%	0.1856*** (0.005)	78.6%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	
Panel B: Lagged Philanthropy								
Variable	Pred. Sign	N	75th Quantile		50th Quantile		25th Quantile	
			Coeff.	R ²	Coeff.	R ²	Coeff.	R ²
<i>US_DON_{1YR,t-1}</i>	–	7,839	–0.0969** (0.021)	77.40%	–0.1732*** (< 0.001)	77.50%	–0.1197** (0.020)	77.70%
<i>NONUS_DON_{1YR,t-1}</i>	+	7,839	0.0777 (0.101)	77.40%	0.0967* (0.084)	77.50%	0.1472*** (0.005)	77.70%
Control Variables			Yes		Yes		Yes	
Industry and Year Included			Yes		Yes		Yes	

This table summarises correlation coefficients for audit fees and (1) lagged and non-lagged domestic philanthropy, and (2) lagged and non-lagged foreign philanthropy at different audit fees quantiles. Regression was estimated using the quantile regression as in Equation Model (4). The Table A8, Panel B, reports full regression results. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1, Panel A.

5.3 Equity Valuation Test

This section presents and discusses the results from 1) Book Value of Equity Valuation – the Ohlson Test (Section 5.3.1) and 2) Cost of Equity Test (Section 5.3.3). The analyses of the Ohlson test are using sample-portfolios that are built according to the level of firm's performance in three measures of corporate citizenship: tax fairness, wage unfairness and philanthropy. The requirements imposed by the Ohlson model has reduced the sample-portfolios period from 2002 – 2014. As for the third and final test - cost of equity test, it is also using different samples consistent with this study using three corporate citizenship measures. The cost of equity test samples are the full samples and span the period from 2001 – 2014.

The wage unfairness sample-portfolios have significantly low data comparatively to other sample-portfolios and therefore, additional analyses have been conducted using the alternative measure for wage unfairness: CEO compensation excess, which measures the excess of the CEO's compensation in relation to the industry-adjusted rate. The results using the CEO's compensation excess are expected to strengthen the results provided by the preferred measure, wage unfairness. Also, contrary to audit fees test and the cost of equity test, the Ohlson test is using OLS regression. The OLS regression is viewed to be sufficient for the Ohlson test due to the use of sub-samples, which expected to have no outliers issue.

5.3.1 Book Value of Equity Valuation—the Ohlson Test

5.3.1.1 Tax Fairness

Table 32, Panel A and B, report results for the Ohlson test, as shown in Equation Model (9), for the Tax Sample Portfolio. Panel A, provides results for the firm portfolio built using the non-lagged tax fairness performance, which was at the 75th and 25th quantiles in the sample. Panel B provides results for the firm portfolio using lagged tax fairness performance at similar quantiles cut-off points.

In general, all sample portfolios for tax fairness report higher R^2 in the Top 25 than in the Low 25 quantiles, although the sample portfolio, which uses one-year lagged tax fairness, $CASH_TPR_{1YR, t-1}$, shows relatively less significant results than the others. The relatively

higher R^2 for the Top 25 than for the Low 25 quantile firms supports H2 (a), which predicts that a firm's fair tax contribution increases perceptions of its source credibility, which in turn facilitates higher perceived information relevance.

The sample portfolio that uses three-year cumulative tax fairness, $CASH_TPR_{3YR, t}$, reports the most significant R^2 in its Top 25 quantile firms. The lagged and non-lagged three-year cumulative tax fairness, $CASH_TPR_{3YR, t-1}$ and $CASH_TPR_{3YR, t}$, report an R^2 of 98.3% and 99.6%, respectively. The high R^2 in the results on tax fairness is consistent with the R^2 reported by prior studies (e.g. Collin, Maydew and Weiss 1997; Lo and Lys 2000). These results are strong compared with the Low 25 quantile firms, which report an R^2 of only 42.1% and 40.4%, respectively. However, further analyses of the Top 25 quantile firms for the non-lagged three-year cumulative tax fairness, $CASH_TPR_{3YR, t}$, indicate that the significance of the R^2 is mainly driven by the financial firms in the sample.

The Top 25 quantile firms for the lagged two-year cumulative tax fairness, $CASH_TPR_{2YR, t-1}$, also show a significantly higher R^2 than the Low 25 quantile firms, but this does not extend to the non-lagged measure. The non-lagged two-year cumulative tax fairness, $CASH_TPR_{2YR, t}$, reports a rather low R^2 of 11.8% for its Top 25 quantile firms. However, it is still higher than the Low 25 quantile firms, which report an R^2 of 2.6%.

While the test results provide robust evidence to support H2 (a), this study could not rule out the possibility that these are likely the effects from earnings or transparency in tax disclosure. As indicated by Table 9, Panel A, which describes the distribution of Top and Low 25 quantile firms for the Tax Sample, most Top 25 quantile firms seem to exhibit characteristics consistent with being a large firm (large mean for Price and BVE). Large firms have higher resources and incentives to generate better earning streams and higher tax disclosures.

5.3.1.2 Wage Unfairness

Table 33 provides results for the Ohlson test on wage unfairness, as shown in Equation Model (9) for the Wage Sample. The sample portfolio of wage unfairness was built based on firms' performance in wage unfairness and, therefore, the Top 25 quantile represents the firms that perform high in wage unfairness or poor in citizenship, and the Low 25

quantile represents the firms that have lower wage unfairness or high corporate citizenship.

The results from lagged and non-lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t-1}$ and $CEO_PAY_RATIO_{1YR, t}$, are consistent with expectations in H2 (b), which predicts that investors are likely to perceive that firms with lower performance in wage unfairness have higher information relevance than firms with higher performance in wage unfairness. The Low 25 quantile firms show a relatively higher R^2 than the Top 25 quantile firms for both lagged and non-lagged wage unfairness, $CEO_PAY_RATIO_{1YR, t-1}$ and $CEO_PAY_RATIO_{1YR, t}$. The Top 25 quantile for $CEO_PAY_RATIO_{1YR, t-1}$ and $CEO_PAY_RATIO_{1YR, t}$ has R^2 values of 60.8% and 52.1%, respectively. The Low 25 quantile for both $CEO_PAY_RATIO_{1YR, t-1}$ and $CEO_PAY_RATIO_{1YR, t}$ reports relatively lower R^2 values of 45.9% and 47.1%, respectively.

5.3.1.3 Philanthropy

Table 34 provides results for the Ohlson test model on philanthropy, as shown in Equation Model (9) for the Philanthropy Sample. Contrary to the results provided by tax fairness and wage unfairness, it does not matter whether firms are donors or non-donors (domestic or foreign). The corporate philanthropy information is insignificant for explaining investors' pricing decisions. In addition, the tests show that results consistent with being non-donors have higher information relevance, as suggested by the significantly higher R^2 of the models. While it is possible that the results are driven by the asymmetric proportion in the sample size for the donors and non-donors, this hardly explains the significantly higher R^2 for foreign donors relative to domestic donors when the samples for foreign donors also have a smaller sample size.

Table 32: OLS Regression for Price on Tax Fairness (2002–2014)

Panel A: Non-Lagged Tax Fairness						
Variables	<i>CASH_TPR_{1YR, t}</i>		<i>CASH_TPR_{2YR, t}</i>		<i>CASH_TPR_{3YR, t}</i>	
	(Model 1) Top 25Q	(Model 2) Low 25Q	(Model 3) Top 25Q	(Model 4) Low 25Q	(Model 5) Top 25Q	(Model 6) Low 25Q
<i>BVE_t</i>	0.0403*** (0.001)	−0.0008 (0.635)	0.1040 (0.415)	−0.0028** (0.021)	1.5655*** (<0.001)	0.3520** (0.014)
<i>AE_t</i>	50.0114*** (<0.001)	0.5970 (0.616)	11.0818*** (<0.001)	1.9047** (0.019)	3.2248*** (<0.001)	−0.8166* (0.064)
<i>Constant</i>	42.5778*** (< 0.001)	16.6690*** (< 0.001)	75.6329** (0.040)	18.0209*** (< 0.001)	8.6976*** (< 0.001)	12.7328*** (< 0.001)
<i>Observations, N</i>	10,248	10,249	9,937	9,938	9,522	9,523
<i>R²</i>	76.1%	0.5%	11.8%	3.7%	99.1%	31.6%
<i>VIF</i>	1.00	6.26	1.00	6.39	1.01	1.39
Panel B: Lagged Tax Fairness						
Variables	<i>CASH_TPR_{1YR, t-1}</i>		<i>CASH_TPR_{2YR, t-1}</i>		<i>CASH_TPR_{3YR, t-1}</i>	
	(Model 1) Top 25Q	(Model 2) Low 25Q	(Model 3) Top 25Q	(Model 4) Low 25Q	(Model 5) Top 25Q	(Model 6) Low 25Q
<i>BVE_t</i>	0.0888 (0.448)	0.0001** (0.044)	1.4782*** (< 0.001)	−0.0004** (0.031)	1.4803*** (< 0.001)	0.4296* (0.078)
<i>AE_t</i>	2.2112*** (< 0.001)	−0.4111** (0.026)	3.9473*** (< 0.001)	−0.4596*** (0.007)	4.0618*** (< 0.001)	−0.0222 (0.954)
<i>Constant</i>	72.7923* (0.053)	17.5712*** (< 0.001)	11.1538*** (< 0.001)	18.1191*** (< 0.001)	11.5835*** (< 0.001)	13.3625*** (< 0.001)
<i>Observations, N</i>	10,008	10,009	9,591	9,592	9,060	9,060
<i>R²</i>	5.6%	5.9%	97.1%	5.4%	97.7%	40.5%
<i>VIF</i>	1.01	1.00	1.07	1.07	1.00	1.17

This table reports the full regression results between price and BVE and abnormal earnings for Tax Sample Portfolio (tax fairness measure), as in Equation Model (9) in Section 3.3.3.1. Panel A reports results using the non-lagged tax fairness and Panel B reports results using the lagged tax fairness. The *p* values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A2.

Table 33: OLS Regression for Price on Wage Unfairness (2002–2014)

Variables	Non-Lagged		Lagged	
	$CEO_PAY_RATIO_{IYR, t}$		$CEO_PAY_RATIO_{IYR, t-1}$	
	(Model 1) Top 25Q	(Model 2) Low 25Q	(Model 3) Top 25Q	(Model 4) Low 25Q
BVE_t	1.2624*** (< 0.001)	1.0886*** (< 0.001)	1.2784*** (< 0.001)	1.0668*** (< 0.001)
AE_t	3.1221*** (< 0.001)	3.1428*** (< 0.001)	3.3076*** (< 0.001)	2.1984*** (< 0.001)
Constant	17.6581***	13.3826***	18.2274***	12.0885***
Observations, N	848	849	818	819
R^2	48.1%	51.6%	46.9%	57.6%
VIF	1.02	1.01	1.00	1.00

This table reports the full regression results between price and BVE and abnormal earnings for Wage Sample Portfolio (wage unfairness measure), as in Equation Model (9) in Section 3.3.3.1. Panel A reports results that are using non-lagged wage unfairness and Panel B reports the results using the lagged wage unfairness. The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A2.

Table 34: OLS Regression for Price on Philanthropy (2002–2009)

Panel A: Non-Lagged Philanthropy				
Variables	$US_DON_{IYR, t}$		$NONUS_DON_{IYR, t}$	
	(Model 1) Donors	(Model 2) Non-Donors	(Model 3) Donors	(Model 4) Non-Donors
BVE_t	0.9917*** (< 0.001)	1.3137*** (< 0.001)	1.8121*** (< 0.001)	1.3097*** (< 0.001)
AE_t	1.2086** (0.029)	2.3613*** (< 0.001)	1.1116*** (0.005)	2.3490*** (< 0.001)
Constant	22.1437***	12.4348***	20.0736***	12.3165***
Observations, N	265	10,547	188	10,624
R^2	28.3%	79.7%	65.7%	79.8%
VIF	1.00	1.01	1.01	1.01
Panel B: Lagged Philanthropy				
Variables	$US_DON_{IYR, t-1}$		$NONUS_DON_{IYR, t-1}$	
	(Model 5) Donors	(Model 6) Non-Donors	(Model 7) Donors	(Model 8) Non-Donors
BVE_t	1.1241*** (< 0.001)	1.2854*** (< 0.001)	1.3689*** (< 0.001)	1.2840*** (< 0.001)
AE_t	1.1119** (0.015)	2.3121*** (< 0.001)	1.6857* (0.085)	2.2956*** (< 0.001)
Constant	19.2682***	12.4394***	26.1024***	12.3071***
Observations, N	272	11,864	193	11,943
R^2	33.7%	81.2%	56.6%	81.3%
VIF	1.00	1.01	1.01	1.01

This table reports the full regression results between price and BVE and abnormal earnings using Philanthropy Sample Portfolio (philanthropy measure), as in Equation Model (9) in Section 3.3.3.1. Panel A reports results using non-lagged philanthropy and Panel B reports results on lagged philanthropy. The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A2.

5.3.1.4 Additional Analyses

5.3.1.5 Results Using Alternative Measures for Wage Unfairness and CEO Compensation Excess

Table 35 presents results for the Ohlson test on CEO Compensation Excess, included in Equation Model (9) for the Wage Sample-Portfolio. The results report significantly higher R^2 values for the firms in the Low 25 quantile, which has a low performance in CEO Compensation Excess. The R^2 for the firms in the Top 25 quantile, which has high performance in CEO Compensation Excess, is about 40% lower than the R^2 for the Low 25 quantile. These results suggest as if investors perceived higher information relevance for the firms, which are having lower CEO Compensation Excess (Low 25 quantile). Consequently, these results provide further support to the Ohlson test on wage unfairness, as reported in Table 33.

Table 35: OLS Regression for Price on CEO Compensation Excess (2002–2013)

Panel A: Non-Lagged CEO Compensation Excess				
Variables	$CEO_EXCESS1_{1YR,t}$		$CEO_EXCESS2_{1YR,t}$	
	(Model 1) Top 25Q	(Model 2) Low 25Q	(Model 3) Top 25Q	(Model 4) Low 25Q
BVE_t	1.2334*** (< 0.001)	1.1374*** (< 0.001)	1.2369*** (< 0.001)	1.1380*** (< 0.001)
AE_t	2.3449*** (< 0.001)	4.1060*** (< 0.001)	2.3945*** (< 0.001)	4.717*** (< 0.001)
<i>Constant</i>	10.3803***	22.8984***	10.2044***	22.8984***
<i>Observations, N</i>	4,903	4,903	4,321	4,322
R^2	46.2%	99.9%	47.3%	99.9%
<i>VIF</i>	1.00	1.24	1.00	1.24
Panel B: Lagged CEO Compensation Excess				
Variables	$CEO_EXCESS1_{1YR,t-1}$		$CEO_EXCESS2_{1YR,t-1}$	
	(Model 5) Top 25Q	(Model 6) Low 25Q	(Model 7) Top 25Q	(Model 8) Low 25Q
BVE_t	1.3337*** (< 0.001)	1.8301*** (< 0.001)	1.2825*** (< 0.001)	1.3720*** (< 0.001)
AE_t	1.1576 (0.190)	2.3803** (0.024)	0.4883 (0.702)	3.0369*** (< 0.001)
<i>Constant</i>	9.4455***	11.5530***	8.9811***	27.1553***
<i>Observations, N</i>	4,925	4,925	4,349	4,350
R^2	41.8%	47.0%	45.5%	96.1%
<i>VIF</i>	1.00	1.10	1.03	1.13

This table reports the full regression results for price on BVE and abnormal earnings, as in Equation Model (9). Panel A reports results using non-lagged CEO Compensation Excess and Panel B reports result using lagged CEO Compensation Excess. The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A2.

5.3.2 Cost of Equity Test

5.3.2.1 Tax Fairness

Table 36 presents the results for the regression between the cost of equity test and tax fairness, as included in Equation Model (11) for the Tax Sample. As shown in the non-lagged column of Table 33, the cost of equity is significantly and negatively associated with one-year, two-year and three-year cumulative performance of tax fairness (coeff. = -0.1425 , $p < 0.001$, coeff. = -0.0908 , $p < 0.001$, coeff. = -0.0723 , $p < 0.001$). The significance of the cost of equity test results for tax fairness with the expected negative signs provides support to H3 (a), which predicts that tax fairness is likely to lower the investors' perceived information risk, proxied by the cost of equity.

The significance of the test results is also consistent with the underlying theory of source credibility associated with higher corporate citizenship, facilitated by tax fairness, as used by this study. The results for non-lagged tax fairness provide relatively higher significance than the coefficients for lagged tax fairness consistent with cost of equity includes prior year information. Therefore, the lack of significance in results for the lagged three-year cumulative tax fairness is not very concerning. All control variables show significant associations with cost of equity, with the expected signs consistent with findings from prior studies.

5.3.2.2 Wage Unfairness

Table 37 provides results for the regression between the cost of equity test and wage unfairness, as included in Equation Model (11) for the Wage Sample. The results for the non-lagged wage unfairness ($CEO_PAY_RATIO_{1YR,t}$), though significant, have a negative sign, which is contrary to the prediction in H3 (b). In addition, the coefficient sign for the lagged wage unfairness while met the expectation in H3 (b), it is not significant. It is expected that the low number of observations may have had negative implications on coefficient estimations between the cost of equity and wage unfairness. It is also plausible that the investors associate higher relative CEO pay as an indicator for higher talent, consistent with wage efficiency theory (e.g. Akerlof 1984). This can influence signals of perceived management ability, which is one of the components for source credibility. All control variables provide significant results and support findings from prior studies.

