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Private Governance of Climate Change in Hong Kong: An Analysis of Drivers and Barriers to Corporate Action

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Abstract: *This study examines how corporate governance of climate change is developing in the Hong Kong Special Administrative Region (Hong Kong), Asia's leading financial centre. It situates corporate actions within the broader framework of urban multi-stakeholder climate governance. In the absence of international obligations under the Kyoto Protocol and government regulation to reduce greenhouse gas (GHG) emissions, the majority of companies in Hong Kong have yet to tackle climate change. However, a small number of proactive corporations are acting to reduce climate change induced risks and reposition themselves to take advantage of climate change opportunities. Focusing on these leading corporations, this study identifies the motivations for and barriers to action. It concludes that corporations are only one of the necessary players in addressing climate change at the city level. Corporate climate change governance could be improved in Hong Kong by developing a stronger institutional framework and broader civil society support.*

Keywords: *Hong Kong Special Administrative Region, climate change, corporate governance, private governance, drivers, barriers, risks, opportunities, China*

Introduction

Non nation-state actors such as cities, businesses and non-governmental organisations (NGOs) are playing an increasingly important role in governing climate change and other global environmental problems (Newell, 2000; Betsill and Correll, 2008; Okereke et al., 2009). Non nation-state actors “see themselves as more effective, efficient and faster at tackling climate change than nation-states because of

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[nation states'] difficulty and slowness in reaching agreements. But [non nation-state actors] also recognise that having a rigorous international policy framework is critical for achieving long-term deep cuts in emissions" (Lovell, 2007, p. 1). Until the early 2000s, urban climate change governance was driven predominantly by individuals and networks of municipal governments (Betsill and Bulkeley, 2003). Since then, city-level action has evolved in large part through cooperation with local companies, NGOs, the scientific community and the public (Betsill and Bulkeley, 2007; Schroeder and Bulkeley, 2009). For businesses, mitigating climate change presents both risks and opportunities. It can increase costs through emissions management, physical and regulatory risks, and social and market pressures, but it can also provide an opportunity to increase profits and enhance reputation (Hoffman and Woody, 2008; Falkner, 2008). These costs and benefits are highly dependent on the policy context and supporting mechanisms. In recent years, many large American and European corporations have shifted from lobbying against policies to petitioning for incentives (Kolk and Levy, 2001; Kolk and Pinkse, 2004) to transforming environmental costs into competitive advantages (Haufler, 2001; Orsato, 2006).

As national and international climate policy contexts evolve, increasing numbers of companies are internalising climate change as part of their risk management and/or overall corporate governance (Kolk and Pinkse, 2004). However, the uncertain future international climate regime and thus the cost-benefit implications of climate investments have spurred debates over the depth and genuineness of corporate actions (Levy and Newell, 2005; Beale and Fernando, 2009). In countries where government regulation is absent, private governance of climate change creates a further dilemma for corporations that perceive trade-offs between core business and voluntary engagement in "peripheral" socio-political issues such as climate change. At the same time, corporations are increasingly evaluated on their accountability, transparency and ability to fulfil their fiduciary obligations, including socio-environmental responsibilities (Scherer et al., 2006; Elkington, 1998).

Corporate responsibility (CR) research on climate change has mainly focused on regions where climate regulations are in place or imminent, such as Europe (Schultz and Williamson, 2005; Okereke, 2007), North America (Levy and Egan, 1998; Jones and Levy, 2007) and Australia (Griffiths et al., 2007). Relatively few studies have focused on China (although see Zhu and Wu, 2008). Urban political studies have revealed that governance – i.e. the process of coordinating public and private interests – in the Western context differs fundamentally from that in Asia, where Asian bureaucracies still assume a central governing role regardless of whether or not they are democratically elected (Cheung and Scott, 2003; Ng, 2007). Differences in political contexts have implications for corporate governance. The objective of this paper is to look at Hong Kong as a case study to understand why some large corporations are undertaking climate measures voluntarily. Hong Kong is a part of China's voluntary 40–45 per cent carbon intensity reduction target by 2020 from 2005 levels, which was announced in November 2009 (CCCIN, 2009), with no mandatory obligation to reduce GHG emissions under the United Nations Framework Convention on Climate Change (UNFCCC). Nevertheless, it has been argued that advanced East Asian economies, including Hong Kong, should contribute more to combating climate change (Harris, 2007; 2008; den Elzen et al., 2007; The Climate Group, 2010). As a result, environmental NGOs and some

corporations have pioneered climate change actions in advance of legal requirements in Hong Kong. Furthermore, as the local business community is influential and frequently consulted in government decision-making, understanding the drivers of and barriers to corporate climate governance has important implications for shaping broader urban climate change governance. Recent studies comparing urban climate responses in Asia (Schroeder et al., forthcoming) and among the +10 countries including China (Bulkeley et al., 2009) reveal that municipal climate action in Hong Kong lags behind that in cities such as Seoul, Beijing and Mexico City.

Semi-structured interviews for this article were conducted with representatives from seven corporations (of 50 approached), four environmental NGOs, two government departments, two environment-oriented business associations, two regional and international trade associations, one consultancy and one practitioner (see Appendix 1). These interviews were complemented by a survey of the seven companies and one NGO and electronic correspondence with three additional institutions between June and August 2008. The interviewed corporations form a minority comprising large, multinational corporations; five of the seven have some form of climate change mandate. While these corporations are not representative of Hong Kong's corporate sector, and while the sample size is statistically insignificant, the in-depth interviews help us to understand the rationale for current corporate actions that have been developed voluntarily.

