Exploring the Relationships between Organizational Size and Market Focus and Commitment to the Green Movement and Impacts of Organizational Culture: A Comparative Study of Jamaica and the United States

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Abstract

In this research, we examine whether organizations of differing size (large vs. small) and market focus (regional vs. national/international) may differ on several variables related to the green movement and quality management in two cultures – Jamaica and the United States. The variables examined include individual green orientation, employee perceptions of organizational green orientation, organizational culture, quality management (QM) maturity, and outcomes, in terms of positive impacts of the green movement and organizational performance. We find evidence for differences in organizational green orientation, individual green awareness, organizational culture, use of total quality management (TQM) tools, and organizational performance for large vs. small organizations and for organizations differing in market focus.

Keywords: Green Movement; Quality Management Maturity; Organizational Culture.

1. INTRODUCTION

In previous research, we find support for a proposed set of linkages among organizational green orientation, organizational culture, employee perceptions of organizational green orientation, quality management (QM) maturity, and outcomes, in terms of positive impacts of the green movement and organizational performance (Fok, et al., 2009; Zee, et al., 2009). Specifically, we find that in organizations which are oriented toward the green movement and which have organizational cultures which are supportive of the green movement, employees who believe that their organizations are aligned with the green movement are more likely to also see the organization as higher in QM maturity. In turn, outcomes in terms of overall performance and positive impact of the green movement will also be higher. In this research, we examine what impact organizational size and market focus may have upon these relationships between Jamaica and the United States.

1.1 The Green Movement

Recent events, and especially rising gasoline prices, a depressed housing market, and instabilities in the world economy, have led to considerable discussion of the current status of the "green movement", a phenomenon that has appeared over the past 20 years (Stafford, 2003). It encompasses areas such as "green buying" by consumers (Mainieri, et al., 1997), Environmentally Preferable Purchasing (EPP) by government agencies and ultimately by organizations in the private sector (Elwood & Case, 2000), Environmentally Benign Design and Manufacturing (EBDM) (Newsdesk, 2006), and Socially Responsible Investing (SRI) (Blodget, 2007). In each case, discussion has centered on purchasing, manufacturing, and investing in ways that are environmentally beneficial.

Historically, emphasis has been placed on insuring that EPP products are attractive to consumers (Ottman, Stafford & Hartman, 2006; Dale, 2008) and insuring that organizations have sufficient incentives to behave in environmentally-constructive ways (Elwood & Case, 2000).

In contrast, a second stream in the literature has suggested that the "green movement" may be in decline. Specifically, one of the "Current Issues in the Greening of Industry" (July 2007) suggests that the current "new-found environmental ethic" may be somewhat ephemeral and that "… corporate greening could go bust" in ways analogous to other recent fad-like phenomena. Moreover, Stafford (2003) points out that "… green issues as a whole appear to be taking a back seat to concerns of terrorism, war, and the economy." However, Dale (2008) points out that, with soaring energy prices pushing up the price of mainstream goods, green products are becoming just as -- or even more -- affordable these days. Stafford also notes that concerns about oil could lead to a movement to reduce dependence on oil in the U.S., and thus foster this aspect of the green movement.

During this unsettled period, one important set of questions centers upon consumers, who, themselves are employees as well and the issue of determining the extent of their commitment to the green movement. We have recently (Li, Hartman & Zee, 2009) reported our initial work to design a scale to measure commitment to the green movement. Our emphasis was on development of an instrument which would tap the key concerns of the green movement. Wikipedia, the free encyclopedia, points out that the Green Movement originated from Green Politics, a political ideology. Greens, the supporters of the green movement, advocate green politics and place a high importance on ecological and environmental goals. The greens share many ideas with the ecology, conservation, environmental, feminist, and peace movements; civil liberties, social justice and nonviolence are the issues they focus upon as well. We reported encouraging initial findings which suggest that the instrument can be used to examine consumer/employee commitment.

Environmental friendliness and sustainability are the major concerns of green products, green manufacturing and service, and green organizations (Liu & He, 2005). All of the green activities, such as reducing waste, using harmless materials, and providing organic food can be placed under the umbrella of greening. Providing a clean, ethical and safe environment to human beings and all creatures is the goal of green movement, and is one which potentially requires the efforts of all the people, industries and governments on the earth (Grewe 2002; Holden 2004; Patulny & Norris, 2005; Tiemstra, 2003).

1.2 Total Quality Management (TQM)

The review of literature has hailed the advent of quality management (QM) as offering great potential as a solution for recent problems with productivity and quality in US corporations. In turn, declining quality and productivity were offered as key offenders where US firms were seen as losing competitive advantage, especially to Japan (e.g., Bowen & Lawler, 1992; Fuld, 1992; Lawler, Mohrman & Ledford, 1992; Shearer, 1996). However, we noted other literature, which has suggested that QM programs, at least as initially introduced in a number of U.S. organizations, have represented anything but a panacea. Moreover, in at least some cases, efforts to introduce quality programs have met with problems and failures (e.g., Choi & Behling, 1997; Klein, 1991; Parker, 1991). We wondered why such differences in organizations' experiences with quality programs could have occurred. In recent research, we have shown that an important underlying issue may involve the *depth* or *qualitative aspects* of the organization's experience with QM, a term referred to as QM maturity (Fok, et al., 2000). Specifically, we reported that it is important to distinguish between the *length of time* an organization has reported that it has been "on QM," and the quality of its implementation.

Moreover, we have contended that QM maturity may be important in understanding the impact upon related systems in organizations differing in QM maturity. In terms of ideas from socio-technical systems theory, for example, we recognize that organizations must be understood as complex and highly interconnected bodies of social and technical systems. Moreover, changes to one or more of the systems will cause change throughout the systems comprising the organization (Jacques, 1952; Trist & Bamforth, 1952). From this perspective, it appears likely that, under increasing QM maturity, or as QM is implemented with more *depth* (i.e., more comprehensively, in ways which impact more parts of the organization, and the like), we should expect effects upon related systems. We have found that QM maturity impacts individuals' understanding of QM concepts, leads to increased job enrichment, affects employees' assessments of the organization's culture, as well as their assessments of how the organization is performing (Fok, et al., 2000).