Table 36: Quantile Regression for Cost of Equity on Tax Fairness (2001–2014)

Variables	Pred. Sign	Non-Lagged			Lagged		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
$CASH_TPR_{1YR, t}$	–	–0.1425*** (< 0.001)			–0.0350* (0.088)		
$CASH_TPR_{2YR, t}$	–		–0.0908*** (< 0.001)			–0.0437** (0.039)	
$CASH_TPR_{3YR, t}$	–			–0.0723*** (0.001)			–0.023 (0.302)
$LnTA_t$	–	–0.0077*** (< 0.001)	–0.0079*** (< 0.001)	–0.0079*** (< 0.001)	–0.0076*** (< 0.001)	–0.0077*** (< 0.001)	–0.0076*** (< 0.001)
$BETA_t$	+	0.0132*** (< 0.001)	0.0135*** (< 0.001)	0.0137*** (< 0.001)	0.0151*** (< 0.001)	0.0154*** (< 0.001)	0.0152*** (< 0.001)
LEV_t	+	0.0529*** (< 0.001)	0.0574*** (< 0.001)	0.0580*** (< 0.001)	0.0559*** (< 0.001)	0.0547*** (< 0.001)	0.0551*** (< 0.001)
MTB_t	–	–0.0009*** (< 0.001)	–0.0011*** (< 0.001)	–0.0011*** (< 0.001)	–0.0011*** (< 0.001)	–0.0011*** (< 0.001)	–0.0011*** (< 0.001)
Ln_FEDISP_t	+	0.0033*** (< 0.001)	0.0034*** (< 0.001)	0.0035*** (< 0.001)	0.0037*** (< 0.001)	0.0037*** (< 0.001)	0.0038*** (< 0.001)
LTG_t	+	0.0104*** (< 0.001)	0.0108*** (< 0.001)	0.0109*** (< 0.001)	0.0091*** (< 0.001)	0.0099*** (< 0.001)	0.0099*** (< 0.001)
Constant	?	0.1270***	0.1269***	0.1264***	0.1235***	0.1237***	0.1219***
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
Industry FE		Yes	Yes	Yes	Yes	Yes	Yes
Observations, N		7,388	7,256	7,096	7,388	7,256	7,096
R^2		6.1%	8.6%	9.1%	6.1%	8.6%	9.1%
VIF		1.96	2.09	2.09	2.10	2.10	2.06

This table reports the full regression result between for the cost of equity test on tax fairness measures, in lagged and non-lagged effects as in Equation Model (11). The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A3.

Table 37: Quantile Regression for Cost of Equity on Wage Unfairness (2001–2014)

Variables	Pred. Sign	Non-Lagged (Model 1)	Lagged (Model 2)
$CEO_PAY_RATIO_{1YR, t}$	+	-0.1162** (0.048)	0.0346 (0.535)
$LnTA_t$	-	-0.0013 (0.248)	-0.0023* (0.071)
$BETA_t$	+	0.0100*** (0.001)	0.0112*** (0.001)
LEV_t	+	0.0436*** (< 0.001)	0.0475*** (< 0.001)
MTB_t	-	-0.0012*** (< 0.001)	-0.0022*** (0.000)
Ln_FEDISP_t	+	0.0053*** (< 0.001)	0.0064*** (< 0.001)
LTG_t	+	0.0076*** (< 0.001)	0.0075*** (< 0.001)
Constant	?	0.1074***	0.1015***
Year FE		Yes	Yes
Industry FE		Yes	Yes
Observations, N		1,272	1,226
R^2		23.10%	23.9%
VIF		3.01	3.04

This table reports the full regression results between the cost of equity test and wage unfairness measures, in non-lagged and lagged effects, as in Equation Model (11). The p values reported in parentheses are two-tailed. All variables are defined in Table A1 and Table A3.

5.3.2.3 Philanthropy

Table 38 provides the regression results between the cost of equity test and philanthropy, and control variables as expressed in Equation Model (11) for the Philanthropy Sample. While the results are significant for all control variables, there are no significant relationships observed between the cost of equity and the philanthropy variables of interest: domestic donation, $US_DON_{1YR, t}$ and foreign donation, $NONUS_DON_{1YR, t}$. These results are similar for their lagged effects. Thus, these results provide no support to H3 (c) and H3 (d). These results are inconsistent with the theory of source credibility, which expects higher corporate contributions to influence social trust positively and subsequently, good corporate citizen corporations as perceived higher credible source of the financial reporting.

The results for the cost of equity on philanthropy reported in this study provide support to prior research works (e.g. Seifert 2003; Brammer and Millington 2008). Seifert 2003 find no evidence to suggest that corporate philanthropy is linked to corporate financial performance. Though, Brammer and Millington (2008) find extremely high social performers having high financial performance, but this is limited to long-run performance. The evidence concluded from these analyses is more in line with the view of critics to corporate social responsibility such as, Friedman (as cited in Porter and Kramer 2002) who argues social investment are activities that carried out at the expense of the shareholders. As consequence, positive performance in corporate contributions is negatively perceived as an action that reduces shareholders' wealth (Godfrey 2005).

However, it is also observed that the expected negative sign for the domestic donation and positive sign for the foreign donation are consistent with the predictions in H3 (c) and H3 (d). This leads to the expectations that the results might be different if tested with samples that larger in size.

Table 38: Quantile Regression for Cost of Equity on Philanthropy (2001–2009)

Variables	Pred. Sign	Non-Lagged			Lagged		
		(M1)	(M2)	(M3)	(M4)	(M5)	(M6)
$US_DON_{1YR,t}$	–	-0.0075 (0.333)	-0.0066 (0.385)		-0.0100 (0.124)	-0.0103 (0.121)	
$NONUS_DON_{1YR,t}$	+	0.0033 (0.711)		0.0003 (0.967)	0.0061 (0.436)		0.0030 (0.698)
$LnTA_t$	-	-0.0054*** (< 0.001)	-0.0053*** (< 0.001)	-0.0056*** (< 0.001)	-0.0059*** (< 0.001)	-0.0059*** (< 0.001)	-0.0061*** (< 0.001)
$BETA_t$	+	0.0139*** (< 0.001)	0.0140*** (< 0.001)	0.0138*** (< 0.001)	0.0153*** (< 0.001)	0.0152*** (< 0.001)	0.0151*** (< 0.001)
LEV_t	+	0.0653*** (< 0.001)	0.0637*** (< 0.001)	0.0641*** (< 0.001)	0.0662*** (< 0.001)	0.0658*** (< 0.001)	0.0671*** (< 0.001)
MTB_t	-	-0.0016*** (< 0.001)	-0.0016*** (< 0.001)	-0.0016*** (< 0.001)	-0.0017*** (< 0.001)	-0.0017*** (< 0.001)	-0.0017*** (< 0.001)
Ln_FEDISP_t	+	0.0034*** (< 0.001)	0.0035*** (< 0.001)	0.0036*** (< 0.001)	0.0038*** (< 0.001)	0.0037*** (< 0.001)	0.0038*** (< 0.001)
LTG_t	+	0.0131*** (< 0.001)	0.0131*** (< 0.001)	0.0131*** (< 0.001)	0.0120*** (< 0.001)	0.0118*** (< 0.001)	0.0121*** (< 0.001)
Constant	?	0.1190*** (< 0.001)	0.1188*** (< 0.001)	0.1214*** (< 0.001)	0.1270*** (< 0.001)	0.1260*** (< 0.001)	0.1263*** (< 0.001)
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
Industry FE		Yes	Yes	Yes	Yes	Yes	Yes
Observations, N		3,932	3,932	3,932	3,932	3,932	3,932
R^2		10.70%	10.70%	10.70%	0.113	11.4%	11.3%
VIF		2.14	2.18	2.18	2.36	2.40	2.41

This table reports the full regression result between the cost of equity test and philanthropy measures, in lagged and non-lagged effects, as in Equation Model (11). The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A3.

5.3.2.4 Additional Analyses

5.3.2.4.1 Results Using the Second Measure of Wage Unfairness, CEO Compensation Excess

Table 39 provides the results of regression between the cost of equity capital and CEO Compensation Excess with control variables, as expressed in Equation Model (11). The results are only significant for the lagged effects. While the positive coefficient of lagged $CEO_EXCESS2_{1YR,t-1}$, which is scaled to net income, is consistent with the prediction in

H3 (b) (coeff. = 0.0339, $p = 0.014$), the coefficient of lagged $CEO_EXCESS1_{1YR, t-1}$, which is scaled to total assets, shows a contrary sign. Since $CEO_EXCESS2$ is scaled to the net income (which is also limited to only positive net income to provide an equal comparative reference point), it is plausible that investors are likely to have poor perceptions of firms that reward their CEOs with higher compensation excess relative to earnings reported. The contrasting results for the lagged $CEO_EXCESS1_{1YR, t-1}$ is could be related to multicollinearity issue. However, on the other hand, is also plausible that investors simply do not associate CEO compensation excess (when it is scaled to total sales) with wage unfairness, and therefore with citizenship.

**Table 39: Quantile Regression for Cost of Equity on CEO Compensation Excess
(2001–2014)**

Variables	Pred. Sign	Non-Lagged		Lagged	
		(M1)	(M2)	(M3)	(M4)
$CEO_EXCESS1_{1YR, t}$	+	0.0394 (0.863)		-0.0021*** (< 0.001)	
$CEO_EXCESS2_{1YR, t}$	+		0.0005 (0.907)		0.0339** (0.014)
$LnTA_t$	+	-0.0056*** (< 0.001)	-0.0043*** (< 0.001)	-0.0057*** (< 0.001)	-0.0051*** (< 0.001)
$BETA_t$	+	0.0157*** (< 0.001)	0.0123*** (< 0.001)	0.0166*** (< 0.001)	0.0174*** (< 0.001)
LEV_t	+	0.0498*** (< 0.001)	0.0327*** (< 0.001)	0.0471*** (< 0.001)	0.0390*** (< 0.001)
MTB_t	-	-0.0013*** (< 0.001)	-0.0008*** (< 0.001)	-0.0013*** (< 0.001)	-0.0009*** (< 0.001)
Ln_FEDISP_t	+	0.0036*** (< 0.001)	0.0027*** (< 0.001)	0.0036*** (< 0.001)	0.0038*** (< 0.001)
LTG_t	+	0.0101*** (< 0.001)	0.0243*** (< 0.001)	0.0088*** (< 0.001)	0.0089*** (< 0.001)
Constant	?	0.1098***	0.0991***	0.1355***	0.1148***
Year FE		Yes	Yes	Yes	Yes
Industry FE		Yes	Yes	Yes	Yes
Observations, N		6,040	5,378	5,713	5,246
R^2		17.0%	10.0%	17.0%	17.2%
VIF		2.07	2.04	2.00	2.06

This table reports the full regression results between the cost of equity and philanthropy measures, non-lagged and also, in lagged effects, as expressed in Equation Model (11). The p values reported in parentheses are two-tailed. All variables are defined in the Table A1 and Table A3.

5.4 Summary of Results

This chapter has presented the results for the hypotheses tests using the audit fees model (Equation Model 4), the Ohlson test (Equation Model 9) and the cost of equity test (Equation Model 11). Overall, the results from audit fees tests provide support to the hypotheses of this study, that the higher corporate citizenship performance, the higher perception of credibility of the corporation or its manager, as a source to the financial reporting information, as expressed in H1 (a), H1 (b) and H1 (3). The results from the analyses indicate that tax fairness (H1 a) and domestic philanthropy (H1 c) are negatively related with audit fees, and wage fairness performance (H1 b) is positively related with audit fees. The positive relation between foreign philanthropy and audit fees provides support to H1 (d), which proposes that foreign-related philanthropy might increase uncertainty related to financial information credibility.

The results of audit fees test of this study find that good corporate citizenship performance, as measured using tax fairness, wage fairness and philanthropy, is effective in lowering auditors' perceived risk related to the information set of financial reporting. The results in general, provide support to the findings from recent audit fees research, which find that audit fees are lower for corporations which have higher corporate citizenship performance (Kim, Park and Wier 2012; Koh and Tong 2012; Berglund and Kang 2013). Furthermore, this study offers new empirical evidence to suggest that corporate philanthropy, in particular, domestic philanthropy has favourable impact in lowering auditors' perceived risk related to the financial reporting. Though these results do not extend to foreign-based philanthropy. It is plausible that the complexity associated with multinational activities is one of the reasons that can explain the adverse results for foreign philanthropy (Haskins and Williams 1988; Hay, Knechel and Wong 2006).

Audit fees test results on tax fairness is also consistent with the positive relation between of tax avoidance or aggression and audit fees, as identified by prior research (e.g., Donohoe and Knechel 2014). While there are no audit fees literature that have examined at the relation between wage unfairness or fairness and audit fees specifically, Wysocki (2010) shows that CEO compensation can increase perceived firm-related risk, which can affect auditors' efforts and subsequently, reflected in audit fees, which explains such results. Furthermore, the findings of this study in relation to measures of corporate citizenship should have different significance to prior literature of corporate citizenship,

or corporate social responsibility and audit fees since none of prior audit fees research that investigates the link between social performance and audit fees have tested the social components individually as done by this study. Most of those research uses a net effect in the social scores (total social strength – total social concern) collected from MSCI-KLD.

The results from the Ohlson Model provide robust support to the hypotheses on tax fairness, H2 (a) and wage unfairness, H2 (b), but not for the hypotheses concerning the domestic philanthropy, H2 (c) and foreign philanthropy H2 (d). The sample portfolio analysis built based on tax fairness indicates that higher-performing corporations in tax fairness have significantly higher R^2 values than those corporations with poor performance in tax fairness. Furthermore, the results on tax fairness produced high R^2 that is observed to be consistent with the R^2 reported in prior literature for example, Collin, Maydew and Weiss (1997), and Lo and Lys (2000). The results for wage unfairness indicate that sample portfolio corporations with lower wage unfairness have higher R^2 values than corporations with higher wage unfairness. While the results of preferred measure of wage unfairness do not produced R^2 as high as reported by tax fairness, or the alternative measure for wage unfairness: CEO compensation excess, they are still consistent with the results reported by some of the prior works for example, Barth, Beaver and Landsman (1998). Results for the tests on domestic philanthropy (H2 c) and foreign philanthropy (H2 d) provide no evidence that they have implications for investors' perceived information credibility. The asymmetric size between the sample available in Top and Bottom quantiles essentially, leads to a weak model with low R^2 .

In relation to the cost of equity test, in overall, the results suggest that only tax fairness is effective in reducing investors' perceived information risk, which provides support to H3 (a). These results on tax fairness of this study is consistent with prior tax avoidance literature, which find corporations with high tax avoidance behaviour are more likely to be perceived as have higher risk by the investors, and received negative valuation (Hanlon and Slemrod 2009). Desai, Foley and Hines (2007) suggest that corporate tax avoidance or aggression provides signals to investors regarding managers' aggression towards shareholders' welfare. The analyses of cost of equity on wage unfairness indicates mixed results, which might be due to non-linearity in size effects which fails to provide support to H3 (b) The regressions on philanthropy measures for both domestic donation and

foreign donation also indicate no significant relation to the cost of equity capital. These results are similar to the results provided by the tests using the Ohlson Model (book value of equity valuation test).

The lack of relation identified between corporate philanthropy and investors valuation using the Ohlson test and the cost of equity test suggests that, investors might not care about performance of corporate philanthropy when estimating the corporate value. The Ohlson test results on philanthropy specifically, suggest that those corporations with relatively poor performance in the area seem to be evaluated more positively. In overall, the results on philanthropy show consistency with the Friedman's view, which argue that positive social performance is costing shareholders (as cited in Porter and Kramer 2002). This subsequently, reject the hypothesis that corporate philanthropy plays a role in facilitating investors' perceived financial reporting information credibility. This study finds the results relating to the equity valuation test is mixed for the wage unfairness. Although, wage unfairness is observed to have no significant relation with the cost of equity capital, it is shown to have credibility role in influencing investors' perceived value-relevance of the financial reporting information.

Chapter 6: Conclusion

6.1 Introduction

This chapter provides overview of the thesis (Section 6.1), summary of the findings (Section 6.2), theoretical contributions (Section 6.3), practical contributions (Section 6.4), limitations of the study (Section 6.5) and future research (Section 6.6).

6.2 Overview of the Study

This study examines whether corporate citizenship performance influences the perceived credibility of financial reporting information by exploring its relations with auditors' and investors' pricing decisions. Management theorists argue that corporations that follow the view of socially responsible tend to accumulate social trust (or support) from its wider stakeholders (Fombrun, Gardberg and Barnett 2000). Empirical research relating to the concept of socially responsible business has largely focused on the information role of corporate social responsibility. I extend this concern with information effects by investigating the effects of corporate citizenship performance on the perceived credibility of financial reporting information. The premise of my study is that a strong communitarian role helps a corporation signals its recognition of mutualistic relationships between the corporation and its stakeholders and build a reputation as a moral member of society, which in turn, contributes to the corporation's accumulation of social trust.

A substantial communication literature suggests that source credibility, which is assessed using two attributes: expertise and trustworthiness are highly persuasive in inducing believability in communication (Hovland, Janis and Kelley 1953; McGinnies and Ward 1980; Pornpitakpan 2004). Prior research suggests that trustworthiness has more influence than expertise on source credibility (McGinnies and Ward 1980). Alternatively, social psychological literature shows that social trust is linked to moral conception, which is internalized from a participant's 'orientation towards society or others' (Kramer and Tyler 1996). Both views provide a basis for expecting that corporate citizenship might accumulate social trust that leads firms with superior performance to develop higher source credibility.

Consistent with conceptualisation of corporate citizenship that has emphasises on voluntary acceptance of responsibility to benefit society, corporate citizenship performance is measured using three forms of corporate social contributions: tax fairness, wage fairness (inversely implied from wage unfairness) and philanthropy. These three measures are selected because they provide strong indications of corporations' direct contribution to society. A corporation's willingness to contribute its "fair share" of tax revenues, fairly remunerate all its employees and support social cause through philanthropy, are more in line with the norms of citizenship that is giving back to the society, in addition to other notions of corporate social responsibility.

6.3 Summary of the Findings

Consistent with the source credibility hypothesis, which theorizes that trustworthiness increases credibility perception of a source's communication, this study finds that higher corporate citizenship performance, the lower the uncertainty inherent to the credibility of firm or managers as a source of the financial reporting information. With all three corporate citizenship measures, this study finds evidence that higher corporate citizenship enhances auditors' perceived credibility of financial reporting information. While the results are robust in the analyses involving auditors' perception of financial reporting information, proxied by audit fees, the results from the analyses of investors' pricing decisions using (1) the Ohlson test and (2) the cost of equity test provide varying evidence. I elaborate my findings in the following.

First, in the analyses of auditors' perceptions of financial reporting credibility using the audit fees, this study finds evidence that auditors charge lower audit fees for corporations, which have higher performance in tax fairness (H1 a), wage fairness (H1 b) and domestic philanthropy (H1 c). However, contrary to the effects on domestic philanthropy, this study finds evidence that auditors charge higher audit fees to corporations that demonstrate high performance in foreign philanthropy, consistent with the prediction in H1 (d). These findings have two implications. First, they provide evidence to support the expectations that higher corporate citizenship with accumulates higher social trust (Fombrun, Gardberg and Barnett 2000), and subsequently, allows firms with good corporate citizenship performance to develop relative higher source credibility and has 'spillover' effects on auditors' perceptions of to its financial reporting credibility. The second implications are that, the differential effects of domestic philanthropy and foreign

philanthropy on auditors' pricing decisions indicate that not all kinds of philanthropy engender social trust. It is plausible that auditors have higher information uncertainty concerning foreign philanthropy because they could not properly verify its nature, beneficiaries and impacts. Thus, with foreign philanthropy, instead of facilitating social trust, it increases auditors' perceived information risk and subsequently, audit fees.

