

COMMITMENT TO THE GREEN MOVEMENT BY ORGANIZATIONS AND INDIVIDUALS, IMPACTS OF ORGANIZATIONAL CULTURE, AND PERCEPTIONS OF IMPACTS UPON OUTCOMES

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Abstract

In this research, we find support for a proposed set of linkages among individual and 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. 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.

Keywords

Green movement, Organizational Culture, and Perceptions of Impacts upon Outcomes

Introduction

In this research, we find support for a proposed set of linkages among individual and 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. One stimulus for our work has been widespread recent discussion of the need to shift attention in

QM programs to issues of *sustainability*, a concept which is potentially central to both QM and the green movement.

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 which 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 which 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, 2008) 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).

Total Quality Management (TQM)

In this research, we consider whether there may be linkages between employee commitment to the green movement and that same employee's belief that his organization has implemented TQM programs in a quality way. Our initial interest was in the area of Quality Management Maturity and had its origin in a review of literature which 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.

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).

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.

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 and the relationships which may exist between personal and organizational commitment and the QM Maturity of the organization. Additionally, where there is a higher level of perceived commitment to the green movement and where more mature QM systems are in place, we expect that, in the overall, the organization itself will be seen as “doing better” and the impact of the Green Movement will be perceived as favorable. Thus, QM and perceptions of the organization’s green movement will be seen as having positive impacts upon organizational outcomes.

Figure 1 shows the linkages we expect and relates linkages to the corresponding research questions. In our study, we believe that the green movement within the organization should be related to or affected by employees’ personal green orientation and by the organizational culture (Research Questions 1 and 2 labeled as RQ1 and RQ2 in Figure 1). Additionally, as organizations become more green-oriented, the organization itself will be seen as “doing better” in general and the impact of the green movement will be more positive (Research Questions 3, 4, and 5 labeled as RQ3, RQ4, and RQ5 in Figure 1). Furthermore, organizations with more desirable organizational culture should be more supportive of the green movement (Research Questions 6 labeled as RQ6 in Figure 1). We also expect that

organizational culture is related to employees' personal green orientation and the organization's performance in general (Research Questions 7 and 8 labeled as RQ7 and RQ8 in Figure 1). Finally, we also believe that as more organizations with more desirable organizational culture, where QM systems are in place, and the organization is "doing better," the employees will perceive the impact of the green movement to be even better (Research Questions 9, 10, 11, and 12 labeled as RQ9, RQ10, RQ11, and RQ12 in Figure 1).

Research Question 1: Organizational Green Orientation is related to Organizational Culture.

Research Question 2: Organizational Green Orientation is related to Individual Green Orientation.

Research Question 3: Organizations which are described by employees as higher in Organizational Green Orientation, will also report more positive feelings about the impact of the green movement.

Research Question 4: Organizations which are described by employees as higher in Organizational Green Orientation will also report more positive feelings about the organization's performance.

Research Question 5: Organizations which are described by employees as higher in Organizational Performance, they will also report more positive feelings about the impact of the green movement.

Research Question 6: Organizations which are described by employees as higher in Organizational Culture, they will also report more positive feelings about the impact of the green movement.

Research Question 7: Organizations which are described by employees as higher in Organizational Culture will also report more positive feelings about the organization's performance.

Research Question 8: Organizational Culture is related to Individual Green Orientation.

Research Question 9: Organizations which are described by employees as higher in Organizational Green Orientation will also be described as having higher QM Maturity.

Research Question 10: Organizations which are described by employees as higher in QM Maturity, they will also report more positive feelings about the impact of the green movement.

Research Question 11: Organizations which are described by employees as higher in QM Maturity will also report more positive feelings about the organization's performance.

Research Question 12: Organizations which are described by employees as higher in Organizational Culture will also be described as having higher QM Maturity.

Methodology

Subjects of the Current Study

Subjects in the sample were approximately 323 managers from a wide variety of industries in the South. The subjects were roughly 57.3 % male and 42.7% female with an average age of 41.26. 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 which has less than 50 employees. 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 green movement by individuals and the organization, organizational culture, QM maturity, organizational performance, and the impact of green movement.