We have recently shown that as organizations increase in QM Maturity, their adoption of information systems (IS) will be more user-centered and participative.

1.3 Organizational Culture

In this research, we also speculate that *organizational culture* may impact employee perceptions of the green movement and its importance to the organization and to them personally. Moreover, culture may impact perceptions about outcomes as well. Note, however, that the impacts between the culture and the perceptions may move in two directions. Specifically, as organizations become *greener*, we should see a move toward a more empowered, employee-centered, and customer-centered culture. Additionally, however, a culture, which is supportive of the green movement, should lead to better outcomes and, perhaps in part through self-selection, to employees who, themselves, are more supportive of the green movement.

A recent in-depth discussion by Zairi (2002) can illustrate what is being considered:

> The concept of sustainable development has been touted as a new planning agenda (Beatley & Manning, 1998). As such, it becomes a fundamental concept that should be an important aspect of all further policy developments (Loffler, 1998). Sustainable development is based on a perceived need to address environmental deterioration and to maintain the vital functions of natural systems for the well being of present and future generations. ***Sustainability*** is defined as 'the ability of an organization to adapt to change in the business environment to capture contemporary best practice methods and to achieve and maintain superior competitive performance' (Zairi & Liburd, 2001). This concept implies that ***sustainability*** is a means for an organization to maintain its competitiveness. Quinn (2000) has a similar idea on ***sustainability***. He describes it as the development that meets present needs without compromising the ability of future generations to meet their own needs. Gladwin et al. (1995), on the other hand, define it as 'development, which meets the needs of the present, without compromising the ability of future organizations to meet their own needs. **Total *Quality Management*** (TQM) represents an integrative approach for the pursuit of customer satisfaction (Chin et al., 2001). However, facing intense pressure of global competition, organizations need to consider incorporating the idea of ***sustainability*** in TQM in order to sustain their competitive advantage and performance improvement. In addition, the interest of organizational survival, growth and prosperity has therefore got to be concerned with not just the present, but also the future.

See also similar ideas by Hitchcock and Willard (2002), Jonker (2000), and McAdam and Leonard (2003).

1.4 Linkages to Total Quality Management

Several of the ideas expressed by Zairi (2002) point to the expansion of TQM to include sustainability and note that the expansion is being fueled by pressures to insure long-term survival under increasing emphasis on globalization. See especially Dervitsiotis (2001) and Wilkinson, Hill and Gollan (2001). Finally, and relating closely to our ideas that employee attitudes toward the green movement may be related to their feelings about TQM programs in the organization, work by Rapp and Eklund (2002) calls for employee involvement with emphasis on suggestion systems. Daily and Huang (2001) point to the importance of human resources management and especially in HR leadership in developing programs such as those fostering commitment (see also Matta, Davis, Mayer & Conlon, 1996). Underscoring the importance of employee personality, Ahmad and Schroeder (2002) have called for selection efforts centering on identifying applicants with potential fit.

1.5 Organization Size and Market Focus

In early research, Child (1972) highlighted the importance of *strategic choice* by organizational decision makers and its impact upon factors including organizational size and market focus. In turn, these choices ultimately impact organizational effectiveness (see especially Beckman, 2006; Kreitner & Kinicki, 2007). In this research, we extend the consideration of the impacts of size (large vs. small) and market focus (local vs. national/international) upon the variables in this research.

1.6 Systematic Study of Cultural Differences

The systematic examination of cultural differences has its origin in Hofstede's (1983) original study, where four dimensions of culture were identified: uncertainty avoidance, individualism/collectivism, masculinity/femininity, and power distance. The idea is that these are underlying dimensions, which can be used to systematically distinguish one culture from another.

In turn, cultural differences may lead to differences in the way the economy, organizational environments, and the workplace operate. Of interest to this research is the prospect that, in differing cultures, there may be differences in how Enterprise Resource Planning (ERP) is implemented and in satisfaction with ERP and the implementation. These ideas have recently been examined in China (Huang, et al., 2006; Liang, Xue, Boulton & Byrd, 2004; Martinsons, 2004; Poon & Yu, 2010; Soh, Kien & Tay-Yap, 2000; Wang, Klein & Jiang, 2006) and there has been limited study in Europe (Van Everdingen, Van Hillegersberg & Waarts, 2000). Reports suggest a general pattern of identifying cultural differences impacting adoption. The apparent emphasis on the study of China is understandable, given the importance of that area's importance as a growing economic engine (Wang et al, 2006). In our study, we examine cultural differences between an emerging culture – Jamaica – and the United States, a leader among developed countries.

1.7 This Research

In this research, we extend the examination of these issues to consider organizational culture, employee perceptions of organizational commitment to the green movement, the QM maturity of the organization, and organizational outcomes. We examine differences that may be occurring between Jamaica and the United States. Additionally, we consider what impact organizational size and market focus may have upon these variables between Jamaica and the United States. Three research questions are proposed in our study.

Research Question 1: Organizations in the United States and in Jamaica will have different levels of individual green orientation, organizational green orientation, organizational culture, QM maturity, organizational performance, and impacts of the green movement.

Research Question 2: Small and large organizations will have different levels of organizational green orientation, organizational culture, QM maturity, organizational performance, andreport differing impacts of the green movement.

Research Question 3: Organizations with regional vs. national/international market focus will have different levels of organizational green orientation, organizational culture, QM maturity, organizational performance, and report differing impacts of the green movement.

2. METHODOLOGY

2.1 Subjects of the Current Study

Subjects in the sample were approximately 323 managers from a wide variety of industries in the United States. The subjects were roughly 57.3 % male and 42.7% female with an average age of 41.26 (Table 1). These managers had an average of 20.64 years working experience with 11.11 years in management positions. 35.9% of the subjects are employed in a company, which has more than 500 employees, 8.7% of the subjects work in a company, which has 251 to 500 employees, 19.5% of the subjects work in a company, which has 51 to 250 employees and 35.9% of the subjects work in a company that has less than 50 employees. Among the 323 managers, 148 managers work in the "Regional Only Focus" companies and 175 managers work in the "National or International Focus" companies.

