

A review of Chinese and English language studies on corporate environmental reporting in China

Helen Hong Yang, Russell Craig, Alan Farley

Abstract

We review theoretical arguments, research methods and empirical findings of 57 Chinese and English language studies of corporate environmental reporting (CER) in China. The studies reviewed highlight the influential role of the Chinese government in driving change in CER, especially since 2008. They reveal that few of the associations reported in Western capital markets research between company characteristics and CER (other than size and industry) were found in studies of CER in China. Agency theory prevailed in Chinese language studies of CER in China whereas institutional theory was more popular in English language studies.

Theoretical foundation of CER research relating to China needs to be more sensitive to the efficacy of transporting Western-based theories to the Chinese context. We draw attention to the potential of using institutional theory to frame analysis of Chinese CER. We call for future research into CER in China to adopt a more flexible theoretical perspective, to be more conscious of distinctive Chinese company characteristics, and to integrate macro and micro contextual factors more strongly.

Keywords: corporate reporting; China; critical; environmental

1. Introduction

China has been disparaged for seeking dynamic national economic growth at the cost of a deteriorating environment and increasing levels of social inequity (World Bank, 2007). These criticisms have drawn close global attention to China's environmental actions to mitigate the effects of climate-change. However, such closer attention has not induced greater understanding by Western accounting researchers of the findings of Chinese language studies of corporate environmental reporting [CER] in China. Very few English language studies of CER in China have drawn on relevant Chinese language studies. This lack of concern seems mildly imperious when juxtaposed against various international admonitions of China (implicitly, if not explicitly) for having a poor record of environmental stewardship. Furthermore, Western ignorance of Chinese language CER studies sits uncomfortably with the increasingly important role China is being urged to adopt by the international community to ameliorate the effects of global climate-change (Heggelund, 2007).

This study provides a platform of knowledge and commentary to benefit understanding of CER in China and to enhance appreciation of the social, economic and political functioning of CER research in China. Specifically, we review and compare 57 English language and Chinese language studies of Chinese CER in terms of theoretical bases, research methods, and influential factors. We introduce to the English language accounting literature 28 Chinese language studies of CER published between 1997 and 2012.

The broad ontological stance we adopt stresses the importance of social location, the influence of situational factors (political system, economic environment, and cultural orientation) and understands that some views are privileged over others. In terms of the Euro-Western research paradigms (of positive/postpositive, interpretive and transformative) outlined by Chilisa (2012, pp. 25-41), the current study has traces of all three paradigms. However, it seems best located within a transformative paradigm (Chilisa 2012, pp. 35-37). This is because we introduce (metaphorically at least) 'voices' from a country whose research findings on CER (in the Chinese language) have remained unknown in mainstream Western literature. We seek to 'transform' (however marginally) Euro-Western knowledge systems relating to CER by exposing them to 'the other [Chinese] knowledge [that is] non-Western and [currently] peripheral' (Chilisa, 2012, p.4). Thus, we seek to be transformative by 'emancipating' knowledge of CER produced in another culture so that it does not remain marginalised.

The following review is also transformative in the sense that it will empower researchers to act in a more informed manner. We believe in the need to recognise, expose and remediate

any cultural bias and cultural marginalization that affects the dissemination of scholarly research in accounting. We view the economic [including environmental] activity that accounting reports on, as having many universal aspects. We do not regard knowledge ‘ownership rights’ in respect of such activity as necessarily vesting in an intellectual hegemony of one ‘superior’ culture over other [perceived as ‘lesser’] cultures.

Many benefits are likely to accrue from obtaining a deeper understanding of China’s social and environmental problems and reporting responses: for example, credible and comparable information about environmental pollution policies of Chinese companies will promote environmental transparency, and better inform the world of China’s progress in dealing with environmental pollution. The current study makes two major contributions to the development of social and environmental reporting.

First, it promotes informed international dialogue by engaging non-Chinese readers with a large volume of Chinese CER literature that has been published in the English and Chinese languages. This is the first study (to our knowledge) that integrates Chinese language CER research to complement CER research published in the English language. Our assessment of how Western theories and research methods have been applied or misapplied in CER research relating to China should be useful to those who intend to conduct research on Chinese CER. In particular, we draw attention to the inappropriateness of using Western incentive-based agency theory and positive accounting theory [PAT] to frame China-based CER studies. This inappropriateness arises because of the distinctively different and rapidly changing institutional setting in China (Li et al., 2009; Sun and He, 2008). We call for researchers to consider the Chinese context more thoroughly in order to avoid potentially misleading results (see Fang, 2009; Geng and Pang, 2004; Li et al., 2002; Xu, 2009).

Second, this study provides a comprehensive review of the empirical findings of Chinese CER. It allows the ‘voices’ of local researchers domiciled in China to be heard. Appendixes A, B and C contain information of considerable benefit to teachers and researchers. These appendixes include bibliographic details; information on theory framing, research method, and keywords; and a summary of the findings of each of the 57 papers reviewed. Thereby, we enable non-Chinese readers to better understand the evolution of Chinese CER, including its potential and limitations. Issues identified in this review are also likely to beneficially inform CER research in other developing countries that are addressing competing tensions between economic development and environmental accountability.

The remainder of this paper is organised as follows. Section 2 outlines important aspects of the Chinese socio-political, economic and academic context. Section 3 explains our

research method. Section 4 discusses key findings of the English and Chinese language papers reviewed – in terms of theoretical frameworks, research methods and factors influencing CER in China. Section 5 enters some conclusions and recommendations for future research.

2. Context

2.1 The Chinese capital market and Chinese companies

China is the second largest economy in the world. It has strong potential to lead global solutions to climate change. The country is transitioning from a planned economy to a market economy. The Chinese capital market has grown rapidly since its establishment in 1991. The number of listed companies in China has increased from 12 in 1991 to 2494 in 2012 (World Bank, 2013). A distinctive feature of the Chinese capital market is that many listed Chinese companies are controlled by the Chinese government (Lin, 2001; Scott, 2002; Yang, 2011). Indeed, in 2012, 953 state-controlled listed companies accounted for 51.4% of the total market value of ‘A share’ listed companies in China (China State-owned Assets Supervision and Administration Commission of the State Council, 2013). Contrary to experience in Western capitalist countries, the corporatization of state-owned enterprises [SOEs] in China has not progressed to the privatization stage (Hilmy, 1999; Walder, 1995; Xu and Uddin, 2008).

China’s economic reforms from 1978 have led to the management responsibility being delegated to enterprise managers. Before 1991, all corporations were run by central, provincial and/or local (municipal) governments. They did not disclose information to the general public. However, in 1992, driven by [then] Communist Party of China [CPC] leader Deng Xiaoping’s push to develop a market-oriented economy, SOEs were encouraged to separate ownership and management. Managers were given more autonomy to control resources and make enterprise decisions. In 1993, the National People’s Congress Standing Committee passed China’s first company law (China Company Law 1993). This law formally designated Chinese SOEs as companies and gave their managers decision making rights. The China Company Law 1993 separated the functions of government and the CPC from business functions. However, in practice, the CPC and the government persisted in being involved with Chinese enterprises (Xiao, et al., 2004; Opper et al., 2002).

The listing procedure in China was administered tightly by a quota system until 2000. Often, a listing was alleged to have succeeded because of political favouritism (Opper, et al., 2002, p. 107). China’s planned economy rendered the political relationships between Chinese

companies and the government more complicated than has been assumed generally in Western capital markets research. Chinese companies who help government attain objectives are alleged to have been rewarded with favourable resource allocations.

2.2 China's institutional transition from bureaucratic secrecy to openness

The nature and conduct of Chinese companies has been fashioned strongly by the political ideology of the ruling CPC (Ezzamel et al., 2007; Lin, 2001; Scott, 2002; Walder, 1986). Since the People's Republic of China was established in 1949, the political ideology of the ruling CPC has had a significant effect on China's politics, society and economy (including its accounting). Public policy has been transformed by four CPC leaders: Mao Zedong (1949–1976), Deng Xiaoping (1978–1989), Jiang Zemin (1989–2002), and Hu Jintao (2002–2012). China's economic reforms since 1978 have been conducted in an environment where the CPC and central government have supreme authority and have been effected 'in ways that do not undermine [China's] centrist political regime' (Scott, 2002, p. 59). Thus, economic systems have been reformed whilst political systems have remained unchanged.

Chinese companies were bred in a climate of policy support for institutionalised information asymmetry between the ruling bureaucracy and the general public. Such a policy made it easier for government officials and the CPC to maintain power and political control. The ability of the Chinese bureaucracy to control the flow of information was valued highly because bureaucratic secrecy suited the needs of a centrally planned economy. However, as the transition to a market-oriented economy proceeded, China's policies of secrecy were challenged, largely because of concerns that institutionalised secrecy would lead to inefficiency and corruption (Horsley, 2007; Hubbard, 2008).

As China's economic reform process has proceeded, provincial and municipal governments have become more than just simple administrative extensions of the central government (Scott, 2002). Delegation of aspects of economic management has encouraged some provincial and municipal government officials to behave opportunistically. They are alleged to have tolerated environmental pollution and social injustice to help boost local growth in Gross Domestic Product [GDP] (Chinese Academy of Social Science [CASS], 2009). Thus, many provincial and municipal government officials have incentives *not* to cooperate in enforcing environmental protection laws. They benefit from a 'higher rate of growth ...[and]... higher levels of output in their region [by] receiv[ing] credits for economic development and sometimes bribes from polluting producers' (Chow, 2008, p.66). Nonetheless, growing discontent among the Chinese populace with levels of environmental

pollution has been manifest in increased demand for environmental transparency (Pan, 2007) and calls to remove provincial governors who fail to enforce environmental standards supported by central government (Chow, 2008, pp. 67-9). The ruling CPC and the Chinese central government have been pressured to promote transparency and public awareness of the environmental stewardship of Chinese companies.

China's economic policies for the 11th Five-year National Program (2006–2010) set the first binding target for energy savings (of 20 per cent) and emission reductions (of 10 per cent) by 2010 (with base year 2005). China's first nationwide government information disclosure regulation, *Open Government Information* (OGI 2007), was promulgated by the State Council of China on 27 April, 2007 (effective 1 May 2008). It represented a significant challenge to endemic bureaucratic secrecy. China's Ministry of Environmental Protection [MOEP] became the first central government body to implement OGI 2007. (For further information, see Horsley [2007] and Hubbard [2008]).

The MOEP issued *Measures for Open Environmental Information Disclosure* (OEI 2007) for trial implementation in April 2007 (effective 1 May 2008). OEI 2007 outlined specific environmental disclosures for some business enterprises, particularly heavy polluting companies. (For further information see Finamore [2010]). OEI 2007 encouraged Chinese business enterprises to report environmental information voluntarily (MOEP, 2007). In May 2008, the guidelines issued by the Shanghai Stock Exchange on voluntary disclosure of corporate social responsibility and environmental information mirrored OEI 2007.