Instrument

Organizational Green Orientation

In this study, we developed nineteen survey questions to measure the Organizational Green Movement. Table 1 provides the items and shows the results of our factor analysis.

Table 1 Factor Analysis on Organizational Green Orientation

Table 1

As Table 1 indicates, we obtained a three-factor solution with 66.644% of the variance explained in the case of the organizational green orientation items. We have labeled Factor 1 as “Green Leadership”, Factor 2 as “Green Products/Services”, and Factor 3 as “Green Workplace.”

Individual Green Orientation

In this study, we developed twenty survey questions to measure the Individual Green Orientation. We obtained a three-factor solution with 51.903% 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 2 provides the items and shows the results of our factor analysis.

Table 2 Factor Analysis on Individual Green Orientation

Organizational Culture

Based on previous research (Fok et al., 2000, 2001), 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 3 below provides the items and shows the results of our factor analysis. We obtained a two-factor solution in the case of the culture items and have labeled Factor 1 as "TQM Culture" and Factor 2 as "People-Friendly Culture." 52.63% of the variance was explained by these two factors.

Table 3 Factor Analysis on Organizational Culture

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, 2002; 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 which 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, 2002), we began the process of developing a measure of QM Maturity. The instrument we developed dealt with perceived program *use* and asked respondents whether eight programs were in use in the organization, with a range from “not used” to “high usage.”

In this study, 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 “Traditional TQM Tools.” The second factor was termed “Advanced TQM Tools” which includes programs like Black Belt training and Six Sigma programs. 62.424% of the variance was explained by these two factors. Table 4 below provides the items and shows the results of our factor analysis.

Table 4 Factor Analysis on Quality Programs Usage Items

Organizational Performance

The Organizational Performance items were primarily adapted from the Malcolm Baldrige National Quality Award outcome assessment measures. The Baldrige Awards

are designed to identify organizations which are performing in an exceptional manner and include criteria for identifying excellence. We used the Baldrige criteria in the form of a scale which asks respondents to provide their perceptions about their organizations along Baldrige lines. The resulting scale has been used and reported in previous research (Fok, et al., 2000, 2001). 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 Performance/Success.”

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 two-factor solution and we named them “Strategic Benefits” and “Operational Benefits.” 82.184% of the variance was explained by these two factors. Table 5 below provides the items and shows the results of our factor analysis. Additionally, we asked for the respondents’ satisfaction with the progress of green movement in their organizations on a 5-point Likert’s scale. This question, termed “Satisfied with Green Progress,” is included as part of instrument with two other factors, “Strategic Benefits” and “Operational Benefits.”

Table 5 Factor Analysis on Impact of Green Movement

Results

Our first research question examines the relationship between Organizational Green Orientation and Organizational Culture. Table 6 provides the results of our correlation analysis. We found only one pair of significant relationship. “TQM Culture” has a significant correlation with “Green Workplace” which implies that as organizations embrace culture that focuses on quality, team, and being proactive, they also are trying to develop a workplace that is environmental friendly to the employees.

Table 6 Pearson's Correlation Matrix – Organizational Green Orientation and Organizational Culture (RQ1)

Research Question 2 investigates the relationship between Organizational Green Orientation and Individual Green Orientation. We found seven pairs of significant relationships among them. The results are shown in Table 7. “Green Leadership” has significant and positive correlations with “Green Actions”, “Green Consciousness”, and “Green Belief” at the 0.01 level. “Green Products/Services” has significant and positive relationship with “Green Actions” and “Green Consciousness” at the 0.01 level, and with

“Green Belief” at the 0.05 level. “Green Workplace” has significant and positive correlation with “Green Belief” at the 0.05 level. The relationships are all positive which imply organizations which are described by employees as higher in Organizational Green Orientation will also report more positive feelings about their own Individual Green Orientation. The findings strongly support the proposition that employees’ individual green orientations affect the organizations’ green movement and vice versa.