Subjects in the Jamaican sample were approximately 345 managers. Of the 345 Jamaican managers, they were roughly 43.9 % male and 56.1% female with an average age of 36.9 years. These managers had an average of 16.02 years working experience with 6.75 years in management positions. 51.3% of the subjects are employed in a company, which has more than 500 employees, 13.8% of the subjects work in a company, which has 251 to 500 employees, 22% of the subjects work in a company which has 51 to 250 employees and 12.9% of the subjects work in a company which has less than 50 employees. Among the 345 managers, 144 managers work in the "Regional Only Focus" companies and 201 managers work in the "National or International Focus" companies.

In this study, we define a company with more than 500 employees as a large size organization and a company with less than 50 employees as a small size organization. Subjects responded to a survey asking about their perceptions and experiences about green movement, quality management, and organizational culture in their own firms. In this study, we will concentrate on the relationships among perceptions of support for the organizational green movement, organizational culture, QM maturity, organizational performance, and the impact of green movement.

INSERT TABLE 1 ABOUT HERE

2.2 Instrument

2.2.1 Organizational Green Orientation

In this research, we developed survey questions to measure the Organizational Green Movement. The instrument asks the respondents to indicate how important for the organization to design, produce, and promote environmentally friendly goods and services, reuse or refurbish components, provide a safe workplace, preserve employees' well-being, and make ethical and socially responsible decisions. Table 2 provides the questions and shows the results of our factor analysis.

INSERT TABLE 2 ABOUT HERE

As Table 2 indicates, we obtained a two-factor solution with 71.61% of the variance explained in the case of the Organizational Green Orientation items. We have labeled Factor 1 as "Green Products/Services" and Factor 2 as "Green Workplace."

2.2.2 Individual Green Orientation

In this study, we developed survey questions to measure the Green Orientation at the personal/individual level. The instrument includes questions on individual's participation on daily green activities such as recycling papers and plastic, using energy-efficient and eco-friendly products, and buying organic food. In addition, there are questions on individual's belief and value towards the green movement. We obtained a three-factor solution with 50.66% of the variance explained in the case of the Individual Green Orientation items. We have labeled Factor 1 as "Green Actions", Factor 2 as "Green Consciousness" and Factor 3 as "Green Belief." Table 3 provides the items and shows the results of our factor analysis.

INSERT TABLE 3 ABOUT HERE

2.2.3 Organizational Culture

Based on previous research (Fok et al., 2000, 2001; Hartman, Fok & Zee, 2009), we measured the Organizational Culture by constructing a series of paired opposite items which asked whether the organization's climate should be described as open vs. closed, soft vs. tough, competitive vs. collaborative, and the like. Table 4 below provides the items and shows the results of our factor analysis. We obtained a two-factor solution in the case of the Organizational Culture items and have labeled Factor 1 as "TQM Culture" and Factor 2 as "People-Friendly Culture." 49.64% of the variance was explained by these two factors.

INSERT TABLE 4 ABOUT HERE

2.2.4 Quality Management (QM) Maturity

In this study, QM maturity refers, in a qualitative sense, to the *degree* of QM implementation in an organization. We suggest, and previous research has shown (Ahire et al., 1996; Flynn et al., 1994; Fok et al., 2000, 2001; Patti, 2001; Saraph et al., 1989) that it can be measured by examining the perceived use of QM programs. These ideas assume that if an organization has more completely followed the QM philosophy, QM programs should be used throughout the organization and in various functional areas, rather than in isolation. Moreover, if "quality is indeed everyone's job," where QM is more fully in place, employees should be aware of the various QM tools and techniques that are in use. If an organization, on the other hand, has very little or no experience with QM, the opposite is expected to occur. In earlier research (Fok et al., 2000, 2001; Patti, 2001), we began the process of developing a measure of QM maturity. The instrument we developed dealt with perceived program *use* and asked respondents whether seven programs were in use in the organization, with a range from "not used" to "high usage." In this research, consistent with our earlier research, the QM maturity instrument was used to gauge QM maturity. We conducted a factor analysis to identify the underlying dimensionality. Two factors emerged from the "Usage" items. The first factor appeared to include all the traditional quality management programs and was termed "Basic TQM Tools." The second factor was termed "Advanced TQM Tools" which includes programs like Black Belt training and Six Sigma programs. 62.42% of the variance was explained by these two factors. Table 5 below provides the items and shows the results of our factor analysis.

INSERT TABLE 5 ABOUT HERE

2.2.5 Impact of Green Movement

The instruments included are items such as "Provide better products," "Provide better services," "Have better relationship with customers," "Have better relationship with suppliers," "Have better reputation,"

"Provide better working environment," "Increase profits," "Reduce costs," and "Improve productivity." Factor analysis produced a single-factor solution and we named it "Benefits of Green Movement." 64.88% of the variance was explained by the factor.

2.2.6 Organizational Performance

The Organizational Performance items were primarily adapted from the Malcolm Baldridge National Quality Award outcome assessment measures. The Baldridge Awards are designed to identify organizations, which are performing in an exceptional manner and include criteria for identifying excellence. We used the Baldridge criteria in the form of a scale, which asks respondents to provide their perceptions about their organizations along Baldridge lines. The resulting scale has been used and reported in previous research (Fok, et al., 2000, 2001; Hartman, Fok & Zee, 2009). The instrument included are items such as "Overall, my company is performing well," "Overall, morale in my company is high," "Overall, I am satisfied with the use of technology in my company," and the like. Factor analysis in this study indicated that one factor was present. We named the factor as "Organizational Success."

2.2.7 Organization Size and Market Focus

In this research, we extend the respondents to report the approximate number of employees in their organizations. Those who reported with less than 50 employees are grouped into the small size group and those with more than 500 employees are grouped into the large size group while those with between 50 and 500 employees are dropped from the analysis. Additionally, the instrument asks the market focus of the organizations. They can check one or more from local, national, or international. Those checked national and/or international are grouped into the "National/International" group and those checked local but not in national or international are grouped into the "Local-only" group.

