New Sustainable Business Models in China

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ABSTRACT
This research explores the need to establish new sustainable business models in China and uses multiple objectives to examine in a sample of Chinese companies the reality of the level of sustainable development, environmental awareness and performance, community responsibility, performance barriers and drivers and other sustainability issues. A mixed methodology was adopted, using a questionnaire survey and interviews with 20 manufacturing companies in Guangzhou and Shenzen. Evidence from the small sample of companies demonstrates the lack of significant sustainable development practices in China, although small and medium sized companies appeared to show interest in this area and would like to further contribute to for example triple bottom line objectives. Increasing concerns are found from the company level regarding the need to use renewable energy, source alternative sustainable materials, close the loop of the supply chain, improve the quality of products produced rather than reducing cost, export to Europe and treat employees as an asset. The lack of skills, finance and knowledge are found to be prohibiting the effective embedment of sustainable development within companies and hence cause an under-performance in this regard. The study concludes that the establishing of a new business model for sustainable development in China is needed urgently, and this should be a joint effort with the Chinese government. Copyright © 2007 John Wiley & Sons, Ltd and ERP Environment.

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The Need for New Sustainable Business Models

An argument may be constructed that current business models do not need to change. After all many societies are enjoying unprecedented wealth, so – the argument goes – why change something that is working so well? Nonetheless, such models are indeed changing and the cause of this change is the need for sustainable development.

The authors note that the need for sustainable development did not arise within the business world or neoclassical economic theory. The roots of sustainable development may be traced to those who subscribed to other sources of knowledge such as ‘A blueprint for survival’ (Goldsmith et al., 1972) and the Club of Rome’s Limits to Growth (Meadows and Meadows, 1972). Furthermore, it is likely that some important sustainable business
Development initiatives may still lie outside present business conceptions of the issue. The World Commission on Environment and Development’s much quoted definition of sustainable development is ‘Sustainable development seeks to meet the needs and aspirations of the present without compromising the ability to meet those of the future’ (WCED, 1987). In ‘needs and aspirations’ there are great business issues to be faced: for example, society will need some idea of material sufficiency as a developmental goal and this, we argue, is not something that existing business models can accommodate.

It is very likely that new sustainable business models will have to address issues that appear at the moment to be counter to business best interest. Travis Engen understands that businesses do now need to respond to social issues: ‘... the corporate world can be placed on a continuum that ranges between Milton Friedman’s view that “the business of business is business” and Ebenezer Scrooge’s revelation that “mankind was my business”. More and more of us are lining up with the redeemed Scrooge. The time he spent in the spirit world did not make Ebenezer less of a businessman. It helped him to understand how his business interests, and every decision he made with respect to them, had an impact on the lives of his fellow human beings’ (Engen, 2005). Admittedly in a significant number of companies, the ‘impact on the lives of his fellow human beings’ is indeed recorded, managed and reported such as by the Triple Bottom Line (Elkington, 1998), the ISO14000 environmental management system standard (ISO, 2006), the UN Global Compact (1999), the Global Reporting Initiative (GRI, 2006) and the Natural Step (2003). Nevertheless, the issue for example of business pressures for over-consumption is barely addressed by these initiatives. The State of the World 2004 report does draw attention to the consumer society and argues that the resource-use efficiency gains achieved by the business world have in fact been wiped out by demands for more and larger (Halweil and Mastny, 2004, p. 135). We argue that over-consumption, like sustainable development, can only be substantiated as an important issue outside the business world, but that the issue will then change the business world.

Sustainability issues that arise outside the business world are broadly natural and social: ‘For a corporation to become truly sustainable, it has to address two more cases of sustainable development. First, managers have to consider the “natural case” for corporate sustainability: as long as a firm is operating close to (or even beyond) the environment’s carrying capacity, it can never become truly sustainable. Second, firms also need to make the “societal case” for sustainability’ (Dyllick and Hockerts, 2002). Furthermore, in a study of new sustainable business models in Nordic countries, a frequently used explanation for the reported sustainable development successes of their businesses was not directly business related but concerned how their societies and culture related to other Nordic people and to nature. In short, Nordic business people explained their reported sustainable business successes in terms of consensus-societies, social equity and love of nature (private communication). This emphasis on personal values suggests that Bendell and Kearins (2005) are missing the point with their identification of a ‘political bottom line’ for corporate sustainable development, as are Schaltegger and Burritt (2006, p. 295) when they write ‘the importance of tasks for applied research, development and training, including to conceptualize an acceptable proportionality dynamic in sustainability challenges to business and to independently research links between this proportionality and the mind sets, actions, attitudes and behaviours of managers, given the predetermined policy goal of a sustainable society’. Even so, it is not surprising that a consortium of Nordic companies meeting to develop new sustainable business models provided a set of steps to integrate sustainable development into existing business models rather than revising the business models per se (see Figure 1).