The disclosure of environmental information prompted by OGI 2007 and OEI 2007 enhanced public supervision of companies in China and encouraged environmentally sound practices (Finamore, 2010). Many Chinese companies operating in international markets were under pressure to establish a sound reputation for environmental responsibility. Thus, they regarded communication of corporate actions on climate-change, and other environmental matters, to be vital for their future international competitiveness.

Prior to the issuance of OGI 2007 and OEI 2007 there were no authoritative domestic guidelines for public disclosure of environmental information. The public was disenchanted with weakly enforced environmental laws (Pan, 2007). Thus, environmental law was a poor motivator for companies to control environmental pollution. Additionally, many foreign companies from developed countries adopted heavy polluting manufacturing processes when they operated in China. They were attracted to China by weaker environmental regulations, weaker enforcement regimes, and lower compliance costs than in their home country (SustainAbility, 2007; Xiao and Mi, 2004). The legitimacy of Chinese companies' business

activities came under increasing challenge — environmental disputes often highlighted the lack of transparency in their environmental disclosures to governments.

2.3 Accounting research in the Chinese academic context

Since China's economic reforms began in 1978, the focus of the dominant paradigm in accounting research in China has changed from theoretical to applied (Yang, 2005). From 1978 to the mid-1980s, China's accounting research focused mainly on conceptual debates, and on management accounting issues. Subsequently, the research focus has shifted to financial accounting, financial management, industry-specific accounting issues, and emerging accounting topics (such as environmental accounting). Until 2008, normative accounting articles comprised about 92% of publications in core Chinese accounting journals (Shao et al., 2010).

North American accounting literature has had a strong influence on accounting research by Chinese scholars. In the late 1970s and during the 1980s, some American accounting textbooks were translated into Chinese and were prescribed by Chinese universities. Concurrently, to modernise and improve accounting, the Chinese government encouraged universities to engage in exchange programs with foreign (mostly North American) universities (Yang, 2012). Many Chinese scholars completed Ph.Ds at North American universities. Upon return to China, they were prone to introduce popular US business research methods and theories to their Chinese peers and students. Not surprisingly, Western (mostly North American) accounting literature began to be cited more frequently in Chinese language accounting research. However, as we explain below, most Chinese studies using Western positive accounting theories were based on Western capital markets experience, and not on the Chinese context (Yang et al., 2008). Chen, writing in Chinese (2007, p. 3), reflects this in his conclusion that '... contemporary accounting research in China lack[s] innovation, simply mimics North American research approaches, and fails to capture the unique contextual characteristics of China.'

The pressure on Chinese academics to publish is high. A survey of Chinese academics reported that this pressure was their highest work-related stress factor (Guo et al., 2010). Most of the quality Chinese language research into CER is indexed in the Chinese Core Journals Index (CCJI). This is an authoritative academic journal assessment system developed in 1992 by the China National Knowledge Infrastructure Network, the China Academic Journal Network, and the Periodicals Office of Beijing University Library. In 2013,

the CCJI listed 13 Chinese language academic accounting journals. Approximately 60% of contributors to those journals are from Chinese universities (Shao et al., 2010).

Chinese academic journals are subject to a ‘review and approval’ process by the Chinese government. They must observe ‘political correctness’ (Yin, 2012). In recent years, the Chinese government has capped the number of journals. The dominant editorial process, known as the Triple Review System (San Shen Zhi, 三审制, hereafter TRS), was borrowed from the former Soviet Union in 1949. Under the TRS, an academic paper is first reviewed by an editor, then by a specialist editor, and finally by the Editor-in-Chief. Thus, the review process is completed by ‘three sets of eyes’ within the journal’s editorial office. The system differs fundamentally from the ‘double-blind peer review’ system adopted in the West. (For further differences see Yin [2012]). Recently, a newly introduced form of TRS incorporates a ‘double-blind peer review’ process in the specialist editor’s review. This new TRS has been well received by researchers because it results in a fairer editorial review.

2.4 The emergence of Chinese CER research

In 1981, a prominent paper by Ge called for Chinese accounting researchers to draw on Western accounting theories and research methods — and they subsequently did so. A decade later, a pivotal marker in research enquiry into environmental accounting in China occurred with the publication (in Chinese) of ‘A new school of thought on Western accounting theories in the 1990s: Green accounting theory’ by Ge and Li (1992). This paper highlighted theories and research approaches used in Western-based CER studies. Subsequently, many Chinese scholars used Western accounting theories in CER research in China. However, many of them failed to address fundamental institutional differences between the West and China. They did not fully appreciate the loss of meaning when Western theories were translated from English to Chinese.

Full understanding of the concepts underlying Western theories is important when deciding the most appropriate theoretical framework to apply in examining influences on CER in China. If the key assumptions underlying those theories are not relevant to the Chinese context, then the factors identified, and the predicted relationships between the factors, are less compelling in explaining Chinese accounting practice. For example, the concept of ‘fair value’ in US Financial Accounting Standards Board (FASB) Statement No. 157: *Fair Value Measurements*, assumes ‘the existence of an efficient (free) market to determine the price of assets or liabilities’; and that transactions are not forced. The assumed

efficient market underlying fair value measurement is yet to be established in China: the country is still transitioning from a planned economy to a market economy. Hence, measuring in terms of unmodified fair value in China risks unintended and dysfunctional consequences.

3. Method

We selected articles for review from three sources: Chinese language CER studies (n = 28); English language studies of CER and corporate social responsibility [CSR] in China (n = 16); and English language studies of Chinese organisations (n = 13). The 28 Chinese language studies identified were published between 1997 (the publication year of the first such study of Chinese language CER) and 2012 (the publication year of the most recent studies available to the authors). The Chinese language studies were sourced principally from the Chinese (language) Academic Journal online database of full-text Chinese academic papers, known as the *China National Knowledge Infrastructure* (see <http://www.cnki.net/>). (An English language link to this database is available at http://oversea.cnki.net/kns55/support/en/about_cnki.aspx.)

Each paper reviewed was selected using the following three criteria. First, the paper addressed CER practice by Chinese companies. Second, it analysed data for any reporting year after the opening of the Shanghai and Shenzhen Stock Exchanges in 1992. Third, it had at least 100 downloads *and* at least one recorded database citation. Appendix A provides further details of the 28 Chinese language CER studies selected. The English language papers reviewed included those which addressed the topic of CER (and CSR) in China (see Appendix B). However, because there were few such studies, we extended our selection catchment to include some relevant studies in the English language literature that dealt with Chinese organisations (see Appendix C). We read each selected paper closely in terms of analytical frameworks, research methods, and distinctive influential factors.

Readers should be mindful that we do not seek to expose the limitations and potentials of CER practice in China. Nor do we propose ways of ameliorating environmental damage in China. Rather, we identify, assemble, describe, and discuss, a body of CER research literature. We synthesise what has been done, offer critique on important matters of research process, and set a platform of knowledge and commentary for teaching and research purposes.

4. Findings

4.1 Overview

Here we summarise the corpus of detail (pertaining to the 57 studies reviewed) that is presented in Appendixes A, B and C. Of the 28 Chinese CER studies selected, 26 were published in academic journals listed on the CCJI 2013 across accounting, economics, finance, and environmental science. Eight studies were published in a leading academic accounting journal, *Accounting Research*; and four were published in *China Population, Resources and Environment*, a leading academic journal in environmental science.

Chinese language CER research papers were much shorter on average (about 6 pages) than English language papers (about 10 pages). This can be explained by the greater compactness of Chinese language text; the lack of in-depth theoretical justification and explanation of research methods; and the use of considerably fewer references (both in-text and in reference lists). A much increased level of engagement of Chinese scholars with English studies of CER was observed over time. The nine Chinese language papers published between 1997 and 2007 cited an average of 1.1 English language journal articles. This average increased strongly to 9.6 English language journal articles cited in the 19 papers published between 2008 and 2012.

Our reading of the corpus of 57 papers, and our knowledge of the Chinese academic context, leads us to conclude that individual Chinese researchers are motivated by a mix of idealism and careerism. Many appear concerned genuinely about the deteriorating natural environment and the increased burden of environmental regulation on Chinese businesses (Li and Xiao, 2002; Wang et al., 1997). Some are motivated by desire to benchmark China's environmental performance against international measures and to foster good practice in CER (Hu, 2010; Shang et al., 2007; Wu et al, 2008). Others are keen to promote public awareness of the need for environmental protection and business accountability (Geng and Jiao, 2002). Activism in CER research in China was strong before 2005 in publications authored by well-established scholars from elite Chinese universities (including Peking University, China People's University; and Xiamen University).

The English and Chinese language papers reviewed portray CER in China as evolving and maturing. Between 1992 and 2007, CER disclosures in the annual reports of listed Chinese companies increased slowly from a low base (Geng and Jiao, 2002; Xiao and Hu, 2005; Wang, 2008). A prominent Chinese language CER study by Xiao and Hu (2005) reported that 37 per cent of 1195 Chinese listed companies disclosed environmental information in their annual reports for 2003 (see Table 1). The generally low level of CER reported in Chinese language studies is consistent with findings in English language studies (such as by Guo, 2005; KPMG, 2005; SustainAbility, 2007; Syntao, 2007). Subsequent

studies by Zhou and Sun (2006) and Li et al. (2008) reported results consistent with those in Table 1.

Table 1: Corporate environmental information reported by Chinese companies, 2002-03
Source: Translated from Xiao and Hu (2005, p. 49)

Disclosure items	Disclosing companies (n=1195)	
	2003	2002
Investment in environmental protection	184	159
Government grants, subsidies, and tax cuts associated with environmental protection	125	101
Pollution fees	120	96
Resources tax and resources compensation surcharge	88	80
ISO environmental management accreditation	44	41
Plantation fees	40	37
Government policy impact on business	37	37
Miscellaneous	31	35
Other income and expenses associated with the environment	15	18
Environmental protection loan	7	11
Legal proceedings, and environmental fines and awards	4	7

Chinese CER studies attribute the generally low level (or even absence) of CER reporting prior to 2008 to three factors: lack of an open information disclosure environment; absence of necessary technical skills to report environmental information; and concerns about negative political and economic impacts for Chinese companies (Wang, et al., 1997; 1998; Li and Xiao, 2002; Xiao and Mi, 2004). These findings reinforce the popular view that CER is subject to the social and political context of the country in which the reporting entity operates. Such an outcome was found in CER and CSR studies conducted in South Africa (de Villiers and van Staden, 2006); China (Yang, 2011); Ghana (Rahamana et al., 2004); Malaysia (Amran and Devi, 2008; Eligido-Ten, 2011); and Bangladesh (Belal and Cooper, 2011).