3. RESULTS

Our first research question suggested that organizations in the United States and in Jamaica would have different levels of organizational and individual green orientation, organizational culture, QM maturity, organizational performance, and impact of green movement. As shown in Table 6, the MANOVA results are significant with a p-value of .000, which implies that organizations in United States were significantly different from organizations in Jamaica, and that subjects reported different levels of organizational and individual green orientation, organizational culture, QM maturity, organizational performance, and impacts of the green movement. Among the nine factors, we found that "Green Products/Services", "Green Actions", "Green Belief", "TQM Culture", "Use of Advanced TQM Tools", and "Organizational Success" are statistically significant at the levels of .05. For "Green Products/Services", the mean factor score of Jamaican organizations (.201) is greater than that of United States organizations (-0.195). The results imply that the Jamaican respondents have stronger belief that Jamaican organizations are inclined to develop green products or services than American respondents evaluating their organizations. For "Green Actions", the mean factor score of Jamaican sample (0.327) is greater than that of American sample (-0.322). For "Green Belief", the mean factor score of American sample (0.207) is greater than that of Jamaican sample (-0.218).

The results suggest that respondents in the Jamaica perceive themselves to have higher level of green practices than those in the United States; however, individuals in the United States perceive themselves to have higher level of green awareness than those in Jamaica. For "TQM Culture", the mean factor score of Jamaican organizations (.185) is greater than that of the United States organizations (-.208). The result implies that Jamaican organizations achieve higher level of teamwork, quality-oriented and innovation promoting than those organizations in the Unites States. For "Use of Advanced TQM Tools", the mean factor of Jamaican organizations (.122) is greater than that of the United States (-.079). The results imply that Jamaican organizations have higher level of usage of advanced TQM tools than American organizations. For "Organizational Success", the mean factor score of the United States organizations (.390) is greater than that of Jamaican organizations (-.363). The results suggest that American organizations achieve higher level of organizational performance/success than those organizations in Jamaica.

INSERT TABLE 6 ABOUT HERE

Our second research question suggested that small and large organizations would have different levels of organizational green orientation, organizational culture, QM maturity, organizational performance, and impact of green movement.

As shown in Table 7, the MANOVA results are significant with p-value of .000, which implies that small size organizations were significantly different from large size organizations, and that respondents reported different levels of organizational green orientation, organizational culture, QM maturity, organizational performance, and impacts of the green movement. Among the eleven factors, we found that "Green Products/Services", ""Green Actions", "Green Belief", "TQM Culture", "People-Friendly Culture", "Use of Traditional TQM Tools", "Use of the Advanced TQM Tools", and "Organizational Success" are statistically significant at the levels of .05. For "Green Products/Services", the mean score of large size organizations (.154) is greater than that of small size organizations (-.069). The results suggest that large size organizations are more inclined to produce green products or services. For "Green Actions", the average score of the large size organizations (.067) is greater than that of small size organizations (-.041). The results suggest that large size organizations have higher level of green practices than small size organizations. For "Green Belief", the mean score of large size organizations (-.051) is less than that of smaller size organizations (.088). The results indicate that small size organizations have higher level of green awareness than large size organizations. For "TQM Culture", the mean score of large size organizations (-.070) is greater than that of small size organizations (-.131).

The results suggest that large size organizations are more innovative, quality oriented than small size organizations. For "People-Friendly Culture", the average score of large size organizations (-.061) is less that that of small size organizations (.280). The results suggest that small size organizations are more formal and competitive than large size organizations. For "Use of Basic TQM Tools", the mean factor score of large size organizations (0.218) is greater than that of small size organizations (-0.297). The results imply that large size organizations have higher levels of usage of traditional TQM tools than small size organizations. For "Use of Advanced TQM Tools", the average score of large size organizations (0.044) is less than that of small size organizations (.092). The results indicate that small size organizations have higher levels of usage of advanced TQM tools than large size organizations. For "Organizational Success", the mean factor score of large size organizations (-0.032) is less than that of small size organizations (0.283). The results suggest that small size organizations are perceived to have higher level of performance than large size organizations.

INSERT TABLE 7 ABOUT HERE

Research Question 3 suggested that organizations with local vs. national/international market focus will have different levels of organizational green orientation, organizational culture, QM maturity, organizational performance, and impact of green movement. The MANOVA results are summarized in Table 8. The MANOVA results are significant with a p-value of .001, which implies that regional-only focus organizations were significantly different from national or international focus organizations with respect to levels of organizational green orientation, organizational culture, QM maturity, organizational performance, and/or impact of green movement. Among the eleven factors, we found "Green Products/Services", "Green Actions", "Green Belief", "TQM Culture", "Use of Advanced TQM Tools", and "Organizational Success" are significant at the levels of .05. For "Green Products/Services", the mean score of regional-only focus organizations (.103) is greater than that of national or international focus organizations (-.017). The results indicate that regional-only focus organizations are more inclined to develop green products or services than national or international focus organizations. For "Green Action", the mean score of regional-only focus organizations (-.129) is smaller than that of national or international focus organizations (0.155). For "Green Belief", the average score of regional-only focus organizations (.008) is smaller than that of national or international focus organizations (0.029).

The results suggest that national or international focus organizations have higher level of green practices and green awareness than those in the regional-only focus organizations. For "TQM Culture", the average score of regional-only focus organizations (0.002) is greater than that of national or international focus organizations (-.203). The results suggest that regional-only focus organizations are more proactive and quality oriented than national or international focus organizations. For "Use of Advanced TQM Tools", the average score of regional-only focus organizations (.023) is smaller than that of national or international focus organizations (0.113). The results indicate that national or international focus organizations report higher level of usage of advanced TQM tools than regional-only focus organizations. For "Organizational Success", the mean score of regional-only focus organizations (.103) is smaller than that of national or international focus organizations (0.148). The results suggest that national or international focus organizations are perceived to have higher level of performance than regional-only focus organizations.

