

THE ROLE OF EMOTIONAL INTELLIGENCE IN ENVIRONMENTAL SCANNING BEHAVIOR: A CROSS-CULTURAL STUDY

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ABSTRACT

This study examines the relationships of emotional intelligence of supervisors—empathy and social skills—to the effectiveness of their environmental scanning behavior. Data was collected from 1,184 dyads in four countries (U.S., Bangladesh, Greece, and China). Employed MBA students completed a questionnaire about their supervisors' emotional intelligence and a colleague of the MBA student, who worked for the same supervisor, completed a questionnaire about the effectiveness of the supervisors' environmental scanning behavior. Results show that empathy was a full mediator of the relationship between social skills and the effectiveness of scanning in the U.S., Bangladesh, and Greece but a partial mediator in China. Findings suggest in individualistic and moderately collectivist cultures empathy fully mediates the relationship between social skills and environmental scanning. However, for highly collectivist cultures there was evidence of only partial mediation. Implications for strategic decision markers and directions for future research are discussed.

INTRODUCTION

In the rapidly changing global economy, scanning for environmental change is vital to organizational performance and viability. Changes in the environment result in new opportunities for wealth creation that decision makers use in strategy formulation and implementation. Environmental changes increase information processing needs within organizations because managers must detect and interpret problem areas, identify opportunities, and implement strategic adaptations (Hambrick, 1982; Culnan, 1983; Tushman, 1977). A strategic advantage rests upon management's ability to collect pertinent information and act on signals that others miss.

Executives are responsible for bringing together specialized information from various departments and functions (Daft, Sormunen, and Parks, 1988). Scanning involves formal and informal sources of information often gained through ad hoc human sources (Thomas, 1980; Hambrick, 1982). Most previous research on scanning has relied on self-report estimates of the frequency of one's search and the source of the information. While this approach has been useful

it does not take into account the intense social aspect of effective scanning behavior within firms. Decision makers must work among others to detect, communicate, and politicize information that enters the organization (Mintzberg, 1973).

The ability to effectively scan the environment has been linked to new venture creation (Fiet, 2007), reduced strategic uncertainty (Elenkov, 1997), and improved firm performance (Daft et al., 1988). Although these studies exemplify the positive outcomes associated with environmental scanning there is little understanding of *how* decision makers work among others to effectively scan information for opportunities and threats. If competitors have unequal abilities to bring about or transfer new information, then they differ in their abilities to formulate cogent responses to environmental changes (Hambrick, 1982). If unequal competencies exist in collecting or *socializing* information, then differences accompanying performance are attributable to the ability to implement a response, that is, to change or modify their strategy.

Research shows the transfer of key information is hindered when an arduous relationship exists between the source and the recipient (Szulanski, 1996). We argue a person's ability to exercise emotional intelligence (EQ) influences their ability to work across departments or functions to effectively scan the environment for new opportunities or threats within the social context of established firms. EQ has increasingly been linked to work outcomes and improved task performance (Lam and Kirby, 2002; Carmeli and Josman, 2006). However, little empirical work has examined emotion within the context of strategic management representing a gap in the literature. The present study is designed to make a contribution to the literature by drawing on existing EQ theory to examine how the dimensions of empathy and social skills explain management's ability to successfully scan the environment across different national cultures.

Not only must executives effectively bring together and make sense of new information but they must do so in an increasingly global economy. Such challenges have stimulated a strong interest in research that relates cross-cultural differences to these desired behaviors (Shane, Venkataraman and MacMillan, 1995). Since environmental scanning deals with the organization-environment interface, performance of the scanning function would be expected to differ for management across national cultures. Kim and Lim (1988) suggested further development of the field of strategic management through investigations of external validity of theories by testing them under different economic and cultural conditions. For example, national culture has been found to have effects on managerial styles and behaviors (Erez and Earley, 1993), with some cultures producing more innovation than others (Baumol, 1990). This raises the question of whether emotional competencies affect effective scanning differently across cultures.