Second, in the analyses concerning investors' perceptions of financial reporting credibility, this study finds evidence that indicates that only tax fairness is highly significant to explain investors' perceived credibility of financial reporting (H2 a and H3 a). These results are robust to using two different tests: the Ohlson test and the cost of equity test. While the evidence is robust on tax fairness, there are some caveats. This study cannot rule out the possibility that tax transparency effects might compound citizenship effects in the tax fairness results. The positive tax performance disclosure, apart from sending signals of the corporation's public accountability, also sends signals of its willingness to disclose tax information that truthfully or accurately reflects its current financial position. Thus, it is possible that investors respond positively to less opaque tax disclosure, in which Dhaliwal, Gleason and Mills (2004) have argued to be high asymmetry area in the financial reporting. The results are also in line with the literature, which argues from the standpoint of political cost hypothesis (Hanlon 2003; Rego 2003). Under the political cost hypothesis, large firms are expected to have higher incentives to demonstrate more transparent tax disclosure. Consistent with these prior studies, all tax fairness samples used for the Ohlson test and the cost of equity test are observed to be biased toward large firms (as reported in Table 9 and Table 15 in Chapter 4). However, this also indicates that large firms might behave differently and that investors might be more sensitive to political cost when it is concerning large firms than small firms.

Third, this study finds that the significance of perception of wage fairness (as implied from inverse wage unfairness) has relatively weaker effects on investors' perceived credibility of the financial reporting information. The results from the Ohlson test provide evidence to support the hypothesis in H2 (b) that, wage unfairness reduces investors' perceived value-relevance of the financial reporting information. This further supported by similar results from the additional analyses that are using the alternative measure of wage unfairness, the CEO compensation excess after adjusted to industry rate (and scaled

to 1) total assets and 2) positive net income). While the results have been robust in the Ohlson test, the results from the cost of equity capital provides evidence that fails to support the hypothesis in H3 (b). In H3 (b), the wage unfairness is expected to be positively related with the cost of equity, but the results indicate a negatively relation. The results from the additional analyses for the cost of equity test using the alternative measure: the CEO compensation excess also fail to lend supports to the main analyses that are using the preferred measures of wage unfairness. The differences in results on wage unfairness produced from the Ohlson test and the cost of equity test, explain that while wage unfairness reduces investors' perceived value-relevance of the financial reporting, it does not improve investors' perceived information risk. The favourable results in the Ohlson test is more in line with a study by Wysocki (2010) that shows the link between the CEO compensation between firm risk, but he also finds that there are other factors that might influence this association such as, management entrenchment.

Fourth, the results from both the Ohlson test and the cost of equity test provide no evidence to support the hypothesis that higher philanthropy performance is effective in influencing investors' perceptions of financial reporting credibility, as tested in H2 (c). The lack of support provided by the results from the Ohlson test is arguably linked to the asymmetric size of firm-portfolio samples (as described in Table 13 in Chapter 4) that essentially gives rise to a weak model for examining the relation between domestic philanthropy and investors' perceived value-relevance of financial reporting information. However, this hardly explains the significantly high R^2 for the test using foreign-donors portfolio even though, the sample-portfolio is much smaller than the domestic-portfolio sample (as reported in Table 34 in Chapter 5). The cost of equity test also provides lack of evidence to indicate that higher philanthropy performance matters to investors' perception of the firm's financial reporting credibility. The consistency in the results on philanthropy observed in both the Ohlson test and the cost of equity test conclusively suggest that investors might not use philanthropy as a powerful indicator for assessing the source credibility of the financial reporting information.

6.4 Theoretical Contributions

The findings of this study have five theoretical contributions. First, the study links the financial benefits with higher corporate citizenship performance particularly, in reducing auditors' perceived information risk associated with management unaudited financial

reporting information. This study extends the recent empirical research, which investigates the financial benefits of corporate social responsibility by examining the relation between source-effects risk inferred from corporate citizenship performance and financial reporting information credibility (e.g. Jiao 2010; Dhaliwal, Tsang and Yang 2011; El Ghouli et al. 2011; Kim, Park and Wier 2012; Koh and Tong 2012; Berglund and Kang 2013). Unlike prior research, which focuses specifically on corporate social responsibility context, this study examines the corporate benefits using the less-explored voluntary responsibility of corporate citizenship. This study provides evidence to support the theoretical arguments, which suggest that corporations tend to benefit from social trust 'spillover' as a result from increasing the welfare of society stakeholders (e.g. Creed et al. 1996; Kramer and Tyler 1996; Fombrun et al. 2000). This study fills the gap in prior literature by using source credibility theory to explain the link between corporate citizenship, social trust and financial reporting information credibility.

Prior research that investigates the relationship between corporate social performance and financial performance have been criticised for failing to provide for a causal theory (Margolis and Walsh 2003). Although, some have attempt to establish the potential connections between corporate social performance and financial performance for example, through reputational capital (Fombrun, Gardberg and Barnett 2000) and moral capital (McWilliams and Siegel 2001), their works rely extensively on anecdote research. This study sets apart by using source credibility theory, linking the findings from prior research of communication, psychological science, marketing, accounting and corporate finance to explain the incremental role of corporate contributions for accumulating social trust and subsequently, source credibility that is persuasive in influencing the perceived credibility of corporation, or its managers as a source to the financial reporting information. While there are other empirical accounting and corporate finance works that have argued on the role of trust associated with corporate social responsibility, for example, Berglund and Kang (2013), they have not discussed the theory to explain social trust role in reducing perception of information risk, which is covered by this study.

Second, this study also contributes to new a methodology approach by introducing rigorous measures through tax fairness and wage unfairness to capture the voluntary responsibility dimension of corporate citizenship. While these measures are available from prior literature, they have not been widely considered in corporate social

responsibility or corporate citizenship literature. As previously discussed, I have argued that using discrete social ratings from MSCI_KLD database provide rather an average estimate for the corporate social performance, which tends to limit meaningful interpretation at the firm-level differences. My research extends prior corporate social responsibility and corporate citizenship literature by advancing alternative measures, other than the usual social performance rating score from MSCI-KLD database in estimating corporate citizenship performance. These measures that I developed for this study: tax fairness and wage unfairness have the advantages of being broad and continuous in nature, that serve as a good measure for estimating the extent of voluntary responsibility acceptance of the corporations with higher accuracy.

Third, this study relates to a substantial literature on corporate tax avoidance since tax fairness has reciprocal implication. Several studies have examined the effects of tax avoidance on auditors' pricings (e.g. Huseynov and Klamm 2012; Donohoe and Knechel 2014), and on investors' stock reactions (Hanlon and Slemrod 2009; Kim et al. 2010). Donohoe and Knechel (2014) is more relatable to this study even though, they examine auditors' perceptions on tax avoidance from the standpoint of aggressive tax reporting rather than using the scope of corporate social responsibility or corporate citizenship. Huseynov and Klamm (2012) is among the first to relate corporate social responsibility to corporate tax avoidance. However, their research examines the relation between tax avoidance behaviour for firms with different social performance and auditor-provided tax fees. Similarly, Hanlon and Slemrod (2009) and Kim, Li and Zhang (2010) investigate investors' reactions associated with management aggression in tax position.

The work of this study compliments prior research mentioned above by providing evidence that corporate fair tax contributions improves auditors' and investors' perceptions of the financial reporting credibility. Moreover, I differ to prior research by using tax fairness (cash taxes paid divided by total sales or revenue) that measures the extent of corporate contributions to society. This measure differs to the tax avoidance measure, which divides cash taxes paid over pre-tax income, which is more concerned with a firm achieving an effective tax rate. One of the advantages of the tax fairness measure is that it reduces estimation error in identifying corporate tax avoiders by scaling it to sales rather than profits. Using profits might understate the extent of corporate tax avoidance, as it is more likely to be affected by tax avoidance activities. Although, the

broadness in the measurement of tax fairness suggests that it is a more effective instrument to observe extreme firms, which tends to be heavy-tailed.

Fourth, this is one of the first studies, to this study's knowledge, which examines the empirical relation between perception of wage unfairness or fairness and auditors' perceptions of financial reporting credibility. The traditional approach in prior literature is to link perception of wage unfairness with societal variables, such as employees' satisfaction or productivity (e.g. Pfeffer and Langton 1993; Grund and Westergaard-Nielsen 2008) or social costs, such as crime rate and poverty (e.g. Blau and Blau 1982; Birdsall and Londoño 1997). Prior research on CEO compensation tends to focus on its role as a monitoring mechanism for the agency problem (e.g. Bebchuck, Fried and Walker 2002; Gul, Chen and Tsui 2003; Bebchuck and Fried 2004). This study extends prior research by providing evidence that perceived wage unfairness in CEO-employee relative pay has negative social trust 'spillover' implication on auditors' overall perceptions of financial reporting information credibility and investors' perceived value-relevance of financial reporting information.

Fifth, while the evidence suggests that investors are less responsive to corporate citizenship performance (other than tax fairness), it is interesting to find that auditors are sensitive to corporate citizenship performance level. This hold important implication for it enriches our understanding of the differential trust impacts of corporate citizenship performance on professional and non-professional decision makers. It is also important to note that unlike investors, auditors have lower information asymmetry in respects of management financial reporting information since they have direct access to the firm, its managers and employees. In addition, auditors' perceptions are to proxy for material aspect to the financial reporting misstatements. As consequence, it is expected that their perceptions would provide less noise relating to trust implication of corporate citizenship performance.

6.5 Practical Contributions

This research has two practical contributions. First, the differential impact of domestic philanthropy and foreign philanthropy on audit fees, in which the former reduces and the latter increases audit fees. This suggest that while domestic philanthropy is strategically useful to facilitate social trust and therefore, auditors' perceptions of financial reporting

credibility, foreign philanthropy tends to increase auditors' perceived information risk. This has important implications for corporations' approach towards managing their philanthropy structure, particularly multinationals that might have a higher tendency to engage with foreign philanthropy. Multinational corporations might consider increasing disclosure in relation to foreign philanthropy in attempt to reduce auditors' perceived risk. However, it is unclear whether higher disclosure on foreign philanthropy might have positive effects on auditors' perceived credibility of the financial reporting since it is plausible that auditors might be more concerned with the risk of foreign-related activities.

Secondly, the findings of this research might motivate corporations to increase disclosure on their voluntary responsibility, which have direct contributions to society. Higher transparency from the corporations in relation to their social role can influence the accumulation of social trust effectively. The disclosure on the CEO-employee relative pay has been made compulsory for public firms with the passage of Section 953(b) of the Dodd-Frank Act that came into effect in 2015. One of the main challenges for this study is to obtain publicly available data on philanthropy, which leads to the use of philanthropy rating scores provided from MSCI-KLD database. However, as previously discussed, even MSCI-KLD discontinued the collection of philanthropy data after 2009.

6.6 Limitations

This study however, has several limitations. First, the evidence relies on measures for corporate citizenship and their abilities to capture the wide-range users of financial reporting information. The limitation with the tax fairness measurement relates to its broadness, which intended to capture the breadth of public perception. While tax fairness has representation from public perceptions, it might have little implication to explain sophisticated investors' perceptions. The sophisticated investors might evaluate corporate tax information relatively different from the public. However, as shown by the findings from the analyses on auditors' perceptions, tax fairness does have significant implication on auditors' perceived information risk. Thus, this provides support to the construct validity of tax fairness as a wide-ranging measure.

The second limitation is the lack of completeness of the wage unfairness measure. The CEO's pay used in this study only considers the base salary (total current salary and bonuses) and excludes other information relating to the CEO's equity and stock-based

compensation. This measure tends to exclude corporations, which prefer to reward their CEOs through equity ownership and options from the sample. While the earlier intention of this study was to use simple and effective measures, research has shown that there is a growing use of stock options to reward CEO (Bebchuck, Fried and Walker 2002; Mishel and Sabadis 2013). Bebchuck, Fried and Walker (2002) specify that in 1990s, most CEOs received their largest share of income through stock-based compensation package. Thus, by using the traditional cash-based compensation to measure wage unfairness, as used by this study, it might limit the measure's ability to estimate the extent of CEO's wealth and therefore, provide incorrect estimation about the CEO's wealth in proportion to the average employees' pay. Another aspect that also affecting the wage unfairness measure in this study, is the lack of employees' pay data. Prior research adjusts by alternatively, use confidential data collected from Labor Statistics (BLS). This data provides salaries information for both executive and non-executive, and also other components that might affect or explain the income distribution.

The next measure of corporate citizenship, philanthropy, also poses some basic problems that makes it a potentially weak measure of citizenship. Firstly, the philanthropy measure used in this study is binary, where 1 refers to good performance and 0 to poor performance. This lacks in terms of variability may obscure more subtle effects. Secondly, there is lack of visibility in how MSCI-KLD ranks the firms. Thirdly, according to the data manual, the individual components of each main social category in the database have been reclassified from time to time, which results in temporal inconsistency that may generate noise or bias. Another database that provides potential philanthropy data is the Datastream (ECG) but this is limited to 400 (largest) firms annually; nonetheless, obtaining more detailed measures of philanthropy may enrich the analysis and further out understanding of its relevance as a citizenship measure in relation to developing source credibility.

This study is also limited to the use of the PEG ratio to estimate implied cost of equity. The PEG ratio tends to exclude growing corporations from the samples. Growing corporations normally have higher information asymmetry and therefore, excluding these corporations from the samples only eliminate the potential cases that would provide robust observations relating to the role of corporate citizenship performance in facilitating investors' perceived credibility of financial reporting.

6.7 Future research

In conclusion, this study opens for at least three future research opportunities. First, consistent with the growing interest on social reporting, this increases the importance of exploring rigorous proxies in measuring corporate social performance. While being extensive, the ambiguity in data management procedures and the simplicity of social performance scores provided by the MSCI-KLD database reduces the meaningful interpretation of results. Despite the limitations in corporate citizenship measures discussed above, I believe with further finesse, tax fairness and wage unfairness hold the potential to predict corporate citizenship behaviour with greater accuracy. For example, under the application of IFRS 2 Share-based payment after 7 November 2002, and its amended version that becomes effective after January 1, 2009; the share-based compensation transactions related to the employees, specifically, the CEOs will be visible and easier to collect for the use of research. This allows for future research to improve the comprehensiveness of wage unfairness or CEO compensation excess measurements in estimating the extent of the CEO's wealth.

Similarly, if future research is able to use monetary information of corporate philanthropy, I believe it will provide better scope to observe the effects of philanthropy information on social trust, and provide results that are more meaningful. The aim of this study is to demonstrate that financial reporting provides useful information to provide measures that relate to corporate citizenship. However, given the infancy of these measures, this study acknowledges their limitations and hope future research can use this research to build useful estimates of corporate citizenship.

Second, future research can extend this research by examining corporate citizenship performance effects on investors' perceived information risk using other or multiple earnings-accounting valuation models to estimate implied cost of equity. This will provide better understanding on the extent of social trust effects associated with corporate citizenship performance. Third, future studies can attempt to separate the compounded effects, such as complexity effects, when examining the relation between tax fairness and auditors' perception of financial reporting credibility. One of the considerations is by separating the reaction before and after the introduction of FIN 48, in which the regulations is intended to reduce diversity in reporting tax reserves.

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Appendix

Table A1: Variable Definition

Panel A: Audit Fees Test	
Variable definition	
$AFee_t$	= Audit Fees in value, in thousands, (\$k).
$LnAFee_t$	= Natural logarithm of audit fees, in thousands, (\$k).
$CASH_TPR_{1YR,t}$	= One-year tax fairness is measured by dividing cash taxes paid over total sales.
$CASH_TPR_{2YR,t}$	= Two-year cumulative tax fairness is measured by the sum of two-year cash taxes paid divided by the sum of two-year total sales.
$CASH_TPR_{3YR,t}$	= Three-year cumulative tax fairness is measured by the sum of three-year cash taxes paid divided by the sum of three-year total sales.
$CASH_TPR_{1YR,t-1}$	= One-year lagged tax fairness.
$CASH_TPR_{2YR,t-1}$	= Two-year cumulative lagged tax fairness.
$CASH_TPR_{3YR,t-1}$	= Three-year cumulative lagged tax fairness.
$CEO_PAY_RATIO_{1YR,t}$	= One-year wage unfairness is measured by the firm's CEO compensation consisting of total current salaries and bonuses divided by the firm's average employees' salaries.
$CEO_PAY_RATIO_{1YR,t-1}$	= One-year lagged wage unfairness.
$CEO_PAY_RATIO_{1YR,t}$	= One-year wage unfairness is measured by the firm's CEO compensation consisting of total current salaries and bonuses divided by the firm's average employees' salaries.
$CEO_EXCESS1_{1YR,t-1}$	= One-year lagged CEO Compensation Excess, scaled by total sales.
$CEO_EXCESS2_{1YR,t-1}$	= One-year lagged CEO Compensation Excess, scaled by positive net income.
$CEO_EXCESS1_{1YR,t}$	= One-year CEO Compensation Excess is measured by the differences between the firm's CEO compensation and industry mean rate for CEO compensation scaled by total sales.
$CEO_EXCESS2_{1YR,t}$	= One-year CEO Compensation Excess is measured by the differences between the firm's CEO compensation and industry mean rate for CEO compensation scaled by net income (restricted to positive net income).
$US_DON_{1YR,t-1}$	= One-year lagged domestic (US) donation.
$NONUS_DON_{1YR,t-1}$	= One-year lagged foreign (non-US) donation.
$US_DON_{1YR,t}$	= One-year domestic (US) donation.
$NONUS_DON_{1YR,t}$	= One-year foreign (non-US) donation.
TA_t	= Total assets in value, in millions (\$m).
$LnTA_t$	= Natural logarithm of total assets, in millions (\$m).
IR_PROXY_t	= Inherent risk proxy is measured by dividing total inventory and total accounts receivable over total assets.
LEV_t	= Leverage ratio is computed by dividing total liabilities to total assets.
LIQ_t	= Liquidity ratio, computed by dividing total current assets to total current liabilities.
ROA_t	= Return on assets is computed by dividing net income to total assets. The ROA in this study is restricted to positive net income only.
$M\&A_t$	= Merger and acquisition activities indicator is equal to 1 if the firm is having merger and acquisition during the period t and 0, otherwise.
$RESTRUC_t$	= Restructuring activities indicator is equal to 1 if the firm is having restructuring activities during the period t and 0, otherwise.
$FOREIGN_t$	= Foreign operations indicator is equal to 1 if the firm is having foreign operations during the period t and 0, otherwise.

