HOW TO ENHANCE DEGREE OF BUSINESS GREENING?

Ching-Hsun Chang, Hui-Chen Chang
Department of Business Administration, Tamkang University, New Taipei City, Taiwan

Abstract. This study wants to explore the positive effect of motives of being green on degree on business greening in Taiwanese manufacturing industry. There are three motives that can drive companies to pursue green activities: instrumental motives, relational motives, and moral motives. The results showed that instrumental motives and moral motives were positively associated with degree of business greening. Investments in instrumental motives and moral motives were helpful for enhancing degree of business greening. Furthermore, this study found that instrumental motives and moral motives of small & medium enterprises (SMEs) were all less than those of large enterprises. It is imperative for SMEs to develop the two motives to strengthen their degree of business greening.

Keywords: motives of being green, instrumental motives, relational motives, and moral motives, degree of business greening.

I. INTRODUCTION

Under the trend of environmentalism, being green has become a critical issue for companies. Companies have to embody the concept of environmental protection into the design and package of products to increase their differentiation advantages [1, 2]. Being green is a driver for continuous innovation, new market opportunity, and wealth creation [3]. Green business is defined as a company can integrate green ideas into its business operations [4]. Adopting green strategies enhances companies to apply strict environmental standards into their green products or processes and it can create high entry barriers [5]. Pollution and resource waste can be avoided through environmental management. Therefore, companies can promote environmentally friendly design, green purchasing, and clean production to gain competitive advantage [6].

Under the trends of environmentalism, companies have increasingly noticed environmental protection. Most of the massive environmental disasters arose from industrial manufacturing activities. In this study, the research object focuses on the manufacturing industry in Taiwan. According to the previous study, successful green innovation can help companies to satisfy the requirement of environmental protection and create high entry barriers [7]. Moreover, successful business greening can create new markets and allow companies to sustain their advantages longer. When a company has an environmental vision or mission, it can minimize
production waste and enhance overall productivity [8]. Companies can enhance sustainable development which reduces environmental impacts and increases the quality of life [9].

Although previous research had widely explored the association between green innovation and competitive advantage, less prior study focus on drivers of being green. In this study, there are three motives that can drive companies to pursue green activities: instrumental motives, relational motives, and moral motives [10, 11]. This study wants to test whether companies that are highly driven by instrumental motives performed better or worse than companies with high levels of relational or moral motives. The structure of this study was as follows. A literature review was discussed in section 2, and three hypotheses were also proposed in this section. In section 3, this study described the methodology, the sample and data collection. Next, the descriptive statistics, reliability of the measurement, factor analysis, correlation coefficients between constructs, and the results of regression analysis were shown in section 4. In the end, this study mentioned the discussions about the findings and implications in section 5.

II. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

A. Motives of being green

With the growing awareness of sustainable development, environmental protection has become a subject of global concern. Companies focus on environmental management can not only avoid the trouble of environmental protests or punishments, but also improve their corporate images, develop new markets, and increase their competitive advantages [8]. It is important for companies to being green and there is a need to deal with the environmental concerns into corporate strategies [12]. Being green is an important issue for companies. However, some companies just meet the environmental standard, but some companies go beyond compliance and engage being green in actions. The motives of companies to pursue green activities are different. There are three different motives of being green: instrumental motives, relational motives, and moral motives [10, 11]. Active environment-related motives facilitate companies to develop environmentally friendly design, green purchasing, and clean production which ahead of competitors and to lead in the market. On the other hand, reactive environment-related attitude is to comply with environmental regulations and to react to the changing environment. Therefore, this study also wants to verify instrumental motives, relational motives, and moral motives of being green have positive effects on degree of business greening. Therefore, this study implies the following hypotheses:

Hypothesis 1 (H1): Instrumental motives are positively associated with degree of business greening.

Hypothesis 2 (H2): Relational motives are positively associated with degree of business greening.

Hypothesis 3 (H3): Moral motives are positively associated with degree of business greening.

B. The Research Framework of the Study

This study summarizes the literature of motives of being green and degree of business greening into a new managerial framework. The main purpose of this study is to explore the positive effects of instrumental motives, relational motives, and moral motives on degree of business greening. The consequent of the research framework is degree of business greening, while the antecedent is motives of being green. This study showed the research framework in Fig. 1.
III. METHODOLOGY AND MEASUREMENT

A. Data collection and the sample

The unit of analysis in this study was the business level. This research employed an empirical study, which collected data from companies in the manufacturing companies in Taiwan. The sample was randomly selected from “2015 Business List of Taiwan”.

The respondents of the questionnaires are the CEOs or the managers of environmental protection, marketing, production, human resource, or R&D departments in Taiwanese companies. To heighten the valid survey response rate, this research called to each company which is sampled, explained the objectives of the study and the questionnaire contents, and confirmed the names and job titles of the respondents prior to questionnaire mailing. The respondents were asked to return the completed questionnaires within two weeks through mailing.

The study referred to the past literatures to design questionnaire items for the survey. Prior to mailing to the respondents, seven experts and scholars were asked to modify the questionnaire in the first pretest. 600 questionnaires were sent to CEOs or the managers of environmental protection, marketing, production, human resource, or R&D departments. There were 143 valid questionnaires, and the effective response rate was 23.8%.

B. Definitions and measurements of the constructs

The measurement of the questionnaire items in this study was by use of “seven-point Likert scale from 1 to 7” rating from strongly disagreement to strongly agreement. The questionnaire comprised four parts. The first part of the questionnaire is the measurement of the descriptive data of companies (including the number of employees, year founded, industry sector, etc.); the second part is the measurement of instrumental motives; the third part is the measurement of relational motives; the fourth part is the moral motives. The fifth part is degree of business greening. Definitions of the constructs are as follows.