In the present study, we assume organizations around the world must seek and make sense of environmental information to compete thereby requiring effective scanning within firms. However, we question whether the role of EQ will be equally effective in all cultural contexts. Our study contributes to the literature in a number of ways. First, we shed light on the emotional dimensions of effective environmental scanning within firms. We draw on extant EQ literature and

develop a theoretical model comprised of empathy and social skills and then test the model using data collected in four countries including the United States, Greece, China, and Bangladesh. Dyads were used ($N=1,184$) made up of MBA students and a colleague who both had the same supervisor. One colleague reported the emotional competencies of the supervisor and the other colleague reported the same supervisors' effectiveness in scanning the environment. The relationship between EQ and effective environmental scanning is examined paying special attention to Hofstede's (1980) national culture continuum of individualism and collectivism across the representative countries. We then draw implications for management in effective scanning.

The study unfolds along the following lines. In the next section, we review the literature surrounding EQ and the field of strategic management to develop a theoretical model. We then review the cultural value literature and summarize aspects salient to effective scanning behavior. An exploratory cross-cultural examination is then performed. A discussion follows and managerial implications are drawn for promoting environmental scanning across individualistic and collectivist cultures.

EMOTIONAL INTELLIGENCE AND STRATEGIC MANAGEMENT

Among the greatest challenges facing the field of strategic management is to comprehend the most appropriate combination of skill sets and competencies by which managers could understand their organizational world and translate information into actionable strategies (Sparrow, 2000). Strategic management has been said to be treated as two parallel worlds (Cassell, 1999), the actions of managers and the skills and competencies we assumed they needed. The first, and still dominating, is a rational model, in which strategic thinking is not impacted by emotions or feelings. From this view, efficient thought and behaviors tame emotion and organizations manage feelings, design them out, or remove them altogether (Fineman, 1996). The parallel world acknowledges emotionality by considering the role of stress, level of satisfaction, trust, commitment, and the psychological contract. Positive discussion of emotion at work notes that organizations can and must generate feelings of excitement, personal engagement, and emotional contagion among employees. This divide in strategic decision making between rational and the emotional is eroding as the increasing emotional environment within which managers operate is recognized. The new approach suggests emotions cannot be separated from managerial thought, action, or the process of strategic change. Both the thought processes and the social processes that surround strategic decision making are indeed influenced by emotion (Daniels, 1999). The quality of the mental models that managers develop is influenced by their emotional state, which thereby determines the attention they give to information processing, the perceived opportunity and threats in the environment, and ability to recall information. If managers operate in a more emotional world, then the content of their thought processes become more emotional.

Recent theories of the mind suggest that there is not a single but multiple kinds of intelligence. Academic discussions of strategic management have recognized an increasingly emotional environment within which managers have to make strategic judgments (Sparrow, 2000). Gardner (1983, 1999) and Sternberg (1985, 2002) conceptualize intelligence in a way different from traditional measures such as the intelligence quotient (IQ). Increasing evidence suggests that EQ may be developed and distinct from personality (Law, Wong and Song, 2004). Gardner (1983) provided the basis for the conceptualization of intra- and inter-personal intelligences. Intrapersonal intelligence is the ability to be aware of and regulate one's own emotions (i.e., feelings, moods, and desires) whereas interpersonal intelligence is associated with one's ability to understand others' emotions and to induce desirable responses in them. The present study uses Gardner's conceptualization of interpersonal intelligence. Two components of this intelligence, empathy and social skills, have been described by Goleman (2001) as social competencies, "that is, knowing and managing emotions of others" (p. 29).

There is a growing body of support for EQ as a prerequisite for superior performance (Lam and Kirby, 2002; Young, Arthur and French, 2000; Carmeli and Josman, 2006). EQ refers to one's ability to be aware of one's own feelings, be aware of others' feelings, to differentiate among them, and to use the information to guide one's thinking and behavior (Salovey and Mayer, 1990). This definition consists of three categories of abilities: evaluation and expression of emotion, regulation of emotion, and using emotions in decision-making. Goleman (1998) provided a similar definition: "the capacity for organizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and in our relationships" (p. 317). These and other definitions by Bar-On (1997), Boyatzis (2001), and others are complimentary. EQ encompasses a number of non-cognitive skills, abilities, or competencies that influence an individual's capacity to deal with environmental demands and pressures effectively. The term EQ was first discussed by Salovey and Mayer (1990) although rooted in Gardner's (1983) concepts of intra- and inter-personal intelligences, and in Thorndike's (1920) concept of social intelligence.