Table 7 Pearson’s Correlation Matrix – Organizational Green Orientation and Individual Green Orientation (RQ2)

Research Question 3 suggests that organizations with higher level of green orientation would be reported by the employees to have more positive feeling about the impact of the green movement. We found four pairs of significant relationships among them. The results are shown in Table 8. “Green Leadership” has significant and positive correlations with “Strategic Benefits” and “Operational Benefits” implying that green leadership within an organization leads to organizational efficiency *and* effectiveness. “Green Products/Services”

has significant and positive correlation with “Strategic Benefits” and “Satisfied with Green Progress.” The results support the premise that when organizations develop “green” products/services or use “green” material in the production, show more concern with avoiding negative consequences of not being green, and help their employees at all levels to be more green-oriented, the overall impact of these green initiatives is perceived to be more positive by the employees.

Table 8 Pearson’s Correlation Matrix – Organizational Green Orientation, Organizational Performance, and Impact of Green Movement (RQ3, RQ4, and RQ5)

Research Question 4 suggests that organizations with higher level of green orientation would have received more positive feelings about the organization’s performance. The results are shown in Table 8. Only one pair of significant relationship is found. The relationship between “Green Workplace” and “Organizational Performance/Success” is significant at the 0.01 level. The relationship is positive which implies that as the

organizations show more concern in helping their employees at all levels to be more green-oriented, and pay more attention to safety concerns, the organizational performance is perceived by the employees to be higher.

Research Question 5 suggests that organizations with higher level of organizational performance would be reported by the employees to have more positive feeling about the impact of the green movement. We found three pairs of significant relationships in Table 8. Two factors (“Strategic Benefits” and “Operational Benefits”) of Impact of Green Movement and “Satisfied with Green Progress” and “Organizational Performance/Success” have significant correlations at the 0.01 level. The relationships are positive and imply that organizations with higher levels of performance would also be reported to have employees with more positive feelings about the impact of the green movement and to have employees who report more overall more satisfaction with the green progress in their organizations.

Our sixth research question examines the relationship between Organizational Culture and Impact of Green Movement. We found three pairs of significant relationships in Table 9. “TQM Culture” has significant correlations with “Strategic Benefits” and “Satisfied with Green Progress” and “People-Friendly Culture” has a significant correlation with “Operational Benefits”. The findings indicate that as the organizational cultures are more green-oriented and employee-friendly; the employees see more positive impacts from the green movement and feel overall more satisfied with green progress in their organizations.

Correlations

		Green					Satisfied with
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	Green Leadership	Products/ Services	Green Workplace	Organizational Performance	Strategic Benefits	Operational Benefits	Green Progress
Green Leadership	—	—	—	NS	.141*	.194**	NS
Green Products/ Service	—	—	—	NS	.292**	NS	.175**
Green Workplace	—	—	—	.212**	NS	NS	NS
Organizational Performance	NS	NS	.212**	—	.173**	.160**	.460**
Strategic Benefits	.141*	.292**	NS	.173**	—	—	.271**
Operational Benefits	.194**	NS	NS	.160**	—	—	.337**
Satisfied with Green Progress	NS	.175**	NS	.460**	.271**	.337**	—

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NS = not significant.

Table 9 Pearson's Correlation Matrix – Organizational Culture, Impact of Green Movement, and Organizational Performance (RQ6 and RQ7)

Research Question 7 suggests that organizations with higher levels of organizational culture would have received more positive reports about the organization's performance. The results are shown in Table 9. Only one pair of significant relationship is found. The relationship between "TQM Culture" and "Organizational Performance/Success" is significant at the 0.01 level. The findings suggest that as the organizational cultures are more green-oriented, the organizational performance is perceived by the employees to be higher.

Research Question 8 investigates the relationship between Organizational Culture and Individual Green Orientation. The results are not significant which implies organizational culture does not have significant impact on employees' view of being green at a personal level.

Our ninth research question examines the relationship between Organizational Green

Orientation and QM Maturity. Table 10 provides the results of our correlation analysis. There are four pairs of significant relationships. Two factors (“Green Products/Services” and “Green Workplace”) have significant and positive correlations with “Use of Traditional TQM Tools”. Two factors (“Green Leadership” and “Green Products/Services”) have significant and positive correlations with “Use of Advanced TQM Tools”. The results indicate that when employees perceive that their organizations are more inclined to develop green products/services and have a green workplace will be reported as using more traditional TQM tools. The results also indicate that the organizations that are perceived by employees as having higher levels of green leadership and more focus on green products/services will be reported as using more advanced TQM tools. In general, our findings confirm that organizations with higher level of green orientation have used higher levels of usage of both traditional and advanced TQM tools.