INSERT TABLE 8 ABOUT HERE

4. DISCUSSION AND CONCLUSIONS

In this research, we examine whether there are differences between the US and Jamaican organizations in employee perceptions of and reactions to the "green movement." Our MANOVA results found significant differences between the US and Jamaican organizations in six aspects: "Green Products/Services", "Green Actions", "Green Belief", "TQM Culture", "Use of the Advanced TQM Tools", and "Organizational Success." The American organizations had significantly higher scores in "Individual Green Belief" and "Organizational Success" than the Jamaican organizations. The Jamaican organizations, on the other hand, scored higher in "Green Products/Services", "Individual Green Actions", "TQM Culture", and "Use of Advanced TQM Tools." In this study, we have also investigated whether respondents in large vs. small organizations would report differing experiences with a number of aspects of TQM. We looked for differences in reported levels of green orientation, organizational culture, QM maturity, organizational performance and reported impacts of the green movement. Where organizational size is considered, our results suggest that respondents from larger organizations are not only more inclined to produce environmentally friendly products or services but also have higher level of green practices than those from smaller organizations. We found larger organizations embrace culture that focuses more on quality, team, and being proactive, whereas smaller organizations embrace culture that focuses more on being soft, informal, and decentralized. The results indicate that respondents from larger organizations report higher usage of traditional TQM tools than those from smaller organizations.

However, respondents from small organizations report higher usage of advanced TQM tools than those from smaller organizations. Respondents from smaller organizations reported higher levels of organizational performance than those from larger organizations. What may be occurring is that the smaller organizations are, perhaps, more advanced in use of TQM tools and possibly are using them as a way of controlling performance. Possibly, the larger organizations are so large that respondents are less sure about overall performance. Where regional vs. national/international focus is considered, we found that respondents from the organizations with regional focus are more inclined to produce green products or services and embrace culture that focuses more on quality and team oriented and more proactive than those from organizations with national/international focus. However, organizations with national/international focus report higher level of green practices, stronger individual green awareness, higher level of usage advanced TQM tools and higher level of organizational performance than those with regional focus.

Future study can examine whether our speculations on why differences are occurring are accurate. Are the US organizations less supportive of the green movement than Jamaican organizations? On a superficial level, at least, organizations with cultures that would be expected to emphasize care and concern would also be expected to be supportive of the green movement. Study measuring concrete organizational actions - rather than perceptions could be useful in supporting whether differences are *real*.

Moreover, we did not find reported differences in several of the variables examined in this study, and most notably those related to green orientation and perceptions. Yet it seems reasonable to expect differences among organizations, which differ in important facets such as size and focus. Is it possible that the green movement is evolving and that organizations in general have had insufficient time to come to an understanding of what the movement can mean? Again, future research can be directed to examining these ideas.

REFERENCES

Ahire, S. L., Golhar, D. Y. and Waller, M. A. (1996) 'Development and validation of TQM implementation constructs', *Decision Sciences*, Vol. 27, No. 1, pp. 23-56.

Ahmad, S. and Schroeder, R. G. (2002) 'The importance of recruitment and selection process for sustainability of total quality management', *International Journal of Quality & Reliability Management*, Vol. 19, No. 5, pp. 540-550.

Beckman C. M. (2006) 'The influence of founding team company affiliations on firm behavior', *Academy of Management Journal*, Vol. 49, No. 4, pp. 741-758.

Beatley, T. and Manning, K. (1998) *The ecology of place: planning for environment, economy and community*, Washington DC: Island Press.

Blodget, H. (2007) 'The conscientious investor: an unsentimental guide to socially responsible investing', *Atlantic Monthly*, Vol. 300, No. 3, pp. 78-89.

Bowen, D. E. and Lawler, E. E. (1992) 'Total quality-oriented human resources management', *Organizational Dynamics*, Vol. 20, pp. 29-41.

Child, J. (1972) 'Organization structure, environment and performance: the role of strategic choice', *Sociology: The Journal of the British Sociological Association*, Vol. 6, pp. 1-22.

Chin, K. S., Pun, K. F. and Hua, H. M. (2001) 'Consolidation of China's quality transformation efforts: a review', *International Journal of Quality & Reliability Management*, Vol. 18, No. 8, pp. 836-853.

Choi, T. Y. and Behling, O. C. (1997) 'Top managers and TQM success: one more look after all these years', *Academy of Management Executive*, Vol. 11, No. 1, pp. 37-48.

Current Issues in the Greening of Industry (2007), *Business Strategy and the Environment*, Vol. 16, No. 6, pp. 456-457.

Daily, B. F. and Huang, S. (2001) 'Achieving sustainability through attention to human resource factors in environmental management', *International Journal of Operations& Production Manageement*, Vol. 21, Issue 12, pp. 1539-1552.

Dale, A. (2008) 'Enterprise: green products gain from new price equation; they find new buyers as high energy costs hurt regular brands', *Wall Street Journal*, Eastern edition: B7 (24 June, 2008)

Dervitsiotis, K. (2001) 'Emerging elements of a world view for sustainable quality', *Total Quality Management*, Vol. 12, No. 7, pp. 817-824.

Elwood, H. and Case, S. (2000) 'Private sector pioneers', *Greener Management International*, Vol. 29, pp. 70-94.

Flynn, B. B., Schroeder, R. G. and Sakakibara, S. (1994) 'A framework for quality management research and an associated measurement instrument', *Journal of Operations Management*, Vol. 11, pp. 339-366.

Fok, L. Y., Fok, W. M. and Hartman, S. J. (2001) 'Exploring the relationship between total quality management and information systems development', *Information & Management*, Vol. 38, pp. 355-371.

Fok, L. Y., Hartman, S. J., Patti, A. L. and Razek, J. R. (2000) 'The relationship between equity sensitivity, growth need strength, organizational citizenship behavior, and perceived outcomes in the quality environment: a study of accounting professionals', *Journal of Social Behavior and Personality*, Vol. 15, No. 1, pp. 99-120.