This article begins with an overview of Hong Kong's policy context. After identifying the role of the private sector, it then focuses on the specific motivations and barriers that explain why corporations have or have not taken action on climate change. Particular emphasis is placed on the electricity sector, as it generates the most emissions (62.5 per cent of overall emissions in 2007; EPD, 2009) in Hong Kong. The article concludes by arguing for the need to broaden and deepen corporate climate change governance in Hong Kong.

Policy Context and Climate Action in Hong Kong

Hong Kong's political system combines a top-down central government with a neoliberal market environment that fosters a powerful business sector. This resembles the "traditional Asian form of governance (including Malaysia, Singapore, Taiwan, Thailand and Japan) that places a heavy reliance on a meritocratic, centralized, more or less autonomous, paternalistic bureaucracy" (Painter, 2005, p. 335). Historically, the *laissez-faire* relationship between government and industry has constrained the former's ability to satisfy both environmental and business interests (Hills, 2004). Therefore, Hong Kong's policy context, as examined below, is highly dependent on the consensus of the local business elite. As Hong Kong has exported much of its manufacturing industry to Guangdong Province since the British handover to China in 1997, reducing emissions effectively requires cooperation between Hong Kong and Guangdong. The Pearl River Delta (PRD), the regional area that includes Hong Kong, Macau and Guangdong Province, is highly vulnerable to sea-level rise and flooding (Cruz et al., 2007; Huang et al., 2004). Adapting to these climate risks also calls for regional policy cooperation by the two sides. Figure 1 outlines how the key local players relate to international and national stakeholders.

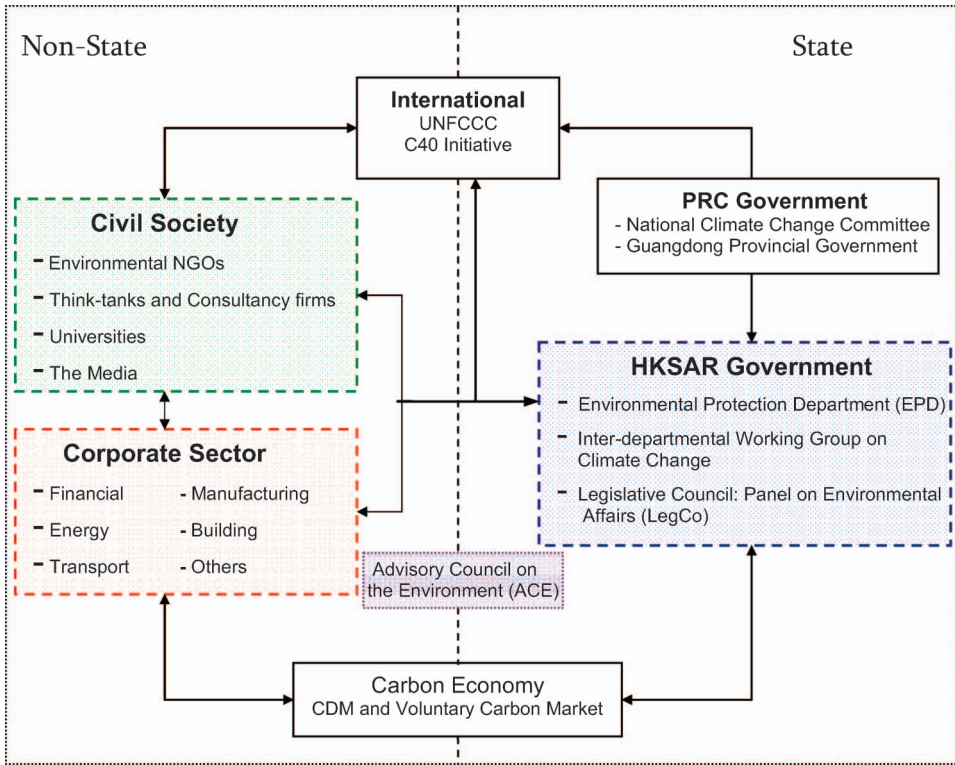


Figure 1. Stakeholder map of climate change governance in Hong Kong.

Hong Kong Government

Hong Kong became a Special Administrative Region (SAR) of the People’s Republic of China on 1 July 1997. Under the “one country – two systems” model enshrined in the 1984 Sino-British Joint Declaration on the Future of Hong Kong and the Basic Law, Hong Kong enjoys a 50-year autonomy from China’s central government in Beijing. Policy-making in Hong Kong is characterised by an “administrative rationality” (Dryzek, 1997; Hills, 2004) where technocracy and centralisation have limited broader public engagement in the policy process (Gouldson et al., 2008). According to Hills (2005, p. 231), “Hong Kong lacks a mature political fabric and the limited degree of participatory democracy introduced during the latter years of British rule has been largely dismantled”. The Chief Executive is “elected by a carefully chosen committee of 800 delegates and then approved by the central (PRC) government” (Scott, 2007, p. 33). Half the members of the Legislative Council (LegCo) are elected under a proportional representation system approved by the PRC government; the other half is “biased towards business and professional groups” (ibid.). Thus, the political system remains executive-led. In view of its poor performance and increased public concern over the autonomy of Hong Kong, citizens have challenged the legitimacy of a non-democratically elected government in recent years (Scott, 2007; Chan and Chan, 2007).