This research then considers a next step and is based on the premise that basic changes may be needed to traditional business models to respond to societal and natural, not just business, needs of sustainable development. We keep an open mind about the kinds of change that may happen, partly to maintain some objectivity and avoid the powerful draw of vested interests but also because it is feasible that business models may change in ways beyond our imagination as social and cultural contexts themselves adapt to the needs of sustainable development. However, we would agree with Opoku (2004, p. 332) when he argues in favour of ‘unique situational conditions’ for the systems of sustainable development: ‘Each individual, their group, firm or organization has different values, preferences and interests arising out their specific social and cultural situations’. The individual Chinese aspect is reinforced in this paper by the inclusion among the authors of a Chinese citizen, an experienced businesswoman and resident of Beijing, who has contributed and edited both the managerial and cultural aspects contained in this article.
### China and New Sustainable Business Models

The argument for protecting the environment and society from the worst impacts of industrial development is not difficult to make for China. For example, of 412 sites on China’s seven main rivers in 2004, 58% of them were monitored to be too dirty for human consumption; of the 20 most polluted cities in the world, 16 are in China.
and an estimated 30% of China’s cropland is suffering from acidification and the resulting damage is estimated to be USD13 billion (Nierenberg, 2006, p. 7).

Chan (2004) identifies more environmental problems in China:

- a third of the country suffers from severe soil erosion;
- 75 per cent of its lakes and about half of its rivers have been polluted;
- 75 per cent of its wastewater is discharged untreated;
- 60 per cent of its people are drinking water that does not meet the World Health Organisation’s minimum acceptable standard;
- one in four people die of respiratory diseases;
- China is also one of the world’s largest contributors to global climate change and
- an international survey on the environmental sustainability of 24 selected countries in 2001 puts China near the bottom of a ranking of environmentally clean countries.

On the positive side, the political situation in China may facilitate the changes to a more sustainable way of developing. The autonomy, authority and influence of the Chinese government means that their decisions may be implemented far more effectively than in western-style democracies, where lobbying, electorate and counter-arguments dilute the intentions of governments. It was therefore particularly significant when the fifth plenary session of the 16th CPC Central Committee proposed to ‘build a resource-saving and environment-friendly society’ and underscored that this will be a strategic task for China’s mid- and long-term economic and social development (Xinhuanet, 2005). In a speech on 8 November 2005, the Chinese president, Hu Jintao, said ‘Strengthening the development and use of renewable energies is a must for us to address the increasingly serious energy and environmental issues’. Furthermore, it was announced towards the end of 2005 that China will prepare its own standards for corporate social responsibility.

In a private interview conducted in July 2006, Professor Zheul (Head of the Transnational Corporations Research Centre, Ministry of Commerce, Government of the People’s Republic of China, Beijing) observed that the Chinese government is picking up on the ‘soft-competitiveness’ idea. Professor Zheul is researching CR in a study of 40 companies and claims that his work will contribute to the Chinese national standard for CR. He argues that ‘corporate responsibility’ (CR) is a more appropriate concept than CSR for Chinese companies that need to acquire a broader range of responsibilities such as to shareholders. Professor Zheul wants companies to produce the CR report first then check their performance against this standard.

In a private interview on 10 July 2006, Mr Zhai, chair of the Chinese Business Council for Sustainable Development, reported that he is developing a Chinese standard for CSR in SMEs. He also observed that the way to develop CSR in Chinese SMEs is to make use of local governments.

In addition, President Hu Jintao’s policy known as the ‘peaceful rise of China’ is based on the concept of jueqi, which means ‘emerging precipitously in a peaceful way’. Jueqi has three objectives:

(1) a move from ‘old-style’ industries to high-tech, economically efficient, low-resource-use, low-pollution industries that take full advantage of China’s labour;
(2) a mode of development that will not use violence to pillage resources and seek world hegemony and
(3) China would go beyond outdated social-management modes to develop a better balance between the rich and poor, and economic and social development in Chinese society.