Panel A: Audit Fees Test	
Variable definition	
$BIG4_t$	= Auditor reputation indicator is equal to 1 if the firm is audited by the Big Four during the period t and 0, otherwise.
AUD_CHANGE_t	= Auditor change indicator is equal to 1 if the firm is having auditor change during the period t and 0, otherwise.
$NASFee_t$	= Non-audit fees ratio is computed by dividing non-audit fees over audit fees.
$LnNASFee_t$	= Natural logarithm of non-audit fees ratio.
AUD_TENURE_t	= The audit tenure for the firm's auditors.
$LnAUD_TENURE_t$	= Natural logarithm of audit tenure.
$PREM_CITY_t$	= Expensive city indicator is equal to 1 if the auditor is located in Top 5 cities with high cost of living as ranked by NUMBEO and 0, otherwise.
$AUD_GEODISP_t$	= Auditor geographic dispersion indicator is equal to 1 if the firm hired local auditor and 0, otherwise.
$RESTATE_t$	= Audit restatement indicator is equal to 1 if the firm has restatement and 0, otherwise.
$G_CONCERN_t$	= Going concern opinion indicator is equal to 1 if the firm received going concern opinion.
AUD_LAG_t	= Audit report lag, which measures the length of period between the signature date and audited financial statement date.
$SqAUD_LAG_t$	= The square root of audit report lag.
$BUSY_SEASON_t$	= Auditor busy season indicator is equal to 1 if the firm has financial year-end between November and January and 0, otherwise.
$INVMILLS_t$	= Inverse mills ratio, to control for auditor reputation selection.
$ENV_STR==1, \text{ }_t$	= One-level environmental strength score.
$ENV_CON==1, \text{ }_t$	= One-level environmental concern score.
$EMP_STR==2, \text{ }_t$	= Two-level employee-related strength performance score.
$EMP_CON==2, \text{ }_t$	= Two-level employee-related concern performance score.
IND_t	= Industry dummy.
$YEAR_t$	= Year dummy.

Table A1—continued

Panel B: The Ohlson Test (BVE)		
Variable definition		
P_t	=	The firm's current share price.
BVE_t	=	The firm's BVE, scaled to common shares fully diluted.
AE_t	=	The firm's abnormal earnings for the period, scaled to common shares fully diluted.
Panel C: Cost of Equity Test		
Variable definition		
COE_TAX_t	=	Implied cost of equity estimated for the Tax Sample (based on Tax Fairness measure).
COE_WAGE_t	=	Implied cost of equity estimated for the Wage Sample (based on Wage Unfairness measure).
COE_DON_t	=	Implied cost of equity estimated for the Philanthropy Sample (based on Philanthropy measure).
$LnTA_t$	=	Natural logarithm of total assets, as the firm size proxy.
$BETA_t$	=	Beta is estimated using the market model using 60 months window with minimum 24 months window required.
LEV_t	=	Leverage ratio, calculated from total liabilities / total assets.
MTB_t	=	Market-to-Book ratio, calculated from market value / BVE.
LN_FEDISP_t	=	Natural logarithm of earnings forecast dispersion estimated using 90 days window.
LTG_t	=	Long-term growth rate estimated from earnings forecasts using 90 days window.

Table A2: Audit Fees Test
Descriptive Statistics of CEO Compensation Excess Measure (2001–2013)

Variables	N	Mean	Median	Std. Dev.	Min	Max
<i>CEO_EXCESS1_{1YR, t}</i>	10,067	−0.001	−0.000	0.005	−0.027	0.101
<i>CEO_EXCESS2_{1YR, t}</i>	10,068	0.014	0.000	0.177	−0.108	14.674
<i>CEO_EXCESS1_{1YR, t-1}</i>	9,404	−0.001	−0.000	0.045	−0.039	4.129
<i>CEO_EXCESS2_{1YR, t-1}</i>	8,577	0.010	0.000	0.057	−0.108	1.534

Table 2 provides descriptive statistics of alternative measure of wage unfairness, CEO Compensation Excess, in which *CEO_EXCESS1_{1YR, t}* is the CEO Compensation Excess, scaled by total sales and *CEO_EXCESS2_{1YR, t}* is the CEO Compensation Excess, scaled by positive net income. *CEO_EXCESS1_{1YR, t-1}* and *CEO_EXCESS2_{1YR, t-1}* are the lagged measures. All variables are defined in Table A1, Panel A.

Table A3: Audit Fees Test
Distribution of CEO Compensation Excess Measures (2001–2013)

Year	Non-Lagged				Lagged			
	<i>CEO_EXCESS1_{1YR, t}</i>		<i>CEO_EXCESS2_{1YR, t}</i>		<i>CEO_EXCESS1_{1YR, t-1}</i>		<i>CEO_EXCESS2_{1YR, t-1}</i>	
	<i>(N = 10,067)</i>		<i>(N = 10,068)</i>		<i>(N = 9,404)</i>		<i>(N = 8,577)</i>	
2001	282	2.8%	282	2.8%	142	1.50%	131	1.50%
2002	420	4.2%	420	4.2%	359	3.80%	326	3.80%
2003	867	8.6%	867	8.6%	449	4.80%	379	4.40%
2004	957	9.5%	957	9.5%	866	9.20%	748	8.70%
2005	809	8.0%	809	8.0%	768	8.20%	716	8.30%
2006	864	8.6%	864	8.6%	745	7.90%	694	8.10%
2007	888	8.8%	888	8.8%	749	8.00%	708	8.30%
2008	761	7.6%	761	7.6%	697	7.40%	664	7.70%
2009	730	7.3%	730	7.3%	675	7.20%	599	7.00%
2010	855	8.5%	855	8.5%	808	8.60%	660	7.70%
2011	852	8.5%	853	8.5%	825	8.80%	765	8.90%
2012	897	8.9%	897	8.9%	803	8.50%	760	8.90%
2013	885	8.8%	885	8.8%	738	7.80%	700	8.20%
2014	0	0.0%	0	0.0%	780	8.30%	727	8.50%
Total	10,067		10,068		9,404		8,577	

This table provides sample distribution for the alternative measure for wage unfairness, CEO Compensation Excess, in which *CEO_EXCESS1_{1YR, t}* is the CEO Compensation Excess, scaled by total sales and *CEO_EXCESS2_{1YR, t}* is the CEO Compensation Excess, scaled by positive net income (*CEO_EXCESS2_{1YR, t}*). All variables are defined in Table A1, Panel A.

**Table A4: Regression for Audit Fees on Combination A, Excludes Philanthropy
(2001–2013)**

Variables	Pred. Sign	Non-Lagged			Lagged		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>CASH_TPR_{1YR, t}</i>	–	–4.4528*** (< 0.001)			–3.5570*** (< 0.001)		
<i>CASH_TPR_{2YR, t}</i>	–		–4.7294*** (< 0.001)			–4.5588*** (< 0.001)	
<i>CASH_TPR_{3YR, t}</i>	–			–5.5352*** (< 0.001)			–5.2831*** (< 0.001)
<i>CEO_PAY_RATIO_{1YR, t}</i>	+	1.2424*** (0.010)	1.1233*** (< 0.001)	1.1393* (0.067)	0.9020** (–0.048)	0.8970*** (–0.003)	0.8909** (–0.026)
<i>LnTA_t</i>	+	0.6379*** (< 0.001)	0.5978*** (< 0.001)	0.6117*** (< 0.001)	0.5784*** (< 0.001)	0.5695*** (< 0.001)	0.5612*** (< 0.001)
<i>IR_proxy_t</i>	+	1.3374*** (< 0.001)	1.2533*** (< 0.001)	1.2297*** (< 0.001)	1.3997*** (< 0.001)	1.2085*** (< 0.001)	1.1822*** (< 0.001)
<i>LEV_t</i>	+	0.1154 (0.433)	0.1094 (0.231)	0.0280 (0.886)	0.0862 (0.580)	0.0359 (0.722)	0.0616 (0.640)
<i>LIQ_t</i>	–	0.0037 (0.903)	0.0102 (0.595)	–0.0044 (0.914)	–0.0095 (0.767)	0.0045 (0.830)	0.0156 (0.565)
<i>ROA_t</i>	–	0.3167 (0.593)	0.2515 (0.499)	0.1487 (0.850)	0.0187 (0.976)	0.1913 (0.636)	0.2837 (0.586)
<i>M&A_t</i>	+	0.0298 (0.690)	0.0242 (0.601)	0.0227 (0.817)	0.064 (0.396)	0.0568 (0.246)	0.0836 (0.189)
<i>RESTRUC_t</i>	+	–0.0028 (0.957)	0.0082 (0.799)	–0.0047 (0.945)	–0.1316 (0.164)	–0.1378** (0.025)	–0.1786*** (0.004)
<i>FOREIGN_t</i>	+	0.4630*** (< 0.001)	0.4413*** (< 0.001)	0.4746*** (< 0.001)	0.4684*** (< 0.001)	0.4971*** (< 0.001)	0.4891*** (< 0.001)
<i>BIG4_t</i>	+	0.0520 (0.746)	0.0913 (0.350)	0.0510 (0.809)	0.0534 (0.738)	0.1215 (0.240)	0.0941 (0.495)
<i>AUD_CHANGE_t</i>	+/–	0.0143 (0.939)	0.1638 (0.168)	0.1583 (0.528)	0.2099 (0.301)	0.1889 (0.143)	0.0625 (0.712)
<i>LnNASFee_t</i>	+/–	0.1328*** (< 0.001)	0.1313*** (< 0.001)	0.1332*** (< 0.001)	0.1367*** (< 0.001)	0.1336*** (< 0.001)	0.1397*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/–	0.1309* (0.088)	0.1443*** (0.003)	0.1411 (0.170)	0.1400* (0.089)	0.1523*** (0.004)	0.1287* (0.067)
<i>EXP_CITY_t</i>	+	0.4001*** (< 0.001)	0.4116*** (< 0.001)	0.4336*** (< 0.001)	0.4361*** (< 0.001)	0.4588*** (< 0.001)	0.4625*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	0.0200 (0.807)	0.0063 (0.902)	0.0371 (0.730)	0.081 (0.372)	0.0541 (0.355)	0.1001 (0.187)
<i>RESTATE_t</i>	+	–0.0920 (0.198)	–0.1083** (0.016)	–0.0884 (0.347)	–0.0858 (0.264)	–0.0894* (0.080)	–0.0834 (0.208)
<i>SqAUD_LAG_t</i>	+	0.0985*** (0.001)	0.1037*** (< 0.001)	0.1097*** (0.005)	0.1034*** (0.003)	0.1107*** (< 0.001)	0.1090*** (< 0.001)

Variables	Pred. Sign	Non-Lagged			Lagged		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>BUSY_SEASON_t</i>	+	0.0025 (0.971)	0.0068 (0.880)	−0.0420 (0.662)	0.0146 (0.847)	−0.0305 (0.541)	−0.0857 (0.188)
<i>INVMILLS_t</i>	+	2.4450*** (< 0.001)	2.0028*** (< 0.001)	2.1842*** (0.007)	2.0429*** (0.002)	1.9374*** (< 0.001)	1.7794*** (0.002)
<i>*ENV_STR_t</i>	+	0.0086 (0.850)	0.0219 (0.440)	0.0117 (0.845)	0.0646 (0.151)	0.0748** (0.011)	0.0715** (0.048)
<i>*ENV_CON_t</i>	+	−0.0305 (0.479)	−0.0224 (0.401)	−0.0345 (0.539)	−0.0366 (0.384)	−0.0358 (0.191)	−0.0247 (0.486)
<i>*EMP_STR=1_t</i>	−	−0.0031 (0.965)	−0.0101 (0.820)	0.0103 (0.914)	0.0264 (0.716)	−0.0146 (0.755)	−0.0318 (0.597)
<i>*EMP_STR=2_t</i>	−	−0.1393 (0.120)	−0.1419** (0.012)	−0.0881 (0.451)	−0.0492 (0.574)	−0.064 (0.261)	−0.0566 (0.443)
<i>*EMP_CON=1_t</i>	+	0.0037 (0.950)	0.0029 (0.936)	0.0129 (0.865)	−0.0148 (0.800)	−0.0091 (0.809)	0.0032 (0.947)
<i>*EMP_CON=2_t</i>	+	0.1673** (0.045)	0.1911*** (< 0.001)	0.2108* (0.055)	0.1698** (0.045)	0.1755*** (0.002)	0.1654** (0.022)
<i>Constant</i>	?	−0.6644	−0.3504	0.1254	−0.1706	0.4707	0.6691
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		817	816	810	798	796	789
<i>R²</i>		83.9%	84.2%	84.2%	84.30%	84.60%	84.90%

This table reports the full regression results between audit fees and joint corporate citizenship measures—excluding philanthropy, and control variables as in Equation Model (4). Model 1–Model 3 presents the results of correlation coefficients for the combination of non-lagged tax fairness and wage unfairness (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}*, *CASH_TPR_{3YR, t}* and *CEO_PAY_RATIO_{1YR, t}*). Model 4—Model 6 present results of coefficients for the combination of lagged tax fairness and wage unfairness (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}*, *CASH_TPR_{3YR, t-1}* and *CEO_PAY_RATIO_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A5: Regression for Audit Fees on Combined Corporate Citizenship, Includes Philanthropy (2001–2009)

Variables	Pred. Sign	Non-Lagged Corporate Citizenship			Lagged Corporate Citizenship		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>US_DON_{1YR, t}</i>	–	0.3465 (0.405)	0.4709*** (0.002)	0.4138 (0.568)	0.2888 (0.423)	0.2859 (0.176)	0.2085 (0.463)
<i>NONUS_DON_{1YR, t}</i>	+	0.1882 (0.811)	0.2483 (0.282)	0.2074 (0.854)	0.2158 (0.774)	0.2644 (0.538)	0.2707 (0.633)
<i>CASH_TPR_{1YR, t}</i>	–	–3.1080 (0.158)			–2.4629 (0.156)		
<i>CASH_TPR_{2YR, t}</i>	–		–3.5178*** (< 0.001)			–3.8181*** (0.003)	
<i>CASH_TPR_{3YR, t}</i>	–			–4.6632 (0.300)			–5.1135*** (0.006)
<i>CEO_PAY_RATIO_{1YR, t}</i>	+	0.9200 (0.404)	0.8494** (0.023)	0.8448 (0.651)	0.8933 (0.367)	0.9297 (0.134)	0.9136 (0.275)
<i>LnTA_t</i>	+	0.5911*** (< 0.001)	0.5942*** (< 0.001)	0.6023** (0.018)	0.5917*** (< 0.001)	0.5709*** (< 0.001)	0.5317*** (< 0.001)
<i>IR_proxy_t</i>	+	1.2678** (0.019)	1.2452*** (0.000)	1.1260 (0.235)	1.1379** (0.025)	1.1577*** (< 0.001)	1.1758*** (0.006)
<i>LEV_t</i>	+	0.3415 (0.346)	0.3109** (0.015)	0.2683 (0.669)	0.1402 (0.689)	0.0799 (0.706)	–0.0152 (0.956)
<i>LIQ_t</i>	–	–0.0170 (0.836)	–0.0085 (0.774)	–0.0096 (0.947)	–0.0697 (0.364)	–0.0583 (0.203)	–0.0400 (0.510)
<i>ROA_t</i>	–	0.6209 (0.677)	0.3597 (0.493)	0.7972 (0.758)	0.6157 (0.650)	0.9313 (0.266)	0.5574 (0.603)
<i>M&A_t</i>	+	0.0030 (0.990)	–0.0002 (0.998)	–0.0061 (0.989)	0.0087 (0.967)	0.0165 (0.892)	0.0388 (0.822)
<i>RESTRUC_t</i>	+	0.0188 (0.858)	0.0235 (0.529)	0.0224 (0.902)	0.1536 (0.569)	–0.0272 (0.870)	–0.0035 (0.987)
<i>FOREIGN_t</i>	+	0.4255*** (0.007)	0.4433*** (< 0.001)	0.4429* (0.095)	0.4912*** (0.001)	0.5044*** (< 0.001)	0.4897*** (< 0.001)
<i>BIG4_t</i>	+	–0.2039 (0.591)	–0.1652 (0.232)	–0.1429 (0.833)	–0.3623 (0.307)	–0.3171 (0.160)	–0.2556 (0.361)
<i>AUD_CHANGE_t</i>	+/–	–0.0416 (0.921)	0.0765 (0.616)	0.1935 (0.795)	0.022 (0.959)	0.0034 (0.990)	–0.0624 (0.851)
<i>LnNASFee_t</i>	+/–	0.1505*** (0.003)	0.1405*** (< 0.001)	0.1397* (0.099)	0.1229*** (0.009)	0.1259*** (< 0.001)	0.1329*** (0.001)
<i>LnAUD_TENURE_t</i>	+/–	0.0181 (0.929)	0.0376 (0.601)	0.1105 (0.756)	0.0057 (0.977)	–0.0076 (0.951)	–0.064 (0.691)
<i>EXP_CITY_t</i>	+	0.1750 (0.384)	0.1692** (0.019)	0.2186 (0.532)	0.2407 (0.207)	0.2856** (0.013)	0.3223** (0.037)
<i>AUD_GEODISP_t</i>	+	–0.0805 (0.671)	–0.1470** (0.028)	–0.0553 (0.868)	0.034 (0.862)	0.0865 (0.459)	0.063 (0.686)
<i>RESTATE_t</i>	+	–0.1419 (0.381)	–0.1184** (0.043)	–0.1155 (0.684)	–0.0907 (0.574)	–0.1013 (0.286)	–0.0746 (0.559)
<i>SqAUD_LAG_t</i>	+	0.1169* (0.003)	0.1103*** (< 0.001)	0.1328 (0.003)	0.1012 (0.003)	0.1174*** (< 0.001)	0.1374** (0.003)