The government's close relations with businesses, especially land developers, also cast doubt on its policy objectivity. As the monopoly land supplier, the Hong Kong Government relies heavily on land sales revenue, driven by both real demand and speculation, with a low level of revenue from corporate and salary taxes (EIU, 2007). As observed by Smart and Lee (2003), the inflation of housing prices since the 1990s was largely driven by the government's policy favouring home ownership in a decade when land sales taxes averaged over 30 per cent of total government revenue. To maintain this income, government macro-policies have favoured maintaining high property prices, partly reflecting the bargaining power of real estate firms.

As the government prioritises economic growth over environmental protection (Gouldson et al., 2008), it is not surprising that climate change has only recently entered the policy arena. Climate change emerged for the first time in LegCo discussions and annual policy addresses in 2007 and 2008 (Hong Kong Government, 2007 and 2008). The Inter-departmental Working Group on Climate Change, set up in January 2008, has yet to demonstrate its success in driving intra-governmental decision-making. This Working Group commissioned a study including a series of public consultations to evaluate Hong Kong's mitigation and adaptation options (ERM, 2008). The fourth and final public consultation on vulnerability and adaptation was conducted in February 2010 (ERM, 2010). Among various initiatives amalgamated under the umbrella of "climate change", the government allocated HK\$450 million for energy-saving projects and collaborated with local utility companies in introducing electric vehicles and charging stations, although the funding imposes some restrictions and electric vehicles still lack extensive public support. By comparison, China offers more concrete plans, as suggested in its "China National Climate Change Program" in June 2007, the White Paper on "China's Policies and Actions on Addressing Climate Change" in October 2008, and its 2020 renewable energy target. Hong Kong's regional peers including Singapore and South Korea have voluntarily implemented national plans to mitigate GHG emissions. Global financial centres such as London, New York and Tokyo, which have relatively similar per capita emissions to Hong Kong (Mayor of New York, 2008; Mayor of London, 2007; TMG, 2007), have all set emissions reduction targets with action plans detailing measures to meet them. Generally, Hong Kong's efforts pale in comparison to those of other C40 Climate Leadership Group members who are committed to addressing climate change. Climate change has thus entered the political rhetoric, but has not yet triggered any meaningful policy action.

Civil society

Civil society (CS) encompasses a broad range of actors, including community-based organisations, local and international NGOs, media, academia and the general public. Since the 2000s, CS in Hong Kong has matured from simply non-profit organisations responsible for service provision to agents of advocacy (Chan and Chan, 2007). However, CS is still largely marginalised by government policy-making, as in the case of air pollution (Francesch-Huidobro, 2007). For this

study, views from civil society were obtained from interviews with environmental NGOs that have informed and educated the general public on climate change in Hong Kong through conferences and campaigns (see Figure 2). In addition to grassroots activities, media coverage by local newspapers and TV channels contributes to increased public awareness of the issue as suggested in a number of public surveys. For example, a Nielsen global online survey gauged a 14 per cent jump in Hong Kong citizens' concern about climate change between 2006 and 2007, due partly to media coverage of the Intergovernmental Panel on Climate Change reports and Al Gore's *Inconvenient Truth* during that period (Nielsen Company, 2007). Another market survey suggested that 61.8 per cent of Hong Kong online respondents prefer "green" products (Synovate, 2007). Despite these results, the closed-door nature of government-business decision-making has made citizen participation difficult. Comparative surveys conducted in 2000 and 2008 on attitudes towards environmental governance have revealed that people in Hong Kong consider environmental problems to be serious but feel relatively pessimistic about their resolution and have little confidence in the government's enforcement of environmental policies (Wong and Wan, 2009).

As observed by several interviewees, many environmental campaigns seek to increase interest by combining the issue of climate change with air pollution, which the local community seems to consider a more urgent issue (Koehn, 2008; Huizenga et al., 2008). However, the state of air pollution is consistently downplayed by Hong Kong's Chief Executive (Lau, 2006), resulting in the misconception that air pollution, and thus climate change, can be attributed to manufacturing in Guangdong and is not a local problem (Interviewees 12, 18 and 19). In fact, local electricity generation and transport accounted for around 62.5 per cent and 16 per cent of GHG emissions in 2007 (EPD, 2009). Public confidence in the government's ability to respond to environmental change has been undermined by its ineffectiveness in addressing air quality.

Corporate sector

Corporations in Hong Kong enjoy a liberalised market setting. In the absence of regulation, a small number of large, visible and often multinational companies have moved beyond adopting environmental, health and safety management systems, for instance ISO14001 standards, a "green" code of conduct and/or auditing (Cheung et al., 2009), to explicitly formulating strategies that address climate risks and opportunities, which are integrated into their management, operations and/or supply chains. These companies tend to possess market power and are more exposed to climate risks and opportunities given their broader scope of operations. They also dominate the market in terms of market capitalisation, with the 50 leading companies accounting for as much as 76 per cent of the Hong Kong Stock Exchange Main Board as of December 2008 (HKEx, 2009). Four of the top 10 of these publicly listed companies were interviewed for this study.

Although these corporations assume a leadership role, they are not representative of the business sector; nor are they sufficient in number to be an effective

agent of self-regulation as 98 per cent of businesses in Hong Kong are small- and medium-sized enterprises (SMEs).¹ Although the overall market share of SMEs is relatively small, their internal structures, corporate culture and business strategies are inherently different from those of larger companies and are more compliance-driven (Welford, 2003). Voluntary environmental governance is likely to be too costly for them and to undermine their competitiveness if their peers are not obliged to do the same (Studer et al., 2006). A more detailed analysis of corporate actions is provided in the next section.

Climate Change Action in Hong Kong

In Hong Kong, corporations and civil society were the first movers on climate change (Figure 2).

