The Coastal Business Journal

Volume 8 | Number 1

Article 1

May 2009

Employee Perceptions of Organizational Commitment to the Green Movement, Quality Management Maturity, and Outcomes

Lillian Y. Fok University of New Orleans

Susan M. L. Zee Southeastern Louisiana University

Sandra J. Hartman University of New Orleans

Follow this and additional works at: https://digitalcommons.coastal.edu/cbj

Part of the Advertising and Promotion Management Commons, Curriculum and Instruction Commons, E-Commerce Commons, Economics Commons, Higher Education Commons, Hospitality Administration and Management Commons, Marketing Commons, Real Estate Commons, Recreation Business Commons, and the Tourism and Travel Commons

Recommended Citation

Fok, Lillian Y.; Zee, Susan M. L.; and Hartman, Sandra J. (2009) "Employee Perceptions of Organizational Commitment to the Green Movement, Quality Management Maturity, and Outcomes," *The Coastal Business Journal*: Vol. 8 : No. 1, Article 1. Available at: https://digitalcommons.coastal.edu/cbj/vol8/iss1/1

This Article is brought to you for free and open access by the Journals and Peer-Reviewed Series at CCU Digital Commons. It has been accepted for inclusion in The Coastal Business Journal by an authorized editor of CCU Digital Commons. For more information, please contact commons@coastal.edu.

EMPLOYEE PERCEPTIONS OF ORGANIZATIONAL COMMITMENT TO THE GREEN MOVEMENT, QUALITY MANAGEMENT MATURITY, AND OUTCOMES

Lillian Y. Fok, University of New Orleans Susan M. L. Zee, Southeastern Louisiana University Sandra J. Hartman, University of New Orleans

ABSTRACT

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

INTRODUCTION

In this research, we consider how employee perceptions of the organization's commitment to the "green" movement and employee perceptions that the organization has implemented its Quality Management (QM) programs in a high quality manner. A 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 central to 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 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, 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 <u>political ideology</u>. Greens, the supporters of the green movement, advocate green politics and place a high importance on <u>ecological and environmental</u> goals. The greens share many ideas with the <u>ecology</u>, <u>conservation</u>, <u>environmental</u>, <u>feminist</u>, and <u>peace movements</u>; <u>civil liberties</u>, <u>social justice</u> and <u>nonviolence</u> 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

The Coastal Business Journal Spring 2009: Volume 8, Number 1 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 We have found that QM Maturity impacts individuals' upon related systems. 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.

Quality Management (QM) and Sustainability

A starting point for discussion of potential relationships between QM and sustainability has been establishing a common understanding of the two concepts and what it means to study them. 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. Ouinn (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.

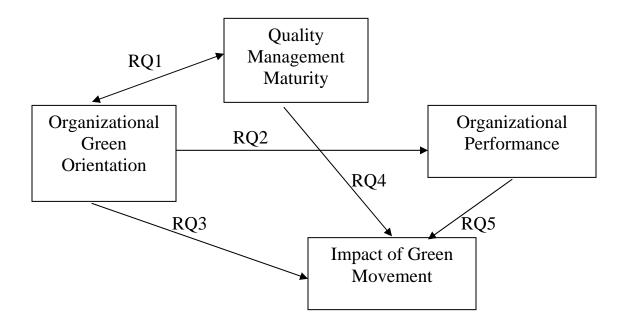
See also similar ideas by Hitchcock and Willard (2002), Jonker (2000), and McAdam and Leonard (2003).

In addition to the ideas expressed by Zairi (2002), several other theorists have pointed that the expansion of TQM to include sustainability 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.

In this research, we extend the examination of these issues to consider employee perceptions of organizational commitment to the green movement and the relationships which may exist between 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 more QM mature organizations should be more supportive of the green movement (Research Question 1, labeled as RQ1 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 2 and 3, labeled as RQ2 and RQ3 in Figure 1). Next, where QM systems are in place, we expect that the impact of the green movement will be more positive (Research Question 4, labeled as RQ4 in Figure 1). Finally, where employees feel organizational performance is high, they will also report higher levels of personal commitment to the green movement (Research Question 5, labeled as RQ5 in Figure 1).