In his role as a consultant, Goleman (1998; see also Goleman, Boyatzis, and McKee, 2002) found that EQ is twice more important than technical skills and IQ for jobs at all levels. He also reported that EQ plays an increasingly important role at the highest levels of a company. When he compared "Star performers with average ones in senior leadership positions, nearly 90% of the difference in their profiles was attributable to EQ factors rather than cognitive abilities" (Goleman, 1998, p. 108).

Components of EQ

Some scholars have used the term EQ to include almost everything but IQ: emotional awareness, accurate self-assessment, self-confidence, trustworthiness, conscientiousness, adaptability, innovation, and so on (i.e., Bar-On and Parker, 2000; Goleman, 1998), but this

framework stretches the conceptualization of intelligence way beyond acceptable limits (Hedlund and Sternberg, 2000). As suggested by a number of scholars (e.g., Salovey and Mayer, 1990; Rahim and Psenicka, 2005) there should be a more restrictive model of EQ based on ability and distinguished from personality. We do this by defining the two dimensions of interpersonal intelligence selected for the present study as follows:

1. Empathy refers to one's ability of understanding others and taking active interest in them, recognizing and responding to changes in their emotional states, understanding their feelings transmitted through verbal and nonverbal messages, to provide emotional support to people when needed, and to understand the links between their emotions and behavior.
2. Social Skills is associated with one's ability to induce desirable responses in others, dealing with problems without demeaning those who work with him or her, to not allow own or others' negative feelings to inhibit collaboration, and to negotiate and manage affective conflict with tact and diplomacy.

Studies on EQ in the strategic management literature are limited and much of the work has concentrated on leadership effectiveness (e.g., Bass, 2002; Hesselbein, Goldsmith, and Beckhard, 1996; Sosik and Megerian, 1999). Less scholarly work is available on EQ in the context of opportunity scanning within organizations although recently scholars have encouraged such endeavors (Sparrow, 2000). Cross and Travaglione (2003) conducted a qualitative study examining the use of emotion by Australian entrepreneurs. They concluded each entrepreneur showed high levels of EQ compared to workplace norms. Shepherd (2004) proposed educating students on how to manage their emotions to avoid failure and encouraged the examination of emotion to benefit organizations wishing to behave more entrepreneurially. We investigate the relationships of two components of EQ—empathy and social skills—to effectiveness of environmental scanning behavior. Some evidence suggests that empathy mediates the relation between social skills and leadership role (Rahim and Psenicka, 2005). We take this view and argue the effects of social skills on outcomes become more effective when social skills are used via empathy. In other words, empathy mediates the relationship between social skills and effectiveness of scanning behavior (i.e. Social skills → Empathy → Effective Environmental Scanning). Therefore the hypothesis for the study is as follows:

H1: Empathy mediates the relationship between social skills and the effectiveness of environmental scanning.

Our literature review suggests that aspects of EQ may be associated with effective environmental scanning. However, numerous studies have shown that differences exist in behaviors

and managerial styles across cultures (e.g., Baumol, 1990; Erez and Earley, 1993). Consequently the effective use of emotion may be unequal across different national cultures. In the next section, we review the cultural literature salient to strategic behavior.

CULTURAL VALUES AND STRATEGIC BEHAVIOR

Research has shown significant variations in behavior across societies and identified national culture as a critical contextual variable conditioning behavior (England, 1975; Hofstede, 1980; Earley, 1994). Fundamental changes in the global business environment have stimulated a strong interest in research that relates cross-cultural value difference to strategic behaviors. National culture can be interpreted as a logic by which members of a society view the environment, other individuals, organizations, and their relations to one another. In turn, scholars have surmised that national culture is likely to yield important effects on “the process by which the environment is known and responded to” (Schneider, 1989, p. 152).

As members of national societies, managers not only contribute to the collective formulation of cultural norms and views, they experience social reinforcement pressures which bring their individual-level assumptions and preferences into close alignment with those of their native culture (e.g., Berger and Luckmann, 1967; Van Maanen and Laurent, 1993). In fact, research has shown that the differing views and assumptions embedded in national culture are reflected in managerial attitudes and beliefs (e.g., Lodge and Vogel, 1987) as well as their behaviors and actions (Jackofsky and Slocum, 1988; Shane, 1995). Of particular importance, cultural values play a central role in shaping managerial views of the environment and appropriate responses to change (e.g., Schein, 1985). Consequently, they are posited to influence the strategy formulation process and its outcomes (Hambrick and Brandon, 1988; Schneider, 1989).