Year	HKSAR Government	Corporate Sector	Civil Society
Nov. 2006			Study on "The Impacts of Climate Change in Hong Kong and the PRD" (Civic Exchange)
Dec. 2006			Hong Kong Climate Change Conference (University of Hong Kong)
2007		HSBC Five-year Climate Partnership	
May 2007		International Climate Change Conference in 2007 (Analogue Group)	
Sept. 2007	Adopted Asia Pacific Economic Council's 25% carbon intensity reduction target of 2005 levels by 2030		
Nov. 2007	Joined the C40 cities network	Feasibility Study on Carbon Trading in Hong Kong (Hong Kong Stock Exchange)	Climate Change Business Forum (CCBF) formed (Business Environment Council)
Dec. 2007		Carbon Offset Programs (Cathay Pacific and Dragon Air)	
Jan. 2008	Created Inter-departmental Working Group on Climate Change		
Mar. 2008	Consultation on Mandatory Building Energy Codes		

Figure 2. Chronology of major climate change-related initiatives in Hong Kong by sector.

April 2008			Lung Fu Shan Environmental Education Centre created (EPD and University of Hong Kong)
June 2008	Emissions Trading Platform launched to permit generation of CDM credits under National Development and Reform Commission of China	Two Carbon Trading Workshops held (British Consulate and Civic Exchange)	Return On Investment Sustainability Conference (The Economist); Greater Pearl River Delta Low Carbon Economy and Development Forum (The Climate Group (TCG) and National Development Reform Commission); Hong Kong Climate Change Forum created
July 2008	Partnership with 37 volunteer businesses to audit 100 buildings using the Guidelines to Account for and Report on GHG Emissions and Removals for Buildings		First Asian Youth Summit on Climate Change (University of Hong Kong)
Oct. 2008	A 20% profits tax deduction for 5 years on environment protection installations (including renewable energy facilities) mainly for buildings	Climate Change Conference: Making Business Sense of the Low Carbon Economy (HSBC, TCG and Swire Pacific)	Low-carbon Office Operations Program (LOOP) partnered with four businesses to measure and reduce office building emissions (WWF)
Mar. 2009			Earth/lights-off Hour in Hong Kong (WWF)
April/May 2009	HKS450 million funding for building owners to implement energy-saving projects; Environmental Protection Dept. introduced electric vehicles	Building Electric vehicle charging stations in car parks (CLP, Wilson Parking and Link Management)	How to Reduce [GHG emissions] Guide published (CCBF)
June 2009			Conference on China and Global Climate Change, Lingnan University
July/Aug. 2009		consultancy paper on establishing a carbon trading Certified Emissions Reduction futures exchange (Hong Kong Stock Exchange)	Workshop on Climate Projections and Economics of Climate Change (British Consulate-General Hong Kong and Hong Kong Observatory); Panel discussion on carbon trading (CCBF); Consultancy Report on Climate Change governance in Hong Kong (CCBF and Reset)
Oct. 2009			International Climate Change Conference 2009 (TCG, Hong Kong Climate Change Forum)

Figure 2. (Continued)

Nov 2009	PRC Government announces 40-45% carbon intensity reduction target by 2020 to 2005 levels leading to UNFCCC's COP15 in Copenhagen		
Dec. 2009			The 2009 Climate Leaders' Summit (TCG)
Mar. 2010			Report on Hong Kong low-carbon goals (TCG commissioned by Energy Resource Institute)
Jul. 2010		Hang Seng Corporate Sustainability Index Series Launched (Hang Seng Indexes)	
		Research on sectoral approach to a low-carbon economy (CCBF and business partners)	
Nov. 2010		C40 Summit in Hong Kong	

Figure 2. (Continued)

Corporate Action to Mitigate Climate Change

Below is an overview of observable climate actions in Hong Kong, analysed using Porter and Reinhardt's (2007) four-action framework. The first two actions are what Orsato (2006, p. 131) defines as "eco-efficiency of process", while the latter two relate to "product or service substitution".

- (1) *Raising awareness.* Many companies have programs to raise employee awareness on climate change. Examples include encouraging double-sided and reduced printing, installing recycling bins, using non-styrofoam food containers and creating energy-saving tip sheets to reduce emissions in the office and at home. Many of the companies interviewed also publish their GHG emissions data in annual CR reports based on Global Reporting Initiative guidelines and through surveys such as the Carbon Disclosure Project. Externally, companies may organise community outreach events such as tree planting activities, visits to wind farms and waste clean-up days.
- (2) *Mitigating operational emissions.* Buildings consume 89 per cent of Hong Kong's total electricity, which in turn contributes to 34 per cent of total GHG emissions (EMSD, 2008; Civic Exchange and AAM, 2008). Since buildings account for the majority of office emissions, actions include switching to energy-saving light bulbs, installing motion detectors to maintain room temperature and redesigning operations. Mass Transit Railway (MTR) has saved around 14 per cent on its electricity usage by installing regenerative braking in all vehicles (MTR, 2007). Since business travel constitutes operational emissions, encouraging its replacement by video conferencing is

also a popular way to reduce emissions. At present, none of the companies interviewed are looking at reducing employees' commuting habits, as their focus is on reducing emissions by buildings and facilities.