Variables	Pred. Sign	Non-Lagged Corporate Citizenship			Lagged Corporate Citizenship		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(0.064)	(< 0.001)	(0.225)	(0.129)	(0.005)	(0.014)
<i>BUSY_SEASON_t</i>	+	0.0717	0.0635	0.0683	0.0663	0.0601	0.0971
		(0.678)	(0.298)	(0.822)	(0.697)	−0.563)	(0.477)
<i>INVMILLS_t</i>	+	2.2386	2.1675***	2.0924	2.2077	1.8709**	1.349
		(0.134)	(< 0.001)	(0.426)	(0.148)	(0.042)	(0.262)
<i>*ENV_STR_t</i>	+	0.0172	0.0233	0.0534	0.0903	0.0936	0.0811
		(0.904)	(0.646)	(0.830)	(0.492)	(0.216)	(0.400)
<i>*ENV_CON_t</i>	+	−0.0633	−0.0644*	−0.0612	−0.0517	−0.0633	−0.0495
		(0.531)	(0.076)	(0.732)	(0.597)	(0.271)	(0.515)
<i>*EMP_STR=1, _t</i>	−	0.0886	0.0821	0.1032	0.013	0.0123	0.0102
		(0.609)	(0.191)	(0.735)	(0.938)	(0.901)	(0.938)
<i>*EMP_STR=2, _t</i>	−	−0.0917	−0.0874	−0.1017	−0.0528	−0.0244	0.028
		(0.686)	(0.287)	(0.797)	(0.802)	(0.847)	(0.865)
<i>*EMP_CON=1, _t</i>	+	−0.0065	−0.0083	−0.0056	−0.0282	−0.0023	−0.0008
		(0.961)	(0.862)	(0.981)	(0.822)	(0.975)	(0.993)
<i>*EMP_CON=2, _t</i>	+	0.2008	0.2165***	0.1771	0.187	0.1858*	0.2222
		(0.281)	(0.002)	(0.587)	(0.302)	(0.086)	(0.122)
<i>Constant</i>	?	0.5698	0.6587	0.1407	0.9811	0.3485	1.4068
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		543	542	536	535	533	527
<i>R²</i>		83.2%	83.5%	84.0%	83.10%	83.30%	83.50%

This table reports the full regression results between audit fees and joint corporate citizenship measures—including philanthropy, and control variables as in Equation Model (4). Model 1–Model 3 presents the results of correlation coefficients for the combination of non-lagged tax fairness and wage unfairness (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}*, *CASH_TPR_{3YR, t}*, *CEO_PAY_RATIO_{1YR, t}* with *US_DON_{1YR, t}* or *NONUS_DON_{1YR, t}*). Model 4–Model 6 present results of coefficients for the combination of lagged tax fairness and wage unfairness (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}*, *CASH_TPR_{3YR, t-1}*, *CEO_PAY_RATIO_{1YR, t-1}* with *US_DON_{1YR, t-1}* or *NONUS_DON_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A6: Regression for Audit Fees on CEO Compensation Excess (2001–2013)

Variables	Pred. Sign	Non-Lagged		Lagged	
		(Model 1)	(Model 2)	(Model 3)	(Model 4)
<i>CEO_EXCESS1_{1YR, t}</i>	+	0.8794 (0.446)		0.0223 (0.121)	
<i>CEO_EXCESS2_{1YR, t}</i>	+		0.0429*** (0.007)		0.006 (0.956)
<i>LnTA_t</i>	+	0.5668*** (< 0.001)	0.5673*** (< 0.001)	0.5698*** (< 0.001)	0.5689*** (< 0.001)
<i>IR_proxy_t</i>	+	0.6576*** (< 0.001)	0.6566*** (< 0.001)	0.6956*** (< 0.001)	0.6768*** (< 0.001)
<i>LEV_t</i>	+	0.3510*** (< 0.001)	0.3455*** (< 0.001)	0.3434*** (< 0.001)	0.3240*** (< 0.001)
<i>LIQ_t</i>	−	−0.0182*** (< 0.001)	−0.0183*** (< 0.001)	−0.0200*** (< 0.001)	−0.0184*** (< 0.001)
<i>ROA_t</i>	−	−0.1652* (0.085)	−0.1377 (0.152)	−0.1212 (0.212)	−0.1583 (0.208)
<i>M&A_t</i>	+	0.0087 (0.568)	0.0043 (0.777)	0.0136 (0.344)	−0.0085 (0.636)
<i>RESTRUC_t</i>	+	−0.0263 (0.114)	−0.0249 (0.135)	−0.0977*** (< 0.001)	−0.0809*** (0.001)
<i>FOREIGN_t</i>	+	0.3880*** (< 0.001)	0.3893*** (< 0.001)	0.3926*** (< 0.001)	0.3850*** (< 0.001)
<i>BIG4_t</i>	+	0.0174 (0.489)	0.0206 (0.414)	0.0279 (0.280)	0.0337 (0.302)
<i>AUD_CHANGE_t</i>	+/−	−0.1541*** (< 0.001)	−0.1500*** (< 0.001)	−0.1348*** (< 0.001)	−0.1179** −0.017
<i>LnNASFee_t</i>	+/−	0.1077*** (< 0.001)	0.1069*** (< 0.001)	0.1092*** (< 0.001)	0.1126*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/−	−0.0451*** (0.003)	−0.0431*** (0.004)	−0.0333** (0.024)	−0.0367* (0.051)
<i>EXP_CITY_t</i>	+	0.1083*** (< 0.001)	0.1090*** (< 0.001)	0.1320*** (< 0.001)	0.1315*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	−0.0301** (0.048)	−0.0300** (0.050)	−0.0465*** (0.002)	−0.0503*** (0.009)
<i>RESTATE_t</i>	+	−0.0049 (0.753)	−0.0041 (0.793)	−0.0175 (0.276)	−0.0055 (0.786)
<i>G_CONCERN_t</i>	+	0.1505 (0.254)	0.1514 (0.253)	0.1738 (0.193)	0.1784 (0.324)
<i>SqAUD_LAG_t</i>	+	0.0908*** (< 0.001)	0.0891*** (< 0.001)	0.0932*** (< 0.001)	0.0902*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1453*** (< 0.001)	0.1459*** (< 0.001)	0.1304*** (< 0.001)	0.1295*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1453*** (< 0.001)	0.1459*** (< 0.001)	0.1304*** (< 0.001)	0.1295*** (< 0.001)
<i>INVMILLS_t</i>	+	1.2709*** (< 0.001)	1.2723*** (< 0.001)	1.3800*** (< 0.001)	1.3579*** (< 0.001)

Variables	Pred. Sign	Non-Lagged		Lagged	
		(Model 1)	(Model 2)	(Model 3)	(Model 4)
<i>*ENV_STR_t</i>	+	0.0523*** (< 0.001)	0.0532*** (< 0.001)	0.0604*** (< 0.001)	0.0613*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0240*** (0.005)	0.0232*** (0.007)	0.0146* (0.075)	0.012 (0.248)
<i>*EMP_STR=1_t</i>	–	–0.0325** (0.025)	–0.0342** (0.019)	–0.0386*** (0.006)	–0.0382** (0.032)
<i>*EMP_STR=2_t</i>	–	–0.1428*** (< 0.001)	–0.1419*** (< 0.001)	–0.1452*** (< 0.001)	–0.1502*** (< 0.001)
<i>*EMP_CON=1_t</i>	+	0.0600*** (< 0.001)	0.0607*** (< 0.001)	0.0630*** (< 0.001)	0.0609*** (< 0.001)
<i>*EMP_CON=2_t</i>	+	0.0344 (0.111)	0.0298 (0.169)	0.0426** (0.042)	0.0375 (0.161)
Constant	?	0.9164***	0.9224***	0.8655***	0.9329***
Industry Included		Yes	Yes	Yes	Yes
Year included		Yes	Yes	Yes	Yes
Observations, <i>N</i>		10,067	10,068	9,404	8,577
<i>R</i> ²		80.20%	80.20%	79.90%	80.20%
VIF		2.21	2.18	2.16	3.47

This table reports the full regression results between audit fees and alternative measure for wage unfairness, CEO Compensation Excess and control variables as in Equation Model (4). Model 1 and Model 2 present the results of correlation coefficients for non-lagged CEO Compensation Excess, scaled by total sales (*CEO_EXCESS1_{1YR, t}*) and non-lagged CEO Compensation Excess, scaled by positive net income (*CEO_EXCESS1_{1YR, t}*). Model 3–Model 4 present results of coefficients for lagged CEO Compensation Excess, scaled by total sales (*CEO_EXCESS1_{1YR, t-1}*) and lagged CEO Compensation Excess, scaled by positive net income (*CEO_EXCESS2_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

**Table A7: Regression for Audit Fees on Combined Corporate Citizenship Using
Alternative Measure of Wage Unfairness, CEO Compensation Excess**

Panel A: Regression for Audit Fees on Combined Corporate Citizenship Using CEO Compensation Excess—Excludes Philanthropy from 2001 to 2013							
Variables	Pred. Sign	Lagged					
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>CASH_TPR_{1YR, t}</i>	—	−1.0914*** (< 0.001)			−1.1816*** (< 0.001)		
<i>CASH_TPR_{2YR, t}</i>	—		−1.4589*** (< 0.001)			−1.6204*** (< 0.001)	
<i>CASH_TPR_{3YR, t}</i>	—			−1.7125*** (< 0.001)			−1.8222*** (< 0.001)
<i>CEO_EXCESS1_{1YR, t}</i>	+	0.2669*** (< 0.001)	1.2381*** (< 0.001)	0.0483*** (0.003)			
<i>CEO_EXCESS2_{1YR, t}</i>					−0.0082 (0.940)	−0.0149 (0.885)	0.0051 (0.961)
<i>LnTA_t</i>	+	0.5734*** (< 0.001)	0.5786*** (< 0.001)	0.5840*** (< 0.001)	0.5785*** (< 0.001)	0.5843*** (< 0.001)	0.5895*** (< 0.001)
<i>IR_proxy_t</i>	+	0.6862*** (< 0.001)	0.6714*** (< 0.001)	0.6726*** (< 0.001)	0.6501*** (< 0.001)	0.6414*** (< 0.001)	0.6346*** (< 0.001)
<i>LEV_t</i>	+	0.3494*** (< 0.001)	0.3270*** (< 0.001)	0.3355*** (< 0.001)	0.3230*** (< 0.001)	0.3087*** (< 0.001)	0.3151*** (< 0.001)
<i>LIQ_t</i>	—	−0.0184*** (< 0.001)	−0.0188*** (< 0.001)	−0.0182*** (< 0.001)	−0.0181*** (< 0.001)	−0.0180*** (< 0.001)	−0.0177*** (< 0.001)
<i>ROA_t</i>	—	0.1182 (0.309)	0.2006* (0.060)	0.2470** (0.046)	0.0504 (0.701)	0.1575 (0.207)	0.1932 (0.116)
<i>M&A_t</i>	+	0.0209 (0.196)	0.0153 (0.293)	0.0181 (0.283)	0.0076 (0.663)	0.0067 (0.686)	0.0081 (0.617)
<i>RESTRUC_t</i>	+	−0.1243*** (< 0.001)	−0.1341*** (< 0.001)	−0.1331*** (< 0.001)	−0.1114*** (< 0.001)	−0.1137*** (< 0.001)	−0.1297*** (< 0.001)
<i>FOREIGN_t</i>	+	0.3900*** (< 0.001)	0.3967*** (< 0.001)	0.3956*** (< 0.001)	0.3946*** (< 0.001)	0.3965*** (< 0.001)	0.3949*** (< 0.001)
<i>BIG4_t</i>	+	0.0332 (0.254)	0.0370 (0.161)	0.0369 (0.227)	0.0352 (0.270)	0.0441 (0.143)	0.0563* (0.058)
<i>AUD_CHANGE_t</i>	+/−	−0.1256*** (0.004)	−0.1338*** (0.001)	−0.1368*** (0.003)	−0.1079** (0.025)	−0.1401*** (0.002)	−0.1324*** (0.003)
<i>LnNASFee_t</i>	+/−	0.1095*** (< 0.001)	0.1086*** (< 0.001)	0.1088*** (< 0.001)	0.1113*** (< 0.001)	0.1099*** (< 0.001)	0.1096*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/−	−0.0386** (0.020)	−0.0349** (0.022)	−0.0361** (0.042)	−0.0432** (0.019)	−0.0499*** (0.004)	−0.0471*** (0.007)
<i>EXP_CITY_t</i>	+	0.1264*** (< 0.001)	0.1179*** (< 0.001)	0.1199*** (< 0.001)	0.1208*** (< 0.001)	0.1163*** (< 0.001)	0.1190*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	−0.0473*** (0.006)	−0.0607*** (< 0.001)	−0.0536*** (0.003)	−0.0517*** (0.006)	−0.0627*** (0.000)	−0.0553*** (0.002)
<i>RESTATE_t</i>	+	−0.0162 (0.372)	−0.0190 (0.248)	−0.0097 (0.608)	−0.0017 (0.930)	0.0038 (0.839)	0.0036 (0.843)
<i>G_CONCERN_t</i>	+	−0.2180 (0.295)	−0.1852 (0.357)	−0.1877 (0.417)	−0.5765** (0.022)	−0.6000** (0.019)	−0.6050** (0.016)

Panel A: Regression for Audit Fees on Combined Corporate Citizenship Using CEO Compensation Excess—Excludes Philanthropy from 2001 to 2013							
Lagged							
Variables	Pred. Sign	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>SqAUD_LAG_t</i>	+	0.0907*** (< 0.001)	0.0945*** (< 0.001)	0.0939*** (< 0.001)	0.0880*** (< 0.001)	0.0915*** (< 0.001)	0.0903*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1349*** (< 0.001)	0.1345*** (< 0.001)	0.1322*** (< 0.001)	0.1306*** (< 0.001)	0.1320*** (< 0.001)	0.1274*** (< 0.001)
<i>INVMILLS_t</i>	+	1.3624*** (< 0.001)	1.3771*** (< 0.001)	1.4198*** (< 0.001)	1.4278*** (< 0.001)	1.4418*** (< 0.001)	1.4758*** (< 0.001)
<i>*ENV_STR_t</i>	+	0.0586*** (< 0.001)	0.0579*** (< 0.001)	0.0555*** (< 0.001)	0.0589*** (< 0.001)	0.0594*** (< 0.001)	0.0575*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0203** (0.029)	0.0164* (0.050)	0.0167* (0.084)	0.0143 (0.159)	0.0134 (0.159)	0.0122 (0.190)
<i>*EMP_STR=1_t</i>	−	−0.0416*** (0.009)	−0.0452*** (0.002)	−0.0423** (0.011)	−0.0368** (0.034)	−0.0391** (0.017)	−0.0386** (0.016)
<i>*EMP_STR=2_t</i>	−	−0.1484*** (< 0.001)	−0.1506*** (< 0.001)	−0.1525*** (< 0.001)	−0.1504*** (< 0.001)	−0.1557*** (< 0.001)	−0.1525*** (< 0.001)
<i>*EMP_CON=1_t</i>	+	0.0505*** (< 0.001)	0.0505*** (< 0.001)	0.0458*** (0.002)	0.0503*** (0.001)	0.0478*** (0.001)	0.0405*** (0.006)
<i>*EMP_CON=2_t</i>	+	0.0250 (0.292)	0.0206 (0.335)	0.0198 (0.422)	0.0248 (0.343)	0.0151 (0.538)	0.0070 (0.773)
<i>Constant</i>	?	0.9303***	0.8370***	0.7920***	−0.0494	0.8867***	−0.1404
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		9,294	9,215	9,109	8,496	8,430	8,337
<i>R²</i>		80.1%	80.1%	80.1%	80.4%	80.4%	80.4%

This table reports the full regression results between audit fees and combined corporate citizenship—excludes philanthropy and using alternative measure for wage unfairness, CEO Compensation Excess, and control variables as in Equation Model (4). Model 1–Model 3 present the results of correlation coefficients for lagged CEO Compensation Excess, scaled by total sales (*CEO_EXCESS1_{1YR, t-1}*) combined with lagged tax fairness measure (*CASH_TPR1_{YR, t-1}*, *CASH_TPR2_{YR, t-1}* and *CASH_TPR3_{YR, t-1}*). Model 4–Model 6 present the results of correlation coefficients for lagged CEO Compensation Excess, scaled by positive net income (*CEO_EXCESS2_{YR, t-1}*) combined with lagged tax fairness measure (*CASH_TPR1_{YR, t-1}*, *CASH_TPR2_{YR, t-1}* and *CASH_TPR3_{YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A7—continued

Panel B: Regression for Audit Fees on Combined Corporate Citizenship Using CEO Compensation Excess—Includes Philanthropy (2001–2009)							
Variables	Pred. Sign	Lagged					
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>US_DON_{1YR,t}</i>	–	–0.1755*** (<0.001)	–0.1743*** (<0.001)	–0.1656*** (<0.001)	–0.1815*** (<0.001)	–0.1899*** (<0.001)	–0.1802*** (<0.001)
<i>NONUS_DON_{1YR,t}</i>	+	0.1172** (0.017)	0.1202*** (0.005)	0.1144*** (0.007)	0.1290** (0.022)	0.1398*** (0.007)	0.1244*** (0.009)
<i>CASH_TPR_{1YR,t}</i>	–	–1.0375*** (<0.001)			–1.1911*** (<0.001)		
<i>CASH_TPR_{2YR,t}</i>	–		–1.7102*** (<0.001)			–1.8731*** (<0.001)	
<i>CASH_TPR_{3YR,t}</i>	–			–2.0256*** (<0.001)			–2.1254*** (<0.001)
<i>CEO_EXCESS1_{1YR,t}</i>	+	–1.3567 (0.356)	–0.9394 (0.465)	–0.9724 (0.451)			
<i>CEO_EXCESS2_{1YR,t}</i>					0.0465 (0.748)	0.0824 (0.574)	0.0391 (0.768)
<i>LnTA_t</i>	+	0.5936*** (<0.001)	0.5973*** (<0.001)	0.6009*** (<0.001)	0.5942*** (<0.001)	0.5996*** (<0.001)	0.6048*** (<0.001)
<i>IR_proxy_t</i>	+	0.5950*** (<0.001)	0.5978*** (<0.001)	0.6073*** (<0.001)	0.6043*** (<0.001)	0.5823*** (<0.001)	0.6154*** (<0.001)
<i>LEV_t</i>	+	0.3139*** (<0.001)	0.3141*** (<0.001)	0.3085*** (<0.001)	0.2667*** (<0.001)	0.2596*** (<0.001)	0.2692*** (<0.001)
<i>LIQ_t</i>	–	–0.0197*** (<0.001)	–0.0175*** (<0.001)	–0.0170*** (<0.001)	–0.0182*** (<0.001)	–0.0184*** (<0.001)	–0.0177*** (<0.001)
<i>ROA_t</i>	–	0.0497 (0.732)	0.1764 (0.175)	0.2607** (0.044)	–0.0239 (0.889)	0.1189 (0.465)	0.1882 (0.218)
<i>M&A_t</i>	+	–0.0309 (0.249)	–0.0394* (0.093)	–0.0322 (0.168)	–0.0367 (0.229)	–0.0411 (0.145)	–0.0370 (0.163)
<i>RESTRUC_t</i>	+	–0.1109*** (<0.001)	–0.1188*** (<0.001)	–0.1125*** (<0.001)	–0.1193*** (<0.001)	–0.1280*** (<0.001)	–0.1265*** (<0.001)
<i>FOREIGN_t</i>	+	0.3699*** (<0.001)	0.3700*** (<0.001)	0.3639*** (<0.001)	0.3725*** (<0.001)	0.3694*** (<0.001)	0.3683*** (<0.001)
<i>BIG4_t</i>	+	0.0312 (0.412)	0.0367 (0.265)	0.0250 (0.445)	0.0269 (0.534)	0.0435 (0.278)	0.0524 (0.164)
<i>AUD_CHANGE_t</i>	+/–	–0.0686 (0.189)	–0.0767* (0.093)	–0.0720 (0.113)	–0.0619 (0.303)	–0.0890 (0.113)	–0.0665 (0.208)
<i>LnNASFee_t</i>	+/–	0.1088*** (<0.001)	0.1072*** (<0.001)	0.1062*** (<0.001)	0.1102*** (<0.001)	0.1101*** (<0.001)	0.1074*** (<0.001)
<i>LnAUD_TENURE_t</i>	+/–	–0.0482* (0.089)	–0.0495** (0.045)	–0.0490** (0.045)	–0.0511* (0.089)	–0.0623** (0.045)	–0.0583** (0.045)