Correlations

	TQM Culture	People-Friendly Culture	Organizational Performance	Strategic Benefits	Operational Benefits	Satisfied with Green Progress
TQM Culture	—	—	-.591**	-.205**	NS	-.399**
People-Friendly Culture	—	—	NS	NS	-.132*	NS
Organizational Performance	-.591**	NS	—	.173**	.160**	.460**
Strategic Benefits	-.205**	NS	.173**	—	—	.271**
Operational Benefits	NS	-.132*	.160**	—	—	.337**
Satisfied with Green Progress	-.399**	NS	.460**	.271**	.337**	—

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

NS = not significant.

Table 10 Pearson’s Correlation Matrix - Organizational Green Orientation and QM Maturity (RQ9)

Research Question 10 examines the relationship between QM Maturity and Impact of Green Movement. We found five pairs of significant relationships in Table 11. “Use of Traditional TQM Tools” has significant and positive correlations with “Strategic Benefits”, “Operational Benefits”, and “Satisfied with Green Progress.” “Use of Advanced TQM Tools” has significant and positive correlations with “Operational Benefits” and “Satisfied with Green Progress.” The results suggest that organizations with higher levels of QM

Maturity would also have employees who report more positive feelings about the impact of the green movement and more satisfied with green progress in their organizations.

Table 11 Pearson's Correlation Matrix - QM Maturity and Impact of Green Movement (RQ10)

Research Question 11 suggests that organizations which are described by employees as higher in QM Maturity will also have employees who report more positive feelings about the organization's performance. We found one pair of significant and positive relationship between "Use of Traditional TQM Tools" and "Organizational Performance/Success". The results as shown in Table 12 indicate that when employees report higher levels of organizational performance, they will also report use of more traditional TQM tools.

Correlations					
	Traditional TQM Tools	Advanced TQM Tools	Strategic Benefits	Operational Benefits	Satisfied with Green Progress
Traditional TQM Tools	—	—	.228**	.184**	.237**
Advanced TQM Tools	NS	—	NS	.219**	.172**
Strategic Benefits	.228**	NS	—	—	.271**
Operational Benefits	.184**	.219**	—	—	.337**
Satisfied with Green Progress	.237**	.172**	.271**	.337**	—

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NS = not significant.

Table 12 Pearson's Correlation Matrix – QM maturity, Organizational Performance, and Organizational Culture (RQ11 and RQ12)

