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Content

The 8th World Business Ethics Forum

"Emerging from Crisis through Socially Responsible and Ethical Business"

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The 8th World Business Ethics Forum

"Emerging from Crisis through Socially Responsible and Ethical Business"

Forum Programme

14 June 2023, Wednesday		
08:30 – 11:00	**Opening Plenary**	
08:30	<u>*Registration*</u>	Foyer, 4/F, S H Ho Academic Building
09:30 – 09:45	<u>*Welcome Remarks*</u> **Professor Robin SNELL** Visiting Professor of Management, School of Business, the Hang Seng University of Hong Kong **Professor Jean Jinghan CHEN** Vice President, China-Europe Business Association; Formerly Dean of FBA and Chair Professor in Accounting and Finance, University of Macau **Professor Simon Shun Man HO** President, the Hang Seng University of Hong Kong	Fung Yiu King Hall, 4/F, S H Ho Academic Building
09:45 – 11:00 *Session Chair:* *Professor Robin SNELL*	<u>*Keynote Speeches*</u> **Professor Carl RHODES** Dean of UTS Business School, University of Technology Sydney, Australia **Ms Akiko TAKAHASHI** Executive Vice President and Chief of Staff to Chairman and CEO, Melco Group, Hong Kong	Fung Yiu King Hall, 4/F, S H Ho Academic Building
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11:15 – 12:45	**Concurrent Session 1**	
Session 1A: *Session Chair:* *Professor Louis CHENG*	<u>*ESG Practitioner*</u> **Dr Ricky SZETO** GM & ED, Hung Fook Tong Group Holdings Ltd **Dr Michael WU** Chairman of Creative Asset Management Limited	Fung Yiu King Hall, 4/F, S H Ho Academic Building

Session 1B: *Session Chair: Professor Robin SNELL*	<u>*Sustainability-minded Practitioners*</u> **Mr Terence LAU** Business Sustainability Director, Richform Holdings Limited "Sustainability practices and shared value creation" **Mr Simeon CHENG** Group Director of Sustainability, Vitasoy "Developing sustainable business organizations" **Professor Erwin HUANG** Adjunct Professor, Division of Integrative Systems & Design, the Hong Kong University of Science and Technology "Generation Z's search for purpose" **Dr Thomas Sek Khuen TANG** Executive Director, AECOM and Form former Adjunct Professor, City University of Hong Kong "Challenges in Cybersecurity"	A403, 4/F, S H Ho Academic Building
12:45– 14:00	Lunch	The Always, 2/F, M Building, Yuen Campus
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Session 2A *Session Chair: Professor Tiffany Cheng Han LEUNG*	<u>*Quantitative ESG*</u> ESG Ratings and Dividend Changes: Evidence from the Initiation of Non-financial Agency Coverage (P002) *Dr Yi XIANG (The Hong Kong Polytechnic University)** *Professor Albert TSANG (Southern University of Science and Technology)* *Ms Yujie WANG (Central South University)* *Dr Li YU (Nankai University)* The Relationship between Corporate Climate-related Disclosure and Financial Impacts: An Exploration of the Emerging Chinese Companies in a Global Financial Centre (P014) *Miss Ying GUO (City University of Macau)** *Professor Tiffany Cheng Han LEUNG (City University of Macau)* *Professor Teresa CHU (University of Macau)*	Fung Yiu King Hall, 4/F, S H Ho Academic Building
Session 2B *Session Chair: Professor Michael SEGON*	<u>*HRM*</u> HRM and Management Professionals: Expertise, Duty and Managing Corporate Ethics (P012) *Professor Michael SEGON (Central Queensland University)** *Dr Andrew ROBERTS (Central Queensland University)* The Impacts of Work-from-home Goal Alignment on Employee Well-Being and Turnover Intentions: The Mediating Role of Work Engagement (P033) *Dr Ada Hiu Kan WONG (Singapore University of Social Sciences)** *Professor Francis CHEUNG (Lingnan University)* Building Trust and Mending Relationships Prevention and Response Management for Sexual Harassment Crisis in Organizations (P037) *Miss Erica Wing Kiu YUEN (The Hang Seng University of Hong Kong)** *Miss Icelyn Yiu Bing CHOY (The Hang Seng University of Hong Kong)* *Professor Jeanne Ho Ying FU (The Hang Seng University of Hong Kong)*	A403, 4/F, S H Ho Academic Building
15:30 – 16:00	Break	Foyer, 4/F, S H Ho Academic Building

16:00 – 17:30	Concurrent Session 3	
Session 3A *Session Chair: Dr Martin Chi Keung TSUI*	<u>Corporate Image</u> How Do Consumer Stereotypes Affect Social Enterprises and Profit-making Companies? A Study of Social Enterprises Stereotypes across Five Industries in Hong Kong (P016) *Dr Martin Chi Keung TSUI (Hong Kong Baptist University)** *Dr Connie LI (Hong Kong Baptist University)* *Dr Margaret Siu Miu CHUI (City University of Hong Kong)* Promoting the Sustainable Development Goals: What Has Been Done and What Can Be Done? (P026) *Dr Fanny Fong Yee CHAN (The Hang Seng University of Hong Kong)* *Miss Ruby Ka Yee HUI (The Hang Seng University of Hong Kong)**	Fung Yiu King Hall, 4/F, S H Ho Academic Building
Session 3B *Session Chair: Professor Robin SNELL*	<u>Leadership and Personal Development</u> Does an Exemplary Leader Make Followers Selfless? A Serial Mediation Model of Ethical Leadership, Knowledge Sharing and Knowledge Hiding (P020) *Professor I-Chieh HSU (Graduate Institute of Human Resource Management)* *Miss Ji-Jie LIN (Graduate Institute of Human Resource Management)** Mindfulness as a Conflict Resolution Tool for a Harmonious Workplace (P028) *Dr Liane Wai Ying LEE (The Hang Seng University of Hong Kong)** *Professor Robin SNELL (The Hang Seng University of Hong Kong)* *Dr Lawrence Hong Weng LEI (The Hang Seng University of Hong Kong)* *Dr Crystal Xinru WU (The Hang Seng University of Hong Kong)*	A403, 4/F, S H Ho Academic Building
17:30 – 18:00	Coach to Courtyard by Marriott Hong Kong, Shatin	

18:30 – 20:30	**Conference Dinner** -Courtyard by Marriott Hong Kong, Shatin-
18:30	Drinks
18:50 *Session Chair: Professor Robin SNELL*	*<u>Keynote speech</u>* **Professor John FRAEDRICH** *Jannetides Professor of Business Ethics, Southern Illinois University, Carbondale, United States*
19:25 *Session Chair: Professor Simon Shun Man HO*	Conference Dinner & Best Paper Awards Presentation (midway through)

15 June 2023, Thursday		
08:30 – 11:00	**Plenary**	
08:30	*Registration*	Foyer, 4/F, S H Ho Academic Building
09:30 – 11:00 *Session Chair:* *Professor Robin SNELL*	*Roundtable on "Encouraging and Regulating Socially Responsible Business"* **Ms Natalie CHAN** Managing Director, PIE Strategy **Mr CHUA Hoi Wai** Chief Executive, Hong Kong Council of Social Services **Ms Virginia WILSON** Chief Executive Officer, Shared Value Initiative Hong Kong	Fung Yiu King Hall, 4/F, S H Ho Academic Building
11:00 – 11:15	Break	Foyer, 4/F, S H Ho Academic Building
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Session 4A *Session Chair:* *Professor Jacky Fok Loi HONG*	HRM & Leadership An Exploratory Study on Institutional Motivations and Challenges in Creating Meaningful Internship Experience (Interim Findings) (P035) *Mr Roy Fai YING (The Hang Seng University of Hong Kong)** Creating Shared Value (CSV) under COVID-19 - Learning from Successful Companies (P018) *Dr Carry Ka Yee MAK (University of Macau)** Responsible Leadership at a Time of Crisis (P025) *Dr Hamid KHURSHID (Hong Kong Metropolitan University)** *Dr Crystal Xinru WU (The Hang Seng University of Hong Kong)* *Professor Robin SNELL (The Hang Seng University of Hong Kong)*	Fung Yiu King Hall, 4/F, S H Ho Academic Building
Session 4B *Session Chair:* *Professor Tiffany Cheng Han LEUNG*	Responsible Accounting Exploring the Extent of Materiality Assessment in Sustainability Reporting (P007) *Miss Cindy Shi-Xiang YOU (City University of Macau)** *Professor Teresa CHU (University of Macau)* *Professor Tiffany Cheng Han LEUNG (City University of Macau)* Regulatory Investigations, Media Coverage, and Audit Opinions (P010) *Dr Morris LIU (University of Macau)** *Ms Xuelian LI (University of Macau)* *Dr Liang DONG (Hunan University of Technology and Business)* *Dr Hung Wan KOT (University of Macau)* Evergrande's Ethical Dilemmas in Debt Crisis (P023) *Dr Hong Kei IM (Macau University of Science and Technology)* *Mr Zhangyang ZIZHUO (Macau University of Science and Technology)**	A403, 4/F, S H Ho Academic Building
12:45 – 14:00	Lunch	The Always, 2/F, M Building, Yuen Campus

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Session 5A *Session Chair: Dr Lisa GOH*	<u>Social Responsibility & Firm Performance</u> Female Leadership and Firm Performance in the Undeveloped Institutional Environment: Evidence from China (P013) *Dr Hongbiao DU* *Professor Xueji LIANG (Xi'an Jiaotong-liverpool University)** The Impact of Sustainability Development Goals on Financial Performance in the Information Communication Technology Industry Using Machine Learning Techniques (P024) *Professor Tian-Shyug LEE (Fu Jen Catholic University)** *Professor Ariana CHANG (Fu Jen Catholic University)* *Miss Hsiu-Mei LEE (Fu Jen Catholic University)* *Professor Ching-Heng SHEN (Ming Chuan University)* Chief Sustainability Officers: International Evidence (P034) *Dr Lisa GOH (The Hang Seng University of Hong Kong)** *Professor Albert TSANG (Southern University of Science and Technology)*	Fung Yiu King Hall, 4/F, S H Ho Academic Building
Session 5B *Session Chair: Professor Robin SNELL*	<u>Leadership & HRM</u> Energizing or Depleting? The Impact of Servant Leadership on Leaders Themselves: A Conservation of Resources Perspective (P017) *Dr Crystal Xinru WU (The Hang Seng University of Hong Kong)* *Dr Eko Yi LIAO (The Hang Seng University of Hong Kong)* *Professor Robin SNELL (The Hang Seng University of Hong Kong)** Ethical Leadership and Organizational Culture in Start Ups: A Comparative Study of Two Asian Countries (P030) *Dr Suja KARTHIKA (Hong Kong Metropolitan University)** Workplace Happiness: What Is It? Why Is It Important in The Context of Great Upheaval? (P036) *Dr Kenneth Ka Kei KWONG (The Hang Seng University of Hong Kong)** *Dr Thomas Wing Yan MAN (The Hang Seng University of Hong Kong)* *Dr Susanna Lai Man CHUI (The Hang Seng University of Hong Kong)*	A403, 4/F, S H Ho Academic Building
15:30 – 15:45	Break	Foyer, 4/F, S H Ho Academic Building
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Session 6 *Session Chair: Dr Crystal Xinru WU*	<u>Corporate Image</u> A Study of Philanthropic CSR and Brand Love (P022) *Dr Ho Yan KWAN (Hong Kong Baptist University)** *Dr Junfeng ZHANG (Hong Kong Baptist University)* *Professor Noel Yee Man SIU (Hong Kong Baptist University)* <u>The Importance of Language</u> Tone Management Between Languages (P011) *Dr Hung Wan KOT (University of Macau)* *Professor Lewis H.K. TAM (University of Macau)* *Miss Xin XU (University of Macau)** A Study of the Development of English Skills for Japanese Employees (P029) *Ms Yuka NAKAYA (Kobe University)**	Fung Yiu King Hall, 4/F, S H Ho Academic Building

16:45 – 17:00	Closing	
Session 7A:	*Closing Remarks* **Professor Robin SNELL** Visiting Professor of Management, School of Business, the Hang Seng University of Hong Kong **Professor Jacky Hong** Head of Management & Marketing, University of Macau	Fung Yiu King Hall, 4/F, S H Ho Academic Building

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Paper Number:P002

ESG Ratings and Dividend Changes: Evidence from the Initiation of Non-financial Agency Coverage

Albert TSANG
Southern University of Science and Technology
China

Yujie WANG
Central South University
China

Yi XIANG*
The Hong Kong Polytechnic University
Hong Kong

Li YU
Nankai University
China

*The corresponding author

ABSTRACT

This paper examines whether the coverage of non-financial rating (NFR) agencies affects corporate dividend policy. We argue that dividend payout may decrease (increase) if NFR agencies provide information that reduces (increases) shareholder-manager agency (shareholder-stakeholder) conflict. We find that the coverage by an NFR agency is followed by an increase in dividends. This result is more pronounced for firms with more influential shareholders, poorer financial performance, and greater ESG commitment. We corroborate our findings using the acquisitions of NFR agencies and the expansion of NFR agencies' coverage as two main exogenous shocks. Collectively, the finding of this paper lends support to the inference that the ESG ratings made available by NFR rating agencies following their rating coverage increase shareholder-stakeholder conflict to a greater extent than its effect on reducing shareholder-managers agency conflict.

Keywords: Rating Agencies; CSR; Conflicts; Dividend

1. INTRODUCTION

In recent decades, investors' growing awareness of the role of environmental, social, and government (ESG) engagement (alternatively, corporate social responsibility, CSR, engagement) in corporate financial sustainability has significantly increased the demand for firms' non-financial ESG information.[1] The rapid increase in socially responsible investing during past decades has further accelerated this information demand (Social Investment Forum 2014). Studies document that non-financial ESG information has significant capital market implications (Dhaliwal et al. 2011, 2012; Kim et al. 2012; Lys et al. 2015; Christensen et al. 2022; Ryou et al. 2022). However, ESG issues are diverse and complex in nature (Christensen et al. 2021). The large volume of data and diversity of factors that fall under ESG dimensions make gathering information and standardizing it for comparison purposes difficult and costly. Therefore, commercial third-party ESG information/rating providers, i.e., non-financial rating (NFR) agencies, have become an increasingly important information intermediary in capital markets in recent years. According to a 2020 survey by Sustainability, ESG ratings and/or data products from professional third-party rating providers are the ESG information source most frequently referenced by institutional investors (Wong and Petroy 2020).

Additionally, although some ESG strategies have the potential to increase shareholder value, others may be driven by factors such as managers' personal job market considerations, agency costs, executive compensation, managerial traits, and country-level institutional factors (e.g., Krüger 2015; El Ghoul et al. 2017; Cronqvist and Yu 2017; Liang et al. 2018; Davidson et al. 2019;

[1] For instance, research generally suggests a positive association between ESG performance and corporate financial performance (see, for example, Margolis et al. 2009, Radhakrishnan et al. 2018, Tsang et al. 2021) because of the positive role of ESG performance in building a competitive/differentiation strategy (Flammer 2015), generating social capital and trust (Lins et al. 2017), attracting institutional investors (Dyck et al. 2019), reducing the cost of equity and debt capital (Dhaliwal et al. 2011; Tan et al. 2020), and improving the information environment (Dhaliwal et al. 2012; Muslu et al. 2019).

Flammer et al. 2019; Hegde and Mishra 2019; Dunbar et al. 2020; Liao et al. 2021; Dai et al. 2021). As a result, although many firms in countries around the world have started to provide ESG information disclosure voluntarily during the past decades, firms' voluntary ESG information disclosure tends to be associated with high credibility concern, which raises concerns about its reliability for assessing firms' ESG performance by capital market participatns (Ramanna 2013; Cohen and Simnett 2015; Chen et al. 2016; Clarkson et al. 2019). Consequently, research suggests that the ultimate effects of corporate ESG activities on shareholder value is generally difficult to identify (Wang et al. 2016; Hubbard et al. 2017).[2]

The literature on ESG suggests that firms' ESG activities can have important implications for corporate finance, including the cost of capital (El Ghoul et al. 2011), capital structure (Tan et al. 2020), and information asymmetry (Dhaliwal et al. 2011, 2012, 2014). Similarly, the literature suggests that corporate dividend policies are one of the most debated issues in modern corporate finance (La Porta et al. 2000; Denis and Osobov 2008; Caskey and Hanlon 2013). In addition, the endogenous nature of firms' ESG activities and corporate dividend decisions makes examining the role of ESG initiatives in firms' dividend policies difficult. Motivated by the importance of both ESG initiatives and dividend policy in corporate finance, this paper examines how dividend policy is influenced by firms' ESG initiatives. Specifically, given the great interest in dividend policy to investors and academics (La Porta et al. 2000; Denis and Osobov 2008; Caskey and Hanlon 2013), we take the advantage of the exogenous coverage decisions made by NFR agencies and examine the effect of ESG information from NFR agencies on corporate dividend policy.[3]

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[2] Lending support to this view, there is no clear consensus on a positive relationship between firms' ESG performance and firm value although many studies examine this relationship (e.g., McWilliams and Siegel 2000; Orlitzky et al. 2003; Barnett and Salomon 2006).

[3] An important advantage of examining the impact of NFR agency coverage on firms' behavior is that coverage by any NFR agency is largely exogenous (Chatterji and Toffel 2010), which mitigates self-selection concerns. For example, MSCI ESG gradually increases the number of firms it covers on the basis of firms' market capitalization. In contrast, Refinitiv gradually expands its ESG global coverage on the basis of firms' inclusion in several major global

Ex ante, it is unclear whether and how ESG-rating coverage decisions (or the production of a firm's ESG performance rating) by NFR agencies affect a firm's dividend policy. Studies predict increased dividend payments after firms are being covered by an NFR agency because the revelation of firms' commitment to non-shareholder stakeholders might trigger shareholders' concerns about conflicts of interest between them (Friedman 1970; Margolis and Walsh 2003; Petrenko et al. 2016; Hubbard et al. 2017). In response, managers are likely to mitigate such potential shareholder–stakeholder conflict and/or to respond to the increased dividend demand from shareholders by increasing firms' dividend payouts. Conversely, agency theories predict a decrease in dividend payouts to the extent that improved ESG information transparency resulted by the coverage of NFR agencies reduces the shareholder-manager agency conflict and thereby lowers managers' need to signal their commitment to avoid overinvestment via costly dividend payouts (e.g., Miller and Rock 1985; Kormendi and Zarowin 1996; Aggarwal et al. 2012; Kim et al. 2012; Lys et al. 2015). Therefore, these competing arguments suggest that it is important to examine this research question empirically.

We test these predictions by analyzing the changes in corporate dividends issued by U.S. firms from 2000 to 2018 around their staggered first-time coverage by NFR agencies. Using coverage by the four major NFR agencies (Refinitiv ESG, MSCI ESG STATS, IVA, and Sustainalytics) commonly used by practitioners and academic researchers,[4] we find strong evidence to support our prediction that the initial coverage of a firm by an NFR agency has a significant effect on its dividend policy. Specifically, we find that the initiation of NFR agency

capital market indices (e.g., FTSE 250, S&P 500, MSCI World, Russell 1000). See Appendix A for more details about the coverage of firms by each NFR agency.

[4] Refinitiv ESG, previously known as Thomson Reuters ESG (ASSET4); MSCI ESG STATS, previously known as Kinder, Lydenberg, Domini Research & Analytics (KLD). These agencies are the four most prominent NFR agencies, and their ESG scores are widely used (Gibson et al. 2021; Christensen et al. 2022; Serafeim and Yoon 2022).

coverage leads to a significant increase in dividend payments by the covered firms. This increase is also economically significant. For instance, our result suggests that after being covered by an NFR agency, covered firms tend to issue 6.85% more dividends relative to firms not covered by any NFR agency. This supports the prediction that shareholders' greater awareness of covered firms' ESG commitments to non-shareholder stakeholders compels such firms to increase their dividend payments.

To shed light on the channels underlying the link between NFR agency coverage and dividend payouts, we conduct multiple cross-sectional tests. The results of these cross-sectional analyses suggest that the significant increase in covered firms' dividend payouts following the initiation of coverage by an NFR agency is greater for firms with more influential shareholders, poorer financial performance, and a higher level of ESG commitments. Taken together, these findings suggest that ESG ratings by NFR agencies, which presumably reveal to outside shareholders the extent of covered firms' stakeholder engagement, can significantly affect covered firms' dividend policies, especially when covered firms' shareholders have a high degree of influence on managerial decisions and firms with poorer financial performance.

We attribute our main findings to covered firms' increased incentive to balance the potentially heightened shareholder–stakeholder conflict after being covered by an NFR agency (especially for firms with a high level of ESG commitments to their stakeholders) by increasing dividends to shareholders. To further strengthen the link between ESG ratings and corporate dividends, we conduct another test using NFR agency acquisitions during the sample period. Using these acquisitions as exogenous shocks that presumably increase external shareholders' awareness of the covered firms' commitments to stakeholders, we find evidence that the positive effect of NFR agency coverage on dividends is stronger after the NFR agency of a covered firm is acquired by a high-profile investment service provider. To further address the endogeneity concern, we also repeat our tests using a subsample of firms that are covered due to the coverage expansion of NFR agencies (which is likely to be more exogenous to firms' decision-making). We find our results still hold. Overall, these findings again suggest that ESG ratings by NFR agencies convey important insights into potential conflicts between shareholders and stakeholders, supporting the important role of NFR agencies in corporate dividend policies.

To further strengthen our inferences and rule out possible alternative explanations, we conduct an array of additional tests. First, using the dynamic difference-in-differences regression model, we find that the positive effect of NFR agency coverage on dividends is observed only in the years after the initiation of NFR agency coverage. Second, we use an alternative measure of NFR agency coverage (i.e., a variable measuring NFR agency coverage intensity) to better control the level of ESG information made available by multiple NFR agencies. Consistent with our main findings, we find that more intensive coverage by NFR agencies increases firms' incentives to increase their dividends. Third, we find that our results are robust to several alternative measures of corporate dividends including share repurchase. Fourth, given that we focus on ESG information from NFR agencies, to rule out the possibility that shareholders obtain ESG information from other sources, we include several additional control variables capturing ESG information made available from other sources (including firms' voluntary disclosure characteristics and media report) and our inference is unchanged.[5] Additionally, we further control for the presence of other types of financial intermediaries including financial analysts and credit rating agencies, and the S&P indexes. Our inference is again unchanged.

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[5] These include variables measuring whether a firm voluntarily issues an ESG report, whether a firm's voluntary ESG information disclosure is accompanied by external assurance, whether a firm has a corporate sustainability committee, and the intensity of media coverage.

Finally, we find that the results are heterogeneous across the environmental, social, and governance dimensions of ESG ratings. Specifically, the results indicate that although the covered firms with high ratings on the environmental and social dimensions appear to have a stronger incentive to pay more dividends than the firms with low ratings on these two dimensions, firms with high corporate governance ratings tend to pay fewer dividends than those with low corporate governance ratings after they are initially covered by an NFR agency. This finding, however, lends support to the notion that potential shareholder–stakeholder conflict explains our finding.[6]

This study contributes to the literature in several ways. First, it contributes to the literature on the capital market consequences of non-financial ESG information. Numerous studies have documented the various benefits and costs associated with ESG information disclosure, but those studies largely focus on voluntarily disclosed ESG information (e.g., Dhaliwal et al. 2011, 2012; Lys et al. 2015; Christensen 2016; Tan et al. 2020; Ryou et al. 2022; Tsang et al. 2022). Despite the importance of ESG ratings by third-party NFR agencies to capital market participants, both investors and regulators are increasingly scrutinizing these ratings over concerns about their quality, consistency, and comparability (Larcker et al. 2022). In line with this view, recent evidence suggests that ESG ratings by different NFR agencies exhibit a high degree of dispersion (Eccles and Stroehle 2018; Berg et al. 2022; Christensen et al. 2022; Serafeim and Yoon 2022). However, although many studies examine the significance of firms' ESG initiatives and/or ESG information disclosure to various stakeholders' assessments of firms' future financial performance, corporate responsibility, and managerial integrity, to the best of our knowledge, few studies

[6] The finding of a stronger effect of NFR agency coverage on the corporate dividend policies of covered firms with low corporate governance ratings is consistent with previous studies that argue that investors tend to demand more dividends when a firm's corporate governance is weak (e.g., Chen et al. 2022).

examine whether and to what extent ESG information affects firms' dividend policies.[7] We add to the literature by presenting evidence suggesting that external NFR agencies play an important role in affecting real corporate decisions.

Second, this study contributes to the dividend payout literature by identifying an important and novel determinant of dividend policy. Studies show that various factors, such as information asymmetry, governance strength, financial reporting quality, accounting conservatism, asymmetry cost behavior, individual investors' tax profiles, and country-level institutions, are important determinants of firms' dividend policies (e.g., La Porta et al. 2000; Ahmed et al. 2002; Hail et al. 2014; Koo et al. 2017; Li et al. 2017; He et al. 2020; Ellahie and Kaplan 2021). This study extends this body of literature from the financial-determinant focus to non-financial-determinant focus by examining the role of non-financial ESG information in firms' dividend policies. Moreover, a few studies also examine the shift in relative power between shareholders and non-shareholder stakeholders and suggest that this is an important determinant of firms' dividend policies (Wang et al. 2018; Haw et al. 2018; Ni and Zhang 2019). This study thus adds to the literature by presenting evidence suggesting that shareholders' power influences corporate dividend policy, especially when a firm's shareholder–stakeholder conflict is high.

The remainder of this paper is organized as follows. Section 2 develops the hypotheses. Section 3 describes the data, variables, and empirical strategy. Section 4 presents the main empirical results. Section 5 provides the results of additional tests and analyses. Section 6 concludes the paper.

[7] For example, Ni and Zhang (2019) find that firms reduce dividend payouts significantly following the adoption of mandatory ESG disclosure requirements. They attribute this finding to the increased stakeholder power brought about by mandatory ESG disclosure requirements.

2. HYPOTHESES DEVELOPMENT

The literature offers competing views of the role of NFR agency coverage in covered firms' dividend policies. On the one hand, research suggests that the relative power of a firm's principals and agents is an important determinant of dividend policies (La Porta et al. 2000; Hail et al. 2014; Chen et al. 2022). Proponents of ESG argue that greater ESG initiatives can increase shareholder value by building strong connections between stakeholders such as investors, customers, employees, communities, and regulators (Godfrey et al. 2009; Lins et al. 2017; Tsang et al. 2022), whereas opponents of ESG claim that greater ESG investment can represent a conflict of interest between stakeholders and shareholders because it benefits stakeholders at the expense of shareholders (Friedman 1970; Margolis and Walsh 2003; Petrenko et al. 2016; Hubbard et al. 2017).

While a primary objective of the ESG ratings from NFR agencies is to provide ESG information that is valuable and relevant to capital market participants to aid their assessment of the potential risks and opportunities arising from firms' societal and/or environmental exposure, these ratings also provide information to shareholders about firms' commitment to non-shareholders stakeholders (Larcker et al. 2022). Although extensive research suggests that having a good stakeholder relationship can have significant value for shareholders,[8] studies also suggest that non-shareholder stakeholders and shareholders can have incompatible goals and different objective functions (e.g., Hubbard et al. 2017).[9] Thus, to the extent that dividend policy can help

[8] For example, Godfrey et al. (2009) argue that better stakeholder relationships can create goodwill that has insurance value for firms' risk management. Lins et al. (2017) find that better stakeholder relationships built through firms' ESG investments bring value to firms during a financial crisis.

[9] For instance, the concept of ESG-driven inflation has been hotly debated in recent years. That is, when the pressure exerted on corporations to reduce their negative social and environmental impacts increases rapidly, firms are likely to face growing pressure to reduce production, thereby decreasing the supply of their products in the product market, lowering shareholder value, and ultimately hurting economic growth (see "ESG Feeds Inflation, Hurts Economic Growth," https://www.econlib.org/esg-feeds-inflation-hurts-economic-growth/).

alleviate shareholder–stakeholder conflict, we predict that the initiation of NFR agency coverage is associated with increased dividends from covered firms. These discussions lead to our first hypothesis.

H1: The initiation of coverage by NFR agencies increases covered firms' dividend payouts.

On the other hand, agency theories predict a decrease in dividend payouts to the extent that improved ESG information transparency from NFR agencies reduces the shareholder-manager agency conflict and lowers managers' need to signal their commitment to avoid overinvestment via costly dividend payouts (e.g., Miller and Rock 1985; Kormendi and Zarowin 1996; Aggarwal et al. 2012; Kim et al. 2012; Lys et al. 2015). In particular, shareholders-managers agency conflict arise from the concern that ESG may be driven by factors that may potentially reduce shareholder values such as managers' personal job market considerations, executive compensation, managerial traits, and country-level institutional factors (e.g., Krüger 2015; El Ghoul et al. 2017; Cronqvist and Yu 2017; Liang et al. 2018; Davidson et al. 2019; Flammer et al. 2019; Hegde and Mishra 2019; Dunbar et al. 2020; Liao et al. 2021; Dai et al. 2021). Thus, investors may demand more dividend payout to protect their interests. When such conflict reduces due to the coverage of NFR agencies, investors may demand less dividend payout.

Furthermore, the signaling role of dividends under information asymmetry suggests that corporate dividend policies convey credible private information about firms' future earnings and profitability to shareholders (Bhattacharya 1979; John and Williams 1985; Miller and Rock 1985; Kormendi and Zarowin 1996; Aggarwal et al. 2012; Homburg et al. 2018). However, dividend payments are sticky and costly, and the association between dividend payments and earnings tends to weaken over time, thereby reducing managers' incentives to signal their future prospects through dividends, especially when another established and less costly signaling mechanism is available (Brav et al. 2005).

Research also suggests that firms can signal future financial performance by investing in long-term ESG activities. Lending support to the signaling role of ESG, Lys et al. (2015) find that committing to a higher level of ESG disclosure signals better future financial prospects for a firm. Given the potential signaling role of both dividend policy and ESG initiatives, we argue that following the initiation of coverage by NFR agencies, which improves covered firms' information transparency for the ESG dimensions (especially for firms with good ESG performance ratings), managers are likely to have fewer incentives to signal firms' long-term orientation and future prospects through dividends.[10]

Additionally, an alternative substitute view of dividends holds that a firm's dividend payments increase when its corporate governance and/or monitoring is weak (Chen et al. 2022). This view relies crucially on firms' need to seek external equity capital (Ellahie and Kaplan 2021) and suggests that dividends play a positive role in reducing shareholders' concerns about wealth expropriation by corporate insiders (La Porta et al. 2000). However, extensive research suggests that relative to their peers, firms that provide more non-financial ESG information to investors and/or engage in ESG initiatives have lower capital costs, less information asymmetry, and more institutional investors, thereby allowing them to raise more equity capital (Dhaliwal et al. 2011, 2012, 2014; Tan et al. 2020; Tsang et al. 2021, 2022). Thus, to the extent that the ESG information provided by NFR agencies improves the ESG- or sustainability-related information transparency of covered firms and thereby facilitates their access to external capital, the substitute view predicts

[10] Additionally, to the extent that both ESG performance (Kim et al. 2012) and dividends (e.g., Sivakumar and Waymire 1993; Skinner and Soltes 2011; Caskey and Hanlon 2013) signal earnings quality, we make a similar prediction for the relationship between NFR agency coverage and corporate dividends.

a negative association between a firm's initial coverage by an NFR agency and its dividend payouts. These discussions lead to our second hypothesis, stated as follows.

H2: The initiation of coverage by NFR agencies reduces covered firms' dividend payouts.

3. VARIABLE DEFINITIONS AND RESEARCH DESIGN

3.1 Sample

To construct our sample, we start with all U.S. firms listed in Compustat, which provides corporate dividend information. Next, we identify whether these firms are covered by any of the four NFR agencies examined in our study: Refinitiv ESG, MSCI ESG Stats, IVA, and Sustainalytics. The ESG ratings from these NFR agencies are frequently used in studies (Gibson et al. 2021; Serafeim and Yoon 2022) and by investors (Wong and Petroy 2020; Christensen et al. 2022). The staggered coverage by these NFR agencies gives us an important advantage in mitigating endogeneity concerns in our examination of the effect of ESG ratings from NFR agencies on corporate dividend policies because NFR agency coverage decisions are largely exogenous and vary between NFR agencies (Chatterji and Toffel 2010). In Appendix A, we provide detailed coverage criteria for each of these four major NFR agencies. The data for the variables measuring firm-level characteristics are from Compustat. The stock price data are from the Center for Research in Security Prices (CRSP), and the institutional ownership data are from Factset Ownership. Due to the limitations of these datasets at the time of investigation, our sample period is from 2000 to 2018.

To mitigate the concern that our results are driven by unknown differences between covered (i.e., treatment) and uncovered (i.e., control) firms, we use the propensity score matching method. Specifically, the treatment and control firms are one-to-one matched using the closest propensity scores for coverage by at least one NFR agency. For the control firms, their pseudo first year of NFR agency coverage is set to that of their matched treatment firm. Ultimately, our final sample consists of 74,370 firm-year observations, including 30,470 observations of the treatment firms and 43,900 observations of the control firms.

Table 1 tabulates the sample distribution and dividend payout by industry (based on the Fama–French 12-industry classification) in Panel A and by year in Panel B. In Panel A, we find that most (the least) of our observations are from the finance (consumer non-durables) industry. We also find that the utilities (wholesale) industry has the largest (smallest) average dividend payout. Panel B shows a generally constant distribution of observations and gradually increasing dividend payments over the sample period, which is consistent with the literature (Leary and Michaely 2011; Andres and Hofbaur 2017).

[Insert Table 1 about here]

3.2 Research Design

We predict that dividend payments are affected by the initiation of ESG-rating coverage by NFR agencies. To test this prediction, we develop the following staggered difference-in-differences (DID) model:

$$DIV1_{i,t} \; or \; DIV2_{i,t} = \beta_0 + \beta_1 POST\_COVER_{i,t-1} + Controls + Year\,FE + Firm\,FE + \varepsilon \tag{1}$$

where the dependent variable captures the extent of dividend payouts. *DIV1* is the ratio of cash dividends declared on common/ordinary shares to total sales in year *t*, multiplied by 10 for ease of interpretation. Similarly, *DIV2* is the ratio of cash dividends declared on common/ordinary shares to total assets in year *t*, multiplied by 10. Our variable of interest, *POST_COVER* is an indicator variable that equals 1 starting with the year in which the treatment firms are covered by an NFR agency, and 0 otherwise. A positive (negative) coefficient on *POST_COVER* indicates that relative to noncovered firms, covered firms are more likely to increase (decrease) their dividend payouts after being covered by an NFR agency.

Next, we control for various firm-level characteristics that are likely to be related to dividend payments (Denis and Osobov 2008; Bae et al. 2021; Chen et al. 2022). These controls include firm size (*FIRMSIZE*); accounting-based firm performance (return on assets, *ROA*); accounting conservatism (*BM*); business activities (*LEV*); cash holding (*CASH_HOLD*); institutional ownership (*INSTI_OWNER*); market-based firm performance (*PRE_RETURN*); market-based firm risk (stock return volatility, *RET_VOL*; share turnover, *SHARE_TURNOVER*), and agency costs (*AC_FCF*, *AC_ER*, and *AC_ATO*). Finally, we include firm and year fixed effects to control for possible variations across firms and years, respectively. All of the continuous variables are winsorized at the 1st and 99th percentiles. The variable definitions are provided in Appendix B.

4. EMPIRICAL RESULTS

4.1 Descriptive Statistics

Table 2 provides the descriptive statistics of our key variables. Our sample consists of 74,370 firm-year observations from 2000 to 2018. The mean value of *POST_COVER* is 0.358, suggesting that approximately 35.8% of our observations are covered by at least one NFR agency. The average of *DIV1* and *DIV2* is 0.336 and 0.104, respectively. This indicates that, on average, the ratio of cash dividends declared on common/ordinary shares to total sales and total assets is 3.36% and 1.04%, respectively, which is consistent with prior studies (Chen et al. 2022). Furthermore, the distributions of the control variables are also generally consistent with those in the literature (e.g., Caskey and Hanlon 2013; Heese et al. 2022).

[Insert Table 2 about here]

4.2 Hypothesis Testing

Table 3 reports the results of estimating equation (1) using two specifications: one with the control variables and another without the control variables. In both specifications, the coefficient on *POST_COVER* is consistently significant and positive for both proxies of dividends (*DIV1* and *DIV2*). These results indicate that firms tend to pay higher dividends after they are covered by an NFR agency. This result supports H1 that following the initiation of NFR agency coverage, covered firms tend to have an incentive to pay more dividends. This finding is consistent with our argument that the revelation of covered firms' commitment to non-shareholder stakeholders after they are covered by an NFR agency is likely to trigger shareholders' concerns about conflicts of interest between shareholders and other stakeholders, thereby motivating covered firms to increase dividend payments to balance such conflict. The observed effect is also economically significant. For example, the results in Column (2) indicate that covered firms tend to pay 6.85% (of the sample average) more dividends after being covered for the first time by an NFR agency. In terms of the control variables, most of the coefficients have the expected signs. For example, dividend payment is positively associated with *FIRMSIZE*, *ROA*, and *CASH_HOLD* (Rozeff 1982; Bodnaruk and Östberg 2013; Koo et al. 2017).

[Insert Table 3 about Here]

4.3 Dynamic Difference-in-Differences Tests

The parallel trends assumption is an important assumption underlying the validity of a DID test. To test whether the covered and noncovered firms have a similar dividend-payment trend before NFR agency coverage starts for the covered firms, we follow Bertrand and Mullainathan (2003) and perform a dynamic DID analysis. In particular, we interact *NFR_COVER* (an indicator variable that captures whether a firm is covered by an NFR agency during the sample period) with a set of indicator variables for different periods around the initial NFR agency coverage (i.e., *YEAR0*). This set of indicator variables includes *PRIOR_YEAR2*, *PRIOR_YEAR1*, *YEAR0*, *POST_YEAR1*, and *POST_YEAR2+*, which represent two years before the year in which a firm is initially covered by an NFR agency to at least two years after the initial coverage.

Using the same control variables and fixed effects as in our main analysis, the results in Table 4 show that the coefficients on the interaction variables for the pre-coverage years (*NFR_COVER* × *PRIOR_YEAR2*, *PRIOR_YEAR1*, and *YEAR0*, respectively) are statistically insignificant. In contrast, significant coefficients with signs that are consistent with our main finding are observed on the interaction variables for the post-coverage years (*NFR_COVER* × *POST_YEAR1* and *NFR_COVER* × *POST_YEAR2+*), thereby lending support to our finding of a positive effect of the initial coverage of NFR agencies on dividends, which also supports the parallel trends assumption. Collectively, these results suggest that the findings from our DID test are unlikely to be due to a preexisting trend.

[Insert Table 4 about here]

4.4 Cross-Sectional Tests

To shed light on the potential channels through which NFR agency coverage increases covered firms' dividend payments, we conduct several cross-sectional tests. Motivated by the agency theory that dividend payments are the outcome of effective shareholder protections (Bae et al. 2021) that mitigate the divergence between the owners (shareholders) and the controllers (managers) interests (Jensen 1986), we predict the effect to be stronger for firms with greater shareholder power. Thus, to the extent that coverage by NFR agencies reveals firms' commitment to non-shareholder stakeholders, firms with more influential shareholders are likely to pay more dividends to mitigate concerns that managers may exploit shareholders' interests to satisfy other stakeholders.

To test this possibility, we use two proxies of shareholders' power: the percentage of independent directors on the board (*SHAREHOLDER_POW1*) and the negative value of the total number of directors on the board (*SHAREHOLDER_POW2*). The first proxy is based on the notion that independent directors play an important role in protecting shareholders' interests (Shleifer and Wolfenzon 2002). The second proxy is based on the argument that a larger board size may not effectively protect shareholders' interests because of problems such as social loafing and higher coordination costs (Eisenberg et al. 1998; Khanna et al. 2015). Table 5 presents the results of the cross-sectional tests based on shareholder power. According to the results in Columns (1) to (4) of Table 5, we find that the coefficients on *POST_COVER* × *SHAREHOLDER_POW1* and *POST_COVER* × *SHAREHOLDER_POW2* are both positive and significant. This finding is consistent with our conjecture that influential shareholders are likely to pressure covered firms to pay more dividends when those firms exhibit a strong commitment to satisfying other stakeholders' demands.

[Insert Table 5 about here]

Table 6 further presents the results of the cross-sectional tests based on the covered firms' financial performance. We predict our result to be more pronounced for covered firms with poorer financial performance. This prediction is motivated by the argument that management power is relatively weak in firms with poor financial performance because they fail to satisfy shareholders' interests and as a result, they have stronger incentives to satisfy shareholders' interests for job security reasons (Hubbard et al. 2017). Furthermore, the negative perceptions of managers caused by poor financial performance may arouse shareholders to protect their interests (Young et al.

2008). Thus, to the extent that coverage by NFR agencies reveals a conflict of interest between shareholders and non-shareholder stakeholders and motivates managers to balance this conflict by paying more dividends, we conjecture that covered firms with poor financial performance are likely to pay more dividends after they are initially covered by NFR agencies. To test this conjecture, we follow Hubbard et al. (2017) and use a firm's industry-year adjusted annual stock return (*FIN_PERFORMANCE1*) and industry-year adjusted ROA (*FIN_PERFORMANCE2*) to calculate its financial performance. Consistent with our prediction, in Columns (1) to (4) of Table 6, the coefficients on the interaction terms with the two measures of financial performance are significantly negative, suggesting that firms with poorer financial performance increase their dividends payouts more after the initial coverage by NFR agencies.

[Insert Table 6 about here]

4.5 Additional Analysis

4.5.1 Initial High ESG Ratings vs Initial Low ESG Ratings

Thus far, our analysis is based on the initiation of coverage by an NFR agency, without considering the level of ESG ratings of the covered firms. In this section, we consider the level of ESG ratings of the covered firms in the effect of NFR agency coverage on covered firms' dividend policies. For covered firms with high initial ESG ratings, shareholders may be more concerned that managers are investing in ESG to serve their self-interests (e.g., Yuan et al. 2019) and/or to satisfy stakeholders' interests at the expense of shareholders' interests (e.g., Petrenko et al. 2016; Hubbard et al. 2017). Consequently, shareholders may demand more dividends to protect their interests (Renneboog and Szilagyi 2020). However, for firms with low initial ESG ratings, shareholders may also be concerned about the firms' financial sustainability and long-term growth (Christensen et al. 2021) or that the firms are increasing their ESG investment by allocating financial resources away from shareholders (Chatterji and Toffel 2010; Slager and Chapple 2016; Clementino and Perkins 2021). Both concerns may lead to greater shareholder demand for dividends to protect their interests.

To examine this possibility, we regress dividend-payment proxies on the firms with high (*NFR_INITIAION_HIESG*) and low (*NFR_INITIAION_LOESG*) initial ESG ratings. The coefficients in Panel A of Table 7 are significant and positive. More importantly, the coefficient on *NFR_INITIAION_HIESG* is significantly larger than that on *NFR_INITIAION_LOESG*, suggesting that shareholders tend to exert stronger dividend demands on covered firms with high levels of ESG commitment than they exert on covered firms with low levels of ESG commitment.

In addition to examining the covered firms' overall ESG ratings, we separately examine whether and to what extent the effect of NFR agency coverage on covered firms' dividend payments varies across the dimensions of ESG. Firms' commitments on the environmental and social dimensions are likely to reflect their efforts and investments to meet stakeholders' interests, but a better governance rating serves shareholders' interests. Following this argument, we predict our results to be stronger for covered firms with high initial environmental or social ratings (*NFR_INITIATION_HI_E* and *NFR_INITIATION_HI_S*) than for covered firms with low initial ratings on these dimensions (*NFR_INITIATION_LO_E* and *NFR_INITIATION_LO_S*). In contrast, we predict the result to be weaker for covered firms with high initial governance ratings (*NFR_INITIATION_HI_G*) than for covered firms with low initial governance ratings (*NFR_INITIATION_LO_G*). The results presented in Panel B of Table 7 support these predictions.

[Insert Table 7 about here]

4.5.2 NFR Agency Coverage Intensity

Our main analysis is based on whether a firm is covered by an NFR agency. As a firm can be covered by multiple NFR agencies and more intense coverage by NFR agencies is likely to increase the effect of ESG ratings on the capital market, we further examine the intensity of NFR agency coverage (i.e., the number of NFR agencies covering a firm). As shown in Table 8, the coefficients on *NFR_INTENSITY* from both models are positive and significant, lending support to the inference that NFR agencies, through their ESG ratings, influence firms' dividend policies.

[Insert Table 8 about here]

4.5.3 Endogeneity Tests

We apply two types of exogenous shocks to address the endogeneity concern. First, during the sample period, several mergers or acquisitions of NFR agencies by high-profile investment service providers occurred, attracting great media attention.[11] These acquisitions (all in 2009) include 1) the acquisition of ASSET4 by Thomson Reuters; 2) the acquisition of KLD by RiskMetrics, and 3) the acquisition of IVA by RiskMetrics.[12] These acquisitions are likely to create an exogenous shock that increases the visibility of ESG ratings, increasing external shareholders' awareness of firms' ESG activities and therefore revealing the potential conflict of interest between shareholders and stakeholders. Therefore, we predict that the effect of NFR agency coverage on covered firms' dividend payments is stronger after such acquisitions. To test this prediction, in Panel A of Table 9, we interact *POST_COVER* and *NFR_INTENSITY* with *POST_ACQ* (an

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[11] For example, "Thomson Reuters Acquires ASSET4 AG Business" on Nov 30, 2009 (https://www.globalcustodian.com/thomson-reuters-acquires-asset4-ag-business/), "RiskMetrics primed to buy KLD" on October 12, 2009 (https://www.responsible-investor.com/riskmetrics-primed-to-buy-kld/), and "RiskMetrics Group Announces Acquisition of KLD Research & Analytics, Inc." on Nov 3, 2009 (https://insurancenewsnet.com/oarticle/RiskMetrics-Group-Announces-Acquisition-of-KLD-Research-Analytics-Inc-a-142188) (accessed June 30, 2022).

[12] RiskMetrics was later acquired by MSCI in 2010. In our test, we focus on the first acquisition. Our results remain robust if we use the year of second acquisition (untabulated).

indicator variable that equals 1 for observations after 2009, and 0 otherwise). As shown in Panel A, the coefficients are all positive and significant, supporting our prediction and indicating the robustness of our findings.

Second, to address the potential concern that the NFR agency coverage is not fully exogenous, we repeat our main tests using a subsample of firms that are covered by the NFR agencies due to the coverage expansion (for example ASSET4 expands the firm coverage in 2008, 2009, 2011, 2013, and 2016). We require firms to be not covered by any one of the NFR agencies before the expansion. We find that the coefficients on *POST_COVER* are 0.038 and 0.016 reported in Columns (2) and (4) in Panel B, respectively. These results support that the initial coverage of the NFR agencies has a significant and positively effect on the dividend payment.

[Insert Table 9 about here]

4.5.4 Alternative Measures of Dividend Policy

To further ensure the robustness of our findings, we use several alternative measures of dividend policy, and we report the results in Table 10. Following prior studies (e.g., Brockman and Unlu 2009; Bae et al. 2021), we use the ratio of dividends to cash flow (*DIV3*), the ratio of dividends to earnings (*DIV4*), and the ratio of dividends to share repurchases to total sales (*DIV5*) to retest our results. In Panel A, the coefficients on *POST_COVER* and *NFR_INTENSITY* remain positive and statistically significant across the alternative dividend measures, which is consistent with our main findings.

Another alternative measure of dividend policy is share repurchase. Managers may choose both dividend payouts and share repurchase in their dividend policy (Blouin et al. 2011). For example, compared to dividends, some investors prefer share repurchase to take advantage of lower tax (Moser and Puckett 2009). In Panel B, we use the share repurchase to do our main test.

Consistent with our main results, the coefficients on *POST_COVER* are both positive and significant, with or without the control variables.

[Insert Table 10 about here]

4.5.5 Additional Control Variables

Last, one key argument of this study is that NFR agencies provide ESG information to shareholders that triggers their concerns about the conflict of interest between shareholders and non-shareholder stakeholders. To rule out the possibility that shareholders can obtain firms' ESG information from sources other than the NFR agencies covering their firms, we control for several other variables indicating (1) whether a covered firm has an ESG committee (*ESG_COMMITTEE*), (2) whether a covered firm's voluntary ESG information disclosure is accompanied by external assurance (*ASSURANCED*), (3) whether a covered firm issues stand-alone ESG reports (*STAND_ALONE*), (4) the intensity of media coverage (*MED_COV*). Studies suggest that investors can obtain firms' ESG information from these sources (Thorne et al. 2014; Cohen and Simnett 2015; Adhikari 2016; Chen et al. 2016; Byun and Oh 2018). We further control for the presence of other financial intermediaries including (5) the number of the following analysts (*ANA_COV*) and (6) the number of credit raters (*CREDITOR_COV*), and auditors (7) Big 4 audit firms (*BIGN*). Last, we control for the S&P indexes to control for the unobserved features in different S&P indexes. We collect these data from ASSET4, RavenPack, I/B/E/S/, Compustat, and Audit Analytics (Liao et al. 2021; Fiechter et al. 2022; Peyravan and Wittenberg-Moerman 2022). The results are reported in Table 11. Consistent with our main result, the coefficients on *POST_COVER* remain positive and statistically significant even after we control for these additional variables.

[Insert Table 11 about here]

5. CONCLUSION

ESG ratings by NFR agencies are increasingly important, as they reveal the extent to which covered firms address the interests of various corporate stakeholders. However, as ESG activities are diverse and complex, it remains unclear whether firms' ESG engagement benefits or harms shareholders' interests, and thus it may increase shareholders' concerns regarding resource allocation between shareholders and non-shareholder stakeholders.

By analyzing the changes in the corporate dividend policies of U.S. firms from 2000 to 2018 around the staggered first-time coverage of those firms by any of the four major NFR agencies (Refinitiv ESG, MSCI ESG STATS, IVA, and Sustainalytics), we find that the initiation of NFR agency coverage leads to a significant increase in dividend payments by the covered firms. This effect is stronger for covered firms with more influential shareholders, low financial performance, or high ESG engagement. These results support our conjecture that shareholders' increased knowledge of firms' ESG engagement with stakeholders compels firms to increase their dividend payments. Collectively, our findings suggest that the ESG ratings by NFR rating agencies play an important role in covered firms' corporate dividend policies.

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Appendix A: Firm Coverage Criteria of NFR Agencies

Coverage Description:	Coverage Universes:	Information Source:
ASSET4 (now Refinitiv ESG)		
"Our coverage has evolved over time and is continuously expanding as we include more indices. Semi annually, we review the constituents of these indices and add any newly included companies to our coverage. ……. The illustration below shows a timeline of the **index inclusion** in the Thomson Reuters ESG universe."	2003: SMI; DAX; CAC 40; FTSE 100; FTSE 250; S&P 500; NASDAQ 100 2008: DJ STOXX; MSCI World 2009: S&P/TSX; OMPOSITE 2011: Russell 1000; MSCI Emerging; Markets 2012: Bovespa 2013: S&P ASX 300 2016: S&P NZX 50	https://www.esade.edu/itemsweb/biblioteca/bbdd/inbbdd/archivos/Thomson_Reuters_ESGScores.pdf (on Page 5)
KLD (now MSCI ESG STATS)		
"For each year beginning with 1991, KLD STATS provides a table of data with a collection of approximately 650 companies that comprise the FTSE KLD 400 Social Index and S&P 500® with one record for each company. Beginning in 2001, KLD expanded its coverage universe to include the largest 1000 US companies by market capitalization. In 2003, KLD expanded that coverage to the largest 3000 US companies by market capitalization."	1991-2000: S&P 500® Index; Domini 400 Social SM Index (Approximate Total Number of Companies Covered: 650) 2001: S&P 500® Index; Domini 400 Social SM Index; 1000 Largest US Companies (Approximate Total Number of Companies Covered: 1100) 2002: S&P 500® Index; Domini 400 Social SM Index; 1000 Largest US Companies; Large Cap SocialSM Index (Approximate Total Number of Companies Covered: 1100) 2003-Present: S&P 500® Index; Domini 400 Social SM Index; 1000 Largest US Companies; Large Cap Social^{SM} Index; 2000 Small Cap US Companies; Broad Market Social^{SM} Index (Approximate Total Number of Companies Covered: 3100)	http://www.pornsit-jiraporn.com/Getting_Started_With_KLD_STATS.pdf (on Page 3)

Intangible Value Assessment (IVA) (now MSCI)		
"MSCI ESG IVA rates and analyzes over 5,500 companies, covering the MSCI World, Emerging Markets, US, Canada, UK, Australia, and South Africa Indexes, in addition to 95% by market value of the Barclays Global Aggregate – Corporate Index. Additional bespoke coverage is available through MSCI ESG Research's Custom Research team."	The IVA coverage universe currently comprises the following: Top 1,500 companies of the MSCI World Index (expanding to the full MSCI World Index over the course of 2011) Top 25 companies of the MSCI Emerging Markets Index Top 275 companies by market cap of the FTSE 100 and the FTSE 250 excluding investment trusts ASX 200	https://www.msci.com/documents/10199/25a39052-0b0e-4a10-bef8-e78dbc854168
SustainAnalytics (now Morningstar)		
"We analyze and rate a universe of approximately 8,000 issuers belonging to 33 widely used global and regional equity and fixed-income indices. In addition to the full ESG Ratings universe, we conduct controversy research and provide Controversy Ratings on approximately 10,000 issuers. Among the indices we cover are S&P500, FTSE, DAX, TSX, MSCI World, Russell 3000 and Iboxx (fixed-income index)."	AEX; AMX; ASX 200; ATX 20; CAC 40; DAX 30; EURO STOXX 50; FTSE 100; FTSE 350; IBEX 35; MSCI ACWI; MSCI World; Russell 1000; S&P 500; Russell 3000 etc.	Sustainanalytics ESG Ratings Research Methodology This document is obtained from Sheila Oviedo, Associate Director and Product Manager for ESG Ratings, Sustainanalytics.