Fok, L. Y., Zee, S. M. L. and Hartman, S. J. (2009) 'Employee perceptions of organizational commitment to the green movement, quality management maturity, and outcomes', *The Coastal Business Journal*, Vol. 8, No. 1, pp. 1-17.

Fuld, L. M. (1992) 'Achieving total quality through intelligence', *Long Range Planning*, Vol. 25, No. 1, pp. 109-116.

Gladwin, T. H. N., Kennely, J. J., Shelomith, B. C. and Krause, T. (1995) 'Shifting paradigms for sustainable development: implications for management theory and research', *Academy of Management Review*, Vol. 20, pp. 874-907.

Grewe, T. (2002) 'Sustainability and the finance officer', *Government Finance Review*, Vol. 18, No. 1, p. 5.

Hartman, S. J., Fok, L. Y. and Zee, S. M. (2009) 'Linkages among employee perceptions of organizational commitment to the green movement and organizational culture, and their perceived impacts upon outcomes', *Journal of Organizational Culture, Communications and Conflict*, Vol. 13, No. 2, pp. 27-44.

Hofstede, G. (1983) *Culture's consequences: international differences in work-related values*, London: Sage Publications Ltd.

Holden, E. (2004) 'Towards sustainable consumption: do green households have smaller ecological footprints?' *International Journal of Sustainable Development*, Vol. 7, No. 1, pp. 44-58.

Hitchcock, D. and Willard, M. (2002) 'Sustainability: enlarging quality's mission', *Quality Progress*, Vol. 35, No. 2, pp. 43-47.

Huang L., Boehm, B., Hu, H., Ge, J., Lü, J. and Qian, C (2006) 'Applying the Value/Petri Process to ERP Software Development in China', *Proceedings of 28th International Conference of Software Engineering (ICSE)*, Shanghai, China.

Jacques, E. (1952) *The changing culture of a factory*, New York: Dryden Press.

Jonker, J. (2000) 'Organizations as responsible contributors to society: linking quality, sustainability and accountability', *Total Quality Management*, Vol. 11, No. 4/5/6, pp. 741-746.

Klein, J. A. (1991) 'A reexamination of autonomy in light of new manufacturing practices', *Human Relations*, Vol. 44, No. 1, pp. 21-38.

Kreitner, R. & Kinicki, A. (2007) *Organizational Behavior*, Boston: McGraw-Hill.

Lawler, E. E., Mohrman, S. A. and Ledford, G. E. (1992), *Employee Involvement and Total Quality Management*, San Francisco: Josey-Bass.

Li, J., Hartman, S. J. and Zee, S. M. L. (2009) 'A study of green movement perceptions and behavioral intentions', *International Journal of Sustainable Economy*, Vol. 1, No. 2, pp. 133-143.

Liu, Y. and He, M. (2005) 'Design of "green grade" rating system for the environmental performance assessment of a firm', *International Journal of Management and Enterprise Development*, Vol. 2, No. 2, pp. 183-203.

Liang, H., Xue, Y., Boulton, W. R. and Byrd, T. A. (2004) 'Why Western vendors don't dominate China's ERP market', *Communications of the ACM*, Vol. 47, No. 7, pp. 69-72.

Loffler, P. (1998) 'Sustainable development in Europe', *A Cause for Regional Environment*, Vol. 8, pp. 113-120.

Matta, K., Davis, J., Mayer, R. and Conlon, E. (1996) 'Research questions on the implementation of total quality management', *Total Quality Management*, Vol. 7, No. 1, pp. 39-49.

McAdam, R. and Leonard, D. (2003) ' Corporate social responsibility in a total quality management context: opportunities for sustainable growth', *Corporate Goverance*, Vol. 3, No. 4, pp. 36-45.

Mainieri, T., Barnett, E. G., Valdero, T. R., Unipan, J. B. and Oskamp, S. (1997) 'Green buying: the influence of environmental concern on consumer behavior', *Journal of Social Psychology*, Vol. 137, No. 2, pp. 189-204.

Martinsons, M. G. (2004) 'ERP in China: one package, two profiles', *Communications of the ACM*, Vol. 47, No. 7, pp. 65-68.

Newsdesk (2006) 'Sustainable economic competitiveness', *Manufacturing Engineering*, Vol. 137, No. 3, pp. 27-28.

Ottman, J. A., Stafford, E. R. and Hartman, C. L. (2006) 'Avoiding green marketing myopia', *Environment*, Vol. 48, No. 5, pp. 22-36.

Parker, M. (1991) 'Participation or control?' *Academe*, Vol. 77, No. 4, pp. 44-48.

Patti, A. L., Hartman, S. J. and Fok, L. Y. (2001) 'Investigating organizational quality management maturity: an investment validation study', *International Journal of* Quality & Reliability Management, Vol. 18, No. 9, pp. 882-899.

Patulny, R. and Norris, K. (2005) 'Sustaining interest: are green values converting to votes?' *International Journal of Environment, Workplace and Employment*, Vol. 1, No. 3/4, pp. 296-309.

Poon P. and Yu Y. (2010) 'Investigating ERP systems procurement practice: Hong Kong and Australian experiences', *Information and Software Technology*, Vol. 52, pp. 1011– 1022.

Rapp, C. and Eklund, J. (2002) 'Sustainable development of improvement activities -the long-term operation of a suggestion scheme in a Swedish company', *Total Quality Management*, Vol. 13, No. 7, pp. 945-969.

Quinn, B. (2000) 'Sustaining New Jersey's industrial future', *Pollution Engineering*, Vol. 32, No. 13, pp. 25-27.

Saraph, J. V., Benson, G. P. and Schroeder, R. G. (1989) 'An instrument for measuring the critical factors of quality management', *Decision Sciences*, Vol. 20, pp. 810-829.

Shearer, C. (1996) 'TQM requires the harnessing of fear', *Quality Progress*, Vol. 29, No. 4, pp. 97-101.

Stafford, E. R. (2003) 'Energy efficiency and the new green marketing', *Environment*, Vol. 45, No. 3, pp. 8-10.