FIGURE 1 Research Model



Research Question 1: Organizations which are described by employees as being high in Organizational Green Orientation will also be described as having higher QM Maturity.

Research Question 2: Organizations which are described by employees as higher in Organizational Green Orientation will also have employees who report more positive feelings about the organization's performance.

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

Research Question 4: Organizations which are described by employees as higher in QM Maturity will also have employees who report more positive feelings about the impact of the green movement.

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

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 *The Coastal Business Journal* 5 Spring 2009: Volume 8, Number 1

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 organizational green movement, quality management, organizational performance, and impact of green movement.

Instrument

Organizational Green Orientation

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

TABLE 1 Factor Analysis on Organizational Green Orientation

		Component	
	1	2	3
Produce environmentally friendly goods and services	.222	.900	.054
Design environmentally friendly goods and services	.214	.900	.067
Reuse or refurbish a product's components	.247	.615	.257
Provide a safe and healthy workplace for employees	.108	.109	.841
Make ethical and socially responsible decisions	.169	.145	.717
Make an effort to preserve the natural environment	.680	.274	.277
Lead and support corporate responsibility activities	.606	.202	.261
Encourage employees to conserve energy/resources.	.725	.083	.242
Set goals to conserve energy/resources.	.848	.194	.108
Commit to be environmentally friendly at all levels	.806	.312	.082
Preserve employees' physical and emotional well-being	.355	.043	.690

Rotated Component Matrix

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

a. Rotation converged in 5 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	4.796	43.597	43.597	4.796	43.597	43.597	3.046	27.693	27.693
2	1.447	13.157	56.754	1.447	13.157	56.754	2.291	20.828	48.521
3	1.088	9.890	66.644	1.088	9.890	66.644	1.994	18.123	66.644
4	.770	7.001	73.644						
5	.635	5.776	79.420						
6	.610	5.549	84.969						
7	.447	4.066	89.035						
8	.422	3.834	92.869						
9	.368	3.343	96.212						
10	.263	2.394	98.606						
11	.153	1.394	100.000						

Extraction Method: Principal Component Analysis.

As Table 1 indicates, we obtained a three-factor solution with 66.664% of the variance explained in the case of the organizational green orientation items. We have The Coastal Business Journal 7 Spring 2009: Volume 8, Number 1

labeled Factor 1 as "Green Leadership", Factor 2 as "Green Products/Services", and Factor 3 as "Green Workplace.

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 et al., 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 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 et al., 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 eight programs were in use in the organization, with a range from "not used" to "high usage." Table 2 below includes the items.

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. 62.424% of the variance was explained by these two factors. 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. Table 2 below provides the items and shows the results of our factor analysis.

TABLE 2
Factor Analysis on Quality Programs Usage Items

	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		

Rotated Component Matrix

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

	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	3.575	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						

Total Variance Explained

Extraction Method: Principal Component Analysis.

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). The instrument included 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."

Impact of Green Movement

The instruments included items such as "Provide better products," "Provide better services," "Have better relationships with customers," "Have better relationships 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 3 below provides the items and shows the results of our factor analysis.

TABLE 3Factor Analysis on Impact of Green Movement

	Component				
	1 2				
Have better relationship with customers	.828	.374			
Have better relationship with society at large	.892	.214			
Have better reputation	.837	.295			
Increase profits	.305	.871			
Reduce costs	.267	.902			
Have better relationship with suppliers	.803	.333			
Improve productivity	.413	.815			
Have better relationship with employees	.798	.399			

Rotated Component Matrix

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

a. Rotation converged in 3 iterations.

Total Variance Explained

	Initial Eigenvalues			Extractio	on Sums of Squar	red Loadings	Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.523	69.034	69.034	5.523	69.034	69.034	3.796	47.454	47.454
2	1.052	13.150	82.184	1.052	13.150	82.184	2.778	34.731	82.184
3	.383	4.788	86.973						
4	.280	3.499	90.471						
5	.233	2.908	93.379						
6	.215	2.692	96.070						
7	.163	2.033	98.103						
8	.152	1.897	100.000						

Extraction Method: Principal Component Analysis.