As China increases its involvement in global markets, its companies will become subject to more of the pressures that bring about reforms in western companies: stakeholder influences, supply-chain issues, product and waste liabilities, life cycle assessments and voluminous legislation. If Chinese companies plan to increase their added value by improving product quality and company reputations, then they will have to compete openly with the best-in-class western-style companies and be judged by global standards. There are good arguments then as to why Chinese companies are likely to work to improve their social and environmental performance, but this does not mean that they will develop and adopt business models radically different from those in the west. However, there are aspects of Chinese culture and society that make such radical change more likely and potentially very different from change in the West. These aspects will have subtle and long-term but nonetheless substantial effects, since they affect the Chinese worldview, which is currently masked by their current enthusiasm for free-market
economics, hi-tech industrialization, consumerism and the effects of the Cultural Revolution, but which at deeper levels remain pervasive and influential in China.

For example, language alone determines that the Chinese see the world in a very different way from the West. The symbols used in Chinese writing do not differentiate a subject from the action. The Western expression ‘the dog runs’ becomes ‘running-dog’ (Lau and Ames, 1998). This is not only a matter of concern for grammarians but tells us something about the Chinese world-view. Whereas in the West we see objects that have actions done to them, for the Chinese the basic view is a world made of a flow of events in which we, people, are embedded. The importance of such distinctions for the longer-term evolution of sustainable business models in China cannot perhaps be over-emphasized: ‘Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society’ (Sapir, 1929, p. 69), and ‘We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds – and this means largely by the linguistic systems in our minds’ (Whorf, 1956, pp. 213–214). Hence, ancient Chinese philosophical understanding gave rise to Daoism, a way of understanding the way of world (i.e. Dao). ‘But it is perhaps in the West that an appreciation of the Dao will bring the ripest fruit. This is primarily because Daoism is a philosophy of action that describes humanity as inescapably part of nature rather than in any way separate from it’ (Lau and Ames, 1998, p. 19). The famous ecologist, founder of the Ecologist magazine and a significant contributor to the development of the concept of sustainable development in the West, Edward Goldsmith, wrote what is probably his most important book around this concept of Dao, The Way, an Ecological World-View (Goldsmith, 1992).

The precise significance of this different world-view for sustainable business models is part of the purpose of this kind of study. It does relate very well to realism-based business models, by which we mean those models that develop scientific studies of impacts on society and nature, including aspects of resource-base theory, rather than those derived purely from economic abstractions such as free markets (Birkin, 2000; Birkin et al., 2005a, 2005b).

It remains to be seen just how radical new Chinese business models for sustainable development turn out to be. Such transformations are however on the agenda. China’s Vice-Minister of the Environment, Pan Yue, believes that China needs to find its own development pathway that will leapfrog the technologies, policies and even the structures that prevail in many western countries (Nierenberg, 2006, pp. 18–19). This concern is particularly urgent especially for China to host the Olympic Games 2008, where Beijing is now re-known as the fog city with its air pollution. Zjeng Bijian, Chair of China Economic Reform, writes ‘...a new path of industrialization based on technology, low consumption of natural resources, low environmental pollution, and the optimal allocation of human resources’ (Nierenberg, 2006, p. 23). The necessity to integrate social, environmental and economic goals in any form of business development may, for example, mean that any new Chinese business model will be far less capital intensive than those models that have emerged in many western countries. It will be necessary, for example, to consider the plight of ecosystems when developing the economy and not to dismiss it as Desrochers (2002, p. 204) does by simply arguing that it is too big an issue for an economic analysis.

Overall, this research aims to further the knowledge and understanding of new business models for sustainable development in China. The objectives of this research are to examine in a sample of Chinese companies the actual level of sustainable development, environmental awareness and performance, community responsibility, performance barriers and drivers and sustainability issues, all of which will contribute towards the establishment of new business models for sustainable development in China.
The following sub-sections discuss the research process undertaken, starting by justification and selection of the sample under study, explanation of the research methods and data analysis approaches adopted and assessment of the limitations of the study.