Recently, scholars have begun to explore the link between national culture and strategic decision making. In a study of 20 countries, Geletkanycz (1997) found culture affected executives' adherence of existing strategy. Culture had an important impact on executive mindsets, as differing cultural backgrounds were not equally open to change in organizational strategy. The conceptual work of Hambrick and Brandon (1988) as well as Schneider (1989) suggests that variation in executives' strategic actions may be attributable to the different values embedded within national cultures. Culture reflects a societal understanding of the environment, individuals, and interrelationships. Cultural values capture the salient dimensions of this understanding together with broad societal preferences surrounding issues of organization and adaptation (Hofstede, 1991). Managers, whom have been socialized from an early age to cultural orientations, bring aspects to their roles and responsibilities, including strategic decision making (Hambrick and Mason, 1984). These scholars theorize that cultural values will be reflected in executives' strategic actions. They suggest that cultural values will not only help to shape executives' view of the external contingencies they face, but in the way they work with others to achieve desired goals. In the

present we explore this linkage by examining the impact of cultural values across a sample of managers across four nationalities paying close attention to the cultural dimension of individualism-collectivism.

Individualism-Collectivism

The cultural value dimension of individualism versus collectivism has shown to be particularly resilient compared to other cultural dimensions such as power distance and uncertainty avoidance which were more likely to shift over time. For example, mainland Chinese and Taiwanese entrepreneurs were found by McGrath et al. (1992) to have similar collectivistic values, even though these two groups have been exposed to very different ideologies and lived under different economic systems over the last 50 years. Lodge (1975) claimed that individualistic cultures tend to seek out more information compared to collectivist cultures because of a willingness to take on new ways of doing things and take greater risks. Individualism-collectivism has been used to predict differences in such activities as preferences for organizational equity (Bond, Leung and Wan, 1982), social loafing (Earley, 1989), preferences for organizational structure and job satisfaction (Lincoln, Olson and Hanada, 1978) and championing strategies (Shane and Venkataraman, 1996).

Traditionally conceptualized as a continuum, individualism-collectivism has received considerable attention from sociologists and social psychologists (Earley, 1989; Hofstede, 1980; Triandis, McCusker and Hui, 1990). Individualism refers to a self-orientation, and emphasis on self-sufficiency and control, the pursuit of individual goals that may or may not be consistent with in-group goals. Individualism involves a willingness to confront members of the in-group to which a person belongs, and a culture where people derive pride from their accomplishments. In an individualistic environment people are motivated by self-interest and achievement of personal goals. They hesitate to contribute to collective action unless their own efforts are recognized, preferring instead to benefit from the efforts of others. On the other hand, collectivism involves the subordination of personal interests to the goals of the larger work group, an emphasis on sharing, cooperation, group harmony, and hostility towards out-group members. Collectivists believe that they are an indispensable part of the group, and will readily contribute without concern for advantage being taken of them or for whether others are doing their part. They feel personally responsible for the group product and are orientated towards sharing group rewards.

In the present study we examine the relationship between managers' EQ and their environmental scanning behavior for assessing opportunities, threats, or problems in four different national cultures. Sayles (1964) and Mintzberg (1973) first discussed environmental scanning in terms of one of the roles management performs. McCall and Sergist (1978) built on this work and empirically measured these roles by defining specific behaviors that characterize various roles managers perform. Tsui (1984) used 40 of the 46 McCall and Sergist items to further investigate

these roles and on the basis of factor analysis proposed managerial effectiveness in terms of six different roles (leader, spokesperson, resource allocator, entrepreneur, environmental monitor, and liaison). Tsui's (1984) environmental monitor uses Mintzberg's (1973) and Hambrick (1982) view of seeking and receiving information to understand opportunities and threats. We selected effectiveness of environmental monitor, or environmental scanning, as the criterion variable.