Soh, C., Kien, S. S. and Tay-Yap, J. (2000) 'Cultural fits and misfits: is ERP a universal solution?' *Communications of the ACM*, Vol. 43, No. 4, pp. 47-51.

Tiemstra, J. P. (2003) 'Environmental policy for business and government', *Business and Society Review*, Vol. 108, No. 1, pp. 61-69.

Trist, E. L. and Bamforth, K. W. (1952) 'Some social and psychological consequences of
the longwall method of coal mining', *Human Relations*, Vol. 4, pp. 3-38.

Van Everdingen, Y., Van Hillegersberg, J. and Waarts, E. (2000) 'Enterprise resource planning: ERP adoption by European midsize companies', *Communications of the ACM*, Vol. 43, No. 4, pp. 27-31.

Wang, E., Klein, G. and Jiang, J. (2006) 'ERP misfit: country of origin and organizational factors', *Journal of Management Information Systems*, Vol. 23, No. 1, pp. 263-292.

Wilkinson, A., Hill, M. and Gollan, P. (2001) 'The sustainability debate', *International Journal of Operations & Production Management*, Vol. 21, No. 12, pp. 1492-1502.

Zairi, M. (2002) 'Beyond TQM implementation: the new paradigm of TQM sustainability', *Total Quality Management*, Vol. 13, No. 8, pp. 1161-1172.

Zairi, M. and Liburd, I. M. (2001) 'TQM sustainability – a roadmap for creating competitive advantage', *Integrated Management, Proceeding of the 6th International Conference on ISO 9000 and TQM*, Paisley, Ayr, Scotland, 17-19 April, pp. 452-461.

Zee, S. M. L., Hartman, S. J. and Fok, L. Y. (2009) 'Commitment to the green movement by organizations and individuals, impacts of organizational culture, and perceptions of impacts upon outcomes', *The International Journal of Applied Management and Technology*, Vol. 7, No. 1, pp. 133-162.

Table 1 Subjects' Demographic Information

		USA	Jamaica
Gender	Male	185 (57.3%)	151 (43.9%)
	Female	138 (42.7%)	193 (56.1%)
	Valid N (list wise)	323 (100.0%)	344 (100.0%)
Number of Years	Age	41.26	36.90
	Working Experience	20.64	16.02
	Managerial Experience	11.11	6.75
	Valid N (list wise)	317	330
Number of Employees	Over 500	116 (35.9%)	175 (51.3%)
	251-500	28 (8.7%)	47 (13.8%)
	51-250	63 (19.5%)	75 (22.0%)
	Less than 50	116 (35.9%)	44 (12.9%)
	Valid N (list wise)	323 (100.0%)	341 (100.0%)

Table 2 Factor Analysis on Organizational Green Orientation

Rotated Component Matrix[a]

	Component	
	1	2
Produce environmentally friendly goods and services	.880	.133
Design environmentally friendly goods and services	.904	.134
Reuse or refurbish a product's components	.727	.292
Promote environmentally friendly causes and products	.780	.301
Provide a safe and healthy workplace for employees	.222	.818
Preserve employees' physical and emotional well-being	.168	.804
Make ethical and socially responsible decisions	.200	.800

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.717	53.097	53.097	3.717	53.097	53.097	2.847	40.667	40.667
2	1.296	18.514	71.611	1.296	18.514	71.611	2.166	30.944	71.611
3	.568	8.109	79.720						
4	.506	7.227	86.947						
5	.447	6.382	93.329						
6	.299	4.278	97.607						
7	.168	2.393	100.000						

Extraction Method: Principal Component Analysis.

Table 3 Factor Analysis on Individual Green Orientation

Rotated Component Matrix[a]

	Component		
	1	2	3
Recycle paper, plastic, or aluminum products	.582	.334	.157
Drive a hybrid or electric car	.630	.096	.002
Install low-energy lights in your home	.269	.481	-.281
Look for the products with the green recycling sign	.744	.155	-.154
Use the eco-friendly, reusable shopping bag	.747	.137	-.089
Buy organic food	.647	.098	-.027
Turn off lights and equipment(s) when not in use	-.005	.798	-.021
Follow the green-building guides for building a home	.627	.278	-.056
Look for "Energy Star" when purchase an appliance	.513	.357	.066
Purchase eco-friendly cleaning products	.714	.044	-.228
Bank at an eco-friendly bank	.560	.065	-.175
Run your home on renewable energy	.629	.209	.070
The city or state should provide an ability to recycle	.238	.641	-.029
It is inconvenient being "green"	-.076	-.094	.931

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 4 iterations.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.951	35.366	35.366	4.951	35.366	35.366	4.277	30.549	30.549
2	1.127	8.049	43.415	1.127	8.049	43.415	1.717	12.263	42.811
3	1.015	7.249	50.664	1.015	7.249	50.664	1.099	7.852	50.664
4	.919	6.566	57.230						
5	.811	5.792	63.021						
6	.758	5.417	68.438						
7	.734	5.245	73.683						
8	.707	5.049	78.732						
9	.620	4.427	83.159						
10	.577	4.122	87.281						
11	.497	3.548	90.829						
12	.486	3.473	94.302						
13	.411	2.935	97.236						
14	.387	2.764	100.000						

Extraction Method: Principal Component Analysis.

Table 4 Factor Analysis on Organizational Culture

Rotated Component Matrix[a]

	Component	
	1	2
Open	.676	-.292
Soft	-.307	.459
Collaborative	-.018	.679
Informal	.039	.665
Team-oriented	.663	.090
Decentralized	.127	.618
Participative	.693	-.098
Quality-oriented	.748	.061
Innovation-promoting	.787	.019
Proactive	.829	.081

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.364	33.641	33.641	3.364	33.641	33.641	3.355	33.550	33.550
2	1.600	15.999	49.640	1.600	15.999	49.640	1.609	16.090	49.640
3	.943	9.433	59.073						
4	.833	8.332	67.405						
5	.759	7.585	74.991						
6	.716	7.158	82.149						
7	.566	5.665	87.813						
8	.501	5.014	92.828						
9	.445	4.454	97.282						
10	.272	2.718	100.000						

Extraction Method: Principal Component Analysis.