Appendix B: Variable Measurement

Key Variables of Interest	Definitions
DIV1	The ratio of cash dividends declared on common/ordinary shares to total sales in year *t*, multiple by 10 for the ease of coefficient interpretation.
DIV2	The ratio of cash dividends declared on common/ordinary shares to total assets in year *t*, multiple by 10 for the ease of coefficient interpretation.
POST_COVER	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency, and zero otherwise.
Control Variables	
FIRMSIZE	The natural logarithm of total assets in year *t*-1.
ROA	The income before extraordinary items divided by total assets (in million) in year *t*-1.
BM	The book to market ratio in year *t*-1.
RE	The ratio of retained earnings to total assets in year *t*-1.
LEV	The year-end ratio of the sum of current liabilities and long-term debt to total assets in year *t*-1.
CASH_HOLD	The ratio of cash or cash equivalent to total assets in year *t*-1.
INSTI_OWNER	The percentage of institutional ownership in year *t*-1.
PRE_RETURN	The cumulative daily stock returns in year *t*-1.
RETURN_VOLATILITY	The daily returns standard deviation in year *t*-1.
SHARE_TURNOVER	the probability that a share was traded within a given period, calculated as: 1- $\prod_t (1 - Shares\ Traded_t / total\ shares_t)$, accumulated over the one-year period in year *t*-1.
AC_FCF	The product of free cash flow and an indicator for growth that equals one when Tobin's Q is less than 1 and zero otherwise. Free cash flow is calculated as the sum of income before extraordinary items plus depreciation and amortization, less cash dividends, and less capital expenditures. Tobin's Q is calculated as the market value of equity plus the book value of debt, divided by total assets. A higher value indicates higher agency costs associated with free cash flow.
AC_ER	The ratio of operating expenses to annual sales. A higher value indicates higher agency costs, as greater expenses relative to sales is likely to include managers' consumption of perquisites (Ang et al., 2000).
AC_ATO	The ratio of annual sales to total assets, multiplied by -1. A higher value indicates higher agency costs.
Other Variables	
NFR_COVER	An indicator variable equal to one if a firm is covered by an NFR agency during our sample period, and zero otherwise.
NFR_INITIAION_HIESG	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with higher than industry-average initial overall ESG ratings, and zero otherwise.
NFR_INITIAION_LOESG	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with lower than industry-average initial overall ESG ratings, and zero otherwise.
NFR_INITIATION_HI_E	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with higher than industry-average initial environmental ESG ratings, and zero otherwise.

NFR_INITIATION_LO_E	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with lower than industry-average initial environmental ESG ratings, and zero otherwise.
NFR_INITIATION_HI_S	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with higher than industry-average initial social ESG ratings, and zero otherwise.
NFR_INITIATION_LO_S	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with lower than industry-average initial social ESG ratings, and zero otherwise.
NFR_INITIATION_HI_G	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with higher than industry-average initial governance ESG ratings, and zero otherwise.
NFR_INITIATION_LO_G	An indicator variable equal to one starting the year in which the treatment firms started to be covered by an NFR agency with lower than industry-average initial governance ESG ratings, and zero otherwise.
SHAREHOLDER_POW1	Proxied by the board independence, measured by the percentage of independent directors on the board in year *t*-1.
SHAREHOLDER_POW2	Proxied by the reverse of board size, measured by the negative values of the total number of directors on the board in year *t*-1.
FIN_PERFORMANCE1	The industry-year adjusted *PRE_RETURN.*
FIN_PERFORMANCE2	The industry-year adjusted *ROA.*
NFR_INTENSITY	The number of times in a quarter a firm is covered by each of the following NFR agencies: KLD (now MSCI ESG Stats), ASSET4 (now Refinitiv ESG), MSCI IVA, and Sustainalytics.
POST_ACQ	The indicator variable equal to one if the observation is after 2009, and zero otherwise.
DIV3	The ratio of dividends to cash flow.
DIV4	The ratio of dividends to earnings.
DIV5	The ratio of dividends plus share repurchases to total sales. The repurchase amount equals the purchase of common and preferred stock minus any decrease in the value of preferred stock outstanding. If missing, it is set to zero.
SHARE_REPURCHASE	Ratio of cash paid to repurchase common shares less changes in preferred stock to the market capitalization in year *t.* If this ratio is missing or less than 0.5%, this variable is set to 0, following Banyi, Dyl, and Kahle (2008).
ESG_COMMITTEE	An indicator variable equal to one if a firm has a ESG/CSR/Sustainability committee in year *t*-1, and zero otherwise.
ASSURANCED	An indicator variable equal to one if a firm's ESG/CSR reports are assured by external auditors in year *t*-1, and zero otherwise.
STAND_ALONE	An indicator variable equal to one if a firm's ESG/CSR reports are separate from annual reports in year *t*-1, and zero otherwise.
MED_COV	The natural logarithm of number of media reports from RavenPack plus one in year *t*-1.

Figure 1: Changes in dividend payout before and after the NFR agency coverage

This figure plots the annual average *DIV1* from five years before the NFR agency coverage (*t*-5) to five years after the coverage (*t*+5) for firms with higher-than-average initial ESG ratings (High Initial ESG Ratings) and firms with lower-than-average initial ESG ratings (Low Initial ESG Ratings).

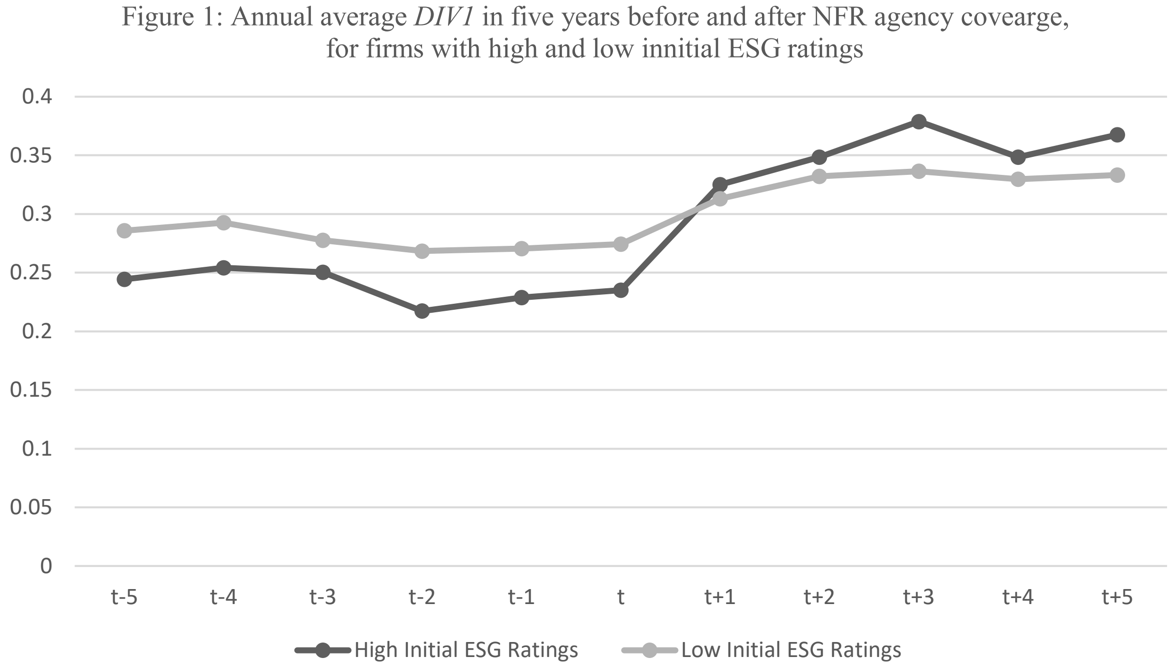

Table 1: Sample Distribution

This table reports the sample distribution by industry (Panel A) and by year (Panel B).

Panel A: Sample distribution by industry

Fama & French 12 industries classification	**Obs**	**%**	***DIV1***	***DIV2***
1. Consumer Non-Durables	2,827	3.80	0.173	0.159
2. Consumer Durables	1,359	1.83	0.115	0.135
3. Manufacturing	6,047	8.13	0.103	0.104
4. Energy	3,247	4.37	0.124	0.060
5. Chemicals and Allied Products	1,352	1.82	0.152	0.128
6. Business Equipment	14,279	19.2	0.113	0.082
7. Telephone and Television Transmission	1,971	2.65	0.320	0.137
8. Utilities	1,571	2.11	0.512	0.183
9. Wholesale, Retail, and Some Services	6,100	8.20	0.060	0.092
10. Healthcare, Medical, and Drugs	9,222	12.4	0.114	0.077
11. Finance	17,273	23.23	0.990	0.132
12. Other	9,122	12.27	0.170	0.091
Sum/Avg	**74,370**	**100**	**0.336**	**0.104**

Panel B: Sample distribution by year

Year	**Obs**	**%**	***DIV1***	***DIV2***
2000	3,339	4.49	0.230	0.077
2001	3,421	4.60	0.221	0.071
2002	3,684	4.95	0.240	0.068
2003	3,924	5.28	0.257	0.073
2004	4,786	6.44	0.326	0.092
2005	4,886	6.57	0.317	0.096
2006	4,787	6.44	0.327	0.102
2007	4,580	6.16	0.324	0.105
2008	4,409	5.93	0.315	0.103
2009	4,277	5.75	0.262	0.090
2010	4,071	5.47	0.301	0.112
2011	3,942	5.30	0.305	0.101
2012	3,754	5.05	0.394	0.148
2013	3,582	4.82	0.382	0.126
2014	3,585	4.82	0.401	0.124
2015	3,482	4.68	0.430	0.130
2016	3,370	4.53	0.449	0.128
2017	3,283	4.41	0.487	0.123
2018	3,208	4.31	0.495	0.123
Sum/Avg	**74,370**	**100**	**0.336**	**0.104**

Table 2: Descriptive Statistics

This table reports the sample size, mean, percentiles, and standard deviations of our sample variables. All continuous variables are winsorized at the 1st and 99th percentiles. We detail the variable definitions in Appendix B.

	Obs.	Mean	Std. Dev.	Q1	Median	Q3
Variables of Interest						
DIV1	74,370	0.336	0.854	0.001	0.001	0.267
DIV2	74,370	0.104	0.239	0.001	0.001	0.101
POST_COVER	74,370	0.358	0.480	0.001	0.001	1.000
NFR_INTENSITY	74,370	0.653	0.947	0.001	0.001	1.000
NFR_DISPERSION	74,370	0.098	0.281	0.001	0.001	0.001
Control Variables						
FIRMSIZE	74,370	6.327	2.102	4.742	6.301	7.727
ROA	74,370	-0.014	0.185	-0.008	0.021	0.062
BM	74,370	0.646	0.562	0.314	0.542	0.858
RE	74,370	-0.307	1.638	-0.121	0.071	0.308
LEV	74,370	0.551	0.278	0.335	0.535	0.763
CASH_HOLD	74,370	0.176	0.211	0.028	0.086	0.245
INSTI_OWNER	74,370	0.431	0.346	0.070	0.407	0.752
PRE_RETURN	74,370	-0.029	0.418	-0.285	-0.073	0.149
RETURN_VOLATILITY	74,370	0.032	0.020	0.019	0.027	0.040
SHARE_TURNOVER	74,370	0.584	0.274	0.390	0.617	0.798
AC_FCF	74,370	66.141	457.486	-6.111	2.826	33.441
AC_ER	74,370	1.099	1.700	0.734	0.870	0.949
AC_ATO	74,370	-0.859	0.776	-1.243	-0.692	-0.228

Table 3: Main Results for H1

This table presents the results from a staggered difference in difference tests based on the PSM sample including 30,470 firm-year observations for firms with at least one NFR agency coverage (i.e., treatment firms) and 43,900 firm-year observations for firms with no NFR agency coverage (i.e., control firms) in our sample period. Treatment firms and control firms are one-to-one matched by the closest propensity scores of being covered by at least one NFR agency. *POST_COVER* is an indicator equal to 1 starting the year in which the treatment firms started to be covered by an NFR agency, and 0 otherwise. See Appendix B for variable definitions. Robust standard errors are clustered at the firm and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

	(1)	(2)	(3)	(4)
Dep Var =	***DIV1***		***DIV2***	
POST_COVER	**0.022*****	**0.023*****	**0.009*****	**0.012*****
	(0.007)	**(0.007)**	**(0.003)**	**(0.003)**
FIRMSIZE		0.024*		0.006**
		(0.012)		(0.003)
ROA		0.079**		0.051***
		(0.033)		(0.011)
BM		-0.095***		-0.026***
		(0.012)		(0.004)
RE		-0.012***		-0.001
		(0.003)		(0.002)
LEV		-0.267***		-0.069***
		(0.032)		(0.010)
CASH_HOLD		0.124**		0.129***
		(0.049)		(0.014)
INSTI_OWNER		-0.023*		-0.012*
		(0.013)		(0.006)
PRE_RETURN		0.034***		0.012***
		(0.008)		(0.003)
RETURN_VOLATILITY		-2.068***		-0.731***
		(0.379)		(0.105)
SHARE_TURNOVER		0.020		0.002
		(0.021)		(0.006)
AC_FCF		-0.001**		0.001
		(0.001)		(0.001)
AC_ER		-0.001		0.001
		(0.003)		(0.001)
AC_ATO		-0.038***		-0.017***
		(0.012)		(0.005)
Constant	0.266***	0.434***	0.079***	0.095***
	(0.002)	(0.090)	(0.001)	(0.021)
Observations	74,370	74,370	74,370	74,370
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.760	0.766	0.601	0.612

Table 4: Dynamic Difference-in-Difference Tests

This table shows the result of dynamic DID models. In particular, we follow Bertrand and Mullainathan (2003) and interact *NFR_COVER* (an indicator variable capturing whether a firm is covered by an NFR agency during our sample period) with different time indicator variables that track the effect of the initial NFR agency coverage before and after. These indicator variables are *PRIOR_YEAR2*, *PRIOR_YEAR1*, *YEAR0*, *POST_YEAR1*, and *POST_YEAR2+*, which equals one for the year in which a firm is initially covered by an NFR agency from the prior two years to the post at least two years, and zero otherwise. See Appendix B for other variable definitions. Robust standard errors are clustered at the firm and year levels. The standard errors are reported in parentheses. ***, **, and * indicates p-values of 1%, 5%, and 10%, respectively.

	(1)	(2)
Dep Var =	***DIV1***	***DIV2***
NFR_COVER × *PRIOR_YEAR2*	0.004	0.002
	(0.009)	(0.004)
NFR_COVER × *PRIOR_YEAR1*	-0.002	-0.002
	(0.010)	(0.004)
NFR_COVER × *YEAR0*	0.001	-0.002
	(0.006)	(0.004)
NFR_COVER* × *POST_YEAR1	**0.018****	**0.007****
	(0.007)	**(0.002)**
NFR_COVER* × *POST_YEAR2+	**0.038*****	**0.021*****
	(0.009)	**(0.004)**
FIRMSIZE	0.024*	0.006*
	(0.011)	(0.003)
ROA	0.080**	0.051***
	(0.033)	(0.011)
BM	-0.095***	-0.026***
	(0.012)	(0.003)
RE	-0.012***	-0.001
	(0.003)	(0.002)
LEV	-0.268***	-0.069***
	(0.032)	(0.010)
CASH_HOLD	0.125**	0.130***
	(0.049)	(0.014)
INSTI_OWNER	-0.025*	-0.013**
	(0.013)	(0.006)
PRE_RETURN	0.034***	0.012***
	(0.008)	(0.003)
RETURN_VOLATILITY	-2.064***	-0.729***
	(0.378)	(0.106)
SHARE_TURNOVER	0.020	0.002
	(0.021)	(0.006)
AC_FCF	-0.001**	0.001
	(0.001)	(0.001)
AC_ER	-0.001	0.001
	(0.003)	(0.001)
AC_ATO	-0.038***	-0.016***
	(0.012)	(0.005)
Constant	0.439***	0.098***
	(0.089)	(0.021)
Observations	74,370	74,370
Firm FE	Yes	Yes
Year FE	Yes	Yes
Adjusted R^2	0.766	0.612

Table 5: The Cross-sectional Tests: Shareholder Power

This table presents the cross-sectional tests that examine whether our results are more pronounced for firms with greater shareholder power arising from stronger corporate governance monitoring. See Appendix B for variable definitions. Robust standard errors are clustered at the firm and year levels. The standard errors are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Dep Var =	***DIV1***	***DIV2***	***DIV1***	***DIV2***
POST_COVER	**0.033*****	**0.020*****	**0.181*****	**0.068*****
	(0.011)	**(0.004)**	**(0.033)**	**(0.010)**
POST_COVER × SHAREHOLDER_POW1	**0.052***	**0.014****		
	(0.025)	**(0.007)**		
POST_COVER × SHAREHOLDER_POW2			**0.016*****	**0.005*****
			(0.003)	**(0.001)**
SHAREHOLDER_POW1	0.063***	0.016**		
	(0.021)	(0.006)		
SHAREHOLDER_POW2			0.026*	0.008**
			(0.013)	(0.004)
FIRMSIZE	0.030*	0.003	0.041**	0.005
	(0.016)	(0.004)	(0.017)	(0.004)
ROA	0.116**	0.055***	0.109**	0.053***
	(0.046)	(0.011)	(0.046)	(0.011)
BM	-0.103***	-0.022***	-0.104***	-0.022***
	(0.017)	(0.005)	(0.017)	(0.005)
RE	-0.018***	-0.001	-0.019***	-0.001
	(0.004)	(0.002)	(0.004)	(0.002)
LEV	-0.284***	-0.065***	-0.288***	-0.066***
	(0.035)	(0.012)	(0.035)	(0.012)
CASH_HOLD	0.150**	0.132***	0.151**	0.132***
	(0.057)	(0.016)	(0.055)	(0.016)
INSTI_OWNER	-0.025	-0.019**	-0.029	-0.020**
	(0.023)	(0.008)	(0.023)	(0.008)
PRE_RETURN	0.040***	0.014***	0.041***	0.014***
	(0.011)	(0.004)	(0.011)	(0.004)
RETURN_VOLATILITY	-2.295***	-0.861***	-2.325***	-0.866***
	(0.637)	(0.173)	(0.638)	(0.174)
SHARE_TURNOVER	0.054*	0.010	0.055**	0.010
	(0.026)	(0.008)	(0.026)	(0.008)
AC_FCF	-0.001***	0.001	-0.001***	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
AC_ER	0.001	0.001	0.001	0.001
	(0.005)	(0.001)	(0.005)	(0.001)
AC_ATO	-0.036**	-0.015**	-0.034**	-0.016**
	(0.015)	(0.007)	(0.016)	(0.007)
Constant	0.213	0.095***	0.175	0.083**
	(0.145)	(0.032)	(0.158)	(0.034)
Observations	53,728	53,728	53,728	53,728
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.771	0.642	0.774	0.647

Table 6: The Cross-sectional Tests: Financial Performance

This table presents the cross-sectional tests that examine whether our results are less pronounced for firms with better financial performance. See Appendix B for variable definitions. Robust standard errors are clustered at the firm and year levels. The standard errors are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Dep Var =	*DIV1*	*DIV2*	*DIV1*	*DIV2*
POST_COVER	**0.022*****	**0.012*****	**0.020****	**0.010*****
	(0.008)	**(0.003)**	**(0.007)**	**(0.003)**
POST_COVER × FIN_PERFORMANCE1	**-0.057*****	**-0.012****		
	(0.011)	**(0.006)**		
POST_COVER × FIN_PERFORMANCE2			**-0.161*****	**-0.032***
			(0.039)	**(0.018)**
FIN_PERFORMANCE1	-0.061**	-0.016		
	(0.027)	(0.012)		
FIN_PERFORMANCE2			-0.844***	-0.442***
			(0.153)	(0.064)
FIRMSIZE	0.025**	0.007**	0.027**	0.008**
	(0.012)	(0.003)	(0.012)	(0.003)
ROA	0.080**	0.051***	0.904***	0.472***
	(0.032)	(0.011)	(0.168)	(0.065)
BM	-0.095***	-0.026***	-0.091***	-0.024***
	(0.012)	(0.004)	(0.011)	(0.003)
RE	-0.012***	-0.001	-0.012***	-0.001
	(0.003)	(0.002)	(0.003)	(0.002)
LEV	-0.268***	-0.069***	-0.266***	-0.067***
	(0.032)	(0.010)	(0.032)	(0.010)
CASH_HOLD	0.125**	0.129***	0.131**	0.133***
	(0.048)	(0.014)	(0.047)	(0.014)
INSTI_OWNER	-0.025*	-0.012**	-0.027*	-0.014**
	(0.013)	(0.006)	(0.014)	(0.006)
PRE_RETURN	0.102***	0.029**	0.036***	0.013***
	(0.025)	(0.010)	(0.009)	(0.003)
RETURN_VOLATILITY	-2.046***	-0.725***	-1.919***	-0.659***
	(0.356)	(0.104)	(0.393)	(0.105)
SHARE_TURNOVER	0.020	0.002	0.019	0.001
	(0.021)	(0.006)	(0.021)	(0.006)
AC_FCF	-0.001**	0.001	-0.001**	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
AC_ER	-0.001	0.001	-0.001	0.001
	(0.003)	(0.001)	(0.003)	(0.001)
AC_ATO	-0.038***	-0.016***	-0.042***	-0.014**
	(0.012)	(0.005)	(0.012)	(0.006)
Constant	0.429***	0.094***	0.419***	0.089***
	(0.089)	(0.021)	(0.091)	(0.020)
Observations	74,370	74,370	74,370	74,370
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.766	0.612	0.767	0.617

Table 7: Initial High ESG Ratings vs Initial Low ESG Ratings

This table presents the results of the effect of high ESG initial ratings and low ESG initial ratings on ESG violations. *NFR_INITIATION_HIESG* is an indicator variable equal to one if the initial ESG rating is higher than the industry-year median, and zero otherwise. *NFR_INITIATION_LOESG* is an indicator variable equal to 1 if the initial ESG rating is lower than the industry-year median, and 0 otherwise. See Appendix B for variable definitions. Robust standard errors are clustered at the industry and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

Panel A: Initial High vs Low Overall ESG Ratings

	(1)		(2)	
Dep Var =	***DIV1***		***DIV2***	
NFR_INITIAION_HIESG [a]	**0.073*****	**(0.014)**	**0.027*****	**(0.004)**
NFR_INITIAION_LOESG [b]	**0.024****	**(0.009)**	**0.009*****	**(0.003)**
FIRMSIZE	0.023*	(0.012)	0.006*	(0.003)
ROA	0.080**	(0.033)	0.051***	(0.011)
BM	-0.095***	(0.012)	-0.026***	(0.004)
RE	-0.012***	(0.003)	-0.001	(0.002)
LEV	-0.268***	(0.032)	-0.069***	(0.010)
CASH_HOLD	0.125**	(0.049)	0.129***	(0.014)
INSTI_OWNER	-0.029**	(0.014)	-0.013**	(0.006)
PRE_RETURN	0.034***	(0.008)	0.012***	(0.003)
RETURN_VOLATILITY	-2.068***	(0.380)	-0.731***	(0.106)
SHARE_TURNOVER	0.020	(0.021)	0.002	(0.006)
AC_FCF	-0.000**	(0.000)	0.000	(0.000)
AC_ER	-0.001	(0.003)	0.000	(0.001)
AC_ATO	-0.038***	(0.012)	-0.016***	(0.005)
Constant	0.435***	(0.090)	0.095***	(0.021)
Observations	74,370		74,370	
P-value of Coeff on a-b	**0.002*****		**0.001*****	
Firm FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.766		0.612	

Panel B: Initial High vs Low Environmental, Social, and Governance Ratings

	(1)	(2)	(3)	(4)	(5)	(6)
Dep Var =		***DIV1***			***DIV2***	
NFR_INITIATION_HI_E	**0.078***** **(0.018)**			**0.032***** **(0.005)**		
NFR_INITIATION_LO_E	**0.047***** **(0.013)**			**0.013**** **(0.005)**		
NFR_INITIATION_HI_S		**0.070***** **(0.018)**			**0.022***** **(0.005)**	
NFR_INITIATION_LO_S		**0.029***** **(0.009)**			**0.016***** **(0.004)**	
NFR_INITIATION_HI_G			**0.033***** **(0.011)**			**0.019***** **(0.004)**
NFR_INITIATION_LO_G			**0.132***** **(0.027)**			**0.035***** **(0.007)**
FIRMSIZE	0.023* (0.012)	0.024* (0.011)	0.023* (0.012)	0.006* (0.003)	0.006* (0.003)	0.006* (0.003)
ROA	0.080** (0.033)	0.080** (0.033)	0.079** (0.033)	0.051*** (0.011)	0.051*** (0.011)	0.051*** (0.011)
BM	-0.095*** (0.012)	-0.095*** (0.012)	-0.095*** (0.012)	-0.026*** (0.004)	-0.026*** (0.003)	-0.026*** (0.004)
RE	-0.012*** (0.003)	-0.012*** (0.003)	-0.012*** (0.003)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)
LEV	-0.268*** (0.032)	-0.267*** (0.032)	-0.268*** (0.032)	-0.069*** (0.010)	-0.069*** (0.010)	-0.069*** (0.010)
CASH_HOLD	0.125** (0.049)	0.125** (0.049)	0.123** (0.049)	0.129*** (0.014)	0.129*** (0.014)	0.129*** (0.014)
INSTI_OWNER	-0.029** (0.013)	-0.026* (0.013)	-0.030** (0.014)	-0.013** (0.006)	-0.012** (0.006)	-0.014** (0.006)
PRE_RETURN	0.034*** (0.008)	0.034*** (0.008)	0.034*** (0.008)	0.012*** (0.003)	0.012*** (0.003)	0.012*** (0.003)
RETURN_VOLATILITY	-2.070*** (0.378)	-2.072*** (0.378)	-2.072*** (0.377)	-0.732*** (0.106)	-0.732*** (0.105)	-0.732*** (0.105)
SHARE_TURNOVER	0.021 (0.021)	0.020 (0.021)	0.021 (0.021)	0.002 (0.006)	0.002 (0.006)	0.002 (0.006)
AC_FCF	-0.000** (0.000)	-0.000** (0.000)	-0.000** (0.000)	0.000 (0.000)	0.000 (0.000)	0.000 (0.000)
AC_ER	-0.001 (0.003)	-0.001 (0.003)	-0.001 (0.003)	0.000 (0.001)	0.000 (0.001)	0.000 (0.001)
AC_ATO	-0.038*** (0.012)	-0.038*** (0.012)	-0.038*** (0.012)	-0.017*** (0.005)	-0.017*** (0.005)	-0.016*** (0.005)
Constant	0.436*** (0.090)	0.435*** (0.090)	0.436*** (0.090)	0.096*** (0.021)	0.095*** (0.021)	0.096*** (0.021)
Observations	74,370	74,370	74,370	74,370	74,370	74,370
P-value of Coeff on *HI* - *LO*	0.098*	0.025**	0.001***	0.007***	0.184	0.085*
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.766	0.766	0.766	0.612	0.612	0.612

Table 8: Results for NFR Agency Coverage Intensity

This table presents the results that examines the effect of NFR agency coverage intensity (*NFR_ITENSITY*) on the covered firms' dividend payment. See Appendix B for variable definitions. Robust standard errors are clustered at the firm and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

	(1)		(2)	
Dep Var =	***DIV1***		***DIV2***	
NFR_INTENSITY	**0.033*****	**(0.008)**	**0.017*****	**(0.004)**
FIRMSIZE	0.020*	(0.011)	0.004	(0.003)
ROA	0.080**	(0.033)	0.051***	(0.011)
BM	-0.094***	(0.012)	-0.025***	(0.003)
RE	-0.012***	(0.003)	-0.001	(0.002)
LEV	-0.266***	(0.032)	-0.068***	(0.010)
CASH_HOLD	0.124**	(0.049)	0.129***	(0.014)
INSTI_OWNER	-0.028*	(0.014)	-0.014**	(0.006)
PRE_RETURN	0.034***	(0.008)	0.012***	(0.003)
RETURN_VOLATILITY	-2.086***	(0.380)	-0.740***	(0.105)
SHARE_TURNOVER	0.021	(0.021)	0.003	(0.006)
AC_FCF	-0.001**	(0.001)	0.001	(0.001)
AC_ER	-0.001	(0.004)	0.001	(0.001)
AC_ATO	-0.038***	(0.012)	-0.016***	(0.005)
Constant	0.450***	(0.090)	0.103***	(0.022)
Observations	74,370		74,370	
Firm FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.766		0.613	

Table 9: Endogeneity Tests

This table presents the results addressing the concern of the endogeneity issues. We first use the external shock of merge and acquisition of NFR agencies by larger profile research firms in 2009. The results are reported in Panel A. *POST_ACQ* is an indicator variable equal to 1 if the observation is after 2009, and 0 otherwise. Furthermore, we also use the shock arising from the expansion of NFR agencies' coverage. Panel B reports the results using the a subsample of firms that are covered during the expansion of NFR agencies' coverage. See Appendix B for variable definitions. Robust standard errors are clustered at the industry and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

Panel A: The Acquisitions of NFR Agencies

	(1)	(2)	(3)	(4)
Dep Var =	***DIV1***		***DIV2***	
POST_COVER × POST_ACQ	**0.034*****		**0.029*****	
	(0.010)		**(0.005)**	
POST_COVER	0.017**		0.007**	
	(0.007)		(0.003)	
NFR_INTENSITY × POST_ACQ		**0.007***		**0.010*****
		(0.003)		**(0.003)**
NFR_INTENSITY		0.030***		0.012***
		(0.005)		(0.004)
POST_ACQ	0.060***	0.054***	0.007	0.003
	(0.013)	(0.013)	(0.005)	(0.004)
FIRMSIZE	0.023***	0.020***	0.006*	0.004
	(0.004)	(0.004)	(0.003)	(0.003)
ROA	0.079***	0.080***	0.051***	0.051***
	(0.015)	(0.015)	(0.011)	(0.011)
BM	-0.095***	-0.094***	-0.026***	-0.025***
	(0.004)	(0.004)	(0.003)	(0.003)
RE	-0.012***	-0.012***	-0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
LEV	-0.268***	-0.267***	-0.069***	-0.069***
	(0.014)	(0.014)	(0.010)	(0.010)
CASH_HOLD	0.124***	0.124***	0.129***	0.129***
	(0.018)	(0.018)	(0.014)	(0.014)
INSTI_OWNER	-0.023**	-0.027***	-0.012*	-0.013**
	(0.010)	(0.010)	(0.006)	(0.006)
PRE_RETURN	0.034***	0.034***	0.012***	0.012***
	(0.004)	(0.004)	(0.003)	(0.003)
RETURN_VOLATILITY	-2.071***	-2.087***	-0.734***	-0.741***
	(0.135)	(0.135)	(0.105)	(0.105)
SHARE_TURNOVER	0.021***	0.022***	0.003	0.003
	(0.008)	(0.008)	(0.006)	(0.006)
AC_FCF	-0.001***	-0.001***	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
AC_ER	-0.001	-0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
AC_ATO	-0.038***	-0.038***	-0.016***	-0.016***
	(0.007)	(0.007)	(0.005)	(0.005)
Constant	0.439***	0.452***	0.100***	0.106***
	(0.030)	(0.030)	(0.021)	(0.022)
Observations	74,370	74,370	74,370	74,370
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.766	0.766	0.612	0.613

Panel B: Firms Covered by the Expansion of NFR Agencies' Coverage

	(1)	(2)	(3)	(4)
Dep Var =	*DIV1*		*DIV2*	
POST_COVER	**0.037*****	**0.038*****	**0.015*****	**0.016*****
	(0.009)	**(0.010)**	**(0.004)**	**(0.005)**
FIRMSIZE		0.018*		-0.001
		(0.010)		(0.003)
ROA		0.047		0.028**
		(0.035)		(0.010)
BM		-0.068***		-0.023***
		(0.006)		(0.003)
RE		-0.004		0.002
		(0.002)		(0.001)
LEV		-0.109***		-0.043***
		(0.020)		(0.010)
CASH_HOLD		0.147***		0.067***
		(0.030)		(0.014)
INSTI_OWNER		-0.012		0.004
		(0.024)		(0.009)
PRE_RETURN		0.009		0.005**
		(0.006)		(0.002)
RETURN_VOLATILITY		-1.001***		-0.614***
		(0.194)		(0.084)
SHARE_TURNOVER		0.002		0.011*
		(0.016)		(0.005)
AC_FCF		-0.001		0.001
		(0.001)		(0.001)
AC_ER		0.006		0.002***
		(0.006)		(0.001)
AC_ATO		0.001		-0.027***
		(0.013)		(0.006)
Constant	0.216***	0.249***	0.044***	0.081***
	(0.004)	(0.043)	(0.002)	(0.020)
Observations	20,648	20,648	20,648	20,648
Firm FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.816	0.818	0.563	0.574

Table 10: Alternative Proxies of Dividend Policy

This table presents the results using the alternative measures of dividend policy: i.e., other dividend payout measures in Panel A and share repurchase in Panel B . See Appendix B for variable definitions. Robust standard errors are clustered at the industry and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

Panel A: Other Dividend Proxies

	(1)	(2)	(3)	(4)	(5)	(6)
Dep Var =	***DIV3***	***DIV3***	***DIV4***	***DIV4***	***DIV5***	***DIV5***
POST_COVER	**0.016*****		**0.023***		**0.006*****	
	(0.005)		**(0.013)**		**(0.002)**	
NFR_INTENSITY		**0.018*****		**0.023****		**0.005*****
		(0.003)		**(0.009)**		**(0.001)**
FIRMSIZE	0.017***	0.015***	0.029**	0.026*	0.004*	0.004
	(0.005)	(0.005)	(0.014)	(0.015)	(0.002)	(0.002)
ROA	0.026**	0.026**	-0.032	-0.032	0.017***	0.017***
	(0.013)	(0.013)	(0.024)	(0.024)	(0.006)	(0.006)
BM	-0.039***	-0.038***	-0.068***	-0.068***	-0.007***	-0.007***
	(0.004)	(0.004)	(0.009)	(0.009)	(0.002)	(0.002)
RE	-0.004***	-0.004***	-0.007*	-0.007*	-0.001	-0.001
	(0.002)	(0.002)	(0.004)	(0.004)	(0.001)	(0.001)
LEV	-0.094***	-0.094***	-0.183***	-0.182***	-0.046***	-0.046***
	(0.012)	(0.012)	(0.031)	(0.031)	(0.007)	(0.007)
CASH_HOLD	0.095***	0.095***	0.061	0.061	0.045***	0.045***
	(0.018)	(0.018)	(0.040)	(0.040)	(0.010)	(0.010)
INSTI_OWNER	-0.024***	-0.026***	-0.044*	-0.046*	0.001	0.001
	(0.009)	(0.009)	(0.026)	(0.026)	(0.005)	(0.004)
PRE_RETURN	0.007**	0.007**	0.004	0.004	0.002	0.002
	(0.003)	(0.003)	(0.007)	(0.007)	(0.001)	(0.001)
RETURN_VOLATILITY	-1.039***	-1.048***	-1.645***	-1.657***	-0.384***	-0.387***
	(0.112)	(0.112)	(0.280)	(0.280)	(0.051)	(0.051)
SHARE_TURNOVER	-0.004	-0.003	-0.010	-0.009	0.006**	0.006**
	(0.008)	(0.008)	(0.020)	(0.020)	(0.003)	(0.003)
AC_FCF	-0.001	-0.001	0.001	0.001	0.001***	0.001***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
AC_ER	-0.001	-0.001	-0.001	-0.001	0.001*	0.001*
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
AC_ATO	-0.004	-0.003	-0.009	-0.008	-0.007***	-0.008***
	(0.005)	(0.005)	(0.013)	(0.013)	(0.002)	(0.002)
Constant	0.145***	0.153***	0.252***	0.263***	0.069***	0.071***
	(0.038)	(0.038)	(0.097)	(0.099)	(0.015)	(0.015)
Observations	74,370	74,370	74,370	74,370	74,370	74,370
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.446	0.446	0.297	0.297	0.529	0.529

Panel B: Share Repurchase

	(1) *SHARE_REPURCHASE*		(2) *SHARE_REPURCHASE*	
POST_COVER	**0.229****	**(0.086)**	**0.144****	**(0.066)**
FIRMSIZE			0.368***	(0.080)
ROA			-1.381***	(0.398)
BM			0.150**	(0.063)
RE			-0.046	(0.065)
LEV			-0.757***	(0.181)
CASH_HOLD			-0.097	(0.154)
INSTI_OWNER			-0.166	(0.247)
PRE_RETURN			-0.127**	(0.052)
RETURN_VOLATILITY			0.920	(2.237)
SHARE_TURNOVER			0.188*	(0.108)
AC_FCF			0.002***	(0.000)
AC_ER			-0.021	(0.017)
AC_ATO			-0.092	(0.107)
Constant	0.485***	(0.035)	-1.601***	(0.478)
Observations	74,370		74,370	
Firm FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.592		0.617	

Table 11: Additional Control Variables

This table presents the results by adding additional control variables in the main regression. See Appendix B for variable definitions. Robust standard errors are clustered at the industry and year levels. The standard errors are reported in parentheses. ***, **, and * indicate *p*-values of 1%, 5%, and 10%, respectively.

	(1)		(2)	
Dep Var =	***DIV1***		***DIV2***	
POST_COVER	**0.024*****	**(0.009)**	**0.013*****	**(0.003)**
FIRMSIZE	0.019	(0.011)	0.005	(0.003)
ROA	0.085**	(0.033)	0.052***	(0.011)
BM	-0.093***	(0.012)	-0.025***	(0.004)
RE	-0.013***	(0.003)	-0.001	(0.002)
LEV	-0.255***	(0.035)	-0.065***	(0.010)
CASH_HOLD	0.125**	(0.048)	0.128***	(0.014)
INSTI_OWNER	-0.028*	(0.014)	-0.014**	(0.006)
PRE_RETURN	0.036***	(0.009)	0.012***	(0.003)
RETURN_VOLATILITY	-2.049***	(0.390)	-0.730***	(0.105)
SHARE_TURNOVER	0.017	(0.020)	0.001	(0.006)
AC_FCF	-0.000**	(0.000)	0.000	(0.000)
AC_ER	-0.001	(0.003)	0.000	(0.001)
AC_ATO	0.037***	(0.012)	-0.016***	(0.005)
ESG_COMMITTEE	0.038	(0.024)	0.022**	(0.010)
ASSURANCED	0.006	(0.020)	-0.005	(0.013)
STAND_ALONE	0.038**	(0.017)	0.000	(0.008)
MED_COV	0.002	(0.004)	0.002	(0.002)
ANA_COV	0.030***	(0.008)	0.005	(0.003)
CREDITOR_COV	-0.039**	(0.018)	-0.005	(0.004)
BIGN	-0.018*	(0.009)	-0.012**	(0.005)
Constant	0.412***	(0.106)	0.105***	(0.029)
Observations	74,370		74,370	
SP Index FE	Yes		Yes	
Firm FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.767		0.613	

Paper Number:P007

Exploring the Extend of Materiality Assessment in Sustainability Reporting

Cindy Shi-Xiang YOU*
City University of Macau
Macau

Teresa CHU
University of Macau
Macau

Tiffany Cheng Han LEUNG
City University of Macau
Macau

*The corresponding author

Extended Abstract

This study aims to explore the materiality assessment practice in ESG disclosure and sustainability reports in the Hong Kong context. This study examines (i) what ESG information is material for listed companies and (ii) the different response of industries to materiality assessment. Materiality assessment results were obtained from materiality matrices, polar diagram or material ESG issue lists in ESG disclosure or sustainability reports. A materiality index was developed according to the ESG topics suggested in the Environmental, Social and Governance (ESG) Reporting Guide (the ESG Guide) in Hong Kong, in which there are four items in the environmental aspect and eight items in the social aspect. Content analysis is conducted manually based on 2,205 listed companies in 11 industries from 2019 to 2021 on the Main Board of the Hong Kong Exchanges and Clearing Limited (HKEX). This study finds that most ESG topics are considered as medium material for companies. Climate change and community investment are the least material ESG issues, while product responsibility and anti-corruption are perceived as highly material for the industries. This study provides insights for companies and policymakers to improve materiality assessment practice.

Keywords: Materiality; Sustainability reporting; Environmental, social, and governance; Corporate social responsibility

1. Introduction

The definition of materiality was first applied in financial accounting and auditing in the 1960s. The omission, misstatement or vagueness of material accounting information reasonably affects the decisions made by the primary users of general-purpose financial statements (IFRS, 2018). Materiality has been highlighted in sustainability reporting due to greenwashing. Since materiality lacks standard threshold in sustainability reporting (Garst, Maas, & Suijs, 2022), research on context-specific materiality is necessary. This study examines the extent of materiality assessment in sustainability reporting in the Hong Kong context. Content analysis is adopted to identify material ESG topics in ESG disclosure and investigate whether industries respond differently to materiality assessment with 6,605 firm-year observations.

2. Literature and Framework

2.1 Materiality in Sustainability Reporting

Guidance on materiality assessment is included in some leading sustainability reporting standards, namely the Global Reporting Initiatives Sustainability Reporting Standards (the GRI Standards) and the Sustainability Accounting Standards Board Framework (the SASB Framework). Double materiality (the GRI method) and financial materiality (the SASB method) are two common types of materiality. The former focuses on economic, environmental, and social impacts, while the latter mainly focuses on financial impacts (Abhayawansa, 2022).

2.2 Materiality Assessment in Hong Kong

This study identifies material ESG topics and investigate the sector-specific response to materiality assessment across listed companies in the Hong Kong Exchanges and Clearing Limited (HKEX). In 2019, the HKEX declared that materiality assessment of ESG issues would be mandatory for all listed companies since 1 July 2020. All listed companies in the HKEX should disclose how they identify and choose material ESG topics (HKEX, 2019). Materiality assessment is mostly voluntary but is mandated by the HKEX, so materiality assessment practice remains to be discussed in the Hong Kong context. Thus, the following research questions are asked: (i) what kind of ESG information is material for listed companies in Hong Kong and (ii) are material ESG topics and the material level differ due to industry attributes?

2.3 Research Contributions

This study contributes to the existing literature on materiality in three ways. First, previous research has mainly examined voluntary materiality assessment (Karagiannis, Vouros, Sioutas, & Evangelinos, 2022). This study focuses on mandatory materiality assessment. Second, prior studies have focused on materiality assessment in a particular industry (Karagiannis et al., 2022). This study examines the material ESG information of all listed companies in the HKEX from 2019 to 2021. Third, prior studies have evaluated material ESG information based on international reporting standards. Since materiality lacks standardised interpretations (Garst et al., 2022), this study evaluates materiality based on local sustainability reporting regulations.

3. Methodology and Results

This study aims to identify material ESG topics and investigate whether industries respond differently to materiality assessment. Content analysis is adopted to collect ESG topics from the materiality matrices, polar diagrams, or list type of assessment in standalone sustainability reports and ESG disclosure in annual reports.

3.1 Sampling and Data Collection

The sample consists of 2,205 listed companies in 11 industries from 2019 to 2021 on the Main Board of the HKEX. The observation period is from 2019 to 2021 since the mandatory materiality assessment was announced in 2019. Table 1 presents the industry distributions. Material ESG topics are collected from materiality assessment section. ESG topics (as listed in Table 2), are classified into environmental and social issues based on the ESG Guide. Material ESG topics will be assigned level of importance if such information is disclosed based on materiality matrices, polar diagrams, or lists of material issues.

3.2 Major Findings

Table 3 shows the preliminary findings about materiality assessment results of listed companies in the HKEX. Climate change (A4) and community investment (B8) are the least material ESG issues. Most of the ESG issues are considered as medium material in the Hong Kong market, while product responsibility (B6) and anti-corruption (B7) are perceived as highly material for most industries. The results suggest that Hong Kong companies tend to pay less attention to local community and climate-related issues. On the contrary, all industries assigned high materiality to responsible production since the Hong Kong market mainly focuses on providing service and products (Lai, 2012). Anti-corruption is assigned high materiality by 10 of 11 industries, indicating that the Hong Kong companies are devoted to improving governance practice.

4. Discussion

This study provides implications for regulators. First, regulators may consider adding ESG disclosure items which are not included in the ESG Guide, such as biodiversity, economic performance, and ESG risk management. Second, regulators could encourage companies to seek independent parties for credible materiality assessment. There are two implications for business entities. First, listed companies could enhance stakeholder engagement in materiality assessment to address stakeholders' concerns about ESG performance. Second, companies need to consider industry attributes while evaluating material ESG information.

This study has some limitations and opens up new research directions. First, this study does not identify the process to determine material ESG issues. Future research may combine the materiality process and results. Second, this study does not differentiate ESG topics with different labels. Future research could differentiate these labels. Third, this study does not examine the consequences of materiality assessment, such as sustainability reporting quality and financial performance (Abhayawansa, 2022). Future studies could examine whether materiality assessment brings the expected outcomes.

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Tables

Table 1 Sample Companies by Industry

Industries	N
Energy	68
Materials	128
Industrials	250
Consumer discretionary	525
Consumer staples	107
Healthcare	182
Telecommunications	13
Utilities	76
Financials	208
Properties and construction	471
Information technology	177
Total	2,205

Table 2 Material ESG Topics

Environmental aspects	Social aspects
A1: emissions	B1: employment
A2: use of resources	B2: health and safety
A3: the environmental and natural resources	B3: development and training
A4: climate change	B4: labour standards
	B5: supply chain management
	B6: product responsibility
	B7: anti-corruption
	B8: community investment

Table 3 Materiality Assessment Results of Listed Companies in the HKEX

	Consumer Discretionary	Consumer Staples	Healthcare	Energy	Financials	Industrials	Information Technology	Materials	Properties & Construction	Telecommunications	Utilities
A1	L	M	L	H	L	M	L	M	M	H	M
A2	M	M	L	H	L	M	L	M	M	M	H
A3	M	M	L	H	L	M	L	M	M	M	H
A4	L	L	M	M	L	M	L	M	L	M	H
B1	H	M	M	M	M	M	H	M	M	M	M
B2	H	H	H	M	H	H	M	H	H	M	H
B3	H	M	M	M	M	M	H	M	H	H	M
B4	H	M	M	M	M	M	M	M	H	L	M
B5	M	M	M	M	L	M	M	M	M	M	M
B6	H	H	H	H	H	H	H	H	H	H	H
B7	H	H	H	H	H	H	H	H	H	M	H
B8	M	L	M	L	M	L	M	L	M	M	L

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Regulatory Investigations, Media Coverage, and Audit Opinions

Xuelian LI
University of Macau
Macau

Liang DONG
Hunan University of Technology and Business
China

Hung Wan KOT
University of Macau
Macau

Morris LIU*
University of Macau
Macau

*The corresponding author

Abstract:

We examine after an investigation of an audit engagement is announced, whether media coverage of the investigation affects the involved auditor's behaviors in his/her other (non-investigated) engagements? Use a sample of Chinese firms, we find that an auditor is more likely to issue modified audit opinions in his/her non-investigated engagements if the investigation attracts a high level of media coverage. This augmenting effect of media coverage exists only when the information environment of the non-investigated engagement is opaque or has a relatively high level of earnings management, when the involved auditor is the review auditor or not a busy auditor, and when the news comes from an opinion leader. Our results suggest that the media can play an effective role in broadening the sphere of influence of regulatory actions.

Key words: Audit opinion; Individual auditor; Media coverage; Regulatory investigation; Spillover effect.

1. Introduction

Studying the spillover effects of regulatory investigations on auditor behaviors is important, as research shows that audit failures tend not to be isolated events (Li et al., 2017). If one audit engagement is under investigation, the quality of the involved auditor's other (non-investigated) engagements may also be problematic. Regulatory actions should therefore bring attention not only to the investigated firm but also to the non-investigated engagements of the involved auditor. However, investigation announcements generally have low information content, and it is unclear whether investigations can improve the audit quality of investigated firms, let alone that of non-investigated firms (Lennox & Pittman, 2010; Sundgren & Svanstrom, 2017). Furthermore, there is limited research on the mechanisms underlying the potential spillover effects of regulatory investigations on auditor practices (Wu & Zhang, 2014). In this study, we propose and empirically test media coverage as one possible mechanism. Journalists are often regarded as "uncrowned kings" and the media as a "fourth power" alongside the three branches of a democratic society (Marsili, 2011, p.70). Considering the media's great influence over market activities (Besley & Burgess, 2002; Bushee et al., 2010), this paper seeks to answer whether media coverage can intensify the spillover effects of regulatory investigations on auditor behaviors.

Specifically, will an auditor involved in an investigation be more likely to issue modified audit opinions (MAOs) for his/her non-investigated engagements if media coverage of the investigation is high? We hypothesize that the media can intensify spillover effects as media can affect the involved auditor's behavior in non-investigated engagements through auditor's reputation management (Power, 2003; Aerts, 2005; Dunne et al., 2021), and through the pressure of stakeholders and regulators' closer monitor and potential action (Flynn et al., 1998; Wahlberg & Sjoberg, 2000). Hence, media coverage can be an important intermediate factor in the relationship between investigations and auditors' precautionary behaviors in their non-investigated engagements.

We choose China as our research context for two important reasons. First, audits in China are unique in that audit reports need to be signed by two engagement auditors. The names of the signing auditors are disclosed, and their personal profile data are also publicly available (Gul et al., 2013; Guan et al., 2016). This requirement enables us to obtain auditor information and study whether there is meaningful variation in audit quality across individual auditors (Gul et al., 2013). Second, the media in China are strictly governed, with regulators intent on blocking news that could induce social unrest (Xu, 2014; You et al., 2017; Ding et al., 2018). Therefore, the media in China are conservative and rigorous in their fact checking and not inclined to report unconfirmed news. Ding et al. (2018) document an upward (i.e., positive) bias in news reporting in China. The risk-averse nature of Chinese journalists means that when negative news is reported, it is likely to be highly reliable and to attract more attention from readers.

Using hand-collected data from 2002 to 2019, we find that the non-investigated engagements of an auditor involved in an investigation are more likely to receive MAOs when there is a sufficiently high number of news reports on the investigation. The results are robust to both a time series regression and a difference-in-differences (DiD) model with propensity score matching (PSM). The results are also robust to a placebo test, different test models, varied test windows around the investigation, different proxies for investigation news, and the inclusion of disparate control variables. In summary, we find that media coverage plays a positive mediating role in intensifying the spillover effects of an investigative action on the non-investigated engagements of the involved auditor. In addition, this augmenting effect of media coverage exists only when the information environment of the non-investigated engagement is opaque or has a relatively high level of earnings management, when the involved auditor is the review auditor or not a busy auditor, and when the news comes from an opinion leader.

This paper makes several contributions to the literature. First, it contributes to the literature on regulatory monitoring by answering the call of Wu and Zhang (2014) for further research on the spillover effects of regulatory investigations. Our paper complements those of Ge and Zhang (2017) and Li at al. (2017). Ge and Zhang (2017) examine the impact of China Securities Regulatory Commission (CSRC) investigations on targeted partners' audit quality. Their results suggest that investigations lead to improved audit quality, with targeted partners being more likely to issue MAOs and their clients exhibiting lower discretionary accruals. Meanwhile, Li et al. (2017) examine the relationship between failed audits and the quality of other audits performed by the same auditors. They find that auditors with failed audits tend to deliver lower-quality audits in their other audit engagements. Our paper builds on these findings by using empirical data to explore a possible mechanism (media coverage) for the spillover effects of regulatory investigations on audit quality, which is not studied in either Ge and Zhang (2017) or Li et al.

(2017). Second, our paper also responds to Miller and Skinner (2015), who identify media interactions with other financial market players as a promising avenue for research. Specifically, we study whether media coverage can augment the spillover effects of regulatory investigations on audit quality by affecting auditors' behaviors in their non-investigated engagements.

The remainder of the paper is organized as follows. We describe the research background and develop the hypotheses in Section 2. In Section 3, we describe the sample selection and research design. Section 4 presents the empirical results. We conclude the study in Section 5.

2. Literature Review and Hypotheses

2.1 Regulatory Actions and Audit Quality

The CSRC is the major regulatory body governing all securities exchanges and futures markets within China. The CSRC initiates investigations for many reasons, including complaints from stakeholders, information from insiders, media coverage, referrals from stock exchanges, legal disputes, and police investigations. The CSRC also conducts regular reviews and random investigations. It can take years for an investigation to conclude. If wrongdoing is confirmed, the CSRC can impose sanctions. A sanction announcement typically discloses details about a listed company's misconduct and sanction measures. In contrast, investigation announcements are much less detailed, normally revealing only that a company is under investigation for suspicion of violating regulations (qualitative information). Stakeholders usually do not know whether the firm is guilty, what the alleged misconduct is about, and whether the auditors are liable. Studies on audit quality changes around CSRC sanctions provide mixed evidence on the effect of regulatory monitoring on audit quality (Wu, 2008; Fang, 2011; Wang et al., 2011; Liu, 2013; Firth et al., 2014), perhaps because auditors improve audit quality before sanctions are announced, i.e., when the corresponding investigations are underway (Ge & Zhang, 2017). A growing number of studies emphasize the importance of studying investigative action (Chen et al., 2005; Firth et al., 2009; Wu & Zhang, 2014; Ge & Zhang, 2017).

For a firm under investigation, the auditor may issue more MAOs after an investigation is announced due to concerns over future sanctions, litigation risks (Choi et al., 2008; Francis & Wang, 2008; Venkataraman et al., 2008; Choi et al., 2009; Lennox & Li, 2014), and reputational damage (Yang et al., 2001; Ge & Zhang, 2017). However, given that investigation announcements generally have low information content, they may not have the anticipated effect on auditor behaviors. Many studies find that Public Company Accounting Oversight Board (PCAOB) inspections of accounting firms fail to induce more unclean audit opinions (Lennox & Pittman, 2010; Sundgren & Svanstrom, 2017). Audit partners who have performed failed audits may also deliver lower-quality audits in other engagements (Li et al., 2017). Regulatory actions should therefore bring attention not only to the investigated firm but also to non-investigated firms engaging the same auditor. Whether an investigation can lead to better audit practices in the non-investigated engagements is a question with important implications for audit practitioners.

As for the potential spillover effects of an investigation on non-investigated engagements, it is possible that auditor practices will change for reasons similar to those just outlined. The auditor may take responsive actions even for non-investigated engagements, as the investigation of one client may prompt the auditor to rethink whether he/she has provided adequate audit quality across all of his/her engagements. It is uncertain whether an investigation can sufficiently call the attention of stakeholders of non-investigated auditees, especially as the effect is indirect. Therefore, such spillover effects may not exist because the aforementioned concerns related to sanctions, litigation, and reputational damage are left to the professional judgment of individual auditors (Aobdia, 2018). Taken together, we choose to present our first hypothesis in the null form.

