Chapter 4
EI, IQ and Competence: Toward a Comparative Model of China and Bangladesh

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Abstract EI (Emotional Intelligence) alone or when combined with IQ (Intelligence Quotient) has been known to often determine managerial competence (or problem solving index.) This paper retests a conceptual model developed earlier to interpret how EI (Emotional Intelligence), IQ (Knowledge, Skills and Abilities or KSA) and ED (Executive Development) contribute to Managerial Problem Solving. It tests four hypotheses with data from Bangladesh and China toward a comparative management effectiveness model. Seventy eight entry to mid- level managers of BRAC in Bangladesh and 52 managers from 26 diverse organizations of Shandong, China participated in this comparative study. The authors provide reliable indices for Emotional Intelligence, IQ (KSA) and Employee Development concepts while providing empirical support for the managerial effectiveness model. The paper makes a definitive claim about the contribution of EI in managerial effectiveness (or problem solving).

4.1 Introduction

Emotional Intelligence (EI) is a set of abilities and skills pertaining to perception, recognition and regulation of supervisor's personal and employee emotions. It also involves using emotions to facilitate individual performance. Although the literature on the concept still debates whether EI is a trait or ability (Austin, 2010), this paper uses the original construct of Salovey and Mayer (1990) in the prediction of managerial competence or problem solving behavior. The construct uses the following mental abilities: (1) Managing one's emotion to achieve specific goals;

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(2) Understanding emotional language, and the signals conveyed by emotions; (3) Using emotions to facilitate thinking; (4) Perceiving emotions in oneself and others. The surge of research interest began with Salovey and Mayer (1990) who made a claim that emotional intelligence (EI) influence socially desirable outcomes. Since then a great deal have been written about emotional intelligence as a major explanatory variable in conjunction with variables such as managerial IQ reflected in operational, communication, and problem solving skills contributing to individual and managerial performances (Butler & Chinowsky, 2006; Caruso & Salovey, 2004a, 2004b; Cote & Miner, 2006; Goleman, 1998, 2000; Lyusin, 2006; Petrides & Furnham, 2006; Rahim et al., 2002; Rapisadra, 2002; Salovey & Mayer, 1990; Mayer et al., 1998, 2000, 2004, 2008; Caruso et al., 2002). While the conceptual and philosophical debates of mixing intelligence with emotion is yet to be resolved (Becker, 2003; Cote & Miner, 2006; Landy, 2005; Locke, 2005; Mathews et al., 2006) an ever increasing number of business have been using MSCEIT (Mayer, Salovey, & Caruso, 2002), Goleman ECI 360 (1995), and Bar-On EII (1997) as the screening device for recruiting new managers and executives. However, despite the debates, there seems to be a consensus that EI of manager is as important as IQ if not more, and as such it also affects individual behavior and consequently the organizational outcomes.

In the recent studies, EI has been found to explain occupational stress (Nikolaou & Tsaousis, 2002; Nooryan, Gasparyan, Sharif, & Zoladl, 2011; Petrides & Furnham, 2006) employee commitment (Petrides & Furnham, 2006); team cohesiveness (Rapisadra, 2002); burnout (Sharma, 2007); sales performance (Law, Wong, & Song, 2004); professional success.

Scholars who assume EI as a mental ability tend also to believe that EI could be developed through socialization and training. Schachter (2009) emphasized EI in leadership training; Nooryan et al. (2011) emphasized teaching of EI to overcome job related stress; Yaghoubi, Mashinchi, and Hadi (2011) showed how variations in parenting explain EI in children. In addition a recent empirical study confirmed gains in EI in a leadership development program (McEnrue, Groves, & Shen, 2009). Another competency model for interpersonal effectiveness developed by Kunnanatt (2008) provided a practical framework that could help executives, employees, and career advisors understand what EI competencies managers need and how these could be developed through EI training. Yet in another study by Fambrough and Hart (2008) suggest alternative ways to include increased awareness of emotions in the leadership development. Furthermore, Berman and West (2008) in a study of social skills among public managers have identified practices that lead to development of EI skills. These studies may have influenced the management practices and many organizations recently have adopted emotional intelligence in their employee development programs (Cote & Miner, 2006).

While the importance EI has been recognized in both in the literature as well as in practice, the operational definition and measurement of the aspects of EI continue to remain an unresolved issue. Rahim et al. (2002) in a cross-cultural (seven country) model of emotional intelligence, used five dimensions: self awareness, self regulation, motivation, empathy, and social skills. For each of these

dimensions, Likert type scales were used. Petrides and Furnham (2006) made a distinction between Trait EI vs. Ability EI, reflecting perceived vs. demonstrated emotional intelligence leading to a complex mutlti-dimensional measurement technique. In such a complex model, overestimation/underestimation of parameters of EI are practical problems stemming from the confounded data of both perceived and/or the demonstrated emotional intelligence. In spite of all risks of confounding data and measurement errors, EI has been established as an explanatory variable of managerial effectiveness and as such is a highly desired trait in the executive hiring decisions.