Panel B: Regression for Audit Fees on Combined Corporate Citizenship Using CEO Compensation Excess—Includes Philanthropy (2001–2009)							
Lagged							
Variables	Pred. Sign	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(0.052)	(0.024)	(0.026)	(0.078)	(0.021)	(0.023)
<i>EXP_CITY_t</i>	+	0.1147*** (<0.001)	0.1100*** (<0.001)	0.1126*** (<0.001)	0.1020*** (<0.001)	0.1092*** (<0.001)	0.1088*** (<0.001)
<i>AUD_GEODISP_t</i>	+	−0.0650*** (<0.001)	−0.0763*** (<0.001)	−0.0774*** (<0.001)	−0.0747*** (<0.001)	−0.0820*** (<0.001)	−0.0917*** (<0.001)
<i>RESTATE_t</i>	+	−0.0342* (0.093)	−0.0326* (0.067)	−0.0320* (0.070)	−0.0116 (0.618)	−0.0054 (0.802)	−0.0024 (0.905)
<i>G_CONCERN_t</i>	+	−0.2471 (0.244)	−0.2170 (0.239)	−0.2071 (0.253)	−0.6044** (0.026)	−0.6342** (0.011)	−0.6419*** (0.006)
<i>SqAUD_LAG_t</i>	+	0.0983*** (<0.001)	0.0977*** (<0.001)	0.0976*** (<0.001)	0.0971*** (<0.001)	0.0975*** (<0.001)	0.0957*** (<0.001)
<i>BUSY_SEASON_t</i>	+	0.1834*** (<0.001)	0.1832*** (<0.001)	0.1765*** (<0.001)	0.1771*** (<0.001)	0.1778*** (<0.001)	0.1781*** (<0.001)
<i>INVMILLS_t</i>	+	1.3383*** (<0.001)	1.3155*** (<0.001)	1.3014*** (<0.001)	1.3146*** (<0.001)	1.3613*** (<0.001)	1.3609*** (<0.001)
<i>*ENV_STR_t</i>	+	0.0762*** (<0.001)	0.0737*** (<0.001)	0.0707*** (<0.001)	0.0755*** (<0.001)	0.0707*** (<0.001)	0.0701*** (<0.001)
<i>*ENV_CON_t</i>	+	0.0089 (0.431)	0.0081 (0.412)	0.0068 (0.482)	0.0065 (0.617)	0.0074 (0.536)	0.0065 (0.559)
<i>*EMP_STR=1_t</i>	−	−0.0311 (0.108)	−0.0350** (0.037)	−0.0410** (0.014)	−0.0276 (0.212)	−0.0314 (0.126)	−0.0364* (0.056)
<i>*EMP_STR=2_t</i>	−	−0.1690*** (<0.001)	−0.1700*** (<0.001)	−0.1751*** (<0.001)	−0.1681*** (<0.001)	−0.1654*** (<0.001)	−0.1726*** (<0.001)
<i>*EMP_CON=1_t</i>	+	0.0442*** (0.007)	0.0390*** (0.006)	0.0381*** (0.007)	0.0393** (0.036)	0.0408** (0.019)	0.0351** (0.031)
<i>*EMP_CON=2_t</i>	+	−0.0054 (0.848)	−0.0152 (0.534)	−0.0155 (0.522)	−0.0185 (0.571)	−0.0316 (0.297)	−0.0373 (0.187)
<i>Constant</i>	?	−0.1884 (0.241)	−0.1932 (0.169)	−0.1816 (0.192)	0.7884*** (<0.001)	0.7817*** (<0.001)	0.7498*** (<0.001)
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		5,378	5,316	5,237	4,912	4,860	4,790
<i>R²</i>		78.1%	78.2%	78.3%	78.4%	78.4%	78.4%

This table reports the full regression results between audit fees and combined corporate citizenship—includes philanthropy and using alternative measure for wage unfairness, CEO Compensation Excess, and control variables as in Equation Model (4). Model 1 and Model 3 present the results of correlation coefficients for lagged CEO Compensation Excess, scaled by total sales (*CEO_EXCESS_{1YR, t-1}*) when combined with lagged tax fairness measure (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}* and *CASH_TPR_{3YR, t-1}*) and

lagged philanthropy measure ($US_DON_{IR, t-1}$ and $NON_USDON_{1YR, t-1}$). Model 3–Model 6 present results of coefficients for lagged CEO Compensation Excess, scaled by positive net income ($CEO_EXCESS2_{1YR, t-1}$) when combined with lagged tax fairness measure ($CASH_TPR_{1YR, t-1}$, $CASH_TPR_{2YR, t-1}$ and $CASH_TPR_{3YR, t-1}$) and lagged philanthropy measure ($US_DON_{IR, t-1}$ and $NON_USDON_{1YR, t-1}$). The p values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

**Table A8: Regression for Audit Fees on Tax Fairness When Audit Fees At
Top and Low Quantiles**

Panel A: Regression for Audit Fees on Tax Fairness—75th Quantile (2001–2013)							
Variables	Pred. Sign	Non-Lagged Tax Fairness			Lagged Tax Fairness		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>CASH_TPR_{1YR,t}</i>	–	–0.8694*** (< 0.001)			–0.9511*** (< 0.001)		
<i>CASH_TPR_{2YR,t}</i>	–		–1.1676*** (< 0.001)			–0.9671*** (< 0.001)	
<i>CASH_TPR_{3YR,t}</i>	–			–1.4480*** (< 0.001)			–1.6595*** (< 0.001)
<i>LnTA_t</i>	+	0.5980*** (< 0.001)	0.6035*** (< 0.001)	0.6070*** (< 0.001)	0.6090*** (< 0.001)	0.6099*** (< 0.001)	0.6150*** (< 0.001)
<i>IR_proxy_t</i>	+	0.5084*** (< 0.001)	0.5083*** (< 0.001)	0.4861*** (< 0.001)	0.5840*** (< 0.001)	0.5884*** (< 0.001)	0.5678*** (< 0.001)
<i>LEV_t</i>	+	0.3508*** (< 0.001)	0.3483*** (< 0.001)	0.3567*** (< 0.001)	0.3674*** (< 0.001)	0.3720*** (< 0.001)	0.3611*** (< 0.001)
<i>LIQ_t</i>	–	–0.0199*** (< 0.001)	–0.0187*** (< 0.001)	–0.0192*** (< 0.001)	–0.0191*** (< 0.001)	–0.0192*** (< 0.001)	–0.0194*** (< 0.001)
<i>ROA_t</i>	–	0.1517 (0.151)	0.1841* (0.097)	0.2446** (0.017)	–0.0662 (0.542)	–0.082 (0.440)	0.0294 (0.800)
<i>M&A_t</i>	+	0.0091 (0.561)	0.0108 (0.507)	0.0051 (0.733)	0.0244 (0.108)	0.0201 (0.180)	0.0211 (0.185)
<i>RESTRUC_t</i>	+	–0.015 (0.317)	–0.0268 (0.127)	–0.0262 (0.122)	–0.0556*** (0.009)	–0.0586*** (0.006)	–0.0625*** (0.008)
<i>FOREIGN_t</i>	+	0.3235*** (< 0.001)	0.3219*** (< 0.001)	0.3248*** (< 0.001)	0.3344*** (< 0.001)	0.3326*** (< 0.001)	0.3344*** (< 0.001)
<i>BIG4_t</i>	+	0.1457*** (< 0.001)	0.1385*** (< 0.001)	0.1369*** (< 0.001)	0.1405*** (< 0.001)	0.1389*** (< 0.001)	0.1366*** (< 0.001)
<i>AUD_CHANGE_t</i>	+/–	–0.1399*** (< 0.001)	–0.1311*** (< 0.001)	–0.1171*** (0.001)	–0.0676* (0.075)	–0.0576 (0.126)	–0.0756* (–0.061)
<i>LnNASFee_t</i>	+/–	0.0875*** (< 0.001)	0.0865*** (< 0.001)	0.0857*** (< 0.001)	0.0824*** (< 0.001)	0.0832*** (< 0.001)	0.0832*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/–	–0.0610*** (< 0.001)	–0.0567*** (< 0.001)	–0.0486*** (< 0.001)	–0.0375*** (0.009)	–0.0368*** (0.010)	–0.0328** (0.032)
<i>EXP_CITY_t</i>	+	0.1309*** (< 0.001)	0.1298*** (< 0.001)	0.1320*** (< 0.001)	0.1427*** (< 0.001)	0.1391*** (< 0.001)	0.1365*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	–0.0135 (0.361)	–0.0093 (0.543)	–0.0158 (0.261)	–0.0147 (0.342)	–0.0169 (0.267)	–0.018 (0.267)
<i>RESTATE_t</i>	+	–0.0378** (0.016)	–0.0323** (0.048)	–0.0350** (0.020)	–0.0371** (0.027)	–0.0338** (0.042)	–0.0328* (0.064)
<i>G_CONCERN_t</i>	+	0.17 (0.285)	0.1389 (0.432)	0.1434 (0.413)	0.004 (0.984)	0.1548 (0.381)	0.1684 (0.366)
<i>SqAUD_LAG_t</i>	+	0.0859*** (< 0.001)	0.0880*** (< 0.001)	0.0878*** (< 0.001)	0.0891*** (< 0.001)	0.0892*** (< 0.001)	0.0888*** (< 0.001)
<i>BUSY_SEASON_t</i>		0.0831*** (< 0.001)	0.0807*** (< 0.001)	0.0775*** (< 0.001)	0.0748*** (< 0.001)	0.0752*** (< 0.001)	0.0673*** (< 0.001)

Panel A: Regression for Audit Fees on Tax Fairness—75th Quantile (2001–2013)							
		Non-Lagged Tax Fairness			Lagged Tax Fairness		
Variables	Pred. Sign	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>INVMILLS_t</i>	+	1.2873*** (< 0.001)	1.2970*** (< 0.001)	1.3296*** (< 0.001)	1.4508*** (< 0.001)	1.4508*** (< 0.001)	1.4773*** (< 0.001)
<i>*ENV_STR_t</i>	+	0.0337*** (< 0.001)	0.0316*** (< 0.001)	0.0308*** (< 0.001)	0.0347*** (< 0.001)	0.0333*** (< 0.001)	0.0353*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0255*** (0.006)	0.0242** (0.012)	0.0268*** (0.002)	0.0171* (0.061)	0.0153* (0.089)	0.0128 (0.180)
<i>*EMP_STR=1_t</i>	–	–0.0445*** (0.005)	–0.0433*** (0.008)	–0.0449*** (0.003)	–0.0346** (0.028)	–0.0284* (0.068)	–0.0347** (0.035)
<i>*EMP_STR=2_t</i>	–	–0.1559*** (< 0.001)	–0.1599*** (< 0.001)	–0.1658*** (< 0.001)	–0.1472*** (< 0.001)	–0.1417*** (< 0.001)	–0.1451*** (< 0.001)
<i>*EMP_CON=1_t</i>	+	0.0665*** (< 0.001)	0.0651*** (< 0.001)	0.0634*** (< 0.001)	0.0594*** (< 0.001)	0.0611*** (< 0.001)	0.0544*** (< 0.001)
<i>*EMP_CON=2_t</i>	+	0.0501** (0.032)	0.0464* (0.055)	0.0411* (0.063)	0.0478** (0.040)	0.0495** (0.031)	0.0293 (0.230)
<i>Constant</i>	?	0.4123***	0.3801***	0.1574	0.1515	1.0703***	1.0596***
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		12,851	12,722	12,530	11,602	11,467	11,280
<i>R²</i>		79.6%	79.7%	79.7%	79.1%	79.1%	79.3%

This table reports the full regression results between audit fees and tax fairness, and control variables as in Equation Model (4) when audit fees at 75th quantile. Model 1–Model 3 present the results of coefficients for non-lagged tax fairness measures (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}*, *CASH_TPR_{3YR, t}*). Model 4–Model 6 present results of coefficients for lagged tax fairness measures (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}*, *CASH_TPR_{3YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A8—continued

Panel B: Regression for Audit Fees on Tax Fairness—25th Quantile (2001–2013)							
Variables	Pred. Sign	Non-Lagged Corporate Citizenship			Lagged Corporate Citizenship		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>CASH_TPR_{1YR, t}</i>	–	–0.8210*** (< 0.001)			–0.9481*** (< 0.001)		
<i>CASH_TPR_{2YR, t}</i>	–		–1.1208*** (< 0.001)			–1.2613*** (< 0.001)	
<i>CASH_TPR_{3YR, t}</i>	–			–1.4891*** (< 0.001)			–1.4303*** (< 0.001)
<i>LnTA_t</i>	+	0.5002*** (< 0.001)	0.5031*** (< 0.001)	0.5022*** (< 0.001)	0.5017*** (< 0.001)	0.5010*** (< 0.001)	0.4989*** (< 0.001)
<i>IR_proxy_t</i>	+	0.5617*** (< 0.001)	0.5657*** (< 0.001)	0.5454*** (< 0.001)	0.4981*** (< 0.001)	0.4832*** (< 0.001)	0.4880*** (< 0.001)
<i>LEV_t</i>	+	0.2677*** (< 0.001)	0.2646*** (< 0.001)	0.2709*** (< 0.001)	0.2496*** (< 0.001)	0.2570*** (< 0.001)	0.2509*** (< 0.001)
<i>LIQ_t</i>	–	–0.0156*** (< 0.001)	–0.0143*** (< 0.001)	–0.0131*** (< 0.001)	–0.0158*** (< 0.001)	–0.0145*** (< 0.001)	–0.0139*** (< 0.001)
<i>ROA_t</i>	–	–0.1567 (0.118)	–0.1155 (0.239)	–0.0613 (0.55)	–0.0787 (0.401)	0.0389 (0.640)	0.0363 (0.672)
<i>M&A_t</i>	+	0.0347** (0.023)	0.0399*** (0.009)	0.0386** (0.011)	0.0391** (0.014)	0.0367** (0.012)	0.0351** (0.018)
<i>RESTRUC_t</i>	+	–0.1093*** (< 0.001)	–0.1137*** (< 0.001)	–0.1241*** (< 0.001)	–0.0817*** (< 0.001)	–0.0848*** (< 0.001)	–0.0884*** (< 0.001)
<i>FOREIGN_t</i>	+	0.3998*** (< 0.001)	0.3905*** (< 0.001)	0.3902*** (< 0.001)	0.3894*** (< 0.001)	0.3896*** (< 0.001)	0.3882*** (< 0.001)
<i>BIG4_t</i>	+	0.2340*** (< 0.001)	0.2415*** (< 0.001)	0.2375*** (< 0.001)	0.2203*** (< 0.001)	0.2198*** (< 0.001)	0.2218*** (< 0.001)
<i>AUD_CHANGE_t</i>	+/–	–0.1775*** (< 0.001)	–0.1994*** (< 0.001)	–0.1866*** (< 0.001)	–0.1703*** (< 0.001)	–0.1407*** (< 0.001)	–0.1537*** (< 0.001)
<i>LnNASFee_t</i>	+/–	0.1036*** (< 0.001)	0.1059*** (< 0.001)	0.1071*** (< 0.001)	0.1021*** (< 0.001)	0.1035*** (< 0.001)	0.1050*** (< 0.001)
<i>LnAUD_TENURE_t</i>	+/–	–0.022 (0.137)	–0.0247* (0.097)	–0.021 (0.163)	–0.0043 (0.764)	–0.0004 (0.976)	–0.0012 (0.931)
<i>EXP_CITY_t</i>	+	0.1531*** (< 0.001)	0.1514*** (< 0.001)	0.1495*** (< 0.001)	0.1491*** (< 0.001)	0.1473*** (< 0.001)	0.1476*** (< 0.001)
<i>AUD_GEODISP_t</i>	+	–0.0104 (0.507)	–0.0141 (0.366)	–0.0171 (0.271)	–0.0155 (0.311)	–0.0168 (0.231)	–0.0202 (0.157)
<i>RESTATE_t</i>	+	–0.0332** (0.049)	–0.0408** (0.015)	–0.0410** (0.015)	–0.0399** (0.014)	–0.0385*** (0.009)	–0.0385** (0.010)
<i>G_CONCERN_t</i>	+	–0.0896 (0.661)	–0.3319* (0.068)	–0.3228* (0.073)	–0.1478 (0.378)	–0.1647 (0.318)	–0.1705 (0.347)
<i>SqAUD_LAG_t</i>	+	0.0696*** (< 0.001)	0.0700*** (< 0.001)	0.0688*** (< 0.001)	0.0632*** (< 0.001)	0.0650*** (< 0.001)	0.0664*** (< 0.001)
<i>BUSY_SEASON_t</i>	+	0.1373*** (< 0.001)	0.1360*** (< 0.001)	0.1310*** (< 0.001)	0.1409*** (< 0.001)	0.1359*** (< 0.001)	0.1377*** (< 0.001)
<i>INVMILLS_t</i>	+	0.8174*** (< 0.001)	0.8279*** (< 0.001)	0.8189*** (< 0.001)	0.7910*** (< 0.001)	0.7768*** (< 0.001)	0.7681*** (< 0.001)
<i>*ENV_STR_t</i>	+	0.0766*** (< 0.001)	0.0767*** (< 0.001)	0.0767*** (< 0.001)	0.0766*** (< 0.001)	0.0767*** (< 0.001)	0.0767*** (< 0.001)
<i>*ENV_CON_t</i>	+	0.0621***	0.0586***	0.0616***	0.0621***	0.0586***	0.0616***