Hypothesis 1. An announcement that one audit engagement is under investigation does not have an effect on the involved auditor's issuance of MAOs for his/her non-investigated engagements.

Given the ambiguity in whether an audit engagement investigation can improve the quality of other engagements involving the same auditor, we are interested in mechanisms that may intensify the spillover effects of regulatory investigations on the practices of the involved auditor. In this paper, we focus on media coverage as the mechanism.

2.2 Mediating Effect of Media

2.2.1 Media

The financial press may have greater potential for diffusion—reaching qualified and non-qualified stakeholders, managers, shareholders, regulators, and other market participants—than any other information intermediary (Bushee et al., 2010). Companies that find themselves in the media spotlight are also likely to become the focus of the public (Qi et al., 2014).[1] Media coverage can serve a watchdog role, increasing the quality and transparency of accounting information (Chahine et al., 2015; Comiran et al., 2018). The literature suggests that stakeholders consider the financial press to be a more credible source of information than analyst reports or firm disclosures, as journalists may be less affected by incentive concerns (Kothari et al., 2009). Given that firms disclose only limited information, the editorial content provided by the media tends to be more complete and more understandable to stakeholders. Furthermore, the media can conduct independent investigations into potential malfeasance (Dyck & Zingales, 2002; Miller, 2006; Dyck et al., 2010; Miller & Skinner, 2015). In practice, the financial media have demonstrated their value in fraud detection, such as during the Enron scandal in the U.S. (reported by *Fortune*) and the Yinguangxia scandal in China (reported by *Caijing*).

In addition to conducting independent investigations, the media disseminate information uncovered by other sources to a broader audience, thus reducing the cost of information searching for market participants. Most empirical studies find that stakeholders react to news containing the same information already available in SEC filings (Drake et al., 2014; Dai et al., 2015). Auditors are also likely to respond to such news: negative news involving auditees, such as debt defaults

[1] It is crucial for policy makers to understand the power and corporate governance role of the media (Dyck & Zingales, 2002; Dyck et al., 2010), which act as an information intermediary between firms and external stakeholders (Miller, 2006; Tetlock, 2007; Fang & Peress, 2009; Bushee et al., 2010; Armstrong et al., 2012; Jansson, 2013; Ahern & Sosyura, 2014) and enhance transparency and the level of protection afforded to external agents' interests (La Porta et al., 2000; Djankov et al., 2008; Anderson et al., 2009). With its role in corporate governance and corporate social responsibility, the media can affect firms' operations, such as stock option grants to chief executive officers (CEOs) with the public opinion conveyed through the media (Kuhnen & Niessen, 2012; Zyglidopoulos et al., 2012). Many studies examine the effects of media coverage of specific firm-related events, such as news reports about pollution (Wang et al., 2017; Zhou et al., 2019; Chang et al., 2020; Xu et al., 2022), environmental, social, and governance practices (Burke et al., 2019; Asante-Appiah, 2020), earnings press releases (Stice, 1991; Bushee et al., 2010; Soltes, 2010; Engelberg & Parsons, 2011; Drake et al., 2014; Blankespoor et al., 2018), CEO excess compensation (Core et al., 2008), fraud (Cohen et al., 2017), debt default and loss contingencies (Frost, 1991; Mutchler et al., 1997; Joe, 2003), and restatements (Cowle & Rowe, 2019).

(Mutchler et al., 1997) and loss contingencies (Frost, 1991), has been found to be associated with a higher auditor propensity to issue MAOs, even though such information is already disclosed in financial statements. Therefore, the media's information dissemination role is valued in the market.

The media in China has unique features. Disadvantages include their relatively high degree of opacity and low level of protection when sued by individuals or companies (Qi et al., 2014). However, recent years have witnessed a gradual opening up of press freedom in the area of finance and economics (Chen, 2003; Esarey, 2006), with increased attention paid to the monitoring role of the financial media (Chen, 2005; Liebman & Milhaupt, 2008).

2.2.2 Media and Auditors

With increasing recognition of the media's role in financial markets (Miller 2006), Miller and Skinner (2015) propose that a promising area for research is the interaction between the media and other financial market players, such as traders (Tetlock, 2014), CEOs (Core et al., 2008; Kuhnen & Niessen, 2012), analysts (Sant & Zaman, 1996; Miller, 2006), auditors (Miller, 2006), hedge funds (Dyck et al., 2008), and managers (Dai et al., 2015). In particular, the interaction between the media and auditors is still a relatively under-examined research area, and additional studies on how auditors use media information in their audit judgments are justified. Recent studies find that auditors in China (Gong et al., 2018) and the U.S. (Asante-Appiah, 2020; Cahan et al., 2020) change their assessments of audit risk and adjust their audit efforts in response to news reports involving their clients. High media visibility draws the attention of stakeholders and regulators and thus exposes auditors to greater risks of reputational and litigation losses in the event of an audit failure. Studies also find that negative news coverage of clients is associated with an increased auditor propensity to issue MAOs (Mutchler et al., 1997; Joe, 2003) and less earnings management and misstatements (Cowle & Rowe, 2019).

While studies mainly focus on whether media coverage of a client firm affects the auditor's risk assessments and behavior toward the firm, this line of research suffers from an endogeneity issue, as the media coverage is endogenous to the firm and the news being covered. In such research settings, it is unclear whether the auditor is reacting to the media coverage itself or to the underlying issue being reported on, which might cause a reaction even in the absence of media attention. Our paper studies whether media coverage of an investigated engagement makes the involved auditor more likely to issue MAOs for his/her non-investigated engagements after an investigation is announced. This setting helps reduce endogeneity concerns, as the amount of news about the investigation is unlikely to be associated with the quality of the auditor's non-investigated engagements, except through differences in the auditor's attempt to protect himself or herself from future attention from regulators and stakeholders. [this paragraph could move to Introduction as third paragraph or last paragraph]

2.2.3 Media's Augmenting Effect on the Association between Investigations and MAOs

Owing to the media's role in both information creation and dissemination, the media inform more market participants about the possible misconduct of the investigated auditee and the involved auditor. Media can affect involved auditor's behavior in non-investigated engagements through both direct and indirect channels.

Channel 1 (direct): **Media-Auditor**. For auditors, reputation and image management is essential for assuring the quality of the audit report and attracting clients. Prior studies have found that the reputation damage brought by the news will cause the auditors to lose clients (Ege et al., 2021). The larger media attention brought to the investigated engagements can threaten auditor's professional identity and therefore cause auditors to engage in impression management (Power, 2003; Aerts, 2005; Dunne et al., 2021).

Channel 2 (indirect): **Media-Stakeholder-Auditor**. The stakeholders, including banks, creditors, and institutional investors, etc., are sensitive to events associated with where their business and wealth is, and they have the motivation and capacity to actively track the information of potential risk events.[2] Therefore, though media coverage usually does not involve non-investigated firms or auditors, stakeholders can still find out the relevant news of investigation. Stakeholders will put pressure on the non-investigated firms directly and therefore further affect auditor behavior.

Channel 3 (indirect): Media-Regulator-Auditor. Audit failures are contagious (Li et al., 2017). The quality of the involved auditor's non-investigated engagements may also be

[2] From communication with market practitioners, including people working in the risk management department of banks and institutional investors, we are informed that they keep a close monitoring on their business partners and business partners' related parties, with automatic internet news alerts through financial platforms (e.g., Wind, Bloomberg, etc.). Auditors and their engagements are easily searched and listed in the news monitor systems.

problematic. Media reports reflects the market interest and attention, and the high level of media reports on the investigation casts shadow on the perceived audit quality of the involved auditor. To ease market tense, regulators may approach the involved auditor actively for the non-investigated engagements.

[Insert Figure 1 here]

Although auditors are self-interested, media can play the role of monitoring auditors and affect their behaviors. Auditors will weigh the cost of improving the audit quality on the non-investigated engagements and the cost of potential reputation and litigation losses. Even though the involved auditor already knows his/her audit quality, higher media visibility on the investigations may draw more attention from non-investigated firm's stakeholders and urge the regulators to take more actions to relieve market tense. Therefore, the cost of reputation and litigation losses is exacerbated, and the auditor will choose to improve audit quality by issuing MAO. Specifically, auditors can change behavior in both detection of the errors or fraud, and in reporting of the errors or fraud.

In terms of detection, auditor may be more conservative in making judgments in deciding the level of risk or the adequacy of audit procedure, or amplifying the paper works that might be helpful for self-protection. According to Cowle (2022)'s survey among audit practitioners, auditors try to or are required by the audit firm to preempt audit issues exposed by the news by adjusting audit procedures. This reaction is to make sure that the other audit firm's audit failure disclosed by the media was not also an issue at their clients, even if the concerns have not merit. In this way, non-investigated firm's errors and fraud are more likely to be detected when media visibility is high.

In terms of reporting, the higher pressure from the stakeholders due to the media coverage will lower the auditor's tolerance in the client's negotiation for a clean audit opinion. Under this circumstance, issuing MAO and staying safe is more important than maintaining client relationship by allowing for some minor issues. In this way, non-investigated firm's errors and fraud are more likely to be reported when media visibility is high.

From both perspectives, non-investigated firm's errors and fraud are more likely to be detected and reported when media visibility is high. Therefore, we develop the following hypothesis.

Hypothesis 2. Intensive reporting of an announcement that one audit engagement is under investigation makes the involved auditor more likely to issue MAOs for his/her non-investigated engagements.

3. Research Design and Data

3.1 Sample Selection

From the CSRC website, we hand-collect 70 sanction announcements from 2002 to 2019. Next, we search online to find stock exchange filings or news regarding the relevant investigation announcements and identify the dates when the CSRC began its investigations. We drop eight cases for which we are unable to identify an investigation announcement date, and we also exclude six cases concerning failed initial public offerings. Finally, we have 56 investigative actions and 133 involved auditors. We obtain all of these involved auditors' engagements in three years before and after the investigation announcements and then keep only the involved auditors' engagements other than the investigated engagements to study the spillover effects of regulatory investigations. Media data are retrieved from China Research Data Services (CNRDS).[3] Financial data are obtained from the China Securities Markets and Accounting Research (CSMAR) database. We collect auditors' personal information from the website of the Chinese Institute of Certified Public Accountants (CICPA) and exclude client firms in the financial industry and observations with missing variables in the regression analysis. To mitigate the influence of outliers, all continuous variables are winsorized at the 1st and 99th percentiles.

[3] The traditional business press perhaps has the largest and broadest audience of all potential information intermediaries (Bushee et al., 2010), more than analyst reports and corporate filings that tend to circulate primarily among sophisticated stakeholders and regulators (Fang & Peress, 2009; Bushee et al., 2010). We restrict the scope of media coverage to newspapers and exclude social media for two reasons. First, being produced by professional and qualified journalists, the information in newspapers is more credible than that from social media sources, meaning that regulators are more likely to trust newspaper news. Second, newspapers currently rely on the internet to issue and disseminate information, so the public or regulators can easily find news articles online.

3.2 Model Design

$$MAO_{ijt} = \beta_0 + \beta_1 Post_{ijt} + \beta_j Control_{ijt} + \varepsilon_{ijt}, \quad (1)$$

$$MAO_{ijt} = \beta_0 + \beta_1 Post_{ijt} + \beta_2 Post_{ijt} * D\_Media_{ijt} + \beta_j Control_{ijt} + \varepsilon_{ijt}, \quad (2)$$

Model (1) and Model (2) are time-series regression models, which include only the non-investigated samples. Model (1) and Model (2) aim to test Hypothesis 1 and Hypothesis 2, respectively. In Model (1), we test whether the auditors under investigation are more likely to issue MAOs for other engagements in the post-investigation period compared to the pre-investigation period, and the variable of interest (VOI) is *Post*. In Model (2)[4], we test whether the investigated auditors' propensity to issue MAOs for other engagements increases with the number of news reports about the investigation in the post-investigation period compared to the pre-investigation period, and the VOI is *Post*D_Media*. *MAO* takes the value of 0 if the non-investigated firm receives a standard unqualified opinion and 1 if the non-investigated firm receives an unqualified opinion with an explanatory paragraph or a qualified opinion[5]; *Post* equals 1 if the observation is in the post-investigation window and 0 if it is in the pre-investigation window. The pre-investigation window is from the third year before an investigation announcement to the year preceding the investigation announcement, and the post-investigation window is from the year after the investigation announcement to the third year[6] following the investigation announcement. The investigation announcement year is not included for data clearance. Other windows are also tested for robustness.

D_Media equals 1 if the number of news reports about an investigation is above the median and 0 otherwise. News reports about an investigation need to meet three criteria: (1) the period is within three months after the disclosure of the investigation, following Comiran et al. (2018); (2)

[4] This paper aims to study the effect of media reports on the spillover effect of regulatory investigation. This design makes the media reports only exist after the announcement of investigation. A standalone *D_Media* would explain the media reports before investigation, which is less meaningful. Therefore, we cannot add *D_Media* into regression if we define Media with the number of news on investigation. However, we have done a robustness with standalone *newscount*, which uses the number of total news reports on investigated firm, and the results are similar.
[5] In the main test, we exclude adverse audit opinions and disclaimers because we suppose that the media effect may not be strong enough to make auditors oscillate between clean opinions and adverse opinions or disclaimers. We have also added adverse audit opinions and disclaimers into *MAO* as a robustness test (not tabulated), and the results are quantitatively similar
[6] The time length between sanction announcement and investigation announcement is 2.5 years on average, which shows basically no possibility of the overlap between investigation news and sanction news.

the news headline includes translated key words including *CSRC*, *regulatory body*, *investigation*, or *violation*, etc.; (3) the news must be related to the CSRC's investigative action (we exclude reports that include key words but are about investigations by other regulators, routine CSRC news, or CSRC sanctions related to previous investigations). The number of news reports about an investigation and another news proxy are also used as a robustness test. We use the number of media reports about a specific event, as empirical studies suggest that the monitoring role of the press in correcting firm behavior may be exerted more effectively through firm-specific reports than through general reports (Pan et al., 2019).

Following Chen et al. (2010), Chen et al. (2013), Gul et al. (2013), and Yu et al. (2013), we control for the following characteristics of non-investigated firms and auditors: firm size (*Size*), cash (*Cash*), liquidity ratio (*Liquidity*), accounts receivable (*REC*), operating cash flow (*CFO*), rate of total asset growth (*Growth*), net profit (*Netprofit*), auditor brand (*BigTen*), auditor tenure (*AuditorTenure*), auditor's economic dependence on a specific client (*ClientImportance*), and audit firm size (*AuditorSize*). We include the total number of news reports during a given period (*MediaCoverage*) to control for general media coverage, which allows us to isolate the incremental effect of news about a specific investigation on auditor practices. Investigated firm's size (*InvesSize*) and whether investigated firm is SOE or not (*InvesSOE*) [7] are also included to further control media selection bias. We also include the auditor's educational background (*Education*), gender (*Female*), professional experience (*CPAyear*), and non-investigated firm' audit change (*AuditorChange*) to control for auditor attributes. Last, we control for industry and year fixed effects. All standard errors are clustered by firm to control for potential heteroskedasticity. The variable definitions are listed in the Appendix.

4. Results

4.1 Summary Statistics

Panel A of Table 1 shows the distribution of investigations, involved auditors, non-investigated engagements, and sample observations by year. The sample is included only if the non-investigated engagements have at least one of the former signing auditors of the investigated

[7] We thank an anonymous referee who suggests that the media selection bias should be addressed.

firm. The investigations are evenly distributed from 2002 to 2017. Panel B of Table 1 shows the descriptive statistics of the non-investigated engagements and auditors. The distributions of these variables, such as *Size*, *MAO*, *AuditorTenure,* and *ClientImportance*, are comparable to those in prior studies (Chen et al., 2010; Gul et al., 2013; Ge & Zhang, 2017).

Panel C of Table 1 shows the summary statistics regarding investigation news coverage. *MediaCoverage (a)* shows the number of news reports on investigated firms within three months after the disclosure of an investigation, while *MediaCoverage-last3month (b)* and *MediaCoverage-lastyear3month (c)* show the number of news reports on investigated firms during the previous three months and during the corresponding period in the previous year, respectively. We find that the total number of news reports rises significantly within three months after the disclosure of an investigation: 24 more than during the previous three months and 31 more than during the corresponding period in the previous year (both significant). The number of news reports on the specific investigation*, Inves news (f)*, is on average 18, accounting for around 75% and 58% of the increase in news reports, respectively. This indicates that the investigation announcement is the major reason for the increased media attention directed to investigated firms. Regarding the content of the investigation-related news reports, some merely rebroadcast firms' investigation announcements without adding any editorial content. Others provide more information and context, such as the investigated firms' past breaches, recent major events related to management restructuring, appointments, or resignations. Reports also sometimes include the perspectives of outside parties toward the particular firm or industry, such as recent speeches by regulators or analyst comments. Normally, the names of audit firms and auditors are not included, and other non-investigated firms audited by the auditors are very rarely mentioned.

[Insert Table 1 here]

Table 2 shows the correlation matrix for the non-investigated firm and auditor variables. It shows that the propensity of a non-investigated firm to receive MAOs is negatively associated with *Size*, *Cash*, *Liquidity*, *BigTen*, *Growth*, *CFO*, *Netprofit*, *MediaCoverage*, *AuditorTenure*, and *AuditorSize* and positively associated with *REC*, *ClientImportance*, and *Female*, which is consistent with prior studies (Chen et al., 2010; Gul et al., 2013).

[Insert Table 2 here]

4.2 Main Regression

Column (1) of Table 3 shows the results of Model (1), regarding whether an auditor is more likely to issue MAOs for his/her non-investigated engagements after an investigation is disclosed. The coefficient on *Post* is insignificant (coefficient = -0.36; t-stat. = -1.26), which shows that the spillover effect of the investigation is not significant. Column (2) presents the results of Model (2). The coefficient on *Post*D_Media* is positive and significant (coefficient = 2.20; t-stat. = 3.10); this indicates that if the number of news reports about an investigation is above the median, the non-investigated engagements of the involved auditor are more likely to receive MAOs.[8] Combining both tests, the results suggest that following the announcement that an audit engagement is under investigation, the involved auditor will not issue more MAOs for his/her non-investigated engagements; however, if the investigative action is widely reported by the media, the involved auditor will issue more MAOs for his/her non-investigated engagements[9]. Clearly, media coverage intensifies the spillover effect of regulatory investigations on non-investigated audit engagements[10]. In the next part, we seek to answer under what circumstances media coverage is more likely to intensify the spillover effects.

[Insert Table 3 here]

4.3 Other Analysis

4.3.1 DiD Model and PSM

Model (3) mitigates concerns that changes in the likelihood of issuing MAOs is common to both non-investigated engagement and non-investigated engagement's matched control firms, which relieves the concern that the media' s effect does not spread to the non-investigated firm through the shared auditor.

[8] We also test with year or industry fixed effects alone, and the results are robust.

[9] We perform a test based on the audit firm behavior, and the results show that media's effect is insignificant on the audit firm's behavior. The results are consistent with the intuition that audit firm is far more experienced in dealing with investigations than auditors, and the concern of media coverage is more on auditors rather than on audit firms.

[10] We also performed a test based on the whether the investigation reason is based on financial reporting or not, and the results do not show significant difference. We thank an anonymous reviewer for the suggestion.

$$MAO_{ijt} = \beta_0 + \beta_1 Post_{ijt} + \beta_2 Treat_{ijt} + \beta_3 D\_Media_{ijt} + \beta_4 Treat_{ijt}*Post_{ijt} + \beta_5 Treat_{ijt}*D\_Media_{ijt} + \beta_6 Post_{ijt}*D\_Media_{ijt} + \beta_7 Treat_{ijt}*Post_{ijt}*D\_Media_{ijt} + \beta_j Control_{ijt} + \varepsilon_{ijt}, \quad (3)$$

Model (3) examines whether the likelihood of issuing MAOs for non-investigated engagements increases with a higher level of media coverage from the pre-investigation to the post-investigation period compared with non-investigated engagement's PSM control firms. *MAO* takes a value of 0 if the non-investigated engagement or its control firm receives a standard unqualified opinion and 1 if the non-investigated engagement or its control firm receives an unqualified opinion with an explanatory paragraph or a qualified opinion; *Post* equals 1 if the observation of non-investigated engagement is in the post-investigation window (pseudo-event for non-investigated engagement's PSM control firms) and 0 if it is in the pre-investigation window (pseudo-event for PSM control firms non-investigated engagement's PSM control firms). The pre-investigation window (pseudo-event for non-investigated engagement's PSM control firms) is from the third year before an investigation announcement to the year preceding the investigation announcement, and the post-investigation window is from the year after investigation announcement to the third year following the investigation announcement. The investigation announcement year is not included for data clearance. *Treat* takes a value of 1 if firm is the non-investigated engagements of the involved auditor, and 0 otherwise. *D_Media* equals 1 if the number of news reports on an investigation is above the median and 0 otherwise.

Table 4 shows the results for Model (3) using the DiD model and PSM sample as a control group. The positive and significant coefficient on *Treat*Post*D_Media* (coefficient = 1.10; t-stat. = 2.31) indicates that as the level of media coverage of an investigation increases, the change in the likelihood of non-investigated engagements receiving MAOs between the pre-investigation and post-investigation periods is significantly higher than the corresponding change for non-investigated engagement's PSM control firms.

[Insert Table 4 here]

4.3.2 Firm Attributes

The information environment of the non-investigated engagement. As stated in the hypothesis development, an auditor may respond to media coverage of an investigation because such news can arouse suspicions in the stakeholders of a non-investigated firm engaging the same auditor; the higher the number of news reports about the investigation, the more skeptical stakeholders will be when interpreting the financial performance of the firm and the quality of the audit. The information environment of non-investigated firms is important in this process because if the non-investigated firms' information environment is opague, the stakeholders will have more difficulty obtaining information from the non-investigated engagements and have to rely more on external information sources, i.e., media. Stakeholders of such opague firms may be more attuned to media coverage concerning investigated engagements, and therefore involved auditors, in turn, may be more cautious when the stakeholders of the non-investigated firms rely more on the investigation news.

We use the opacity score ranked by the Shanghai and Shenzhen stock exchanges as the measure of a firm's opacity level. Stock exchanges evaluate listed firms' information disclosure based on attributes like information quality and timeliness and assign rankings from A (best) to D (worst). The data are disclosed in the CSMAR database. We measure the information environment with *D_Opacity*, which equals 1 if the ranking is below the median (closer to D), and 0 otherwise. As columns (1) and (2) of Table 5 show, the role of media coverage in increasing the auditor propensity to issue MAOs is more pronounced when a firm's information environment is relatively opaque (coefficient = 5.46; t-stat. = 3.17). This result lends support to our reasoning that the press exerts its role by reducing the cost of information searching for stakeholders.

The earnings management level of the non-investigated engagement. For the auditor, higher earnings management indicates higher risk. As such, an auditor facing media coverage of an investigation will exercise particular caution (i.e., issue more MAOs) with respect to non-investigated engagements with a higher level of earnings management. In our study, we use a modified Jones model to estimate discretionary accruals; *D_EM* equals 1 if the absolute value of abnormal discretionary accruals is above the median and 0 otherwise. As columns (3) and (4) of Table 5 show, the role of media coverage in increasing the auditor propensity to issue MAOs is more pronounced when the firm has a higher level of earnings management (coefficient = 9.06; t-stat. = 5.96). We also measure *D_EM* using the median of the absolute value of discretionary accruals in the specific industry and year, and the results are quantitatively similar (not tabulated).

[Insert Table 5 here]

4.3.3 Auditor Attributes

As discussed in the hypothesis development, media can affect the involved auditor's behavior in non-investigated engagements through auditor's reputation management (direct channel), and through the pressure of stakeholders and regulators' closer monitor and potential action (indirect channels). We conjecture that auditor type and auditor busyness will affect auditor' ability to respond to media. Specifically, if the auditor is burdened with a heavy workload, either due to being the engagement auditor or due to having a large number of engagements on hand, he or she would have limited attention to the external media coverage and less capacity to evaluate and react to the potential action that might be taken by the stakeholders and regulator. Therefore, the media's effect on auditor behavior would be more pronounced for auditors who are review auditors or who have less engagements.

Review auditor. In China, at least two auditors must sign an audit report, a review auditor and an engagement auditor. The engagement auditor leads the fieldwork and reviews the working papers prepared by the engagement team. The work of the engagement auditor is detailed. The review auditor, meanwhile, reviews the final audit report and significant audit issues. The review auditor, usually being more experienced, makes the final professional judgment in the report-issuing stage based on the work done by the engagement team. With extensive audit experience, the review auditor normally has more say in determining whether the audit team has gathered sufficient audit evidence to form an audit opinion. In addition, the review auditor is likely to be more conservative in making professional judgments and may attach more importance to information from external sources, including the media. As columns (1) and (2) of Table 6 show[11], a higher number of news reports about an investigation can increase the auditor propensity to issue MAOs for non-investigated engagements only when the involved auditor is the review auditor in the non-investigated engagements (coefficient = 7.71; t-stat. = 3.78).[12]

[11] The main tests in Table 3 shown the results of including both signing auditors, and the results are similar.

[12] To further support the idea that the different effects between review and engagement auditors lies in audit experience, we categorize auditors as experienced auditors if the years they have held a CPA license is above the median. Although not tabulated, the results show that a higher number of news reports can intensify the spillover effect of an investigation on the auditor propensity to issue MAOs for non-investigated engagements only when the investigated auditor is an experienced auditor.

Auditor busyness. Studies find that a heavy workload reduces the amount of time and effort an auditor can allocate for each client and tends to lead to lower audit quality. For instance, auditor busyness can result in an increase in discretionary accruals (Caramanis & Lennox, 2008; Lopez & Peters, 2012; Lopez & Pitman, 2014) and a decrease in the propensity to issue going concern opinions (Sundgren & Svanstrom, 2014; Gul et al., 2017). In other words, higher engagement quantity can come at the cost of delivering low-quality audits. A review auditor needs time to gather and respond to news about an investigation. If an auditor spends excessive time focused on review work and other routine audit work, he/she may have less sensitivity to external media reports. If engagements for which an auditor serves as the review auditor within a given year account for more than 75% of the engagement distribution, we define him/her as a busy auditor. As columns (3) and (4) of Table 6 show, a higher number of news reports about an investigation can increase the auditor propensity to issue MAOs for non-investigated engagements only when the involved auditor is not a busy auditor (coefficient = 3.82; t-stat. = 4.74).

[Insert Table 6 here]

4.3.4 Media Attributes

Opinion leader. Opinion leaders are people who exert a large influence on the members of their networks through the information they disseminate (Chaney, 2001). In the media, opinion leaders can be influential in shaping public perceptions of reported events and in persuading readers of their credibility (Lazarsfeld et al., 1948, etc.). We use the Baidu search index of each media personality to define whether he/she is an opinion leader. Other studies have also used the Baidu search index, the largest search engine in China, to study the role of online media in delivering information to Internet users (Shen et al., 2018). If the Baidu search index of a media personality is above 75% of the distribution, we define him/her as an opinion leader. Highly searched media personalities are likely held in high esteem by audiences, who may view news reported by them as more credible. From one perspective, a large amount of news from opinion leaders will likely motivate an auditor to rethink whether he/she has provided adequate audit quality and prompt him/her to adopt a more conservative approach. From another perspective, a large amount of news from opinion leaders may attract attention to the involved auditor, even from the stakeholders of his/her non-investigated engagements. Taken together, the auditor may issue more MAOs for non-investigated engagements to protect himself/herself from potential trouble.

Table 7 shows that a higher level of media coverage can intensify the spillover effects of an investigation on the auditor propensity to issue MAOs for non-investigated engagements only when the news comes from an opinion leader (coefficient = 9.68; t-stat. = 4.80). As a robustness test, instead of using the Baidu search index to define opinion leaders, we consider media status who have backgrounds in market-oriented media (rather than state-controlled media). The results show that news from such sources can intensify the spillover effects of investigations to a greater extent (not tabulated). This finding is consistent with You, Zhang, and Zhang (2017), who find that market-oriented media are more critical, more accurate, more comprehensive, and timelier than state-controlled media.

[Insert Table 7 here]

4.4 Robustness Tests

To validate our causal findings, we perform placebo analyses. We suppose that only news about an investigation can help intensify the spillover effect of the investigation on non-investigated engagements, as such news conveys some message about the shared auditor that the stakeholders of the non-investigated engagements care about. To reflect the case in which the involved auditor does not change his/her audit behaviors in non-investigated engagements in response to regular media coverage, we construct *False_Media*, which equals 1 if the number of news reports about a firm within the false period is above the median and 0 otherwise. The false period is based on the number of months before the investigation: [-12, -9], [-9, -6], and [-6, -3] in columns (1), (2), and (3), respectively. This new measure of news is not related to the regulatory investigation, but represents only general media attention. Table 8 shows that *Post*False_Media* is not significant, which supports the effect of media coverage on the investigation.

[Insert Table 8 here]

Table 9 presents a robustness check with different indicators for media coverage of an investigation. In column (1), we use the number of news reports on an investigation instead of a dummy variable. The result supports the positive effect of the media in intensifying the spillover effect of an investigation (coefficient = 0.08; t-stat. = 2.39). This test suggests that there is a quantitative effect of each news report; the auditor is more likely to issue MAOs for non-investigated engagements if there are at least 17 news reports. In column (2), we perform a robustness test with an alternative measure of news to overcome possible subjectivity in identifying news about an investigation. *News proxy* is the number of news reports about a focal firm within three months after the disclosure of an investigation, less the number of news reports about the firm within the corresponding period in the previous year. We choose the corresponding period in the previous year as the base to mitigate the impact of the business cycle. The results support the media's positive effect in making the auditor issue MAOs for non-investigated engagements (coefficient = 0.05; t-stat. = 3.01). In column (3), we only consider the short news, i.e., news that contains less than 10 sentences. Short news usually only reports about the investigation announcement and do not include auditor's information. This strict setting is to test whether auditors change behavior in the non-investigated firms even if their names could not be included in the news. The results support the media's positive effect in making the issue MAOs for non-investigated engagements (coefficient = 0.91; t-stat. = 2.17).

[Insert Table 9 here]

To address the sample survival bias that some of the involved auditors stop signing any audit after the investigation, we have done a robustness test to present a robustness test. In Table 10, auditors that discontinued signing audit reports within three years after the release of investigation announcement are excluded. The result remains quantitatively similar (coefficient = 2.35, t-stat.= 3.19).

[Insert Table 10 here]

We narrow the test window from three years before and after the disclosure of an investigation to two years or one year. The coefficients on *Post*D_Media* news for the two-year window and one-year window are 2.16 and 3.83, respectively, and both are significant at the 5% level (not tabulated). This result suggests that the media's effect is strongest the year after the disclosure of an investigation and that the possible overlapping between the post-investigation window and the post-sanction window is not a problem.

According to Huang et al. (2020), there are computational issues in using the probit model when including more than one fixed effect. We rerun the regressions when including two fixed effects with OLS as a robustness check. The results (not tabulated) remain substantially the same.

We change the control variable for media coverage from news within three months after the disclosure of an investigation to news within the corresponding period in the previous year and news within three months before the disclosure of an investigation, and the results remain substantially the same (not tabulated).

5. Conclusions

Our study finds that the spillover effect of a regulatory investigation is not strong initially, but the effect intensifies as media coverage of the investigation increases. Specifically, if there is a sufficiently high number of news reports on the investigation, the non-investigated engagements of the involved auditor are more likely to receive MAOs. Further tests suggest that this augmenting effect of media coverage exists only when the information environment of the non-investigated engagement is opaque, when the non-investigated engagement has a relatively high level of earnings management, when the involved auditor is the review auditor, when the involved auditor is not a busy auditor, and when news comes from an opinion leader. Our finding that the financial press plays a positive mediating role in intensifying the spillover effect of investigative actions on non-investigated audit engagements has practical implications for policy makers. It will take significant time and effort to perfect the litigation and enforcement system so as to build a healthy investment environment and maintain stakeholder confidence. In the meantime, a far more efficient and effective approach may be to relax constraints on the financial press, allowing it to play its part in heightening the spillover effects of regulatory investigations on audit quality.

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Tables

Table 1: Sample Selection and Summary Statistics

Panel A: Sample Distribution

Year	No. of investigations	No. of involved auditors	No. of non-investigated engagements	No. of sample observations
2001	3	6	5	9
2002	1	2	19	49
2003	6	14	21	84
2004	4	9	19	76
2005	6	14	33	72
2006	4	11	21	104
2007	3	6	23	67
2008	3	8	11	23
2009	1	3	1	2
2010	5	14	26	78
2012	2	4	6	18
2013	2	4	23	48
2014	2	5	4	12
2015	8	19	33	125
2016	4	8	11	37
2017	2	6	13	38
Total	56	133	269	842

Panel B: Descriptive Statistics (n = 1,404)

Variable	Mean	Median	25%	75%	SD
MAO	0.09	0	0	0	0.29
InvesSOE	0.34	0	0	1	0.47
InvesSize	2.44	2.29	1.82	3.33	1.04
AuditorChange	0.36	0	0	1	0.48
Size	2.81	2.60	2.08	3.40	1.22
Cash	6.61	2.24	0.86	5.69	15.80
Liquidity	1.70	0.95	0.57	1.69	2.36
REC	0.23	0.20	0.08	0.34	0.18
BigTen	0.26	0	0	1	0.44
Growth	0.17	0.08	-0.02	0.23	0.41
CFO	1.80	0.43	-0.02	1.56	6.50
Netprofit	1.38	0.36	0.09	0.95	4.78
ClientImportance	0.05	0.02	0	0.05	0.13
AuditorTenure	5.65	5	3	7	3.74
AuditorSize	6,625.59	909.01	304.39	3,589.36	12,871.69
Education	2.88	3	2	3	0.66
Female	0.2	0	0	0	0.4
CPAyear	9.15	9	7	12	5.14

The variables are defined in the Appendix.

Panel C: Descriptive Statistics for News (n = 56)

Variable	Mean
MediaCoverage (a)	56
MediaCoverage-last3month (b)	32
MediaCoverage-lastyear3month (c)	25
diff-last3month (d = a-b)	24
diff-lastyear3month (e = a-c)	31
Inves news (f)	**18**
%-last3month (g = f/d)	75%
%-lastyear3month (h = f/e)	58%

The variables are defined in the Appendix.

Table 2: Correlation Matrix

Variables	(1) MAO	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
(2) Post	0.01																			
(3) Post*D_Media	0.02	0.52*																		
(4) InvesSOE	0.01	0.08*	0.13*																	
(5) InvesSize	-0.08*	-0.18*	0.01	-0.14*																
(6) AuditorChange	-0.07*	-0.55*	-0.28*	-0.04	0.19*															
(7) Size	-0.19*	-0.01	0.11*	-0.05*	0.28*	0.01														
(8) Cash	-0.10*	0.04	0.17*	-0.01	0.10*	-0.01	0.69*													
(9) Liquidity	-0.13*	0.04	0.17*	0.04	-0.07*	0.00	-0.13*	0.00												
(10) REC	0.09*	-0.06*	-0.12*	-0.02	0.04	0.08*	-0.12*	-0.21*	-0.19*											
(11) BigTen	-0.07*	0.14*	0.04	0.15*	-0.15*	0.04	0.07*	0.11*	0.12*	-0.03										
(12) Growth	-0.10*	0.03	0.05	0.01	0.01	0.02	0.15*	0.12*	-0.00	-0.11*	0.06*									
(13) CFO	-0.08*	0.05*	0.00	0.03	0.13*	-0.05*	0.47*	0.41*	-0.09*	-0.09*	0.08*	0.05*								
(14) Netprofit	-0.13*	0.04	0.10*	0.02	0.09*	-0.02	0.60*	0.79*	-0.06*	-0.17*	0.11*	0.15*	0.53*							
(15) MediaCoverage	-0.05*	-0.17*	0.10*	-0.23*	0.27*	0.25*	0.19*	0.18*	0.15*	-0.15*	0.11*	0.01	-0.00	0.06*						
(16) ClientImportance	0.05*	-0.03	0.00	-0.01	0.10	0.01	0.23*	0.24*	-0.14*	-0.02	-0.16*	0.04	0.21*	0.25*	-0.08*					
(17) AuditorTenure	-0.07*	0.06*	0.03	0.02	-0.02	-0.07*	0.12*	-0.01	-0.06*	-0.10*	0.04	-0.08*	0.08*	-0.01	0.11*	-0.12*				
(18) AuditorSize	-0.09*	0.07*	0.23*	0.05*	0.05*	-0.00	0.29*	0.23*	0.15*	-0.13*	0.39*	0.04	0.24*	0.18*	0.42*	-0.19*	0.20*			
(19) Education	0.03	0.14*	0.21*	-0.04	-0.04	0.00	0.02	0.11*	0.13*	-0.03	0.08*	0.03	0.01	0.08*	0.09*	-0.00	-0.15*	0.04		
(20) Female	0.05*	-0.01	-0.10*	-0.06*	0.10*	0.04	0.00	-0.06*	-0.01	-0.00	-0.09*	-0.04	0.03	-0.03	-0.01	0.00	-0.07*	-0.04	0.00	
(21) CPAyear	-0.02	0.17*	0.26*	0.20*	0.18*	0.01	0.12*	0.13*	0.07*	-0.13*	0.13*	0.07*	0.06*	0.11*	0.24*	-0.01	0.06*	0.27*	0.13*	-0.13*

Table 3: Regression on the Media's Augmenting Effect

Y=MAO	(1) Model 1		(2) Model 2	
	Coeff.	t-stat	Coeff.	t-stat
Post	-0.36	(-1.26)	-0.71**	(-2.31)
Post*D_Media			2.20***	(3.10)
InvesSOE	0.26	(1.04)	-0.01	(-0.03)
InvesSize	-0.11	(-0.96)	-0.21**	(-2.00)
AuditorChange	-0.58**	(-2.03)	-0.55**	(-2.05)
Size	-0.90***	(-4.65)	-0.91***	(-4.70)
Cash	0.05	(0.81)	0.05	(0.90)
Liquidity	-0.35**	(-2.45)	-0.30**	(-2.27)
REC	0.92	(1.41)	1.09	(1.64)
BigTen	-0.06	(-0.15)	0.10	(0.26)
Growth	-0.31	(-0.73)	-0.52	(-1.23)
CFO	0.06	(1.06)	0.07	(1.43)
NetProfit	-0.77***	(-5.55)	-0.74***	(-5.25)
MediaCoverage	0.00	(0.29)	0.00*	(1.94)
ClientImportance	-0.92	(-0.49)	-1.07	(-0.70)
AuditorTenure	-0.09**	(-2.34)	-0.08**	(-2.07)
AuditorSize	0.00	(0.22)	0.00	(0.35)
Education	0.14	(0.91)	0.15	(0.91)
Female	-0.13	(-0.49)	-0.13	(-0.52)
CPAyear	0.01	(0.62)	0.01	(0.27)
N	806		806	
Industry FE	YES		YES	
Year FE	YES		YES	
Pseudo R^2	0.522		0.543	

***, **, * Denote significance at the 1%, 5%, and 10% significance levels, respectively, based on two-tailed tests.

Table 4: DiD test on Media's Effect

Y=MAO	Model 3	
	Coeff.	t-stat
Post	-0.70**	(-2.10)
Treat	-0.03	(-0.19)
D_Media	-0.38	(-1.23)
Post*D_Media	0.40	(0.71)
Treat*D_Media	-0.16	(-0.73)
Treat*Post	-0.06	(-0.21)
Treat*Post*D_Media	1.10**	(2.31)
Observations	1,490	
Control Variables	YES	
Industry FE	YES	
Year FE	YES	
Pseudo R^2	0.350	

***, **, * Denote significance at the 1%, 5%, and 10% significance levels, respectively, based on two-tailed tests.

Table 5: Subgroup Analysis Based on Firm Attributes of the Non-investigated Engagements of the Involved Auditor

	(1)		(2)		(3)		(4)	
Y=MAO	D_Opacity=1		D_Opacity=0		D_EM=1		D_EM=0	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Post	-0.81	(-1.12)	-2.45***	(-3.90)	-1.95***	(-2.90)	-2.77	(-1.45)
Post*D_Media	5.46***	(3.17)	0.51	(0.47)	9.06***	(5.96)	-3.59	(-0.86)
Observations	420		386		443		363	
Control Variables	YES		YES		YES		YES	
Industry FE	YES		YES		YES		YES	
Year FE	YES		YES		YES		YES	
Pseudo R^2	0.750		0.723		0.783		0.783	

***, **, * denote significance at the 1%, 5%, and 10% levels, respectively, based on two-tailed tests.
1. Detailed definitions of the variables are outlined in the Appendix.
2. We use a probit model.

Table 6: Subgroup Analysis Based on Attributes of the Involved Auditor

Y=MAO	(1) Review Auditor=1		(2) Review Auditor=0		(3) Busy Auditor=1		(4) Busy Auditor=0	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Post	-0.50	(-0.54)	-1.16**	(-2.24)	0.22	(0.13)	-0.11	(-0.27)
Post*D_Media	7.71***	(3.78)	-0.28	(-0.27)	-2.69	(-0.66)	3.82***	(4.74)
Observations	512		294		292		514	
Control Variables	YES		YES		YES		YES	
Industry FE	YES		YES		YES		YES	
Year FE	YES		YES		YES		YES	
Pseudo R^2	0.835		0.624		0.761		0.649	

***, **, * denote significance at the 1%, 5%, and 10% levels, respectively, based on two-tailed tests.
1. Detailed definitions of the variables are outlined in the Appendix.
2. We use a probit model.

Table 7: Subgroup Analysis Based on Media Attributes

	(1)		(2)	
Y=MAO	Opinion Leader=1		Opinion Leader=0	
	Coeff.	t-stat	Coeff.	t-stat
Post	-1.16*	(-1.66)	0.10	(0.09)
Post*D_Media	9.68***	(4.80)	0.42	(0.00)
Observations	569		336	
Control Variables	YES		YES	
Industry FE	YES		YES	
Year FE	YES		YES	
Pseudo R^2	0.807		0.850	

***, **, * denote significance at the 1%, 5%, and 10% levels, respectively, based on two-tailed tests.

1. Detailed definitions of the variables are outlined in the Appendix.
2. We use a probit model.

Table 8: Placebo Test

Y=MAO	(1) Month [-12, -9]		(2) Month [-9, -6]		(3) Month [-6, -3]	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Post	-0.56	(-1.32)	-0.56	(-1.34)	-0.36	(-1.17)
Post*False_Media	0.86	(1.46)	0.82	(1.53)	0.18	(0.42)
Observations	806		806		806	
Control Variables	YES		YES		YES	
Industry FE	YES		YES		YES	
Year FE	YES		YES		YES	
Robust SE	YES		YES		YES	
Pseudo R^2	0.513		0.513		0.507	

***, **, * denote significance at the 1%, 5%, and 10% levels, respectively, based on two-tailed tests.
1. Detailed definitions of the variables are outlined in the Appendix.
2. We use a probit model.

Table 9: Test on the Different Indicators for Investigation News

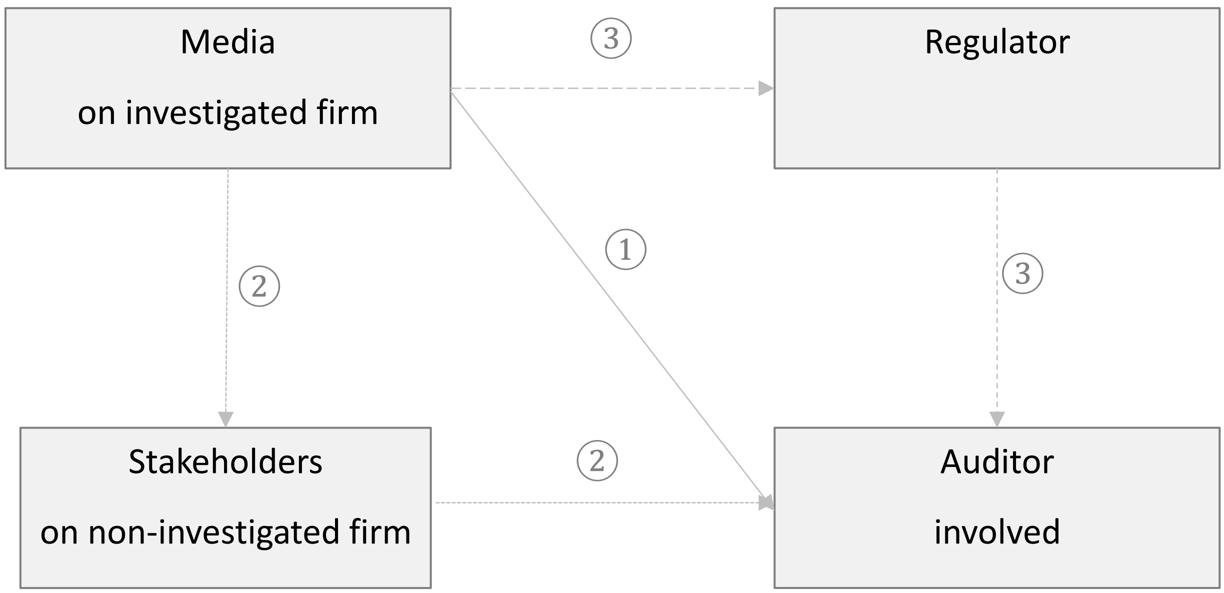
	(1)		(2)		(3)	
Y=MAO	InvesNews		News proxy		Short news only	
	Coeff.	t-stat	Coeff.	t-stat	Coeff.	t-stat
Post	-0.72**	(-2.26)	-0.67**	(-2.28)	-0.58*	(-1.95)
Post*Media	0.08**	(2.39)	0.05***	(3.01)	0.91**	(2.17)
Observations	806		806		806	
Control Variables	YES		YES		YES	
Industry FE	YES		YES		YES	
Year FE	YES		YES		YES	
Pseudo R^2	0.534		0.539		0.531	

***, **, * denote significance at the 1%, 5%, and 10% levels, respectively, based on two-tailed tests.
1. Detailed definitions of the variables are outlined in the Appendix.
2. We use a probit model.

Table 10: Test on Excluding auditors that discontinued signing after the investigation

	(1)	
Y=MAO	Exclude discontinued auditor	
	Coeff.	t-stat
Post	-0.62**	(-2.19)
Post*D_Media	2.35***	(3.19)
Observations	693	
Control Variables	YES	
Industry FE	YES	
Year FE	YES	
Pseudo R2	0.553	

Figure 1: Channels of how media affect auditor's behavior in the non-investigated firms



Appendix: Variable definitions

Variable	Definition
AuditorChange	Dummy variable that equals 1 if non-investigated firm changes auditors (stops hiring the investigated firm's auditors) after the investigation year, and 0 otherwise.
AuditorSize	Absolute value of the total assets of all the auditee firms of an audit firm in hundreds of millions of RMB.
AuditorTenure	Auditor tenure of the audit firm in numbers of years.
BigTen	Dummy variable that equals 1 if the firm is audited by a top 10 auditor in China, and 0 otherwise.
BusyAuditor	Dummy variable that equals 1 if the number of engagements for which involved auditors serve as review partners within a given year is more than 75% of the distribution, and 0 otherwise.
Cash	Non-investigated firms' absolute value of cash and short-term investments in hundreds of millions of RMB.
CFO	Non-investigated firms' absolute value of operating cash flow in hundreds of millions of RMB.
ClientImportance	Audit fee of a client divided by the audit firm's total audit revenue in that year.
CPAyear	The number of years since the auditor got his/her CPA certificate.
D_EM	Dummy variable that equals 1 if non-investigated firms' absolute value of discretionary accruals (modified Jones model) is above the median, and 0 otherwise.
D_Media	Dummy variable that equals 1 if the number of news reports on the investigation is above the median, and 0 otherwise.
D_Opacity	Dummy variable that equals 1 if non-investigated firms' information disclosure ranking given by the stock exchanges is below the median, and 0 otherwise.
Education	Dummy variable that equals 1 if the auditor has a high school diploma or below; 2 if the auditor has an associate degree; 3 if the auditor has a bachelor's degree; 4 if the auditor has a master's degree; and 5 if the auditor has a doctorate degree.
ExperiencdAuditor	Dummy variable that equals 1 if the involved auditor has held a CPA for more than the median number of years, and 0 otherwise.
Female	Dummy variable that equals 1 if the auditor is female, and 0 otherwise.
False_Media	Dummy variable that equals 1 if the number of news reports about the firm within the false period is above the median, and 0 otherwise. The false period is based on the number of months before the investigation: (-12, -9), (-9, -6), and (-6, -3), respectively.
Growth	Percentage of non-investigated firms' total asset growth from the beginning to the end of year.
InvesNews	Number of news reports on the investigation, which need to meet three criteria: (1) appearing within three months after the disclosure of investigation; (2) including the following key words in the headline (in Chinese characters): "China Securities Regulatory Commission (CSRC), Securities Regulatory Bureau, regulatory body, file a case,

	investigation, investigated, violation"; (3) having direct relevance to CSRC investigative actions. (Reports that include the keywords but are about investigations by other regulators, routine CSRC news, or CSRCs sanctions resulting from previous investigations are deleted.)
InvesSize	The investigated firm's natural log of the total assets.
InvesSOE	Dummy variable that equals 1 if the investigated firm is a state-owned enterprise, and 0 otherwise.
Liquidity	Non-investigated firms' liquid assets divided by current liability at the end of year.
MAO	Dummy variable equals to zero if non-investigated firm receives standard unqualified opinion, one if non-investigated firm receives unqualified opinion with explanation paragraph or qualified opinion.
MediaCoverage	Total number of news on the investigated firms within three months after the disclosure of investigation.
MediaCoverage-last3month	Total number of news on the investigated firms within three months before the disclosure of investigation.
MediaCoverage-lastyear3month	Total number of news on the investigated firms during the corresponding period last year.
Netprofit	Non-investigated firms' the net profit of the firm in hundreds of millions of RMB.
News proxy	Number of news about the investigated firms within three months after the disclosure of investigation, less the number of news about the investigated firms within corresponding period last year.
OpinionLeader	Dummy variable equals to one if media's Baidu searching index is above 75% of the distribution, and zero otherwise.
POST	Dummy variable equals to one if the observation is in the post investigation window; zero if it is in the pre-investigation window. The pre investigation window is from the third year before an investigation to the year preceding the investigation, and the post investigation window is from the year after investigation to the third year following the investigation. The investigation year is not included for data clearance.
REC	Non-investigated firms' sum of accounts receivable over total assets.
ReviewAuditor	Dummy variable equals to one if the involved auditor is the review partner in the other engagements; and zero otherwise.
Size	Non-investigated firms' natural log of the total assets.
Treat	Dummy variable that equals 1 if firm is the non-investigated engagements of the involved auditor, and 0 otherwise

Paper Number:P011

Tone Management Between Languages

Hung Wan KOT*
University of Macau
Macau

Lewis H.K. TAM
University of Macau
Macau

Xin XU
University of Macau
Macau

*The corresponding author

Abstract

We examine the impact of tone management between languages, by focusing on the Chinese and English versions of the profit warnings and positive alerts in Hong Kong market. The abnormal returns are negatively associate to positive tone management in profit warnings, but not for positive alerts. The results are mainly driven by the penny stocks and local firms. We exam the mechanisms and find penny stocks and local firms contain less information in their announcements and they run less real businesses. Moreover, firms tend to use more positive words in Chinese version in pandemic period than non-pandemic period.

Long abstract

Information is important in the financial market as it affects security valuation and capital allocation. Stock prices react to new information released in the markets through investors' trading on the news. In the last two decades, textual analysis literature find that textual information contains important information which predicts future stock returns (Huang Teoh and Zhang, 2014; Loughran and McDonald, 2016; Tetlock, 2007; Henry, 2008). The advancement in textual analysis is largely limited to English-speaking countries. Existing studies do not answer whether two language versions of the same piece of information have the same impact on investors.

The answer to this question is important because bilingual or multilingual publication of the same information is common in the financial markets globally. Critical discourse analysis suggests that institutional, social, political, and cultural structures frame language patterns in expression (Gao, 2020). Investors who are only proficient in one language will read news in that language rather than comparing the information content in all versions. This leaves room for corporate managers to manage investors' expectations by manipulating the tone of news in the language of the dominant investor group.

We address two questions in the paper: whether tone management between two languages has an impact on investors? If yes, is such sentiment impact asymmetric between the positive and negative news? To answer these questions, we examine the content of profit warnings and positive alerts of listed companies in Hong Kong, where Hong Kong Exchange (HKEx) uses "profit warning" for negative news related to profits and "positive alert" for positive news related to profits. We investigate these questions in Hong Kong stock markets for two reasons: First, HKEx requires firms to release information to investors and regulators in Chinese and English simultaneously. Second, both Chinese and English are official languages in Hong Kong. The high level of proficiency in both languages may not be shared by cross-listing cases that are studied by previous works (Lang and Stice-Lawrence, 2015).

We focus on profit warnings and positive alerts because such announcements have high media coverage, attract the investors' attention, and affect the stock price significantly (Jackson and Madura, 2003; Skinner, 1994). Moreover, a profit warning or positive alert is brief and inform investors of the issuing firm's future profits. Investors can digest the news immediately and trade accordingly.

We download both Chinese and English versions of all profit warnings and positive alerts from the website of HKEx for the period from 2013 to 2021. We translate the Chinese version into English in Python. Following Loughran and McDonald's (2011), the positive (negative) tone is defined as the number of positive (negative) words scaled by the total number of words. The positive tone management between Chinese and English (*Positive_TM*) is defined as the difference between the translated positive tone and the English version positive tone; the negative tone management between Chinese and English (*Negative_TM*) is defined as the difference between the translated negative tone and the English version negative tone. If the Hong Kong stock market is efficient, there is no association between the stock returns and *Positive_TM* or *Negative_TM*.

We find that tone management significantly impacts stock prices for profit warnings but not for positive alerts. The abnormal stock returns in [-3, +3] event days are lower for firms with more positive tone management. It indicates that the financial market is efficient, and tone management cannot mitigate the negative impact of profit warnings. We further find that results are concentrated in the penny stocks (i.e., price less than 1 HKD) and local stocks and unrelated to short selling eligibility and stock ownership structure.