Chinese CER literature emphasizes the importance of the Chinese government as a powerful political and economic promoter of transparency through CER. Ten out of 28 Chinese language studies reported that the driving force for Chinese CER was the Chinese government. This finding is consistent with English language studies of Chinese CER (Branzei and Vertinsky, 2002; Guo, 2005; Rowe and Guthrie, 2010; SustainAbility, 2007; WWF, 2010; Yang, 2011). A similarly strong influence on corporate social reporting was reported to have been exercised by the Malaysian government (Amran and Devi, 2008).

Between 2008 and 2012 there was rapid growth in public disclosure of environmental information, especially as part of CSR. A frequent empirical focus of many Chinese language

studies has been on the performance of companies in polluting industries. These industries have been identified by Chinese environmental protection authorities as comprising mining; metal and non-metal; petrochemicals; pharmaceutical medicine; electricity, coal and gas; textile, garments and fur; food and drink; and paper and printing. Another feature of Chinese language studies has been their disinclination to focus on matters of assurance, reporting relating to water or carbon, and/or the environmental reporting performance of multi-national subsidiary companies in China.

To the best of our knowledge, no studies published in the English language literature prior to 2013 have focussed on the quality of CER by Chinese companies. However, in 2013, Dong et al. (2013) analysed 352 annual and CSR reports for 2007 to 2010 of listed Chinese companies in the mining industry; and Guan et al. (2013) analysed 210 annual reports and 117 social reports for 2006 to 2010 of the largest Chinese SOEs in 14 industry sectors. Both studies reported rapid growth in the level of CSR reporting in China in 2008, followed by slow growth in 2009 and 2010. Their results are inconsistent with findings of CER studies published in Chinese which report that although the quantity of disclosures increased after 2008, quality did not improve (Shen and Li, 2010; Wang, 2008). These inconsistent results can be explained by the lack of consensus on how to measure the quality of CER disclosures. There are variations in terms of the reliability of the research measurement instrument developed, and the efficacy of using unequal weights to assign scores to different types of information. The lack of consensus has been a long-running contentious issue in social and environmental accounting research internationally. The majority of Chinese researchers have applied unequal weights to disclosures, consistent with proposals of Wiseman (1982): monetary information = 3, non-monetary (but quantitative) information = 2, and narrative (qualitative) information = 1. Such an approach discriminates against the many qualitative disclosures in Chinese CER (e.g. regarding whether a company has helped facilitate a 'harmonious society') and possibly helps to explain the different assessments of disclosure quality.

In the following section, consistent with our broad ontological emphasis on the importance of social location and situational factors, we discuss reported findings under three headings: macro political and economic context; company characteristics; and internal motivators to engage in CER.

4.2 Factors reported to influence Chinese CER

4.2.1 Macro political and economic context

China's political and economic transition has contributed to the changing behavior of Chinese CER. Prior to 2005, Chinese studies reported a low incidence of CER in China – except for about ten foreign multinational companies and several large Chinese SOEs with overseas operations (Guo 2005; Wang, et al. 1997, 1998; Wang 2008). Although Chinese business enterprises were required to provide an environmental report using a form prescribed by provincial and municipal environmental protection authorities, the information provided was unavailable to the public (Guo, 2005). Lack of government guidelines (or signs encouraging disclosure of environmental information by Chinese political institutions) discouraged Chinese enterprises from engaging in CER.

Between 2006 and 2007, CER began to emerge in CSR reports issued by large Chinese SOEs, especially those with international operations (Syntao, 2007). The year 2008 was one of rapid growth of CER reporting by Chinese companies (Bi et al., 2012; Dong et al., 2013; Guan et al., 2013; He and Hou, 2010; Shen and Li, 2010; Syntao 2009; Wang et al., 2012) as China's policy shifted from a preference for bureaucratic secrecy to one of openness and information transparency. An important stimulus (discussed earlier) was the Chinese government's release of OGI 2007 and OEI 2007 and its encouragement of CSR reports (Syntao, 2007; 2009). Whereas CSR reporting was seen initially by the Chinese government as an additional cost burden for Chinese business and a barrier to international trade (SustainAbility, 2007), as more Chinese companies entered international markets, the government embraced disclosure to improve the competitiveness of Chinese companies. In 2007, to encourage SOEs to issue CSR reports, the powerful China State-owned Assets Supervision and Administration Commission of the State Council issued a document titled: *Guidance to Central State-owned Enterprises on Fulfilling Social Responsibility*.

4.22 Company characteristics

Many studies in Chinese and English have tested for associations between company characteristics and CER. Chinese language studies have drawn principally on agency theory and PAT to do so (exceptions are Chen et al., 2010; Shen and Feng, 2012; Xiao and Zhang, 2007; and Yang et al., 2011). In contrast, none of the English language studies used agency theory or PAT to examine company characteristics and CER (see Appendixes B and C). In general, most studies inadequately rationalize why and how political and economic contexts influence company reporting behaviour. Their lack of theoretical justification for why particular company (organizational) characteristics are relevant in corporate reporting is consistent with CER research findings internationally (see Gray et al., 2001).

There has been consistent empirical support (apart from He and Hou, 2010; and Li et al., 2008) for the influence of size, industry membership, and SOE status on levels of CER. However, in Chinese language studies, the relationship between firm characteristics and CER differs in important respects from similar studies in Western developed countries: for example, those informed by agency theory (Belkaoui and Karpik, 1989), legitimacy theory (Aerts et al., 2009; Patten, 1991), stakeholder theory (Roberts, 1992) and institutional theory (Berrone and Gomez-Mejia, 2009). Generally, there is little or no support for the following company characteristics that have been identified as significant in those Western studies: financial leverage, ownership concentration ratio, location of company headquarters, level of profitability (except for Li et al., 2008), firm age, growth, number of independent directors, number of board of directors' meetings, and dual role of the CEO and chairman. Tang and Li (2008) and Xiao and Zhang (2008) attribute the differences to the underdeveloped and inefficient Chinese capital market. These results point to the inappropriateness of using variables that characterise companies in Western developed countries to also characterise Chinese companies.

4.23 Internal motivators to engage in CER

Studies based on surveys and interviews, conducted between 1996 and 2007, principally in the Chinese language, reveal passive overall compliance with Chinese government regulations. They also reveal reluctance by Chinese business managers to disclose environmental information because of cost concerns. This reluctance arose despite the managers' stated recognition of the importance of CER and their obligation to report environmental information to provincial and municipal state governments (see Li and Xiao, 2002; Wang et al, 1997). Nonetheless, some Chinese managers were more proactive towards CER and regarded environmental disclosure as a way to build a positive image and enhance market position (Wang et al., 1997, p. 45).

Concerns about political uncertainty and the potentially negative political and economic effects of voluntary CER were a major disincentive for Chinese business managers to engage in CER (Wang et al., 1997; Zhou and Sun, 2006). Managers drew attention to the technical difficulties of measuring environmental activities in financial reports, especially in the absence of a designated financial reporting standard on environmental activities (Wang et al., 1998). Several other studies reported that only a small fraction of income and expense associated with corporate environmental activities was recognized separately (Li and Xiao, 2002, p. 44; Wang et al. 1998; Xiao and Mi, 2004). Survey and interview studies conducted

between 2008 and 2010 in the English language (WWF 2010; Yang 2011) reveal the attitude of Chinese managers to CER is changing. Increasingly, they regard corporate environmental management and reporting as being more beneficial and less burdensome (WWF, 2010).¹ Many are keener to establish their legitimacy by conforming to international norms on corporate environmental and sustainability reporting.

4.3 Theoretical bases

Approximately half of the Chinese CER studies reviewed in both languages did not state their theoretical perspective. Chinese language CER studies relied primarily on agency theory and PAT (see Appendix A). In contrast, institutional theory was applied more frequently in English language studies (see Appendixes B and C). In the elaboration in the following sub-section, we assume readers are familiar with agency theory, PAT, legitimacy theory, stakeholder theory and institutional theory; and with the controversies surrounding them. We focus on how these theories are used in Chinese studies, and the distinctive features of the Chinese context that renders them appropriate or inappropriate.

4.3.1 Agency theory and PAT

Many Chinese language studies invoke agency theory and/or PAT. They apply the same assumptions as Western capital markets studies but do not explain adequately *why* and *how* particular company characteristics influence CER in China. In some cases, relationships are assumed as if true by axiom. Explanations of Chinese CER which apply unmodified agency theory and/or unmodified PAT frameworks to China's social, political and economic context, are highly contestable (Li et al., 2009; Sun and He, 2008; Yang, 2011). They rely on assumptions (such as efficient markets, self-interested human behaviour) that are dubious in the Chinese context. Many of the underlying assumptions of agency theory in Western capital markets research do not fit well in the context of China, where proprietary ownership does not prevail, capital markets are not as well established, and a culture of individualism conflicts with the traditional Chinese Confucian culture of collectivism (Hofstede and Bond, 1988; Scott, 2002).

¹ This change of attitude was driven by China's changing political and economic environment, deteriorating environmental conditions (prompted by rapid economic growth), demand for corporate environmental transparency, and rapid internationalization of Chinese business.

Unlike Western companies, Chinese enterprises are subject to rigid government control. Many Chinese companies still carry institutional characteristics of their former manifestations as SOEs (Child, 1996, p. 44). The CPC's continued power to command and control Chinese companies (Opper et al., 2002; Yang, 2011), when allied with collectivist culture in China, renders Western agency theory conceptions of companies as a 'nexus of contracts' of dubious validity.² This partly explains why studies of associations between corporate characteristics (as determined in Western capital markets research) and levels of Chinese CER generally fail to explain the reporting behaviour of Chinese companies. In a Chinese language paper, Xu (2009, p. 42) argued that the problem of applying Western-based theory to the analysis of Chinese CER arose, in part, because 'very few theoretical implications have been embedded in the Chinese Accounting Standard system and the corresponding accounting regulations set by China's Ministry of Finance...'³.

4.32 Legitimacy theory and stakeholder theory

In a Chinese language study of CER, Xiao and Zhang (2008) adopted unmodified Western legitimacy theory to examine the disclosure patterns of Chinese companies in the chemicals industry (in reaction to legitimacy threats posed by the Songhua River pollution accident). They found that the Chinese stock price responded more slowly than in Western developed countries (Deegan et al., 2000; Patten 1992) and explained this difference as being caused by inefficient Chinese capital markets. In another Chinese language study, Shen and Feng (2012) found Chinese media attention influenced CER positively. However, they failed to acknowledge the influence of the release of OGI 2007 and OEI 2007 in the year immediately prior to their analysis. The Chinese (mainstream) media is controlled strongly by the Chinese government (Taylor and Shan, 2007; Yin, 2012). The government's influence through the CPC, and its control of the media, pervades Chinese organizations and society (Opper et al., 2002; Scott, 2002; Walder, 1996). Increased media coverage of environmental issues can be viewed as demonstrating concurrence with the pro-social objectives of the CPC, and as tantamount to a quest for moral legitimacy. Thus, increased CER disclosures can be viewed as a way of managing a specific stakeholder, the CPC, in an act of pragmatic

² For criticisms of agency theory and PAT in CER studies in non-Chinese settings, see Gray et al. (1995) and Milne (2002).