- (3) *Promoting "low-carbon" products.* This entails marketing a new product using its "green" characteristics. For instance, HSBC launched a chlorine-free "green" credit card in 2008, which donates 0.1 per cent of cardholder spending to the Green Roofs for Schools program (HSBC, 2007). Since the end of 2007, Cathay Pacific and Dragon Air have offered carbon offset programs to their clients. Supply chain partnerships in PRD enable both parent companies and suppliers to gain product value through enhanced environmental management (Cheung et al., 2009).
- (4) *Integrating climate change into core decision-making and corporate strategy.* The conglomerate Swire Pacific not only implements emissions reductions throughout its diverse sectors but is also involved in forward purchasing of carbon credits. CLPH is partnering with Wilson Parking and Link Management to set up electric vehicle recharging stations in 2009–13. MTR adopts an exemplary risk-based model to plan against climate change risks to its subterranean operations. Towngas and Swire Sita have jointly extracted methane from a New Territories landfill to meet growing gas demand and reduce fossil-fuel dependency, with the potential to sell credits on the voluntary emissions reduction market (Interviewee 2).

Building alliances, either between business and government or business and NGOs, is a global trend observed in the private governance literature (Levy and Newell, 2005) and in Hong Kong (Mantel et al., 2006). As Figure 2 reveals, the predominant mode of climate partnerships combines businesses and NGOs. A product of a business-government alliance is the Comprehensive Environmental Performance Assessment Scheme (CEPAS) rating system for buildings. Recently formed business consortia such as the Hong Kong Climate Change Forum and the Sustainable Fashion Business Forum are strengthening partnerships among businesses and NGOs with the aim of educating and sharing best practices amongst firms. However, more associations do not automatically translate into effective corporate action (Brewer and Hayllar, 2005; Cheung, 2007). Despite their strength as a means of building consensus, partnerships may dilute the initial policy or management objective(s) through processes of influence and bargaining. They can be a considerable drain on voluntary resources, and "potentially lead to 'burn out' amongst the many partners involved" (Bulkeley and Schroeder, 2008, p. 15), further discouraging the necessary involvement of smaller-cap organisations.

Drivers of Corporate Action on Climate Change

We will now turn to identifying and analysing the most important drivers of corporate climate action. The interviews and survey indicate that the strongest driver of corporate climate initiatives is enhancing *Competitive Advantage*, which ultimately increases revenue and productivity (Figure 3). Competitive advantage can be obtained through cost advantage, where a company offers the same service as its competitor at a lower cost, or differentiation advantage, where a company delivers

superior services for the same price as its peers (Porter, 1998). As the CEO of one of the largest property developers in Hong Kong stated, “When we put up a building, we like to know how it can be highly efficient, sustainable and competitive for the next 50 years. Ultimately, we want to set a standard”. This company owns and operates its commercial and residential properties rather than selling them, which distinguishes it from most of its peers. Therefore, enhancing the long-term value of its properties becomes a prime motivation for seeking product enhancement. Similarly, HSBC’s launch of the “green” credit card allowed it to be the first bank in Hong Kong to “capture the market space and establish a niche product” (Interviewee 7), although the actual take-up rate of this card has not been made public.

Reputation was ranked as the second most important motivation. This may be explained by sample bias, given that larger corporations are more exposed than smaller, more compliance-driven companies (Studer et al., 2006). One interviewee testified that new clients had sought his company’s input due to its longstanding image for corporate sustainability (Interviewee 7). CLP began to formulate a climate change strategy in 2004, partly to take advantage of being the prime mover in this area and partly to respond to pressure from environmental groups (Interviewees 3 and 16). Regionally, CLP places emphasis on managing regulatory risks, especially in its businesses in Australia, where water shortage and imminent carbon regulations are a concern, and in Taiwan, where there were attempts to pass a GHG bill in 2007 (CLP, 2007). In addition, CLP participates in World Business Council on Sustainable Development (WBCSD) efforts to draft policy recommendations for the UNFCCC (WBCSD, 2008). Due to the absence of anticipatory regulation in Hong Kong, reputational risk is a crucial driver of corporate strategy, reflecting the concerns of senior management.

Senior Management Leadership was identified as an equally important driver to reputation. Given the absence of government legislation, the leadership of senior management plays a decisive role in whether climate change is addressed. This may be even more so in times of macroeconomic downturn and shrinking budgets. According to one interviewee, “companies that do not see benefits may refrain from examining climate change implications altogether” (Interviewee 15). Companies are likely to be receptive to streamlining operations and installing energy-saving equipment (action type 1) if this is cost effective. However, integrating climate

Rank	Motivations	Company Scores								Total score
		A	B	C	D	E	F	G	H	
1	Competitive Advantage	3	6	1	3	4	1	4	6	28
2	Reputation	11	1	1	2	4	7	2	4	32
2	Senior Management Leadership	10	2	8	1	1	6	3	1	32
3	Risk Reduction	2	3	4	4	1	10	10	2	36
4	Cost Effectiveness/Savings	5	5	6	6	1	2	5	7	37
5	Stakeholder Demands	4	4	9	5	8	4	9	8	51
6	Consistent with Corporate Ethics	9	9	5	7	4	9	7	3	53
7	Legislative Requirements	1	7	10	9	8	3	11	5	54
8	Supply Chain Requirements	7	10	11	10	8	5	1	11	63
9	Access to Financial Resources	8	11	7	11	4	11	6	9	67
10	Government Encouragement	6	8	12	8	11	8	8	10	71
11	Other	12	12	3	12	12	12	12	12	87

Figure 3. Motivations for companies to adopt voluntary climate change initiatives.

change into core business voluntarily, such as by becoming carbon-neutral, remains “anecdotal” (Interviewee 7). Consequently, to a large extent, private governance relies on senior management’s understanding of strategic risks and benefits, and its willingness to address the issue. As the founder of the Hong Kong Climate Change Forum noted, the majority of Hong Kong senior managers do not necessarily understand the climate risks that affect their businesses.

