

# **Environmental Management and Biocentric Values: A Study of Hong Kong Executives**

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## **Abstract**

This paper describes and discusses the results of an empirical study which was carried out to investigate three major corporate environmental management issues in Hong Kong: (1) reasons for pursuing environmental management efforts; (2) managerial attitude toward environmental management; and (3) managers' ethical beliefs in environmentalism.

## **1. Introduction**

The importance of effective environmental management is increasingly being recognized by corporations. Managers are paying greater attention to environmental protection and its impact on firm performance, measured in terms of both social benefits and rates of financial return. According to a recent review of past research, key environmental management themes "include environmental influences on strategic choices, internal structure reform, supply chain management, stakeholder management and competitive advantage" [1, p.36].

Although the Hong Kong Special Administrative Region (HKSAR) Government has recently introduced several new initiatives to deal with Hong Kong's worsening problems of air pollution and waste disposal, it still has a long way to go in reaching the goals of sustainable development advocated by many environmental activist groups. In the business community of Hong Kong, there is a growing fear that Hong Kong's competitiveness as a world-class city of trade and commerce may be gradually eroded by its deteriorating physical environment and quality of life.

This paper focuses on an examination of three primary issues related to corporate environmental management in Hong Kong. They include reasons for pursuing environmental management efforts, managerial attitude toward environmental protection, and managers' ethical beliefs in environmentalism. After a short introduction and description of methodology, the results of an empirical study conducted to investigate these three issues will be reported and discussed, followed by some brief concluding remarks.

## **2. Methodology**

### **2.1 Respondents**

Respondents for this study came from an executive training program jointly offered by a prestigious overseas university and a local Hong Kong educational services agency. The program consisted of a number of typical MBA-level courses, taught in Chinese, on management, marketing, finance, and other business subjects.

### **2.2 Survey Instrument**

The survey instrument designed for data collection was a Chinese-language questionnaire, which included questions on demographics, organizational attributes, and Likert-scale items pertaining to the environmental management and ethical issues investigated in this study. The Likert-scale items were constructed after a thorough review of relevant scholarly work [2,4,5,7] and a pre-test. Furthermore, to minimize cross-cultural bias due to language differences, we employed a back-translation approach recommended by previous researchers [3,6] to ensure that the English and Chinese versions of the questionnaire were comparable.

### **2.3 Procedure**

A total of 78 managers were asked to fill out the questionnaire in a *Research Methods* class taught by one of the authors, who explained the purpose of the study to the managers and assured them that their identity would remain in anonymity and that any sensitive, personal information they provided would be kept strictly confidential. At the end of

class time, each of the managers completed his/her questionnaire. All of the 78 completed and returned questionnaires were found to be usable.

## 2.4 Analysis

Only basic descriptive analysis involving categorization of the data and calculation of percentage breakdowns was performed. We felt that such an analytical approach was adequate to meet the requirements of an exploratory study like ours.

## 3. Results and Discussion

### 3.1 Organizational and Demographical Characteristics

The respondents, who had a mean age of 37.2 years, were 45 males (57.7%) and 33 females (42.3%). The majority of the respondents (76.9%) had no religious faith and indicated that religion had little effect on their ethical beliefs and attitude toward environmental management.

Slightly over half of the respondents were either senior managers or presidents/CEOs. On average, the respondents had about 16 years of full-time work experience and were generally well educated. All but one had at least some college education or professional qualifications such as certified accountants or chartered engineers. The companies represented by the respondents were predominantly non-manufacturing organizations (82.1%). This is not a surprising result given Hong Kong's role as an international trading service center and financial hub. The respondents also reported that their companies had a mean workforce size of 971 employees and a mean yearly sales amount of HK\$6,411.17 million (roughly equivalent to US\$821.94 million).

### 3.2 Driving Forces Behind Environmental Management

As indicated in Table 1, dealing with customer reaction was found to be a highly important reason for corporate involvement in environmental management efforts. Nearly 2 out of 3 respondents considered this reason either "very important" or "extremely important" in explaining why their companies engaged in environmental management activities. Coping with governmental-legal pressure was also considered a reason of critical importance by more than 50% of the respondents. The least important reason, as rated by the respondents, however, turned out to be societal pressure. It appears that the main driving forces behind environmental management among the companies surveyed had more to do with a customer orientation approach and compliance with legal regulations. On the other hand, social norms do not seem to matter much in forcing these companies to adopt environmental management methods.