However, it is also not clear in the literature as to how managerial IQ in conjunction with Managerial EI or independently explain managerial effectiveness. Therefore, we proposed a model to empirically discern relative contributions both variables with data from two developing countries. Beside EI, we therefore need to introduce IQ, Executive Development (ED), and Managerial Competence related to organizational problem solving as a prelude to the discussion of our model.

Psychological literature on IQ is very rich and its measurement has been universally accepted. Based on the literature, we can safely deduce that managerial IQ lies in the cognitive domain of the managers and it is demonstrated in the operational knowledge, conceptual abilities and skills pertaining to performance of the traditional functions of planning, organizing, leading, and controlling. We have attributed Managerial IQ to Knowledge, Skills, and Abilities (KSA) of managers.

Executive Development (ED) stands for executive development training programs in the organization. These programs usually are skill/ability development programs leading to Knowledge, Skills and Abilities (KSA) of managers. We proposed ED as the KSA booster contributing to overall competency expectations of managers.

Managerial Problem Solving (MPS) is a composite index of problem solving performance attributions by subordinates representing supervisor's managerial effectiveness.

By using the above variables, we have conceptualized Managerial Competence (MC) is a function of KSA + ED + EI, where ED stands for the amount of management training and development received by the manager. Therefore, we can formulate the following conceptual Equation:

$$\mathrm{MC}\left(\sum \mathrm{KSA}, \mathrm{ED}, \mathrm{EI}\right) + \acute{\varepsilon} = \mathrm{MPS}$$

Where $\acute{\varepsilon}$ stands for errors or contributions of unknown variables; MPS stands for Managerial Problem Solving.

Based on above formulations, it may be stated that all managers are expected to resolve issues and solve problems. Managerial effectiveness depends on solving organizational problems as well as resolving interpersonal issues. Figure 4.1 below illustrates the relationship depicted in the Equation:

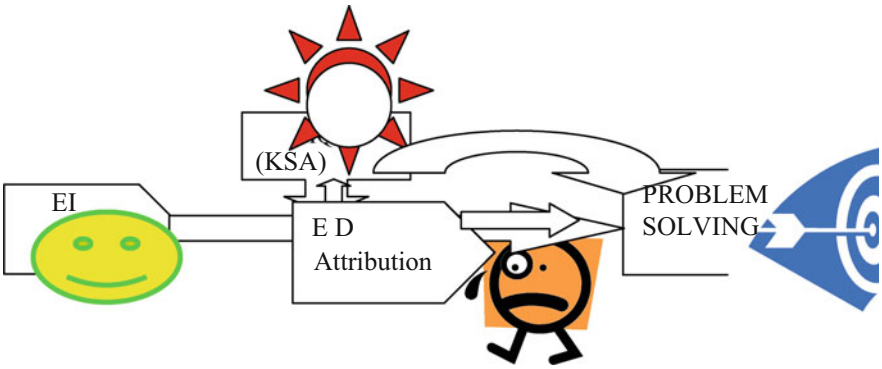

Fig. 4.1 A model of managerial effectiveness

The above model was initially developed by Amin and Afza (2008). It was first tested with data from an organization (BRAC) in Bangladesh. Legends in the Fig. 4.1: The moon symbolizes (emotion) EI, and the Sun symbolizes (reason) i.e. IQ (KSA). The action figure (clip art) symbolizes management training and education, and the arrow on a target symbolizes problem solving efforts by the manager.

The following illustrative Hypotheses from the above model may be deduced:

H_1: Higher the observed EI (Emotional intelligence), higher is the managerial problem solving (or managerial effectiveness)

H_2: Higher IQ (KSA), higher is the managerial problem solving (or managerial effectiveness)

H_3: Higher EI along with higher IQ (KSA) lead to higher managerial problem solving (or managerial effectiveness)

H_4: Higher EI along with higher IQ (KSA) and ED (Employee Development Attribution) lead to higher managerial problem solving (or managerial effectiveness)