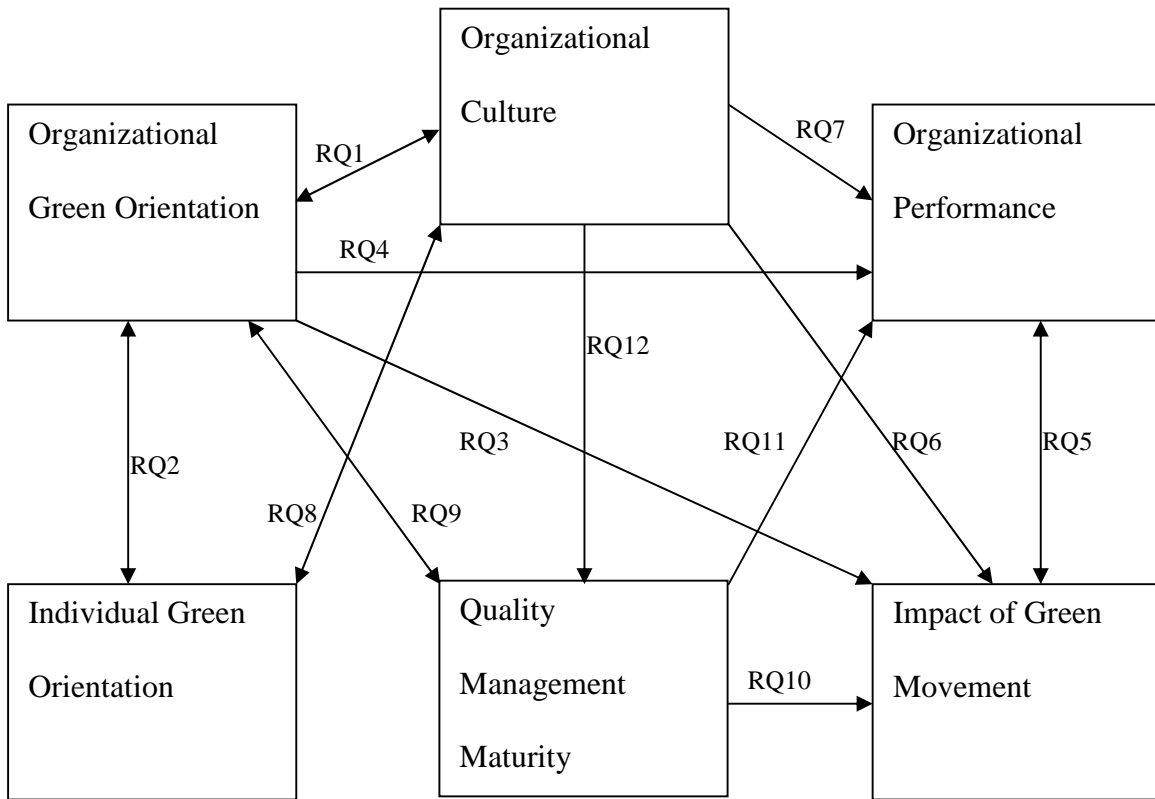
Research Question 12 suggests that organizations with higher level of organizational culture would be reported by employees to have higher level of QM Maturity. We found three pairs of significant relationships in Table 12. The relationship between “TQM Culture” and “Use of Traditional TQM Tools” is significant at the 0.01 level which implies that as organizations embrace culture that focuses on quality, team, and being proactive, they also use more traditional TQM tools. “People-Friendly Culture” has significant relationships with “Use of Traditional TQM Tools” and “Use of Advanced TQM Tools”. The findings indicate that, as the organizational cultures are reported to be more employee-friendly, employees will also report that their organizations have higher levels of usage of both traditional and advanced TQM tools. In general, our findings confirm that organizations with higher level of organizational culture have used higher levels of usage of both traditional and advanced TQM tools.

Discussion and Conclusions

In this research, we find considerable support for the linkages among employee perceptions of organizational green orientation and outcomes, in terms of positive impacts of the green movement and organizational performance (see Figure 1). Employees who believe that their organizations are aligned with the green movement are more likely to also see the organization as higher in performance. Moreover, outcomes in terms of overall performance

and positive impact of the green movement will also be higher. Individual Green Orientation did not have a significant relationship with Organizational Culture (see RQ8), but Individual Green Orientation does have seven pairs of significant relationships with Organizational Green Orientation (see RQ2). These findings may have implications for management. This research suggests that when employees believe that their organizations are committed to being green, a number of positive feelings will result. Yet, anecdotally, at least, it appears that many organizations are doing little to keep employees informed of their efforts to support the green movement and its relationship to ideas like sustainability. More and better information appears to have the potential to bring about positive results. Such information, in turn, can be helpful in building an organizational culture which is supportive of the green movement *and* attracting and retaining employees who are personally committed to supporting the movement.

Figure 1 Research Model



Correlations

	TQM Culture	People-Friendly Culture	Traditional TQM Tools	Advanced TQM Tools	Organizational Performance
TQM Culture	—	—	-.332**	NS	-.591**
People-Friendly Culture	—	—	-.134*	-.132*	NS
Traditional TQM Tools	-.332**	-.134*	—	—	.318**
Advanced TQM Tools	NS	-.132*	—	—	NS
Organizational Performance	-.591**	NS	.318**	NS	—

*. Correlation is significant at the 0.05 level (2-tailed).

**. Correlation is significant at the 0.01 level (2-tailed).

NS = not significant.

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