The Sample

Two of the greatest difficulties in conducting this form of research is the identification and selection of suitable companies, and once selected in securing their agreement to become partners. The concept of conducting research of this nature for academic purposes is a concept which most Chinese companies found difficult to comprehend. There was therefore an understandable degree of reluctance to fully engage in the research process that arose out of this difference of comprehension. Indeed, some of the companies indicated that they thought that their participation might attract potentially adverse attention from the authorities. The other concern expressed was that if too much was said by them that this might be used by westerners to censure Chinese businesses for their performance. As a result, the research had to be conducted with a great deal of sensitivity and discretion in order to secure cooperation and to allay fears.

Initially, to identify companies, an internet search was made of Chinese companies in Guangdong Province who were signalling a degree of recognition of the importance to them of either their environmental or social performance. The indications of this were taken to be either innovations in sustainable development, certification with ISO 14000 or other recognition of their environmental or social performance such as ‘Outstanding unit for environmental protection in Guangdong Province’. In total, some 21 companies were identified in this manner, covering the electrical goods, electronics, logistics, oil and construction sectors. They were then contacted by email or directly by letter with details of the proposed research project, requesting their participation. In all but one case either no reply was received, in spite of many follow-up contacts, or those approached declined to take part, often citing no reason.

As a result, alternative methods of selection of companies were adopted that were more successful. This approach relied on personal, business contacts to introduce the research team to potential participants, making use of what is referred to in Chinese society as Guanxi. Through the good offices of an intermediary 20 companies were selected, approached and their willingness to take part secured. Selection therefore relied on a network of personal contacts between the research team, the intermediary and the companies.

Research Methods

A mixed methodology by means of questionnaire survey and interview was adopted (Tashakkori and Teddlie, 1998). A total of 20 companies were included in the pilot study, which was conducted by way of a questionnaire survey, the form being in English. Of the 20, ten were sent questionnaires, via the intermediary, and requested to fill them in. These were then returned to the researchers, again via the intermediary. The remaining ten companies were interviewed and the questionnaire completed jointly during the interview. During all of the interviews the intermediary was present to facilitate the meeting and to assist. It should be stressed that the intermediary had no personal interest and did not take any part in the interview, nor did they stand to gain in any way from the process. This ensures that bias was absent during the interview.

Interestingly for the researchers, the majority of the interviews took place as part of a meal. This practice is a common way of conducting business, as hospitality and respect are of great importance in Chinese business dealings.

The research was carried out by two researchers, one male, one female, and it is important to take note of particular characteristics/attributes that might have had an influence on the research process, over and above those noted above. Only one of the researchers (female) spoke both Mandarin and Cantonese, being of Chinese origin, and therefore conducted the face to face research. The other researcher (male) acted as note-taker and observer, intervening occasionally to suggest other lines of enquiry or request further elaboration or explanation that were not otherwise covered in the questionnaire. Answers were translated and summarized by the bilingual researcher into English for noting down on the questionnaires. It was felt that such a combination of researchers has removed the barriers of communication between interviewers and interviewees in this project. Although some of those
interviewed spoke English, it was easier to use Mandarin as the medium of communication. This presented difficulties with certain terms and concepts, as some were unknown to the participants. It also prolonged the process of filling in the questionnaire. Each interview took about 3 hours.

Analysis Methods

Content analysis was carried out to identify patterns in the evidence collected from the interview and data collected from the questionnaire survey. This was then analyzed and recognized by methods of grouping the similar responses together. Content analysis was thought to be appropriate because it provides rationalization for evidence-based qualitative data (Symon and Cassell, 1998).

Descriptive and frequency analyses were performed on fundamental questions related to size of companies, drivers and barriers to improve performance, which could be analyzed quantitatively. These statistical analyses were used owing to the small sample size in this study; advanced statistical analysis cannot be executed with a sample size of less than 30 (Morris, 2003).

Limitations

The small sample size of 20 involved in this study means that researchers cannot make decisive pronouncements and the results are not generalizable to other situations. Having a large sample, however, may not make a difference (Cassell et al., 2004). More importantly, the nature of this research makes it necessary to critically analyse the qualitative evidence collected.

Examination of the 10 returned questionnaires revealed that only seven had been completed to the degree that they contained some useful information. Most had been completed in Mandarin. In the light of the experience gained in completing the questionnaires during the interviews, this was not that surprising. Some of the terminology and concepts used in the questionnaire were unknown to the participants. Whilst these could be explained when there was face-to-face contact, this support was not available to others.

It was also clear that there was little incentive to include the level of detail that would have rendered the questionnaire more useful, as it is the follow-up questions that can yield useful insights. Most of the interviews were carried out under the setting of a meal, and this imposed restrictions on interviews as it was not always possible to pursue particular points of interest.