³ This paper is not included in Appendix A. It does not focus on CER but on the development of accounting theories generally.

legitimacy (Suchman, 1995). If the CPC is the principal audience for CER, then CER disclosures have value in terms of dispositional legitimacy (Suchman 1995) on environmental matters (e.g., pollution). This is because they show companies' affiliation with the policies of the CPC (see Mahadeo et al., 2011, pp.158-161).⁴

Stakeholder theory and legitimacy theory inadequately address the influence of external parties on CER in China. There is a high 'power distance' in Chinese culture: that is, a high level 'to which the less powerful members of institutions and organizations [in China] expect and accept that power is distributed unequally' (Hofstede, 1997, p. 28). This high power distance arises from the Confucian tradition that 'emphasises respect for authority and the importance of maintaining group harmony' (Donald and Jackling, 2007, p. 16). A high power distance makes it easier to justify the centralisation of power and authority in the Chinese government, to accept the unchallenged position of the ruling CPC, and to eschew notions of democratic accountability.

4.33 Institutional theory

Institutional theory has been applied in English language studies of CER and CSR (Appendix B)⁵ and in broader analyses of Chinese organisations as they transition from a planned economy to a market economy (see Appendix C). However, this theoretical perspective has been noticeably absent from Chinese language studies. This is curious in view of claims about the relevance of institutional theory to corporate environmental (including sustainability) management and reporting (Hoffman, 1999, 2001; Jennings and Zandbergen, 1995; Larrinaga-Gonzales, 2007); and the explicit adoption of an institutional perspective in English language studies of Chinese CER (by Branzei and Vertinsky [2002]; Rowe and Guthrie [2010]; Yang [2011]; Zeng et al. [2012]). We concur with Scott's (2002) view that adopting an institutional perspective when studying Chinese companies (including, presumably, when studying their CER) will provide a better view of economic, social and organizational change in China, and lead to a better understanding of Chinese company behaviour and characteristics. Such a perspective will help to reveal important differences in

⁴ For examples of the use of legitimacy theory and stakeholder theory in non-Chinese studies, see Deegan (2002); de Villiers and van Staden (2006); and Thomson (2007). For some criticisms of legitimacy theory in the context of CER, see Parker (2005) and Larrinaga-Gonzales (2007).

⁵ See also DiMaggio and Powell (1983) and Dillard et al. (2004).

the influences on Chinese and non-Chinese companies at the economic and political level; the organizational field level; and the individual organization level.

Institutional theory appears well-suited to explaining CER in China: first, in terms of how CER is created, diffused, adopted and adapted over space and time (i.e. institutionalised); second, in terms of how it can fall into decline (i.e. be de-institutionalised); and third, in terms of why it differs from other social, political and cultural environments. Traditionally, institutional theory has embraced a top-down model, with broad emphasis on how companies respond to institutional pressures of structural conformity and isomorphism. This has promoted critique of the theory for according insufficient attention to the bottom-up influence of individual organisations, and for being weak in explaining variation and change in organisational response to institutional influences (Ball and Craig, 2010; Hoffman, 1999; Oliver, 1991; Scott, 2008).

A notable development of institutional theory has been to incorporate organisations' perceived strategic responses to institutional pressures (Oliver, 1991; Scott, 2008). The focus on forces that lie beyond the organisational boundary, in the realm of social processes (DiMaggio & Powell, 1991), has been particularly helpful in rendering institutional theory useful in explaining CER in China. Such a focus allows for multiple levels of analysis: from broad political and economic contextual factors, through to management perceptions of institutional pressures, and internal decision-making processes. It enables a broader and longer-term view of organisational and social change. Zeng et al. (2012) have drawn on these advances to examine factors influencing CER in China. Their study advocates use of an advanced form of institutional theory to explain the evolution of CER reporting in China.

4.4 Research methods

English language CER research studies relating to China use a wide variety of research methods: face-to-face interviews (Rowe and Guthrie, 2010; WWF China, 2010); questionnaire surveys (Branzei and Vertinsky, 2002); descriptive content analysis of stand-alone corporate sustainability reports (ACCA and GRI, 2009; Kolk et al., 2010; Syntao, 2007, 2009); CER disclosures on the Internet (Zhang, et al., 2007); and quantitative assessments of statistical associations between company characteristics and CER disclosures in annual reports (Zeng, et al., 2012).

Chinese language CER research studies, particularly between 1997 and 2005, relied strongly on questionnaire techniques to elicit the perceptions of Chinese business managers and accountants (Li and Xiao, 2002; Wang, et al., 1997, 1998; Xiao and Mi, 2004). Content

analysis techniques became popular in studies published between 2006 and 2012. However, they inadequately explain coding procedures, content analysis methods, and research instrument development. These deficiencies are consistent with international criticism of content studies of social and environmental reports for not providing ‘sufficient information to enable others to understand how the content analysis has been conducted’ (Bouten et al., 2011, p. 191).

Studies using content analysis in English and Chinese languages are dominated by one medium of corporate communication – the annual report. The ‘research method’ column of Appendixes A and B reveals a heavy concentration on data disclosed in annual reports, especially those of listed companies in polluting industries. Although company annual reports are often the primary source of information to stakeholders, companies have the discretion to use many alternative disclosure communication media (Frost et al., 2005; Unerman, 2000). This is an especially important qualifier, given that large companies (including those in China) are now highly disposed to supplement annual reports with stand-alone sustainability reports and CSR reports (see Guthrie et al., 2008).

5. Concluding remarks

Studies informed by agency theory and PAT dominate Chinese language CER research. Although agency theory and PAT recognize the importance of incentives and self-interest in organizational thinking, they ignore the social, cultural and political context in China. They fail to capture how those external influences are incorporated into organizational reporting. By highlighting the inappropriateness of blindly ‘parachuting in’ Western theoretical constructs into studies set in China, we seek to raise consciousness of the need to more critically examine the applicability of using Western theories in a Chinese context.

The forces facing Chinese academics in accounting research are institutional in nature. They include coercive institutional forces exerted by the authoritative Chinese government (e.g. push for environmental protection and transparency) and the unchallengeable position of the CPC; and by normative institutional forces exerted by Chinese universities (the ‘publish or perish’ culture; the promotion of Western ‘positivist’ research methodologies) and by editors’ preference (perceived or actual) for papers associated with capital markets research (informed by Western agency theory and PAT). These institutional forces create ‘norms and values’ in the field of accounting research that narrowly define ‘legitimate research and circumscribe its members’ actions’ (Tuttle and Dillard, 2007, p.403). Thus, Chinese

academics have limited choices — they are subject to strong pressures to adopt what is seen as popular (legitimate) accounting research.

There is considerable potential to apply institutional theory to interpret environmental reporting developments and performance in China. Such adoption would help to better integrate China's macro-level political and economic context with its micro-level company-specific context: At the macro level, China's evolving institutional environment has changed expectations regarding the transparency of CER. The rapid growth in CER since 2008 highlights the effectiveness of the coercive institutional influence of the Chinese government — through its disclosure regulations OGI (2007) and OEI (2007) and its endorsement of international best practice reporting guidelines. At the micro level, Chinese companies are facing changing yet converging institutional influences on environmental transparency. These are exerted by institutional actors who are domestic (e.g. Chinese government) and international (e.g. consumers from developed countries). However, the institutional history of Chinese companies has led them to have some unique characteristics. These moderate the level of institutional influence on companies' decisions regarding CER reporting.

The papers reviewed indicate some findings that are consistent with the broader corpus of international literature regarding associations between CER and company characteristics (such as size and industry membership). However, many company characteristics used in Western capital markets research have no association with CER in China. Future research should identify the company characteristics that are distinctive and relevant to China: for example, the CPC's influence on management decisions at all levels in society (Lin, 2001; Scott, 2002). We should recognise that the CPC exercises power directly at an organisational level through its control of a company's board of directors — and that many senior managers in large Chinese companies are former government officers, appointed by the CPC (Yang, 2002).

The current study is subject to several limitations that can be addressed in future research. The study has not reviewed *all* CER studies in China. The review of Chinese language CER papers covers the period between 1997 and 2012 only. Studies published prior to 1997 and post 2012 are not included. The selected papers are sourced from English and Chinese language CER literature on China. Thus, CER studies of China published in other languages are not canvassed. The study does not review CER practice in China, nor does it offer recommendations to improve CER practice.

Future research should develop research instruments that are more capable of capturing qualitative and quantitative information about the social and environmental reporting context; and draw more on annual reports *and* CSR reports to investigate corporate reporting by Chinese companies. Researchers should embrace the strengths of qualitative and quantitative research and challenge the actual or perceived methodological preferences (or biases) in environmental accounting research. Future research should also consider how the formulation of international reporting guidelines should best engage with the contextual setting of China. How can we best inform international stakeholders of special CER issues (such as those relating to carbon or water) in the special context of individual countries such as China? How can we ensure the credibility of reporting when there is no consensus about whether, and if so how, disclosure should be independently audited? A sensible way forward (as argued in GRI [2011]) would be to actively involve the Chinese business community (companies, professional bodies, and regulatory authorities) in shaping new international guidelines for economic, environmental and social reporting.

We encourage the acceptance of ‘two-way’ transportation of ideas and knowledge across national boundaries and cultural divides. Any view (whether maintained, implicit or assumed) that superior wisdom or professional expertise in reporting necessarily resides in Anglo-American and European cultures rather than in other (such as Asian cultures), is misplaced and patronizing. Ideas leading to assumptions that Western (Anglo-American and European) accounting theory and practice are superior usually stem from neo-liberal ideologies. Whereas such ideologies are often ‘based on concepts of private, transferable property ownership, individual rights, and a notion that commercial and social relationships are universally reducible to a system of economic transactions ... [they] fail to provide solutions to critical societal concerns ... [and] ... environmental concerns such as global warming...’ (Craig et al., 2012, p.1042).

Future studies of CER in China should adopt a more flexible theoretical perspective, be more conscious of distinctive Chinese company characteristics, and integrate macro-level political and economic context with micro-level company-specific context in better fashion.