**Table 1**  
**Reasons for Involvement in Environmental Management**

Reason	Not Important	Somewhat Important	Moderately Important	Very Important	Extremely Important
<b>Societal Pressure</b>	3 (3.8)	20 (25.6)	36 (46.2)	16 (20.5)	3 (3.8)
<b>Competitive Pressure</b>	1 (1.3)	8 (10.3)	28 (35.9)	30 (38.5)	11 (14.1)
<b>Customer Reaction</b>	1 (1.3)	3 (3.8)	23 (29.5)	20 (25.6)	31 (39.7)
<b>Investor Reaction</b>	3 (3.8)	4 (5.1)	30 (38.5)	17 (21.8)	24 (30.8)
<b>Governmental-Legal Pressure</b>	0 (0.0)	6 (7.7)	27 (34.6)	25 (32.1)	20 (25.6)

**Note: Figures in parentheses are percentages. N=78.**

### 3.3 Perceived Benefits and Costs of Pursuing Environmental Protection

One key element of effective environmental management is the design of specific programs to help protect the environment rather than just offering lip service for the sake of projecting a "green" image. When asked about their views on the pros and cons arising from pursuing formal environmental protection activities, the respondents, as revealed by the data summarized in both Table 2 and Table 3, tended to express stronger agreement with gaining a competitive advantage as a benefit and relying on experts and consultants for technical assistance as a cost. This suggests a close linkage between strategic planning and managerial attitude toward environmental protection, which is consistent with the common belief that environmental management should be made an essential part of the process of strategic management. In addition, the concern that environmental protection efforts will lead to higher costs because of the need to hire experts and consultants suggests that the companies included in this study faced a possible shortage of specialized talents trained to handle unconventional technical problems.

**Table 2**  
**Perceived Benefits of Pursuing Environmental Protection**

Statement	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Pursuing environmental protection will help reduce the likelihood of having to deal with a corporate crisis.	1 (1.3)	17 (21.8)	13 (16.7)	26 (33.3)	21 (26.9)	0 (0.0)
Pursuing environmental protection will help improve corporate profitability in the long run.	1 (1.3)	17 (21.8)	17 (21.8)	17 (21.8)	24 (30.8)	2 (2.6)
Pursuing environmental protection will give a company a competitive edge over its rivals.	0 (0.0)	3 (3.8)	5 (6.4)	20 (25.6)	32 (41.0)	18 (23.1)

**Note: Figures in parentheses are percentages. N=78.**

**Table 3**  
**Perceived Costs of Pursuing Environmental Protection**

Statement	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Pursuing environmental protection will necessitate the hiring of experts and consultants to deal with specific problems.	0 (0.0)	5 (6.4)	4 (5.1)	20 (25.6)	39 (50.0)	10 (12.8)
Pursuing environmental protection will necessitate additional investment in research and development projects.	0 (0.0)	2 (2.6)	4 (5.1)	25 (32.1)	44 (56.4)	3 (3.8)
Pursuing environmental protection will result in increased production costs.	1 (1.3)	6 (7.7)	6 (7.7)	23 (29.5)	35 (44.9)	7 (9.0)

**Note: Figures in parentheses are percentages. N=78.**

### **3.4 What Changes Will Be Required?**

Environmental protection efforts, if pursued in a deliberate and coordinated fashion, can be expected to require changes in a company's existing management system. We posed several questions to the respondents regarding this issue and a breakdown of their responses is displayed in Table 4. Table 4 shows that the respondents were more likely to agree that the use of new production technology and the formulation of a new organizational strategic direction would be required to support environmental protection efforts. It is noteworthy that the respondents were least likely to agree that their companies would need to have a redesigned organizational structure to facilitate the work of environmental protection. If a new organizational strategic direction is required, which often triggers the introduction of a new strategy and application of new production methods, then certain structural changes may logically be anticipated, since structure is known to follow strategy, as suggested by main stream organization theory. The lack of consistency between the respondents' perceived changes in strategy and structure may be indicative of an unwillingness to drastically formalize environmental protection efforts.

**Table 4**  
**Required Management System Changes**

Statement	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
Pursuing environmental protection will necessitate the implementation of new production technology.	1 (1.3)	3 (3.8)	7 (9.0)	25 (32.1)	39 (50.0)	3 (3.8)
Pursuing environmental protection will necessitate the implementation of new marketing techniques.	1 (1.3)	16 (20.5)	17 (21.8)	24 (30.8)	18 (23.1)	2 (2.6)
Pursuing environmental protection will necessitate the redesign of organizational structure.	4 (5.1)	22 (28.2)	11 (14.1)	23 (29.5)	17 (21.8)	1 (1.3)
Pursuing environmental protection will necessitate the development of a new organizational strategic direction.	0 (0.0)	8 (10.3)	13 (16.7)	19 (24.4)	30 (38.5)	8 (10.3)