To understand more of tone management, we construct two additional textual measures: the percentage of specificity words (Hope, Hu and Lu, 2016; Dyer, Lang and Stice-Lawrence, 2017) and the percentage of hard information (Blankespoor, 2019; Dyer et al., 2017). We find that penny stocks (local stocks) provide less specific and less hard information than non-penny stocks (mainland firms). The finding is also consistent with Hope et al. (2016) that firms with stronger incentives to hide information are less likely to provide specific information.

We further check whether tone management is related to the real business of the firms. We examine the difference in the sales turnover, operating cash flow, and tangible assets for different groups of firms. We find that penny stocks (local stocks) have fewer real businesses than non-penny stocks (mainland stocks). Moreover, we also find that firms with better corporate governance will have more negative tone management in their profit warnings.

Finally, we investigate any difference in tone management during the Covid-19 pandemic and non-pandemic periods. The sentiment will be stronger during the pandemic as most firms are affected negatively by Covid-19. We find that firms tend to have more positive tone management in the Chinese version, no matter is a profit warning or positive alert.

Our study makes the following contributions to the literature. First, the study contributes to the textual analysis literature. To the best of our knowledge, this is the first study relating investors' reactions to the same information provided in different languages. Second, our study also contributed to the textual analysis research in the Chinese financial markets. We echo Huang, Wu, and Yu(2020) that the financial textual research and applications in Hong Kong are underdeveloped. Focusing on a unique setting of the news release in Chinese and

English simultaneously, our results call for regulators' attention to tone management between languages. Finally, our study contributes to the profit (earnings) warning literature. We perform textual analysis on the profit warnings in the Hong Kong market to investigate the relationship between the stock price reaction and tone management between Chinese and English. To our knowledge, this study is the first to use textual analysis in the profit warning literature.

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Paper Number:P012

HRM and Management Professionals: Expertise, Duty and Managing Corporate Ethics.

Michael SEGON*
Central Queensland University
Australia

Andrew ROBERTS
Central Queensland University
Australia

*The corresponding author

1.0 Introduction

Organisations are typically defined as social entities producing goods and services to achieve organisational goals (Robbins, 1990). As Mintzberg (1983; 1985; 1990) notes the primary function of an organisation is undertaken by the operating core, or the workers, who make the products or provide the services in pursuit of organisational goals (Cameron, 1980, Robbins & Barwnell, 1996, Daft 2020). However, organisations also need administrative structures which Mintzberg described as the technocratic and support functions. These include many departments such as finance, IT Marketing and HR. etc who provide internal services to the firm. The importance of these specialist disciplines cannot be underestimated as they allow the organisation to function effectively.

Higher education institutions such as Colleges and Universities play a significant role in educating these specialists and organisations rely on the graduates to have acquired the necessary knowledge, skills and capabilities to perform critical support and technocratic functions. Specific associations representing these disciplines and individuals suggests increasing professionalisation of these occupations. This is true of Human Resource Management and General Management with both undergraduate, postgraduate qualifications and professional associations that perform important functions to oversee and enhance this discipline. An inherent assumption of professions and its members is that they have acquired high degrees of expert knowledge and are able to exercise this to solve problems for clients and organisations within the limits or boundaries of that knowledge.

2.0 Increasing Importance of Ethics, CSR and ESG

Within the international business context, there is an increasing importance of ethics, corporate social responsibility and more recently environmental, sustainability and governance (ESG), as reflected by the use of codes of ethics and conduct, whistle blowing systems, CSR policies and training in ethical decision making, ethical leadership and the increasing use of the United Nations Sustainability goals to guide and enhance corporate strategy.

However, with some exceptions, there appears to be no detailed qualifications in business/ professional or applied ethics offered by Australian and Asian Universities, as distinct from single subjects in ethics and courses/degrees bio-medical ethics and philosophy degrees or postgraduate programs.

2.1 Organisational Ethics and Human Resource Management

A preliminary review of major corporations and public sector organisations suggests that the responsibility for developing ethics, CSR, and ESG policies, implementing, communicating and maintaining ethical culture, appears to be delegated mostly to Human Resource managers and Human Resource Departments. The question then arises as to whether this “profession” possesses the expertise, knowledge and capability in business ethics and the sub fields of csr, sustainability and governance, as reflected in formal HRM and Management qualifications, to ensure an informed approach.

3.0 Expert knowledge and capabilities required of "ethics or csr managers"

According to Trevino and Nelson (2014, 2021) ethics is an integral part of the organisation's overall culture. Designing an ethical organisation means systematically analysing all aspects of the organisation's structure and culture, aligning them so that they support ethical behaviour and discourage unethical behaviour. This can be termed the *institutionalisation of corporate ethics* and is a multi- faceted approach that 'main-streams' concerns about the ethical issues facing organisations (Preston, 1994; Sampford, 1994; Ferrell and Fraedrich and Ferrell 2021). Many ethical theorists and researchers such as Trevino and Nelson (2014, 2021); Nave and Ferreira (2019); Bice (2017); Charlo, Moya, and Muñoz (2017); Asgary and Li, (2016); Painter Morland (2015); Lagan (2005); Hoffman, Driscoll and Painter-Morland (2001); Hoffman (1995); Kitson and Campbell (1996), and Ritchie (1996) have developed similar approaches which detail the components of an organisational ethical framework enabling ethical cultures to develop. These approaches affirm that ethics must be managed like any other corporate function characterised by a structured approach.

Driscoll and Hoffman (2000) suggest that whilst ethical responsibility should be assumed by all members of the organisation, the coordination and management of the system designed to establish, inform and maintain those standards cannot be left to each individual but rather needs to be seen as a function within the organisation. Ferrell Fraedrich and Ferrell (2021) maintain the importance of having a manager in charge of the ethics program to insure effectiveness. Llopis, Reyes Gonzales and Gasco (2007) Hoffman (1995), Segon (2012) describe an ethics officer or manager as having responsibility to oversee the corporate ethics program, developing appropriate standards or codes of ethics and implementation of systems designed to build and maintain an ethical culture and help steer the company around ethical risks and challenges.

3.1 Expert Knowledge required by Ethics/CSR Managers

The terms ethics/csr manager, compliance manager and more recently corporate sustainability officers, often refer to the same function (Velte & Stawinoga, 2021; Fu et al., 2020; Strand, 2013, 2014). Collins (2009) identifies that the appointment of an ethics csr manager must be based on expertise and an understanding of the organisation. Adobor (2006) states that the role is unique in organisation in that it faces multiple and competing expectations from internal and external organisational stakeholders. This is consistent with Llopis, Reyes-Gonzales, and Gasco (2007) who suggest that the essential requirement of an ethics /csr manager can be summarised as having a wider knowledge of the firm, mastering management techniques as well as theoretical and practical issues related to business ethics as with other senior executives having hierarchical authority or legitimate power to exert influence within the organisation.

Orme and Ashton (2003) and Segon and Booth (2019) maintain that ethics as a foundation competency and that managers and leaders cannot be expected to make ethical decisions or devise ethical processes without an understanding of ethics conceptually and practically, typically through knowledge and learning. Izraeli and BarNir (1998) state that ethics/csr manager must have expert knowledge in moral awareness and ethical theories (McNamee, 1992) and experienced in resolving ethical dilemmas. Such conceptual understanding is necessary to enable identification of moral dilemmas, an analysis of consequences of decisions and the promotion of social responsibility through educational programs.

Adobor (2006); Llopis, Reyes-Gonzales, and Gasco (2007); Izraeli and BarNir (1998) Trevino and Nelson (2014, 2021) Driscoll and Hoffman (2000) Hoffman, Driscoll and Painter-Morland (2001) all recognise the ethics/csr manager function as involving specific roles and responsibilities as well as several characteristics that are necessary for effective role performance. Spreitzer et al. (1997); Adobor and (2006);Collins (2009) and Segon (2012) note that ethics/csr managers need to undertake a multi-duty role including that managing the internal reposting system, assessing areas of ethical risk, monitor adherence to code of ethics and or conduct, oversee the ethics communication strategy, develop and interpret ethical polices oversee training and development in ethics and collect and analyse data and report such to senior executives. They need external awareness and specific knowledge related to the field of governance and such as any legislative requirements. This is in addition to specific knowledge of the firm's business, products and industry characteristics. Adobor (2006) maintains that ethics/csr managers with such business knowledge will have a better understanding of the organisation, the information it holds and how to access it. He suggests that such knowledge should result in the ethics officer experiencing less task complexity, ambiguity and positive affect role performance. Segon (2012) summarises distinct functions for csr/ethics managers:

- Design of ethics and csr policies such as codes of ethics and conduct.
- Ethics Education- this includes training design, training delivery and international program development.
- Manage Compliance: this includes management of program documentation, direct handling of hotline or guideline and internal reporting. Assessing and reviewing vulnerabilities, i.e., ethics risk assessments establishing company policies and procedures and presentation and delivery of external presentations.
- Adviser top management: this includes senior management and or board of director briefing and communications
- Investigative oversight: this includes overseeing and conducting investigations of wrongdoing, and lastly
- Corporate Social Responsibility and sustainability, including communication relationship, corporate foundation/giving, shareholder relations, diversity issues and environmental compliance and human rights.

Each of these requirements are a necessary to enable the csr/ethics manager to function at a sufficient level to promote the social responsibility of the firm. This seems to be consistent with Mangham and Pye (1991) concept that effective professional practice requires a combination of the forms of knowledge and that whilst they are difficult to separate, each plays the role of informing the other at the point of action.

3.2 HRM and Organisational Ethics

De Gama, McKenna and Harris (2012)identify a relationship between the ethics and human resource functions within organisations. Winstanley, Woodall and Heery (1996) suggested that the HR function included a role of ethical stewardship that involved raising awareness about ethical issues, promoting ethical behaviour and in disseminating ethical leadership practices amongst leaders and managers. They also describe the as including communicating codes of ethical conduct, devising and providing ethics training to employees, managing compliance and monitoring arrangements, and taking a lead in enforcement proceedings. Woodd (1997) suggests that HR specialists need to be at the heart of policy design and implementation, to raise the issues and stimulate debate on ethics in the employment of people. She argues that this requires a degree of "expertise" in their field, emphasizing the need for continuing professional development. She further notes that this requirement for any profession and be shared by the associated institute.

These descriptions appear consistent with characteristic of professional practice as described by May (1989) and Flexner (1910), De George (1999) and Ardaugh (2010) and various roles of the ethics officer as described by Adobor (2006); Llopis, Reyes-Gonzales, and Gasco (2007); Izraeli and BarNir (1998) Trevino and Nelson (2014, 2021) Driscoll and Hoffman (2000) and Hoffman, Driscoll and Painter-Morland (2001). However ,Trevino and Nelson (2014, 2021) note that within many departmental organisational structures, positioning the csr/ethics function is located within human resources, audit or legal departments. This leads to a perception of a functional task rather than a holistic corporate strategy. This again seems to reinforce the concept that an ethics officer seems to require an understanding of professional ethics as part of their professional knowledge.

3.3 Preliminary Review of HRM and MBA Qualifications.

The authors of this paper have extensive academic and consulting experience within Australian and International Universities including teaching and managing MBAs, Masters of HRM and International Business courses. Reflecting on this experience and via a preliminary review of a number of Masters in Human Resource Management and Employment Relations, it is clear that these qualifications focus on enhancing discipline specific expertise. Few if any subjects or content in business ethics /csr are apparent. The other significant qualification that is regarded as essential for senior managerial positions, the MBA, has been the subject of numerous recent reviews and it also appears do you have little if any ethics or corporate social responsibility content.

This raises important questions as to whether organisations are doing themselves a disservice by locating Ethics and CSR functions within HR departments. It also raises the question of whether Human Resource or General Managers, without significant knowledge and expertise in csr and ethics are violating a professional duty by assuming this corporate function.

4.0 The Proposed Research and Analysis

The purpose of this paper is to consider the question of who is appropriate to manage the ethics function in Australasian firms. A literature review will briefly outline what constitutes a profession to establish the scope and limits of professional practice. The review will also address the ethics /csr manager concept as a means of establishing the expertise required to manage such functions.

Two levels of research will then be presented. Firstly, the CSR/ethics function within major Australian and Asian corporations and public sector organisations will be examined to verify the responsibility is being delegated primarily to human resource management.

Secondly, a review of accredited Postgraduate Human Resources and MBAs degrees at major Australian Universities, (accredited by the Australian Human Resource Management Institute, as meeting its professional criteria, that includes the competency of “ethical practitioner”) will be presented. A similar analysis will also be undertaken of recognised postgraduate qualifications in Singapore, Malaysia and Hong Kong Universities. Each post graduate program’s structure will be examined to identify core or compulsory subjects and what percentage of study can be classified as ethics or corporate social responsibility. This is to establish the guaranteed expert knowledge that must be acquired as part of the “professional” qualification. Futhermore, a review of available electives will be examined to establish whether ethics or corporate social responsibility subjects are available to students. The objective of this task is to determine whether such programs contain specific ethics content, in sufficient depth, to address the scope of roles, duties and responsibilities outlined as required of ethics/ CSR managers.

This analysis will establish whether Human Resource professionals are sufficiently equipped with the expert knowledge and capabilities required to undertake the ethics/csr manager functions through their formal education.

Based on this analysis a series of recommendations will be made in terms of:

- The extent to which existing masters in HRM or equivalents need to be modified to ensure adequate expert knowledge to manage the ethics/csr function.
- Whether a separate Masters in professional or applied ethics could be developed to ensure adequate expert knowledge to manage the ethics/csr function
- The extent to which professional body accreditation in HR has appropriate criteria to adequately identify expert knowledge to manage the ethics/csr function.

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Female Leadership and Firm Performance in the Undeveloped Institutional Environment: Evidence from China

Hongbiao DU*
None
China

Xueji LIANG
Xi'an Jiaotong-liverpool University
China

*The corresponding author

Abstract: This study examines whether and how female leaders(female CEOs) affect firm performance. Based on the institutional perspective, I explain that female leaders, hindered by the gender stereotype derived from the traditional institution, have a negative impact on the firm value. Analyses of a Chinese sample of 14043 firm-year observations provide strong empirical support for the hypothesis that female leaders impair firm performance. Additionally, I explore the moderating effect of ESG performance and the Marketization Index on the main relationship. The results show that for firms with high ESG performance and in regions of high marketization level, the negative impact of female leaders on the firm value is weakened. Besides, the robust test proves the robustness of the main relationship between female leadership and firm performance and the complementary analysis reveals the mechanism of how female leaders contribute to the firm performance through different pillars of ESG. Finally, this paper contributes to the understanding of how female leaders influence the firm value under the undeveloped institutional environment through the institutional lens.

Keywords: Female leaders, Institutional perspective, Firm performance, ESG, Marketization

Introduction

In recent years, there has been intense public and academic attention put on the influence of female leadership in firms. Two broad approaches are adopted by scholars to explain how female leadership affects firm outcomes. The first approach emphasizes the uniqueness of female leadership. Unlike their male counterparts, female leaders have different psychological traits, leadership styles, and human and social capital, altering organizational outcomes (Boulouta, 2013; Perryman, Fernando

& Tripathy, 2016; Hillman, Cannella & Harris, 2002). The second approach focuses on the external perception of and response to female leadership. Specifically, stakeholders and shareholders, based on their values and belief, interpret the influence of female leadership and make reactions beneficial for themselves (Post & Byron, 2015; Kang, Compton & Zhu, 2022). The most obvious example is that female leaders need to overcome gender barriers, which would negatively affect organizational cohesion and then the firm performance(Compton, Kang & Zhu, 2019; Jeong & Harrison, 2017).

The evidence that female leadership affects financial performance is mixed. Some studies have shown that female leadership can create value for firms while others find female leadership can cause value loss(Galbreath,2018; Pletzer, Nikolova, Kedzior & Voelpel, 2015). Such paradoxical results make salient the influence of the broader social context. In other words, what effects female leadership would bring and how different stakeholders and shareholders evaluate and react to female leadership are determined by social rules and beliefs(Zhang, 2020). Most previous studies focus on the social context of developed economy and emphasize the positive effect of female leaders(Campbell & Mínguez-Vera, 2008; Galbreath,2018; Reguera-Alvarado, de Fuentes, & Laffarga,2017). However, only a few studies attempt to explain the role of female leadership in the developing world. Compared with findings in developed countries, these studies that examined female leadership in developing countries find a negative relationship between female leadership and financial performance since gender diversity involves gender stereotyping, poor team cohesion, conservative strategic decision, and higher agency cost(Triana, Miller & Trzebiatowski, 2014; Compton et al., 2019; Jadiyappa, Jyothi, Sireesha & Hickman, 2019). To enhance the understanding of the influence of female leadership in the social context of the developing economy, this study attempts to unlock the connection between female leadership and firm financial performance in China, the largest developing country in the world.

This paper has four main contributions. First, this paper attempts to explain how female leadership is interpreted by insiders and outsiders of the firm through the institutional perspective and then determine the profit of the firm, thus extending the application of the institutional approach to female leadership. Second, unlike previous studies that examine female leadership in developed countries, this paper concentrates on how the institutional environment of developing economies affects the effectiveness of female leadership, enriching the literature on institutions of undeveloped nations. Third, by introducing two moderators, this paper points out two kinds of institutional power that can weaken the gender-based bias derived from Chinese traditional institutions, enriching the understanding of how different institutional logics influence the firm outcome. Fourth, this paper also builds the mechanism of how female leaders create firm values through selective engagement in social-oriented activities under an undeveloped institutional environment.

Literature Review

Scholars have explored the impact of female leaders on corporate performance from multiple theoretical perspectives and achieved mixed results. Studies based on the upper echelons emphasize that female leadership—social-oriented, risk-averse, collaborative, and democratic—affects firm outcomes(Eagly & Carli, 2003). For instance, Galbreath(2018) advocates that female leadership positively affects firm performance because female leaders tend to take account of the interests of a wider range of stakeholders, ensuring available strategic resources for firms. Perryman et al.(2016) find that greater gender diversity in TMT teams pursue less risky decisions and thus deliver higher firm performance. Jeong et al.(2022) prove that female leaders can promote subordinates' autonomous strategic behaviors as well as activate underutilized female employees' human capital to improve firm value. On the contrary, Triana et al.(2014) suggest that gender-diverse leadership impairs team cohesion and impedes strategic decisions, which hinders the ability to recover from low-performance trouble. Jadiyappa et al.(2019) propose that female leaders fail to grasp opportunities to enhance firm performance because of their greater risk aversion, especially in a growing economy.

Another theory perspective is the resource-dependence perspective, which emphasizes that female leaders affect firm performance through their unique expertise and relationships. Female leaders in firms are more likely to hold a higher educational degree, to come from a non-business background, and to serve on multiple boards(Hillman, Cannella & Harris, 2002). Based on this resource-dependence perspective, Pletzer et al.(2015) suggest that female leaders can utilize their knowledge to analyze complex problems from multiple perspectives and thus improve the quality of board decisions, contributing to a better firm outcome. Hillman et al.(2007) demonstrate that female leaders can promote firm development by providing necessary resources from external networks. However, Singh et al.(2008) point out that because female leaders lack business skills and management experiences, they do not have the adequate social capital to admit leadership positions.

Studies examining female leadership from the principal-agent perspective highlight the influence of female leaders on corporate governance. For instance, female leaders facilitate better monitoring management and efficient information flow to improve corporate governance and then the firm performance(Hillman & Dalziel, 2003; Loukil, Yousfi & Yerbanga, 2019). Similarly, based on the Chinese context, Ain et al.(2020) propose that female directors reduce agency costs by performing better monitoring roles. On the opposite, Adams and Ferreira(2009) conclude that female directors involve fewer attendant problems and allocate more efforts to monitoring to enhance firm governance but negatively affect firm financial performance. Using samples from India, Jadiyappa et al.(2019)

advocate that female CEOs have a negative influence on firm value because of the increased agency cost due to cultural arguments in India preventing female leaders from making significant contributions.

The next view involving the connection between female leadership and firm performance is the social role theory. This perspective holds the view that the existence of significant stereotypes of women in leadership positions would exert an impact on how female leaders affect the firm outcome(Eagly, 2007). For instance, Abdullah et al.(2016) find that because of stereotypically negative perceptions toward female leadership, female directors will incur bad market reactions and lower market value. Nekhili et al.(2018) prove that the incongruence between the leader role and gender role leads female directors or managers to get involved in internal conflicts, disrupt the decision process, and undermine firm performance. However, Jeong and Harrison (2017) prove that female leaders can break the glass ceiling because their reduced risk-taking lower lowers the short-term market value but increase the long-term financial performance.

Inconclusive results enlighten scholars to consider the significance of the institutional environment. As Zhang(2020) proposes, the extent to which female leaders contribute to corporate performance depends on the acceptance of female leaders, which is built by normative legitimacy and regulatory legitimacy. Similarly, Boudreaux and Nikolaev(2018) also find that a high-quality institutional environment can reduce the gender difference in business performance since female leaders can obtain more business opportunities under improved financial, business, and labor market institutions. Besides, Boehe and Cruz(2013) suggest that the institutional environment in developing economies restricts female leaders' access to education, mobility, management abilities, and relationship abilities, thus weakening the positive impact of women on Microfinance Performance.

Obviously, the completeness of the institution determines the gender barriers female leaders confront.

Hypothesis Development

This paper adopts an institutional lens to explore how female leadership affects firm performance in China. An institutional approach to understanding leadership emphasizes the institutional environment that firms are located within share a common meaning system, whose values and rules determine how to perceive and to response organizational practices(Zhang, 2020). Specifically, I advocate the congruity between the leader stereotype and the female stereotype shaped by the institutional values and rules, rather than the female leadership itself, determines the influence of female leaders on firm outcomes. Unlike developed economies, developing economies have unique institutional characteristics. These characteristics construct specific social standards and rules that decide how female leaders conduct management work and what influence female leadership would bring(Sidani et al.,2015). Relying on this logic, Jadiyappa et al.(2019) prove conflicts between female leadership and elements of the Indian social environment impede effective communications among members of the top management team and weaken the effectiveness of female management. China is a developing economy where women are influenced by the combination of traditional beliefs, such as family roles and the age-marriage connection, and new market rules(Sung, 2022). Therefore, diverse institutional logics of Chinese multiple institutions might play the same or opposite roles in regulating how female leaders relate to firm performance.

Generally, female leaders are often regarded as more communal, social-oriented, democratic, supportive of sustainable investment, and risk-averse(Vu, Lee, Duong & Barnett, 2018; Eagly, Johannesen-Schmidt & Van Engen, 2003; Pletzer et al.2015). Such leadership styles are not consistent with what people perceive leaders should be—aggressive, decisive, assertive, and dominant

(Schaumberg & Flynn, 2017). The misalignment between perceived leadership and female leadership puts female leaders at a disadvantage. I suppose the inferior position of female leaders brought by such misalignment also exists in China because Chinese women are traditionally connected with the family role under the patriarchal norms that still survive regardless of political and socioeconomic changes, the family role that emphasizes female subordination rather than dominance in family and their family responsibility in private sphere rather than social-economic responsibility in the public sphere(Sung, 2022; Zuo, 2009). As a result, such gender-based bias prevents female leaders from conducting efficient management work in firms and results in bad firm performance.

For one thing, gender diversity in a team will break team cohesion, undermine the quality of the firm decision, and erode the firm competitiveness. Although previous studies point out female leaders provide broader information and experiences to the decision process to enhance decision efficiency, the opinion of female leaders will be ignored or even denied since they are perceived as less capable and their suggestions as less persuasive(Setini, Yasa, Supartha, Giantari & Rajani, 2020; Esser, Karens, Mouzughi & Eomois, 2018). Yanadori et al. (2021) propose that female leaders are generally treated as outgroup members in top management teams by male leaders, thus leading to reduced collaboration and communication between board members and diminished firm performance. For another thing, the family role derived from Chinese traditional culture exposes female leaders to work-family conflict and affects their choices of how to balance their careers and family(Sung, 2022). In this case, female leaders are more likely to be hindered by family responsibility and less competitive than their male counterparts. Correspondingly, Welsh et al.(2017) prove that work-family balance and management abilities determine Chinese women entrepreneurs' firm performance. While giving up opportunities to prompt or socialize with colleagues due to family responsibility, female leaders lose chances to accumulate their human capital, including knowledge, skills, and relationships (Boehe and Cruz, 2013).

Another trait of female leaders is their higher ethical standards. Female leaders who practice higher moral standards tend to contribute to the firm performance through social-oriented activities, which goes against the traditional profit-oriented leadership styles(Galbreath, 2018; Sahelices-Pinto, Lanero-Carrizo & Vázquez-Burguete, 2018). Under shareholder logic, social investment does not serve the purpose of profit maximization but the personal utility of managers (Lewis & Carlos, 2022). Especially in developing economies where formal institutions are weak and undeveloped and thus cannot promise reciprocity between firms and stakeholders, socially responsible firms will lose business opportunities since they avoid unethical deals(Khan, Lew & Park, 2015; Cui, Liang & Lu, 2015). In this case, the commitment to social performance negatively affects the firm performance. For example, Cordeiro et al. (2021) point out that sustainable investment in developing economies is costly because of distrust between firms and stakeholders, which resulted from high information asymmetries, widespread corruption, and an opaque institutional context.

Besides, some studies also prove that female leaders can improve firm performance because of their risk aversion(Perryman et al., 2016; Opper, Nee, & Holm, 2017). However, risk-averse leadership might not be effective in a fast-growing economy. Faccio et al.(2016) suggest the risk-averse preference of female CEOs means that firms run by them have lower leverage, less volatile earnings, and a higher chance of survival than similar firms run by male CEOs. However, the avoidance of risky investment and debt financing will diminish the firm’s ability to grow, harming the firm performance. At the same time, risk aversion also means that female leaders will adopt more comprehensive information processing and more cautious decision-making, both of them slowing down the response of firms to the external environment and thus restricting firm development(Triana et al.,2014; Epetimehin, 2013). For instance, Sharma and Tarp(2018) suggest that under a better business climate, risk-averse leadership means lower firm revenues. Similarly, Abdullah et al.(2016) suggest that market investors hold negative attitudes toward female leaders because the risk aversion of female leaders will discount their probability to achieve a higher return. Therefore,

Hypothesis 1: In the developing country, the female leader is negatively related to the firm performance.

Even though female leadership suffers from the conflicts between the leader role and the traditional gender role, this negative influence will be diminished in firms that allocate more resources to sustainable activities. Instead of maximizing private profits, highly socially responsible firms in China pursue not only financial reward but also social welfare(Rodríguez Bolívar, Garde Sánchez & López Hernández, 2015; Tenuta & Cambrea, 2022). Such a balance between economic and social goals reshapes socially responsible firms' beliefs of what leaders should be. Bouloutal (2013) proposes that men are preferred for membership in compensation, executive, and finance committees while women are preferred in public affairs committees or CSR areas. Accordingly, the alignment between the gender stereotype of female leaders and corporate social-oriented activities will erode the influence of the tension between the traditional gender stereotype and the leader role and weaken the restriction on female leadership(Teng, Hu, Chen, Poon, & Bai, 2021; Zhang, 2020). For instance, Low et al.(2015) propose that Asian cultural resistance resulting from gender stereotypes limits the positive impact of female leaders on firm performance. However, such limitations are broken in firms that pursue not only profit goals but also non-profit social and political goals(Liu, Wei & Xie, 2014).

As suggested previously, female leaders have higher moral standards, higher risk aversion, more supportive skills, and more non-business resources and relationships(Galbreath, 2018; Perryman et al., 2016; Hillman et al., 2002). Firms that conduct high social investment tend to cooperate with stakeholders rather than make use of institutional voids to enhance firm development. Correspondingly, the higher moral standards and diverse firm resources motivate female leaders to grasp opportunities to improve firm value by meeting the requirements of stakeholders and avoiding unethical ones(Bouloutal, 2013; Khan, Lew & Park, 2015). Besides, with the fade of traditional gender stereotypes, female leaders' participation in strategic decisions and firm development will be more acceptable. In this case, they would acquire more chances to make positive contributions to firm performance. For instance, García-Sánchez et al.(2021) find that the emphasis of family firms on socio-emotional wealth clears gender-based barriers that female leaders face in expressing their opinions and for views being taken into account. Therefore,

Hypothesis 2: In the developing country, corporate social performance positively moderates the relationship between female leaders and firm performance.

Another force I propose to counteract the impact of gender stereotypes is the market institution. China is an economy of tremendous regional differences in the degree of marketization among different regions(Xiong, Wang, & Zhao, 2020). As Gammage(2015) suggests, the market institution, through women's labor market participation, plays a role in promoting gender equality and secures better outcomes for women in the labor market. Correspondingly, in China, people in regions of higher levels of marketization are located in more liberal political and social environments and more supportive of continued market reforms and liberal values such as sexual freedom, while people in regions of lower levels of marketization are more influenced by traditional Confucian values that honor patriarchy and promote gender imbalance(Wang, Reilly & Fatema, 2022).

It is reasonable to suggest that female leaders in regions with high levels of marketization will face less gender-based bias and obtain more resources and opportunities in both family and management teams. For instance, with the replacement of sexual freedom with traditional gender stereotypes, female leaders can get more resources from families allocated to their education, more job positions, compensation compared to that of male ones, and more extensive social interaction(Lavy, 2008; Wang et al., 2022; Gao, Lin, & Ma, 2016). All of these enable female leaders to accumulate human capital, enhance competitiveness and thus make up for disadvantages compared with male leaders. What's more, the gender equality awareness derived from high marketization also makes it more acceptable for women to participate in firm management. In this case, female leaders will feel respected and valued and thus are willing to contribute their opinions and views, which can improve the quality of firm decisions and the revenue for the firm(Zhang, 2020). Correspondingly, Cavero-Rubio et al.(2019) prove that institutional recognition of gender equality allows female leaders to build competitive advantages by receiving work training, getting the promotion, and gaining business information through communication. In this case, firms can enhance their financial performance because of higher group intelligence in decision-making teams, qualified employees, and access to market niches where women are the main consumers. Therefore,

Hypothesis 3: In the developing country, marketization positively moderates the relationship between female leaders and firm performance.

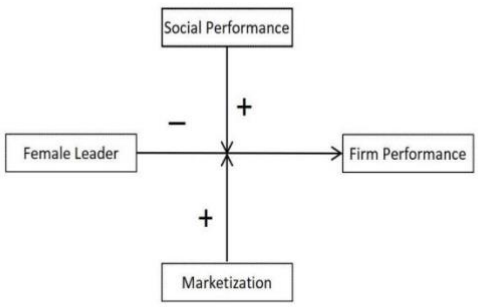

Figure 1

Method and Variable

Data Source. This paper takes China's A-share listed companies from 2012-2019 as the original sample. Two main data sources provide corresponding data. The first data source is Chinese Stock Market and Accounting Research (CSMAR), which provides information on Chinese stock markets and financial statements of China's listed firms. CSMAR provides data about CEO gender, Firm performance, and control variables. The second source Hexun.com provides data about the corporate social performance performances of China's A-share listed companies, the ESG score. The ESG principle is a framework system consisting of environmental (E), social (S), and governance (G), representing responsible development for stakeholders and shareholders (Li, Wang, Sueyoshi & Wang, 2021; Hanson, 2013). The ESG score from Hexun.com consists of the total ESG score and the individual score of the pillars of environmental (ENV), social (SOC), and governance (GOV). After dropping firms whose key variables are missing, ST firms, and financial firms, I get the final sample of 2749 firms and 14043 observations.

Dependent Variable. Consistent with Abdullah et al. (2016), this paper uses Return On Assets(ROA) as firm performance. ROA is measured by using net income divided by total assets.

Independent Variable. Consistent with Dadanlar and Abebe,(2020), this paper measures female leadership by CEO Gender. Specifically, I code this variable as 1 if the CEO gender is female and 0 if the CEO gender is male.

Moderators. This paper has two moderators: social performance and marketization. Consistent with Wang et al.(2023), I measure the social performance of the firm by using the standardized scores of aggregated *ESG* performance of the firm from Hexun.com. The data to measure the degree of marketization of different regions comes from the China Market Index Database, which provides the measurement of the relative marketization progress of China's provinces, autonomous regions, and municipalities from 1997 to 2019(Fan, Wang & Zhu, 2003). I use China *Marketization Index(market)* to measure the development of the market institution in different regions. According to Li et al.(2019), I code the region of high marketization degree as 1 and the region of low marketization degree as 0.

Control Variable. In line with previous literature, I control a set of variables that might affect the level of firm performance. Excluding the influence of other female leaders on the firm value(Reguera-Alvarado et al., 2017), I control female directors(FD) and female executives(FE) by the proportion of female directors on the board and the proportion of female executives on the top management team. I control CEO Education(Edu) because education plays a role in shaping the expertise and networks of female leaders and therefore determining their competitiveness(Bennouri, Chtioui, Nagati & Nekhili, 2018). Specifically, the education is coded as 5 for the doctorate degree, 4 for the graduate degree, 3 for the undergraduate degree, 2 for the junior college degree, and 1 for those below the junior college degree. The CEO Duality(Duality) is controlled because the CEO's power influences firm performance through firm decisions, which is set to 1 if the CEO is the Chairman and 0 otherwise(Ramón- Llorens, García-Meca & Pucheta-Martínez, 2016). Because small board sizes and high board independence means effective management monitoring that affects the firm financial performance(Hillman & Dalziel, 2003), I control Board Size(BS) through the number of board members and Board Independence(BI) as the proportion of independent directors to the total number of board members. I also control Firm Size(FS) by the total assets because firm size plays an important role in profitability(Lee, 2009). Since firms can employ slack to enhance firm performance(Daniel et al., 2004), I control Slack as assets divided by liabilities. I also control ownership property by including the percentage of the state-owned shares(SOE) in the firm in the model because of the special status of state-owned enterprises(Zhao & Mao, 2022). Besides, I measure Advertisement Intensity(AI) by the ratio of sales cost to operational revenue because intensive advertising activities affect firm value through changing social rewards from external stakeholders of environmental and social performance(Stevens, Makarius, & Mukherjee, 2015). Regarding the impact of research and development investment on firm performance, I control R&D as the natural logarithm of R&D expenditure(Sampson, 2007). Plus, because political ties affect the resource endowment of the firm and alter the firm value, I measure political connections (PC) by the affiliation of the CEO or the chairman with the government. This variable is set to 1 if the CEO or the Chairman was an official of the government; otherwise, it is set to 0 (Zhang, Marquis & Qiao, 2016).

Estimate Method. Based on the result of the Huasman Test($P<0.01$), I choose the fixed effects models to analyze the panel data.

$$y_{it} = \beta_1 CEO\ Gender_{it} + \beta_2 CEO\ Gender_{it} * ESG_{it} + \beta_3 CEO\ Gender_{it} * Marketization_{it} + \beta_n X_{it} + Year_t + \in_{it}$$

Y is the firm performance. CEO Gender indicates the gender of the CEO. X includes all other control variables including moderators. The year contains time dummies to control for the time-variant but firm-invariant unobservable factors. i and t refer to a firm and a year respectively. Besides, $\in it$ denotes the error term.

Results

Table 1 Descriptive statistics

Variable	Count	Mean	S.D.	Min	Max
ROA	14043	0.04	0.10	-4.78	1.13
FD	14043	0.15	0.13	0.00	0.80
FG	14043	0.16	0.17	0.00	1.00

Edu	14043	3.44	0.89	1.00	5.00
Duality	14043	0.32	0.47	0.00	1.00
BS	14043	8.46	1.64	4.00	18.00
BI	14043	0.38	0.06	0.18	0.80
FS	14043	0.01	0.08	0.00	2.41
Slack	14043	0.40	0.21	0.01	5.00
SOE	14043	0.03	0.10	0.00	0.90
AI	14043	0.08	0.21	0.00	22.04
R&D	14043	17.83	1.50	0.00	25.03
PC	14043	0.34	0.47	0.00	1.00
ESG	14043	-0.01	0.99	-2.78	4.48
Market	14043	0.56	0.50	0.00	1.00
CEO Gender	14043	0.06	0.24	0.00	1.00

Table 2 Correlations statistics

Variables	1.	2.	3.	4.	5.	6.	7.	8.
1.ROA	1.000							
2.FD	0.017**	1.000						
3.FG	0.015*	0.348***	1.000					
4.Edu	-0.018**	-0.048***	-0.017**	1.000				
5.Duality	0.022***	0.098***	0.090***	-0.006	1.000			
6.BS	0.027***	-0.102***	-0.126***	0.072***	-0.175***	1.000		
7.BI	-0.027***	0.029***	0.059***	0.004	0.115***	-0.527***	1.000	
8.FS	-0.004	-0.082***	-0.065***	0.085***	-0.065***	0.093***	0.086***	1.000
9.Slack	-0.399***	-0.090***	-0.107***	0.057***	-0.113***	0.144***	0.005	0.160***
10.SOE	0.006	-0.085***	-0.079***	0.074***	-0.103***	0.119***	-0.038***	0.052***
11.AI	-0.062***	0.038***	0.068***	0.036***	0.034***	-0.020**	0.004	-0.033***
12.R&D	0.082***	-0.090***	-0.095***	0.145***	-0.038***	0.114***	0.026***	0.253***
13.PC	0.017**	0.013	-0.017**	0.029***	-0.054***	0.049***	-0.006	0.012
14.ESG	0.332***	-0.050***	-0.032***	0.053***	-0.034***	0.119***	-0.016*	0.084***

15.Market	0.031***	0.059***	0.055***	-0.086***	0.110***	-0.118***	0.032***	-0.073***
16.CEO Gender	0.004	0.227***	0.316***	-0.031***	-0.032***	-0.092***	0.059***	-0.023***
Variables	9.	10.	11.	12.	13.	14.	15.	16.
9.Slack	1.000							
10.SOE	0.080***	1.000						
11.AI	-0.102***	-0.036***	1.000					
12.R&D	0.171***	0.049***	0.009	1.000				
13.PC	0.006	-0.024***	0.000	-0.014*	1.000			
14.ESG	-0.076***	0.065***	-0.002	0.134***	0.064***	1.000		
15.Market	-0.058***	-0.099***	-0.008	0.035***	-0.052***	-0.025***	1.000	
16.CEO Gender	-0.048***	-0.026***	0.012	-0.056***	0.022***	-0.005	-0.005	1.000

N=14043, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 1 provides descriptive statistics for all the variables in our models, including count, mean, standard deviation, minimum, and maximum. The mean of CEO Gender is 0.06, reflecting that women are unrepresented in top management in China. Table 2 displays correlations between different variables. Most of the correlations are relatively small in magnitude except the correlation between Board Size and Board Independence is -0.527. To ensure that my models are not affected by multicollinearity, I calculated variance inflation factors(VIF) for all variables. The maximum VIF in any of the models was 1.55(Board Size), and the mean VIF was around 1.52. Both of them are substantially below the rule-of-thumb cutoff of 10 for regression models(Kleinbaum, Kupper & Muller, 1988). Thus, multicollinearity was not a serious issue in our models.

Table 3 OLS Regression Analyses of ROA on CEO Gender

	(1)	(2)	(3)	(4)	(5)
	ROA	ROA	ROA	ROA	ROA
FD	0.010	0.013	0.012	0.012	0.012
	(0.013)	(0.013)	(0.013)	(0.013)	(0.013)

FG	0.006	0.012	0.011	0.012	0.012
	(0.013)	(0.014)	(0.014)	(0.014)	(0.013)
Edu	-0.005*	-0.005*	-0.005*	-0.005*	-0.005*
	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Duality	0.005	0.005	0.005	0.005	0.005
	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
BS	0.003	0.003	0.003	0.003	0.003
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
BI	0.020	0.020	0.022	0.020	0.022
	(0.043)	(0.043)	(0.043)	(0.043)	(0.043)
FS	0.192**	0.192**	0.189**	0.192**	0.189**
	(0.084)	(0.084)	(0.083)	(0.084)	(0.083)
Slack	-0.399***	-0.399***	-0.399***	-0.400***	-0.400***
	(0.094)	(0.094)	(0.094)	(0.094)	(0.094)
SOE	-0.025***	-0.026***	-0.025***	-0.026***	-0.026***
	(0.010)	(0.010)	(0.010)	(0.010)	(0.010)
Adv	-0.323***	-0.324***	-0.324***	-0.324***	-0.325***
	(0.048)	(0.048)	(0.048)	(0.048)	(0.048)
R&D	0.014***	0.014***	0.014***	0.014***	0.014***
	(0.005)	(0.005)	(0.004)	(0.004)	(0.004)
PC	0.004	0.003	0.003	0.004	0.004
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
ESG	0.024***	0.024***	0.024***	0.024***	0.024***
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
Market	0.013***	0.013***	0.012***	0.011***	0.011**
	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
CEO Gender		-0.017*	-0.015	-0.032**	-0.029**
		(0.010)	(0.009)	(0.014)	(0.013)
CEO Gender*ESG			0.014*		0.014*

			(0.008)		(0.008)
CEO Gender*Market				0.028*	0.027*
				(0.017)	(0.017)
_cons	-0.071	-0.069	-0.070	-0.068	-0.068
	(0.072)	(0.072)	(0.071)	(0.071)	(0.071)
N	14043	14043	14043	14043	14043
n	2749	2749	2749	2749	2749
R^2	0.323	0.324	0.325	0.324	0.325
Year FE	√	√	√	√	√
Company FE	√	√	√	√	√
F	31.105	29.898	28.643	28.578	27.460

Standard errors in parentheses

Table 3 shows the regression results of ROA on CEO Gender. Model 1 in Table 3 displays the results of a fixed effects model of ROA on all control variables. Consistent with previous studies, firm size, firm slacks, state-owned shares, advertisement intensity, and R&D are significant in the model, while the firm size and the R&D are positively related to ROA, and firm slacks, state-owned shares, and advertisement intensity are negatively related to ROA. Our moderators, ESG performance and market, are also related to ROA. The positive relationship between ESG performance and ROA suggests that the social investment of firms can enhance firm values in China. However, this kind of investment might prevent firms to pursue better chances to promote firm growth in a fast-growing economy(Khan, Lew & Park, 2015; Cui, Liang & Lu, 2015). Besides, the positive connection between the market index and firm performance demonstrates that the market institution plays an important role in accelerating business development. As Park et al.(2006) propose, institutional changes affect firm performance by shaping managerial incentives, affecting transaction and agency costs, and making selective resource allocations across and within industries.

Hypothesis 1 predicts that female CEOs will have a negative impact on the firm performance. Model 2 in Table 3 tests this hypothesis by adding the variable—CEO Gender to the regression of Model 1. The coefficient on CEO Gender is negative and statistically significant at the 10% level. Consistent with the suggestion, the prejudice derived from traditional gender stereotype restrict female leaders from playing an active role in firms. Thus, this result provides indicative support for Hypothesis 1.

Hypothesis 2 predicts that ESG performance will positively moderate the relationship between CEO Gender and the firm performance. To test this hypothesis, I use Model 3 by adding the interaction between CEO gender and ESG performance to Model 2. The coefficient on the interaction between CEO Gender and ESG performance is positive and statistically significant at the 10% level, providing evidence for Hypothesis 2. Consistent with the conjecture, highly socially oriented firms create an environment where female CEOs confront less discrimination, gain higher legitimacy and grasp more opportunities to take advantage of their expertise and networks to improve the firm value(Zhang, 2020; García-Sánchez, Rodríguez-Ariza & Granada-Abarzuza, 2021).

Hypothesis 3 predicts that the marketization index will positively moderate the relationship between CEO gender and firm performance. I test this hypothesis by using Model 4—adding the interaction between CEO gender and Marketization Index to Model 2. The coefficient on the interaction between CEO gender and Marketization Index is also positive and statistically significant at the 10% level, leading strong support to Hypothesis 3. Again, consistent with the inference, the market institution effectively shatters the gender stereotypes generated from Chinese traditional culture and unleashes the potential of female leadership in top management(Wang, Reilly & Fatema, 2022; Cook & Glass, 2014).

Finally, Model 5 is a full model consisting of the main independent variable and two moderators. Again, the coefficients of both interactions are significantly positive, which proves the robustness of the results of regressions.

Robustness analysis

Table 4 Regression Analyses with Reduced Size of Samples

	(1) Female Director>0	(2)Female Executive>0	(3) Female Director and Executive>0
	ROA	ROA	ROA
FD	-0.000	0.009	-0.012
	(0.020)	(0.015)	(0.018)

FG	0.017	0.023	0.019
	(0.020)	(0.016)	(0.022)
Edu	-0.007^{*}	-0.005^{**}	-0.007^{*}
	(0.004)	(0.003)	(0.004)
Duality	0.002	0.013^{**}	0.010
	(0.007)	(0.006)	(0.008)
BS	0.003	0.002	0.003
	(0.002)	(0.002)	(0.002)
BI	0.057	-0.016	0.047
	(0.053)	(0.045)	(0.054)
FS	0.476^{***}	0.458^{***}	0.590^{***}
	(0.127)	(0.147)	(0.145)
Slack	-0.386^{***}	-0.339^{***}	-0.350^{***}
	(0.112)	(0.065)	(0.096)
SOE	-0.019	-0.023^{*}	-0.007
	(0.014)	(0.012)	(0.016)
Adv	-0.300^{***}	-0.277^{***}	-0.280^{***}
	(0.052)	(0.049)	(0.056)
R&D	0.017^{**}	0.017^{***}	0.020^{**}
	(0.007)	(0.007)	(0.009)
PC	0.007	0.008^{*}	0.008
	(0.006)	(0.005)	(0.007)
ESG	0.026^{***}	0.026^{***}	0.027^{***}
	(0.002)	(0.002)	(0.002)
Market	0.015^{**}	0.011^{**}	0.009
	(0.006)	(0.004)	(0.006)
CEO Gender	-0.022^{*}	-0.015	-0.020^{*}
	(0.012)	(0.010)	(0.011)
_cons	-0.133	-0.132	-0.199

	(0.118)	(0.103)	(0.140)
N	8876	10120	6963
n	2088	2350	1081
R2	0.324	0.286	0.302
Year FE	√	√	√
Company FE	√	√	√
F	17.234	20.480	13.663

Standard errors in parentheses

Taking Boulouta(2013) as a reference, I make robustness tests on the main model with different reduced sizes of samples. Specifically, samples of Model 1, Model 2, and Model 3 sequentially involve only firms with at least one female director, firms with at least one female executive, and firms with at least one female director and one female executive. As shown in the table, coefficients on CEO gender in Mode 1 and Model 3 are negative and statistically significant at a 10% level but the coefficient in Model 2 is not. It seems that women in the top management can provide larger support for female CEOs to overcome gender-based prejudice and thus enhance the firm value. Nevertheless, the results of Table 5 still confirm that the efficiency of female leadership still suffers from suppression derived from the gender stereotype.

Complementary Analysis

Table 5 The Mechanism that ESG Moderates the Impact of CEO Gender

	(1)	(2)	(3)	(4)
	ROA	ROA	ROA	ROA
FD	0.004	0.004	0.004	0.004
	(0.013)	(0.013)	(0.012)	(0.012)
FG	0.016	0.016	0.015	0.016
	(0.013)	(0.013)	(0.013)	(0.013)
Edu	-0.004	-0.004	-0.004	-0.004
	(0.003)	(0.003)	(0.003)	(0.003)
Duality	0.003	0.003	0.003	0.003

	(0.005)	(0.005)	(0.005)	(0.005)
BS	0.002	0.002	0.002	0.002
	(0.002)	(0.002)	(0.002)	(0.002)
BI	0.015	0.015	0.016	0.016
	(0.041)	(0.041)	(0.041)	(0.041)
FS	0.041	0.040	0.039	0.040
	(0.037)	(0.037)	(0.036)	(0.037)
Slack	-0.323***	-0.323***	-0.323***	-0.323***
	(0.103)	(0.103)	(0.103)	(0.103)
SOE	-0.034***	-0.034***	-0.034***	-0.033***
	(0.009)	(0.009)	(0.009)	(0.009)
Adv	-0.190***	-0.190***	-0.191***	-0.189***
	(0.042)	(0.042)	(0.042)	(0.042)
R&D	0.011**	0.011**	0.011**	0.011**
	(0.004)	(0.004)	(0.004)	(0.004)
PC	0.003	0.003	0.003	0.003
	(0.003)	(0.003)	(0.003)	(0.003)
E	-0.007***	-0.007***	-0.007***	-0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
S	0.006***	0.006***	0.006***	0.006***
	(0.002)	(0.002)	(0.002)	(0.002)
G	0.054***	0.054***	0.054***	0.053***
	(0.004)	(0.004)	(0.004)	(0.004)
Market	0.005	0.005	0.005	0.005
	(0.004)	(0.004)	(0.004)	(0.004)
CEO Gender	-0.017*	-0.017*	-0.016*	-0.015*
	(0.009)	(0.009)	(0.009)	(0.008)
CEO Gender*E		0.002		
		(0.002)		

CEO Gender*S			0.007*	
			(0.004)	
CEO Gender*G				0.015
				(0.013)
_cons	-0.042	-0.043	-0.043	-0.042
	(0.068)	(0.068)	(0.067)	(0.066)
N	14043	14043	14043	14043
n	2749	2749	2749	2749
R^2	0.432	0.432	0.433	0.433
Year FE	√	√	√	√
Compan FE	√	√	√	√
F	68.127	65.486	65.807	65.697

Standard errors in parentheses

Table 5 concentrates on how female CEOs enhance firm value through ESG management. Previous studies point out that different pillars of ESG investment tend to create unequal social awarding for firms(Uyar, Kuzey & Karaman, 2022). Such an unbalanced return is determined by the difference in the institutional environment(Iliev & Roth, 2020). Considering the particularity of institutions of developing economies, I attempt to find out how female CEOs deploy resources and formulate strategies to maximize corporate benefits.

Specifically, in Model 1 of Table 5, I replace the aggregated ESG score with divided E, S, and G pillars and make regression of ROA on CEO Gender again. The coefficient on CEO Gender is negative and statistically significant at a 10% level, which enhances hypothesis 1 again. Besides, coefficients on E, S, and G pillars are negative, positive, and positive, and all statistically significant at 1%. The results suggest that the environmental pillar, contrary to social and governance pillars, harms firm performance in China. As Dkhili(2018) proposes, poor institutional quality in developing countries will weaken the motivation of firms to improve environmental investment. However, a high level of social and governance pillars still has positive impacts on the firm value. Compared to increasing environmental investment, social investment and corporate governance improvement are better approaches to promising firm revenue in China.

Model 2, Model 3, and Model 4 in Table 5 test how E, S, and G pillars moderate the relationship between CEO Gender and firm performance. To find out the moderation effects of the three pillars, I separately add interactions between CEO Gender and E, S, and G pillars to Model 1. Coefficients on interactions between CEO Gender and E and G pillar are not significant but the coefficients on interactions between CEO Gender and S pillar are positive and statistically significant at a 10% level. The results indicate that female CEOs selectively make contributions through different dimensions of ESG performance. On the one hand, Gillan et al.(2021) propose that the fact that financially-weaker firms are reluctant to improve their environmental scores reflects that the cost of improving ESG performance is an important factor for decision-makers of firms. On the other hand, because of gender-based bias, female leaders' influence on corporate governance is limited by fewer powerful positions and less persuasive voices in board decisions(Srinidhi, Sun, Zhang & Chen, 2020). However, female leaders still depend on their advantages on social pillars to improve the firm performance even in an undeveloped institutional environment.

Discussion and Limitation

This paper provides new insights into the connection between female leadership and firm performance from the institutional perspective. Unlike previous literature that explores the effect of female leadership in developed institutions, this paper concentrates on female leadership in the undeveloped institutional environment—China. Specifically, I propose that female leadership will suffer from gender stereotypes shaped by the values and beliefs of Chinese traditional institutions and have low management efficiency in firms. A sample of 2749 firms of 14043 observations for 2012-2019 was used to prove three hypotheses. Through statistical analysis, this paper draws the following conclusions:

First, female leadership will harm the firm performance. Second, in firms that have higher social performance, the negative impact of female leadership on the firm performance will be restricted. Third, in regions that have a higher degree of marketization, the negative impact of female leadership on the firm performance will be reduced.

The research conclusions of this paper provide us with the enlightenment of how different institutional logics of developing countries decide and adjust the efficiency of female leadership. Specifically, I introduce several institutional power, including gender stereotype derived from Chinese traditional culture, which obstructs female leaders' positive influence on firm management, and the values and beliefs of highly socially oriented firms and highly marketized regions, which partly attenuate the repression of female leadership. Obviously, compared to the developed nation, female leaders are not completely free from the shackles of traditional culture (Wang & Shirmohammadi, 2016). However, institutional transitions in China provide female leaders with chances to break the limitations on them. With a dramatic transition from a state-controlled to a socialist market economy, gradually improved market institutions and increasingly recognized stakeholder logic started to make the value of female leadership more and more salient(Yin & Zhang, 2012; Zhang, 2020). In this case, it is reasonable for the government to release women's power to make an economic contribution to society by implementing appropriate policies, such as increasing investment in female education and promoting equal pay for men and women.

Of course, this paper has several limitations. First, female leadership involves the leadership of female directors, female executives, and female CEOs. However, this paper only concentrates on female CEOs and neglects others. I hope future studies can provide more comprehensive explanations of the relationship between female leadership and firm performance. Second, previous studies point out that the firm value can be measured by the accounting value and the market value(Alm & Winberg, 2016). This paper focuses on the accounting value but does not discuss the market value. Therefore, it will be beneficial for researchers to further explore how female leadership in developing economies affects the market value and what the differences between the two connections are. Third, this paper assumes that the institutional environment of China is representative of developing countries. However, this generality is not supported by enough evidence. Thus, I hope future studies can use the institutional environment of other developing economies to test the hypothesis in this paper, which can provide more meaningful conclusions that verify or supplement the argument of this paper.