While strategic scanning behavior exists in firms, it is bounded by social values, norms, and history. Ignoring the role of these cultural values in shaping behavior within an organization leads to an undersocialized understanding of the phenomena (Granovetter, 1985). Therefore, we empirically examine the role of empathy and social skills in facilitating effective environmental scanning behavior across four different countries including the United States, Greece, China, and Bangladesh. On the individualism–collectivism dimension, the United States is extremely individualistic among the countries studied by Hofstede and Bond (1988). Bangladesh is moderately more individualistic compared to the world average and Greece is moderately more collectivist. China is an extremely collectivist national culture. Given the cultural difference among these countries, we explore whether the mediating effect on the relationship between social skills and environmental scanning behavior differs between these cultures.

H2: The mediation effect will vary according to the national culture continuum of individualism and collectivism.

RESEARCH DESIGN

Sample and Procedure

Data were collected from 1,182 dyads composed of an MBA student and a colleague who each worked for the same supervisor. Dyadic data was collected across four countries including the U.S. ($n = 373$), Bangladesh ($n = 204$), Greece ($n = 240$), and China ($n = 365$). The EQ data were collected from MBA students and the scanning data collected from their colleague who worked for the same supervisor in order to make the samples as comparable as possible. The average age of respondents across the four countries ranged between 24.42–31.19 ($SD = 3.95$ – 7.66). Respondents' average full-time work experience ranged in years from 2.39–5.54 ($SD = 1.62$ – 10.17). The percentage of male respondents across the four countries ranged from 64%–86%.

Data on EQ and effectiveness of environmental scanning were collected from each of the four countries. MBA students filled out the EQ instrument, and their colleagues (who had the same supervisor) completed the questionnaire about the supervisors' scanning behavior. The data for each dyad—MBA student and his or her colleague—were matched. It is expected that this procedure will overcome the problems of common method biases (i.e., variance due to the measurement method rather than the constructs the measures represent).

Common Method Variance

Davis, Stankov, and Roberts (1998, p. 1013) warned about the potential dark side of popularizing a construct before it is carefully conceptualized, operationalized and rigorous empirical studies are completed. Previously used self-report measures of EQ (e.g., Bar-On, 1997; Boyatzis and Goleman, 2001; Cooper and Sawaf, 1997; Law et al., 2004; Mayer, Caruso, and Salovey, 2000) and criterion variables may have resulted in common method variance. This occurs when data are collected from the same respondents, with the same measures, and at the same time. The EQ instruments developed by Law, Wong, and Song and by Mayer, Caruso, and Salovey have been found to be psychometrically sound and it is expected that they will be resistant to common method variance (cf. Spector, 1987).

Another issue in organizational studies is that supervisors are often asked to assess their own managerial skills, but studies by Kruger and Dunning (1999) and Shipper and Dillard (2000) reported that unsuccessful supervisors overestimate their skills compared to successful supervisors. Also three studies reported that under-estimators of their managerial skills are likely to be more effective than over-estimators (Atwater and Yammarino, 1992; Church, 1997; Van Velsor, Taylor, and Leslie, 1993). As a result, if supervisors are asked to self-assess their EQ, some of them will probably provide misleading information. In the present study, an attempt was made to overcome some of the limitations of the existing self-report measures of EQ by using a new measure which involved asking observers (e.g., MBA students and their colleagues) to assess their common supervisor's EQ and environmental scanning. The MBAs and their colleagues assessed their supervisor's EQ and effectiveness of scanning, respectively.

Measurement

Emotional Intelligence

The two components of supervisory EQ were measured with Rahim and Psenicka's (2005) EQ instrument referred to the EQI. The EQI is composed of 16-items but unlike self-report instruments, items measure subordinates' perceptions of their supervisors' empathy and social skills. The instrument was developed by Rahim and Psenicka (2005) from repeated feedback from respondents and experts in the field. The scale underwent a rigorous and iterative process of exploratory and confirmatory factor analyses of various items in the countries included in our study. After factor analysis, the items that loaded less than .50 and/or loaded on an uninterpretable factor were dropped or rephrased. The EQI uses a 7-point box scale (7 = Strongly Agree . . . 1 = Strongly Disagree) for ranking each of the items and a higher score indicates a greater EQ for the representative supervisor. Sample items for the two dimensions include: "My supervisor understands the feelings transmitted through nonverbal messages," "My supervisor understands the links

between employees' emotions and what they do" (empathy) and "My supervisor confronts problems without demeaning those who work with him or her," "My supervisor handles emotional conflicts with tact and diplomacy" (social skills).