It is worth pointing out that while the large companies already undertaking climate action converged in their rankings, the two companies that have not yet adopted any climate change measures (companies A and G, a local firm and an SME supplier) both rated *Legislative Requirements* and *Supply Chain Requirements* as the largest drivers, respectively, of voluntary environmental initiatives, revealing their more reactive approach. The case of PRD-based suppliers helps to explain this point. There are currently more than 60,000 Hong Kong-owned companies in the PRD (Cheung et al., 2009). PRD-based suppliers are susceptible to green procurement policies imposed by international buyers such as 3M, Philips and Walmart as well as the European Union’s Restriction of Hazardous Substances (Interviewee 18). Imposed over a short timespan, these restrictions forced several non-compliant suppliers out of the market in 2007 (Interviewee 18). By contrast, manufacturers whose products met these environmental requirements not only survived, but may raise industry standards in the long run while leveraging growing demand for green products locally and internationally. Realising the impact of external regulations, since 2007 the Chinese central government has been enforcing its 2003 Cleaner Production Promotion Law by upgrading and relocating manufacturing industries to eco-parks for collective monitoring and waste treatment (Interviewee 18). In such a context, the Hong Kong Government allocated HK\$93 million to Hong Kong-owned PRD-based companies adopting cleaner production technologies that aim to reduce air pollution for 2008–13. Although none of these measures is directly related to climate change *per se*, globalisation has exposed suppliers to international legislation. Given that the European Union (EU) and increasingly the USA are seeking ways to reduce their GHG emissions, trade regulations and the post-2012 climate regime might become a driver for small and medium suppliers in Asia to tackle their carbon emissions.

Barriers to Corporate Action on Climate Change

As Figure 4 shows, most survey participants agreed that the fact that corporate action on climate change is *Not a Legal Requirement* is a significant barrier, as it creates competitive disadvantage for those who act. As Interviewee 9 explained:

If you are renting out buildings you need to put large windows [*which consume more energy*]. Put smaller ones in and you have a comparative disadvantage. If you walk around Hong Kong, you’ll find a lot of shops . . . where they don’t have doors and you’ve got cold air coming out of the shops which is very inefficient. If you put doors on your shop and your competitor doesn’t, you lose out on market shares. You’ll do badly. What is needed is for the government to regulate minimum thermal efficiency of office buildings and all shops should have doors.

Rank	Barriers	Company Scores								
		A	B	C	D	E	F	G	H	Total score
1	Not a Legal Requirement	1	1	2	3	1	4	1	6	19
2	Lack of Incentives	6	2	3	6	2	1	2	5	27
3	Not a Priority by Senior Management	5	6	7	1	5	2	4	1	31
4	Costly	4	5	4	8	2	3	7	4	37
5	Corporate Inertia	9	4	5	2	8	5	3	11	47
6	Creates Competitive Disadvantage	3	8	1	10	2	9	10	3	46
7	Lack of Resources	7	3	8	5	10	7	5	7	52
8	No Stakeholder Demand	2	7	10	7	5	8	9	8	56
9	Lack of Standards/Guidance	10	10	6	4	5	10	5	10	60
10	Lack of In-house Knowledge	8	9	9	9	8	6	6	9	64
11	Other: Lack of policy support such as international framework	11	11	11	11	11	11	11	2	79

Figure 4. Barriers for companies to adopt voluntary climate change initiatives.

However, interviewees do not expect the HKSAR Government to introduce climate change regulations in the near future. Their pessimism is based on past observation. For instance, it took the Hong Kong Government 10 years to make energy efficiency labelling for three products a mandatory requirement, while 18 other product labelling schemes remain voluntary (EMSD, 2008). Only in 2009 did the government consider making building energy codes mandatory, even though the codes were introduced in 1998 (SCMP, 28 July 2008). Government decision-making can also lack transparency, and was described by one interviewee as “erratic and unpredictable” (Interviewee 12). Rather than making the above-mentioned CEPAS building rating system mandatory, the government consulted with the private sector and allowed instead a voluntary, industry-defined Hong Kong Building Environmental Assessment Method (Interviewee 5). Generally, interviewees described the government’s climate thinking as “decades behind” (Interviewees 4, 13, 16 and 20).

The *Lack of Incentives* barrier, including mainly financial incentives, was a recurring theme throughout the interviews and received the second highest rating in the survey. Examining the energy sector, there is a strong tendency to judge the viability of “cleaner” fuels according to cost-benefit criteria. The two electricity utilities are procuring, through long-term contracts, a higher proportion of natural gas, liquefied natural gas (LNG) and nuclear, which are less emissions intensive than coal, in their fuel mix. However, fuel diversification will only be pursued to the extent that it makes economic sense. The competitiveness of renewable energy, natural gas, nuclear and other sources vis-à-vis coal and oil prices is a determining factor in generation portfolios. Hence, as seen elsewhere, financial incentives help to expedite grid parity. In Hong Kong, however, the renewed 10-year Scheme of Control agreements (SOCs) signed in late 2008 between the government and two electricity utilities offer very few incentives (a mere 1 per cent increase in the rate of return) for the companies to produce and source renewable energy (Civic Exchange, WWF and RMI, 2008). It is true that Hong Kong’s small landmass and compact high-rise buildings create many technical and geographical constraints to cleaner energy development. CLP has recently obtained the environmental permit to develop

offshore wind in northeast Hong Kong, while pointing out the engineering difficulties of deep water and lower average wind speed than countries such as Australia (Interviewees 1 and 3). More renewable energy may be harnessed by adopting a regional approach such as collaborating with provinces in the PRD, an idea similar to the supply extension of LNG and nuclear contracts (Li et al., 2007; Interviewee 16). While emphasis is placed on keeping tariffs and expenditures low, absolute emissions reduction is expected to be modest because of growing regional energy demand. One interviewee reiterated that, despite climate change being “a world trend”, as a commercial entity his company is unwilling to “go beyond regulation at this point” (Interviewee 1). This interviewee stressed that trade-offs have to be made between keeping tariffs low and allowing energy costs to rise to help meet environmental objectives. His company is therefore unlikely to reduce its GHG emissions voluntarily if such action impinges on the economic bottom line.