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Paper Number:P014

The Relationship Between Corporate Climate-related Disclosure and Financial Impacts: An Exploration of the Emerging Chinese Companies in a Global Financial Centre

Ying GUO*
City University of Macau
Macau

Tiffany Cheng Han LEUNG
City University of Macau
Macau

Teresa CHU
University of Macau
Macau

*The corresponding author

Extended Abstract

This study examines the extent of climate disclosure quality in Hong Kong listed companies and explores the relationship among corporate climate-related disclosure, board and senior management governance, and financial impacts. This study applies content analysis and quantitative analysis to analyse climate-related disclosure data from 2017 to 2021 for a sample of Hong Kong listed companies. The data sources are annual Environmental, Social and Governance (ESG) reports and ESG sections in the annual reports. There are three findings. First, the completeness and balance of climate-related disclosure should be increased. Second, climate-related disclosure would cause better financial impacts. In particular, climate-related disclosure reduces cost of equity and corporate risk. Climate-related disclosure is a part of proactive environmental strategy, contributing to increased information transparency. Third, board of directors or senior managers reinforce the negative relationship between climate-related disclosure and financial impacts. board of directors or senior managers might focus on climate change issues related to long-term corporate commitments. Implications of the study for researchers, managers and policymakers are explored.

Keyword: Climate-related Disclosure, Financial Impacts, TCFD, Hong Kong listed companies

1. Introduction

Climate change has become an important issue worldwide. Therefore, Hong Kong Exchanges and Clearing Limited (HKEX) has incorporated some of the Task Force on Climate-related Financial Disclosures (TCFD) recommendations into its ESG Reporting Guide in 2021 (Hong Kong Exchanges and Clearing Limited, 2021). However, Implementing the TCFD's recommendations poses challenges for complying companies in Hong Kong. It is not clear the role board and senior management governance play in the relationship between climate-related disclosure and financial impacts. Therefore, this study intends to answer the following three research questions: First, what is the extent of climate disclosure quality among Hong Kong listed companies? Second, what are the financial impacts of climate-related disclosure? Third, what role does board and senior management governance play in the relationship between climate-related disclosure and financial impacts?

2. Literature and Framework

There are difficulties to implement the TCFD's recommendations for companies in Hong Kong. First, it would be difficult to integrate climate risk into existing risk management procedures and report material climate risks across different companies and industries (O'Dwyer & Unerman, 2020). Second, The TCFD recommendations mainly focus on Western or developed countries (Amar, Demaria, & Rigot, 2022; Deweerdt, 2022). Climate-related disclosure is still a new topic in Asia (Maji & Kalita).

Third, there is no unified conclusion on the impact of climate-related disclosure on cost of equity and corporate risk (Alsaifi, Elnahass, Al-Awadhi, & Salama, 2022; Prasad, Kumar, Devji, Lim, Prabhu, & Moodbidri 2022). Additionally, researchers are paying attention to the impact of board and senior management governance on sustainability practices (Martínez-Ferrero, Lozano, & Vivas, 2021; Fernández-Gago, Cabeza-García, & Nieto, 2018). However, few articles explain how board and senior management governance influences the relationship between climate-related disclosure and financial impacts. Therefore, four hypotheses are established below.

Hypothesis 1: Climate-related disclosure reduces cost of equity.

Hypothesis 2: Climate-related disclosure reduces corporate risk.

Hypothesis 3: board of directors or senior managers reinforce the negative relationship between climate-related disclosure and cost of equity.

Hypothesis 4: board of directors or senior managers reinforce the negative relationship between climate-related disclosure and corporate risk.

3. Method and Results

This study samples data collected from Hong Kong listed companies between 2017 and 2021. For the data sources, ESG reports and ESG sections in the annual reports of Hong Kong listed companies were chosen. In this study, content analysis and quantitative analysis are used to analyse data. In the content analysis, coding schemes are designed to understand the companies' disclosure according to climate-related risks, climate-related opportunities and the TCFD's four key recommendations (governance, strategy, risk management, and metrics and targets). In the coding schemes, each question is assigned a score of 1, 0.5, or 0 according to the relative presence of the disclosed information. In the quantitative analysis, the financial impacts are divided into two parts, which are cost of equity and corporate risk. Descriptive statistical analysis, correlation analysis, regression analysis, endogeneity test and robustness test performed.

This study comes to three results. First, the compliance of these companies lacks completeness and balance, which indicates that the quality of climate disclosure by Hong Kong listed companies should be increased. Second, this research explores the relationship between corporate climate-related disclosure and financial impacts. As expected, climate-related disclosure reduces cost of equity and corporate risk. The third result is that board of directors or senior managers reinforce the negative relationship between climate-related disclosure and financial impacts. Figure 1 shows the hypothesis test results.

4. Discussion

This study contributes to research in the following two aspects: First, this research provides evidence to compare the climate disclosure in Hong Kong and Western countries. Second, this study provides evidence of the relationship between climate disclosure and financial impacts and the role board and senior management governance plays in the relationship. The following are practical suggestions for policymakers and industry practitioners: First, policymakers in Hong Kong and other countries could understand the current status of climate disclosure by Hong Kong listed companies, making more detailed and targeted recommendations in the Hong Kong context. Second, this study could help companies proactively identify and manage climate risks and opportunities, reducing information asymmetry. The two limitations to this research are as follows: First, the study's only data sources are ESG reports and ESG sections in annual reports. Second, this study focuses on the financial impacts caused by climate disclosure, but it does not discuss the determining factors of climate disclosure.

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Appendix

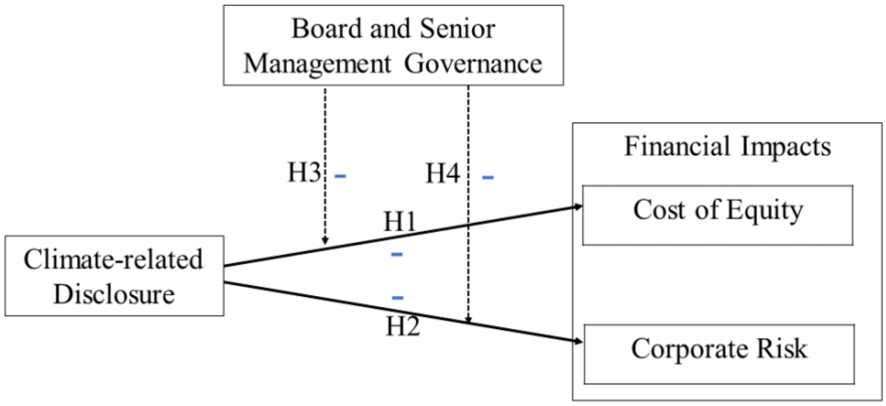

Figure 1. Hypothesis Test Results

Paper Number:P016

How Do Consumer Stereotypes Affect Social Enterprises and Profit-making Companies? A Study of Social Enterprises Stereotypes Across Five Industries in Hong Kong.

Martin Chi Keung TSUI*
Hong Kong Baptist University
Hong Kong

Connie LI
Hong Kong Baptist University
Hong Kong

Margaret CHUI
City University of Hong Kong
Hong Kong

*The corresponding author

Abstract

This study examined the effect of perceived warmth and competence on social enterprises (SEs). Previous research has shown that consumers perceive non-profit organizations as warm rather than competent, as opposed to profit-making companies (PMCs). In particular, the perceived warmth of a non-profit organization was negatively correlated with purchase intent (Aaker, Vohs, & Mogilner, 2010). Despite this, several unanswered questions remain, including, "Do consumers perceive social enterprises and non-profit organizations the same way as the non-profit organization?" "Are consumers less likely to purchase from social enterprises they perceive as warm?" Two experiments demonstrated that consumers perceived social enterprises as warmer than profit-making companies. Interestingly, social enterprises in the healthcare, fitness, and transportation sectors demonstrated higher levels of perceived warmth and competence than the others (Experiment 1). Moreover, Experiment 2 showed consumers perceive social enterprises as warmer and equally competent as profit-making companies. Consumers' purchase intention increased when they perceived a restaurant as a social enterprise rather than a profit-making company. These companies can thus use the perceptions of warmth and competence to position themselves in the market.

Keywords: Social Enterprise, Profit Making Company, Stereotype Content Model, Warmth, Competence, Consumers' Purchase Intention

1. Introduction

Social enterprise (SE) typically has specific social objectives and is expected to significantly affect society. Public attention to SE has increased in the past decades. However, most people believe that SE's principal purpose is to assist the poor and create job opportunities for the elderly and minorities. People usually confuse SEs with non-profit charity organizations (NPOs).

In social cognition, two dimensions are normally used to understand the behavior of individuals or groups. These two dimensions, which are included in the Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002), are perceived warmth (trustworthiness, friendliness) and competence (capability, assertiveness).

2. Literature Review

2.1 Warmth and Competence

Stereotypes play a vital role in how we perceive and respond to others, influencing our behavior. Previous studies have focused primarily on negative stereotypes, ignoring positive stereotypes. Fiske et al. (2002) developed a premise that shifted our view of stereotypes, stating that stereotypes could have positive and negative characteristics based on the warmth and competence dimensions.

Humans are complex creatures with unique beliefs that influence behavior. Understanding how belief systems are formed and how they influence individual behavior is essential. Taylor (1998) highlighted two beliefs: personal-held and commonly held. Personal beliefs remain in an individual's mind and are generally not commonly shared with others. Alternatively, commonly held beliefs are generally accepted and shared with a group of people. Borg (2001) explained that beliefs are owned consciously or unconsciously based on personal perspective and a sense of truth.

The dimensions of 'warmth' and 'competence' first emerged from the theory of social judgments (Rosenberg, Nelson, & Vivekananthan, 1968). Since their work, research has consistently shown that judgments by others fall into these two dimensions. For example, Fiske, Cuddy, & Glick (2007) presented university students with a list of about 20 social groups and asked the students to rate the warmth and competence of these groups. Friendliness and trustworthiness represented warmth, whereas confidence, skill, and capability represented competence. The warm reaction was defined as the perceiver's assessment of the target's intentions, whereas the competence reaction was defined as the perceiver's assessment of the target's ability to act based on its intentions (Fiske et al., 2007).

2.2 Stereotype Content Model

This study applied Stereotype Content Model to assess social enterprises (SE) and for-profit-making companies across five industries. There are more than 700 social enterprises in Hong Kong, but people still do not differentiate between social and non-profit companies. According to Yunus (2007), SE is designed to achieve social objectives and solve society's major problems, such as unemployment and poverty. The book Social

Enterprises (OECD, 1999) also mentions that SEs achieve social goals through non-governmental organizations. The stereotype content model was initially applied to evaluate people on two main dimensions, warmth and competence, and these judgments drive people's behavior toward others. Later, it was applied to test different groups across various cultural contexts.

According to the Structure of Attitudes (Rosenberg, & Hovland, 1960), warmth is linked to affective (feelings) and behavioral (the effect of the attitude on behavior) reactions, whereas competence is associated more with cognitive (belief and knowledge) reactions. This research examined whether consumers are more sensitive to warmth or the competence dimension of SE's offerings.

According to the Stereotype Content Model (SCM), group stereotypes towards an organization can be classified into four categories from consumers' perceptions: 1. Type A with low warmth and low competence, 2. Type B with low warmth and high competence, 3. Type 3 with high warmth and low competence, and 4. Type D with high warmth and high competence. Their attributes are listed in Table 1. Previous studies have shown non-profits belong to type C, whereas profit-makings are categorized as type B. To our knowledge, our research is the first to compare the stereotypes and purchase intentions of social enterprises versus profit-making companies.

Table 1: The attributes of each stereotype relating to their warmth and competence dimensions

Competence / Warmth	1. Low	2. High
1. Low	Type A: Contemptuous prejudice. People may provoke feelings of contempt towards the univalent / pure (low-low) target group.	Type B: Envious prejudice. People may provoke feelings of envy towards the ambivalent / mixed / complementary (high-low) target group.
2. High	Type C: Paternalistic prejudice. People may provoke feelings of pity towards the ambivalent / mixed / complementary (low-high) target group.	Type D: Admiration. People may provoke feelings of admiration towards the univalent / pure (high-high) target group.

3. Research Methodology

3.1 Experiment 1

Experiment 1 examined consumers' perceptions of social enterprises in Hong Kong. Participants (n = 108, M_{age} = 27.65) were recruited from a university in Hong Kong. They were randomly presented with the brand logo and descriptions of a profit-making company or a social enterprise across five industries in Hong Kong, including catering, retailing, health care and fitness, transportation, and professional consultancy services. They were then asked to rate their perceived warmth ($\alpha = 0.92$) and competence ($\alpha = 0.93$) of the brand using a 7-point Likert scale (1= *definitely not*, to 7 = *definitely yes*). We expected that a social enterprise would elicit higher warmth and lower competence in the participants compared to a profit-making organization.

Study 1 showed that participants perceived social enterprises to be warmer than profit-making companies across five industries. One-way ANOVA tests revealed statistically significant differences in the warmth dimension between social enterprises and profit-making companies, with the mean scores of catering (M_{SE}=5.70, SD_{SE} = 0.74 vs. M_{PM} =3.88, SD_{PM}=1.27, p < 0.01), health care and fitness service (M_{SE}=4.94, SD_{SE} = 0.91; M_{PM} =4.22, SD_{PM}=1.00, p < 0.01), transportation (M_{SE}=5.35, SD_{SE} = 0.97; M_{PM} =3.38, SD_{PM}=1.61, p < 0.01), retailing (M_{SE}=5.43, SD_{SE} = 0.78; M_{PM} =4.46, SD_{PM}=1.25, p < 0.01), and professional consultancy service (M_{SE}=5.29, SD_{SE} = 0.90; M_{PM} =3.53, SD_{PM}=1.29, p < 0.01) being higher for social enterprises.

The findings also indicated statistically significant differences in the competence dimension between social enterprises and profit-making companies in the health care and fitness service (M_{SE}=5.02, SD_{SE} = 0.76; M_{PM} =4.38, SD_{PM}=0.97, p < 0.01) and transportation (M_{SE}=5.21, SD_{SE} = 0.92; M_{PM} =4.46, SD_{PM}=1.52, p < 0.01) industries, favoring social enterprises. In the other three industries, differences between social enterprises and profit-making companies in the competence dimension were insignificant. This illustrated that compared to profit-making companies, consumers perceive health care and fitness services operated by social enterprises as warmer and more competent.

3.2 Experiment 2

Experiment 2 examined the consumers' intentions (α = 0.92) to purchase from social enterprises and profit-making companies. Participants (n =102, M_{age} = 21.48) were recruited from a university in Hong Kong. They were exposed to menus of restaurants run by either a social enterprise, namely *Gingko House, or a profit-making company, namely the Shangri-la Group. Both restaurants' menus were identical; only the restaurant type differed. The perceived warmth (α = 0.94) and competence (α = 0.89) of the restaurants were also measured in the questionnaire.

The one-way ANOVA results showed that consumers perceived the restaurant operated by a social enterprise as warmer than a profit-making restaurant (M_{SE}=5.38, SD_{SE} = 0.98; M_{PM} =4.51, SD_{PM}=1.27, p < 0.01). Consumers also showed higher intention to purchase from the social enterprise restaurant (M_{SE}=5.05, SD_{SE} = 1.02) than the profit-making restaurant (M_{PM} =4.57, SD_{PM}=1.10, p < 0.1). The results demonstrated that when consumers consider social enterprise and profit-making restaurants equally competent, perceived warmth may increase purchase intention.

4. Conclusion

To summarize, social enterprises were evaluated as warmer across all five industries. Consumers perceived social enterprises in the transportation and health care and fitness service industries as more competent than profit-making companies. This positive evaluation of social enterprises over profit-making companies indicates a potential admiration (Type D in Table 1) for social entrepreneurship, implying that social enterprises have an advantage in positioning their brand as warm and competent. Furthermore, our findings indicated that competence is not the primary factor triggering purchase intentions. Research on this topic is important to the social enterprise ecosystem, and it would be incomplete if we focused only on the competence element. Our findings shed light on overcoming consumer stereotypes to enhance positive purchase intentions toward social enterprises in the future.

Note:

[*]This research examined the effects of perceived warmth and competence on social enterprises using Gingko House as an example. The Gingko House is a Hong Kong social enterprise icon that advocates senior employment. The company's five restaurants and catering facility in Hong Kong currently employ more than 100 seniors. Gingko House is considered one of the most successful social enterprises in Hong Kong, pioneering senior employment in the restaurant industry.

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Appendix 1

Experiment 1: Brand logo and descriptions

Highlighted Descriptions of the company:

Elite Thai Boxing is a social enterprise which provides professional Thai boxing and fitness programs to improve the lives of both professionals and underprivileged groups. They have already served over 400 underprivileged youth and 500 youth with mental issues so far.

Highlighted Descriptions of the Company:

Alibaba Health Information Technology Limited focuses on pharmaceutical and health businesses. By facilitating medicine through big data, technological and business model innovations, Ali-Health visionizes to use the internet in changing health to provide fair, affordable and accessible medical & healthcare services to 1 billion people.

Appendix 2

Experiment 2

A. Menu for the restaurant operated by a social enterprise (Gingko House)

B. Menu for the profit-making restaurant (Shangri-la Group)

Paper Number:P017

Energizing or Depleting? The Impact of Servant Leadership on Leaders Themselves: A Conservation of Resources Perspective

Crystal Xinru WU*
The Hang Seng University of Hong Kong
Hong Kong

Eko Yi LIAO
The Hang Seng University of Hong Kong
Hong Kong

Robin SNELL
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Extended Abstract

This study draws on conservation of resources theory (COR) to explore the potential negative influence of servant leadership on leaders and examine ways to offset any such impact through processes of self-energizing. A mixed method design incorporating both quantitative and qualitative data will be adopted to explore the hypothesized model. Theoretical and practical implications will be discussed.

Keywords: Conservation of resources theory, emotional labor, leaders' wellbeing

Introduction

Organizations with an embedded servant leadership climate (e.g., Southwest Airlines, Starbucks) have been found to thrive in industries, which has propelled ongoing studies on servant leadership (Eva et al., 2019). Modern workplaces have also evolved to present more challenges for leaders in seeking to fulfil a variety of needs from various stakeholders, such as the increasing importance of striving for innovation and addressing employee needs (van Dierendonck, 2011). To meeting these challenges, servant leadership has been proposed as a suitable approach for leading contemporary workforces (van Dierendonck, 2011; van Dierendonck & Nuijten, 2011).

While servant leaders enhances employees' wellbeing and work output, relatively little attention has been given to its potential adverse impact on leaders themselves. According to Greenleaf (1977), servant leadership sacrifices leaders' self-interest and prioritizes followers' needs. In this research, we consider the prospect of sacrifice as problematic as this would challenge leaders' limited resources (Chen et al., 2020; Li et al., 2019; Hobfoll, 2001). Some existing evidence shows that leaders' self-sacrifice can lead to leader depletion (Chen et al., 2020). It is also possible that at least some of the emotional toll for servant leaders arising from their efforts to support their followers may be offset by exercising emotional intelligence, enabling servant leaders to monitor and manage their own emotions as well as those of their followers (Palmer et al., 2001). Liden et al. (2008) defined and validated seven dimensions of servant leadership. These are 'emotional healing, creating value for the community, conceptual skills, empowering, helping subordinates grow and succeed, putting subordinates first, and behaving ethically'. Based on Liden et al. (2008) the seven dimensions are further explained as follows: The first dimension, emotional healing, demonstrates servant leaders' acts of showing sensitivity to followers' personal concerns. The second dimension, creating value for the community, emphasizes helping the community and encouraging others to do likewise. The third dimension, conceptual skills, reflects that the servant leaders can effectively support and assist others as a result of their full knowledge of the organization and tasks. The fourth, empowering, entails encouraging and facilitating others in identifying and solving problems. The fifth, helping subordinates grow and succeed, reflects that servant leaders give support and guidance to followers to help promote their career growth and development. Through the sixth, servant leaders clearly show to subordinates that they put their (the subordinates') work needs prior to their own needs. The last, behaving ethically, demonstrates that servant leaders interact 'openly, fairly, and honestly with others'.

Prior research findings indicate the effective function of servant leadership as a critical source of energy for followers (Hu & Liden, 2011; Eva et al., 2019). However, there are only limited studies that examine the impact of servant leadership behaviors on leaders themselves. This research will address this gap by adopting conservation of resources theory (COR) to explore the consequences of adopting servant leadership behaviors for leaders and examine how to reduce any negative impacts and enhance the positive self-energizing process for them.

Research Questions

This research aims to investigate three research questions: a) What is the impact of servant leadership behaviors on leaders themselves? b) Through what processes do servant leadership behaviors affect leaders' wellbeing? c) How does the synergistic effect of combining servant leadership with authentic leadership shape the negative and positive impacts of servant leadership on leaders themselves? Existing empirical studies of servant leadership mainly focus on the effects of servant leadership on followers' working attitudes and behaviors rather than on leaders themselves. For example, servant leadership is identified as inducing followers' work engagement (van Dierendonck et al., 2014), organizational commitment (e.g., Liden et al., 2008; van Dierendonck et al., 2014), and job satisfaction (e.g., Barbuto & Wheeler, 2006; Mayer et al., 2008), and as decreasing follower disengagement (e.g., Hunter et al., 2013) and turnover intention (e.g., Hunter et al., 2013). Little research has focused on the impact of servant leadership on leaders themselves.

This research will adopt conservation of resources theory (COR) (Hobfoll, 1989, 2001) to explain the impact of servant leadership on leaders themselves. It will consider how negative self-impacts can be reduced, and how positive self-effects can be enhanced through the adoption of appropriate emotional labor strategies and the avoidance of inappropriate ones. This research will also examine authentic leadership as a boundary condition for influencing the relationship between servant leadership behaviors and leaders' engagement in various emotional labor strategies.

Literature and framework

The negative side of servant leadership

Engaging in servant leadership behaviors may involve both resource gaining and resource losing mechanisms. Because on the one hand servant leaders have a genuine belief in serving others (Greenleaf, 1977), the true enactment of this belief is an energy generating activity. On the other hand, serving others also requires resource consumption by meeting others' various demands. COR theory is an appropriate framework for this investigation because it delineates the causes of stress (Hobfoll, 2001) and identifies people's different involvements in resource gaining and resource losing processes (Hobfoll, 1989; Quinn et al., 2012).

Engaging in servant leadership behaviors goes beyond normal leadership activities by displaying prioritized concern for followers' various needs (i.e., emotional needs, competence needs and growth needs). When serving followers, leaders must therefore downplay their self-interests (Wu et al., 2021) and redirect their energy to accommodate followers' concerns and needs (Liden et al., 2008; Liao et al., 2021). Thus, working with followers is more demanding for servant leaders than for traditional, top-down leaders (Liden et al., 2014). This consideration theoretically suggests the prospect that servant leaders may become de-energized or may need more energy replenishment after continuously engaging in servant leadership behaviors.

For example, Beamish (2019) theorized that servant leadership is a resource depleting process for leaders' themselves. However, Beamish (2019) did not obtain significant empirical evidence for the negative relationship between servant leadership and wellbeing factors, such as family satisfaction or sleep, and other empirical research has not provided any significant support for a direct negative relationship between servant leadership behaviors and leaders' wellbeing outcomes. In addition, Liao et al. (2021), based on two sets of experience sampling data, found that engaging daily in servant leadership behaviors did not have significant adverse effects in terms of leaders' energy depletion. They also found that a positive relationship between daily servant leadership behavior and daily energy depletion only existed for leaders with low perspective taking (i.e., a form of lack of empathy), while for leaders with high perspective taking there was a negative relationship between performing daily servant leadership behavior and energy depletion.

It appears, therefore, that the theoretical notion that servant leadership behaviors, as a self-demanding leader style, have some cost to leaders (Liden et al., 2014; Lin et al., 2016; Johnson et al., 2014) is not consistently supported by existing evidence about the actual impact of engaging in servant leadership behaviors. It remains unclear how and under what conditions servant leadership behaviors bring harmful or helpful impacts for leaders themselves.

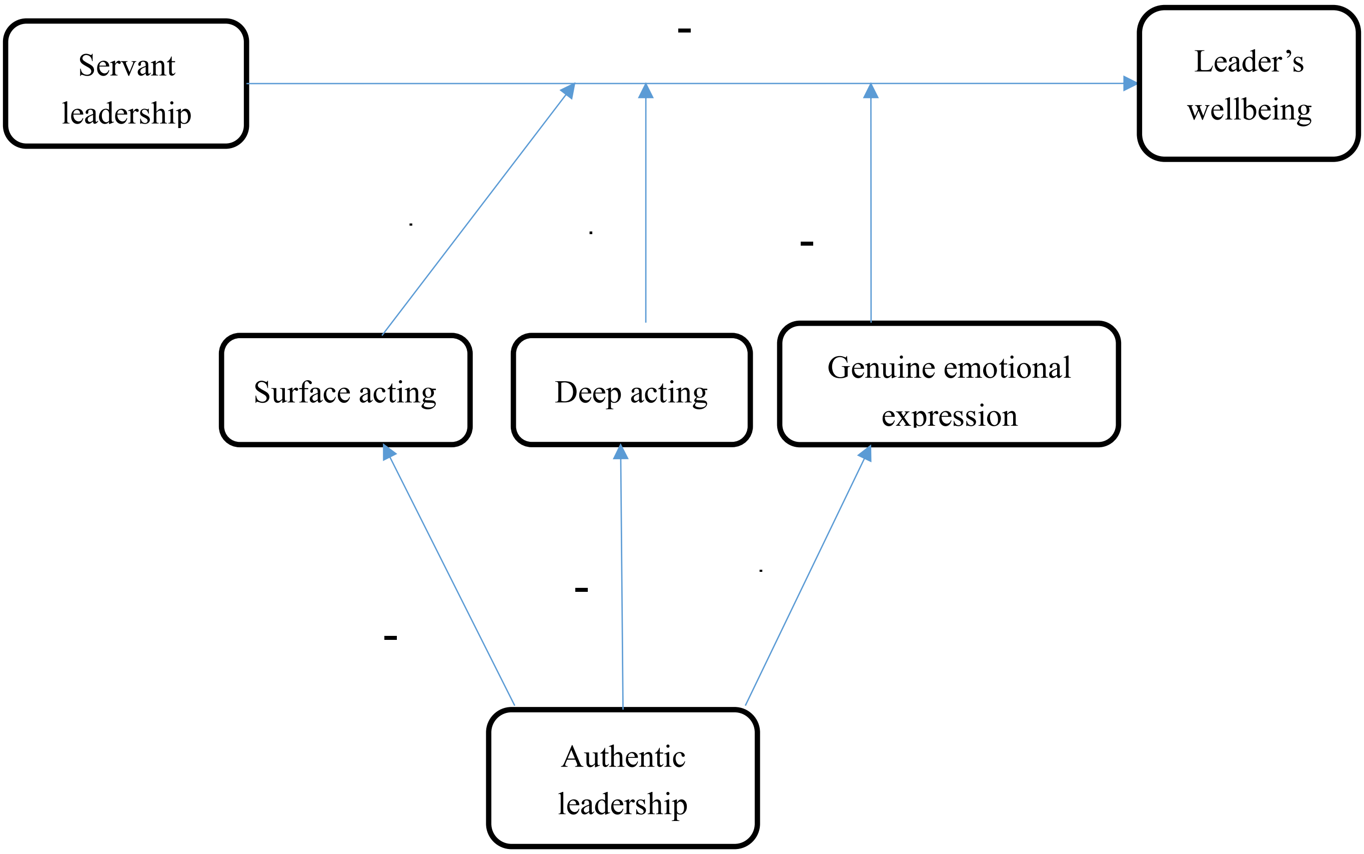
Conservation of resources theory

To better understand the impact of servant leadership behaviors on leaders themselves, we draw upon COR theory (Hobfoll, 1989, 2001). The basic tenet of COR theory is that people are motivated to obtain, maintain, and develop resources. When the following three conditions exist, stress occurs: (a) threat of a resource loss; (b) actual loss of resources; (c) lack of resource gain after resource investment. Hobfoll (1989) defined resources as those things that people value or that are used as the means for obtaining what people value. Hobfoll (1989) also identified four kinds of resources, which are: objects (e.g., physical equipment), personal characteristics (e.g., personal traits, skills), conditions (e.g., roles, supporting systems) and energies (e.g., time, money).

Furthermore, Hobfoll et al. (2018) summarized four principles of COR theory. The first principle is primacy of loss principle, which means 'resource loss is disproportionately more salient than resource gain'. The second principle is resource investment principle, which refers that 'people must invest resources in order to protect against resource loss, recover from losses, and gain resources. The third is the gain paradox principle, which holds that 'when resource loss circumstances are high, resource gains become more important—they gain in value'. The fourth principle is desperation, meaning that 'when people's resources are outstretched or exhausted, they enter a defensive mode to preserve the self which is often defensive, aggressive, and may become irrational'.

Based on COR theory, we hypothesize the following model.

Figure 1. Hypothesized model.



To address the research questions, this research will adopt a mixed method design, drawing on both quantitative and qualitative data to explore the hypothesized model. Mixed method designs explore the same aspects of the research questions from different angles and provide cross-validated (or "triangulated") information from different sources (Lobe et al., 2007). This approach is considered to provide more comprehensive understanding as compared with using a single method (Creswell, 2014).

For questionnaire data collection, we plan to recruit 500 hundred supervisors and at least 3 their respective subordinates to fill in the questionnaires. The questionnaire data collection will involve three waves. Wave 1 questionnaires will measure antecedents and control variables. Wave 2 will measure mediator and moderator variables. Wave 3 questionnaires will measure outcome variables. Quantitative techniques, such as confirmatory factor analysis (CFA), correlation and structural equation modeling (SEM) will be used to perform data analyses.

Regarding qualitative data collection, we plan to conduct semi-structured interviews with at least 50 leaders. A stratified sample of interviewees will be selected on the basis of their perceived engagement in servant leadership behaviors (high to low) and authentic leadership behaviors (high to low) as indicated by the questionnaire scores. An interview guide will be prepared to obtain the interviewees' critical incident accounts of their own engagement in servant leadership behaviors and authentic leadership behaviors, along with their perceptions of the impacts of such behaviors on their own wellbeing. To reduce demand characteristics, a researcher will conduct the interviews without knowing the quantitative scores of that particular interviewee. The same researcher will also rate each interviewee's servant and authentic leadership propensity based on the interviews or interview transcripts. Interviews will be conducted in Cantonese, Putonghua or English, depending on the preferences of the interviewees.

Thematic analysis (Fereday & Muir-Cochrane, 2006) will be adopted to analyze how engaging in servant leadership behaviors influences leaders' own wellbeing in conjunction with leaders' utilization of emotional labor strategies. The qualitative data is expected to help cross-validate (Lobe et al., 2007) the hypothesized model indicated by the questionnaire data.

Discussion

The proposed research seeks to make three main contributions. First, we consider that applying COR theory is likely to contribute to an overarching theory that explains the self-impacts of servant leadership. Second, we anticipate that our investigation of emotional labor will provide strategic insights into how to preserve and develop emotional resources for servant leaders' own well-being. Third, we expect to identify the boundary conditions that are necessary for inducing positive self-impacts of servant leadership and mitigating negative self-impacts of servant leadership behaviors.

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Paper Number:P018

Creating Shared Value (CSV) under COVID-19 – Learning from Successful Companies

Ka Yee Carry MAK*
University of Macau
Macau

*The corresponding author

Extended Abstract

This study investigates why and how successful corporations pursue creating shared value (CSV) during the COVID-19 pandemic and the post-COVID-19 era. A qualitative thematic analysis of case incidents (CI) of CSV from top 54 companies awarded by the Fortune magazine as winners for 2022 Change the World were investigated and systematically reviewed. Based on the review, we identified CSV strategies that successful companies have adopted during or post COVID-19 period and classified the determinants of CSV into various internal and external factors. This study contributes to the CSV literature by providing an understanding of factors that influence CSV initiatives and strategies companies adopted during or post COVID-19 era. We conclude by discussing the implications for business academics and practitioners.

Keywords Creating shared value, COVID-19 pandemic, strategy, sustainability, thematic analysis

1. Introduction

In the COVID-19 pandemic and post-lockdown era, it is often considered a challenging time for business in general in terms of profit and survival (Amankwah-Amoah et al., 2021). However, there are still many successful companies making profits while simultaneously reconciling social-environmental welfare. This study aims to explore first, how companies around the world successfully achieved dual benefits by creating profit value via creating social value, that is, creating shared value (CSV) during this difficult time period. And second, what are the factors that induced these companies to pursue CSV strategies for sustainable growth.

Accordingly, the two research questions for this study are as follows:

RQ1): How do companies pursue profitable CSV during and after the COVID-19 era?

RQ2): What factors influence companies' CSV initiatives during and after COVID-19?

Regarding the first research question, based on the widespread popularity of the CSV model of Porter & Kramer (2011), this study identified strategies that were employed by the successful case companies in the implementation of CSV during and after COVID-19. With regard to the second research question, since previous literature on the determinants of CSV tends to be scattered and no one single model has been widely recognized so far (e.g., Menghwar & Daood, 2021; Hasbu et al., 2022), this study intends to identify factors influencing CSV. In order to address these two questions, we employ a qualitative thematic analysis by analyzing the CSV case incidents of 54 companies who won the *Fortune 2022 Change the World List* to extend our understanding of the strategies and determinants of CSV during the pandemic.

This paper contributes to the field of CSV and COVID-19 in the following ways: First, despite the widespread popularity of CSV and Porter & Kramer's model, there have been criticisms in the last decade, including management fashion, a lack of empirical evidence, blocking transformative innovation, etc. (Beschorner & Hajduk, 2017; Crane et al., 2014; de los Reyes & Scholz, 2019; Dembek, 2016). By investigating the critical incidents (CI) of 54 companies around the world that successfully implemented CSV during or after the COVID-19 period, the study will attempt to align more empirical data support to Porter & Kramer's CSV model. Second, our analysis provides insights into practical CSV strategies of successful companies on "how" managers can create shared value by using their own strengths or capabilities for social progress (helping society), which in return helps firms not just earn reputation, but as well profits.

2. Literature Review

According to Porter & Kramer (2011), creating shared value (CSV) is defined as "the policies and operating practices that enhance the competitiveness of a company while simultaneously advancing social and economic conditions in the communities in which it operates (2011: 66)". CSV takes social goals to a strategic level (Crane et al., 2014), is more sustainable than corporate social responsibility or corporate philanthropy, as is more than brand reputation enhancement (Beschorner & Hajduk, 2017), CSV leads firms to use their capabilities to do social goods, which in turn aid firms to gain profits and legitimacy (Beschorner & Hajduk, 2017; Porter & Kramer, 2014).

One of the most commonly adopted CSV models is Porter & Kramer's model, which regards social problems as opportunities and innovates towards it (Carroll & Brown, 2018). Their CSV models provide three strategies for how managers can do this: 1) reconceiving products and markets; 2) redefining productivity in the value chain, and 3) building supportive industry clusters at the company's locations.

Another popular CSV model is from Pfitzer et al. (2013), suggesting a 5-step mechanism through which corporations can create shared value: embedding a social purpose, rigorously defining the social needs, measuring the social and business value, creating the optimal innovation structure, and co-creating with external stakeholders.

3. Methodology

Qualitative thematic analysis (Braun & Clarke, 2006) was adopted for the present study to analyze successful case incidents on creating shared value (CSV) of the top 54 companies around the globe that win the *Fortune 2022 Change the World List*. Fortune partners with the Share Value Initiative and FSG to list the top 54 companies globally that are doing well by doing good to society based on three criteria: 1) measureable social impact, 2) business result, and 3) degree of innovation. The Case selection were based on the case companies and incidents awarded by the Fortune magazine, we further explore in more depth about the CSV case incidents and the company via company websites, news, reports, articles, websites, archival material, and so on.

Data analysis followed the adapted six-step process of thematic analysis described by Braun & Clarke (2006). Based on the CSV model of Porter & Kramer (2011) and the determinants of CSV models from Menghwar & Daood (2019) and Padjadjaran et al. (2022), we performed a deductive thematic analysis in which the starting themes were the preconceived themes derived from the existing theory and models, such as reconceiving products and markets, creating shared value in products, redefining productivity in the value chain, internal and external factors, etc. Lower-level themes and elaborations of new or modified themes and sub-themes were identified using inductive coding.

4. Discussion

The findings of this study suggest two main conclusions. First, our study identified various internal and external stimuli for firms to pursue CSV initiatives. Indeed, there are many new CSV opportunities, especially in the emerging or developing markets, which are often the underserved markets, providing new opportunities for company growth and innovations (e.g., reverse innovation which often leads to lost-cost product, service, and/or process innovations). Second, the current study provides additional empirical evidence in support of Porter and Kramer's CSV model for the theoretical strategies' validity. Nonetheless, there has been an increasing number of start-ups and small businesses that received the "Change the World" award in 2022 *Fortune Change the World List*. This demonstrates as role models that not only large MNCs, but also start-ups and small companies, can implement CSV strategies, even during pandemics. Despite the pandemic, due to advances in technology, it is easier for start-ups and smaller firms with great ideas to pursue CSV.

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Paper Number:P020

Does an Exemplary Leader Make Followers Selfishless? A Serial Mediation Model of Ethical Leadership, Knowledge Sharing and Knowledge Hiding

I-Chieh HSU
Graduate Institute of Human Resource Management
Taiwan

Ji-Jie LIN*
Graduate Institute of Human Resource Management
Taiwan

*The corresponding author

Extended Abstract

Ethical issues in the workplace have been an important topic of discussion in recent years, with ethical leadership becoming a trend. Many studies have shown that ethical leadership styles have the potential to influence the moral behavior of employees. Therefore, this study uses social learning theory to explore the impact of ethical leadership on knowledge sharing and knowledge hiding, and to gain a deeper understanding of the mediating effects of socio-moral climate, ethical role modeling, and moral efficacy. This study will use a questionnaire survey to collect data from employees and their immediate supervisors in Taiwanese companies. The study aims to collect 120 matched pairs of questionnaires and use confirmatory factor analysis and multilevel analysis to verify the theoretical model's structure. The study's results are expected to show that ethical leadership has a positive effect on moral efficacy through socio-moral climate and ethical role modeling. Employees with increased moral efficacy are likely to promote knowledge sharing and reduce knowledge hiding behaviors.

Keyword: Ethical leadership; Socio-moral climate; Ethical role modeling; Moral efficacy; Knowledge sharing; Knowledge hiding

1. Introduction

Will an ethically and morally responsible leader encourage employees to share their knowledge and reduce their knowledge hiding behaviors? Previous studies have reported that ethical leadership has a positive impact on knowledge sharing behavior and a negative impact on knowledge hiding behavior (Bavik, Tang, Shao & Lam, 2018; Anser, Ali, Usman, Rana, & Yousaf, 2021), however, few studies have taken the ethical leadership as an antecedent to explore whether it will affect the employees' knowledge sharing and hiding behaviors. In addition, knowledge sharing and hiding have always been a critical issue in terms of ethics and morality, but there has still been not much investigations into the effect of ethical leadership on knowledge sharing and knowledge hiding through a mediating mechanism (see Lu et al., 2019 for knowledge sharing, and Anser et al., 2021 for knowledge hiding). Furthermore, prior research on knowledge sharing/hiding behavior has paid little attention to moral perspectives. Only a handful of research has gradually adopted a moral perspective for the study of the focal behavior. Nonetheless, such research draws self-determination theory (Bavik et al., 2018) and conservation of resource theory (Su et al., 2021). We still do not know much about how ethical leadership affects knowledge sharing/hiding through social learning processes. In particular, we focus on the causal mechanism through which moral efficacy is developed to engage in moral behavior, i.e., knowledge sharing, and to regulate unethical behavior, i.e., knowledge hiding.

Moral efficacy, a type of self-efficacy in the moral domain, refers to one's judgement as to one's ability to behave ethically. Prior research has established that ethical leadership motivates employees to behave ethically, following self-determination theory, or improves employees' resource perceptions that facilitate ethical behavior, following the conservation of resource theory. Nonetheless, the investigation cannot be complete without taking into account employees' judgement in their ability to behave ethically. Moral efficacy is important because it dictates how one face ethical issues at work. In particular, one may face ethical dilemmas at work. Moral efficacy helps one tackle such dilemmas by coming up with ethical solutions (Hannah, Avolio, & May, 2011). The literature has reported one's tendency to hide knowledge, instead of sharing knowledge because of the dilemma one faces between doing collective good vs. gaining personal benefit. With moral efficacy, one will be better able to deal with such dilemmas.

This research posits that the process of ethical leadership recognition can occur in multiple aspects, and therefore this study adopts the main tenets of F Brown, Treviño and Harrison (2005) which categorizes ethical leadership into two main features: ethical person and ethical manager. The social learning process of ethical leadership is assumed to occur in multiple aspects, both individual and group level, and to have a bi-directional impact on both the environment and the individual. As stated previously, the ethical person is viewed at the individual level and serves as a role model for subordinates, creating an ethical role model. The ethical manager is viewed at the group level and is created through mutual and open communication, creating a socio-moral climate (Seyr & Vollmer, 2014). Additionally, following social learning theory, this study incorporates the concept of moral efficacy as the driver of knowledge sharing and the negative predictor of knowledge hiding. It extends and focuses on how ethical leadership will impact the moral role modeling of individuals and the social moral atmosphere of teams, thereby having a positive impact on employees' moral efficacy, ultimately promoting an increase in knowledge sharing and a decrease in knowledge hiding behavior.

The purpose of this research is to investigate the effect of ethical leadership on knowledge sharing and knowledge hiding through socio-moral climate, ethical role modeling, and moral efficacy. The specific objectives are:

(1) To examine the dual mediating effect of socio-moral climate and ethical role modeling on the relationship between ethical leadership and moral efficacy.

(2) To investigate the mediating effect of moral efficacy on the relationship between socio-moral climate, ethical role modeling and knowledge sharing and knowledge hiding.

(3) To examine the mediating effects of socio-moral climate, ethical role modeling and moral efficacy on the relationship between ethical leadership and knowledge sharing and knowledge hiding.

2. Literature and framework

The importance of ethical leadership has been emphasized by previous research, including the study by Brown and Treviño (2006). According to the definition, an ethical leader is one who demonstrates appropriate behavior through personal actions and interpersonal relationships, and promotes such behavior to followers through two-way communication, reinforcement, and decision-making. According to social learning theory (Bandura & Walters, 1977; Bandura, 1986 1982), people learn appropriate behaviors through observing the actions and consequences of others. When ethical leadership serves as a model of moral behavior and becomes a target of identification and emulation for followers (Brown, Treviño & Harrison, 2005), such leadership can convey clear and consistent information about the importance of ethical values to the organization to subordinates. Prior research findings suggest that ethical leaders can have a significant impact on employee behavior through rewarding prosocial actions, such as organizational citizenship behavior, and taking disciplinary actions against unethical behavior, such as selfish behavior (Paterson & Huang, 2019).

Furthermore, ethical leaders as moral managers create a moral climate by showing concern for followers, openly communicating ethical standards with followers, and fostering altruism among followers. In such a moral climate, followers learn and emulate each other to improve their ability to behave ethically, even in the face of ethical dilemmas. The moral climate ethical leaders foster is not just the type of moral climate in the traditional sense; that is, the climate that regulates employee behavior through ethical-related laws and codes (Kim & Vandenberghe, 2020), or that promotes ethical norms and practices (Schneider, Ehrhart, & Macey, 2013). Rather, by showing employees appreciation, support, trust, and allocating responsibility among employees, ethical leaders involve employees in ethical decision making, thereby, fostering a socio-moral climate (Pircher Verdorfer, Steinheider, & Burkus, 2015). Weber, Unterrainer and Schmid (2009) examined the concept of socio-moral climate and its impact on prosocial and moral behaviors within teams. The study found that when team members experience a cooperative atmosphere characterized by appreciation, trust, and respect, as well as open communication, they are more likely to act in accordance with the team's moral expectations. Therefore, ethical leadership is effective in developing socio-moral climate that guide employees in meeting moral expectations of a collective or team. Moral efficacy, one's belief in one's capabilities to exhibit moral deeds and attain moral performance, is improved as a result. We hypothesize:

Hypothesis 1. Ethical leadership will positively influence moral efficacy through the socio-moral climate.

As previously mentioned, ethical leaders lead employees by setting up an ethical role model and convey ethical expectations. They also communicate with employees to persuade them to follow ethical guidelines. According to Bandura (1977), one tends to observe and learn from a credible and convincing role model. Ethical leaders, because of their honesty, trustworthiness, and concern for others (Brown & Treviño, 2006), present themselves as credible and convincing role models. As such, employees learn to face ethical dilemmas and make moral judgment by following their leaders' examples (Ogunfowora, 2013). Ethical leaders develop their employees' moral efficacy via ethical role modeling. We hypothesize:

Hypothesis 2. Ethical leadership will positively influence moral efficacy through ethical role modeling.

Knowledge sharing is one of the most important knowledge management processes, which is conducive to knowledge innovation for firm competitiveness (Mahdi, Nassar & Almsafir, 2019; Lee, Foo, Leong & Ooi, 2016). By contrast, knowledge hiding inhibits knowledge exchanges and reduces trust among organizational members (Connelly, Zweig, Webster, & Trougakos, 2012). As knowledge sharing brings collective good while knowledge hiding shows a gesture of protecting knowledge owners' self-interest, knowledge sharing should be encouraged, and knowledge hiding be eliminated. In facing the moral decision to share vs. hide, one with moral efficacy will be capable of making a decision as to what is good for the organization. That is, knowledge sharing will be chosen over knowledge hiding. As argued above, both socio-moral climate and ethical role modeling will be able to enhance moral efficacy, we propose the following hypotheses:

Hypothesis 3. The socio-moral climate will positively impact knowledge sharing and negatively impact knowledge hiding through moral efficacy.

Hypothesis 4. Ethical role modeling will positively impact knowledge sharing and negatively impact knowledge hiding through moral efficacy.

Our discussion so far has established that ethical leadership will lead to socio-moral climate at the collective level and ethical role modeling at the individual level. Both socio-moral climate and ethical role modeling will contribute to moral efficacy, which helps one to choose knowledge sharing over knowledge hiding. With moral efficacy, one will put oneself in perspective, be able to make a judgement as to the behavior good for the whole organization, and exhibit the behavior deemed good for the whole organization. Nevertheless, knowledge hiding is not a lack of knowledge sharing. Knowledge hiding is a distinct type of behavior, and is not seen as morally justifiable. Therefore, we include both knowledge sharing and hiding in our proposed investigation. As knowledge sharing is fostered, knowledge hiding should be absent. We have our hypotheses 5 and 6.

Hypothesis 5. Ethical leadership will positively impact knowledge sharing and negatively impact knowledge hiding through the socio-moral climate and moral efficacy.

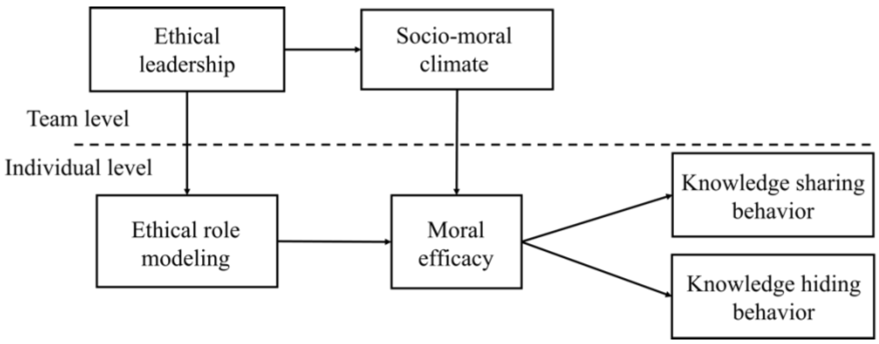
Hypothesis 6. Ethical leadership will positively impact knowledge sharing and negatively impact knowledge hiding through both ethical role modeling and moral efficacy.

3. Method and expected results

3.1. Method

In this section, the following structure diagram will be used to illustrate the relationship between the variables, and the research structure and assumptions will be drawn up. The research structure is shown in the figure:

Figure 1. A multi-level mediation model of ethical leadership to knowledge sharing and knowledge hiding.



This study investigates the relationship between ethical leadership and knowledge sharing and hiding behaviors in various industries. The sample population of this study will consist of full-time employees and their direct supervisors across different industries in Taiwan. The pair-sampled method will be used to collect data, with employees filling out the independent, mediating, and control variables (ethical leadership, socio-moral climate, ethical role modeling, moral efficacy, moral clarity, time pressure, moral identity, and Leader-Follower Value congruence), and supervisors filling out the dependent variables (knowledge sharing and hiding). The collected data will be screened for consistency and missing answers, coded, and archived for analysis. The statistical analysis will be conducted using SPSS and Mplus, including confirmatory factor analyses and cross-level analyses.

3.2. Expected results

This study will apply social learning theory in investigating a multilevel framework that addresses the effect of ethical leadership on knowledge sharing and knowledge hiding through socio-moral climate, ethical role modeling and moral efficacy. Our results are expected to show that ethical leadership creates a nurturing ethical social atmosphere through two-way communication, reinforcement and decision-making management methods, thereby enhancing the socio-moral climate. The mediating role of ethical role modeling is expected to provide support for H1, as ethical leadership recognizes the ethical behavior of the leader and encourages employees to view it as a model, which can cause employees to behave like the leader and enhance moral efficacy. From H1 and H2, it can be known that ethical leadership can influence both the team level and the individual level through a dual-pathway. It is further expected that enhanced moral efficacy will increase knowledge sharing behavior and suppress knowledge hiding behavior through the socio-moral climate. Finally, it is expected that moral efficacy will increase knowledge sharing behavior and decrease knowledge hiding behavior through ethical role modeling.

This research is expected to show that ethical leadership plays a crucial role in shaping the socio-moral climate, ethical role modeling and moral efficacy. Improving moral efficacy will encourage employees to share knowledge and reduce knowledge hiding. Specifically, research findings should highlight the importance of fostering supportive ethical environments, promoting ethical role modeling and cultivating a strong sense of moral efficacy in organizations to enhance knowledge sharing.

4. Conclusions

It should be safe to conclude that ethical leadership is a leadership style that helps to enhance moral behavior, facilitate knowledge sharing, and reduce knowledge hiding. Ethical leadership creates an environment for ethical behavior by strengthening external supervision and allows employees to build self-concept and embody their moral beliefs and confidence by emulating the leader's ethical behavior. The conclusions and recommendations of this research will be significant for businesses as leaders seek to enhance organizational efficiency and gain a competitive advantage. A conduit for this is leaders improving ethical behavior, promoting knowledge sharing, and inhibiting knowledge hiding. The importance of ethical leadership cannot be overstated. As a leader, it is crucial to model ethical behavior and create an atmosphere that fosters integrity, transparency, and accountability. Ethical leadership not only strengthens the organization's reputation and builds trust with stakeholders, but it also enhances employee morale and motivation, leading to higher levels of job satisfaction and performance. We strongly recommend that leaders make a concerted effort to prioritize ethics in their decision-making and set a positive example for their teams to follow. By doing this, they can create a workplace that not only meets their goals, but makes employees feel valued and respected.

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Paper Number:P022

A Study of Philanthropic CSR and Brand Love

Ho Yan KWAN*
Hong Kong Baptist University
Hong Kong

Junfeng ZHANG
Hong Kong Baptist University
Hong Kong

Noel Yee Man SIU
Hong Kong Baptist University
Hong Kong

*The corresponding author

Extended Abstract

Brand love has appeared as a key to maintaining strong customer-brand relationships. It is defined as the extent of a person's passionate emotional attachment to a particular brand. Empirical research has indicated the significant role of brand love in impacting consumer behavior. Yet, the challenges of what strategies companies could use to arouse and maintain consumers' love towards particular brands remain. Inspired by previous studies that have highlighted the role of corporate philanthropic activities in building a strong bond with consumers, this study intends to further our understanding of the consequence of philanthropic CSR on brand love and their contingencies.

This study complements prior research not only by demonstrating the interactive effects between firm competences (i.e., brand innovativeness and product quality) and philanthropic CSR on brand love, but also showing whether and how cultural factors (i.e., uncertainty avoidance, individualism) impact the relationship between philanthropic CSR and brand love.

With a sample of 326 respondents, the results of a field survey showed that brand innovativeness strengthened the positive effect of philanthropic CSR on brand love. But interestingly, product quality negatively moderated the philanthropic CSR-brand love link. In addition, cultural factors play a role in impacting such relationships. The interactions between (1) philanthropic CSR and brand innovativeness as well as (2) philanthropic CSR and product quality on brand love were significant among consumers with high uncertainty avoidance.

Keywords: Philanthropic CSR, brand innovativeness, product quality, brand love

Paper Number:P023

Evergrande's Ethical Dilemas in Debt Crisis

Hong Kei IM*
Macau University of Science and Technology
Macau

Ouyang ZIZHUO
Macau University of Science and Technology
Macau

*The corresponding author

Abstract

The case study discusses the ethical issues surrounding the debt crisis of the Evergrande Group, the most indebted property developer in the world with $300 billion debt outstanding as of 2021. Prioritizing different stakeholders and meeting their expectations is a key part in stakeholder orientation. This paper addresses several balancing issues Evergrande has faced in dealing with divergent interests by stakeholders. Bowing to pressure from stockholders and creditors, the firm has distributed the borrowed funds to pay dividends and met urgent debt obligations. Fearing public backlash and the spreading of debt crisis to the property sector and the economy, the government has taken strict measures to ensure stalled projects to be delivered to home buyers while ignoring the basic needs of the firm's employees and contractors, apparent deviation from the Common Prosperity policy.

Key words: Evergrande Group, Debt crisis, Chinese property market, Corporate Social Responsibilities, Stakeholder orientation, Three-red-line policy.

Concurrent Submission to the AJBE

I. The Making of Evergrande's Debt Crisis

The most debt-ridden developer faces different problems than other companies do. Evergrande not only owes large debts to individual and institutional investors such as banks and equity funds, but also has to build unfinished houses to homebuyers, repaying disgruntled employees who were made to invest in Evergrande's financial products and houses, as well as settle unpaid bills with construction companies and suppliers.

Evergrande started out as a private-funded property developer founded by Hui Ka Yin in 1996. With murky legal status in the socialist country, private firms in the 80s and 90s in China relied retained earnings and personal raising of funds for investments. These private enterprises were able to get access to bank credit and corporate debts starting from the early 2000s, thanks to the relaxed rules allowing entrepreneurs to join the Communist Party and their loyalty to the leadership. Political connections made it possible for private firms to borrow from banks. The property developers' unquenched thirst for lands during housing booms (thus becoming major contributors to the government coffers) paved the way for virtually unlimited credit for state-owned and private developers alike.