Table 5 Factor Analysis on Quality Programs Usage Items

Rotated Component Matrix[a]

	Component	
	1	2
QM Program	.801	.075
Quality Circles	.745	.180
Statistical process control	.704	.181
Employee suggestion channels	.636	.103
Employee quality training programs	.787	.019
Quality Improvement seminars	.781	.031
Six Sigma programs	.222	.849
Black Belt training	.009	.902

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
a. Rotation converged in 3 iterations.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.575	44.683	44.683	3.575	44.683	44.683	3.376	42.204	42.204
2	1.419	17.741	62.424	1.419	17.741	62.424	1.618	20.221	62.424
3	.798	9.970	72.394						
4	.615	7.683	80.078						
5	.481	6.014	86.092						
6	.414	5.171	91.263						
7	.383	4.793	96.057						
8	.315	3.943	100.000						

Extraction Method: Principal Component Analysis.

Table 6 Summary of MANOVA results – U.S. vs. Jamaica

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.003	.141[a]	11.000	572.000	1.000
	Wilks' Lambda	.997	.141[a]	11.000	572.000	1.000
	Hotelling's Trace	.003	.141[a]	11.000	572.000	1.000
	Roy's Largest Root	.003	.141[a]	11.000	572.000	1.000
country	Pillai's Trace	.288	21.065[a]	11.000	572.000	.000
	Wilks' Lambda	.712	21.065[a]	11.000	572.000	.000
	Hotelling's Trace	.405	21.065[a]	11.000	572.000	.000
	Roy's Largest Root	.405	21.065[a]	11.000	572.000	.000

a. Exact statistic

b. Design: Intercept+country

Dependent Variable	Significance
Green Products/Services	.000**
Green Workplace	.161
Green Actions	.000**
Green Consciousness	.374
Green Belief	.000**
TQM Culture	.000**
People-Friendly Culture	.372
Use of Basic TQM Tools	.155
Use of Advanced TQM Tools	.015**
Benefits of Green Movement	.481
Organizational Success	.000**

The F tests the effect of U.S. vs. Jamaican organizations. This test is based on the linearly independent pairwise comparisons among the estimated marginal means.

** F test is significant at the 0.05 level.

Table 7 Summary of MANOVA results - Organizational Size

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.045	1.633[a]	11.000	382.000	.087
	Wilks' Lambda	.955	1.633[a]	11.000	382.000	.087
	Hotelling's Trace	.047	1.633[a]	11.000	382.000	.087
	Roy's Largest Root	.047	1.633[a]	11.000	382.000	.087
country	Pillai's Trace	.202	8.772[a]	11.000	382.000	.000
	Wilks' Lambda	.798	8.772[a]	11.000	382.000	.000
	Hotelling's Trace	.253	8.772[a]	11.000	382.000	.000
	Roy's Largest Root	.253	8.772[a]	11.000	382.000	.000
size	Pillai's Trace	.175	7.369[a]	11.000	382.000	.000
	Wilks' Lambda	.825	7.369[a]	11.000	382.000	.000
	Hotelling's Trace	.212	7.369[a]	11.000	382.000	.000
	Roy's Largest Root	.212	7.369[a]	11.000	382.000	.000
country * size	Pillai's Trace	.044	1.583[a]	11.000	382.000	.101
	Wilks' Lambda	.956	1.583[a]	11.000	382.000	.101
	Hotelling's Trace	.046	1.583[a]	11.000	382.000	.101
	Roy's Largest Root	.046	1.583[a]	11.000	382.000	.101

a. Exact statistic

b. Design: Intercept+country+size+country * size

Dependent Variable	Significance
Green Products/Services	.000**
Green Workplace	.104
Green Actions	.000**
Green Consciousness	.873
Green Belief	.004**
TQM Culture	.001**
People-Friendly Culture	.002**
Use of Basic TQM Tools	.000**
Use of Advanced TQM Tools	.028**
Benefits of Green Movement	.328
Organizational Success	.000**

** F test is significant at the 0.05 level.

Table 8 Summary of MANOVA Results - Market Focus

Multivariate Tests[b]

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.021	1.121[a]	11.000	569.000	.342
	Wilks' Lambda	.979	1.121[a]	11.000	569.000	.342
	Hotelling's Trace	.022	1.121[a]	11.000	569.000	.342
	Roy's Largest Root	.022	1.121[a]	11.000	569.000	.342
focus	Pillai's Trace	.052	2.850[a]	11.000	569.000	.001
	Wilks' Lambda	.948	2.850[a]	11.000	569.000	.001
	Hotelling's Trace	.055	2.850[a]	11.000	569.000	.001
	Roy's Largest Root	.055	2.850[a]	11.000	569.000	.001
country	Pillai's Trace	.189	12.029[a]	11.000	569.000	.000
	Wilks' Lambda	.811	12.029[a]	11.000	569.000	.000
	Hotelling's Trace	.233	12.029[a]	11.000	569.000	.000
	Roy's Largest Root	.233	12.029[a]	11.000	569.000	.000
focus * country	Pillai's Trace	.034	1.828[a]	11.000	569.000	.046
	Wilks' Lambda	.966	1.828[a]	11.000	569.000	.046
	Hotelling's Trace	.035	1.828[a]	11.000	569.000	.046
	Roy's Largest Root	.035	1.828[a]	11.000	569.000	.046

a. Exact statistic

b. Design: Intercept+focus+country+focus * country

Dependent Variable	Significance
Green Products/Services	.000**
Green Workplace	.547
Green Actions	.000**
Green Consciousness	.106
Green Belief	.000**
TQM Culture	.000**
People-Friendly Culture	.263
Use of Basic TQM Tools	.106
Use of Advanced TQM Tools	.002**
Benefits of Green Movement	.377
Organizational Success	.000**

** F test is significant at the 0.05 level.