Similarly, in the building sector, the priority for senior managers in decision-making is often the return to shareholders (Interviewee 4). As high efficiency buildings in Hong Kong do not yet command a premium in sales or rental prices, the interest in addressing climate change among real-estate companies is minimal. As an interviewee observed, the “majority of professionals in the building sector and planners are not pushing for it [GHG emission reduction]”. Realising that energy efficiency improvements require strong incentives, in April 2009 the government launched a HK\$450 million Building Energy Efficiency Funding Scheme for commercial common areas for the next three years. Unless external stimuli such as this scheme are provided, companies and individuals are unlikely to conduct retrofits, even though these may be paid for in 1–2 years (Interviewees 3 and 14). Hence, the absence of incentives reinforces the *Not a Priority of Senior Management* barrier, which also dampens companies’ enthusiasm for adopting voluntary initiatives.

Barriers such as *Competitive Disadvantage*, *Lack of Incentives* and *Absence of Senior Management Endorsement* can be attributed to a general lack of vision and consensus amongst industry peers. For many, “moral obligations are not enough in Hong Kong’s setting”, and climate change governance requires a more solid business case (Interviewee 4). One interviewee who is frustrated with the lack of consensus complained:

There is a lack of holistic vision, standards and objectives we are striving for . . . It’s like being the captain of a ship. I’m trying to steer the wheel of my company towards a direction. Incremental steps are like loading sailors and foodstuff onto the ship. But we still lack the general direction.

Material climate actions that go beyond awareness-raising are few and scattered. Many interviewees concurred that calculating and reporting emissions, which is a fundamental requirement for climate change governance, can be very complicated and a major challenge, especially for SMEs (Interviewees 2 and 10). The Hong Kong Government’s voluntary Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for buildings, issued in July 2008, are limited to buildings. At the moment, there is no legislation or clear standard of emissions accounting, and each company has the discretion to disclose or withhold data.

Another challenge consistently raised by the interviewees relates to mobilising their customers and the public. Almost all interviewees point to the need to induce behavioural change regarding emissions reduction. Mainly due to climatic circumstances with long, hot, humid summers, Hong Kong's electricity use is high and inelastic. Yet, the average household in Hong Kong spends less than 5 per cent of its income on electricity (Interviewee 1), which explains the lack of incentive for consumers to conserve energy. A survey of household electricity usage demonstrates that while 73.6 per cent of those sampled support the government's 25.5°C voluntary indoor temperature guideline, 50 per cent of those surveyed prefer to sleep with the air conditioning below 24°C (FoE, 2008). This implies that guidelines should extend to structural improvements such as building design. Yet, the focus so far has been on designing more efficient appliances, applying basic energy efficiency codes, and monitoring emissions, without addressing the "social process of power supply" (Lo, 2008, p. 1530). The latter point refers to the fact that the public has grown accustomed to the reliability of supply, without recognising the need to save energy. Even if demand is reduced, one cannot ignore the consumer rebound effect, where savings from energy efficiency are spent on something else, thus negating emissions reductions (Economist, 2008). Although the Scheme of Controls has obliged utilities to create education and loan funds to promote energy conservation, demand-side management is generally met with little enthusiasm from utilities, and has limited impact on the public (Lam, 2004). In the absence of policy regulations, the potential for large-scale reductions in energy consumption in residential areas remains untapped.

Discussion

As outlined above, a small number of corporations are motivated to undertake climate action due to drivers such as competitive advantage, reputation, senior management leadership, risk reduction and external regulatory pressure. The common characteristics of these proactive corporations are their economies of scale, availability of resources and capabilities, good environmental management track records, longer-term perspectives, and, for some, their transnational nature, which exposes them to trends abroad. Without regulatory obligations, however, observable climate actions are limited. Barriers that prevent the majority of companies from tackling climate change include the lack of legal requirements, incentives and senior management endorsement, capacity and knowledge. Even for certain proactive corporations, large-scale emissions reductions are perceived to directly impinge on their business's economic bottom line. Most observed corporate climate actions are focused on one-off or short-term initiatives and operational emissions reductions that generate ancillary benefits without bringing about large-scale changes. The challenge for most corporations is to overcome trade-offs between short-term economic growth and low-carbon investments.