In response to the 2008 financial tsunami, the Chinese government introduced a package worth of RMB 4 trillion to jumpstart the economy, in which a large portion of the money went to the infrastructure development and the property market through liberal loan requirements. Coupled with easy credit policy, the property market had been on the growth trajectory again. Urban renewals also released renewed interest in the property market as some urbanites would have the funds (compensation for their demolished houses) available for new apartments, further fuelling property speculations and causing both price hikes and quantities of units sold.

The year 2020 marks the beginning of the downfall for the firm as the central government promulgated the Three Red Lines Policy[2] that aimed to limit the financial risks posed by property developers' excessive borrowing, the prevalent industrial practice among developers. With the new rules set to take effect in 2021, Evergrande felt the credit crunches beforehand and tried to manipulate cash flows and accounting numbers in order not to fail the tests.

II. The Unsustainable and Risky Business Model for Property Developers

Property developments are capital-intensive undertakings. A large amount of capital is required for land acquisitions and construction later. Credits are guaranteed by banks before the start of housing projects. A few months later a presale permit is approved before unfinished house units can be sold. The presale model was developed to cope with substantial capital expenditure upfront before sale could begin, a practice introduced to the mainland from Hong Kong and became the industry norm. The property developers would use the presale funds to bid more lands and develop more properties. This model would work when the developers are able to generate enough cash flow to meet the needs for further property projects. However, when the house demands are sluggish in economic downturns or extraordinary time such as Covid-19, the developers would be engulfed in credit crunch and bad debts.

[2] The "three red lines" metric put caps on debt-to-cash, debt-to-assets and debt-to-equity ratios and asked property developers to provide more details about their debts.

Evergrande had been more aggressive than other developers in expanding their project portfolio. In the second half of the 2010s Evergrande became the biggest property developer with their aggressive expansions and therefore accumulating systemic risks that drew the attentions from the government agencies.

Rising property price in the overheated industry had the government worry. In August 2020 the government established three red lines for property developers:

1. Assets (presales excluded) liabilities ratio cannot go over 70%.
2. Net asset debt ration cannot go over 100%.
3. Cash to short term liabilities ratio must be over 100%.

Crossing one redline means annual debt growth is capped at 10%. Crossing two red lines means that debt growth must be less than 5%. Crossing all three means no new debts are allowed. Evergrande happened to cross all the red lines and set the stage for its doom. With its abilities to borrow tightened up, the cash-strapped firm lost all of the financing options and could only count on assets sales, costs cutting, private loans from individuals and the founder’s personal wealth. Many bad loans to the developers followed economic downturns and it is quite clear that Covid-19 was to be blamed for the weak demands in the property market from 2020 to 2022.

On the eve of possible Evergrande’s default on a $260 million bond (after a three-month extension from overseas bond holders), the Guangdong Provincial government sent a working group to settle in the company to supervise the firm's risk management, internal control and normal operation[3].

Specifically, the group would

1. assess the firm's financial position and consult with domestic creditors to resolve debt issues to prevent accelerated payment demands.
2. secure the completion of homes for the buyers.

The People's Bank of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission pointed out that Evergrande's debt crisis was an isolated case and would not affect the stability of the Chinese capital market. The central bank suggested that the firm's risks stemmed from mismanagement and unsustainable expansions, but it gave assurance that the firm's problems were unlikely to undermine the medium and long-term financial markets. Beginning from July 2021, two measures had been taken to ensure houses get built and funds are made available:

1. Local city investment enterprises started taking over Evergrande's building projects.
2. To ensure funds are used to complete housing projects and not diverted to pay creditors, the Ministry of Housing and Urban-Rural Development instructed local subsidiaries across China to supervise funds for Evergrande's property projects in special escrow accounts[4].

There are many unknowns with the debt crisis of this magnitude. Despite takeovers of Evergrade's projects by municipal investment groups (Chengtou firms specialized in municipal developments).

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Little is known about the financial mismanagement by the Group, especially how the borrowed funds were used (where it went) and the corporate governance issues such as the role of chairman Ka Yan Hui in the financial troubles and how the Board made important decisions related to strategic developments and financial matters. Since indebted subcontractors and former employees were not allowed to speak up in the public arena (the Internet included), about the firm, it is difficult to assess the impact of debt crisis on these groups. Former executives do not speak about their firms so there are no way to corroborate the claims by netizens who managed to voice their plights under heavy censorship.

This paper uses published financial statements and news reports as the basis for analysis. The latest was the interim report in 2021 and the Group has never updated their financials ever since, implying bigger financial troubles lying ahead.

III. Stakeholders orientation

Stakeholder orientation describes a pattern of social responsibility values, decision making or behavior where managers decide and act by including the interests of various groups of stakeholders like customers, employees, etc. It provides a normative framework to address the competing interests in challenging environments such as sluggish home sales and tightening credit policy.

Stakeholder orientation often involves balancing different interests of important stakeholders. One of them is the shareholders. They are the ultimate decider of the how corporate decisions are made, especially when it comes to dividend policy.

The utilitarian tradition dictates that firms' corporate social responsibility rests upon meeting shareholders' goals: wealth and pursuing profits as much as possible. But it says nothing about what a firm's social responsibility would be when it faces financial problems and possible defaults and even collapse. The stakeholder orientation provides a framework for companies to identify key stakeholders and prioritize their divergent interests so that the most urgent and important needs must be met first. The commonsense approach to resolving debt problems is the firm's survival by all means, such as maintaining sufficient cash flows to remain operational. The short-term solution to liquidity problems is generating additional cash flows (even with borrowings) while reducing unnecessary expenses and delaying payments. That was exactly what China Evergrande has done but there were problems that they did not anticipate.

IV. Key Stakeholders Involved

Primary stakeholders in Evergrande's debt crisis can be found by looking at the firm's liabilities section in the balance sheet.

Stockholders

The equity structure change announced in 2020 show that the Evergrande received strategic investments from state-owned firms specialized in municipal infrastructure[5]. The firm has become de facto state-owned enterprise guided by government policy to achieve objectives deemed desirable by the State. It may be easy to understand why the firm continued to pay dividends from borrowed funds in the midst of its debt crisis. These State investment firms would need to see the returns on their investment and the pressure was on the firm to deliver.

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Creditors

Offshore bondholders and senior note holders account only for a small fraction of the firm's mountain debts, but this group has made much noise by demanding debt restructuring plans and taking over Evergrande's overseas assets. One notable example was the takeover of the Group's Hong Kong headquarters by China Citic Bank International[6]. Initially the firm struggled to pay interests to these creditors lest of cross defaults on domestic debts, then several debt restructuring talks were held but no agreements have been made due to the creditors' hesitations to accept Evergrande's subsidiaries assets as a part of the debt settlements. This reflects serious doubts on Evergrande's future viability.

Table 1. Debt Numbers between the China Evergrande Group and Key Stakeholders

$300 billion debt	Stockholders	Creditors	Employees	Contractors & suppliers	Homebuyers	Governments
By the numbers	Ownershipchange hands to SOE infrastructure firms. More state control expected	Intl debts: 6.7%; PRC bonds & banks 20%. Offshore lenders quick to take over assets while domestic lenders slow.	Layoff, salary & benefits cuts, relocation. Their investments in jeopardy.	$100 billion or 33%. Biggest victim who experience defaults and lawsuits.	$32 billion; 500,000 homes at stake. Stalled projects restarted but far from completion. uncertainty	Taxes owed s: $24.8 billion or 8.3%

Domestic creditors, especially banks and PRC bondholders bear the brunt of the firm's default (a combined 21% of the debt), but they are careful not to make much noise in the media in fear of causing investors' loss of confidence in the financial markets. Debt restructuring talks may proceed in the background and there were news reports of banks' seizing of the firm's assets.

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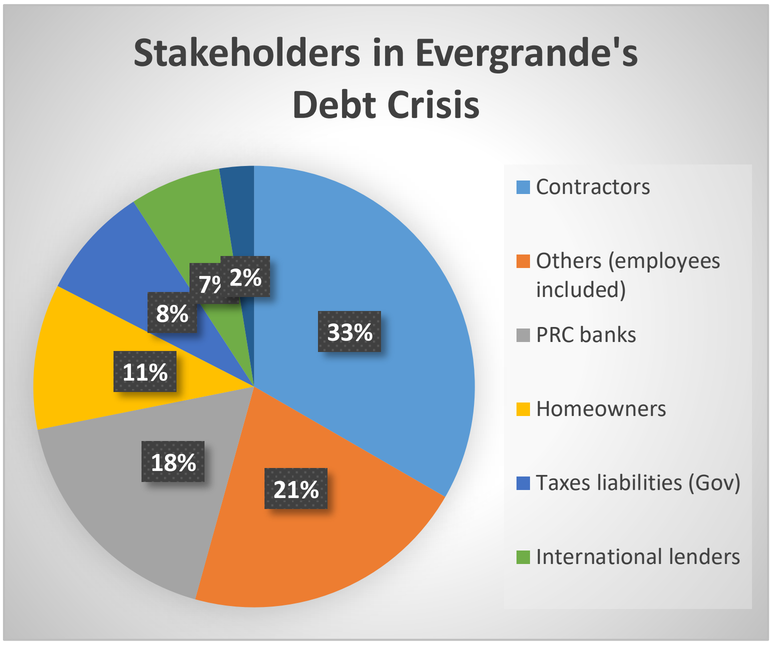
Homebuyers

The priority to save home buyers by ensuring the delivery of houses can be socially acceptable and politically correct. The firm promised to restart all stalled projects due to failure to pay the building contractors and other suppliers. Over 90% of the projects have been restarted but the lack of funding to continue these projects to their completion raises the question whether these projects would ever be delivered.

This group was given priority because their sheer number (500,000 or more) and their plight. For municipalities where Evergrande has stalled projects, the government will take control of the funds for the projects and put it into trust accounts. To ensure the completion of the projects, diverting the owners' proceeds to the Group's headquarters is not allowed.

The government has a role to mitigate financial risks when property developers have performed poorly during economic downturns. Out of systemic risks and wider market panics, the government has to take care of its political objectives when property developers fail to complete houses for the home buyers. It can easily turn into a political backlash when the government gets too close to big businesses or seen too sympathetic to their financial problems. as it could go against the official line of "common prosperity", a vague concept emphasizing poverty alleviation policy as means to social equity.

Exhibit 1. Breakdown of Evergrande's Creditors



Employees

Evergrande had 163,000 employees as of June 2021, including those working at individual properties or offices. Their back pay is in serious trouble, not to mention their investments in Evergrande's financial investments, auto and properties, commercial paper (IOUs), all were forced to buy from the firm. Their salaries have been delayed and cut as a result of financial troubles. Some employees reported that they were forced to tender their resignations, or they would be dispatched to others work locations deemed highly undesirable, then forcing them to accept positions with lower pays or undesirable positions.

Employees were asked to be committed to purchasing the firm's financial products, electric vehicles and house units. Their salaries and social securities had been cut and they staged strikes against the Group, further complicating the government and firm's efforts to deliver unfinished housing projects to the homeowners[7]. They were told to file lawsuits in Guangzhou, where the Group is headquartered, but the prospects of recovering money are considered slim as no class-action lawsuits would be allowed and most of the firm's valuable assets have been taken over by institutional creditors.

Table 2. Evergrande's Creditors by Numbers

in USD billions

Creditors	Amount	Percentage
Contractors	100	33%
Others (employees included)	62.9	21%
PRC banks	52.7	18%
Homeowners	32	11%
Taxes liabilities (Gov)	24.8	8%
International lenders	20	7%
PRC bonds	7.6	3%
	300	100%

A big part of overdue pay is commissions owed to real estate agents/salespersons. This group is blamed to be pawns of Evergrande, selling house units to buyers who are unlikely to see their homes ever built or completed. However, their plight is quite severe because they have experienced delays after delays in getting their commissions due from the firm. Some former sales agents reported that they had been warned NOT to publicize their grievances online or among their contacts when they approached the government to resolve overdue commissions with the firm. They insisted that they were forced to change their employment status from employees to independent business owners, meaning they would forfeit their rights without recourse as their commissions would not be recognized as pay.

[7] Qiao, L., Cheng, W. (2021, Dec 24). Evergrande's Employees Stage Strikes in Hunan, Shanxi and Guizhou Protesting Unpaid Wages and Fringe Benefits Cut. *RFA.org*. Retrieved Oct 8, 2022, from https://www.rfa.org/cantonese/news/salary-12242021055804.html

To reach their sales targets these agents had used up their own funds or borrowed heavily from banks or credit card companies. Their financial hardship would only exacerbate when they can't get their commissions from Evergrande. As a last resort to resolve their owed commissions the local officials told these agents to file lawsuits in Guangzhou's court, the only venue for legal settlement against the firm[8].

Contractors and Suppliers

The grievances from small and individual contractors are routinely suppressed online. They are allowed to file individual lawsuits against the Group but not class action. Some large/state-owned construction firms have won lawsuits and caused the Group's assets and bank accounts frozen. Some firms have already write-off their debts from receivables from Evergrande while others become default or are taken to courts by their creditors because of Evergrande's inabilities to pay them. A few large SOEs managed to recover some funds through legal actions but most small suppliers are in limbo.

The payments to this group's trade payable accounts had been delayed and some bills had never been paid. Most of these groups are in dire situations as they borrowed heavily in order to perform services for Evergrande but now they are stuck with unpaid bills and mounting financial obligations to pay their own workers and partners. Legal settlements have been taken by these groups as the upstream and down industries have been severely curtailed.

During the period of Sept 26 to 28 in 2022, a total of 12 civil enforcements have been executed

[8] Liao, L. (2021, Oct 15). The Road to Recover Overdue Pays for Evergrande's Employees. *Zhihu.com.* Retrieved Jan 11, 2022.

against Evergrande's subsidiaries in 9 different cities among 6 provinces, ranging from RMB 10,000 to hundreds of thousands of RMB. Every indication shows that creditors and large contractors are quick to use legal means to recover their funds. The effect of taking valuable assets, would only exacerbate Evergrande's financial troubles.

V. Issues in Balancing Stakeholders' Divergent Interests

Even though business ethics texts suggest firms should focus on taking care of the interests and needs of those deemed most influential to their survival, what it entails can be misleading because the principles of fairness and taking care of the least disadvantaged are missing in the equation. The problem of heeding to the most powerful stakeholders in time of crisis is that their influence and interests may be paramount but not necessarily urgent. During the height of debt problems in 2021, the Group managed to pay dividends right after a dismal interim report showing a combined trade and contract liabilities of RMB 1.2 trillion[9], in spite of widespread layoffs and salary cuts within the Group. Dividends can be delayed and in fact the firm had not paid dividends to the shareholders for two years in the firm's history.

Table 3. Dividend History of the China Evergrande Group

Ex-Dividend Date	Dividend	Type	Payment Date	Yield
Jun 16, 2021	0.182		Jul 08, 2021	1.66%
Jul 08, 2020	0.71		Jul 21, 2020	2.76%
Jan 17, 2020	1.578		Feb 26, 2020	7.12%
Sep 28, 2018	1.287		Oct 19, 2018	5.08%
Jun 20, 2016	0.4486		Jul 08, 2016	8.50%
Jun 16, 2015	0.545		Jul 03, 2015	10.77%

Source: Investing.com

9 Interim Report 2021 of China Evergrande Group.

Strongest Sense of Social Responsibility – Not to Cause Harm

The strongest sense of responsibility is the duty not to cause harm. Even when not explicitly prohibited by law, ethics would demand that firms not cause avoidable harm. If a business causes harm to someone and, if that harm could have been avoided by exercising due care or proper planning, then both the law and ethics would say that business should be held liable for violating its responsibilities. In practice, this ethical requirement is the type of responsibility established by the precedents of tort law. In Evergrande's case, the extent of harm caused by failing to pay legal benefits to employees and repayments to numerous contractors and suppliers outweighs the sheer benefits of enriching shareholders.

Shareholders and debtors were the only stakeholders the firm would need to address while the obligations to pay other stakeholders such as contractors and service providers were not on their priority list. While it is understandable to pay interests and retire bonds when they come in due, repurchasing shares and paying dividends seem to be self-defeating when the funds raised were not used to meet the most urgent needs, such as employees to whom the firm owed unpaid wages and social securities, issues dear to their well-beings and survivals.

However, what if cutting expenses would invariably hurt some stakeholders enough that it would affect the pursuit of second goal hurts the priority, the firm's survival chances? As in the case of Evergrande, to meet its mounting debt obligations, the firm would need to dispose valuable assets (no matter how it is done, such as paying off debts or under legal/court orders from litigations). These efforts would inevitably undermine Evergrande's overall abilities to generate stable flow of income to settle debts and other obligations such as funding for the completion of stalled projects.

The Chinese government's handling of the situation suggests the firm's survival will take the back seat as there're more urgent and political objectives: maintaining social stability by calming down stressed home owners. Urgency is center and front, so the impact of economic spillover along the supply chain won't be on their priority list as it takes time to feel and there are no scientific ways to come up with the price tag for the exact damages to the sector and economy. Who would care even if we get the results?

However, ignoring the outcries of Evergrande's employees and contractors to which the firm owes unpaid wages won't be able to reflect the spirit of common prosperity, a vague concept referring to poverty alleviation. The inequity of saving some affected stakeholders while ignoring others can only delay the slow death of the firm which can no longer realistically to be able repay its mountain of debt.

Table 4. Evergrande's Trade Payables and Days Payable Outstanding (DPO)

Year	2016	2017	2018	2019	2020	2021 Interim
Trade payables, in millions RMB	182,994	257,459	423,648	544,653	621,715	666,902
Annual change		+40.7%	+64.5%	+28.6%	+14.1%	7.2%[10]
DPO	379	404	418	513	553	

Source: CFA Institute

One way to boost cash flows is by delaying payments to vendors and suppliers with trade payables, which was much easier to do than paying no dividend to stockholders or default on debts. Stockholders and creditors are powerful stakeholders that firms would not want to undermine if all

[10] The Annual change for 2021 is estimated to be 14.4% (7.2*2=14.4)

possible while the financial obligations to contractors, vendors and employees can be “managed” to generate positive cash flows.

The number of days payable outstanding (DPO) shows the number of days the cost of sales is lying unpaid. In Evergrande’s case, the DPO had increased by 46% from 2016 to 2020, a troubling sign with its weak cash flow and accumulated short-term debts.

VI. Conclusions

The financial mismanagement of the firm is to be blamed for Evergrande’s liquidity crisis. On a deeper level, it is the misallocation of funds to meet the urgent needs of influential stakeholders (repayments to lenders and dividend payments) but not millions of contractors and employees whose well-beings are at stake. This reckless disregard for the harm created by default on the latter group initiated the chain reaction to destroy the very foundation to keep the firm afloat, the ultimate goal for any firms in financial distress. Building contractors will leave when payments for their services stop and employees are let go in the midst of salary and benefits cut.

There are unfinished businesses needed to be taken care of, such as debt restructuring plans, projects restarted but a long way from being completed, wages and employment benefits overdue to employees, and the investments they were made to contribute to the firm. In addition, contractors, vendors and service providers are left in the cold as they are holding the firm’s commercial papers (IOU) with no hope in sight.

The government has tried to solve a small part of Evergrande’s debt problems but the results are not encouraging. Homebuyers may have the hope to see their homes delivered but a great uncertainty remains as when it will happen and some issues are not resolved, such as the green zones, bus stops and other facilities surrounding their properties. These have been promised but will not be realized when projects are running out of funds.

When talks with Evergrande stall, international creditors will not get their money back if they don’t take legal actions to seize the firm’s overseas assets. Domestic banks are likely to take a big hit when Evergrande fails to repay their loans.

The lesson learned from this debt crisis can be many. Firms must give priority to the most important stakeholders and not the most influential. They should think about how to be operationally viable with key stakeholders before worrying about their reputation.

Paper Number:P024

The Impact of Sustainability Development Goals on Financial Performance in the Information Communication Technology Industry Using Machine Learning Techniques

Tian-Shyug LEE
Fu Jen Catholic University
Taiwan

Ariana CHANG
Fu Jen Catholic University
Taiwan

Hsiu-Mei LEE*
Fu Jen Catholic University
Taiwan

Ching-Heng SHEN
Ming Chuan University
Taiwan

*The corresponding author

Extended Abstract

This study seeks to identify the impact of sustainable development goals (SDGs) in predicting corporate financial performance in the ICT industry. We extracted financial report data from the Taiwan Economic Journal Co. Ltd database, including profit and loss (P&L) data, balance sheet data, and cash flow statement for companies in the information communications technology (ICT) that published CSR reports and are active up to 2020. Thus, important variables were identified to help predict the financial performance in the following years upon published CSR reports. The purpose of this study is to find the important variables that affect the prediction accuracy of financial performance and provide management insights for better business decision-making. The mechanism of this study is implemented using machine learning feature selection methods with identified important variables to better predict EPS using linear regression, machine learning approaches, and artificial intelligence techniques. Our findings suggest the vitality of certain variables that could enhance the Earnings Per Share (EPS) prediction. With various predictive models applied, the Artificial Neural Network (ANN) model was found to be the most effective in predicting corporate financial performances, as indicated by the evaluation metrics. This is especially applicable in predicting corporate financial performance for one to four years upon the Corporate Social Responsibility (CSR) report publication. Our findings suggest that the implementation of SDGs can be used to better forecast the financial performance after firms have published their CSR reports as it enables firms to bolster stakeholder engagement and evaluate ESG efforts.

Keywords: Corporate social responsibility (CSR), sustainable development goals (SDGs), machine learning, prediction, financial performance, feature selection

1. Introduction

Corporate Social Responsibility (CSR) has gained significant amount of attention since the 19th century, and is closely related to a firm's corporate image, revenue and sustainable operation. The dimensions of CSR include economic, legal, ethical and discretional responsibilities (Carroll, 1979). CSR can be referred to as voluntary activities that progress social good which is beyond the firm's interests and that which is mandated by law (McWilliams and Siegel, 2001; Waddock, 2004). To communicate CSR activities, many firms publish CSR or sustainability reports annually. Sustainability reporting is about assessing and make periodic public disclosures (Fonseca, Macdonald, Dandy, & Valenti, 2011). One of the ultimate goals for firms is sustainable development and firms must recognize their social responsibilities in order to achieve such an objective (Huang and Kung, 2010). Globally, nation states and Taiwan are striving toward progressing sustainable development.

According to the World Business Council for Sustainable Development (WBCSD), CSR is defined as a company's commitment to continuously abide by ethical standards, contribute to economic development, improve employee wellbeing, the local community, and advance quality of life. Recently, the focus on corporate social responsibility in the realm of international affairs has shifted towards increased transparency in regards to non-financial information. Since 2013, regulations concerning the disclosure of non-financial information have been passed by the United Nations, the European Union, and the United States. These regulations aim to strengthen the accountability and transparency of firms in regards to non-financial information. Globally, sustainable development is promoted through the power of financial markets, and its scope has expanded from focusing on green or environmental aspects in the early days to covering environmental, social, and corporate governance (ESG) aspects. Sustainable finance has become the core of international financial development policies.

Since its inception, how a firm implements CSR has dramatically evolved. In the early days, the donation approach was mostly adopted, but it lacked relevant synergies. Even though they still exist today, most of them are in emergency assistance basis. According to the latest "Corporate Governance 3.0 Sustainable Development Blueprint" announced by the Financial Supervisory Commission of Taiwan in August 2020, the requirements for companies to publish CSR reports will be stricter from 2023, extending from listed to over-the-counter (OTC) companies. Companies are required to publish CSR reports with registered capital exceeding 2 billion NTD (USD$64 million) by 2030 while the current requirement is the registered capital higher than 5 billion NTD (USD$ 161 million). The investment and impact of CSR reports and initiatives will be highly intensive. Profit seeking has always been the main concern of firms, many problems arose due to the fact that profit has always been the main concern for firms. The government has set many policies and programs to encourage incorporation of social and environmental initiatives into business decision making instead of seeking for profit. The recognition of the importance of CSR in Taiwanese society and the general public has increased rapidly year by year. Private organizations and organizations such as Commonwealth Magazine, Foresight Magazine, Sustainable Energy Foundation, and Corporate Sustainability Development Association have extensively reported on CSR and hosted awards. With the public awareness of CSR and through hosting CSR awards, firms are encouraged to engage in CSR. Moreover, firms can also benefit from understanding their own strengths and weaknesses for future CSR related strategic planning.

The world is currently facing severe challenges such as serious inflation problems, which posed a lot of risk and uncertainties to enterprise supply chains. Currently, global investments focus on the stability and long-term benefits of corporate financing. As responsible citizens of the society, enterprises will not only be interest seekers in commercial areas, but also the leading force of the social community. It is difficult for firms that do not implement CSR gain recognition from investors and customers, because CSR has become one of the critical components for the sustainable development of firms. Good corporate reputation can increase firm value and past literatures also found that firms with good reputation in general industries also have better financial performance (Dowling, 2006). Participating in CSR initiatives is indeed advantageous as the marginal profit rate of the year increased substantially and ultimately boosted ROA performance (Chih, Miao, & Chuang, 2014). Enterprises are expected to achieve sustainable development through social trust (Cho, Chung, & Young, 2019). Hence, the entrepreneurial activity of a firm is based on trust, which can help maintain good relations with various stakeholders and ultimately improve financial performance.

The information and communication technology (ICT) industry has grown rapidly over the past twenty years and has transformed global economies (Batool, Ali, & Rehman, 2022). There were concerns that ICT will someday use an unsustainable portion of the total available energy (Fuchs, 2008; Zeadally, Khan, & Chilamkurti, 2012). The IT industry in Taiwan is a significant global provider of computer chips. Of note, the supply of computer chips to the world market was disrupted when the manufacturing lines at Hsin Chu Industry Park (concentrated technology park) halted due to an earthquake on September 21st, 2001 (Huang, 2008). Taiwan's electronics industry is a key player throughout the entire global consumer electronics supply chain, notable for leading both the capital-intensive segment, such as the production of semiconductor chips and other electronics components, and the labor-intensive segment (the final assembly for personal computers and smartphones) (Hao and Bu, 2022). Notable technology firms include TSMC, UMC (United Microelectronics Corporation), Acer, Compal and Hon Hai. The world's two largest foundries producing microchips that power computers, digital cameras, and other electronic devices are TSMC and UMC.

As the firm's reputation gets enhanced, the initial cost of investment in CSR endeavors will eventually be offset by the reduced expense and increased revenue rendered by the reduced long-term cost. Chang (2017) used regression analysis to examine the effect of CSR on the return on assets (ROA) and return on equity (ROE) indicators of firms. The results indicate that when firms devote more efforts into corporate social responsibilities and fully disclose CSR indicators, their financial performance will become higher.

Fu, Hung, & Hou (2022) collected hospital accreditation statistics from a Taiwanese hospital from 2009 to 2020 and time series analysis was applied to analyze the data. Jang, Kang, Lee, & Bae (2020) mentioned that credit rating agency should include ESG indicators to the evaluating process or create individual ESG scores. Bond investors should also combine ESG scores with existing indicators for credit scoring. [46] Tseng, & Shih (2022) revealed that the mandatory disclosure policy of CSR reports significantly improves the forecasting accuracy and reduces the dispersion of analyst forecasts concurrently. When CSR reports are forced to go through the accounting process, the accuracy of prediction will be further improved. This explains why the legal enforcement of CSR reporting will lead to increased performance of prediction accuracy.

Our main research question is whether SDGs (sustainable development goals) will have an impact on corporate financial performance in the ICT industry. This study will focus on companies with registered capital of more than 5 billion NTD in Taiwan that have published CSR reports. To gain insights between the relationship of CSR reports and financial performance, our research will examine the changes in financial performance after the annual release of CSR reports. Moreover, we will identify the impact of CSR report on financial performance and investigate what are the important variables that affect financial performance prediction to provide managerial recommendations.

The rest of the paper is structured as follows: section 2 introduces the methodologies adopted in this study, section 3 discusses the empirical study using different machine learning techniques, section 4 provides the research findings and finally section 5 addresses the management insights and conclusions of this study.

2. Literature Review

2.1. Sustainable Development and Corporate Reporting

In September 2015, UN member nations adopted a set of 17 sustainable development goals (SDGs) to eradicate poverty, safeguard the environment, and provide prosperity for everyone as part of a sustainable development agenda (George, Howard-Grenville, Joshi, & Tihanyi, 2016). Rather than adhering to binding mandates, the SDGs serves as a novel approach to sustainability-relevant change be providing distinct targets (Whittingham, Earle, Leyva-de la Hiz, & Argiolas, 2022). In the indicator of Goal 12 to12.6.1: number of companies publishing sustainability reports, it encourages companies to adopt sustainable practices and sustainability reporting. Due to the demands of shareholders, many firms are motivated to address more sustainability and disclose details on sustainability performance (Herremans, Nazari, & Mahmoudian, 2016).

The growing impact of non-shareholder stakeholders and the growing demand for corporate social responsibility (CSR), businesses can no longer just serve the interests of shareholders (Huang and Kung, 2010). Through institutional pressures, businesses are motivated by societal pressures and need to comply to society's norms (Harrison and St. John, 1996). As stakeholders gain more influence over a firm, the latter must alter its operations to minimize conflicting interests and social and environmental disclosures are seen as strategies for businesses to respond to their stakeholders (Huang and Kung, 2010). CSR reports serve as a channel of communication between the company and its stakeholders.

2.2. CSR and ESG Disclosure

Jang et al. (2020) mentioned that credit rating agency should include ESG indicators to the evaluating process or create individual ESG scores. Bond investors should also combine ESG scores with the existing indicators for credit scoring. Tseng et al. (2022) revealed that the mandatory disclosure policy of CSR reports significantly improves the forecasting accuracy and reduces the dispersion of analyst forecasts at the same time. When CSR reports are forced to go through accounting processes, the accuracy of prediction will be further improved. This explains why the enforcement policy on CSR reports leads to increased performance of prediction accuracy. Because of the accessibility of ESG ratings, they are frequently used as a proxy for business sustainability performance (Drempetic, Klein, & Zwergel, 2020). Measure such as return on assets (ROA) (e.g., Xie, Nozawa, Yagi, Fujii, & Managi, 2019), return on equity (ROE) (e.g., Atan, Alam, Said, & Zamri, 2018), and stock returns (e.g., Brammer, Brooks, & Pavelin, 2006) have been utilized to investigate the relationship between ESG scores and financial performance.

Fostering the culture of social responsiveness is not only critical to bolstering team cohesion, but also essential to sustain business growth. CSR has been used to evaluate the difference between the pre-investment financial risk and the post-investment volatility of financial assets invested in CSR related efforts. In fact, Environment, Social, and Governance (ESG) disclosure has become the main motivation for global corporations and companies to publish CSR reports. Past research has found there is a positive relationship between the effort to fulfill corporate social responsibilities and the net profit gain in Taiwanese financial companies. This result aligns with the stakeholder theory: the more the corporates devote into fulfilling the corporate social responsibility, the more competitive and reputable the corporate's brand image becomes (Cho et al. 2019). The initial cost of investment in CSR endeavors will eventually be offset by the reduced expense and increased revenue rendered by the reduced long-term cost, as the corporate reputation gets enhanced.

Baran, Kuźniarska, Makieła, Sławik, & Stuss (2022) investigated whether or not the company's ESG score is related to its financial performance. This research examines data from eight major energy companies in Poland and performed comparison analysis between ESG indicator and profitability metric based on ROA and ROE. The result showed that ESG factors have significant impact on financial performance indicators. Friede, Busch, & Bassen (2015) consolidated 2,200 individual studies and found that 90% of these studies concluded a non-negative relationship between ESG and corporate financial performance (CFP) and highlighted the positive impact of ESG on CFP appears to be stable over time. García, González-Bueno, Guijarro, & Oliver (2020) examined ESG indicators with corporate financial evaluators. They tested datasets with ESG scores from different European companies for the period 2016-2020. The results showed that the variables considered are useful in predicting ESG rankings when companies are clustered in three or four equally balanced groups.

2.3. Financial Performance Prediction

Financial performance is a necessary determinant in measuring a firm's overall performance (Popa, Bogdan, & Simut, 2021). It also affects the managers, investors, and shareholders' decision making (Salehi, Bazrafshan, & Hosseinkamal, 2021). Financial indicators are widely adopted to evaluate performance, predict business pitfalls and develop prediction models (Huang, Tsai, Yen, & Cheng, 2008). There are many methods that can be used to predict the financial performance of a company in past literature. Most of them are utilize either traditional statistical or econometric methodologies. Altman (1968) implemented the well-known z-score model and multiple discriminant analysis to get five financial ratios with best explanatory ability. Bae (2012) used statistical methods including multiple discriminant analysis, logistic regression, multi-layer perceptron (MLP), decision tree algorithms (C5.0), Bayesian networks, to predict financial distress. Ihlayyel, Sharef, Nazri, & Bakar, (2018) integrated features from financial news and a stock price value series based on a 20-minute time lag using linear regression.

Other than traditional statistical and economic methods, machine learning and deep learning methods are also effective (Salehi et al. 2021). Popa et al. (2021) found that the recurrent neural network model can obtain better accuracy and lower error for predicting financial performance composite index when using seven-year data instead of just one-year data. Lam (2004) applied 16 financial statement variables and 11 macroeconomic variables as predictors to build return on common shareholders' equity return prediction by neural network technique.

2.4. **Machine Learning and Feature Selection**

Machine learning is a method that can help identify patterns, make decisions, and improve accuracies such as that of humans (Ghoddusi, Creamer, & Rafizadeh, 2019). Gaining much attention in financial economics and the field of sustainability, machine learning has been frequently used in financial analysis (Coelho, Coelho, Coelho, Reis, Enayatifar, Souza, & Guimarães, 2016; Gan, Wang, & Yang, 2020; Lee and Tae, 2020). Machine learning methods can be defined as supervised, unsupervised and semi-supervised (Li and Sun, 2007).

Decision tree is a popular machine learning technique and ID3, C4.5 and CART are well-known decision tree algorithms (Loh, 2014, Rokach and Maimon, 2014, Quinlan, 2014). All data points are associated with the root node of the tree, and the decision tests for these points are used to group the data and create distinct child nodes for each group. There are many decision tests that can be used to select a testing method for different algorithms. Researchers attempt to group data by this means, with the expectation of low within-group variation and large between-group variation. Splitting nodes in this method continues until the algorithm stopping condition is met. When used for regression, previously unseen data points are moved from the root of the tree through a path defined by a given test. When it arrives at the leaving node, it makes a prediction based on the value of the data point on that node (Loh, 2014, Rokach and Maimon. 2014, Quinlan, 2014).

Random Forest (RF) is an ensemble algorithm based on bootstrap aggregation, an integrated regression tree

(Breiman, 2001). It randomly extracts several variables to improve the correlation between the regression trees. Despite the dependence on computational power, Random Forest creates a highly accurate prediction model and estimates the variables that are important to the prediction of several data sets. Therefore, it is a popular model that is widely used in various fields (Kim, 2021).

Support vector regression (SVR) is one of the analytical methodologies to investigate the relationship between one or more predictor variables and continuous dependent variable (Sharifzadeh, Sikinioti-Lock, & Shah, 2019). Comparing to tradition linear regression, SVR provides the flexibility to define acceptable error in our model and will find a hyperplane in higher dimensions to fit the data.

Features are derived values from raw data used as input to a machine learning algorithm. High-quality features are the basis for modelling and problem-solving, as well as generating reliable and convincing results (Shiu and Yang, 2017). Feature selection is a methodology that reduces dimensions for a large amount of data. It can reduce the time complexity of models by deleting certain variables. To extract the important information from a large amount of data, machine learning algorithms are frequently applied (Ahmed, Usman, Shah, Ashraf, Alghamdi, Bahadded, & Almarhabi, 2022).

3. Research Methodology

3.1. Database

Taiwan Economic Journal Co. Ltd database (TEJ) provides company profile, crediting information, CSR report information and financial reports since 2000. It is one of the key databases used for Taiwanese financial analysis and research. We extracted the company profile, CSR report information and financial reports such as P&L report, balance sheet statements, and cash flow statements from the TEJ database for our study.

As our study's population, we selected the 208 active firms with contributed capital more than 5 billion NTD (approximately 167 million USD) and those that have published CSR reports from 2016 to 2020. Using data from the TEJ database, only firms belonging to the ICT industry sector were chosen. This is due to the differences in the evaluation of the firms' assets and in their corporate structures. The period examined was 2017-2020. These years were chosen because COVID-19 had an immense impact on the economy. To exclude the negative impact of the pandemic, only the 2017-2020 financial performance was examined this study.

With its contribution of the IT industry, Taiwan has successfully created a powerful manufacturing base, demonstrating its incredible production capability as a capable provider of a wide range of products for multinationals such as IBM, Intel, and Dell (Ip, 2008). Along with its export-oriented high-tech industry, Taiwan has a quintessential status as a strategic market for foreign investment and this has raised pressure on businesses to meet global CSR guidelines (Sharma, 2013). To strengthen the Taiwanese economy, the IT sector has a role in advancing and strengthening the development of CSR.

3.2. Dependent variables and independent variables

We extracted the EPS (Earnings Per Share) information of the companies that published CSR reports from the TEJ database as the dependent variable for this study. The performance of a firm can be measured by several commonly adopted performance measurements (Sausan, Korawijayanti, & Ciptaningtias, 2020). Earnings per share (EPS) is a popular indicator used to measure financial performance. The formula is calculated as the company's profit divided by the outstanding shares of its common stock. The results serve as an indicator of a company's profitability (Sausan et al. 2020). Therefore, we select EPS as the dependent variable in this study. Two possible sets of independent variables are included in this study. The first set is the annual financial reports information published in year-end of the CSR report. The financial reports include P&L report, balance sheet statements, and cash flow statements. There are 155 variables chosen for the model building stage. The second set of the independent variables is SDGs related information in CSR reporting. The research team thoroughly examined the reports independently and 17 proxy variables were adopted to define whether the 17 SDGs are included in the CSR reports.

3.3. Model Building

All dependent and independent variables will undergo the min-max normalization process before building the prediction model so that the value of each variable falls between 0 and 1, and conforms to the assumption of normal distribution. This study will build two models to check whether information contained in CSR reports will provide better forecasting results. Model 1 will use financial report information as independent variable and model 2 will use both financial report and CSR report information as independent variables.

In order to improve the accuracy of the model, this study will adopt the two-stage modeling procedure. In the first stage, all independent variables will be used to build the EPS prediction model. Through the feature selection mechanism, the 15 variables with the highest importance will be selected as independent variables for second stage modeling.

In order to verify the effectiveness of the proposed forecasting scheme, the commonly adopted machine learning techniques such as MARS, ANN, XG-Boost, Decision Tree, SVR, and Random Forest will be used in building the forecasting models.

In addition, four different relative ratios of model training database size to model testing database size, namely 90:10, 80:20, 70:30 and 60:40, will be examined to check whether there are overfitting problems. All the models will be implemented on Python Version 3.9.

3.4. Performance Evaluation Metrix

In order to compare the predicting performance of different modeling techniques, MAE, MSE, MAPE, and RMSE will be adopted for model evaluation. The formulas for each measurement are shown in Table 1

Table 1. Metrics of Prediction Performance Evaluation

Metric	Description	Calculation
MAE	Mean absolute error	$MAE = \frac{1}{n}\sum_{i=1}^{n}\lvert F_i - A_i\rvert$
MSE	Mean square error	$MSE = \frac{1}{n}\sum_{i=1}^{n}(A_i - F_i)^2$
MAPE	Mean absolute percentage error	$MAPE = \frac{1}{n}\sum_{i=1}^{n}\left\lvert\frac{F_i - A_i}{A_i}\right\rvert \times 100\%$
RMSE	Root Mean Square Error	$RMSE = \sqrt{\frac{1}{n}\sum_{i=1}^{n}(A_i - F_i)^2} = \sqrt{MSE}$

4. Research Findings

4.1. Impact of EPS

We observed the impact of CSR reports on future financial performance with 1 representing the financial performance one year after the publication of the CSR report and 2 representing the financial performance two years after the publication of the CSR report, and so on. If the current year's EPS is higher than that of the CSR publication, the EPS of the current year is defined as a positive impact, otherwise it is a negative impact. Figure 1 has shown that one year after the release of the CSR report, it has a positive impact on the financial performance of 62% of ICT companies, and 73% of ICT companies have a positive impact on the financial performance of the CSR report two years after the release. The research results showed that the CSR report publication has a positive impact on financial performance, and the proportion of positive impact increases year by year.

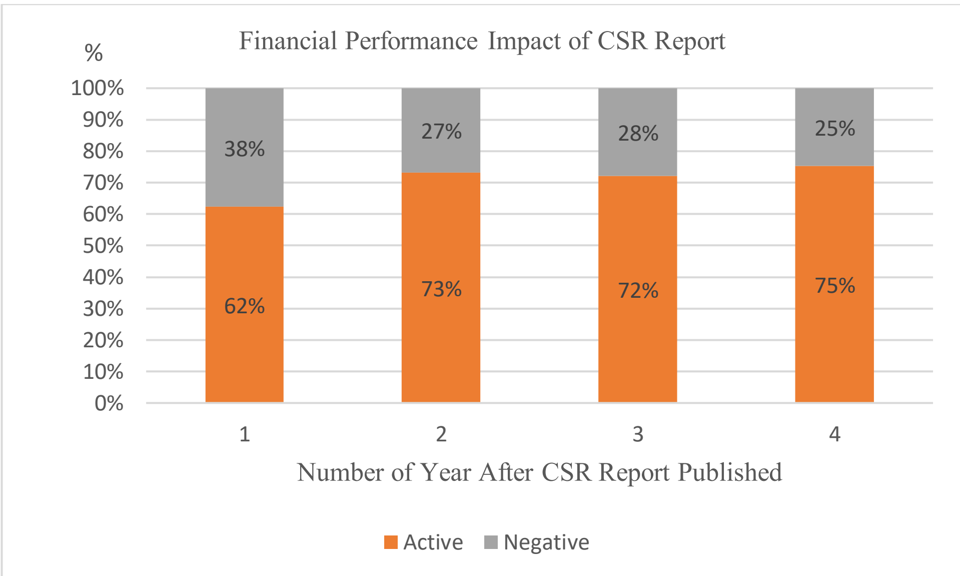


Figure 1. Financial Performance Impact of CSR

4.2. Important Variables

We used MARS, Random Forest, SVR, XG-Boost, Decision Tree, and ANN to conduct the feature selection tasks. To avoid overfitting issues, we implemented four train/ test split ratios to do model validation. The top 15 variables that can be of importance in model 1 from Python implementation are listed in Table 2 and the top 15 variables that can be of importance in model 2 are listed in Table 3.

According to Table 2, the most important variable in predicting EPS are cash dividends for ordinary share, ROA for the year-end of CSR report published, EPS for the year-end of CSR report published, and profit before tax.

Table 2. TOP 10 Important Variable for Model 2

Rank	MARS	Random Forest	SVR	XG Boost	Decision Tree	ANN
1	Cash dividends for Ordinary share-surplus and earnings	ROA-comprehensive income	earnings per share	earnings per share	EPS-Net Income (Exclude Disposal G/L)	earnings per share
2	Cash dividends for Ordinary share-earnings	Return on Total Assets%-A	Capital Reserve	Working Capital	Cash Reinvestment Ratio	Legal Reserve
3	Profit before tax	Other Non-Current Assets	Accrued Pension Payable	Other Non-Current Assets	Net Income Growth Rate-Exclude Disposal G/L	Financial cost
4	Legal Reserve	(L-T Liab. + Shareholders' Equity) /Fixed Assets	Net Sales	Return on Total Assets%-A	Pre-Tax Income /Capital	Other Payable
5	Cash & Cash Equivalent - Beginning	Cash dividends for Ordinary share-surplus and earnings	Operating costs	Cash on Hand & Cash Equivalent	Earnings Before Interest, tax, depreciation, amortization	(L-T Liab.+Shareholders‘ Equity) /Fixed Assets
6	interest revenue	Cash Flow from Financing Action	Sales Per Share	Comprehensive income, attributable to owners of parent	Cash Flow from Financing Action	Total Fixed Assets
7	Other gains and losses	EPS-Net Income (Exclude Disposal G/L)	(Inventory +Accounts Receivables) /Shareholders' Equity	Cash dividends for Ordinary share-surplus and earnings	Pre-Tax Income Per Share	Operating Expense-R&D Expense
8	Gross Profit	Fixed Asset Turnover	Retention Ratio	Dividend paid	Comprehensive income, attributable to owners of parent	Accrued Pension Payable
9	Operating Income Per Share	Profit (loss) before tax	Accounts & Notes Receivable-Trade	EPS-Net Income (Exclude Disposal G/L)	Other Non-Current Assets	Non-current assets
10	Accrued Pension Payable	Pre-Tax Income /Capital	Interest-Bearing Debt/ Shareholders‘ Equity	Pre-Tax Income Per Share	Dividend paid	Operating costs

According to Table 3, the most important features that impact EPS prediction includes both financial report related and SDGs related information. The financial related variables are cash dividends for ordinary share, return on total assets, earning per shares at the end of the year, and working capital. The SDGs related variables include whether the firm has set KPI for SDGs achievement tracking and if SDGs are mentioned in CSR reports. For the 17 SDGs, Goal 3 good health and well-being, Goal 7 affordable and clean energy , Goal 9 industry, innovation and infrastructure, Goal 12 responsible consumption and product, and Goal 14 life below water are selected as important variables through the feature selection technique. In addition, most of the SDGs related variables are related to environment.

Table 3. TOP 10 Important Variable for Model 2

Rank	MARS	Random Forest	SVR	XG Boost	Decision Tree	ANN
1	Cash dividends for Ordinary share-surplus and earnings	Return on Total Assets%-A	earnings per share	earnings per share	EPS-Net Income (Exclude Disposal G/L)	Earnings per share
2	Cash dividends for Ordinary share-earnings	ROA-comprehensive income	Mention SDGs in CSR report(Y/N)	Working Capital	Cash Reinvestment Ratio	Climate Action
3	Set KPI for SDGs achievement(Y/N)	(L-T Liab. + Shareholders' Equity) /Fixed Assets	Substantial actions to practice SDGs(Y/N)	Other Non-Current Assets	Ordinary Income Growth Rate	Sustainable Cities and Communities
4	Industry, Innovation and Infrastructure	Other Non-Current Assets	Set KPI for SDGs achievement(Y/N)	Return on Total Assets%-A	Accrued Pension Payable	Industry, Innovation and Infrastructure
5	Comprehensive income per share	EPS-Net Income (Exclude Disposal G/L)	Industry, Innovation and Infrastructure	Dividend paid	Profit (loss) before tax	Affordable and Clean Energy
6	Legal Reserve	Cash Flow from Financing Action	Gender Equality	Cash on Hand & Cash Equivalent	Pre-Tax Income Per Share	Life Below Water
7	Operating Income Per Share	Pre-Tax Income /Capital	Affordable and Clean Energy	Comprehensive income, attributable to owners of parent	Cash dividends for Ordinary share-surplus and earnings	Legal Reserve
8	Accrued Pension Payable	Cash dividends for Ordinary share-surplus and earnings	Good Health and Well-Being	Cash dividends for Ordinary share-surplus and earnings	Amortizations-CFO	Operating Expense-R&D Expense
9	Other gains and losses	Comprehensive income, attributable to owners of parent	Reduced Inequalities	EPS-Net Income (Exclude Disposal G/L)	Cash Flow from Financing Action	Gender Equality
10	Deferred Income Tax Liabilities - Current	Dividend paid	Responsible Consumption and Production	Pre-Tax Income Per Share	Other Non-Current Assets	Responsible Consumption and Production

4.3. Prediction

After the feature selection process, we used the top 15 important variables to build prediction model using machine learning and artificial intelligence techniques. To observe the prediction results for EPS in Table 4, we found that machine learning techniques have lower MAE, MSE, RMSE and MAPE than linear regression analysis in predicting EPS. In comparing all the techniques, ANN led to the lowest MAE, MSE, RMSE and MAPE.

For comparing the prediction results for model 1 and model 2, we found that model 2 led to lower MAE, MSE, RMSE and MAPE. Results show that SDGs related information in CSR reports led to lower prediction error in predicting company financial performance.

Table 4. Prediction Result for EPS

Model	Methodology	MAE	MSE	RMSE	MAPE
Model 1	ANN	91.7050	132.4111	113.7264	31.5289
	Decision Tree	160.3125	284.1307	238.1764	347.0832
	MARS	167.4486	546.2532	231.1346	61.1386
	Random Forest	316.6700	286.7968	591.8543	475.6968
	Regression	424.3644	348.0667	737.7822	372.6933
	SVR	115.4000	226.8550	147.9232	53.2311
	XG Boost	329.9643	327.5489	648.4921	478.4121
Model 2	ANN	81.6007	115.5182	105.7339	30.6279
	Decision Tree	160.2896	193.9504	223.6282	344.2389
	MARS	161.7075	498.9411	220.6900	60.1264
	Random Forest	313.5793	239.9686	586.4029	466.7436
	Regression	412.5511	333.2022	709.1578	320.8389
	SVR	116.0329	226.3486	147.8279	53.7386
	XG Boost	323.5075	229.9729	620.8896	476.0257
	ANN	(10.1043)	(16.8929)	(7.9925)	(0.9011)

Difference (Model 2-Model 1)	Decision Tree	(0.0229)	(90.1804)	(14.5482)	(2.8443)
	MARS	(5.7411)	(47.3121)	(10.4446)	(1.0121)
	Random Forest	(3.0907)	(46.8282)	(5.4514)	(8.9532)
	Regression	(11.8133)	(14.8644)	(28.6244)	(51.8544)
	SVR	0.6329	(0.5064)	(0.0954)	0.5075
	XG Boost	(6.4568)	(97.5761)	(27.6025)	(2.3864)

5. Management Insights and Conclusions

The findings from our research found that the CSR report information related to SDGs can be used to predict future financial performance. Based on a firm's ability to innovate and invest, firms have a significant role in achieving the 2030 Agenda for Sustainable Development. The most important variables related to SDGs in financial performance prediction are Goal 3 (good health and well-being), Goal 7 (affordable and clean energy), Goal 9 (industry, innovation and infrastructure), Goal 12 (responsible consumption and product), and Goal 14 (life below water). The most important variables related to financial statement are dividends for ordinary share, ROA for the year-end of CSR published, EPS for the year-end of CSR report published, and profit before tax. The best technique in predicting financial performance is Artificial Neural Network (ANN) and it implies that machine learning techniques can be a better alternative in conducting financial forecasting tasks. Our research also highlights that financial institutions and investment firms can use SDGs disclosures in CSR reporting to better design, navigate and implement CSR strategies.

The data we used in this study is companies in the ICT industry with more than 5 billion NTD. To strengthen Taiwan's sustainability landscape and ESG disclosure, the Corporate Governance 3.0 Sustainable Development Roadmap was introduced by the Financial Supervisory Commission in August 2020. It announced that firms with paid-in capital of NT$2 billion or more will be required to file sustainability reports starting 2023. Moreover, TWSE/TPEx-listed businesses with a paid-in capital of less than 2 billion NTD will be obliged to appoint a chief corporate governance officer beginning in 2023. The ESG related issues can provide investors the necessary information to help them in their decision-making process. Future research can be built on this to track the impact of ESG disclosure in financial performance. By gaining insights into the impact of SDGs on corporate reporting, we can proactively evaluate a company's adherence to sustainability and its contribution to ESG.

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Responsible Leadership at a Time of Crisis

Hamid KHURSHID*
Hong Kong Metropolitan University
Hong Kong

Crystal Xinru WU
The Hang Seng University of Hong Kong
Hong Kong

Robin SNELL
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Extended Abstract

This paper analyzes the principles and practices of responsible leadership adopted by eight Asia based firms in response to the COVID-19 crisis. The focal firms were a mixture of multinational corporations (MNCs), large-sized enterprises, and small & medium enterprises (SMEs). The main principles and practices comprised: equity-based justice for employees; meeting employees' basic financial needs; caring for employees' well-being; leaders' duty to care and followers' obligation to reciprocate; duty to serve the public; and maintaining communication and providing reassurance.

Keyword: Responsible leadership, distributive justice, responsible business practices, qualitative.

1. Introduction

The COVID-19 outbreak severely disrupted businesses worldwide. There were contractions in sales and production due to stalled supply chains, travel restrictions, and curtailment of economic activities arising from social distancing and other anti-epidemic measures (Bartik et al., 2020; McKibbin & Fernando, 2020). The COVID-19 pandemic had an adverse impact on global GDP growth, with nearly all business sectors adversely affected to some degree, with some sectors like aviation, tourism, and hospitality being severely affected (Craven et al., 2020).

Business activities in the People's Republic of China (PRC) ground to a halt for almost three months during the early part of 2020 amid a decline in market demand and supply, tighter cash flows and disrupted supply chains (UNDP, 2020). In most business sectors, the stoppage particularly affected small to medium-sized enterprises (SMEs) (Zhang, 2020). Similarly, the ongoing COVID-19 pandemic also caused major disruptions for in Hong Kong, the retail and hospitality sectors were especially hard hit (KPMG, 2020). The COVID-19 pandemic led to a major shift toward working from home, and within the first few months of the pandemic, 88% of organizations operating in Asia Pacific region embraced remote working arrangements (Ding et al., 2020). This drastic shift created monumental challenges for both leaders and employees but did not necessarily lead to more autonomy and satisfaction for workers (Bierema, 2020).

Crises such as the COVID-19 pandemic are disruptive and chaotic events that threaten significantly to divert organizations from their core values and principles (Seeger & Ulmer, 2001). Therefore, this emergency called for responsible decision making by organizational leaders (Boin & Nieuwenburg, 2013; Wooten & James, 2008), especially since the livelihoods of organizational members were at stake (Harvey & Haines, 2005). Thus, appropriate responses to the COVID-19 crisis, during which employees were also facing health risks, required responsible leadership. Researchers examining responsible leadership during previous crises have considered issues such as distributive justice (Pless, 2007), and acting as a moral person with an altruistic focus (Waldman, 2011).

Some attempts have been made to examine the key practices and policies that are adopted by leaders amidst crisis to manage organizations effectively (Coldwell et al., 2012; Pearson et al., 1997; Sanchez et al., 1995; Sellnow & Seeger, 2021; St. John III & Pearson. 2016). However, the contexts for such research have primarily involved man-made crises such as civil unrest, wars, and economic downturns and little is known about how leaders deal with challenges arising from apparently natural calamities such as the COVID-19 pandemic, which constitutes a gap in the literature.