The limitations identified suggest that doing primary company based research in China appears to be not a straightforward task. Nonetheless, the evidence and data we gathered are sufficient for a pilot project.

Results, Analysis and Discussion

Participating Companies

The following details some of the general characteristics of the companies that participated in the pilot study. Figure 2 shows the breakdown of the number of people employed by the companies, indicating that over half of them were small or medium sized enterprises. Those with greater numbers of employees were part of larger commercial/industrial groups.

Those companies making household goods had a lower number of employees, generally less than 250. Other sectors that the companies operated in included electronics and electrical goods, light and heavy industry, and warehousing.

The export market accounted for a significant part, up to 90% in three cases and between 80 and 90% in other cases, of most companies’ production. This would prove to be an important factor in determining attitudes to improving quality. Most of the companies interviewed indicated that they had achieved ISO9000 certification, and five out of the 10 companies interviewed either had or had heard of ISO14000 certification. Interestingly, one
company in the electronics sector was foreign owned and had relocated from Hong Kong in order to lower cost of production.

**Environmental Awareness and Performance**

Most of the companies interviewed had some degree of awareness of environmental issues. Only one had any express policy of using environmentally friendly materials and processes; for the rest, there was a feeling of lack of their own agency, i.e. their inability to change things even though they might be aware or thought that there were ways of improving environmental performance. For those who knew about ISO 14000, most suggested that, for businesses of their scale, certification was not an option given their level of resources. Furthermore, it was felt that compliance with and inspection by the local Environmental Protection Bureau was the most appropriate way open to them to manage their environmental performance. This was especially the case with renewable energy, and most companies felt that there was little alternative than to use the electricity grid.

In the case of pollution control, a high degree of compliance with local environmental pollution regulations was claimed. It was evident that the main driver for this was the inspection regime of the local Environmental Protection Bureau. This was seen in a few cases as a burden on the business, and none mentioned that it acted as an incentive to improve their practices.

In the case of recycling, it was evident across all companies that the reuse of waste material was strongly developed and formed an integral part of business practices.

**Community Matters**

Community matters in the sample companies covered what might otherwise be called employee relations, such promotion, wage and training policies. Understandably this was an area of some sensitivity, given the charges of cheap labour practices often voiced. There are regulations in place that govern workers’ conditions and wages and all were well aware of these. It was clear that the majority of the companies relied on waged labour rather than the use of machines and automation. The ready availability of labour and the expense of buying and maintaining machinery have underpinned these practices. However, it was interesting to note that in two cases there was concern about a potential scarcity of skilled labour, and the effect of this was identified as driving an upward trend.

![Figure 2. Number of employees](image-url)
Another frequently voiced concern was that Chinese manufacturing was being undercut by cheaper wage economies such as Vietnam and Thailand.

On several occasions it was pointed out that concern with workers’ conditions was not only driven by a necessity to abide by the regulations governing labour and the workplace. There was also an often expressed concern for workers’ welfare and a stress laid on the mutual respect between workers and management. The importance of good relationships with employees was mentioned as being of great importance to the future prospects of companies. As a result, it was said that fair practice in respect of wages, training and promotion was one of the most important ways of demonstrating this mutual respect.
Performance Drivers and Barriers

The main drivers and barriers to improving business performance are presented in Figures 3 and 4 respectively. The strongest drivers to improve performance are related to economic incentives, with much less attention paid to social and environmental factors such as the improvement in their use of natural resources or to improve their social responsibility. A clear driver that did emerge was the influence of European environmental and quality standards as being strict and something therefore to be striven for. The desire to meet these standards was driven in part by the perception that, though tough, the European market was potentially a lucrative one, where customers were prepared to pay for a premium for goods that met the required standards, unlike the US market, where it is the lowest price that appears to be the deciding factor in consumer purchase choices.

In terms of perceived barriers, a lack of skills and knowledge feature very highly, as does the cost of making changes. These reflect concerns regarding the ability to compete effectively in demanding economic conditions. Companies were also concerned whether the higher production costs, partly arising from more expensive raw materials, can be passed onto customers.

In a small number of the companies, formal systems of performance improvement had been put in place. Some companies had rigorous quality inspection and control procedures; often those that were export driven or were part of large industrial groups. One company had instituted a system of continuous product improvement that involved all levels of staff. The general level of usage of software to support production varied from one company to another, but generally increased use correlated with increasing company size.