Well-designed government regulations can effectively penalise excess emissions or reward prime movers. Due to the historic *laissez-faire* style of governance in Hong Kong, local environmental policies have always been slow and soft, in view of the political dominance of large, mainly local, businesses. Environmental concerns such as air pollution and climate change remain secondary to economic growth, although the rhetoric of government and leading businesses is now slowly changing. This may

explain why many of the large corporations interviewed for this study chose to participate in the international policy arena through industrial associations rather than in conjunction with the Hong Kong Government. For instance, CLP and MTRC are integral members of the World Business Council on Sustainable Development and the International Association of Public Transport respectively, while Swire Pacific and HSBC are sponsors of The Climate Group. The implication here may be that proactive companies in Hong Kong, through their regional/global operational remit, look to the international community rather than the Hong Kong Government for direction and guidance. Civil society, on the other hand, remains in the shadow of Hong Kong's capitalistic structures, exhibiting little success in nurturing meaningful bottom-up sustainability practices. Demand-side management of energy consumption is as challenging in Hong Kong as anywhere, including similar-sized cities such as Los Angeles (Schroeder and Bulkeley, 2008) and London (Bulkeley and Schroeder, 2008). Contrary to widespread misconceptions, energy efficiency abatements reduce emissions and produce positive multiplier effects for the economy (McKinsey, 2008). Reducing emissions is also beneficial in terms of lowering resource consumption and waste generation. As we suggest, creating a favourable context (through government standards and smart consumer choice) is helpful in enticing more companies to realise these benefits.

When analysing the corporate actors, there is a two-tier system in Hong Kong, as in many Asian countries: large, often transnational corporations are more exposed to global norms than smaller, compliance-driven domestic firms, which are likely to resist internalising global trends (IGES, 2005). However, as the case of PRD-based suppliers illustrates, SMEs are equally susceptible to the global policy context and can become uncompetitive due to externally imposed "green" procurement laws. This suggests that Hong Kong industries can be impacted if other countries, in particular trading partners, develop and impose climate change-related requirements. As trade is a crucial component of Hong Kong's economy, understanding and planning for these changes is key to maintaining competitiveness for both firms and the city.

Conclusion

This case study illustrates the inter-relationships between government, businesses and civil society in shaping corporate climate change governance in Hong Kong. It places corporate actors within the broader urban multi-stakeholder climate governance framework. We observe that at this early stage of climate change corporate governance, in which government regulation is absent, the majority of companies in Hong Kong have not incorporated climate governance. Proactive companies tend to be large, transnational corporations that frame climate change within their long-term corporate strategies and undertake a variety of climate actions. However, broadening corporate governance beyond these leading corporations is dependent on the support of municipal and civil society actors and vice versa. This is especially true in Hong Kong, where local businesses traditionally play an integral role in government policy-making. At the same time, the policy-making process is influenced by the Chinese position on the international climate change negotiations. Hence, this study suggests that corporate governance is neither confined nor static but permeable horizontally (across different sectors) and vertically (across international, national and local organisations).

The prominence of private governance with growing business-NGO partnerships on climate change in Hong Kong reinforces the typical Asian power structure: political institutions and civil society are weak compared to the neoliberal corporate world (Painter, 2004 and 2005; Ng, 2007). Despite the urgency of mitigating and adapting to climate risks, we see a small-scale, inconsistent and voluntary string of actions by dominant corporations, with limited response from the local business sector. This study therefore evokes wider questioning on the institutional capacity of adopting quick and effective policies with funding that apply to all in the relatively new domain of environmental politics. From both the local and national government perspectives, the environment is subordinate to economic priorities and the international climate negotiations have yet to delegate global responsibility. All these complexities underpin the reason why the government is ill-equipped, not in terms of resources or knowledge but in terms of political will, to take up the issue of climate change. The government's failure to do so, however, has provided the impetus for corporate action in view of rapidly changing regulatory contexts and rising stakeholder expectations.

Nevertheless, there are limitations to Hong Kong's corporate climate governance. Initiatives are currently focused on cooperative partnerships, best-practice sharing and operational ancillary benefits without making deeper, more challenging shifts from business-as-usual scenarios. Broader and more effective climate governance requires scaling up existing actions to engage more stakeholders and formulate effective policies. Given Hong Kong's international exposure as a world-renowned financial centre, the city could leverage advanced international expertise and innovation and create opportunities for the local business sector. Effective climate governance requires improving linkages among the tripartite actors – government, business and civil society need to collaborate to nurture both stable financial and long-term human resources for low-carbon development. Further research could aim to achieve better climate and development integration and ways to design policies that galvanise action beyond the small percentage of voluntary actors.

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Note

1. SMEs are defined as manufacturing businesses with fewer than 100 employees or non-manufacturing businesses with fewer than 50 employees (TID, 2007).

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Appendix I: Interview Logbook

Interviewee Number	Interview Date	Organisation Sector	Person Contacted
1	13-Jun-08	Power	CEO
2	19-Jun-08	Power	Climate Change Policy Coordinators
3	21-Jun-08	Power	for Director of Environmental
4	23-Jun-08	Real-estate	Protection and HKSAR
5	24-Jun-08	Architect Practitioner	Government
6	25-Jun-08	Government Scientific Observatory	Government Economist
7	27-Jun-08	Banking	
8	01-Jul-08	Business NGO	
9	02-Jul-08	Conglomerate	
10	04-Jul-08	Transport	
11	04-Jul-08	Business NGO	
12	08-Jul-08	Environmental NGO	
13	09-Jul-08	Environmental NGO	
14	11-Jul-08	Environmental NGO	
15	15-Jul-08	International Trade Association	
16	16-Jul-08	Environmental NGO	
17	22-Jul-08	Consultancy	
18	31-Jul-08	Regional Trade Association	
19	12-Aug-08	Government Council	
Email Correspondence			
20	1-Apr to 16-Jul-08	Civic Exchange	
21	28-Mar to 16-Jul-08	Environmental Protection Department	
22	24-Jul-08	Hong Kong Monetary Authority	