Appendix A: Chinese language empirical CER studies

[Key: AR = Annual Reports; CG = Corporate Governance; CN = China(ese); CSR = Corporate Social Responsibility; EID = Environmental Information Disclosure; ENV= Environment; EP = Environmental Protection; ER = Environmental Reporting; GOV= Government; ID = Information Disclosure; IPO = Initial Public Offering; LT = Legitimacy Theory; LC = listed companies; LEV= Financial Leverage; Manu-IND = Manufacturing Industry; MAS = Media Agenda Setting; MGT = Management; N/A = not available; NGO = Non-Government Organization; OEI= Open Environment Information; OWN = Ownership; PAT = Positive Accounting Theory; PI = Polluting Industries; ROA = Return on Assets; ROE = Return on Equity; SOE = State-Owned Enterprise; SR = Social Reporting; SSE = Shanghai Stock Exchange.; STK = Stakeholder Theory. '+' = positive relationship; 'x' = no relationship. Study period is indicated in brackets under Research Method]

Author(s) (Year of Publication) Title of Study	Journal Title	Referenced Theory	Research Method	Key Words	Results
Wang, Yin & Li (1997) Investigating entrepreneurs' attitudes towards the environment and environmental management	Economic Science 经济科学	N/A	500 questionnaires (1996) to CN business managers. 12% response	N/A	No open EID. ER submitted to supervisory GOV EP department. Key drivers of ER were GOV regulations; public pressure & NGO status; market competition & publicity. 35% of respondent companies had senior executives responsible for EP.
Wang, Yin & Li (1998) Investigating environmental accounting practice in Chinese business enterprises	Accounting Research 会计研究	N/A	500 questionnaires (1997) to CN accountants. 5% response	N/A	Respondents from heavy PI. Accountants were involved in ENV MGT. No standard ENV appraisal guidelines. Typical EP expenses were pollution fees. EP facilities for new investment projects. Additional EP expenses incurred to comply with GOV regulations.
Geng & Jiao (2002) International comparison of perspectives in environmental accounting research	Accounting Research 会计研究	N/A	30 IPO reports (1992-99) of LC in PI	EP, LC, Accounting ID	ED was found in AR (except for 1992 & 1995). ER driven by ENV laws & regulations. 17% of companies reported financial information about EP, pollution fees & purchase of EP equipment.
Li & Xiao (2002) China's corporate environment accounting: current situation, demand and future	Accounting Research 会计研究	N/A	400 questionnaires (2001) to business enterprises, banks, securities, insurance & accounting firms. 10% response	CEP, Env accounting, Financial reports, ID	40% of surveyed enterprises had ISO14001. EP expenditure was driven by GOV policies & EP regulations. Frequently incurred EP expenditures were: pollution fees, renovation or replacement of existing equipment to comply with GOV regulations, new investment projects & contingency expenses for EP. Top three drivers for ER were GOV (70%), positive publicity (55%) & market (44%).
Xiao & Mi (2004) Analysis of a survey of enterprises' environmental protection and accounting – views on the necessity and feasibility of establishing environmental accounting in China	Forestry Economy 林业经济	N/A	200 questionnaires (2004) to PI companies. 46% response	N/A	73% of business enterprises (mainly SOE & LC) had EP departments, but not foreign owned enterprises or joint ventures. Age of business had no influence on EP. Top three drivers for corporate ED were GOV (70%), positive publicity (48%), public or EP organisation (41%). Identified users of EI were GOV (87%), MGT (62%), Media (51%) & Investors (50%).
Xiao & Hu (2005) Establishing a corporate environmental reporting system in China	Accounting Research 会计研究	N/A	AR (2002-03) of 1195 LC	ENV, ID, LC, Externalities	PI disclosed more EI than non-PI. EI was mainly financial monetary information relating to resource tax, resource compensation surcharge, pollution fees, plantation fees, EP investment. Non-financial EI information were ISO accreditation, GOV policy, Directors' Report. EI was not found in the audit report. Only one company had standalone CER.
Zhou & Sun (2006) An empirical study of environmental disclosures by China's listed companies	Journal of Nanjing Audit University 南京审计学院学报	N/A	AR (2004) of 827 SSE LC in PI	LC, EI, ID	39% of 827 LC disclosed EI. EI driven by GOV regulations with little voluntary ED. Typical EI were for EP investment, plantation, pollution fees, GOV EP grants & subsidies, ENV accreditation. One company reported standalone CER.
Tang, Chen, Liu & Li (2006) An empirical study of the status of corporate environmental reporting by listed Chinese companies: influential factors	Management World 管理世界	Agency	AR (2001-02) of 60 companies in PI	N/A	EI related with Size (+), ROE (+), & tradable shares (+). Not related with LEV (x) & ROA (x).

Shang, Liu & Geng (2007) An empirical study of the status quo of Chinese enterprise environmental reporting	Environmental Protection 环境保护	N/A	IPOs (1992-2002) of 127 LC in PI	N/A	Low level of ED in general. Slow increase in ED. Key driver of ED was GOV REG.
Xiao & Zhang (2008) Public pressure and corporate environmental disclosure – an empirical study based on the Songhua River pollution accident	Accounting Research 会计研究	LT & PAT	AR (2003-06) of 79 LC in chemical industry	Songhuajiang River incident, Public pressure, EID, LT	ED related to post-disaster reporting year (+). Capital market reacted slowly to the incident (> 15 days) & had negative relationship with post-disaster ID. No relationship between capital market reaction & pre-disaster ID (x).
Wang (2008) Analysis of the relevance of environmental disclosures, industry differences and external regulatory pressure – evidence from listed companies on the Shanghai Stock Exchange	Accounting Research 会计研究	Agency PAT	AR (2006) of 727 SSE LC	Env ID, IND, Regulation	ED related to GOV REGs (+), Size (+) & IND (+). No relationships with ROE/A (x), LEV (x), Location (x); Ownership (x).
Tang & Li (2008) An empirical study of environmental disclosures - evidence from Chinese listed companies in chemical manufacturing industries	China Population, Resources & Environment 中国人口, 资源与环境	Agency	AR (2004-06) of 118 LC in PI	Financial Circumstance, EP, EID	EID related to earnings per share (+), & SIZE (+). No relationship with Growth (x), LEV (x), & Location (x).
Wu, Zhang & Lin (2008) Analysis of corporate environmental information transparency of Chinese 500 companies: based on Internet disclosure and empirical research	China Population, Resources & Environment 中国人口, 资源与环境	N/A	Internet reporting (2008) by 500 large CN companies	Corporate OEL, Measurement system	EID is related to IND (+), Region's economic development (+), & Size (+).
Li, Kuang & Gong (2008) Factors affecting environmental disclosures - empirical study of 201 listed companies on the Shanghai Stock Exchange	Theory & Practice of Finance & Economics 财经理论与实践	Agency	AR (2004-06) of 201 SSE LC	EID, SR, Influencing factors, Company characteristics	LC's EID related to SIZE (+), Performance (+), & Percentage of shares held by the legal person (+). No relationship with LEV (x), SOE (x), Concentration of shareholding (x), & Separation of roles of CEO & Chairman (x).
Zhang & Guan (2009) Empirical study of external factors influencing corporate environmental information disclosure	China Population, Resources & Environment 中国人口, 资源与环境	Agency PAT	AR (2007) of 111 LC in PI	LC, EID, ENV ID, External factors	LC's EID related to SIZE (+), & GOV EP investment (+). No relationship with Public EP awareness (x) & society supervision (x).
He & Hou (2010) Environmental performance and factors influencing environmental performance disclosure: empirical evidence from corporate social responsibility reports by Chinese listed companies	China Population, Resources & Environment 中国人口, 资源与环境	Agency PAT	CSR (2008) of 112 companies in PI	ENV performance, ID, CSR report, Size, Governance	Low EID. LC's EID related to Size (+) & Regulation (+). No relationship with LEV (x), Profitability (x), SOE (x) & Location (x).
Chen, Luo & Yuan (2010) Public pressure, societal trust, and quality of environmental information disclosure	Contemporary Finance & Economics 当代财经	LT	AR (2002-06) of 2152 LC on Shenzhen Stock Exchange	EP Information, Public pressure, Social trust, Disclosure quality	EID quality related to SOE (+), Bank Loan (+) & IND (+). No relationship with the percentage of foreign shareholders (x).
Sun & Zhang (2010) Review of China's accounting research development - 30 years of China's reform and open policy	Friends of Accounting 会计之友	Agency	AR (2006-08) of 180 companies in PI listed on SSE	CSR, Performance, Heavy PI	EID is related to Size (+); ROE (+) & IND (+). No relationship with LEV (x), AGE (x).
Lu & Li (2010) Corporate environmental disclosure by listed Chinese companies: evidence from manufacturing companies listed on the Shanghai Stock Exchange in 2007 and 2008	Journal of Audit & Economics 审计与经济研究	N/A	AR (2007-08) of 442 manufacturing LC on SSE	EI, ID, Manu-IND, CSR report, LC	EID improved the content & the form of disclosure after the release of SSE 2008. LC's EID related to Size (+), SOE(+) & Year 2008 (+).