Sustainability Issues

During the face to face interviews, the opportunity was taken to explore sustainability issues with the companies. For most the concept of sustainable development was a difficult concept to grasp and to relate to business. This said, when the concept was explored with them it became clear from discussions that this was something that resonated with the approaches they would like to adopt. There was both awareness and an interest in the practices and processes being used in other countries and a general attitude that these were better and more environmentally friendly. The perceived barriers to being able to improve were a lack of access to finance and low availability of alternatives. For example, one company wanted to explore how it might reduce its resource and material usage to a more sustainable level and in doing so help to reduce pollution to the environment. In another company the increasing demand for its products to be certified to international standards was being used as an incentive to alter the materials used and improve its manufacturing practices. In one instance, a company indicated that although it had its own logistics fleet, improving its environmental performance was hampered by the lack of alternative fuel sources. There was however a general feeling that small and medium sized enterprises could exercise little influence over or did not possess the capacity to address matters pertaining to environmental and economic sustainability. Responsibility for such matters was often abrogated, with the view being that these were matters for government to deal with.

In the area of social practices, it was apparent that there was a particular and specifically Chinese approach to employee relations. The hierarchical relationship between employer or management and employees was conceptualized more as a partnership between them, and therefore there were mutual obligations on both parties. This was manifest in the way workers were to be treated in terms of wages, facilities and other benefits such as social insurance, which companies paid for on behalf of employees. At the same time, there was an obligation on the part of workers towards the company that appeared to go beyond that implied by a wage-based relationship. In almost all cases the concept of the company as a team was very strong. It appeared to be in the form of an implicit contract between the parties that they were working together for their mutual benefit. It was pointed out that the companies through their employment practices indirectly support several thousand people and therefore there was a responsibility that went beyond making a profit. One company’s mission statement specifically mentioned that its most valuable asset was its employees. Though not conceptualized as being a constituent of social sustainability by the companies, it could well be argued that in fact this is what it amounted to.
Discussion

The findings of this pilot study of a limited number of companies can be set against the wider backdrop of evolving environmental governance and local environmental management in China. Companies and local authorities are still coming to grips with many structural changes in the economy and institutional reforms, and it is therefore unrealistic to expect dramatic change in attitudes to have evolved and been established. For example, it has only been recently that the system was introduced whereby a portion of pollution fees are refunded to enterprises to enable them to tackle their pollution problems (Lo and Tang, 2006). The impact of the introduction of new administrative arrangements for environmental management is gradually filtering through and encouraging the more economically developed jurisdictions and enterprises to invest in environmental projects with higher social returns (Lo and Tang, 2006). Lo and Tang also point to the importance of the advocacy role of non-governmental actors and others in promoting change of attitudes and expectations as well as the more horizontal and participatory system of environmental management (Shi and Zhang, 2006). As knowledge, institutional capacity and external pressures build, it can be expected that not only will there be a strengthening of environmental capacity but also a willingness to change. As Shi and Zhang (2006) observed, greater openness and integration will be beneficial to the modernization of China’s environmental governance.

This preliminary study reveals then a small group of Chinese companies that are active in each of the so-called three pillars of sustainable development, economic, social and environmental. Economic activity does dominate in the study group companies but social and environmental sustainability is evident for example in recycling as well as in compliance with regulations and aspirations to raise their performance to be able to compete effectively in global markets.

However, no evidence was found in the companies of the influence of a distinctly Chinese appreciation of an intrinsic human in nature embeddedness that could be attributed to, for example, Daoism, although interest in and knowledge of Daoism and its contribution to Chinese values and thought was revealed during informal discussions with a small number of Beijing residents. These residents are active business people and they did express a hope that distinct Chinese values would eventually have a more visible influence on the development of China. It was only with regard to the social pillar of sustainable development that distinct Chinese values were discernable in the study companies. The relationships between employees and employers go beyond mere wage and business-utility relationships: these relationships involve hierarchical social values and a recognition of the potential for much broad mutual benefits.