RESULTS

Our first research question examines the relationship between Organizational Green Orientation and QM Maturity. Table 4 provides the results of our correlation analysis.

TABLE 4 Pearson's Correlation Matrix - Organizational Green Orientation and QM Maturity (RQ1)

[1		
			Green			
		Green	Products/	Green	Traditional	Advance
		Leadership	Services	Workpplace	TQM Tools	TQM Tools
Green Leadership	Pearson Correlati	1	.000	.000	.080	.146**
	Sig. (2-tailed)		1.000	1.000	.153	.008
	Ν	323	323	323	323	323
Green Products/Servi	Pearson Correlati	.000	1	.000	.142*	.179**
	Sig. (2-tailed)	1.000		1.000	.011	.001
	Ν	323	323	323	323	323
Green Workpplace	Pearson Correlati	.000	.000	1	.152*`	068
	Sig. (2-tailed)	1.000	1.000		.006	.223
	Ν	323	323	323	323	323
Traditional TQM Tools	Pearson Correlati	.080	.142*	.152*	1	.000
	Sig. (2-tailed)	.153	.011	.006		1.000
	Ν	323	323	323	323	323
Advance TQM Tools	Pearson Correlati	.146**	.179*	068	.000	1
	Sig. (2-tailed)	.008	.001	.223	1.000	
	Ν	323	323	323	323	323

Correlations

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

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

Table 4 shows 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.

Research Question 2 suggested 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 5. 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 organizations are reported by their employees as showing more concern in helping their employees at all levels to be more green-oriented, and as they are seen as

The Coastal Business Journal Spring 2009: Volume 8, Number 1 paying more attention to safety concerns, organizational performance is perceived by the employees to be higher.

TABLE 5 Pearson's Correlation Matrix - Organizational Green Orientation, Organizational Performance, and Impact of Green Movement (RQ2, RQ3, and RQ5)

Correlations								
		Green Leadership	Green Products/ Services	Green Workpplace	Organizational Performance	Strategic benefits	Operational benefits	
Green Leadership	Pearson Correlation	1	.000	.000	013	.141*	.194*	
	Sig. (2-tailed)		1.000	1.000	.820	.011	.000	
	Ν	323	323	323	323	323	323	
Green Products/Services	Pearson Correlation	.000	1	.000	.022	.292**	.091	
	Sig. (2-tailed)	1.000		1.000	.692	.000	.104	
	Ν	323	323	323	323	323	323	
Green Workpplace	Pearson Correlation	.000	.000	1	.212**	.008	072	
	Sig. (2-tailed)	1.000	1.000		.000	.883	.199	
	Ν	323	323	323	323	323	323	
Organizational	Pearson Correlation	013	.022	.212**	1	.173**	.160**	
Performance	Sig. (2-tailed)	.820	.692	.000		.002	.004	
	Ν	323	323	323	323	323	323	
Strategic benefits	Pearson Correlation	.141*	.292**	.008	.173**	1	.000	
	Sig. (2-tailed)	.011	.000	.883	.002		1.000	
	Ν	323	323	323	323	323	323	
Operational benefits	Pearson Correlation	.194**	.091	072	.160**	.000	1	
	Sig. (2-tailed)	.000	.104	.199	.004	1.000		
	Ν	323	323	323	323	323	323	

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

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

Research Question 3 suggested 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 three pairs of significant relationships among them. The results are shown in Table 5. "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". The results supported the premise that when employees perceive that their organizations develop "green" products/services or use "green" materials 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.

Our fourth research question examines the relationship between QM Maturity and Impact of Green Movement. We found three pairs of significant relationships in Table 6. "Use of Traditional TQM Tools" has significant and positive correlation with "Strategic Benefits". "Use of Traditional TQM Tools" and "Use of Advanced TQM Tools" have significant and positive correlations with "Operational Benefits". The results suggested that organizations with higher level of QM Maturity would also be perceived by the employees to have more positive feelings about the impact of the green movement.