Panel B: Regression for Audit Fees on Tax Fairness—25th Quantile (2001–2013)							
Variables	Pred. Sign	Non-Lagged Corporate Citizenship			Lagged Corporate Citizenship		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)	(< 0.001)
<i>*EMP_STR=1_t</i>	–	–0.0129 (0.426)	–0.0116 (0.434)	–0.006 (0.692)	–0.0129 (0.426)	–0.0116 (0.434)	–0.006 (0.692)
<i>*EMP_STR=2_t</i>	–	–0.1082*** (0.001)	–0.1046*** (0.001)	–0.1010*** (0.001)	–0.1082*** (0.001)	–0.1046*** (0.001)	–0.1010*** (0.001)
<i>*EMP_CON=1_t</i>	+	0.0212 (0.126)	0.0220* (0.084)	0.0233* (0.073)	0.0212 (0.126)	0.0220* (0.084)	0.0233* (0.073)
<i>*EMP_CON=2_t</i>	+	0.0504** (0.035)	0.0558** (0.010)	0.0546** (0.014)	0.0504** (0.035)	0.0558** (0.010)	0.0546** (0.014)
<i>Constant</i>	?	0.4014***	0.3827***	0.2519**	0.4014***	0.3827***	0.2519**
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Observations, N</i>		12,851	12,722	12,530	11,602	11,467	11,280
<i>R²</i>		79.6%	79.7%	79.8%	79.2%	79.2%	79.4%

This table reports the full regression results between audit fees and tax fairness, and control variables as in Equation Model (4) when audit fees at 25th quantile. Model 1–Model 3 present the results of coefficients for non-lagged tax fairness measures (*CASH_TPR_{1YR, t}*, *CASH_TPR_{2YR, t}*, *CASH_TPR_{3YR, t}*). Model 4–Model 6 present results of coefficients for lagged tax fairness measures (*CASH_TPR_{1YR, t-1}*, *CASH_TPR_{2YR, t-1}*, *CASH_TPR_{3YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A9: Regression for Audit Fees on Wage Unfairness When Audit Fees At Top and Low Quantiles

Panel A: Regression for Audit Fees on Wage Unfairness—75th Quantile (2001–2013)			
Variables	Pred. Sign	Non-Lagged (Model 1)	Lagged (Model 2)
<i>CEO_PAY_RATIO</i> _{1YR, t}	+	0.7046 (0.201)	0.7300** (0.049)
<i>LnTA</i> _t	+	0.6777*** (< 0.001)	0.7215*** (< 0.001)
<i>IR_proxy</i> _t	+	1.6572*** (< 0.001)	1.9153*** (< 0.001)
<i>LEV</i> _t	+	0.4640*** (0.010)	0.4632*** (< 0.001)
<i>LIQ</i> _t	–	0.0077 (0.841)	0.0177 (0.466)
<i>ROA</i> _t	–	–1.0277 (0.193)	–1.3648** (0.016)
<i>M&A</i> _t	+	0.0084 (0.927)	0.0524 (0.425)
<i>RESTRUC</i> _t	+	–0.0196 (0.794)	–0.0677 (0.369)
<i>FOREIGN</i> _t	+	0.4712*** (< 0.001)	0.5263*** (< 0.001)
<i>BIG4</i> _t	+	0.0274 (0.887)	0.2744** (0.032)
<i>AUD_CHANGE</i> _t	+/–	0.1808 (0.430)	0.0371 (0.826)
<i>LnNASFee</i> _t	+/–	0.1246*** (< 0.001)	0.1006*** (< 0.001)
<i>LnAUD_TENURE</i> _t	+/–	0.0541 (0.557)	0.0828 (0.229)
<i>EXP_CITY</i> _t	+	0.3472*** (0.001)	0.5133*** (< 0.001)
<i>AUD_GEODISP</i> _t	+	–0.1034 (0.320)	–0.1550* (0.054)
<i>RESTATE</i> _t	+	0.0919 (0.300)	0.0496 (0.455)
<i>SqAUD_LAG</i> _t	+	0.0712** (0.048)	0.0785*** (0.004)
<i>BUSY_SEASON</i> _t	+	–0.1355 (0.121)	–0.1244** (0.047)
<i>INVMILLS</i> _t	+	3.4026*** (< 0.001)	4.1526*** (< 0.001)
<i>*ENV_STR</i> _t	+	0.0118 (0.821)	0.0171 (0.627)

Panel A: Regression for Audit Fees on Wage Unfairness—75th Quantile (2001–2013)			
Variables	Pred. Sign	Non-Lagged	Lagged
		(Model 1)	(Model 2)
<i>*ENV_CON_t</i>	+	0.0028 (0.958)	−0.0013 (0.972)
<i>*EMP_STR=1_t</i>	−	0.0637 (0.468)	−0.0306 (0.617)
<i>*EMP_STR=2_t</i>	−	−0.0694 (0.524)	−0.0480 (0.525)
<i>*EMP_CON=1_t</i>	+	−0.0476 (0.512)	−0.0726 (0.146)
<i>*EMP_CON=2_t</i>	+	0.0794 (0.434)	0.1297* (0.072)
<i>Constant</i>	?	−0.7796	−1.3704***
<i>Industry Included</i>		Yes	Yes
<i>Year included</i>		Yes	Yes
<i>Observations, N</i>		823	803
<i>R²</i>		81.9%	82.1%

This table reports the full regression results between audit fees and tax fairness, and control variables as in Equation Model (4) when audit fees at 75th quantile. Model 1 presents the results of coefficients for non-lagged wage unfairness measure ($CEO_PAY_RATIO_{IYR,t}$). Model 2 present results of coefficients for lagged wage unfairness measure ($CEO_PAY_RATIO_{IYR,t-1}$). The p values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A9—*continued*

Panel B: Regression for Audit Fees on Wage Unfairness—25th Quantile (2001–2013)			
Variables	Pred. Sign	Non-Lagged (Model 1)	Lagged (Model 2)
<i>CEO_PAY_RATIO</i> _{1YR, t}	+	1.0194*** (0.007)	1.1942*** (0.006)
<i>LnTA</i> _t	+	0.5419*** (< 0.001)	0.4990*** (< 0.001)
<i>IR_proxy</i> _t	+	1.4255*** (< 0.001)	1.4849*** (< 0.001)
<i>LEV</i> _t	+	0.1874* (0.099)	0.1352 (0.305)
<i>LIQ</i> _t	–	–0.0188 (0.420)	0.0067 (0.797)
<i>ROA</i> _t	–	–0.442 (0.316)	–0.7882* (0.097)
<i>M&A</i> _t	+	0.1257** (0.032)	0.1719*** (0.004)
<i>RESTRUC</i> _t	+	–0.0031 (0.948)	–0.1298** (0.014)
<i>FOREIGN</i> _t	+	0.3996*** (< 0.001)	0.4576*** (< 0.001)
<i>BIG4</i> _t	+	0.5058*** (< 0.001)	0.3404** (0.014)
<i>AUD_CHANGE</i> _t	+/–	0.0324 (0.832)	0.1336 (0.474)
<i>LnNASFee</i> _t	+/–	0.1312*** (< 0.001)	0.1291*** (< 0.001)
<i>LnAUD_TENURE</i> _t	+/–	0.1520** (0.017)	0.0907 (0.187)
<i>EXP_CITY</i> _t	+	0.3063*** (< 0.001)	0.3334*** (< 0.001)
<i>AUD_GEODISP</i> _t	+	0.1337** (0.039)	0.2089*** (0.005)
<i>RESTATE</i> _t	+	0.0581 (0.305)	0.0287 (0.665)
<i>SqAUD_LAG</i> _t	+	0.0849*** (< 0.001)	0.1091*** (< 0.001)
<i>BUSY_SEASON</i> _t	+	0.2436*** (< 0.001)	0.2194*** (< 0.001)
<i>INVMILLS</i> _t	+	1.1036** (0.019)	0.8748 (0.106)
<i>*ENV_STR</i> _t	+	0.1250*** (0.001)	0.1229*** (0.001)

Panel B: Regression for Audit Fees on Wage Unfairness—25th Quantile (2001–2013)			
Variables	Pred. Sign	Non-Lagged (Model 1)	Lagged (Model 2)
*ENV_CON _{<i>t</i>}	+	−0.1076*** (0.002)	−0.0486 (0.205)
*EMP_STR=1 _{<i>t</i>}	−	−0.0183 (0.747)	−0.0027 (0.963)
*EMP_STR=2 _{<i>t</i>}	−	−0.1739** (0.015)	−0.0751 (0.308)
*EMP_CON=1 _{<i>t</i>}	+	−0.0727 (0.119)	0.0111 (0.822)
*EMP_CON=2 _{<i>t</i>}	+	0.2172*** (0.001)	0.2892*** (< 0.001)
Constant	?	−0.8087*	−0.137
Industry Included		Yes	Yes
Year included		Yes	Yes
Observations, <i>N</i>		823	803
<i>R</i> ²		82.6%	83.4%

This table reports the full regression results between audit fees and tax fairness, and control variables as in Equation Model (4) when audit fees at 75th quantile. Model 1 presents the results of coefficients for non-lagged wage unfairness measure ($CEO_PAY_RATIO_{1YR,t}$). Model 2 present results of coefficients for lagged wage unfairness measure ($CEO_PAY_RATIO_{1YR,t-1}$). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

**Table A10: Regression for Audit Fees on Alternative Measure of Wage Unfairness,
CEO Compensation Excess When Audit Fees At Top and Low Quantiles**

Panel A: Regression for Audit Fees on Wage Unfairness—75th Quantile (2001–2013)					
Variables	Pred. Sign	Lagged		Non-Lagged	
		(Model 1)	(Model 2)	(Model 1)	(Model 2)
<i>CEO_EXCESS1_{1YR, t}</i>	+	−0.0405*** (0.009)		−0.5870 (0.624)	
<i>CEO_EXCESS2_{1YR, t}</i>	+		0.1317 (0.117)		0.0174 (0.286)
<i>LnTA_t</i>	+	0.6085*** (<0.001)	0.6085*** (<0.001)	0.6028*** (<0.001)	0.6029*** (<0.001)
<i>IR_proxy_t</i>	+	0.7100*** (<0.001)	0.6813*** (<0.001)	0.5830*** (<0.001)	0.5903*** (<0.001)
<i>LEV_t</i>	+	0.4200*** (<0.001)	0.3939*** (<0.001)	0.4089*** (<0.001)	0.4054*** (<0.001)
<i>LIQ_t</i>	−	−0.0227*** (<0.001)	−0.0210*** (<0.001)	−0.0228*** (<0.001)	−0.0229*** (<0.001)
<i>ROA_t</i>	−	−0.2584** (0.015)	−0.2581** (0.018)	−0.1822* (0.094)	−0.1775* (0.098)
<i>M&A_t</i>	+	0.0163 (0.298)	0.0152 (0.332)	0.0105 (0.532)	0.0103 (0.533)
<i>RESTRUC_t</i>	+	−0.0861*** (0.000)	−0.0735*** (0.001)	−0.0424** (0.026)	−0.0421** (0.025)
<i>FOREIGN_t</i>	+	0.3510*** (<0.001)	0.3472*** (0.000)	0.3429*** (<0.001)	0.3422*** (<0.001)
<i>BIG4_t</i>	+	0.0929*** (0.001)	0.1018*** (<0.001)	0.0653** (0.019)	0.0652** (0.017)
<i>AUD_CHANGE_t</i>	+/−	−0.0816** (0.048)	−0.0772* (0.069)	−0.1008** (0.014)	−0.0927** (0.022)
<i>LnNASFee_t</i>	+/−	0.0927*** (<0.001)	0.0957*** (<0.001)	0.0942*** (<0.001)	0.0939*** (<0.001)
<i>LnAUD_TENURE_t</i>	+/−	−0.0450*** (0.005)	−0.0579*** (<0.001)	−0.0496*** (0.003)	−0.0482*** (0.003)
<i>EXP_CITY_t</i>	+	0.1190*** (<0.001)	0.1092*** (<0.001)	0.1136*** (<0.001)	0.1125*** (<0.001)
<i>AUD_GEODISP_t</i>	+	−0.0368** (0.027)	−0.0422** (0.012)	−0.0258 (0.123)	−0.0260 (0.114)
<i>RESTATE_t</i>	+	−0.0230 (0.193)	−0.0041 (0.818)	−0.0253 (0.142)	−0.0264 (0.120)
<i>G_CONCERN_t</i>	+	0.0350 (0.809)	0.0254 (0.866)	0.0086 (0.950)	0.0377 (0.750)
<i>SqAUD_LAG_t</i>	+	0.0947*** (<0.001)	0.0926*** (<0.001)	0.0922*** (<0.001)	0.0900*** (<0.001)
<i>BUSY_SEASON_t</i>	+	0.0870*** (<0.001)	0.0903*** (<0.001)	0.0868*** (<0.001)	0.0863*** (<0.001)
<i>INVMILLS_t</i>	+	1.6219*** (<0.001)	1.6194*** (<0.001)	1.5137*** (<0.001)	1.5192*** (<0.001)

Panel A: Regression for Audit Fees on Wage Unfairness—75th Quantile (2001–2013)					
Variables	Pred. Sign	Lagged		Non-Lagged	
		(Model 1)	(Model 2)	(Model 1)	(Model 2)
<i>*ENV_STR_t</i>	+	0.0402*** (<0.001)	0.0418*** (<0.001)	0.0338*** (<0.001)	0.0342*** (<0.001)
<i>*ENV_CON_t</i>	+	0.0084 (0.346)	0.0097 (0.286)	0.0150 (0.113)	0.0161* (0.082)
<i>*EMP_STR=1_t</i>	–	–0.0475*** (0.002)	–0.0481*** (0.002)	–0.0488*** (0.002)	–0.0480*** (0.002)
<i>*EMP_STR=2_t</i>	–	–0.1461*** (<0.001)	–0.1481*** (<0.001)	–0.1606*** (<0.001)	–0.1612*** (<0.001)
<i>*EMP_CON=1_t</i>	+	0.0685*** (<0.001)	0.0693*** (<0.001)	0.0727*** (<0.001)	0.0720*** (<0.001)
<i>*EMP_CON=2_t</i>	+	0.0411* (0.074)	0.0337 (0.148)	0.0387 (0.107)	0.0406* (0.085)
<i>Constant</i>	?	0.9390***	0.9792***	1.0506***	1.0709***
<i>Industry Included</i>		Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes
<i>Observations, N</i>		9,404	8,577	10,067	10,068
<i>R²</i>		79.6%	80.0%	79.9%	79.9%

This table reports the full regression results between audit fees and alternative measure of wage unfairness, CEO Compensation Excess and control variables as in Equation Model (4) when audit fees at 75th quantile. Model 1 and Model 2 present the results of coefficients for non-lagged CEO Compensation Excess measure (*CEO_EXCESS1_{1YR, t}* and *CEO_EXCESS2_{1YR, t}*). Model 3 and Model 4 present results of coefficients for lagged CEO Compensation Excess measure (*CEO_EXCESS1_{1YR, t-1}* and *CEO_EXCESS2_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

* Where the variable is also lagged to match the performance of lagged corporate citizenship variable.