4.2 Methods and Measurement

A five point interval variable with upward grading scale (1 = below 60 %; 2 = 60–69 %, 3 = 70–79 %, 4 = 80–89 %, and 5 = 90–100 %) was used for 93 different items concerning perception, recognition, and regulation of personal and employee emotions. This grading scale was judged to be better than that of self-reports of the respondents in Likert type of scale as the grading is assumed to be based on demonstrated EI ability of the immediate supervisor. Typical items were: My supervisor has ability to control his/her emotions; helps subordinates without hurting feelings of coworkers; has ability to handle interpersonal conflicts through tact and diplomacy. An EI index was created by adding 27 of these items and then dividing the aggregate by 27. A Cronbach alpha was calculated by using SPSS-16

sub routine Reliability. The coefficient $\alpha = .937$ affirms high reliability of the EI index. Similarly another index was created for Managerial Problem Solving with 12 items. The typical items in this index were: My supervisor investigates issues to find a solution acceptable to us; tries to bring all our concerns out in the open so that the issues can be resolved; tries to work with me for proper understanding of a problem. A Cronbach alpha $\alpha = .921$ confirms the reliability of the index. Using the same method of dividing the aggregate score by19, an operational skill index (IQ) of the manager was created with 19 individual items. The typical items in this index were: My supervisor comes up with new and practical ideas to improve performance; suggests new ways to improve quality; promotes and champions ideas of others. A Cronbach alpha $\alpha = .929$ confirms the high reliability of the index. ED (Executive Development) index was created with seven individual items through the above math routine. The typical items in the index were: My supervisor encourages continual training for improved employee performance; encourages sharing work related knowledge and skills among employees; encourages education for individual efficiency and effectiveness. A Cronbach alpha $\alpha = .905$ confirms the high reliability of the index.

Managerial Problem Solving (MPS) is an index comprising of 12 variables. Typical items in this index are: My supervisor demonstrates problem solving skills; work with us in understanding issues and problem; helps us solve problems. A Cronbach alpha $\alpha = .904$ confirms reliability of the index.

Data were collected in the winter of 2008 from 51 entry level managers of organizations located in Shandong province of China through structured interviews who were selected based on their respective management (entry level or supervisory) positions. What follows are brief descriptions of organizations involved in this survey. This survey was carried out in 26 organizations in Shandong Province of China which are classified into five groups as Conventional Business Organizations, IT Companies, Non-profit Institutions, Educational Organizations and Financial institutions.

4.2.1 Conventional Business Organizations

There are six companies representing petrochemical, pharmaceutical, tourist trade, and construction companies in this group. They are: China National Petroleum Corporation (CNPC), Qilu Petroleum Engineering Corporation (QPEC), Linuo Group, The Tourism Administration of Shouguang (Shandong), The City Construction Corporation of Zhangqiu (Shandong), and Qilu Pharmaceutical Co. Ltd.

4.2.2 Educational Institution

There are three Universities, one college and a high school in this group. They are Shandong University, Shandong University of Art, Shandong University of Agriculture, Shandong Economy & Trade Professional College, and No.1 High School of Zhucheng (Shandong).

4.2.3 Financial Institution

Four banks and a non-bank financial institution are included in this group. They are The Leyuan Branch of Bank of Commerce of Jinan, The Subsidiary Bank in Weifang (Shandong) of Bank of China, The Subsidiary Bank in Weifang (Shandong) of Bank of peoples' Republic of China, The Subsidiary Bank in Jinan (Shandong) of China Merchants Bank, the non-bank financial institution is Dagong International Credit Evaluation Co. Ltd.

4.2.4 Non-profit Institution

This group includes four organizations, they are: Dadi Scene Travel Planning Institute, Jinan Landscape Management Bureau, Qingdao Port Bureau, and Shandong Architectural Design & Research Institute.

4.2.5 IT Companies

This group includes six companies. They are: Jinan Telecom Company, Jinan Lanfu Managerial Consult Company, Jinan Chengtian Information Company, Jinan Xinhainuo Technical &Trade Company, Shandong Branch of China Mobile Company, and, Zhongqing Jiye Group Ltd. Company. What follows are the brief introductions of some of the organizations based on the publicly provided websites:

1. *China National Petroleum Corporation* http://www.cnpc.com.cn

   Shandong Liaocheng of China National Petroleum Corporation (CNPC) was built in July 2002. CNPC is China's largest oil and gas producer and supplier, as well as one of the world's major oilfield service providers and a globally reputed contractor in engineering construction. It provides crude oil, natural gas, refined products and chemicals for business and customer use. It also provides the industry with a full range of oilfield and engineering services. More than 400 employees serve this company. Some lower level managers in this company are involved in this survey.

2. *Linuo Group* http://www.lino.com

   Linuo Group was established in 1994, specializing in solar products, glass products, pharmacy and automotive coatings; it is an internationalized group that also involves in foreign trading. It was honored as Shandong Province's Outstanding Private Enterprise, National High and New Tech Enterprise, National High Tech Private Enterprise and Top 1,000 Greatest Industrial Enterprises of China in 2005. The group operates departments for solar products, pharmacy, glass products and chemical industry; It also owns 28 manufacturing companies, 2 publicly held companies, 2 overseas companies. It has 9 offices in eight cities of China and 2 R&D institutions abroad and a new-tech R&D center at Linuo University. There are 11,000 employees in Linuo Group and some middle to high level managers of the head office of Linuo Group participated in this survey.