TABLE 6 Pearson's Correlation Matrix - QM Maturity and Impact of Green Movement (RQ 4)

		Traditional TQM Tools	Advance TQM Tools	Strategic benefits	Operational benefits
Traditional TQM Tools	Pearson Correlation	1	.000	.228**	.184**
	Sig. (2-tailed)		1.000	.000	.001
	Ν	323	323	323	323
Advance TQM Tools	Pearson Correlation	.000	1	.105	.219**
	Sig. (2-tailed)	1.000		.059	.000
	Ν	323	323	323	323
Strategic benefits	Pearson Correlation	.228**	.105	1	.000
	Sig. (2-tailed)	.000	.059		1.000
	Ν	323	323	323	323
Operational benefits	Pearson Correlation	.184**	.219**	.000	1
	Sig. (2-tailed)	.001	.000	1.000	
	Ν	323	323	323	323

Correlations

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

Research Question 5 suggested that organizations with higher level of organizational performance would be reported by the employees to have more positive feelings about the impact of the green movement. We found two pairs of significant relationships in Table 5. Two factors ("Strategic Benefits" and "Operational Benefits") of Impact of Green Movement and "Organizational Performance/Success" have significant correlations at the 0.01 level. The relationships are positive which imply that organizations with higher levels of performance would also have employees with more positive feelings about the impact of the green movement.

DISCUSSION AND CONCLUSIONS

In this research, we find considerable support for the linkages among employee perceptions of organizational green orientation, QM Maturity, 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 QM Maturity. In turn, outcomes in terms of overall performance and positive impact of the green movement will also be higher.

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. More and better information appears to have the potential to bring about positive results.

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

The Coastal Business Journal Spring 2009: Volume 8, Number 1

- 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.
- 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.
- 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.
- 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.
- 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, Issue 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, Issue 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.
- 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.
- 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.

The Coastal Business Journal

Spring 2009: Volume 8, Number 1

- Quinn, B. (2000) 'Sustaining New Jersey's industrial future', *Pollution Engineering*, Vol. 32, No. 13, pp. 25-27.
- Robinson, R. (2000). 'Customer relationship management', *Computerworld*, Vol. 34, No. 9, p.67.
- 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.
- 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.
- 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.

ABOUT THE AUTHORS

Lillian Y. Fok is a Professor of Management, as well as the Seraphia Leyda Teaching Fellow at the University of New Orleans. She joined the Department of Management at UNO in 1989. She has actively participated in the development of various undergraduate, graduate, as well as executive programs. She has more than 45 articles published in highly regarded refereed journals, both academic and professional. In addition, she has won six Best-Paper awards in business conferences and one Best-Paper- of-the-Year award offered by a high quality journal.

Susan Zee is an Associate Professor of Management at Southeastern Louisiana University. She teaches financial management, investments, operations management, and business statistics. Professor Zee's research interests include corporate finance, investments, business ethics, quality management, and econometrics. Her research has been published in journals such as European Journal of Economics, Finance, and Administrative Science, Business Journal for Entrepreneurs, Essays in Education, Journal of Research in Finance, The Journal of Insurance Issues, Review of Quantitative Finance and Accounting, Managerial Finance Journal, Coastal Business Journal, and many others.

Sandra Hartman is the Chase Professor of Management at the University of New Orleans. Professor Hartman joined The University of New Orleans in 1981 following a 20-year career as a manager in the hospitality and telephone industries. She has also taught in UNO's International Summer School program in Innsbruck, Austria and currently teaches in UNO's Executive MBA program in New Orleans, Kingston, Jamaica and in Puerto Rico. Professor Hartman's research interests include human resources management, leadership in organizations, healthcare management, and the human impacts of technology change. Dr. Hartman's research has been published in journals such as the Journal of Business Research, International Journal of Management

and Enterprise Development, Healthcare Manager Journal, International Journal of Management and Decision Making, JONA's Healthcare Law, Ethics & Regulation, Journal of Nursing Management, International Journal of Quality and Reliability Management, International Journal of Health Care Quality Assurance, and many others.