Table A10—*continued*

Panel B: Regression for Audit Fees on CEO Compensation Excess—25th Quantile (2001–2013)					
Variables	Pred. Sign	Lagged		Non-Lagged	
		(Model 1)	(Model 2)	(Model 1)	(Model 2)
<i>CEO_EXCESS1_{1YR, t}</i>	+	0.0832*** (<0.001)		1.4853 (0.231)	
<i>CEO_EXCESS2_{1YR, t}</i>	+		0.2041** (0.046)		0.0800*** (<0.001)
<i>LnTA_t</i>	+	0.5177*** (<0.001)	0.5182*** (<0.001)	0.5086*** (<0.001)	0.5090*** (<0.001)
<i>IR_proxy_t</i>	+	0.6859*** (<0.001)	0.6742*** (<0.001)	0.6205*** (<0.001)	0.6241*** (<0.001)
<i>LEV_t</i>	+	0.2623*** (<0.001)	0.2534*** (<0.001)	0.2781*** (<0.001)	0.2801*** (<0.001)
<i>LIQ_t</i>	–	–0.0172*** (<0.001)	–0.0171*** (<0.001)	–0.0183*** (<0.001)	–0.0182*** (<0.001)
<i>ROA_t</i>	–	–0.2458** (0.030)	–0.1958* (0.083)	–0.2185** (0.032)	–0.1673 (0.129)
<i>M&A_t</i>	+	0.0419** (0.012)	0.0338** (0.034)	0.0387** (0.015)	0.0412** (0.015)
<i>RESTRUC_t</i>	+	–0.1112*** (<0.001)	–0.1062*** (<0.001)	–0.0849*** (0.000)	–0.0806*** (0.000)
<i>FOREIGN_t</i>	+	0.4053*** (<0.001)	0.3999*** (<0.001)	0.4149*** (<0.001)	0.4158*** (<0.001)
<i>BIG4_t</i>	+	0.0868*** (0.004)	0.0930*** (0.002)	0.0540** (0.041)	0.0524* (0.064)
<i>AUD_CHANGE_t</i>	+/–	–0.2004*** (<0.001)	–0.1978*** (<0.001)	–0.1770*** (<0.001)	–0.1730*** (<0.001)
<i>LnNASFee_t</i>	+/–	0.1191*** (<0.001)	0.1235*** (<0.001)	0.1193*** (<0.001)	0.1186*** (<0.001)
<i>LnAUD_TENURE_t</i>	+/–	–0.0274 (0.117)	–0.0310* (0.071)	–0.0218 (0.169)	–0.0229 (0.178)
<i>EXP_CITY_t</i>	+	0.1275*** (<0.001)	0.1239*** (<0.001)	0.1061*** (<0.001)	0.1081*** (<0.001)
<i>AUD_GEODISP_t</i>	+	–0.0512*** (0.004)	–0.0467*** (0.007)	–0.0542*** (0.001)	–0.0525*** (0.002)
<i>RESTATE_t</i>	+	–0.0440** (0.018)	–0.0412** (0.023)	–0.0410** (0.012)	–0.0364** (0.037)
<i>G_CONCERN_t</i>	+	0.2623* (0.095)	0.2802* (0.077)	0.2029 (0.131)	0.2091 (0.145)
<i>SqAUD_LAG_t</i>	+	0.0729*** (<0.001)	0.0723*** (<0.001)	0.0668*** (<0.001)	0.0664*** (<0.001)
<i>BUSY_SEASON_t</i>	+	0.1615*** (<0.001)	0.1646*** (<0.001)	0.1551*** (<0.001)	0.1594*** (<0.001)
<i>INVMILLS_t</i>	+	1.0634*** (<0.001)	1.0507*** (<0.001)	0.9262*** (<0.001)	0.9135*** (<0.001)
<i>*ENV_STR_t</i>	+	0.0850***	0.0818***	0.0733***	0.0721***

Panel B: Regression for Audit Fees on CEO Compensation Excess—25th Quantile (2001–2013)					
Variables	Pred. Sign	Lagged		Non-Lagged	
		(Model 1)	(Model 2)	(Model 1)	(Model 2)
		(<0.001)	(<0.001)	(<0.001)	(<0.001)
*ENV_CON _{<i>i</i>}	+	0.0360***	0.0340***	0.0447***	0.0441***
		(<0.001)	(<0.001)	(<0.001)	(<0.001)
*EMP_STR=1, _{<i>t</i>}	–	–0.0236	–0.0195	–0.0249	–0.0263
		(0.155)	(0.227)	(0.106)	(0.109)
*EMP_STR=2, _{<i>t</i>}	–	–0.1338***	–0.1404***	–0.1031***	–0.1072***
		(<0.001)	(<0.001)	(<0.001)	(<0.001)
*EMP_CON=1, _{<i>t</i>}	+	0.0374**	0.0365**	0.0402***	0.0392***
		(0.012)	(0.012)	(0.004)	(0.008)
*EMP_CON=2, _{<i>t</i>}	+	0.0588**	0.0565**	0.0599***	0.0614**
		(0.016)	(0.018)	(0.008)	(0.011)
Constant	?	1.1069***	1.0843***	1.2167***	1.2184***
Industry Included		Yes	Yes	Yes	Yes
Year included		Yes	Yes	Yes	Yes
Observations, <i>N</i>		9,404	8,577	10,067	10,068
<i>R</i> ²		79.7%	80.1%	80.0%	80.0%

This table reports the full regression results between audit fees and alternative measure of wage unfairness, CEO Compensation Excess and control variables as in Equation Model (4) when audit fees at 25th quantile. Model 1 and Model 2 present the results of coefficients for non-lagged CEO Compensation Excess measure (*CEO_EXCESS1_{1YR, t}* and *CEO_EXCESS2_{1YR, t}*). Model 3 and Model 4 present results of coefficients for lagged EO Compensation Excess measure (*CEO_EXCESS1_{1YR, t-1}* and *CEO_EXCESS2_{1YR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

* Where the variable is also lagged to properly match the performance of lagged corporate citizenship variable.

**Table A11: Regression for Audit Fees on Philanthropy When Audit Fees At
Top and Low Quantiles**

Panel A: Regression for Audit Fees on Philanthropy—75th Quantile (2001–2009)							
Variables	Pred. Sign	Lagged Philanthropy			Non-Lagged Philanthropy		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>US_DON_{1YR,t}</i>	–	–0.0710 (0.113)		–0.0969** (0.021)	–0.1379** (0.018)		–0.1642*** (0.002)
<i>NONUS_DON_{1YR,t}</i>	+		0.0721 (0.172)	0.0777 (0.101)		0.1303** (0.034)	0.1296** (0.028)
<i>LnTA_t</i>	+	0.6293*** (<0.001)	0.6280*** (<0.001)	0.6257*** (<0.001)	0.6129*** (<0.001)	0.6124*** (<0.001)	0.6109*** (<0.001)
<i>IR_proxy_t</i>	+	0.3265*** (<0.001)	0.3203*** (<0.001)	0.3256*** (<0.001)	0.3565*** (<0.001)	0.3508*** (<0.001)	0.3603*** (<0.001)
<i>LEV_t</i>	+	–0.0206*** (<0.001)	–0.0206*** (<0.001)	–0.0206*** (<0.001)	–0.0186*** (<0.001)	–0.0177*** (<0.001)	–0.0183*** (<0.001)
<i>LIQ_t</i>	–	0.5669*** (<0.001)	0.5650*** (<0.001)	0.5658*** (<0.001)	0.5085*** (<0.001)	0.5160*** (<0.001)	0.5233*** (<0.001)
<i>ROA_t</i>	–	–0.1039 (0.403)	–0.0881 (0.501)	–0.1365 (0.234)	–0.1451 (0.346)	–0.1474 (0.307)	–0.1514 (0.267)
<i>M&A_t</i>	+	–0.0110 (0.636)	–0.0107 (0.662)	–0.0097 (0.653)	–0.0411 (0.197)	–0.0411 (0.168)	–0.0401 (0.155)
<i>RESTRUC_t</i>	+	–0.0866*** (<0.001)	–0.0917*** (<0.001)	–0.0922*** (<0.001)	–0.0033*** (<0.001)	–0.0032*** (<0.001)	–0.0033*** (<0.001)
<i>FOREIGN_t</i>	+	0.3202*** (0.000)	0.3201*** (0.000)	0.3175*** (0.000)	0.3170*** (<0.001)	0.3180*** (<0.001)	0.3187*** (<0.001)
<i>BIG4_t</i>	+	0.1300*** (<0.001)	0.1330*** (<0.001)	0.1336*** (<0.001)	0.1173*** (<0.001)	0.1169*** (<0.001)	0.1172*** (<0.001)
<i>AUD_CHANGE_t</i>	+/–	–0.1183** (0.010)	–0.1220** (0.011)	–0.1285*** (0.002)	–0.1640*** (0.003)	–0.1487*** (0.003)	–0.1685*** (<0.001)
<i>LnNASFee_t</i>	+/–	0.0857*** (<0.001)	0.0856*** (<0.001)	0.0854*** (<0.001)	0.0907*** (<0.001)	0.0908*** (<0.001)	0.0904*** (<0.001)
<i>LnAUD_TENURE_t</i>	+/–	–0.0919*** (<0.001)	–0.0944*** (<0.001)	–0.0931*** (<0.001)	–0.1106*** (<0.001)	–0.1038*** (<0.001)	–0.1121*** (<0.001)
<i>EXP_CITY_t</i>	+	0.1235*** (<0.001)	0.1206*** (<0.001)	0.1203*** (<0.001)	0.1124*** (<0.001)	0.1120*** (<0.001)	0.1072*** (<0.001)
<i>AUD_GEODISP_t</i>	+	–0.0083 (0.660)	–0.0100 (0.612)	–0.0086 (0.621)	–0.0209 (0.360)	–0.0204 (0.339)	–0.0207 (0.306)
<i>RESTATE_t</i>	+	–0.0467** (0.016)	–0.0546*** (0.007)	–0.0494*** (0.005)	–0.0404* (0.081)	–0.0360* (0.095)	–0.0381* (0.062)
<i>G_CONCERN_t</i>	+	0.0660 (0.631)	0.0760 (0.598)	0.0644 (0.611)	0.0369 (0.846)	0.0501 (0.777)	0.0501 (0.765)
<i>SqAUD_LAG_t</i>	+	0.0956*** (<0.001)	0.0958*** (<0.001)	0.0955*** (<0.001)	0.0951*** (<0.001)	0.0930*** (<0.001)	0.0926*** (<0.001)
<i>BUSY_SEASON_t</i>	+	0.0989*** (<0.001)	0.1018*** (<0.001)	0.1008*** (<0.001)	0.1362*** (<0.001)	0.1343*** (<0.001)	0.1357*** (<0.001)
<i>INVMILLS_t</i>	+	1.4968*** (<0.001)	1.4792*** (<0.001)	1.4626*** (<0.001)	1.3110*** (<0.001)	1.3071*** (<0.001)	1.3027*** (<0.001)
<i>*ENV_CON_t</i>	+	0.0313**	0.0257*	0.0311**	0.0448**	0.0302*	0.0426***

Panel A: Regression for Audit Fees on Philanthropy—75th Quantile (2001–2009)							
Variables	Pred. Sign	Lagged Philanthropy			Non-Lagged Philanthropy		
		(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		0.0313**	0.0257*	0.0311**	(0.013)	(0.072)	(0.008)
<i>*ENV_CON_t</i>	+	(0.028)	(0.086)	(0.019)	0.0209	0.0230*	0.0219*
		0.0205*	0.0202*	0.0218**	(0.141)	(0.086)	(0.087)
<i>*EMP_STR=1_t</i>	–	(0.065)	(0.085)	(0.035)	–0.0172	–0.0231	–0.0189
		–0.0049	–0.0115	–0.0053	(0.474)	(0.307)	(0.375)
<i>*EMP_STR=2_t</i>	–	(0.795)	(0.561)	(0.760)	–0.1788***	–0.1903***	–0.1918***
		–0.1676***	–0.1762***	–0.1821***	(<0.001)	(<0.001)	(<0.001)
<i>*EMP_CON=1_t</i>	+	(<0.001)	(<0.001)	(<0.001)	0.0844***	0.0832***	0.0836***
		0.0701***	0.0685***	0.0696***	(<0.001)	(<0.001)	(<0.001)
<i>*EMP_CON=2_t</i>	+	(<0.001)	(<0.001)	(<0.001)	0.0277	0.0349	0.0332
		0.0235	0.0263	0.0244	(0.400)	(0.256)	(0.253)
<i>Constant</i>	?	0.9069***	0.9224***	0.9415***	–0.0032	0.0062	0.0325
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
Observations, <i>N</i>		7,839	7,839	7,839	8,505	8,505	8,505
<i>R</i> ²		77.4%	77.4%	77.4%	78.4%	78.3%	78.4%

This table reports the full regression results between audit fees and philanthropy measures—domestic donation and foreign donation and control variables as in Equation Model (4) when audit fees at 75th quantile. Model 1 and Model 4 regress audit fees on non-lagged and lagged domestic donation and foreign donation as combination (*US_DON_{IYR, t}* and *NON_USDON_{IYR, t}*; *US_DON_{IYR, t-1}* and *NON_USDON_{IYR, t-1}* respectively). Model 2–Model 3 present the results of coefficients for lagged domestic donation and foreign donation measure (*US_DON_{IYR, -1t}* and *NON_USDON_{IYR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.

Table A11—continued

Panel B: Regression for Audit Fees on Philanthropy—25th Quantile (2001–2009)							
Lagged Philanthropy				Non-Lagged Philanthropy			
Variables	Pred. Sign	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
<i>US_DON_{1YR, t}</i>	—	−0.0847* (0.097)		−0.1197** (0.020)	−0.0975** (0.044)		−0.1274*** (0.007)
<i>NONUS_DON_{1YR, t}</i>	+		0.1279** (0.012)	0.1472*** (0.005)		0.1606*** (0.001)	0.1856*** (<0.001)
<i>LnTA_t</i>	+	0.5054*** (<0.001)	0.5004*** (<0.001)	0.5015*** (<0.001)	0.5085*** (<0.001)	0.5057*** (<0.001)	0.5078*** (<0.001)
<i>IR_proxy_t</i>	+	0.2792*** (<0.001)	0.2947*** (<0.001)	0.2842*** (<0.001)	0.2929*** (<0.001)	0.2954*** (<0.001)	0.2978*** (<0.001)
<i>LEV_t</i>	+	−0.0123*** (0.006)	−0.0112*** (0.009)	−0.0119*** (0.007)	−0.0133*** (<0.001)	−0.0129*** (<0.001)	−0.0129*** (0.001)
<i>LIQ_t</i>	—	0.5730*** (<0.001)	0.5699*** (<0.001)	0.5723*** (<0.001)	0.5128*** (<0.001)	0.5195*** (<0.001)	0.5129*** (<0.001)
<i>ROA_t</i>	—	−0.3239** (0.015)	−0.3900*** (0.003)	−0.3613*** (0.007)	−0.2355** (0.028)	−0.2975*** (0.005)	−0.2949*** (0.006)
<i>M&A_t</i>	+	0.0289 (0.271)	0.0200 (0.431)	0.0198 (0.448)	0.0243 (0.355)	0.0180 (0.486)	0.0235 (0.365)
<i>RESTRUC_t</i>	+	−0.1013*** (0.000)	−0.1020*** (0.000)	−0.0972*** (0.000)	−0.0012*** (<0.001)	−0.0012*** (<0.001)	−0.0012*** (<0.001)
<i>FOREIGN_t</i>	+	0.3771*** (<0.001)	0.3785*** (<0.001)	0.3802*** (<0.001)	0.3776*** (<0.001)	0.3800*** (<0.001)	0.3805*** (<0.001)
<i>BIG4_t</i>	+	0.2138*** (<0.001)	0.2103*** (<0.001)	0.2155*** (<0.001)	0.2090*** (<0.001)	0.2064*** (<0.001)	0.2000*** (<0.001)
<i>AUD_CHANGE_t</i>	+/−	−0.1929*** (<0.001)	−0.1865*** (<0.001)	−0.1780*** (0.001)	−0.1344*** (0.003)	−0.1385*** (0.002)	−0.1321*** (0.003)
<i>LnNASFee_t</i>	+/−	0.1149*** (<0.001)	0.1142*** (<0.001)	0.1134*** (<0.001)	0.1142*** (<0.001)	0.1129*** (<0.001)	0.1135*** (<0.001)
<i>LnAUD_TENURE_t</i>	+/−	−0.0329 (0.152)	−0.0284 (0.206)	−0.0258 (0.266)	0.0081 (0.696)	0.0079 (0.702)	0.0116 (0.571)
<i>EXP_CITY_t</i>	+	0.1422*** (<0.001)	0.1420*** (<0.001)	0.1416*** (<0.001)	0.1356*** (<0.001)	0.1386*** (<0.001)	0.1325*** (<0.001)
<i>AUD_GEODISP_t</i>	+	−0.0181 (0.394)	−0.0199 (0.335)	−0.0194 (0.361)	−0.0296 (0.117)	−0.0237 (0.206)	−0.0256 (0.171)
<i>RESTATE_t</i>	+	−0.0520** (0.016)	−0.0534** (0.011)	−0.0554** (0.011)	−0.0321* (0.089)	−0.0339* (0.069)	−0.0383** (0.041)
<i>G_CONCERN_t</i>	+	−0.0198 (0.913)	−0.0015 (0.993)	−0.0057 (0.975)	−0.0850 (0.598)	−0.0867 (0.587)	−0.0987 (0.538)
<i>SqAUD_LAG_t</i>	+	0.0727*** (<0.001)	0.0732*** (<0.001)	0.0732*** (<0.001)	0.0691*** (<0.001)	0.0699*** (<0.001)	0.0696*** (<0.001)
<i>BUSY_SEASON_t</i>	+	0.1947*** (<0.001)	0.1887*** (<0.001)	0.1914*** (<0.001)	0.1845*** (<0.001)	0.1828*** (<0.001)	0.1879*** (<0.001)
<i>INVMILLS_t</i>	+	0.7849*** (<0.001)	0.7692*** (<0.001)	0.7637*** (<0.001)	0.7372*** (<0.001)	0.7284*** (<0.001)	0.7318*** (<0.001)
<i>*ENV_STR_t</i>	+	0.1200*** (0.000)	0.1137*** (0.000)	0.1189*** (0.000)	0.1075*** (<0.001)	0.0959*** (<0.001)	0.1023*** (<0.001)
<i>*ENV_CON_t</i>	+	0.0468*** (<0.001)	0.0439*** (<0.001)	0.0416*** (0.001)	0.0526*** (<0.001)	0.0491*** (<0.001)	0.0429*** (<0.001)
<i>*EMP_STR=1_t</i>	—	−0.0292	−0.0306	−0.0292	−0.0136	−0.0134	−0.0148

Panel B: Regression for Audit Fees on Philanthropy—25th Quantile (2001–2009)							
		Lagged Philanthropy			Non-Lagged Philanthropy		
Variables	Pred. Sign	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)	(Model 6)
		(0.171)	(0.141)	(0.174)	(0.492)	(0.493)	(0.450)
<i>*EMP_STR=2_t</i>	–	–0.1640***	–0.1793***	–0.1836***	–0.1901***	–0.1882***	–0.1871***
		(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)	(<0.001)
<i>*EMP_CON=1_t</i>	+	0.0328*	0.0325**	0.0326*	0.0441***	0.0440***	0.0441***
		(0.052)	(0.048)	(0.054)	(0.004)	(0.004)	(0.004)
<i>*EMP_CON=2_t</i>	+	0.0559*	0.0640**	0.0627**	0.0481*	0.0521**	0.0570**
		(0.052)	(0.024)	(0.031)	(0.071)	(0.048)	(0.030)
<i>Constant</i>	?	1.0772***	1.1163***	1.1001***	–0.0464	–0.0036	–0.0142
<i>Industry Included</i>		Yes	Yes	Yes	Yes	Yes	Yes
<i>Year included</i>		Yes	Yes	Yes	Yes	Yes	Yes
Observations, <i>N</i>		7,839	7,839	7,839	8,505	8,505	8,505
<i>R</i> ²		77.7%	77.7%	77.7%	78.5%	78.6%	78.6%

This table reports the full regression results between audit fees and philanthropy measures—domestic donation and foreign donation and control variables as in Equation Model (4) when audit fees at 25th quantile. Model 1 and Model 4 regress audit fees on non-lagged and lagged domestic donation and foreign donation as combination (*US_DON_{IYR, t}* and *NON_USDON_{IYR, t}*; *US_DON_{IYR, t-1}* and *NON_USDON_{IYR, t-1}* respectively). Model 2–Model 3 present the results of coefficients for lagged domestic donation and foreign donation measure (*US_DON_{IYR, -1t}* and *NON_USDON_{IYR, t-1}*). The *p* values reported in parentheses are two-tailed. All variables are defined in Table A1, Panel A.