Environmental Scanning Behavior (ESB)

This was measured with 5 items of the effectiveness of an environmental monitor role scale adapted by Tsui (1984) from the McCall and Sergist (1978) instrument. The respondents were asked to rank each item on a 7-point box scale (7 = Strongly Agree . . . 1 = Strongly Disagree). The subscale was computed by averaging the responses to its items. A higher score indicates greater effectiveness of environmental scanning. Tsui provided evidence of convergent and criterion validities of the instrument. Sample items for this subscale are: "Scans the environment for opportunities," "Keeps up with market trends" and "Learns about new ideas from outside units".

Translation

Items were translated from English by bilingual professors from each representative country outside the United States (i.e., Bangladesh, Greece, and China). Changes to the items were made based on suggestions from a group of bilingual experts who translated these scales back to English. The final version was developed after accommodating their feedback.

RESULTS

To report the results we first examine the psychometric properties of the EQI and ESB measures. Then, in the second part of our analysis, we test the two hypotheses.

Factor Analysis

Emotional Intelligence

Factor analysis with SPSS 14 was undertaken using principal component analysis and varimax rotation. Confirmatory factor analysis was also undertaken using LISREL 8. The EQI items supported the two independent dimensions of EQ—empathy and social skills—in each of the four countries. The fit indexes for LISREL analysis were satisfactory in each country (RMSEA = .07–.11, NFI = .82–.95, GFI = .88–.94). These indexes ranged from moderate to high.

Environmental Scanning Behavior

Exploratory factor analysis (principal component analysis and varimax rotation) with SPSS 13 and confirmatory factor analysis with LISREL 8 were computed on the 5 items of ESB. Results confirmed a significant factor representing effectiveness of environmental scanning in each of the four countries. The fit indexes for LISREL analysis were satisfactory in each country (RMSEA = .06–.10, NFI = .87–.91, GFI = .87–.94). These indexes ranged from moderate to high.

Reliability and Social Desirability Bias

Table 1 presents the means, standard deviations, internal consistency reliability coefficients, and Pearson correlations between empathy, social skills and environmental scanning behavior. The internal consistency reliability coefficients of the two EQ scales, as assessed with Cronbach α , ranged between .72 and .87 across the four countries (see Table 1) and found satisfactory (Hinkin, 1995).

Table 1: Descriptive statistics, correlations between EQ and environmental scanning behavior and Cronbach α s for variables				
Predictor variable	Environmental Scanning Behavior			
	U.S.	Bangladesh	Greece	China
Empathy				
<i>r</i>	.44*	.37*	.62*	.56*
Cronbach α	.86	.78	.87	.83
Mean	4.87	5.14	5.06	4.76
<i>SD</i>	1.26	1.10	1.08	1.26
Social skills				
<i>r</i>	.32*	.34*	.59*	.56*
Cronbach α	.82	.74	.87	.72
Mean	4.96	5.16	5.12	4.68
<i>SD</i>	1.25	1.14	1.13	1.15
Environmental scanning behavior				
<i>r</i>	-	-	-	-
Cronbach α	.88	.87	.85	.91
Mean	5.19	5.28	5.21	4.94
<i>SD</i>	1.21	1.03	.75	1.11
Age				
Mean	24.42	31.15	30.67	31.19
<i>SD</i>	7.66	3.79	4.37	3.95

Table 1: Descriptive statistics, correlations between EQ and environmental scanning behavior and Cronbach α s for variables				
Predictor variable	Environmental Scanning Behavior			
	U.S.	Bangladesh	Greece	China
Work experience with present supervisor (in years)				
Mean	3.28	2.39	2.47	5.54
SD	10.17	1.62	5.32	4.16
N (dyads)	373	204	240	365
* $p < .001$. (two-tailed)				