Shen & Li (2010) Corporate environmental disclosure by listed Chinese companies from heavy polluting industries	Securities Market Herald 证券市场导报	N/A	AR (2006-08) of 502 companies in PI	EID, Heavy PI, LC, CG	Companies disclosing EI increased significantly during the study period. Quantity of EI increased but quality decreased. EID varied across IND. More good news than bad news reported. Very few LC disclosed the quantity of resources consumed.
Hu (2010) A study of environmental performance disclosure: evidence from listed Chinese companies of post 2009 environmental inspection	Securities Market Herald 证券市场导报	N/A	AR (2006-09) of 63 polluting companies subject to 2009 environmental audit	ENV performance, ID, Post ENV audit, LC	EID was located mainly in the 'Directors' report' & 'Notes to Financial Reports'. 97% of LC disclosed EI after ENV audit. EID contained narrative, quantitative & financial information. Content of ID complied with relevant mandatory requirement. Low voluntary disclosure. EI by LC were inconsistent & non-comparable.
Yang, Li & Shen (2011) Green financing policy, corporate governance, and corporate environmental information disclosure	Finance & Trade Research 财贸研究	LT	AR (2006-08) of 502 LC in PI	Green finance policy, EID, CG, Heavy PI	EID related to Controlling shareholder (+), Audit Committee (+), ENV division (+), SOE (+), Size (+), Profitability (+), LEV (+) & Refinancing need (+). No relationship with size of board of directors (x), number of Independent Directors (x), size of supervisory committee (x), & Location (x).
He & Huang (2011) Corporate social responsibility reporting by listed companies in the paper industry and environmental performance disclosure	Financial Accounting & Communication 财会通讯	N/A	CSR reports (2008) of 21 companies in paper industry	N/A	EID related to SIZE (+). No relationship with ROE (x), AGE (x) & LEV (x).
Wu (2011) Responsibility index, company characteristics and environmental information disclosure	Journal, Zhongnan University of Economics & Law 中南财经政法大学学报	N/A	CSR reports (2009) of 93 LC on SSE	Responsibility Index, IND;OWN; EID	EID related to SOE (+) & IND (+). No relationship with ROA (x) & LEV (x).
Shen & Feng (2012) Media monitoring, government supervision, and corporate environmental disclosure	Accounting Research 会计研究	LT MAS	AR (2008-09) of 206 LC in PI	CEID, L, Agenda setting, Media attention, GOV supervision	EID related to media attention (+), GOV supervision (+), Size (+) & SOE (+). No relationship with ROE (x) & LEV (x).
Bi, Peng & Zuo (2012) Environmental information disclosure institutions, corporate governance, and environmental information disclosure	Accounting Research 会计研究	Agency	AR & CSR (2006-10) of 582 LC in PI	EID, CG	EID related to Year 2008 (+), Size (+), LEV (+), ROA (+), SOE (+), Independent board director (+). No relationship with separation of roles of CEO & Chairman (x) or with size of Supervisory Committee (x).
Huang & Zhou (2012) Influence of ownership structure and management behaviour on environmental information disclosure: evidence from heavy polluting industries listed on Shanghai Stock Exchange	China Soft Science 中国软科学	Agency & STK	AR (2007-10) of 72 LC in PI	N/A	EID related to the percentage of controlling shareholders (+), Management shareholding (+), & SOE (+). No relationship with Institutional Shareholding (x).
Wang, Song & Dong (2012) Study of factors influencing corporate environmental disclosure	Financial Accounting Monthly 财会月刊	Agency & STK	AR & CSR (2008-10) of 60 LC	EID index, Influencing factors, Correlation, Clustering analysis	EID related to SIZE (+) & IND (+). No relationship with ownership structure (x), number of independent directors (x), or number of board of directors' meetings attended (x).

Appendix B: English language studies of Chinese CER and CSR

[Key: AR = Annual Reports; CA= Content Analysis; CG = Corporate Governance; CN = China(ese); CSED=Corporate Social & Environmental Disclosure; CSR = Corporate Social Responsibility; D = Disclosure; DES = Descriptive study; EID = Environmental Information Disclosure; ENV = Environment; EP = Environmental Protection; GOV = Government; GRI = Global Reporting Initiative; HK = Hong Kong; IT = Institutional Theory; IPO = Initial Public Offering; LC = Listed Companies; LT = Legitimacy Theory; MGT = Management; PET = Political Economy Theory; REG = Regulation; SD=Sustainable Development; SOE = State Owned Enterprise; STK = Stakeholder Theory; Study period is indicated in brackets under Research Method]

Author(s) (Year of Publication)	Referenced Theory	Research Method	Key words	Results
Branzei & Vertinsky (2002)	IT	Survey questionnaires of 300 CN companies, 75% response; 600 Japanese LC, 32% response	N/A	CN firms are mainly responsive to the best practice endorsed by GOV REG agencies.
Chan & Welford (2005)	N/A	AR & IPO (1997-2001) of 219 LC of HK	CG, D, ENV MGT, ER, Risk MGT, Security REG	Lack of ENV MGT & accountability were identified in HKLC
Gao, Heravi & Xiao (2005)	N/A	CA of 154 AR (1993-97) of HKLC.	AR, HK, Social & ENV voluntary D	HKLC have increased CSED from 1993 – 97. CSED influenced by IND (+) & Size (+). HK LC disclosed little information on ENV & Health & Safety. No industry disclosed information on Energy.
Guo (2005)	N/A	DES report on the context of CER in CN	N/A	No open EID. CN companies submitted ER to supervisory GOV department.
Xiao (2006)	N/A	DES on CN CER studies (1992-2003)	N/A	CN ENV accounting studies dominated by prescriptive papers on ENV accounting. Few empirical studies.
SustainAbility (2007)	N/A	DES report	N/A	CN companies viewed ER as a burden & sought to minimise the information they provide the GOV or public. Reporting is driven by CN GOV authorities & is not made public. CN GOV initially viewed CSR as an additional burden & cost for business & a barrier to trade. Has since embraced CSR as a way to improve the competitiveness of CN companies. As of June 2007, 13 CN companies (predominantly SOEs) had published CSR reports according to GRI guidelines, with growth expected.
Taylor & Shan (2007)	LT & STK	CA of AR (2005) by 56 CN companies listed on HK	CSE reporting; legitimacy; political costs; MAS; economic performance; strategic posturing; CN.	Limited & patchy voluntary CSED. LT is less effective than STK in explaining CSED. MAS developed in the West is not effective in explaining voluntary CSER disclosure in CN for two reasons: CN media is strongly controlled by CN GOV; & journalists are influenced strongly by large corporations in CN. CSED is related to Size (+), charity donation (+) & economic performance (+). No relationship with media exposure (x).
Chow (2008)	N/A	Commentary paper	CN, energy, ENV pollution, SD	N/A
ACCA & GRI (2009)	N/A	DES, CA, CSR reports of eight CN companies	N/A	Climate-change information was found in the CSR reports of CN companies
Kolk, Hong & Dolen (2010)	N/A	DES CA of CSR by four CN retailers & four foreign retailers operating in CN in June-July 2007	CN, CSR, retail, multinational companies, SD	Foreign retailers partially mirror their domestic practices, habits & traditions. They are also locally responsive & adapt themselves to what is more common in their specific cultural & economic contexts. Disclosure shows substantial differences between the CN & international contexts. Foreign retailers diverge between home & host settings, most notably Carrefour & to a lesser extent, Wal-Mart. CN retailers report more on economic dimensions, including philanthropy, while the foreign retailers report more on product responsibility. Contentious labour issues & the ENV receive relatively limited attention by both CN & foreign retailers.
Rowe & Guthrie (2010)	IT	Case study/interviews (2001-05) of CN managers	CN, CE MGT, IT, state development strategy	CN GOV REGs were the most influential & most complex in terms of organizational environmental performance. Environmental management systems used for developed nations should not be transplanted directly to developing nations without considering institutional contexts.

WWF CN (2010)	N/A	Survey (2009) of 1,000 CN companies across 10 IND, 200 responded	N/A	CN companies are gradually seeing EP in terms of cost/benefit rather than as a pure burden. EP is regarded very strongly as an important part of CSR. Attention to EP is driven by GOV requirement (84%), customers' request (28%), core company values & strategies (83%) & energy cost savings (59%).
Yang (2011)	IT	Case study/interviews (2009-10) of senior managers of SOEs	sustainability, developing countries, CN, IT	Sustainability MGT & reporting on sustainability are subject to institutional pressures locally & internationally. Low CSR disclosure is caused by the political & technical uncertainty of sustainability reporting.
Zeng et al (2012)	IT	CA of AR (2006-08) of CN listed manufacturing companies	EID; Listed firms; EM CN	EID related to SOE (+), IND (+) & Reputation (+). Content of EID was related to Reputation (+).
Dong, Burritt & Qian (2013)	N/A	CA of 352 AR & CSR (2007-10) of CN mining companies	CN, Mining, CSR, CA, Benchmarking	2008 was important for CSR reporting in terms of quality & quantity of disclosure. Increased levels of reporting in CSR rather than AR.
Guan, Noronha & Tayles (2013)	PET	DES CA of 210 AR & 117 CSR (2006-10) of large CN SOEs	Social accounting, CSR, PET, CN, CN GOV, Chinese Communist Party, social framework, SOE	CN GOV drove the social reporting of SOEs. Reporting grew rapidly in 2008, but there was no noticeable improvement in quality.

Appendix C: English language studies on Chinese organisations

[Key: CN = China(ese); CPC = Communist Party of China; DES = Descriptive study; HK = Hong Kong; IT = Institutional Theory; MGT = Management; PET = Political Economy Theory; REG = Regulation; SOE = State Owned Enterprise; STK = Stakeholder Theory. Study period is indicated in brackets under Research Method]

Author(s) (Year of Publication)	Referenced Theory	Research Method	Research Topics & Findings
Walder (1986)	IT	Archival analysis & interviews of CN workers based in HK (1979-80)	Study of the CN industrial working class, its place in a communist political order, & the pattern of authority it exercises. Finds a high degree of dependence compared with other types of modern industrial relations: economic & social dependence on the SOE; political dependence on the CPC & MGT; personal dependence on supervisors.
Child (1994)	IT	Case study/interviews	MGT in CN during the CN's institutional transition
Walder (1995)	IT	Conceptual paper	CN's transition to the market has been gradual & partial, with extensive GOV intervention in, & domination of, key product markets. Privatization of existing public firms has been largely absent.
Child (1996)	IT	Case study/interviews	MGT in CN during the country's institutional transition.
Firth (1996)	IT	Survey questionnaire	Examines the diffusion of MGT accounting practices in CN. Finds differences in political & economic philosophies between the West & CN led to different accounting policies in CN than in capitalist societies. CN enterprises participating in foreign partnered joint ventures made more changes to their MGT accounting systems than similar CN companies who had no collaborative venture operations with foreign firms.
Hilmy (1999)	N/A	N/A commentary paper	Four stages in the development of accounting theory since 1949 were identified to place CN's accounting reform into perspective.
Xiao (1999)	N/A	DES analysis of AR	Disclosure is low in AR. Difficult to access data.
Lin (2001)	IT	Case study	Firms, competition, & institutional change in post-Mao CN
Scott (2002)	IT	Conceptual paper	Draws on IT to conceptualize the characteristics of CN enterprise & recent change processes. From an IT perspective, changes in CN are explained at three different institutional levels: societal, organizational field & individual organization. Concludes that Western business models must be modified to fit distinctive institutional characteristics of CN.
Peng (2003)	IT	Conceptual paper	Strategic choices organizations make during the time of fundamental & comprehensive institutional transitions.
Ezzamel, Xiao & Pan (2007)	Political Ideology	Case study/interviews	The relationship between political ideology & accounting change in the transition from Maoism to Dengism in CN.
Xu & Uddin (2008)	Burawoy's factory regimes & political economy of development	Case study of one CN company	Whether firms privatised in CN have reversed previous losses & introduced better MGT controls.
Yang & Modell (2012)	IT	Case study of one CN organisation	The incomplete shift between moral-based & merit-based conceptions of performance in the CN GOV sector has fostered considerable ambiguity, enabling various actors to exercise power in explicit ways.