This situation is perhaps not surprising. The recent history of China that would have been influential on the age-group of managers in the study group has been one of cultural revolution, of discarding the traditional values and beliefs of the past in favour of the socially beneficial materialism of Marx and Mao. However, this does not mean that the more distant past can be wholly discounted; Daoism for example is in ascendance in China (Alexander, 2006). China has a society undergoing significant change and it would be too presumptuous to disregard prematurely the potential of that unique Chinese melting pot of varied and diverse values attributable to Confucius, Quin Legalism, Marxism, Maoism and various religious schools of Buddhism, Daoism and Christianity.

The determination of the Chinese government to create and follow its own sustainable development pathways is a significant force for change. To what extent this change may draw upon the deep-seated cultural values and beliefs of the Chinese people is more than a matter of idle speculation. If the ancient Chinese beliefs can be revisited and merged effectively with the demands of a competitive, hi-tech industrial system the world as a whole stands to benefit. Goldsmith (1992) shows the theoretical way to this kind of integration, whilst Elkington (1998), Birkin et al. (2001) and Birkin (2003) outline some of the practical steps to take.

It is perhaps only a matter of time until some Chinese executive has pondered the problems of implementing industrial sustainable development as Engen (2005) has done. The successful implementation of sustainable development depends upon people and their culture, as has already been witnessed in the parallel experience of implementing corporate social responsibility: ‘Much depended on the extent to which the concept of corporate social responsibility had become an integral part of the culture. The more this was the case, the easier it was to communicate the norms and values underlying the concept’ (Cramer, 2005). It would be a moment of great significance for the world if that Chinese executive drew upon his or her own distinct Chinese traditions to
identify a route to a prosperous, secure and harmonious future in accordance with a distinctly Chinese understanding of the ways of mankind and of nature.

Conclusions

This paper reveals a lack of significant sustainable development practices in a sample of Chinese companies, although these small and medium sized companies appeared to show interest in this area and would like to further contribute to for example the triple bottom line objective. The rapid growth rate (10% of annual GDP) in China has resulted in the economic and environmental situations outpacing its own ability to develop at a sustainable level, and this is likely to have had cultural and conceptual impacts as well as practical.

Concerns were found in the sample companies regarding the need to use renewable energy, source alternative materials, close the loop of the supply chain, improve the quality of products produced, export to Europe and treat employees as a valued asset. However, little evidence could be found that these concerns have been satisfactorily pursued, and even where some companies claimed that they have been successful in improving the quality of the products produced and treating employees as an asset the performances were fragmented rather than driven strategically. This study found that lack of skills, finance and knowledge lead to an under-performance and prevent effective embedment of sustainable development within these Chinese companies.

It can be concluded that the establishment of a new business model for sustainable development in China is needed urgently. This research found that the Chinese government is asking for a review and overhaul of the existing business models in China to embed at least eco-efficiency aspects of sustainability. More research is needed into the form that sustainable business models may take in China, but it is imperative that such research does not simply seek to export western thinking and models to China, not only to allow the Chinese to fashion their own solutions with consequential greater commitment and meaning but also in the hope that the Chinese might just create truly sustainable business models in ways not yet considered in the West. In the meantime, there is evidence that China, represented by the president and government, intends to use business to meet social and environmental objectives as well as economic, and in doing so Chinese business models will have to accommodate a very significant government influence. The extent to which such business models are mainly free-market or government policy derivatives remains to be seen, but whatever the specific determinants are there has endured for millennia in China a worldview that is distinct from that in the West, and in the absence of any clear evidence of its influence, any radical and beneficial influence that classic Chinese culture may have on new sustainable business models remains more a matter of hope rather than conviction. Finally, in this spirit, we speculate that the characteristics of new sustainable business models in China would have (i) the potential to synthesize economic, social and economic aspects at least at practical levels in the way in which Chinese culture has historically embraced diverse religions and political philosophies, (ii) a deep understanding of the vagrancies of events traceable to Daoism (and embedded in the popular motif of the sinuous Chinese dragon twisting and turning unexpectedly as it progresses), (iii) following on from (ii) above, less commitment to abstract theoretical constructions and more open-mindedness to the realities of specific contexts, and (iv) an informal social performance appraisal of a company’s (or perhaps a company leader’s) social performance derived from mutual respect that, in a Chinese context, may be as powerful a measure as stock market quotations.
Appendix. Companies in the Survey

<table>
<thead>
<tr>
<th>Company name</th>
<th>Sector</th>
<th>Number of employees</th>
<th>Turnover</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crastal Technology</td>
<td>Electrical goods</td>
<td>1500</td>
<td>$38,000,000</td>
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<tr>
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References