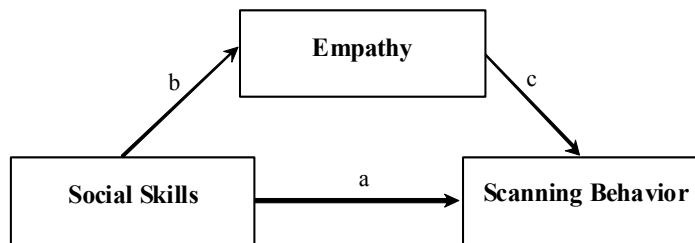
Validity

The average variance extracted by items loading on a given factor measures convergent validity. All items loaded on their respective factor at .50 or above and thus considered to measure the constructs of interest (Hinkin, 1995). A test of discriminant validity is that the squared correlations between factors should be less than the average variance extracted for each factor, the average R^2 (Fornell and Larcker, 1981). In this sample there is a lack of discriminant validity between empathy and social skills. This is attributed to the high correlation between the two subscales which ranged from .80 to .87.

Test for Mediation Effect

To test our hypotheses we use Baron and Kenny's (1986) test for mediation. Baron and Kenny (1986) outline four steps in establishing mediation as follows. (Figure 1):

Figure 1: Empathy as a mediator of the relationship between social skills and environmental scanning behavior in four countries



Path (a): First, show that the initial variable (Social skills) is correlated with the outcome (Environmental scanning). Use a regression equation to estimate and test path (a). This step establishes that there is an effect that may be mediated.

Path (b): Second, show that the initial variable (Social skills) is correlated with the mediator (Empathy). Use Empathy as the criterion variable in the regression equation and Social skills as a predictor to estimate and test path (b).

Path (c): Third, show that the mediator, Empathy, affects the outcome variable, Environmental Scanning. Use the criterion variable in a regression equation and Social skills and Empathy as predictors to estimate and test path (c).

Finally, to establish that Empathy completely mediates the Social skills–Environmental Scanning relationship, the effect of Social skills on Environmental Scanning, controlling for Empathy, should be zero. If these four steps are met, then the data are consistent with the hypothesis that Empathy completely mediates the Social skills–Environmental Scanning relationship. If the first three steps are met but Step 4 is not, then partial mediation is indicated.

Three regression analyses were computed for each country. Each analysis was performed with the two subscales of the EQI—social skills and empathy—as the independent and mediating variables, respectively, and the effectiveness of environmental scanning as the dependent variable. Table 2 shows the results of three regression analyses to satisfy the first three steps.

Equation Regressed	U.S.		Bangladesh		Greece		China	
	β	R^2	β	R^2	β	R^2	β	R^2
(a) SS → ESB	.21*	.05	.30*	.09	.40*	.16	.55*	.30
(b) SS → EM	.81*	.67	.72*	.52	.88*	.78	.80*	.64
(c) EM → ESB	.30*	.08	.24*	.12	.29*	.18	.15*	.31
SS → ESB	-.04		.12		.14		.43*	
<i>N</i> (dyads)		373		204		240		365
* $p < .001$								
Note: SS = Social skills, EM = Empathy, ESB = Environmental scanning behavior.								

- Equation a: Social skills was positively associated with effectiveness of environmental scanning in each country.
- Equation b: Social skills was positively associated with empathy in each country.
- Equation c: Empathy, after controlling for social skills, was positively associated with the effectiveness of environmental scanning in each country.

Equation c shows that there is full mediation in the U.S., Bangladesh, and Greece. In the U.S. the β for social skills changed from .21 ($p < .001$) in Path (a) to $-.04$ (*ns*) in Path (c). Similarly, there was full mediation in Bangladesh as the β for social skills changed from .30 ($p < .001$) in Path (a) to .12 (*ns*) in Path (c). In Greece there was also full mediation as the β for social skills changed from .40 ($p < .001$) in Path (a) to .14 (*ns*) in Path (c). Unlike the other countries, there was only partial mediation in China as the β changed from .55 ($p < .001$) in Path (a) to .43 ($p < .001$) in Path (c). In sum results suggest that empathy is a full mediator of the relationship between social skills and effectiveness of environmental scanning in the U.S., Bangladesh, and Greece but empathy was a partial mediator of this relationship in China.