References

(a) Published in English

- ACCA and GRI. High-impact sectors: The challenge of reporting on climate change. London: Certified Accountants Educational Trust; 2009.
- Aerts W, Cormier D. Media legitimacy and corporate environmental communication. *Accounting, Organizations and Society* 2009; 34(1):1-27.
- Amran A, Devi SS. The impact of government and foreign affiliate influence on corporate social reporting: The case of Malaysia. *Managerial Auditing Journal* 2008; 23(4):386-404.
- Ball A, Craig R. Using neo-institutionalism to advance social and environmental accounting. *Critical Perspectives on Accounting* 2010; 21(4):283-93.
- Belal AR, Cooper S. The absence of corporate social responsibility reporting in Bangladesh. *Critical Perspectives on Accounting* 2011; 22(7):654-67.
- Belkaoui AR, Karpik G. Determinants of the corporate decision to disclose social information, *Accounting, Auditing & Accountability Journal* 1989; 2(1):36-50.
- Berrone P, Gomez-Mejia LR. Environmental performance and executive compensation: An integrated agency-institutional perspective. *Academy of Management Journal* 2009; 52(1):103-26.
- Bouten L, Everaert P, van Liedekerke L, de Moor L, Christiaens J. Corporate social responsibility reporting: A comprehensive picture? *Accounting Forum* 2011; 35(3):187-204.
- Branzei O, Vertinsky I. Eco-sustainability orientation in China and Japan: differences between proactive and reactive firms. In: Sharma S, Starik M, editors. *Research in Corporate Sustainability*: Edward Elgar, Cheltenham, UK; 2002:85-121.
- Chan JC, Welford R. Assessing corporate environmental risk in China: An evaluation of reporting activities of Hong Kong listed enterprises. *Corporate Social Responsibility & Environmental Management* 2005; 12(2):88–104.
- Chow GC. China's energy and environmental problems and policies. *Asia-Pacific Journal of Accounting & Economics* 2008; 15(1):57-70.
- Child J. (1994). *Management in China during the age of reform*. Cambridge, Cambridge University Press.
- Child J. (1996). *Management in China during the age of reform*. Cambridge, Cambridge University Press.

- Chilisa B. (2012). *Indigenous research methodologies*. Sage: Los Angeles.
- Craig R, Taonui R, Wild S. The concept of *taonga* in Māori culture: Insights for accounting. *Accounting, Auditing & Accountability Journal* 2012; 25(6): 1025-1047.
- de Villiers C, van Staden CJ. Can less environmental disclosure have a legitimising effect? Evidence from Africa. *Accounting, Organizations & Society* 2006; 31(8):763-81.
- Deegan C, Rankin M, Voght P. Firms' disclosure reactions to major social incidents: Australian evidence. *Accounting Forum* 2000; 24(1): 101-130.
- Deegan C. The legitimating effect of social and environmental disclosures: a theoretical foundation. *Accounting, Auditing & Accountability Journal* 2002; 15(3):28–31.
- DiMaggio P. J., Powell W. The iron cage revisited: institutional isomorphism and collective rationality in organizational fields. *American Sociological Review* 1983; 48: 47-160.
- DiMaggio P. J., Powell W. (Eds.). *The new institutionalism in organizational analysis*. Chicago, IL: University of Chicago Press: 1991.
- Donald J, Jackling B. Approaches to learning accounting: A cross-cultural study. *Asian Review of Accounting* 2007; 15:100-21.
- Dong S, Burritt R, Qian W. Building CSR reporting practice in China: Evidence from China's mining and minerals industry. Retrieved 29 July 2013 from <http://www.apira2013.org/>. Paper presented at the 7th Asia Pacific Interdisciplinary Research in Accounting Conference, Kobe, Japan, 2013.
- Ezzamel M, Xiao JZ, Pan A. Political ideology and accounting regulation in China. *Accounting, Organizations and Society* 2007; 32(7–8):669–700.
- Finamore BA. Transparency in China: Implications for the environment and climate change. Retrieved 10 August 2011 from **Error! Hyperlink reference not valid.** <http://www.cecc.gov/pages/roundtables/2010/20100401/finamoreStatement.pdf>; 2010.
- Firth M. The diffusion of managerial accounting procedures in the People's Republic of China and the influence of foreign partnered joint ventures. *Accounting, Organizations and Society* 1996; 21(7-8):629-54.
- Frost G, Loftus J, van der Laan S. A survey of sustainability reporting practices by Australian reporting entities. *Australian Accounting Review* 2005; 15(1):89-96.
- Gao SS, Heravi S, Xiao JZ. Determinants of corporate social and environmental reporting in Hong Kong: a research note. *Accounting Forum* 2005; 29(2):233–42.

- Gray R, Javad M, Power DM, Sinclair CD. Social and environmental disclosure and corporate characteristics: A research note and extension. *Journal of Business Finance & Accounting* 2001; 28:327-56.
- Gray R, Kouhy R, Lavers S. Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. *Accounting, Auditing & Accountability Journal* 1995; 8(2):47-77.
- GRI. GRI Focal Point China 2011. Retrieved 1 December, 2012, from <https://www.globalreporting.org>
- Guan JQ, Noronha C, Tayles ME. Explaining social reporting of state-owned enterprises in China - A market economy with socialist characteristics. Retrieved 29 July 2013 from <http://www.apira2013.org/>. Paper presented at the 7th Asia Pacific Interdisciplinary Research in Accounting Conference, Kobe, Japan, 2013.
- Guo PY. Corporate environmental reporting and disclosure in China, CSR Asia, retrieved 15 May 2008 from <http://www.csrasia.com/upload/environmentalreporting.pdf>
- Guthrie J, Cuganesan S, Ward L. Industry specific social and environmental reporting: the Australian food and beverage industry. *Accounting Forum* 2008; 32(1):1-15.
- Heggelund G. China's climate change policy: Domestic and international developments. *Asian Perspective* 2007; 31(2):155–91.
- Hilmy J. Communists among us in a market economy: accountancy in the People's Republic of China. *International Journal of Accounting* 1999; 34(4):491-515.
- Hoffman A. Institutional evolution and change: environmentalism and the U.S. chemical industry. *Academy of Management Journal* 1999; 42(4):351-71.
- Hoffman A. Linking organizational and field-level analyses. *Organization and Environment* 2001; 14(2):133-56.
- Hofstede G. *Cultures and organizations: Software of the mind*. London: McGraw Hill; 1997.
- Hofstede G, Bond M. The Confucius connection: from cultural roots to economic growth. *Organizational Dynamics* 1988; 16(4):4-21.
- Horsley JP. China adopts first nationwide open government information regulations. Retrieved 17 December 2011 from Freedominfo.org; 2007.
- Hubbard P. China's regulations on open government information: challenges of nationwide policy implementation. *Open Government: A Journal on Freedom of Information* 2008; 4(1):1–34.
- Jennings PD, Zandbergen PA. Ecologically sustainable organisations: an institutional approach. *Academy of Management Review* 1995; 20(4):1015-52.

- Kolk A, Hong P, Dolen WV. Corporate social responsibility in China: an analysis of domestic and foreign retailers' sustainability dimensions. *Business Strategy and the Environment* 2010; 19(5):289-303.
- KPMG. (2005). KPMG International Survey of Corporate Responsibility Reporting 2005 Retrieved 20 February 2008 from <http://www.kpmg.com.au>
- Larrinaga-Gonzales C. Insights from neo-institutional theory in sustainability accounting and accountability. In J. Unerman, J. Bebbington and B. O'Dwyer (Eds.), *Sustainability Accounting and Accountability* (pp. 150–67). London: Routledge; 2007.
- Lin Y. *Between Politics and Markets: Firms, Competition, and Institutional Change in Post-Mao China*. Cambridge: Cambridge University Press; 2001.
- Mahadeo JD, Oogarah-Hanuman V, Soobaroyen, T. Changes in social and environmental reporting practices in an emerging economy (2004-2007): Exploring the relevance of stakeholder and legitimacy theories. *Accounting Forum* 2011; 35:158-75.
- Milne MJ. Positive accounting theory, political costs and social disclosure analyses: A critical look. *Critical Perspectives on Accounting* 2002; 13(3):369-95.
- Oliver C. Strategic responses to institutional processes. *Academy of Management Review* 1991;16:145-79.
- Opper S, Wong SML, Ruyin H. Party power, market and private power: Chinese Communist Party persistence in China's listed companies. *Research in Social Stratification and Mobility* 2002; 19:105-38.
- Parker LD. Social and environmental accountability research. *Accounting, Auditing & Accountability Journal* 2005; 18(6):842-60.
- Patten DM. Exposure, legitimacy, and social disclosure. *Journal of Accounting and Public Policy* 1991; 10(4):297-308.
- Peng MW. Institutional transitions and strategic choices. *Academy of Management Review* 2003; 28(2):275-96.
- Rahamana AS, Lawrence S, Roper J. Social and environmental reporting at the VRA: institutionalised legitimacy or legitimisation crisis. *Critical Perspectives on Accounting* 2004; 15(1):35-56.
- Roberts RW. Determinants of corporate social responsibility disclosure: An application of stakeholder theory. *Accounting, Organizations & Society* 1992; 17(6):595-612.
- Rowe AL, Guthrie J. The Chinese government's formal institutional influence on corporate environmental management. *Public Management Review* 2010; 12(4):511-29.

- Scott WR. (2002). The changing world of Chinese enterprise: An institutional perspective. In Tsui, A. & Chung-Ming (Eds.), *The Management of Enterprises in the People's Republic of China* (pp. 59–78). Norwell: Kluwer Academic.
- Scott WR. Approaching adulthood: the maturing of institutional theory. *Theory and Society* 2008; 37(5): 427-442.
- Suchman MC. Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review* 1995; 20(3):571-606.
- SustainAbility. China. London: New Landscapes; 2007.
- Taylor D, Shan Y. What drives the fledging practice of social and environmental reporting by Chinese companies listed in Hong Kong? *Accounting, Accountability and Performance* 2007; 13:57-90.
- Thomson I. Mapping the terrain of sustainability accounting. In J. Unerman, J. Bebbington & B. O'Dwyer (Eds.), *Sustainability Accounting and Accountability* (pp. 19–36). London: Routledge; 2007.
- Tuttle B, Dillard J. Beyond competition: Institutional isomorphism in U.S. accounting research. *Accounting Horizons* 2007; 21(4): 387-409
- Unerman J. Methodological issues: Reflections on quantification in corporate social reporting content analysis. *Accounting Auditing & Accountability Journal* 2000; 13(5):667-80.
- Walder AG. *Communist neo-traditionalism: an introductory essay*. Berkeley: University of Chicago Press; 1986.
- Walder AG. Local governments as industrial firms: An organisational analysis of China's transitional economy. *American Journal of Sociology* 1995; 101:263-301.
- Wiseman J. An evaluation of environmental disclosures made in corporate annual reports. *Accounting, Organizations & Society* 1982; 7(1):53-63.
- World Bank. *Cost of Pollution in China, Economics Estimates of Physical Damages* 2007. Retrieved 11 March 2009 from www.worldbank.org/eapenvironment
- World Bank. *World development indicators* 2013. Retrieved 1 May 2014 from <http://data.worldbank.org/country/china>
- WWF. *Chinese companies in the 21st century (II): A survey on the social responsibility and sustainability of Chinese companies*; 2010. Retrieved 17 August 2011 from <http://en.wwfchina.org/>
- Xiao ZZ. Corporate disclosures made by Chinese listed companies. *The International Journal of Accounting* 1999; 34(3):349–73.