**Note: Figures in parentheses are percentages. N=78.**

### 3.5 Ethical Beliefs in Environmentalism

The respondents' ethical beliefs in environmentalism were measured by their level of agreement with each of the four basic rules of conduct for humans as moral agents, as well as with each of the four basic principles for dealing with conflicts between humans and nature, based on earlier work on biocentric values by Taylor [7] and Booth [2]. A concise description of these rules and principles is provided below:

- (1) *The Rule of Nonmaleficence.* Do no evil or harm to nature.
- (2) *The Rule of Noninterference.* Do not restrict the freedom of other natural organisms.
- (3) *The Rule of Fidelity.* Do not use deception (e.g., baits) for hunting and fishing.
- (4) *The Rule of Restitutive Justice.* Take compensatory action for harms done to nature.
- (5) *The Principle of Self-Defense.* Humans have a right to protect themselves if their safety is threatened by other natural organisms.
- (6) *The Principle of Proportionality.* Do not pursue nonbasic interests (e.g., sport hunting and fishing) that represent an intrinsic disrespect for nature.
- (7) *The Principle of Minimum Wrong.* It is permissible to pursue certain nonbasic interests (e.g., cutting down trees to make room for the construction of an art museum) if minimum harm is done to nature and if such pursuit contributes significantly to advancing human civilization and does not represent an intrinsic disrespect for nature.
- (8) *The Principle of Distributive Justice.* Humans and other natural organisms have an equal right to subsistence. Thus it is permissible to engage in subsistence hunting or fishing if no other food is available.

Analysis of our survey data indicated that the respondents expressed a very strong agreement with *The Rule of Nonmaleficence* and *The Rule of Noninterference*. They also showed substantial agreement with *The Principle of Minimum Wrong* and *The Principle of Distributive Justice*, although their support for *The Principle of Proportionality* was much weaker. On the whole, the results, summarized in Table 5 and Table 6, suggest that the respondents were inclined to accept a "live and let live" view on environmentalism, which is reflective of a respect for freedom and safety for all natural organisms. Moreover, the results generally suggest that the respondents were more likely to endorse the notions of giving equal rights to all natural organisms and of minimizing any damage done to the natural environment in the event of carrying out activities aimed at promoting human civilization. Finally, the results provide evidence that only a small percentage of the respondents saw sport hunting and fishing as something intrinsically disrespectful to nature. It may therefore be inferred that the majority of the respondents probably would be against discouraging or banning such activities.

**Table 5**  
**Biocentric Values: Basic Rules of Conduct for Moral Agents**

Rule	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
The Rule of Nonmaleficence	0 (0.0)	2 (2.6)	5 (6.4)	9 (11.5)	35 (44.9)	27 (34.6)
The Rule of Noninterference	0 (0.0)	2 (2.6)	5 (6.4)	11 (14.1)	36 (46.2)	24 (30.8)
The Rule of Fidelity	0 (0.0)	3 (3.8)	10 (12.8)	20 (25.6)	27 (34.6)	18 (23.1)
The Rule of Restitutive Justice	1 (1.3)	12 (15.4)	10 (12.8)	15 (19.2)	29 (37.2)	11 (14.1)

**Note: Figures in parentheses are percentages. N=78.**

**Table 6**  
**Biocentric Values: Basic Principles for Dealing with Conflicts between Humans and Nature**

Principle	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
The Principle of Self-Defense	5 (6.4)	17 (21.8)	4 (5.1)	17 (21.8)	29 (37.2)	6 (7.7)
The Principle of Proportionality	7 (9.0)	23 (29.5)	25 (32.1)	14 (17.9)	7 (9.0)	2 (2.6)
The Principle of Minimum Wrong	1 (1.3)	3 (3.8)	8 (10.3)	13 (16.7)	42 (53.8)	11 (14.1)
The Principle of Distributive Justice	4 (5.1)	2 (2.6)	6 (7.7)	12 (15.4)	32 (41.0)	22 (28.2)

**Note: Figures in parentheses are percentages. N=78.**

#### 4. Concluding Remarks

We have undertaken this exploratory study to examine three fundamental issues regarding environmental management in Hong Kong. The results presented and discussed in the preceding section add to our knowledge about how managers in larger companies in Hong Kong view environmental protection in terms of its implications for corporate competitiveness, costs/benefits, structural changes, and treatment of other natural organisms.

For future studies, we feel that smaller companies in Hong Kong may be worth investigating based on a similar survey approach employed in this research or other appropriate methodologies. Such efforts will help generate more empirical data for comparing organizations of different sizes, which will no doubt broaden our understanding about the practice of environmental management in Hong Kong.

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