DISCUSSION

This study investigated how differences in EQ relate to the effectiveness of environmental scanning behavior using 1,182 dyads in the four countries. Results provide sound evidence of convergent and criterion validities as well as internal consistency reliability coefficients of the measures of EQ and effectiveness of scanning behaviors within firms. Overall the results of our analysis indicate subordinates' perceptions of managerial EQ are associated with the effectiveness of managers scanning behavior across countries, however, nuances exist in mediation. Using Hofstede and Bond's (1988) continuum of individualism and collectivism, the United States is most individualistic, followed by Bangladesh. On the other hand Greece is slightly more collectivist compared to other countries and China is an extremely collectivist culture. In the individualistic and moderately collectives cultures (U.S., Bangladesh, and Greece), empathy fully mediates the relationship between social skills and effectiveness of environmental scanning. Therefore to effectively scan the environment in individualistic and moderate collectivist countries both social skills and empathy are required. On the other hand, in highly collectivist cultures (China) there was evidence of only partial mediation. In other words, in more collectivistic countries social skills and empathy can independently influence environmental scanning behavior. Whereas a manager with high social skills but not empathetic in an individualistic culture cannot be effective in a strategic scanning role they can be effective in more extreme collectivist cultures. In highly collectivist cultures a manager with social skills alone can be effective in performing an environmental scanning role. However, a manager in this culture with high social skills and empathy will be more effective than others who have social skills or empathy alone.

Implications for Management

The results of our study provide evidence that managers and decision makers alike need to consider the ability to exercise emotion—especially in environments where working with others to scan the environment for opportunities and threats is desired. Managers or expatriates in individualistic and moderately collectivist cultures need to acquire and exercise social skills and empathy competencies to enhance their ability to detect and interpret problem areas, identify opportunities, and implement strategic adaptations. In these national cultures, managers with high social skill competencies will not be as effective in bringing about strategic change unless they use empathy competences as well. For transnational firms wishing to bring about external intelligence and new opportunities for wealth creation special consideration may be needed in selecting managers and expatriates according to their ability to exercise EQ. In highly collectivistic cultures, managers need to acquire and use social skills and/or empathy competencies to enhance their ability to effectively scan the environment for information necessary to formulate strategy. Overall, the challenge for the global organization is to enhance social skills and empathy of their managers. Appropriate interventions may be needed to enhance these social competencies that involve education and specific job-related training (Cherniss and Adler, 2000; Goleman, 1998). Managers should also be encouraged to enhance their skills through continuous self-directed learning. Goleman (1998) suggests that such training should "focus on the competencies needed most for excellence in a given job or role" (p. 251). The contemporary transnational firm wishing to effectively scan information for strategic decision making should provide positive reinforcements for learning and improving managers' essential emotional competencies for bringing about such change. In addition to providing education and training for the existing managers to improve their EQ, organizations may better behave opportunistically by adopting selection practices of identifying managers with an aptitude for exercising emotion. While the opportunity to select managers with appropriate emotional intelligence exists, organizations must also consider the aptitude for development of such competencies. Those firms who are better able to develop appropriate emotional competencies may have distinct advantage in bringing about higher performance based upon their strategic scanning behavior.

Directions for Future Research

Further research is needed to enhance our understanding of the relationships of EQ to other strategic behaviors. Promising criterion variables for future research include managements' ability to formulate and implement strategies. Strategic management involves executives' ability to work with others to communicate information as well as adapt and champion strategies within firms. Therefore, strategy involves social processes which have received less attention compared to other areas within strategic management. Another important area of future research concerns carefully

designing and evaluating the effects of training in EQ in enhancing the aforementioned criterion variables. Field experiments are particularly useful in evaluating the effects of EQ training on individual and firm outcomes. There is also need for scenario-based and laboratory studies that control some of the extraneous variables to better understand the effects of supervisors' EQ. Also it would be useful to investigate the differences in the perceptions of subordinates regarding the firm performance of executives with low and high EQ.

Strengths and Limitations

One of the major strengths of this study is that the independent and dependent variables were collected from separate respondents, which overcome the problem of common method variance. The presence of common method variance may inflate correlations between independent and criterion variables. Another strength is that the data were collected from employed MBA students and their colleagues from each country. Therefore, sample characteristics are comparable across countries. Limitations of this field study should be noted. Data were collected from convenience samples that might limit generalizability of the results. Although the sample sizes for the individual countries were satisfactory, we did not have large samples to perform split-sample tests for the traditional and LISREL analysis, but the results seem to support a consistent cross-cultural pattern.

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