- Xu W, Uddin S. Public sector reforms, privatisation and regimes of control in a Chinese enterprise. *Accounting Forum* 2008; 32:162-77.
- Yang H. Western concept, Chinese context: A note on teaching accounting offshore. *International Journal of Pedagogies and Learning* 2012; 7(1):20-30
- Yang H. Business implications of corporate sustainability in an emerging country: Evidence from China. *International Review of Business Research Papers* 2011; 2(1):71-83.
- Yang C, Modell S. Power and Performance: Institutional Embeddedness and Performance Management in a Chinese Local Government Organization. *Accounting, Auditing & Accountability Journal* 2012; 26(1):101-32.
- Zeng S, Xu X, Yin H, Tam C. Factors that drive Chinese listed companies in voluntary disclosure of environmental information. *Journal of Business Ethics* 2012; 109(3):309-21.
- Zhang T, Gao S, Zhang LL. CER on the web: an exploratory study of Chinese listed companies. *Issues in Social and Environmental Accounting* 2007; 1(1):91–108.

(b) Published in Chinese

- Bi Q, Peng Y, Zuo Y. Environmental information disclosure institution, corporate governance, and environmental information disclosure. *Accounting Research* 2012; 7:39-47.
- CASS. The real price of [the People's Republic of] China's economic growth: An empirical study of genuine savings. Beijing: CASS; 2009.
- Chen A. Contemporary accounting research methodologies: review and reflection. *Accounting Research* 2007; 4:3-10.
- Chen XL, Luo F, Yuan DL. Public pressure, societal trust, and quality of environmental information disclosure. *Contemporary Finance & Economics* 2010; 309(8):111-21.
- China Ministry of Environmental Protection. Measures for open environmental information disclosure (for trial implementation). Retrieved 3 March 2008 from http://www.gov.cn/flfg/2007-04/20/content_589673.htm
- China State Council. Open government information; Beijing; 2007. (For Chinese reporting in English, see 'New rules issued to require government transparency', *China Daily* online. Retrieved 24 April 2007 from http://www.chinadaily.com.cn/china/2007-04/24/content_858745.htm.)
- Fang JX. The basis for a sound empirical accounting study: Integration of prescriptive and positive research methods. *Friends of Accountants* 2009, April, 19-23.
- Ge JS, Li R. A new school of thought in Western accounting theories in the 1990s: Green accounting theory. *Accounting Research* 1992; 5:1-6.
- Ge JS. Transferability of accounting theories. *Xiamen University Academic Journal* 1981; 3.1
- Geng JX, Pang Q. International comparison of perspectives in environmental accounting research. *Accounting Research* 2004;1: 69-75.
- Geng JX, Jiao RJ. Exploratory study of listed companies environmental reporting. *Accounting Research* 2002; 1(1):43-7
- Guo QH, Zhu XJ, Yu JM. Survey on accounting academics' stress, living conditions, and happiness. *China Accounting Society Accounting Education Committee Annual Conference Proceedings* 2010: 1-29.
- He L, Hou T. Environmental performance and factors influencing environmental performance disclosure: Empirical evidence from corporate social responsibility reports by Chinese listed companies. *China Population, Resources and Environment* 2010; 20(8):99-104.

- He L, Huang F. Study of corporate social responsibility reporting by listed companies in the paper industry and environmental performance disclosure. *Financial Accounting and Communication* 2011; 2:31-2.
- Hu QY. A study of environmental performance disclosure: evidence from listed Chinese companies of post 2009 environmental inspection. *Securities Market Herald* 2010; 12:53-9.
- Huang J, Zhou C. Influence of ownership structure and management behaviour on environmental information disclosure: evidence from heavy polluting industries listed on Shanghai Stock Exchange. *China Soft Science* 2012; 1:133-43.
- Li JF, Xiao H. China's corporate environment accounting: current situation, demand and future. *Accounting Research* 2002; 2:42-50.
- Li WJ, Kuang X, Gong GM. Factors affecting environmental disclosures - empirical study of 201 listed companies on the Shanghai Stock Exchange. *The Theory and Practice of Finance and Economics* 2008; 29 (153):47-51.
- Li X, Jiang Y, Gao H. Thirty years (1978–2008) of financial accounting theoretical studies in China: Review, reflection and future development. In W. Liu & J.M. Liu (Eds.), *Thirty Years of Chinese Accounting Reform* (pp. 411–423). Beijing: China Finance and Economics Publishing; 2009.
- Li XH, Wang Y, Chen B. Chinese accounting society environmental accounting research symposium report. *Accounting Research* 2002; (1):58-62.
- Lu X, Li J. Corporate environmental disclosure by listed Chinese companies: Evidence from stock manufacturing companies listed on the Shanghai Stock Exchange in 2007 and 2008. *Journal of Auditing and Economics* 2010; 5:62-9.
- Pan, Y. Pan Yue answers journalist's questions on Open Environmental Information (trial implementation); 2007. Retrieved 1 December 2007 from <http://www.gov.cn>
- Shang H, Liu C, Geng J. An empirical study of the status quo of Chinese enterprise environmental reporting. *Environmental Protection* 2007; 4B:15-21.
- Shao RQ, Chen CH, Yu JL, Yuan GD. Characteristics and implications of China accounting research from 21st century: Review of papers published in Chinese core academic accounting journals, 2001 to 2008. *Accounting Research* 2010; 2: 19-27.
- Shen H, Feng J. Media monitoring, government supervision, and corporate environmental disclosure. *Accounting Research* 2012; 2:72-8.
- Shen HT, Li, YXL. Corporate environmental disclosure by listed Chinese companies from heavy polluting industries. *Securities Market Herald* 2010; 6:51–7.

- Shen HT, Cheng H, Yuan ZQ. Corporate environmental reporting: Annual report or standalone report? *Shanghai Lixin Accounting Academy Journal* 2010; 6:5-12.
- State-owned Assets Supervision and Administration Commission of the State Council of China. Using listed companies as a platform to promote resource integration. 11 January 2013. Retrieved 1 May 2014 from <http://www.sasac.gov.cn>
- Sun Q, Zhang T. Empirical analysis of the relevance of social responsibility and performance: A further exploration of corporate social responsibility disclosure. *Friends of Accounting* 2010; 10 (Summer):19-23.
- Sun Z, He JG. Review of China's accounting research development - 30 years of China's reform and open policy. *Accounting Research* 2008; 7:7-15.
- Syntao. (2007). A journey to discover values. Retrieved 5 November 2008 from <http://www.syntao.com>.
- Syntao. (2009) A journey to discover values 2008. Retrieved 5 February 2010, from <http://syntao.com>.
- Tang JF, Li P. Empirical study on environmental disclosures - evidence from Chinese listed companies in chemical manufacturing industries. *China Population, Resources and Environment* 2008; 18(5):112-17.
- Tang Y, Chen Z, Liu X, Li W. Empirical study of the status of corporate environmental reporting by listed Chinese companies and influence factor. *Management World* 2006; 1:158-9.
- Wang J. Analysis of the relevance of environmental disclosures, industry differences and external regulatory pressure – evidence from listed companies on the Shanghai Stock Exchange. *Accounting Research* 2008; 6:54-62.
- Wang Y, Song L, and Dong S. Study of factors influencing corporate environmental disclosure. *Financial Accounting Monthly* 2012; 2:38-41.
- Wang LY, Yin CY, Li WG. Investigating environmental accounting practice in Chinese business enterprises. *Accounting Research* 1998;8:19-25.
- Wang LY, Yin CY, Li WG. Investigating entrepreneurs' attitudes towards the environment and environmental management. *Economic Science* 1997; 4:35-40.
- Wu D. Responsibility index, company characteristics and environmental information disclosure. *Journal of Zhongnan University of Economics and Law* 2011; 188(5):49-54.

- Wu M, Zhang Z, Lin F. Analysis of corporate environmental information transparency of Chinese 500: based on Internet disclosure and empirical research Chinese 500 companies. *China Population, Resources and Environment* 2008; 18(4):201-05.
- Xiao H, Zhang G. Public pressure and corporate environmental disclosure - empirical study based on Songhua River Pollution Accident. *Accounting Research* 2008; 5:15-22.
- Xiao SF, Hu W. Establishing a corporate environmental reporting system in China. *Accounting Research* 2005; 3:47-52.
- Xiao SF, Mi HY. Analysis of the survey of enterprises' environmental protection and accounting – views on the necessity and feasibility of establishing environmental accounting in China. *Forestry Economy*, 2004; 18(1) (November B):45-8.
- Xu J. Environmental accounting: the development and innovation of theory and practice. *Accounting Research* 2009; (10):36-43.
- Yang, CX. Selection of entrepreneurs in China's State-Owned Enterprises: An Economic Perspective. *China Industrial Economy* 2002; 172(7): 51-6.
- Yang XS, Zhang GF, Liu X, Yu YC, Feng CY. Analysis of the effectiveness of Chinese accounting research: A review of accounting papers published from 1980 to 2002 in *Accounting Research (会计研究)*. *Accounting Research* 2005; (3), 76-84.
- Yang XS. Exploring the road to the freedom of accounting theory research in China in 2011. Conference proceedings, Third Cross-straits Accounting Research Symposium. November 2011, Guangzhou.
- Yang XS, Xue QM, Yang, QW, Huang SC, Cao Y. Review and thoughts on Chinese positive accounting research. *Accounting Research* 2008; 7: 34-42
- Yang Y, Li Y, Shen H. Green financing policy, corporate governance, and corporate environmental information disclosure. *Finance and Trade Research* 2011; 5:131-8.
- Yin, YJ. A comparative study of the peer review system of academic journals between China and the West. *Journal of Zhejiang University (Humanities and Social Sciences)* 2012; 42 (4), 201-16.
- Zhang Y, Guan M. Empirical study of external factors influencing corporate environmental information disclosure. *China Population, Resources and Environment* 2009; 19(6):103-06.
- Zhou Y, Sun X. An empirical study of environmental disclosures by China's listed companies. *Journal of Nanjing Audit University* 2006; 3(4):22-5.