Motives of being green. There are three motives that can drive companies to pursue green activities: instrumental motives, relational motives, and moral motives [11]. Instrumental motives are driven by self-interest. Relational motives are concerned with relationships among group members. Because interests of stakeholders are diverse, companies should be attuned to promoting the interests of different stakeholders such as customers, suppliers, employees, and government and environment groups. Moral motives are concerned with ethical standards and moral principles [11].

Degree of business greening. Green business is defined as a company can integrate green ideas into its business operations [4].

Firm size: According to “Standards for Identifying Small and Medium-sized Enterprises” stipulated by Ministry of Economic Affairs of Taiwan, this study defined a “Medium & Small Enterprise (SME)” as that the number of regular employees of a firm in the manufacturing industries does not exceed 200 persons; whereas the number of regular employees of a large enterprise exceeds 200 persons. The sample
size in the study was 143, including 120 SMEs and 23 large enterprises.

IV. EMPIRICAL RESULTS
Table I showed the descriptive statistics and the correlation coefficients between the constructs of this study. The Cronbach’s α coefficients of the constructs were shown in Table II. Generally, the minimum requirement of Cronbach’s α coefficient is 0.7 [13]. The Cronbach’s α coefficients of all four constructs are more than 0.7. Therefore, the measurement of this study was acceptable in reliability. In addition, this study referred to the past literatures to design questionnaire items. Before mailing to the respondents, seven experts and scholars were asked to modify the questionnaire in the first pretest. Subsequently, in the second pretest the questionnaires were randomly mailed to twelve managers of environmental protection, marketing, production, human resource, or R&D departments of different companies, and they were asked to fill in the questionnaires and to identify ambiguities in terms, meanings, and issues. Therefore, the measurement of this study was acceptable in content validity.

A. The results of regression analysis
The results of the regression analysis in this study were shown in Table III. Instrumental motives and moral motives are positively associated with degree of business greening. However, there is no positive effect between relational motives and degree of business greening. Therefore, \( H_1 \) and \( H_3 \) are supported in this study. The empirical result shows that the more the investments in instrumental motives and moral motives, the better is their degree of business greening. Furthermore, the VIF values of this model are between 1.785 and 1.913, which were below 10, so there was no “multicollinearity” in the regression models [13].

B. Difference analysis between large enterprises and SMEs
According to “The Criteria to Identify Small and Medium-sized Enterprises” stipulated by Ministry of Economic Affairs of Taiwan, this study defined a “Small & Medium Enterprise (SME)” as that the number of regular employees of companies in the information and electronics industry does not exceed 200 persons; while the number of regular employees of a large enterprise exceeds 200 persons. The total sample size in the study was 143, including 23 large enterprises and 120 SMEs. This study compared instrumental motives, relational motives, and moral motives of Taiwanese large enterprises with those of Taiwanese small and medium enterprises (SMEs). As shown in Table IV, this study showed that instrumental motives and moral motives of SMEs were all significantly less than those of large enterprises in the manufacturing industry of Taiwan. Comparing with large companies, SMEs are lack of resources and advantages of scale and scope economies. Hence, there was the advantage of firm size for instrumental motives and moral motives in Taiwanese manufacturing industry. It is imperative for SMEs to develop their instrumental motives and moral motives to strengthen their degree of business greening.
TABLE III. EMPIRICAL RESULTS OF REGRESSION ANALYSIS

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Degree of Business Greening</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Instrumental Motives</td>
<td>0.159 (1.843)**</td>
</tr>
<tr>
<td>2. Relational Motives</td>
<td>0.080 (0.912)</td>
</tr>
<tr>
<td>3. Moral Motives</td>
<td>0.565 (2.174)**</td>
</tr>
<tr>
<td>R²</td>
<td>0.517</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.507</td>
</tr>
<tr>
<td>N</td>
<td>143</td>
</tr>
<tr>
<td>F</td>
<td>49.389**</td>
</tr>
</tbody>
</table>

Note: The number in the bracket is t-value. *p=0.1, **p=0.05, ***p=0.01.

V. CONCLUSION AND IMPLICATIONS

This study wants to explore the positive effect of motives of being green on degree on business greening in Taiwanese manufacturing industry. There are three motives that can drive companies to pursue green activities: instrumental motives, relational motives, and moral motives. The results shows that instrumental motives and moral motives are positively associated with degree of business greening. Investments in instrumental motives and moral motives are helpful for enhancing degree of business greening. Therefore, H1 and H3 are supported in this study. Based on the empirical results, this study found that instrumental motives and moral motives of small & medium enterprises (SMEs) were all less than those of large enterprises. It is imperative for SMEs to develop their instrumental motives and moral motives to strengthen their degree of business greening.

Businesses should not shirk their duties under the trends of strict environmental conventions and the popular environmentalism of consumers. These environmental trends could be turned into the momentum that drives them to enhance degree of business greening and further create green competitive advantages. The research object of this study was the manufacturing industry of Taiwan, so the future studies can focus on other industries or areas and compare with this study. This study verified hypotheses with a questionnaire survey, only providing cross-sectional data, so that this study can not observe the dynamic changes of instrumental motives, relational motives, moral motives and the degree of business greening in the process of the development through longitudinal data. Therefore, future studies can set forth toward the longitudinal study to find out the differences of the four constructs. Finally, this study hopes the research results are beneficial to managers, researchers, or governments in the industry of Taiwan, and contribute to relevant studies and future researches as reference.

References