We posit, after Larres & Kelly (2021) that the assumption of ethical responsibility for meeting the needs of others is grounded in the rational self-consciousness of human beings and that leaders are guided by a set of internal moral principles and values in making decisions amidst crisis (Liu et al., 2021). COVID-19 provides an interesting context for analyzing the decisions and practices of business leaders amidst crises and the underpinning principles that guide their decisions. Accordingly, the current study examines how leaders in the Asian context have been guided by moral principles to adopt responsible and ethical leadership in responding to the COVID-19 crisis.

This paper examined the following research question: What were the principles and practices of responsible leadership that were adopted in the focal firms to mitigate the COVID-19 crisis? This research adopted an interpretative, multiple qualitative case study (Yin, 2009) approach and examined key practices and policies of leaders of eight Asia-based companies in response to COVID-19 and the underlying moral principles guiding their responses. Three of the firms were Hong Kong based MNCs (AIA Group, Cathay Pacific and Microchip Technology). The other firms were operating exclusively in the Chinese mainland and comprised two SMEs (Xiamen International School and Shenzhen College of International Education) and three large-sized enterprises (Shenma Transportation, Dong Trading, and New Oriental Education & Technology Group). Semi-structured interviews were conducted with managers and employees of the focal firms about the firms' decisions and practices in response to the COVID-19 crisis.

2. Research Methodology

The study adopted an interpretive, qualitative research approach, through which we explored the personal experiences and understandings of salient social reality (Berg, 2004) that informed the decision making of business leaders and their followers during the COVID-19 crisis. Qualitative research has the potential to obtain rich accounts of participants' experiences, knowledge, ideas and conduct (Bryman et al., 1988). In conjunction with interviews, a multiple case study method was adopted. The case study method involves an in-depth study of a social phenomenon in natural settings (Gall et al., 1996). Multiple case studies increase the generalizability of the findings due to the replications of patterns emerging from multiple data sources (Yin, 1994).

2.1. Data collection

Semi-structured interviews were conducted with managers and employees of eight focal firms. The interviews examined perceptions about the adoption of responsible business practices and associated leadership decision making during the COVID-19 crisis. The interview questions (for the managers) included: What were the main policies and practices adopted by your organization to mitigate the challenges of COVID-19? How has your leadership attempted to meet the distinctive needs of your firm's local business/community partners amidst the COVID-19 crisis? Can you please explain how you have addressed the basic needs (such as basic salary, job security, paid-leaves) of your employees amidst the COVID-19 crisis?

Altogether 18 interviews were conducted with managers and employees of the focal firms. All the interviews were tape-recorded and lasted between 40 to 60 minutes. Interviewees were selected on the basis of their direct involvement in the implementation and adoption of responsible and ethical business practices amidst the COVID-19 crisis.

2.2. Data analysis

An interpretative approach to qualitative data analysis was adopted. Interviews were analyzed by carrying out thematic analysis (Aronson, 1995), which identified common patterns across the data set in order to address the research questions. The common patterns within and across cases were identified by following a systematic process of data transcribing, data coding and theme development. A cross-case comparison was made following within-case analysis (Eisenhardt, 1989) to identify the common patterns while staying close to the research questions. A constant comparison method was adopted (Charmaz, 2014), incorporating categories derived from concepts in extant literature (e.g., moral values and principles, principles of distributive justice, meeting stakeholders needs, etc.) along with emergent themes and categories. A theoretical model of responsible leadership amidst crisis is being developed based on the rich data.

3. Initial findings

The analysis has identified a set of emergent categories, representing the principles and practices of responsible leadership that were perceived to have been adopted in the focal firms to mitigate the COVID-19 crisis. These are explained and illustrated below.

3.1. Equity based justice for employees

Interviewees from some focal firms (e.g., AIA, Cathay Pacific, Dong Trading) gave examples of how their firm had embraced equity-based justice amidst the COVID-19 crisis. This entailed allocating financial rewards on the basis of employees' merit and contributions (Gangloff et al., 2016).

For example:

> "We ensure that the online mode does not adversely affect the salaries of teachers and that these are fair because we distribute the salaries according to the workloads……I think that even though the pandemic has affected the organization a lot, the organization still follows the same standards to evaluate teachers' performance and the criteria for incomes and bonuses has not changed. The salary is calculated according to their output. The organization is under pressure, but it protects the income of teachers." (Head, New Oriental Education & Technology Group).
>
> "We have set up a new reward program. For example, we provide rewards if a sales representative achieves a certain sale objective within three months." (Insurance Agent, AIA).

3.2. Meeting employees' basic financial needs

The COVID-19 crisis put pressure on the focal firms to reduce their operational costs. Accounts by interviewees in some firms (e.g., Microchip Technology, Shenma Transportation) suggested that even if standard work assignments could not be provided, firms were concerned to help employees meet their basic financial needs (Cook & Hegtvedt, 1983). Statements included:

> "We have a donation fund to support some of our employees. If they have to choose "no pay leave", they can apply for support from the donation fund." (Head of Training and Development, Microchip Technology).
>
> "Because much of the work has been suspended, along with the associated salaries, when allocating work opportunities, our company gives priority to employees with greater family responsibilities. Also, as a

department head, I know what their basic salaries are, and based on this, I deliberately make arrangements. For example, I arrange more working hours for those employees, who have a lower basic salary." (Head of Product Design, Liu Shenma Transportation).

3.3. Caring for employees' well-being

Some accounts indicated that the focal firms had prioritized the health and safety of employees. For example:

> "The CEO is concerned about the stability of the company and takes care of employees. Our CEO pays attention to the emotions and mental health of employees." (Director Human Resources, Shenma Transportation).
>
> "Since the outbreak of the pandemic in January 2020, our company has taken various actions to protect the safety of employees. Firstly, our company installed sanitizers for washing hands and checked the temperature of employees regularly. The priority has been to ensure the safety of employees." (Insurance Agent, AIA).
>
> "Taking people as the foremost concern is rooted in our organizational culture. The organization values and cares for its employees…. We started to provide pandemic protection and offer safety protection to employees at work. We provide comprehensive pandemic protection insurance scheme to our employees." (Marketing and Sales Manager, Cathay Pacific).

3.4. Leaders' duty to care and followers' obligation to reciprocate

The following quotes implied that in times of need, those in the more senior positions within the firm-as-family had an obligation to maintain the livelihood of those in front-line positions, while the latter were expected to reciprocate by remaining loyal to the company.

> "Before the pandemic, our CEO and employees were donating voluntarily and when we confront challenges, then we support each other, and that is our culture…. At the beginning of COVID-19, the CEO cut his salary and contributed to the operation. He suggested that we needed to keep our employees within the organization until the situation gets better, and that we should not waste time hiring new employees. Thus, 'share sacrifice, share reward' guides our direction. (Head of Training and Development, Microchip Technology).
>
> "Our company has no layoffs and the workers in the factory are skillful. The company intends to keep them and if any of them leave the company then we would not be able to deliver a high-quality product on time since it is difficult to recruit skillful workers." (Foreign Trade Sales Agent, Dong Trading).

3.5. Duty to serve the public

There were also mentions of how organization members were exercising their duty to serve the general public.

> "Managers in the offline operations department are working at the front line during the pandemic… They have to work during the pandemic in order to support public transportation. Thus, managers in the offline operation department are brave and are providing services for the public." (Director of Human Resources, Shenma Transportation).

3.6. Maintaining communication and providing reassurance

There were some accounts of leaders providing information and reassurance to employees amidst the crisis, which may be construed as a form of interpersonal justice (Konovosky & Cropanzano, 1991).

> "We have frequent communication and meetings during this pandemic…. We provide timely information and employees are motivated…. …. We have more communication, and our managers spend more time communicating with employees." (Head of Training and Development, Microchip Technology).
>
> "Before the COVID-19 crisis, we often had dinner together but during the COVID-19 crisis, we need to do everything in the WeChat work group. I sometimes give red packages in the WeChat work group to show my care for employees." (Vice-Principal, Xiamen Tutoring School).

4. Conclusions

Our interviewees explained and illustrated how responsible business principles and practices were adopted by their focal firms during the COVID-19 crisis. The accounts presented above are consistent with a prior analysis by Liu et al. (2021) of responsible leadership during crisis. They are also consistent with the argument of Larres & Kelly (2021) that moral responsibility for meeting the needs of others is grounded in the rational self-consciousness of human beings.

Our contribution, thus far, is to complement extant literature on responsible leadership (Larres & Kelly, 2021; Liu et al., 2021), which has largely featured Western-based organizations. In our ongoing data analysis, we are checking for possible differences between the perceptions of managers and those of employees of relatively low rank, and for possible trade-offs between different principles, such as equity-based justice versus meeting basic financial needs. Given the diversity of our focal firms, we expect that the insights that we develop will be generalizable to other firms in Asia.

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Paper Number:P026

Promoting the Sustainable Development Goals: What Has Been Done and What Can Be Done?

Fanny Fong Yee CHAN*
The Hang Seng University of Hong Kong
Hong Kong

Ruby HUI
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Extended Abstract

Sustainability issues have received growing attention in recent years as the world is facing various challenges such as climate change, poverty, and social inequalities, among others. The sustainable development goals (SDGs) were introduced in the 2030 Agenda of the United Nations in 2015, for the promotion of sustainability in economy, society, and environment. Halfway towards the 2030 deadline, it is high time for us to review what has been done to promote the SDGs and reflect on what can be done, which will provide both theoretical and practical implications for advancing sustainable development. The existing literature reviewing the achievement of the SDGs remains limited. This study adopts a systematic approach and conducts a scoping review of studies on the SDGs, which involves classifying the studies according to a newly proposed SEE Cube model that includes the social, economic and environmental dimensions to understand the focus and interactions of these three dimensions. The accomplishments and obstacles in achieving the SDGs are highlighted together with future research avenues for sustainable development.

Keywords: scoping review, sustainable development goals, social, economic, environmental

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1. Introduction

The United Nations has been promoting sustainable development by launching the sustainable development goals (SDGs) in 2015 (UN, 2015) to strive for improvements in economy, environment and society over the world. Among countries, organizations, and corporations, there have been growing interest in and attention to sustainability issues (Lee & Zhou, 2022). SDG is a comparatively new concept with scarce systematic research on this topic. There is a need for a systematic review to examine existing literature on the SDGs which will provide both theoretical and practical implications for promoting the SDGs. This study examined existing literature related to the SDGs and sustainable development using a systematic approach and classified the studies according to a newly proposed SEE Cube model, which involves the social, economic and environmental dimensions. The systematic literature review identifies and examines (1) what SDGs and dimensions of sustainable development have been researched; (2) whether there are any geographical or cultural differences in the research focuses of the SDGs and the dimensions of sustainable development; (3) what are the common methods applied in examining the pursuit of SDGs; and (4) what are the key achievements and obstacles in promoting the SDGs.

2. Literature Review

Scholars have provided numerous definitions of sustainable development (Ciegis, Ramanauskiene, & Martinkus, 2009) but the most frequently cited definition comes from the statement of the Brundtland Commission, in which sustainable development is defined as the “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” (WCED, 1987: 43). Sustainable development features the concept of conserving resources for future generations and the overall objective of sustainable development is the long-term stability of the economy, environment, and society (Emas, 2015).

In September 2015, the United Nations adopted the 2030 Agenda for Sustainable Development, aiming at drawing up an action plan to enhance sustainable development for all nations (UN, 2015). The core of the 2030 Agenda is the SDGs, which contain 17 goals and 169 targets and have fundamental objectives in social, economic and environmental dimensions (Ciegis *et al*., 2009; Duran, Gogan, Artene, & Duran, 2015; Lee & Zhou, 2022), such as to combat inequality, eradicate poverty, conserve natural resources, and deal with climate change, among others (UN, 2015). The three dimensions are interrelated and complementary (Ciegis *et al*., 2009).

It has already been more than seven years since the introduction of the SDGs and there are fewer than seven years for achieving the SDGs as planned by the UN (2015). A comprehensive review of the discussion and implementation of the goals in different countries is deemed necessary and timely to identify the future research directions. This study proposed using the SEE Cube classification model to categorize the existing studies of sustainable development in order to better understand what dimensions previous literature has focused on. The cube contains the social, economic and environmental dimensions of sustainable development and each vertex of the cube represents a combination of the three dimensions.

Since different circumstances and contexts call for different interventions to particular problems, it is anticipated that the promotion and implementation of the SDGs could vary across countries. Developing countries, where the problems in their economies and society are comparatively severe, may tend to focus more on the economic and social dimensions. In contrast, the developed countries, where the economic system and social system are more well developed, might mainly focus on the environmental dimension. Therefore, this study aims to explore and address the following research questions (RQs):

RQ1: What SDGs and dimensions of sustainable development have been examined in the existing literature?

RQ2: Are there any geographical differences in the research focuses of the SDGs and dimensions of sustainable development?

RQ3: What are the common methods applied in examining the implementation of the SDGs?

RQ4: What are the key achievements and obstacles in promoting the SDGs?

3. Methodology

The literature review on the concept of sustainable development goals evaluation showed that there are no shared conceptual and operational methods pervading each solution. The operational definitions of the social, environmental and economic dimensions have been proven to be tricky and elastic. To identify relevant studies for a systematic analysis, firstly, key words such as sustainable development and sustainable development goals were input into the two main online research databases. The search was limited to published years from 2015 ahead, due to the reason that the concept SDGs were brought forward in that year. It included articles with words appearing in the title, abstract, main text and keywords. Secondly, a two-stage screening process was performed applying the preset inclusion and exclusion criteria. Two researchers reviewed all the titles and articles independently at the first screening stage. Articles that focused on one or multiple SDGs or at least mentioned sustainable development notion were selected. The two researchers then compared the selected articles and resolved any deviations by discussion. In the second stage, a full-text screening was performed in which the researchers read the full articles and considered the selection criteria, resulting in the final included articles. Finally, four researchers blinded to the research questions extracted data relevant to the predetermined variables from the included articles.

4. Results & Discussion

A total of 252 articles were selected after the two-stage screening process. It is surprising that the three aspects related to economics, environment and society are almost evenly distributed, around 30% each dimension, in the 252 articles, which illustrates that all these three dimensions have captured the researchers' attention in current research. It is a good sign showing that the social, economic and environmental dimensions of sustainable development have been quite balanced in academic discussions. In addition, it was found that some goal-oriented issues are quite region focused. For instance, existing literature that examined Africa has mainly focused on SDG 1 No poverty, SDG 5 Gender equality, and SDG 10 Reduced inequalities, while the least discussed goals include

SDG 7 Affordable and clean energy and SDG 14 Life below water. The results are understandable as the issues of poverty and inequalities are more severe than environmental problems in Africa. For Europe, the top discussed goals are SDG 13 Climate action and SDG 15 Life on land, while SDG 2 Zero hunger and SDG 10 Reduced inequalities have been less examined. These results also agree with the concept of Environmental Kuznets Curve (EKC), which hypothesizes an inverted U-shape relationship between pollution and economic development (Kuznets, 1955; Panayotou, 1997).

Due to the flexibility and fluidity of the indicators, a lot of the goals-targeted research are conceptual, and region limited. As anticipated, a majority (around 70%) of the previous studies on sustainable development are conceptual analysis. The second and third most applied research methodologies are secondary data analysis and case study. It appears that very few empirical studies on promoting sustainable development goals were conducted. It is suggested that future research adopt more cutting-edged algorithms to evaluate the pursuing of sustainable development goals in different regions and the relative impacts. Among the selected studies that reported the effects of efforts to pursue sustainable development, most of the studies recorded positive effects (over 70%). On the other hand, some studies reported negative or unsatisfactory effects. Although progress has been made towards achieving the SDGs, there are still challenges and obstacles on the path to sustainable development.

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Paper Number:P028

Mindfulness as a Conflict Resolution Tool for a Harmonious Workplace

Liane Wai Ying LEE *
The Hang Seng University of Hong Kong
Hong Kong

Robin SNELL
The Hang Seng University of Hong Kong
Hong Kong

Lawrence Hong Weng LEI
The Hang Seng University of Hong Kong
Hong Kong

Crystal Xinru WU
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Abstract

The practice of mindfulness has received increasing attention due to accumulated evidence about its beneficial impact on employees' well-being and interpersonal effectiveness. Drawing from 15 semi-structured interviews, this study explores the mindfulness phenomena associated with practicing the mental state of "being while doing". Our findings indicate the value of regular meditation as a platform that supports and sustains one's practice of mindfulness in the workplace, and illustrates the role of mindfulness as an effective approach for handling stressful social encounters, especially conflict situations.

Keyword: Mindfulness, harmony, conflict resolution, organizational capacity, sustainability

1. Introduction

There is increasing interest in mindfulness as a theme in corporate training and as an approach for personal well-being. Mindfulness is defined as "the state of being attentive to and aware of what is taking place in the present" (Brown & Ryan, 2003, p.822). Inspired by the Buddhist practice of meditation, Kabat-Zinn (2011) developed a secular psychological programme for teaching the systematic practice of mindfulness, called Mindfulness Based Stress Reduction (MBSR). Psychological studies have demonstrated the efficacy of mindfulness in improving individuals' recovery across a broad spectrum of physical and psychological disorders (Good et al., 2016; Kabat-Zinn et al., 1985). Organizations including Lululemon, Google, and the U.S. Army have adopted mindfulness training as a method for improving how employees handle conflict situations, and for improving workplace relationships (Good et al., 2016; Qiu & Rooney, 2019; Yu & Zellmer-Bruhn, 2018).

Despite the apparent benefits of mindfulness, Qiu & Rooney (2019) identified some risks for individuals trying to practise it. Their review indicated that mindfulness may not be effective as a workplace practice if the company's goals are in conflict with the harmony oriented philosophy of mindfulness, and that the path of meditation can be unsuitable for some individuals, who may experience blockage due to traumatic memories, depression, and existential emptiness. Our current research acknowledges that mindfulness is not for everyone, and finds that there are workplace conditions that can make it difficult to practise mindfulness. Notwithstanding these limitations, we analyze self-reported critical incidents of how mindfulness can help build effective interpersonal relationships, enable constructive conflict resolution, and enhance professional employees' sense of compassion towards their colleagues or clients.

Based on a phenomenological approach, we have built a conceptual framework to understand how an individual's capacity for mindfulness can be enhanced, how mindfulness can be invoked as a psychological state that is conducive for handling conflict situations at work, and how mindfulness can foster harmonious workplace relationships. We shall also discuss the potential role of mindfulness in supporting an ethical workplace culture (Snell et al., 2022).

2. Literature and conceptual framework

2.1 Mindfulness

Mindfulness is a form of consciousness that accommodates the dual cognitive modes of "Being and Doing" (Williams, 2008), operating in parallel. Doing is goal-directed, task oriented and largely self-centred. In Doing mode, a practitioner is able to make ongoing reference to past experience while determining whether the activities being conducted are addressing company's goals (Lord et al., 2010). The Being mode is characterised by a sense of calmness, a lack of egocentricity, a focus on the richness of the present moment, and the ability to construe current experiences from the standpoint of a neutral observer (Vago and Silbersweig, 2012). Practitioners of mindfulness find that their ability to invoke the Being mode alongside the Doing mode can be strengthened through meditation. The benefits of being able to operate in "Dual Cognitive Mode" in the workplace include heightened attention, open-mindedness, stress-reduction and improved productivity (Good et al., 2016; Kabat-Zinn et al., 1985).

2.2 Disentanglement and Entanglement

Liddy and Good (2017) conceptualize that the Dual cognitive mode, under which an individual engages Being and Doing modes simultaneously, is characterized by "Disentanglement". This is a psychological state where the employee can assume a third-party perspective (in Being mode) while simultaneously engaged (in Doing mode) in a debate or potential dispute with a colleague or client. By contrast, if an employee is in a state of Entanglement, he or she may have difficulty accessing the Being mode. If the individual is confined to Being mode only, he or she cannot "step back" from an intense situation and may react to difficult situations in ways that are unconstructive, such as blurting out inappropriate language during an argument.

2.3 Self-alter awareness

Studies have shown that those employees, who are able to practise Disentanglement at work can access a mindfulness state with enhanced alertness about and awareness of the present moment (Dane & Brummel, 2014). Ability to access the Being mode while engaging with others such as clients or colleagues enables one to switch from exclusive ego-centeredness and embrace sensitivity to the "alter" perspective, with outcomes that include caring for others, reduced selfish tendencies (Good et al., 2016), lower Machiavellian attitudes (Krishankumar & Robinson, 2015) and more prosocial behavior (Good et al., 2016). Accordingly, our key guiding proposition for this research is that those employees with mindfulness training, who practice mindfulness at work, will report positive experiences of handling conflict, along with other examples of exhibiting prosocial behavior.

3. Methodology

We have transcribed 15 in-depth semi-structured interviews that were conducted with professionals who had received training in mindfulness. They reported the training in mindfulness that they had received, along with critical incident accounts of how they were able to practice it at work. They also explained their perceived impacts on workplace relationships and performance, and on the social atmosphere at work (see Appendix 1). Interviews lasted between 60 and 120 minutes. Interviewees were recruited through interviewers' networks and through snowballing. Semi-structured interviews were held either in person or via video conferencing. The interview guide was adapted from Liddy and Good (2017)'s prior study. It covered the following areas: (1) self-definition of mindfulness; (2) mindfulness training received; (3) practicing mindfulness, generally; (4) practicing mindfulness at work; (5) benefits/drawbacks for self of practicing mindfulness at work; (6) impact on one's ethical/socially responsible behaviour; (7) personal mindfulness capability; and (8) recommendations for others.

4. Findings

Interviewees outlined and exemplified how they had practiced mindfulness in social situations, mainly at work. Based on Liddy and Good (2017) classifications, we categorized the instances where participants in a conflict situation were able to activate mindfulness (disentanglement, dual mode) and those situations where they are not able to activate mindfulness at work (entanglement, Doing mode only). Table 1 presents some interview quotes about entanglement and disentanglement in conflict situations.

Table 1 Quotes representing entanglement and disentanglement in conflict situations

Disentanglement (Dual mode, Being while Doing)	Entanglement (Predominantly Doing mode)
As I am a doctor, I always have to apologize and constantly face the angry situation. His [the patient's] anger will start towards my cleaning staff and finally aim towards me in the consultation. When the patient has been commenting about me fiercely and is pouring things [negative emotions] on me. Then at that time point, mindfulness can help me as I am absorbing his negative emotions.	*The only time when we're surrounded by media, that's hard to do because you have to smile at the camera. They throw you with an extremely difficult question, and you just want to blink or roll your eyes, but you can't…but you can't roll your eyes, you just need to be extremely autistic to face difficult media. They could try to wind you up there…. My coach is very good on the field, but when he's been wound up by the media, he is big "defender" and that's very difficult to control. Maybe controlling my coach was one of the hardest jobs in terms of mindfulness because he has no idea of how to breathe.*
Mine was not an orthodox reaction to having a loaded gun to your head. So basically, it's like you know, I was non-emotional and looking at the person right in the face, and it was shocking to him that he had a pointed gun to my head and I was looking at him in a way to just observe whatever humanity he might have inside of him… And I said to him, I said, "look, you have the power to take my life right now. Without question, I'm just going to pose a question to you." I said, "Does it make sense to take off this earth, a good person that could help your children or your young nieces and nephews. Do they need one less good person on this planet?" And he looked at me and he said, "I can't do this… I never want to see you again."	*I find the hardest, is the internal-external interaction…in an environment where you are in social environment, I revert to spontaneous interaction…the frustration of having given a student instruction… where I have provided resources for them to learn, and felt that they have taken the resources and haven't done anything with it themselves…expected to be spoon-fed. That, I felt deeply frustrated…* *My first response to that, externally, I'm pretty confident I think I held it together, but internally (facial expression: holding up a fist and clenching his teeth) that sense of frustration."*
I am more sensitive to their (students) facial reactions. *The student couldn't understand the way how the paper should be written…I thought I had explained it very well…I saw her having a puzzled look and I am aware of her emotions, appreciate her difficulties…I used a football analogy to explain (again) and then she understood what I mean."*	*[There was a] committee where they invite student representatives to give feedback on lecturers and teachers. I was so excited because it was my first teaching committee meeting. I'm really well-prepared for that teaching committee meeting. But I'm the only one receiving complaints from students... the committee had just projected that complaint letter on the projector, and everyone had been reading it and it's really embarrassing for me. But then I'm still trying to think from the student perspective why he filed this complaint, and [still] then I think it's his fault!*
He may have given you a puzzling instruction, and	*I did make a mistake at work, (about) a deal. That was*

Disentanglement (Dual mode, Being while Doing)	Entanglement (Predominantly Doing mode)
you have many feelings, such as being unhappy, thinking that it is wrong to do so… I will consciously make a relatively mindful thought, for example, I would not think too much and try to follow the instructions first and trust that his approach may work.	*quite a panic moment for me. I felt really terrible, and I definitely did panic, and I did call my boss and I tried to apologize.*
So, if I'm angry at this person, I will try not to show it because I know that your reaction to people and to emotion is everything, right? Every emotion, every reaction that you portray out to people will also make them react in a certain way…it's not really bottling up but understanding that whatever negative emotion I'm feeling will go away and that's sort of where I put the Vipassana practice into my day to day. So, most of the time when we quote argue, but not really argue. You know if he's sort of showing me his emotions, I'm pretty much try not to react to that, and I find that usually when you don't react as much to people or show a reaction as much they also tend to calm down. They also tend to see where they may be overreacting as well.	*Because he was really unreasonable as I asked him: "Where have you added value?" And it was too much and redundant for me to say this sentence. But I didn't say bad words at that time, and I didn't scold him with foul language. I didn't say that he was stupid, but I acknowledged that my tone was heavy.*

5. Discussion

Our initial findings suggest that is possible to achieve the state of "Being while Doing" (Dual cognitive mode, Disentanglement) (Good et al. 2016, p. 132), even under highly demanding and multi-tasking work situations and that practitioner perceive that this practice (made more attainable through regular meditation), has enabled them to handle workplace conflict while honoring the principle of respect for people. Thus, the effective adoption of the Dual cognitive mode can ensue if the individual has partaken in a course that has systematically taught Mindfulness and where the participant has routinely included meditation in their daily routine. Typically, the meditation is undertaken "off-line" at home, but can also be undertaken in a quiet office or with a like-minded group. Also, according to interviewees, mindfulness can be invoked in the midst of social encounters by means of deep breathing, gently squeezing an object, going out to splash water on the face, visualization, or through other methods. The study will also explore how mindfulness can reduce stress elicited from either types of work-related or personal difficulties.

6. Limitations

Our research primarily focused on the individual level (mindfulness practitioner). The conflict episodes reported by our interviewees represented their perceptions alone and may not match those of the other parties that were involved. Some interviewees alluded to the desirability of collective mindfulness, an organizational level phenomenon, i.e., a company based cultural resource for resolving conflict in the workplace, and for creating a high-reliability oriented organizational environment (Fraher, Branicki & Grint, 2017). Once again, investigating this aspect was beyond the remit of the current research. Finally, we acknowledge that mindfulness and meditation are not appealing to everyone. For example, there may be psychological barriers, as mentioned above. Some may be turned off by the religious connotations, even though MBSR adopts a secular approach. The type of discipline required in regular mediation may not appeal to those looking for "easy answers".

7. Practical Recommendations and Conclusion

Our first recommendation is that to enhance the effectiveness of mindfulness for conflict resolution in the workplace, the corporate culture or DNA of the organization would ideally be aligned with the ethos of mindfulness (i.e., less aggressively profit-oriented). Secondly, to overcome concerns related to the negative psychological outcomes of meditation for those who are not ready this, corporations should consider introducing alternative pathways such as mindful drawing, mindful walking, mindful eating, yoga, and mindful dancing. These could be adopted as family-friendly activities; they could also be offered to the firm's "extended family" (clients, suppliers, etc.). In universities, besides meditation classes, these alternatives could be offered under general education or whole person development programmes. Third, since a wide variety of mindfulness training programmes are available, prospective trainees are encouraged to consider whether they would prefer a programme that seeks to be secular in orientation, one that resonates with their existing religious faith, or one that opens up new spiritual horizons for them.

Future studies could investigate the effectiveness of introducing a mindfulness programme in the context of an explicit organizational aim to improve the way intra-organizational conflicts are being handled.

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Appendix 1
Demographic profile and mindfulness training practices of the participants

#	Job Title	Industry	Working experience	Gender	Location	Mindfulness training
1	Lecturer/ National Sports Team Manager	Education and Sports Coaching	18 years	Female	Hong Kong	Certificate course in Sports & Exercise Psychology
2	Content Strategist	Advertising	14 years	Female	Hong Kong	YouTube video and workshops
3	Marketing Solutions Manager	Advertising	9 years	Female	Hong Kong	Practice meditation on YouTube and Vipassana 10-day silent retreat
4	Investment Banker	Banking and Finance	12 years	Male	New Zealand	The Tim Ferriss Show YouTube, Headspace and Calm apps
5	Entrepreneur	Public Relations	10 years	Female	Hong Kong	Books 6-day Yoga retreat in Southeast Asia
6	Lecturer	Higher Education	1 year	Male	Hong Kong	Headspace Meditation apps
7	Doctor	Medicine	27 years	Male	Hong Kong	Sports Medicine Newlife 330 APP MBSR course
8	Information Management	Public Services	11 years	Male	Hong Kong	Workshops (Plum village)
9	Chef	Hospitality/NGO	40 years	Male	The US	Personal coach, retreats, connecting to the universe
10	Sinologist	Higher	16 years	Male	Australia	Meditation practice

#	Job Title	Industry	Working experience	Gender	Location	Mindfulness training
		education				Dhamma, 10-days retreat
11	Learning and Talent Manager	Health Care	11 years	Female	Hong Kong	Yoga (breathing) Mindfulness workshop at work
12	Owner, retired	Stockbroking	30+ years	Male	Hong Kong	Meditation, Practice Buddhism
13	Department Head	Hygiene industry	25 years	Female	Hong Kong	Buddhism course
14	Former Banker, Wellness Education	Finance	30+ years	Male	Hong Kong	Personal growth education course Practice Buddhism
15	Transformation manager	Finance	12 years	Male	Hong Kong	Mindfulness meditation

Paper Number:P029

A Study of the Development of English Skills for Japanese Employees

Yuka NAKAYA*
Kobe University
Japan

*The corresponding author

1. Introduction

While some companies in Japan need people who can use English, compulsory education in Japan does not allow students to learn business-level English. Therfore, many employees of Japanese companies work in a circumstance, where they do not know when they will be transferred to a department that requires business-level English proficiency. Not all employees who use English in their work are proficient enough in English to meet the actual English language requirements of their jobs. Sometimes they have to study English outside of work hours. Working while being expected to use English beyond one's ability can be a source of mental stress. This thesis proposes a solution to this ethical problem.

2. Prior Research

The lifetime employment system is a general structure in Japanese companies today. This system is tightly related to the salary structure and cannot be easily changed.

When hiring new graduates in Japan, job applicants submit English test scores such as TOEIC. Even though companies are aware of each employee's English ability through this process, they may assign employees to departments that require higher levels of English than each employee possesses. Many companies believe to get better results by assigning people with low English ability but high work ability and require these employees to learn English.

On the other hand, according to data from the Working Person Survey (2008) (wa-kingupa-sontyousa 2008), about 13% of workers are using English at work in 2008. The current English education in compulsory education is sufficient for many people. Therefore, it can be said that there is no need to change the English education system in Japan.

As mentioned above, less than 20% of Japanese workers actually use English in their job, while about 50% of companies have departments that use English, and more than 70% of companies use English in their job. In addition, because Japanese companies have a lifetime employment system, assignments, and transfers are determined by the company. Employees never know when they will need English skills beyond what they acquired in compulsory education. In most Japanese companies, the time for studying to acquire the English skills required for work is not included in work hours. Therefore, if a person with insufficient English skills is assigned to a department that uses English, they must learn English outside of work hours. This is an ethical problem in working, and solving this problem will improve the quality of working life.

3. Main Discussion

Solutions to the ethical issues discussed in the previous sections are discussed in this section. To make these learning of English skills more efficient, this paper has created a flowchart, in which anyone can instantly make a decision of what kind of English learning he or she should work on (Figure). This flowchart is used to accurately grasp what kind of English skills are required at work and to select efficient learning method.

This paper focuses only on the language skills required in the employee's work. Besides, more than one result could be considered applicable. In this case, these results need to be combined.

Result 1) applies to those whose work is routine work. There are three main learning methods for those who are specified as Result 1). (1) Learn About the Routine Work. The first study to be conducted is to memorize the English translations of their job descriptions. (2) Focused Practice on Skills Needed Among the Four Skills.

(3) Study Technical Terms. In addition to (1) and (2), studying of terminology may be added. The same applies to Results 2), 4), 6), 8), and 10), in which studying of specialized terms are necessary. For Results 2) and thereafter, the amount of studying vocabulary increases when technical terms are required, compared to when they are not required. Since there are no other major differences, explanations of Results 2), 4), 6), 8), and 10) are omitted hereafter.

When dealing with new customers, result 2) and thereafter will apply. Result 3) applies to cases where tacit knowledge exists in face-to-face work, including telephone calls. Tacit knowledge is a knowledge which is subjective and cannot be verbalized, and is based on years of experience and intuition that employees and technicians possess tacitly. When tacit knowledge is required in the job, the ability to convey or read non-verbalized information and the ability to communicate the information to others is necessary. Employees who are specified as Result 3) need to study in various ways. (1) Speaking Practice. It is necessary to have an understanding of the pronunciation of words and specific expressions that are used in spoken language. In Result 3), one is required to not only simply understand information which are inputted, as in reading and listening, but to understand what speakers says and respond to them appropriately. Since there is no time to look up unfamiliar words or grammar, strategic competence is required in speaking. "According to Koyanagi, 'strategic competence refers to "the ability to maintain a conversation by paraphrasing or guessing when a communication breakdown occurs' (2004: 154) ". (2) Listening Practice. (3) Learning About Tacit Knowledge. Work involving tacit knowledge requires pragmatic competence, which "according to Koyanagi, Bachman defines 'as the ability to use language appropriately within a social and cultural context' (2004:155) ". Employees specified as Result 5) should learn generally the same content as the employees specified as Result 3) learn. However, since there is no tacit knowledge required, result 5) does not include the learning of tacit knowledge. Result 4) also does not require tacit knowledge, but it requires to learn technical terms.

The Result 7) is a non-face-to-face and one-way use of English. It can be inferred that the number of workers who can be specified as Result 7) is larger than that of those who fit the other results.

Employees who fall under Result 7) must primarily do (1) Study Reading and (2) Listening Practice. Employee can also use types of translation software, but those are often not very precise. Although it is less likely to be required than reading skills, data collection also requires listening skills.

Although jobs which are specified as Result 9) are non-face-to-face, this applies to cases where English is used as a communication tool within a business partner or organization, and where there is tacit knowledge required. Compared to face-to-face communication, instantaneous responses are not required. Even if there is unfamiliar vocabulary or expressions, there is time to look up a dictionary. Also, even when tacit knowledge is required, there is time to think about the other person's intentions. they are mainly required to have (1) Writing Practice, (2) Study Reading and (3) Learning About Tacit Knowledge. In the case of writing, one can look things up in a dictionary, unlike speaking. In addition, while the work is not standardized, the content written in e-mails and letters can be partially standardized. However, in addition to grammatical accuracy, employees must also learn the expressions used in the written language. Reading skills require the same study of grammar and vocabulary as in Result 7).

Result 11) applies to those who communicate in non-face-to-face situations and does not use tacit knowledge very often. Similar to Result 9), Result 11) mainly requires English writing and reading skills, but it does not require pragmatics study.

This paper is based on the assumption about English which is used in current Japan. Therefore, if the situation changes in the future, it is necessary to reconsider the situation according to the changes. For example, I can show situations such as the number of workers who use English in their work increases than at present. Currently, many Japanese are able to generate sufficient income from business in Japan. However, in the future, if Japan's population declines further and further and the domestic market is judged no longer profitable, more Japanese companies will expand their business to overseas markets, which results in more workers needing English skills. If this happens, the way of compulsory education of English will have to be reevaluated.

4. Summary

This paper has discussed the current state of employment and English education in Japan, the ethical issues accompanied with them, and the possible solutions. Employment in Japan is generally based on the lifetime employment system. The system is tightly related to the salary structure and cannot be easily changed. Because of the lifetime employment system, even if one does not have sufficient English skills, if he/she has other skills, such as in sales or planning, they may be transferred to a position where English is used. In such cases, English must be learned outside of work hours, and working in an unusable language can be highly stressful. To solve this problem, this paper proposed a flowchart for employees to learn English more efficiently. In order to acquire necessary English skills for each specific job, this paper has discussed the methods to learn English in accordance with the objective and the nature of each job. This flowchart will increase the efficiency of studying English, and should improve one’s quality of working life.

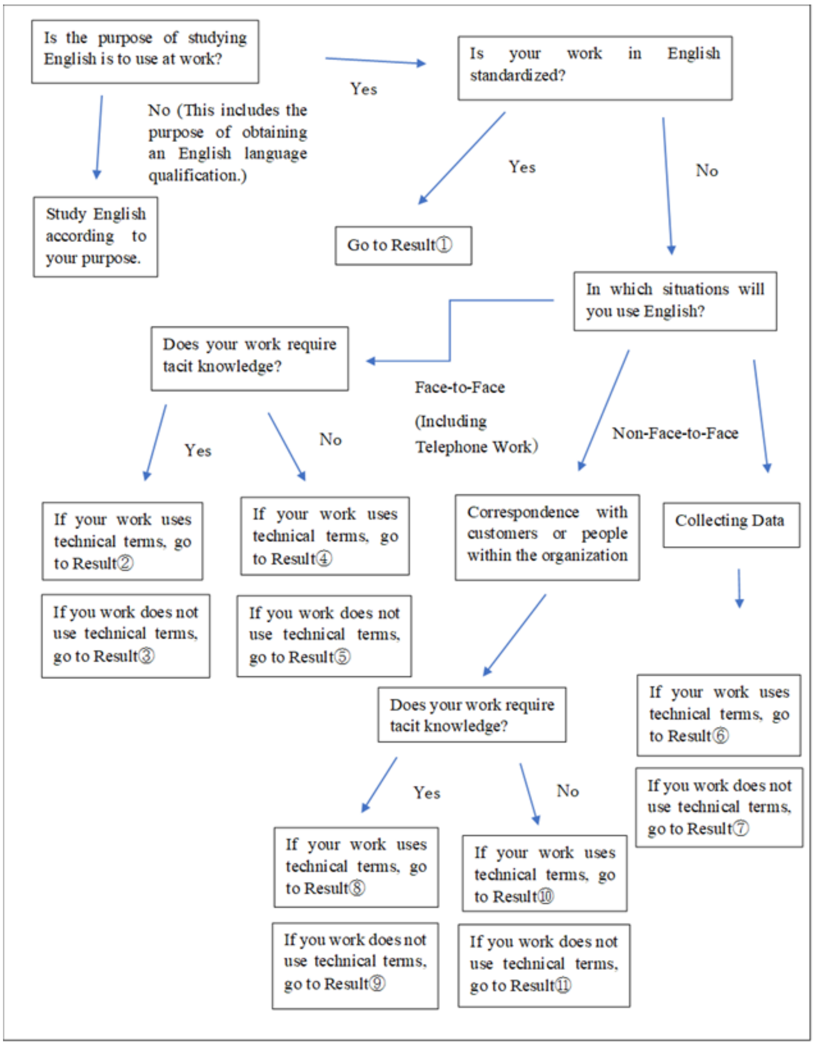

FIGURE 1

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Paper Number:P030

Ethical Leadership and Organizational Culture in Start Ups: A Comparative Study of two Asian Countries

Suja KARTHIKA*
Hong Kong Metropolitan University
Hong Kong

*The corresponding author

Extended Abstract

With start-up organization cultures exemplifying and cloning the founder's character and vision, it becomes crucial to look at the ethical leadership they exhibit and its translation into organizational culture. The present study espouses to understand how ethical leadership of founders translates into the organization culture of start-ups in two Asian countries; Hong Kong and India. The study locations are chosen because of analogies in their culture, in spite of its idiosyncrasies. A qualitative research design is employed, with two sets of participants; founders and employees, being interviewed at two stages of the study. Further, the cultural artefacts are observed to facilitate a deeper understanding of the cultural underpinnings. Semi-structured open interviews and observation are the pivotal data collection tools, while content and thematic analysis will be the data analysis techniques employed. 20 start-ups from each location are being studied. The study being an ongoing one, is currently in the data collection stage. The study is expected to delineate the relationship between the ethical leadership and start-up organization culture and deepen our understanding, by giving exploratory evidence of the same.

Keywords: Ethical Leadership, Start-up Organizational Culture, Asian Countries, Cultural artefacts

1. Introduction

With a never-like before increase in the number of start-ups around the world, and an equally alarming number of them failing to make it in the long run, it is only opportune that a more in-depth understanding about the founding culture of start-ups, and its antecedents are garnered. The start-up culture epitomizes agility and adaptability, promotes proactivity, ownership and responsibility (Costa, 2018). The founder's vision and tenacity is mirrored in a start-up's culture and most studies focus on the founders' risk aptitude, innovative orientation etc (Zaech & Baldegger, 2017). The present study however takes a different perspective and looks at ethical leadership of founders and how it influences the founding culture of start-ups.

2. Literature Review

Ethical leadership is defined as "the demonstration of normatively appropriate conduct through personal actions and interpersonal relationships, and the promotion of such conduct to followers through two-way communication, reinforcement and decision-making" (Brown, Treviño, Harrison., 2005). Ethical leaders are proven to have qualities like integrity, honesty, trustworthiness, cognitive trust, and are posited to be fair and principled and, to communicate their ethical expectations and set standards of ethical behavior in the organization (Ahmad, Gao & Hali., 2017; Brown & Treviño, 2006). Values are ingrained and is critical to the formation of organizational culture generally, and values like care, ethicality and excellence are essentially ratified by the organization's leadership (Keselman, 2012). The founder of a startup is believed to lay the cornerstone for the culture of the organization, as he/she is responsible to choosing the people who will contribute furthermore to it, while also setting up its learning culture through their values and beliefs (Schien, 2010). Organization culture is an echo of higher level leadership (Pasricha, Singh & Verma ., 2018) and this paper examines this line of enquiry in the context of start-ups founding culture.

3. Research Question

To understand how ethical leadership of founders translates into the organization culture of start-ups in two Asian countries; Hong Kong and India.

4. Method

Since multiplicity in viewpoints will help in a deeper and more significant comprehension of the already complex phenomenon being studied (Ritchie, J. Lewis, 2003), it is apt to adopt a qualitative approach to research design. Start-up founders are first interviewed to understand their moral dispositions. Open Ended Interviews with the startup founders constitute the major line of enquiry, which is more of a guided discussion than an ordered set of queries. Later, evidences related to how these ethical characteristics translate to cultural artefacts and practices are collected by interviewing selected employees of the startup firms. These employees are selected using purposive sampling. Criterion sampling is specifically used, as they satisfy the criteria of being employees of the organization with enough experience to understand the cultural underpinnings, as it would maximize the understanding of the phenomenon (Collins, Onwuegbuzie, & Jiao., 2007). Qualitative data analysis techniques like content, thematic analysis will be applied at both stages of data collection to identify themes and a conclusion regarding the congruence will be drawn.

4.1. Participants

India has the world's third best startup ecosystem and has currently over 80,000 start-ups recognized by Department for Promotion of Industry and Internal Trade (DPIIT) (Start Up India, 2022). Hong Kong's start up ecosystem also showed pliancy in spite of the economic challenges faced in the recent past, and is a strong 4000 start-ups community (Hong Kong's Startup Ecosystem – StartmeupHK, 2023). India and Hong Kong were selected for the study as both these are collectivist societies (Dunnagan et, Maragakis, Schneiderjohn, Turner & Vance,. 2013) having analogies in their cultures but with their own idiosyncrasies. 20 start-ups each were selected from both regions through snowball sampling using the criterion of being operational for a minimum of 5 years. Founders were interviewed, using a semi structured interview questionnaire based on the ethical leadership scale ELS scales (Den Hartog, 2015). Later, selected employees are interviewed to understand how the founder's ethical leadership is translated into the startup's organization culture and also by personally examining the artifacts and practices in these start-ups to draw conclusions.

5. Analysis

This is a working paper, and is currently in the data collection stage. Collected data, has been cleaned, transcribed, edited and codes applied to identify preliminary themes. Further steps in data analysis would include, developing a code book of starting and emergent codes (Mathhew B, 2014) and determining the reliability co-efficient for multiple coders (KALPHA in this case). Content analysis; which is a methodical coding and cataloging approach, used to explore textual information unobtrusively to determine trends and patterns of words used, their frequency, their relationships, and the structures (Grbich, 2022) will be used. Thematic Analysis, an independent qualitative descriptive approach (Vaismoradi, Turunen & Bondas., 2013) and "a method for identifying, analyzing and reporting patterns (themes) within data" (Braun & Clarke, 2017) will also be used for both sets of data (the founders and the employees). Later on documentary and visual evidence will be collected from the sites to verify the observable artifacts of organization culture. This will serve as supplementary evidence in answering the research question.

6. Conclusion

While it is clear that, there would be a definitive bearing of ethical leadership on the start-ups' organization culture, the data is anticipated to reveal the intensity, scope and nuances of this impact. The indigenous cultural differences, and its effect on ethical leadership leading to the variations in the start-up culture from the two study locations will be a supplementary outcome of this study. The study is hence expected to espouse ethical leadership as an antecedent of start-up's organizational culture that can be empirically tested in future studies with organizational performance variables as outcomes.

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Paper Number:P033

The Impacts of Work-from-home Goal Alignment on Employee Well-being and Turnover Intentions: The Mediating Role of Work Engagement

Ada Hiu Kan WONG*
Singapore University of Social Sciences
Singapore

Francis CHEUNG
Lingnan University
Hong Kong

*The corresponding author

Extended Abstract

This study investigates the impact of goal alignment for work-from-home (WFH) on personal and family well-being, turnover intention, and the mediating role of work engagement in these relationships. Moreover, we explore whether gender differences moderate the proposed research model. We recruited 701 participants who completed an online questionnaire. Our findings suggest that WFH goal alignment is positively associated with personal and family well-being, but negatively associated with turnover intention. Furthermore, work engagement significantly mediates the relationship between WFH goal alignment and turnover intention. Finally, we discuss the implications of gender differences in the research model. This study highlights the importance of goal alignment in achieving personal and family well-being and reducing turnover intention and emphasises the role of work engagement in mediating these relationships.

Keywords: *Work from Home Goal Alignment, Work Engagement, Employee well-being, Turnover Intention, Gender Differences*

1. Background and Research Questions

The COVID-19 pandemic has led to significant changes in how people work globally, with work-from-home (WFH) policies being a major shift. Singapore implemented strict measures to curb the spread of the virus, including mandatory WFH arrangements for most businesses between September and December 2021 as COVID-19 cases spiked (Mohan, 2021). From January 2022 to April, 50% of employees who fulfilled the vaccination or health requirements were allowed to return to the office (Lin, 2021). In late April 2022, all employees were permitted to return to their physical workplace as restrictions were lifted (Abdullah, 2022). With WFH widely adopted for a period of time, many studies have explored its benefits and drawbacks.

As cited in Abdullah (2022), in a statement announced in April 2022, the tripartite partners comprising the Ministry of Manpower (MOM), the National Trades Union Congress (NTUC), and the Singapore National Employers Federation (SNEF) strongly advised employers to maintain flexible work arrangements as a permanent feature in the workplace. The partners highlighted the potential for flexible work arrangements to improve work-life balance and foster a more productive and engaged workforce. Additionally, offering flexible work arrangements can enhance talent attraction and retention while expanding the pool of potential employees to include caregivers and seniors who may otherwise be unable to participate in the workforce (Abdullah, 2022).

Given the current emphasis on employee well-being and talent attraction/retention in research and business settings, this study aims to contribute to the literature and practical business applications. Specifically, we seek to address the following research questions: 1. Does WFH goal alignment improve employee well-being in personal and family aspects while reducing turnover intention? And, 2. What is the role of work engagement in affecting the effectiveness of WFH?

2. Literature Review and Hypotheses

2.1. WFH Goal Alignment and Personal & Family Well-being

The COVID-19 pandemic has prompted organisations globally to adopt WFH policies to combat the spread of the virus. Although these policies are critical for public health, they have the potential to support employees' family well-being during this crisis. Organisations have implemented various approaches to support personal and family well-being, such as flexitime, telework, part-time work schedules, and job sharing (Vyas et al., 2017). However, just offering WFH options is insufficient to assess their effectiveness. To understand the impact of WFH, it is crucial to evaluate whether the WFH arrangement fits the employees' needs. We propose the construct of WFH alignment, defined as the employees' perception of whether the WFH policy and arrangement align with their needs.

The matching hypothesis suggests that resources can only effectively alleviate stress when they match an individual's needs (Cutrona and Russell, 1990). Using this hypothesis, we argue that providing a WFH arrangement is only effective when employees find that such a work arrangement can help them cope with their work and family demands better. Thus, WFH goal alignment could be considered a job resource that could enhance personal and family well-being. Hence,

H1: WFH goal alignment will be positively related to personal and family well-being.

2.2. WFH Goal Alignment and Turnover Intention

The COVID-19 pandemic has blurred the boundaries between work and family, resulting in increased work-family conflict (Elahi *et al*, 2022; Novitasari *et al*., 2020). When both the work and family demands have exceeded one's capabilities to handle, employees may consider leaving their current job as a possible way out. Recent research suggested that work-family conflict was indeed related to higher intention to leave the organisation, both directly and via the indirect effect of job satisfaction (Li *et al*., 2022).

The provision of WFH allows for greater flexibility for employees to cope with their work and family responsibilities. Such autonomy will mitigate the inter-role conflict that arises from the heightened family and job demands. By aligning the WFH policy with employees' needs, employees have greater opportunities to accomplish their work tasks, which should increase their sense of job satisfaction and accomplishment. These positive evaluations of their work should be negatively associated with their intention to leave their job or organisation. Therefore, we hypothesise that employees with higher WFH goal alignment will report lower turnover intention.

H2: WFH goal alignment will be negatively related to turnover intention.

2.3. The Mediation Effects of Work Engagement

In addition to the direct relationship between WFH goal alignment and personal/family well-being and turnover intention, we propose that work engagement mediates these associations. WFH goal alignment can enhance employees' sense of efficacy in managing demands from both their family and work domains. When employees perceive that the WFH option allows them to work without compromising their family well-being, they are more likely to be motivated to continue engaging in their work, resulting in higher work engagement (e.g. Žnidaršič, & Bernik, 2021).

Moreover, by reducing the stress associated with incompatible demands from work and family, employees can concentrate better on their work and feel more energetic, leading to a stronger dedication to their work. This positive work outlook can also spill over to the family domain, resulting in higher personal and family well-being and a lower sense of turnover intention (e.g. Parent-Lamarche, 2022).

Therefore, we hypothesise that work engagement mediates the relationship between WFH goal alignment and personal/family well-being, as well as the relationship between WFH goal alignment and turnover intention.

H3a: Work engagement will mediate the relationship between WFH goal alignment and personal & family well-being.

H3b: Work engagement will mediate the relationship between WFH goal alignment and turnover intention.

2.4. Effects from Gender Difference?

Traditional gender roles often depict women as primary caregivers, which may affect their ability to balance work and family demands (Cerrato and Cifre, 2018). Although Singapore has made progress towards gender equality, societal expectations and norms may still burden women to balance their work and family roles, affecting their well-being and work outcomes. Therefore, it is essential to examine the gender differences in the relationship between WFH goal alignment, work engagement, personal/family well-being, and turnover intention.

Research shows that women experience higher levels of work-family conflict than men (Wang, Ma and Guo, 2020). Thus, WFH goal alignment is expected to have a stronger impact on women's well-being and work outcomes as it offers flexibility to balance responsibilities. Previous studies have also suggested that women experience more work-family enrichment than men (Beham *et al*., 2017), indicating work engagement's significance to their well-being and family outcomes. Hence, we hypothesise that all tested paths will be stronger for women than men, as WFH goal alignment provides more significant benefits for women in balancing work and family roles.

H4: All the tested paths are expected to be stronger for women than men.

3. Methodology

The study used an online survey to collect data from 931 full-time workers in Singapore who had experience working from home during the pandemic, and 701 responses (75.3%) were deemed effective for data analysis. All constructs used in this study were sourced from the existing literature, except for the WFH goal alignment construct, which was newly developed to fit the research objectives specifically. The main constructs used in this study are **WFH goal alignment** (newly developed five-item scale; $\alpha = .84$); **personal and family well-being** (Wong, Cheung and Chen, 2020; $\alpha = .88$); **turnover intention** (Mobley, Horner and Hollingsworth, 1978; $\alpha = .91$); and, **work engagement** (Schaufeli et al., 2019 ; $\alpha = .85$). A five-point Likert scale ranging from 1 = "strongly disagree" to 5 = "strongly agree" were used to measure the level of agreement with each measurement item. Confirmatory factor analysis (CFA) showed that the measurement model had an acceptable fit to the data: $\chi^2(84) = 358.13$, $p < .001$, CFI = .99, TLI = .99, RMSEA = .07 (90% CI [.06, .08]), with good convergent and discriminant validity.

4. Results

The proposed model was tested using the JASP software with the mediation analysis model. Results from multiple regression and mediation analyses supported all the hypotheses in this paper. Detailed results will be presented at the conference.

5. Discussion and Conclusion

The study contributes to the literature on WFH by introducing the concept of WFH goal alignment, which emphasises the importance of aligning WFH policies with employees' personal and family goals. By testing this concept on 701 working adults in Singapore, the study found that WFH goal alignment positively impacts personal and family well-being and reduces turnover intention and that work engagement mediates this relationship. Furthermore, the study highlights gender differences in the perception of WFH policies, with female employees perceiving better well-being when WFH arrangements align with their personal and family needs.

Drawing on these findings, the study suggests managerial strategies for improving talent attraction and retention. Managers can establish WFH policies and practices that align with the needs and goals of employees by collecting employee feedback, promoting work engagement, and providing targeted support for employees with family responsibilities. These practices not only promote employee well-being and retention but also enhance the company's reputation as a company of choice.

Overall, the study provides valuable insights into the complex dynamics of WFH and highlights the importance of considering employee goals and engagement to promote well-being and retention.

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Chief Sustainability Officers: International Evidence

Lisa GOH*
The Hang Seng University of Hong Kong
Hong Kong

Albert TSANG
Southern University of Science and Technology
China

*The corresponding author

1. Introduction

Corporate social responsibility can be broadly defined as a firm's consideration of its impact on society, the environment and other interested stakeholders when carrying out its activities – that is, its consideration of the needs of those other than owners or investors, who are more likely interested in profits. The topic of CSR is well established in various academic disciplines, such as accounting, management and business ethics. Researchers have focused on various aspects of CSR, such as what drives firms to engage in CSR, the relationship between CSR and financial performance, the consequences of CSR for firms, stakeholders and investors, and the process by which CSR is implemented throughout an organisation.

The set of actions that is included under the CSR umbrella is broad: it includes actions relating to the environment, employees, diversity, community engagement, human rights and product development. Thus, how firms engage with and operationalise CSR commitments is likely to vary considerably. In addition, firms also demonstrate differences in their levels of CSR and how they report their CSR activities in their disclosures.

In this paper, we examine the hiring of Chief Sustainability Officers (CSOs) on an international sample of listed firms, and their impact on firm value. We also examine whether the implementation of CSR-based performance measures in executive compensation contracts has any effect on CSR performance, and how the impact of a CSO, if any, is affected by the use of CSR-based performance measures. We use empirical archival data from a sample of stock exchange-listed companies in an international setting, as firms' attitudes towards CSR and the regulatory and institutional environment vary widely across countries.

2. Background on CSOs and the use of CSR-based performance measures

The appointment of CSOs

The CSO can function as a champion or a figurehead within an organization and is likely to set the tone for CSR policy throughout the company. Although the role of CSO is becoming increasingly common, there is relatively little academic research on the importance of the CSO in identifying value-increasing projects or on how executives are incentivised to support CSR initiatives, particularly in an international setting. The traditional rationales for hiring a CSO (identifying relevant CSR opportunities, securing funds for new CSR measures, establishing procedures for implementing CSR initiatives throughout the firm) suggest that the appointment of a CSO has a positive effect on CSR performance. An alternative view would be that a CSO is a figurehead, similar to a 'label' adopter of various other measures, and has little influence over an organisation's employees or corporate culture.

There is relatively little research on CSOs within the broader body of research on CSR, with the relatively recent interest following the trend of actual appointments of CSOs in practice. Strand (2013) finds that only 15% of US firms had a designated CSR-related position in the top management team in 2010. Similarly, data from Peters et al. (2018) suggest that only 19% of S&P 500 firms (79 of 419 firms) had a CSO at any point during the 2002–2008 period. Even firms that do appoint a CSO may report poor CSR performance; Peters and Romi (2015) find that such firms are less likely to seek assurance (auditing) of their CSR reports. Serafeim and Miller (2015) focus on the role of the CSO and suggest that CSOs' responsibilities and level of authority vary greatly across companies. They similarly note a lack of academic interest in the CSO role, as research on CSOs prior to their study was largely drawn from practitioner reports. Indeed, the review of CSR in accounting research by Huang and Watson (2015, p. 6) indicates that 'much more remains to be known' about CSOs.

CSR-based performance measures in executive compensation

Including CSR-based performance measures in executive compensation contracts may alter the alignment of executive incentives to induce actions that do not necessarily increase share prices. While we would expect CSR performance measures to improve (with executives incentivised to improve them), the CEO and other executives may continue to prioritise other activities that are more strongly linked to their personal financial outcomes (such as stock options). Even if CSR performance measures improve, however, executives may engage in label adoption, taking actions to meet CSR targets even if they have little impact on firm value.

To our knowledge, there are few studies on the use of CSR-based performance measures in executive compensation contracts. Studies that examine executives' incentives with respect to CSR have largely done so indirectly, such as examining the link between CSR and executive compensation (Mahoney and Thorne, 2005) and partitioning executives' incentives into monetary and non-monetary categories (Fabrizi et al., 2014) to approximate CSR incentives. Non-monetary measures are based on the CEO's time horizon (age and recent appointment). Fabrizi et al. (2014) find that monetary incentives are negatively related to CSR outcomes and that non-monetary incentives are positively related to CSR outcomes. Other studies use CEO characteristics to proxy for their personal interest in promoting CSR (e.g. CEO narcissism, Petrenko et al., 2016). Among the studies that we reviewed, only two explicitly consider CSR-based performance measures. Hong et al. (2016), who focus on the relationship between corporate governance and the use of CSR-based performance measures, hand-collect data for 2013 for a sample of S&P 500 firms. They provide initial evidence that CSR-based incentives for executives may be related to CSR activities, based on a basic measure from KLD of strengths minus weaknesses. They also provide evidence on the prevalence of CSR measures in executive compensation contracts, showing that approximately 38% of their sample uses some form of CSR performance measure. Flammer et al. (2019) also examine the sample of S&P 500 firms, for 2004–2013, and find that CSR-based performance measures are associated with an increase in long-term orientation, firm value, and improved social and environmental outcomes.

3. Data, Sample, and Methodology

Much of the research on CSOs and the use of CSR-based performance measures in executive compensation focuses on firms in the United States. However, there is little reason for researchers to continue to focus on US firms when CSR issues are of international importance and when CSR disclosures in some other international jurisdictions may be of higher quality, due to institutional or regulatory pressures. To provide greater insight into the use of these CSR mechanisms internationally, we examine an international sample of firms.

To construct our sample, we start with the ASSET4 database, which has an international scope, and broad coverage of CSR performance measures. We use this as our primary source for data on CSR performance measures and the use of CSR measures in executive compensation contracts. ASSET4 collects a wide spectrum of information on a company's CSR practices, classifying over 250 CSR measures into four 'pillars': (1) economic, (2) environmental, (3) social and (4) corporate governance pillars. We focus on the environmental and social pillars (2 and 3), following several recent cross-country studies on CSR using ASSET4 data (Ioannou and Serafeim, 2012; Luo et al., 2015; El Ghoul et al., 2016). We use data items in each category to calculate pillar scores, as overall measures of CSR performance. We merge this with data from the Datastream database for financial data. We then hand-collect data on CSOs based on this combined data set of 4,746 firms, over the period 2002–2016, drawn from 72 countries.

Positions such as the CEO and CFO can commonly be identified using databases such as Execucomp (for US firms, for example), but tracing the appointment of a CSO is more difficult, particularly if he or she is not a member of the board of directors or is not classified as one of the top five executives in a firm. We follow the method of Strand (2013) and Peters et al. (2018) to hand-collect data on the appointment of CSOs from annual reports, CSR reports when available, and regulatory filings. We are able to identify 321 firms with CSOs and start dates.

Research Question 1: Comparing CSR performance before and after CSO appointment

Serafeim and Miller (2015) propose three stages of CSR engagement. The first, *compliance*, occurs when the firm first engages with sustainability. Firms in this stage view CSR with a view to complying with regulations or expectations. As the firm's experience with CSR matures and it approaches CSR in a more organised firm-level manner, it moves to the *efficiency* stage, in which it focuses on the potential financial gains from CSR. Third, in the *innovation* stage, firms that embrace a more strategic view of CSR seek to identify opportunities for growth, building CSR into their business models. These classifications and findings suggest that the authority of the CSO increases as firms move through the stages of CSR commitment, and that the influence of the CSO is not uniform. This supports the need to examine the relationship between CSO appointment and CSR performance measures.

Using the data we collected on CSO appointments, we construct indicators for the pre- and post-periods of CSO appointment. We then examine the relationship between CSO appointment and CSR performance by comparing CSR performance pre- and post-CSO appointment in a single panel regression which pools all regression. We estimate the model as follows:

$$(CSRPerformance_{it}) = \alpha + \gamma_1 CSRPerformance_{it-1} + \gamma_2 CSO_{it} + \boldsymbol{\beta}_{it}(\boldsymbol{Controls}_{it}) + \varepsilon_{it} \quad (1)$$

where *CSRPerformance* is either the ASSET4 environmental pillar score, the social pillar score, or an aggregated score and *CSO* is an indicator variable denoting the period after the appointment of a CSO. We extend this model to consider the number of years after CSO appointment to allow for γ_3 to vary according to how long a CSO has been in place.

Research Question 2: Comparing CSR performance practices before and after the implementation of CSR-based performance measures in executive compensation

Existing research largely views CSR performance measures in executive compensation as *contrary* to financial incentives because they impose greater costs on firms (Fabrizi et al., 2014). We adopt the more balanced view that CSR investments can also be financially beneficial and therefore value-increasing or value-maximising. For example, a firm that wants to attract socially responsible consumers can invest in CSR initiatives that make the firm more attractive to these customers, which should increase sales. In addition, investments in employee training and employee satisfaction may increase a firm's productivity, ultimately increasing firm value.

We use the data we collect on CSR-based performance measures in executive compensation to construct an indicator variable for those firm-years where a firm uses CSR-based performance measures in their executive compensation contract, *CSRPay*. Using the CSR performance data from above, we then examine our second research question on the relationship between CSR-based performance measures and CSR performance as follows:

$$\begin{aligned}(CSRPerformance_{it}) &= \alpha + \gamma_1 CSRPerformance_{it-1} + \gamma_2 CSRPay_{it} \\ &+ \boldsymbol{\beta}_{it}(\boldsymbol{Controls}_{it}) + \varepsilon_{it}\end{aligned} \quad (2)$$

We also combine Models 1 and 2 into a single model with both *CSO* and *CSRPay* with an additional interaction term, *CSO*CSRPay*, to estimate the incremental effects, if any, of firms implementing both mechanisms.

Research Question 3: Examining CSR and firm value before and after the appointment of a CSO and implementation of CSR-related performance measures

Last, we estimate the strength of the relationship between CSR performance and firm value, and the incremental effect of each characteristic, if any. We estimate these relationships using the general model:

$$(FirmValue_{it}) = \alpha + \gamma_1 CSRPerformance_{it} + \gamma_2 CSO_{it} + \gamma_3 CSRPerformance_{it} * CSO_{it} + \boldsymbol{\beta}_{it}(\boldsymbol{Controls}_{it}) + \varepsilon_{it} \tag{3a}$$

$$(FirmValue_{it}) = \alpha + \gamma_1 CSRPerformance_{it} + \gamma_2 CSRPay_{it} + \gamma_3 CSRPerformance_{it} * CSRPay_{it} + \boldsymbol{\beta}_{it}(\boldsymbol{Controls}_{it}) + \varepsilon_{it} \tag{3b}$$

where *CSRPerformance*, *CSO* and *CSRPay* are as defined above and *FirmValue* is the next period's Tobin's Q or change in Tobin's Q (the ratio of a firm's market value to book value), following previous studies on CSR and firm value (Waddock and Graves, 1997; Servaes and Tamayo, 2013; El Ghoul et al., 2017). ***Controls*** is the set of firm characteristics that may otherwise affect firm value, including firm size, firm age, leverage, institutional ownership, strength of industry competition, analyst following, R&D intensity, and industry, year and country fixed effects.

4. Contributions

Our study is in progress, and when complete, will contribute to the emerging and concurrent body of literature on CSOs (Serafeim and Miller, 2015; Peters and Romi, 2015; Peters et al., 2018). There are relatively few studies on the establishment of CSO positions, these studies largely focus on the United States. Examining a wider international sample provides a new understanding of the use of CSOs internationally and their relative impacts internationally and over time. There are also relatively few studies on the use and effectiveness of CSR-related measures in executive compensation (Flammer et al., 2019). Our paper extends the existing studies to provide more widespread evidence on CSR-based performance measures in executive compensation in an international setting. Last, our study helps to better understand the effects of CSOs and CSR-based executive compensation performance measures on firm value.

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An Exploratory Study on Institutional Motivations and Challenges in Creating Meaningful Internship Experience (Interim Findings)

Roy Fai YING*
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

1. Introduction

In today's competitive business world, organizations face a constant challenge of attracting, developing, and retaining top talent. Hong Kong is no exception, as the talent shortage situation is very serious. According to figures produced by the HKSAR, more than 116,000 young people aged between 18-39 left Hong Kong between 2020 and 2022. To help address this talent gap, professional bodies such as the Hong Kong Institute of Human Resources (HKIHRM) recommend mandatory full-time internships to develop a steady pipeline of employable young talent.

This study explored the association between the quality of internship experience and the motivation of organizations using the Equity Theory (ET) of motivation. Specifically, the study examined the motivations and challenges faced by organizations in providing a meaningful internship experience. As an interim report, this study involved only six interviews with human resources managers of both MNCs and local SMEs to discuss their personal involvement in managing internship programs. Six more interviews and a focus group with students will be conducted.

The work-in-progress research findings suggest that an equitable relationship between the organization and the intern is key to providing motivation to managers in delivering a meaningful internship experience. Additionally, the success of any internship program largely depends on its alignment with the organization's corporate objectives on talent management. This study's insights contribute to the literature on creating shared values (CSV) under the context of internship, providing guidance for organizations and managers seeking to attract and develop top talent.

2. Background

2.1 Internship as Social Contribution

Organizations have been labeling internships as one of their social contributions to their ESG reports. For example, China Light and Power (CLP) in Hong Kong positions its internship program not only as part of the organization's commitment to nurturing young talent and developing future leaders in the energy industry, but also as a pathway to its Graduate Trainee Program. Internships can help organizations identify and develop talent with the potential to become future leaders and decision-makers (Kehoe & Wright, 2013). From a compliance point of view, listed companies in Hong Kong must publish their ESG initiatives under the Hong Kong Stock Exchange (HKEX)'s ESG Reporting Guide. Many organizations seek to continuously improve their ESG performance to meet investor demands, manage risks, and enhance stakeholder engagement (Ioannou & Serafeim, 2017). Internship programs are often included in ESG reports as a form of community investment (Deigh et al., 2016) and a means to promote talent development and diversity.

2.2 Internship as Shared Value

Creating shared value (CSV) is a concept that describes how companies can create economic value while addressing social challenges (Karmer & Porter, 2011). In the context of internships, CSV refers to the benefits created for both the organization and the community, such as talent acquisition and enriching young people's job readiness. If the program is designed to achieve both social and business objectives, the potential benefits for student interns are obvious. Ideally, they should have the opportunity to explore different career paths, gain exposure to different industries, and build professional networks (D'Abate et al., 2009). For the organizations, investing in internships can help create shared value by developing a steady pool of skilled and motivated talent, who can contribute to their long-term success. Furthermore, internships can help address the skills gap and youth unemployment, while also meeting the talent needs of organizations (Nkomo & Beugre, 2019).

2.3 Challenges in Delivering Meaningful Internship Experience

Assessing and evaluating internship programs can take on different dimensions, as there is no universally agreed-upon definition of a meaningful internship experience. Some students may view an internship as a preview of full-time work with the job, industry, or employer, employers may track metrics such as the number of job offers made to former interns, retention rates of former interns within the organization, and overall satisfaction with the program (Cheong et al., 2014; Knouse & Fontenot, 2008).

The successful implementation of an internship program depends on the motivations of front-line managers who act as the interns' immediate supervisors (Akomaning et al., 2011). To incentivize managers to invest time and effort, some organizations offer incentives such as bonuses, promotions, or recognition to encourage the development of high-quality internship programs that provide value to both the organization and the interns (Schraeder & Becton, 2013). By tying incentives to the success of the program, employers aim to motivate managers to create internship experiences that are engaging, challenging, and meaningful for interns (Allen et al., 2013).

2.4 Criticism of Internship Programme

Critics have argued that internships may perpetuate social and economic inequality by favoring students from privileged backgrounds and may be exploitative in nature, with interns performing menial tasks and receiving inadequate compensation (Frinaldi et al., 2012). For example, Satyam Agrawal (2018) argued that unpaid internships can be a form of modern slavery. Furthermore, internship programs may not be accessible or inclusive for all students, which can limit the diversity of talent entering the workforce. These criticisms highlight the need for a better alignment of the objectives of internship programs, from a social, regulatory and a business perspective.

3. Theoretical Framework

It is widely acknowledged that front-line managers play a pivotal role in delivering a meaningful internship experience for students. However, a significant knowledge gap persists in understanding how to motivate managers to act as effective mentors and supervisors. The equity theory of motivation offers insights into predicting manager behavior in this context. Managers' willingness to invest time and effort in their role may depend on what they will receive in return (Adams & Freedman, 1976; Al-Zawahreh & Al-Madi, 2012). Some recent studies have explored the role of incentives (Wu et al., 2020) and recognition (Kim et al., 2020) in motivating managers to invest their time and effort in delivering high-quality internships. However, it remains possible that other contextual factors may influence managers' motivation. This area is under-researched.

Furthermore, the equity theory can also shed light on the motivations of organizations in designing policies and processes aimed at creating meaningful internship experiences. One such factor is the alignment of these programs with corporate objectives. From a talent management perspective, organizations can offer internships as a means to cultivate a pipeline of talent. Previous research has demonstrated that organizations in the hospitality and tourism industry offer internships to attract and retain top talent (Cheong et al., 2014). From an employer branding perspective, internships can also contribute to building diversity and inclusion, promote innovation, and enhance social responsibility.

4. Research Objective

With industry organizations such as the Hong Kong Institute of Human Resource Management (HKIHRM) recommending mandatory full-time internships for tertiary level students, the need to examine the scalability of internship programs and their impact on students' employability has become more pressing. Therefore, this study aims to address a knowledge gap in the application of Equity Theory to internship program design by answering two research questions.

1) What concerns, considerations, and objectives inform internship program design from an organizational perspective?
2) What effective strategies can motivate managers to deliver high-quality internship experiences?

By addressing these research questions, this study aims to contribute to the existing literature on internship program design and offer practical insights to organizations seeking to develop scalable and impactful internship programs.

5. Research Methodology

This study employed a three-step qualitative research approach to address the two research questions. Step 1 was a review of relevant literature on factors influencing the success of internship programs is conducted. Based on this knowledge foundation, a series of semi-structured questions were formulated to guide in-depth interviews with twelve HR professionals in Hong Kong. The aim of this step was to establish a solid understanding of the challenges that organizations face in designing, promoting, and delivering meaningful internship experiences within institutional environments.

In-depth interviews were chosen as step 2 to collect detailed information regarding the respondents' thoughts, motivations, and concerns (Johnson, 2001). HR managers have been selected from the membership of the Hong Kong Institute of Human Resources Management (HKIHRM) and are interviewed either in person or via video conferencing platforms. For this interim report, only six interviews were completed. The rationale for forming a partnership with HKIHRM is to gain access to its membership database, with 5,200 HR professionals from SMEs, local conglomerates, and multinational corporations. This allows for the collection of a balanced range of views on the subject matter. A preliminary screening is conducted to ensure that respondents' remit includes the coordination of internship programs.

The opinions of university students are crucial, especially when it comes to their internship experiences. As part of the research, a focus group will be conducted as step 3 to gather their comments and feedback on their past internships, as well as their expectations for future employers. However, the deadline for this extended abstract falls during the examination period, which could make it challenging to recruit participants. To ensure a diverse group, we plan to recruit eight to ten students with at least one prior internship experience through JINESS, a joint institution online resource platform for post-secondary students.

6. Data Collection and Analysis

Interviews have been conducted in-person or via video conferencing platforms and have been recorded with the participants' consent. Pseudonyms were assigned to respondents to ensure confidentiality. Each interview lasted up to 60 minutes, and the transcribed content are organized and coded using thematic analysis. A standard interview guide was adopted but the participants were encouraged to provide specific examples and stories to enrich the interview content and provide a more comprehensive understanding of their views.

Following the data collection, the transcribed content underwent thematic analysis, which involved a systematic process of familiarization with the data, generating initial codes, searching for themes, reviewing, defining, and naming themes, and producing a report of the findings. NVivo software was used to facilitate data management, organization, and retrieval during the analysis process. To ensure rigor in the analysis, a six-phase approach outlined by Braun and Clarke (2021) was adopted.

7. Discussion

7.1 Step 1 – Literature Review

The literature review has identified several important themes that are relevant to the research questions. Concerns, considerations, and objectives that inform internship program design include the need for organizations to clearly define goals, skills, and experiences for interns, and to provide work assignments that align with organizational objectives (Hirschi et al., 2019; Sosik et al., 2020; Stedman et al., 2018). The importance of mentorship and opportunities for growth and development has also been highlighted, with studies emphasizing the role of mentorship in enhancing job satisfaction, performance, and retention (Kram et al., 2018; Thessin et al., 2020; Singh & Dutta, 2010).

Effective strategies for high-quality internship experiences include providing regular feedback and support to interns, recognizing and rewarding their contributions to the organization, and offering training and development opportunities (Kirkpatrick et al., 2019; Thessin et al., 2020; Singh & Dutta, 2010; Karunaratne & Perera, 2019). Additionally, paying interns fairly and creating a sense of equity and balance in the internship program can help motivate managers and interns alike, with studies highlighting the importance of equity theory in shaping perceptions of fairness and satisfaction (Tepper & Holt, 2015; Adams, 1965; Hirschi et al., 2019).

However, despite the literature highlighting the importance of collaboration between employers, managers, and interns to ensure a meaningful internship experience, there remains a significant knowledge gap in understanding the motivations of organizations to provide such experiences beyond CSR compliance. While literature has suggested incentivizing managers as one way to develop high-quality internship programs, there is a need to explore the deeper motivations of organizations to offer meaningful internships.

7.2 Step 2 - Interview Data (Preliminary Findings)

The interviews are expected to offer solid testimonials on the practical experience and personal stories of the interviewees. The interview data reveals several common themes related to the objectives, priorities, and concerns of organizations regarding their internship programs.

The first theme highlights that internship programs can contribute to one or more of the organization's corporate objectives, such as serving as a pathway for future recruitment, contributing to corporate social responsibility goals, and helping to address talent shortages. The interview data suggests that organizations value internship programs based on their own key performance indicators, which often align with their corporate objectives. From an operational perspective, an interviewee from the hospitality sector said, "We need interns to help us perform front-line duties. We expect them to have a sound knowledge of the hotel business before they are ready to take on our internship roles."

The second theme highlights that internship programs are just one part of the overall portfolio of the Human Resources Department, and other priorities often compete for resources. The interview data suggests that the motivation of managers to support internship programs depends on resource allocation. One of the interviewees from an NGO was very open in advising that they have reached the maximum capacity by saying, "We'd love to offer more internship opportunities, but unless we can get more resources….money, space and manpower, we cannot make our internship program scalable."

The third theme highlights that internship programs are primarily the concern of the Human Resources Division, and there is little emphasis on motivating other business divisions to be proactively involved. The interview data suggests that managers may be reluctant to take on interns due to competing demands and lack of resources, and there is little recognition or rewards offered to front-line managers for their service as mentors and supervisors of student interns. An interviewee from a local conglomerate said, "I often have trouble finding enough managers who are willing to take on interns. They are just too busy to meet their daily demands."

While data from step 3 of this study is not yet available, the preliminary findings suggest that organizations have different objectives and priorities for their internship programs, and the motivation of managers to support such programs depends on resource allocation and institutional priorities.

8 Conclusion

Ideally, aligning internship program objectives with organizational goals can create a mutually beneficial experience for both interns and the organization, resulting in a shared value creation strategy. As top leadership support is crucial in ensuring the success of shared value creation strategies, including internship programs, organizations should leverage the alignment between their corporate objectives and internship program objectives to mobilize resources beyond the human resources department. Adopting a strategic and shared value-oriented approach to internship programs can motivate organizations to enhance the effectiveness of their internship programs by providing adequate resources and support. This includes investing in training and development opportunities for interns and managers, providing regular feedback and recognition, and creating a sense of equity and balance in the internship program. This can motivate managers and interns alike and create a more sustainable and successful internship program that contributes to their long-term success and the development of future talent.

The interim data points to the need to provide support and incentives for supervisors of the interns. From a CSV perspective, organizations that invest in effective internship programs can achieve multiple benefits. By developing a pipeline of talented individuals through their internship programs, organizations can create a more diversified and skilled workforce. Moreover, by building a positive employer brand that attracts top talent, organizations can improve employee retention rates and reduce recruitment costs. These anticipated benefits are particularly important for publicly listed organizations, which must demonstrate tangible returns on any investment. Therefore, by investing in their interns and creating a positive and equitable workplace experience, organizations can attract and retain top talent, reduce recruitment costs, and build a diverse and skilled workforce. This can ultimately contribute to the organization's long-term success and create a sense of equity and fairness among employees.

9. Limitations & Further Studies

While this study has provided valuable insights, it is important to acknowledge its limitations. The findings are based on interim data from a small sample size of six interviews, and without the views from students. Moreover, the study is conducted within the context of Hong Kong, which has a unique cultural and economic landscape that may not necessarily translate to other regions. Views from universities and regulators were also absent, but the accessibility to relevant interviewees who are willing to offer a balanced view is very restricted.

In addition, the COVID-19 pandemic has led to the emergence of virtual internships, which offer a more flexible and accessible approach to talent development. Future research could explore the effectiveness and impact of virtual internships compared to traditional internships. Finally, internship programs have the potential to promote diversity and inclusion by offering opportunities to individuals from underrepresented groups. However, it is unclear whether internship programs are effective in achieving this goal, and more research is needed to explore the relationship between internships, diversity, and inclusion.

-End-

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Paper Number:P036

Workplace Happiness: What is It? Why is It Important in the Context of Great Upheaval?

Kenneth Ka Kei KWONG*
The Hang Seng University of Hong Kong
Hong Kong

Thomas Wing Yan MAN
The Hang Seng University of Hong Kong
Hong Kong

Susanna Lai Man CHUI
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Background of Research

Workplace happiness refers to the level of positive emotions, satisfaction, and fulfilment that employees might experience in their jobs (Fisher, 2010). It is increasingly considered as a desirable quality found in organisations and is a growing area of interest for practitioners and researchers (Joo & Lee, 2017; Fisher, 2010; Stairs & Galpin, 2009). Happy employees tend to be more engaged, motivated, and productive, which can have positive effects on the organisational performance. On the other hand, when employees are unhappy at work, they are more likely to be disengaged and less productive. This can lead to lower quality work, missed deadlines, and increased errors. In the context of COVID-19 pandemic, maintaining the well-being of employees at work has become a particularly timely issue (Merida-Lopez, Extremera, Quintana-Orts, & Rey, 2019). This is because, over the past few years, the pandemic has brought about significant changes and challenges in the workplace, including remote work through digital tools and social isolation, which can lead to increased stress, anxiety, and burnout among employees, which can be negatively associated with individual's well-being at work, undermining the satisfaction of human needs.

In this regard, self-determination theory (SDT) - which examines how the fulfilment of human basic needs are related to motivation at work (Ryan & Deci, 2017) – can offer us a useful perspective to understand workplace happiness in this context. According to SDT, there are three aspects of employees' needs, including competence, autonomy and relatedness, which can attribute to well-being and performance if fulfilled. Olafsen, Deci, and Halvari (2018) validated that employee motivation which could be ignited by social and contextual antecedents, as suggested by SDT. When employees' work experience allows them to understand the purpose of work, develop trust in supervisors and congenial dynamics with team members, they can develop autonomous motivation as 'high-quality motivation' (Rigby & Ryan, 2018). Autonomous motivation as a form of intrinsic motivation is characterised by individuals' engagement in willingness, volition, and choice (Deci, Olafsen & Ryan, 2017).

Inspired by the SDT, this paper conceptualises workplace happiness as a multidimensional construct. When employees' basic needs of competence, autonomy and relatedness could be met, it was considered that subjective sense of well-being that defined the related basic needs could be resulted. Moreover, the effects of the social and contextual antecedents, including organisational culture, trust in supervisors and team coherence, were also examined.

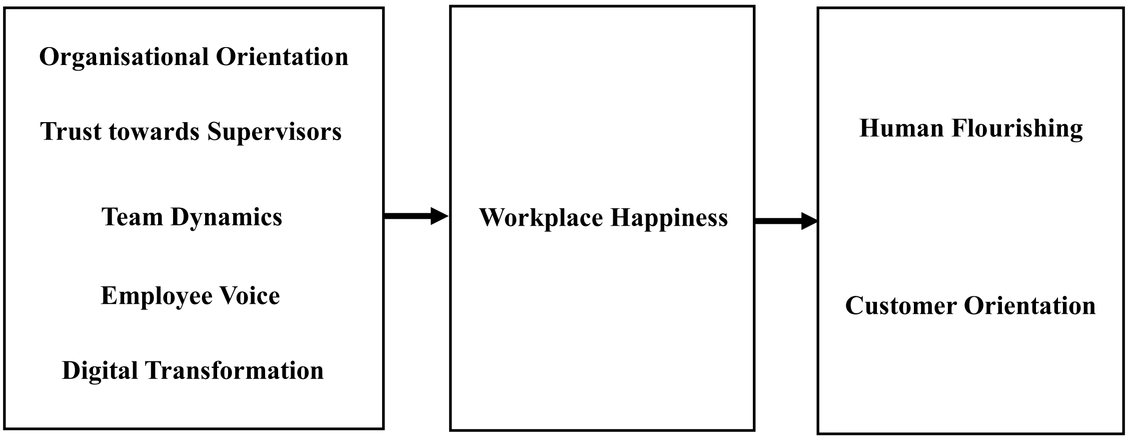
Given the above considerations, the research questions of this study are as follows:

R1: What are the core dimensions in measuring workplace happiness?
R2: Based on the SDT perspective, what leads to workplace happiness?
R3: Can workplace happiness promote meaningful work life and encourage employees to better serve their customers?

Conceptual Framework and Methodology

A conceptual framework portrayed the causes and consequences of workplace happiness was proposed to guide the development of the survey instrument and subsequently the data analyses (see Figure 1). Workplace happiness is posited to mediate the effects of a set of organisational and team related variables on human flourishing and customer orientation. All measures were modified from the existing scales to reflect the disruption and challenge brought by COVID to the work contexts. An online survey was administered to employees in Hong Kong as a part of the self-assessment for companies seeking an HRM award. A useable sample of 810 employees in various job positions was collected from 18 companies. On average, each contributed 45 responses. These companies feature the industry such as insurance, manufacturing, property development, professional services, public utility, retail, and restaurant.

Figure 1. The Conceptual Framework of Workplace Happiness



Findings and Discussion

A principal component analysis method with varimax rotations was performed to factorise all items pertaining to workplace happiness. An undisputable four-factor solution was eventually emerged with 21 items left that constituted relational wellbeing, affective wellbeing, remember wellbeing, and experienced wellbeing (see Table 1). This reported factor structure of workplace happiness was supported by a high KMO (.919) and a significant chi-square of Bartlett's test at the 0.001 level. Each item was loaded into the corresponding factor with a loading higher than .5. The total variance explained was 64.90%. A good Cronbach's alpha was observed in each factor that all reached the minimum threshold of .70. In sum, these factors and items collectively form a reliable measure on workplace happiness.

Following the widely accepted approach from Baron and Kenny (1986) on testing mediation, a series of multiple regression models was run on workplace happiness, human flourishing, and customer orientation (see Table 2). In Model 1, workplace happiness was first regressed to a set of independent variables while tenure, job position, and gender were controlled. It showed that workplace happiness is driven by trust towards supervisor ($\beta = .350, p < .001$), employee voice ($\beta = .194, p < .001$), team dynamics ($\beta = .157, p < .001$), organisational orientation ($\beta = .154, p < .001$), and digital transformation ($\beta = .130, p < .001$). Interestingly, one's happiness in the workplace appears to be positively related to his or her tenure in the company. In Model 2, the same set of independent variables were entered to the equation to predict human flourishing. It showed that all except digital transformation led to human flourishing. In Model 3, workplace happiness was put together to explain human flourishing that accounts for additional variances (Δ in $R^2 = .089$). Workplace happiness fully absorbs the direct effect of trust towards supervisors on human flourishing. In Models 4 and 5, customer orientation replaced human flourishing as an outcome. Organisational orientation, team dynamics, and employee voice exhibited a strong and positive influence on customer orientation. Meanwhile, workplace happiness is also one of the predictors on customer orientation ($\beta = .199, p < .001$).

Table 1. Factor Structure of Workplace Happiness

	Relational Wellbeing (α = .909)	*Affective Wellbeing* (α = .862)	*Remembered Wellbeing* (α = .897)	*Experienced Wellbeing* (α = .729)
My organisation and my supervisor offer work flexibility by allowing the work from home mode to minimize work integration	.771			
My organisation provides online meeting arrangements for me to stay in touch with external clients	.759			
I stay in close/regular connection with my supervisor during COVID	.757			
My organisation has the capability in maintaining safety and psychological health of the employ	.753			
My organisation provides online meeting arrangements for me to conduct internal work meetings	.752			
My organisation and my supervisor look after my safety by staying connected	.751			
My organisation and my supervisor look after my safety by providing sufficient protective resources including masks, sanitizers and related equipment	.746			
In my job I often have trouble coping		.766		
I find my job quite difficult		.754		
I sometimes think I am not very competent at my job		.753		
I am not very interested in my job		.748		
I am not very concerned how things turn out in my job		.726		
I prefer to avoid difficulties activities in my job		.668		
I have the energy to accomplish my daily work			.815	
I feel able to solve the majority of my daily problems at work			.802	
I am satisfied with myself at work			.786	
I feel very connected to the people around me at work			.719	
Something I did make me proud at work				.753
I did something fun with someone at work				.733
I did something I really enjoy doing at work				.703
I learned something interesting at work				.697
Eigenvalues	4.522	3.691	3.021	2.393
% of variance explained	21.534	17.577	14.387	11.397
KMO measure of sampling adequacy			.919	
Bartlett's test of sphericity	χ^2		9218.155***	
	df		210	

Extraction method: Principal component analysis. Rotation method: Varimax.
Total variance explained: 64.90.
Loadings of less than .35 have been omitted for clarity.
****p ≤ .001*

Table 2. Standardized Regression Estimates

	Workplace Happiness	*Human Flourishing*		*Customer Orientation*	
	Model 1	*Model 2*	*Model 3*	*Model 4*	*Model 5*
Control variables					
Tenure[1]	.060*	.046	.014	.015	.004
Job Position[2]	.024	-.008	-.019	.035	.030
Gender[3]	.000	-.003	-.001	-.056	-.056
Independent variables					
Organisational Orientation	.154***	.191***	.113***	.271***	.241***
Trust towards Supervisors	.350***	.123***	-.052	-.003	-.073
Team Dynamics	.157***	.289***	.209***	.240***	.209***
Employee Voice	.194***	.247***	.148***	.288***	.250***
Digital Transformation	.130***	.078	.012	.047	.021
Mediating variable					
Workplace Happiness			.503***		.199***
F-value	131.791***	110.551***	145.498***	85.797***	80.547***
R-square	.647	.607	.696	.544	.558
Δ in R^2	-	-	.089	-	.014

Standardized betas are reported.
[1]1 = 1-5 years, 2 = 6-10 years, 3 = 11-15 years, 4 = Over 15 years; [2]1 = Frontline staff, 2 = Managerial staff; [3]1 = Male, 2 = Female
**p ≤ .05, **p ≤ .01, ***p ≤ .001*

Conclusion

Informed by the self-determination theory under a context of change and uncertainty, we developed a new instrument of workplace happiness consisting of four dimensions that focus on different aspects of employee well-being. We also identified five team and organisational factors that are likely to play a crucial role in this context, and these factors were shown to be significant antecedents leading to workplace happiness. Moreover, workplace happiness was shown to play a significant role towards the work-related outcomes of human flourishing and customer orientation, and it also serves on a partial mediating role between some of those antecedents and these two work-related outcomes.

The findings of this study have extended our understanding on the significant role of workplace happiness as employee well-being not only in a stable environment but also under the context of change and uncertainty. Further studies can focus on examining its impacts in other performance outcomes at individual, team and organisational levels as well as comparing it with other variables such as job satisfaction on these outcomes.

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Paper Number:P037

Building Trust and Mending Relationships Prevention and Response Management for Sexual Harassment Crisis in Organizations

Erica Wing Kiu YUEN*
The Hang Seng University of Hong Kong
Hong Kong

Icelyn Yiu Bing CHOY
The Hang Seng University of Hong Kong
Hong Kong

Jeanne Ho Ying FU
The Hang Seng University of Hong Kong
Hong Kong

*The corresponding author

Description:

Given the rising awareness of the social movements against sexual harassment and other sexual misconducts, it is worthwhile to see how the business world views this issue. While it is common knowledge that sexual harassment is a notorious workplace crisis, it has come to our attention that handling sexual harassment within an organization is a long and strenuous process due to the disagreement or miscommunication between the involved parties. Such communication problem prompt organizations to considered various strategies in responding to sexual harassment. Furthermore, people's misunderstanding and misinformation on sexual harassment may lead to an increase in the number of sexual harassment crisis. Therefore, there is an urgent need for organization to look for suitable frameworks to minimize the possibility of sexual harassment occuring within the organization.

This study aims to provide a clear clarification on the acts of sexual harassment and educate organizational members on understanding and perceptions of sexual harassment. It also studies psychological responses of the victim to different relationship repair behaviors by the suspect and different organizational policies of handling suspected cases. With findings from this research, we hope to propose anti-sexual harassment policies that can satisfy the needs of organizations. A framework of suggestions would be proposed for managers of local enterprises to make references when designing rules to protect its employees and their business's reputation.

Paper Objectives

The 3 objectives of this paper is (1) to educate and clarify the organizational members' understanding of sexual harassment, (2) to study the crisis response in repairing relationship and trust between suspect and victim in a speculated sexual harassment, and (3) to explore organizational approach to prevent and manage sexual harassment crisis.

Guiding Frameworks

We have borrowed some theories from crisis prevention management by McDonald et at (2014) in the literature as the guiding frameworks for our paper. With reference to this theory, the primary prevention is to prevent sexual harassment cases from happening within the organization. And from the secondary prevention, we would study response strategy when facing occurrence of sexual harassment incidents.

Specifically, we explore the prevention of sexual harassment through primary and secondary prevention by focusing on organizational trust. We borrowed the theoretical frameworks of organizational trust and trust repair by McAllister (1995) and Gilespie (2009), respectively, to guide our research. Cognitive trust from McAllister is referred to as how confident organizational members feel in their own and other's ability to understand and handle an organizational incident. By increasing one's ability and understanding of sexual harassment, perhaps employees can better protect themselves or avoid committing sexual harassment. This is where the primary prevention measure comes to light. For secondary prevention measures, we used the trust repair framework from Gillespie's publishing article in 2009. We designed our studies to see which of the following 4 response options is the most effective and efficient option to repair trust between a victim and a suspect. The 4 response options include (1) acknowledging occurrence of a crisis, (2) determining cause and admitting culpability, (3) admitting destructive acts caused by the incident, and (4) accepting responsibility for consequence.

Methodology

As there are 3 objectives for our paper, we have conducted 4 studies, each targeting a different objective.

For study 1, we would like to test the understanding of sexual harassment under the concept of primary prevention. A training video that focuses on the explanation of sexual harassment is created. Our respondents, divided into education and control group, would be given a set of questions to test their objective knowledge in sexual harassment. For study 2, we turned our focus to the trust repair process between the victim and the suspect. With a hypothetical scenario, 4 crisis responses taken by the suspect are manipulated. The respondents would take up the role of the victim and the victim's feelings and perception towards the suspect would be measured. For study 3, we looked into the HR practice and the trust employees have in organization after the occurrence of the sexual harassment. Similar to study 2, respondents are given a hypothetical scenario with a different HR policy adopted by the organization, namely Penalty and Control, and the victim's feelings and perception towards the company and the responsibility attributed to the organization would be measured.

Major Findings

For Study 1, we invited participants to watch an educational video related to sexual harassment and test their knowledge by completing a worksheet. We also asked them to fill out the self-efficacy measure, referred to as how confident they felt about handling sexual harassment should it occur around them.

Our results showed that unlike our expectation, there is no significant difference on their level of objective knowledge related to sexual harassment between the experimental and control condition. The result for Study 1 can be found below. Regarding the self-efficacy, we can see that the mean of the experimental group is slightly higher but the significance is only marginal, indicating that there is a trend of having higher subjective confidence in handling sexual harassment.

In summary, we consider that the length of the video may not be sufficient to improve participants' understanding towards sexual harassment but it increased people's confidence slightly.

Table 1. Result of Study 1

	Control		Education		
	M	SD	M	SD	T-test
Objective Test	13.18	1.55	12.84	2.41	t = 0.67, p = 0.51
Self-efficacy	4.18	0.85	4.61	1.07	t = -1.75, p = 0.09

For study 2, it is related to repairing trust between the victim and the suspect. We have made a specific scenario for participants to view. The scenario constructed by us is that, in City Express Restaurant, Waitress X complained that Chef B had touched her chest when she passed by him in a corridor. We then randomly presented four kinds of responses towards this complaint of sexual harassment. The four kinds of response are (1) Denial, (2) Apology without apology, (3) Apology with internal reasons and (4) Admit with external reasons.

For response option (1) Denial, Chef B claimed that nothing had happened and emphasized that him touching Waitress X's chest was just an unintentional incident. For response option (2) Apology without apology, Chef B admitted that his hand had touched X's chest, but he declined X's request for a formal apology and firmly asserted that he would not apologize for his wrongdoings. For response option (3) Apology with internal reasons, B admitted that he had touched X’s chest and that he promptly apologized for his wrongdoings. B further explained that he was only attracted to X and could not resist the temptation of touching her. For response option (4) Apology with external reasons, B explained that he only accidentally touched X’s breast as the corridor was too narrow. B said that he was sorry for what happened, but he didn’t think he was fully responsible for the incident.With these responses, we then measure the dependent measures of the respondents. The dependent measures include (1) Negative feelings towards Chef B, (2) Perception of Chef B’s morality, (3) Sociality, Competence and Possibility of repairing trust between Waitress X and Chef B.

Our results showed that for Negative feeling, it will be strongest if the suspect admit having committed sexual harassment but do not apologize. Apologizing using external reasons such as the corridor being too narrow led to the lowest level of negative feeling. It is surprising that Denial did not lead to a higher level of negative feeling. For perceptions towards Chef B, Apologizing using external reasons led to the best person perception across all three dimensions: morality, sociability and competence. Lastly, for repairing trust, denial and apologizing using external reasons showed better ratings compared to the other two responses.

To conclude, it is best to apologize with external reasons in order to improve the perception of the victim towards the suspect and repair trust between the suspect and the victim. It is ironic that denial sometimes gives slightly better impression than apology with internal reasons

For study 3, we tested the effect of HR Practice and Trust in Organization on the victim's perception of the organization. We modified the scenario from Study 2 and tested the effect of Penalty-focused HR practices but our data did not support our hypothesis. We also tested the role of trust in organization, affective commitment and having a safe and protective environment in affecting responsibility attribution to the restaurant when a sexual harassment occurs.

Our results (Table 2) showed that there is negative correlation between their trust in the restaurant and the degree to which the restaurant should be responsible for the occurrence of the sexual harassment incident. That means the more trust the participants had in the restaurant, the less they blame the restaurant when a sexual harassment case happen in the restaurant.

Table 2. Results of Study 3

Responsibility of Restaurant	- 0.27*	Trust in the Organization
	- 0.18	Affective Commitment to the Organization
	-0.10	Safe And Protected Environment Offered By The Organization

Conclusion:

To conclude, the results from the aforementioned studies provide that providing more sexual harassment-related education may help victims and other staff members to respond more effectively towards these incidents. It is important to handle the victims' complaints carefully and responsively to lower their negative feeling and distrust towards the organization as building trust can be the key to buffer negative reactions from victims and staff members when sexual harassment incidents occur. Although handling sexual harassment-related crisis requires a lot of work, for pre-incident and post-incident, from organizations, the trust lost and relationships damaged from the crisis are not irreversible.

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Paper Number:P038

Challenges in Cybersecurity

Dr Thomas Sek Khuen TANG*
AECOM and City University of Hong Kong
Hong Kong

*The corresponding author

Challenges in Cybersecurity

In 2015, the UN established the sustainable development goals or SDGs[1] as targets to accomplish in order to provide a sustainable future for the planet and society. The role of technology – whether in the form of clean technology equipment or digital services – has not been detailed thoroughly within the Goals except for a reference in SDG9 on industry, innovation and infrastructure to "*enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per 1 million people and public and private research and development spending.*"

Further text outlines, "*support domestic technology development, research and innovation in developing countries, including by ensuring a conducive policy environment for, inter alia, industrial diversification and value addition to commodities*" and "*significantly increase access to information and communications technology and strive to provide universal and affordable access to the Internet in least developed countries by 2020.*"

The World Economic Forum[2] describes how low-income societies can benefit from technology by moving from low productivity commodity-based industries to higher productivity and skill intensive sectors. Such societies need to embrace the production and export of technology-intensive, high-value and more sophisticated goods to generate more income yielding positive implications for productivity and institutional transformation. It is thus incumbent on low-income societies to invest more in R&D, increase STEM-based human capital and take advantage of Aid for Trade initiatives to build capacity and resources. Bond[3], an international aid NGO, outlines the top ten so-called frontier technologies based on a survey of 37 developing countries to be: Big Data, circular economy, fintech, blockchain, machine learning, artificial intelligence or AI, satellite technology, apps for refugees and asylum seekers, household and commercial scale batteries and 3D printing.

Further digital support for the SDGs comprises:

Zero hunger – SDG2: Around 45% of deaths of children under 5 are linked to undernutrition. AI, sensors, robotics and synthetic biology are demonstrating great promise for improving crop productivity and resilience, and optimizing food distribution. For example, NRgene[4] is using machine learning and genetic sequencing to identify and sequence optimal gene profiles to enhance crop performance, while Phytech[5] is optimizing crop production with its "Plant Internet of Things", which delivers insights and warnings to farmers' smartphones.

Good health and wellbeing – SDG 3: Advances in technology, including AI, blockchain, sensors and biotechnology, can advance human medicine along with healthcare information, services and access. Some 18,000 healthcare startups have attracted $145 billion in investment since 2010. Longenesis[6], for example, uses AI and a blockchain-based platform to overcome challenges in health data storage across Africa.

Affordable and clean energy – SDG 7: There are nearly 800 million people without access to reliable and affordable electricity. Rapid advancements in AI, blockchain, advanced materials for solar panels and battery technology (specifically lithium-ion batteries) means that renewable energy mini-grids now have the potential to be the cheapest solution to connect 290 million people to power.

It is clear that technology can be put to use for common good as long as all citizens have equal access to technology that promotes economic prosperity across the entirety of the city. Successful technology implementation can become a great equalizer across economic classes. However, the downside is that market forces and self-interest may prevail instead, resulting in the prosperity for some versus opportunity for all. This is the basis for the so-called “digital divide”.

Another challenge is the use of data for building communities. The goal is to offer better quality services and products, and more efficiently use resources for communities - however there is the risk of realizing an unexpected result. Frequently the amount of data is touted as an indicator of the ability to make the right decision, but what if the amount of data collected leads to the wrong decision? Governments have placed restrictions on what and how information can be collected as a result of the public concerns on what they view as an invasion of data privacy. The result of this is that much data is excluded. Digital exclusion — the lack of access and capacity to use information technology — limits data harvesters to obtaining information from those that have access to an advanced infrastructure and the knowledge to use it further exacerbating the problem.

Other challenges prevail. In privacy and data security situations, sensors that track vehicles across multiple intersections, cameras and associated AI that leverage facial recognition to identify individuals, and search data collected by technology companies could be leveraged in ways counter with the individuals’ interests. For example, a company amassing a database of human faces and providing access to law enforcement could lead to a lawsuit being filed based on a claim of violation of privacy laws. While data protection laws provide legal requirements for processing personal data, there is a gray area regarding the interpretation and application of these laws. Some may interpret laws in ways that could benefit their agenda. This is where ethical boundaries, together with proper privacy and security controls such as supplier due diligence, are a crucial part of the foundational framework. Article 9 of the European Union General Data Protection Regulation (GDPR) forbids using sensitive personal data (for example, race or biometrics) without a lawful basis such as legitimate interest or consent.

AI is the genie in the digital bottle that many are fearful of what it can do if uncontrolled. Estimates by experts indicate that AI could increase global GDP by US$15.7 trillion by 2030 by improving speed, quality and accuracy of activities previously executed by humans. But is there a case for AI threatening rather than benefitting human existence? Even if the probability is quite low, the potential impact is massive, and the need for scenario planning and policy development is evident.

The European Commission announced the "Artificial Intelligence Act,[7]" in April 2021 as the first regional attempt to regulate the use of AI. It is expected that the regulation will become effective in 2024 or 2025 and will apply to markets that make AI available in the European Union. It will also have an extraterritorial reach, like the GDPR. Most of the controls outlined in the regulation will apply to individuals or organizations that develop an AI system or has it developed for use by people in the EU for free or at cost. The regulation will require full transparency about the product and the data involved, and data used must be accurate and be limited to what is needed. The data must be secured and there must be full accountability. In addition, AI must be thoroughly tested and documented (and audited), and there must be data governance and human oversight in place at all times.

Similar to the launch of the GDPR and paving the way for other countries to enforce robust privacy rules and regulations, the European Union’s Artificial Intelligence Act will set the bar high for AI compliance and pave the way for other countries to enforce similar regulations in the future.

Sam Altman, the CEO of Open AI which produced ChatGPT declared in a Senate hearing, *"I’m a little bit scared of AI technology, and concerned about potential disinformation and authoritarian control of AI technology, even though AI will transform the economy, labor and education… The real risk with AI isn't malice but competence. A super-intelligent AI will be extremely good at accomplishing its goals, and if those goals aren't aligned with ours, we're in trouble*."

With such prescient words, we enter into a new digital age where it is assumed that technology will make a large percentage of human work unnecessary. The more likely outcome is the creation of winners and losers. As with previous waves of automation, some workers will become redundant, including many of those in today's "knowledge economy." However, new areas of human expertise will be required to provide oversight, judgment and policing of increasingly sophisticated AI.

Of gravest concern though are the extreme vulnerabilities when AI is applied to management of infrastructure where bad actors (like cyber attackers), poor model training and catastrophic system failure with limited ability for humans to intervene may arise. This is possible in the case of a power grid, a hydroelectric dam, a water treatment plant or nuclear plant. AI can enhance safety and improve system performance — which is why it is leveraged in the first place — but the gradual loss of human control opens the door to a new set of vulnerabilities that require mitigants and contingencies. In February 2021, a water treatment plant management system in Florida[8] was remotely accessed by an unknown entity who released a large amount of sodium hydroxide into the public water supply, intending to harm civilians. Thankfully, the situation was contained before anyone was harmed. Earlier in 2017, in the wake of a Russian cyber-attack on Ukraine, a global logistics system was offline for weeks due to a cyber-weapon known as NotPetya[9], which disrupted supply chains worldwide and impacted thousands of other companies. Even after global disruptions like NotPetya and the various ransomware attacks in 2021 (one of which caused a major petroleum pipeline to shut down), countering cybersecurity attacks is still a huge challenge, due to complex factors such as networks, operating systems and databases. Coupled with the demand for new technology to meet delivery deadlines, this results in security defects that could be exploited by a security hacker, a rogue nation state, or a cybercrime syndicate.

So how do we mitigate cyber risk?

As we move toward a future smart city of connected digital ecosystems, cyber breaches will only increase if left unguarded, while the impact of such breaches will be even greater. Therefore, we must make sure that technological advancements across our cities and societies are developed hand in hand with stronger cybersecurity. The risk of not doing so could be devastating.

The following steps are proposed:

Enhanced focus on data accuracy and data protection. AI algorithms evolve based on the data set on which they are trained. Comprehensive and representative data sets are therefore critical to reduce the probability of algorithmic bias, and potential algorithmic harm.

Focus on data and algorithm transparency. Despite the increasing complexity of AI, the basis of specific AI decisions should be discoverable. Certainly, transparency is difficult to achieve, so more attention is required on researching techniques to improve the transparency of AI decision-making.

Conducting a series of premortems is a valuable exercise in exploring the negative potentialities. Where a post-mortem provides insight into the reasons for a negative outcome after the fact, the premortem operates on the assumption that the negative outcome has occurred and requests the team to explain what did go wrong and generate explanations for the failure. This is a first step to developing mitigants and preventive policies.

Foster the continued interdependence and symbiosis of humans and machines. While we view the risks above as emerging from increased interdependence with machines, they emerge from machines acting independently of — or at odds with — human objectives. Abiding by principles for creating safer AI — for example the Asilomar AI Principles[10], the ARCC Ethical Framework for AI[11], or Stuart Russell's three principles[12] to guide the development of beneficial machines, policy makers and the AI development community would be well-served to educate themselves on principles for incorporating human-based values into the development of AI.

In line with these steps an ethics-based digital strategy that covers both the immediate use cases and benefits, along with future direction and something that acts as an anchor point for how the technology will evolve should be fostered. Technology must not cause an inequality gap but it should be equally distributed across societies. Technology should also contribute to economic security, particularly if it is automating jobs that were previously carried out by humans. Machines and algorithms must be ethically controlled to eliminate biases that may result in people feeling unfairly impacted by the technology and AI. Reverse engineering of these issues should also be on the cards.

What would actually happen if the technology fell into the wrong hands? Is the technology immutable (i.e., the impacts could follow a person irreversibly in their life)? Who would it be absolutely critical to protect against accessing the technology? How could the technology — or the insight it may generate — be used by bad actors or to subvert the truth? Could this ultimately undermine trust in legitimate organizations and/or create social unrest? With so many players interwoven in a digital ecosystem, who has what power? Are all voices represented? And how will disagreements be resolved?

There are a number of unanswered questions at this stage in the evolution of AI and other tools. Thankfully an Economist article[13] states that evidence shows that countries with the highest levels of automation actually improve in employment levels. In 1940, 60% of jobs in the US did not exist but today flourish as a result of advancement in technology. ChatGPT may have the profoundest impact on professions like lawyers, accountants and travel agents but new roles and new skillsets will emerge in the future.

So, in conclusion, technology can be for good … or bad. Underpinning the principles of technology transformation is that access for all is imperative. Regardless, users of technology must respect individual rights to privacy and the greater we embrace technology, managing risks around cyber threats is crucial.

Importantly, AI technology is not destined to completely replace humans yet.

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Appendix 1

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