3. *Shandong University* http://www.sdu.edu.cn/

   Shandong University is one of the oldest and prestigious universities in China. Shandong University was founded in 1901 and is the second national university established soon after Jingshi University (the Metropolitan University) in the country. Recently, the Ministry of Education approved the university as a "national key comprehensive university." In 2001, it was listed among the 21 national first-class key universities. by the Ministry of Education, PRC.

   Shandong University embraces an abundance of scientific research facilities, a strong teaching staff, and favorable studying environment. The university has a group of reputed scholars known both at home and abroad among 922 professors. There are 29 academicians (including adjunct academicians) who are members of the Chinese Academy of Sciences and the Chinese Academy of Engineering. Three general hospitals, including Qilu Hospital and 12 teaching hospitals are affiliated with the university. Over 175 experimental labs, teaching and research facilities are well-EIuipped. Some of the interviewees come from the lower level management positions of the university.

4. *Shandong University of Arts.* http://www.sdca.edu.cn/

   Shandong University of Arts is located in Jinan, a famous historic and cultural city with many springs, and is the only comprehensive arts institution of higher education in Shandong Province. Since its establishment in 1958 and after continuous efforts of several generations, Shandong University of Arts has developed into a comprehensive arts institution of higher education and is playing an important role in arts education and arts talent cultivation in Shandong Province. It has great influence in some domestic arts academies. It now has 728 full-time teachers, including 292 professors with doctorate and master degrees, and 281 teachers with senior professional qualification. Some teachers of this university participated in this survey.

5. *Shandong Branch of China Mobile Company* http://www.sd.chinamobile.com/

   Officially established on April 20th, 2000, China Mobile Communications Corporation (CM) has a registered capital of 51.8 billion RMB yuan and assets of over 400 billion RMB yuan. Currently, in terms of its market value, China Mobile Limited is the largest among all the overseas listed Chinese companies,

and among all the telecom carriers in Asia. It ranks the first in the world in terms of the network scale and the customer base. By the end of 2005, 100 % of the counties (cites) in China had been covered by network with seamless coverage on the backbone lines and indoor coverage in key urban areas. The training program framework for China Mobile has basically been established and the Internet-based education program covering the thirty-one subsidiaries was implemented and promoted, reinforcing the development, management and analysis of the basic training data, and improving the efficiency and quality of the training efforts. There are nearly 10,000 employees in this company and some of the lower level managers have participated in this survey.

6. *Jinan (Shandong) Subsidiary Bank of China Merchants Bank* http://www.cmbchina.com/branch+websites/0531

   China Merchants Bank is the sixth largest commercial bank by assets in China and is currently among the top 100 banks in the world. During 22 years since the inception, China Merchants Bank have grown from a small bank with one office and capital totaling USD 14.5 million to a national bank with net capital of USD 12.33 billion and more than 600 offices as well as about 36 thousand employees in 40 major cities across China. There are several hundred managers in Jinan subsidiary bank of CMB and some of the junior managers participated in this survey.

7. *Shandong Architectural Design & Research Institute* http://www.sdad.cn/

   Shandong Architectural Design & Research Institute (SDAD) was built in 1953, which is the largest and most powerful entities of architectural design, engineering survey and design. SDAD has trained and cultivated a group of high-quality employees who with the means of advanced design and quality assurance system have achieved excellence. There are 427 existing employees including 48 researcher for engineering applications, 122 senior engineers at the national level, 30 registered architects, and other professionals and technical professionals with diverse professional certification. Some junior managers of this firm participated in this survey.

8. *Jinan Landscape Management Bureau* http://www.jnsylj.gov.cn/

   Jinan Landscape Management Bureau is an governmental institute. It exercises its administrative functions in accordance with the laws and regulations and is responsible for the implementation of local laws, regulations, and the conservation and management of nature. Urban landscaping, as well as the planning, construction and management of amusement parks are among its charges. There are 26 subordinate units and more than 1,000 employees are on active service. Two operational level officers of this Bureau participated in the survey.

   BRAC: Bangladesh http://www.brac.net

BRAC, based in Bangladesh, is (as of May 2010) the world's largest non-governmental development organization. BRAC operates all over Bangladesh and in nine other countries of Asia and Africa and Latin America. In Bangladesh alone, it has over seven million microfinance group members, 37,500 non-formal primary

schools and more than 70,000 health volunteers. BRAC is the largest NGO by number of staff employing over 120,000 people, the majority of whom are women. BRAC operates programs such as those in microfinance and education in nine countries across Asia and Africa, reaching more than 110 million people. The organization is 80 % self-funded through a number of commercial enterprises that include a dairy and food project and a chain of retail handicraft stores called 'Aarong'. BRAC maintains offices in 14 countries throughout the world, including BRAC USA and BRAC UK. BRAC is a few years into their initiative to operate in ten African countries in the next 10 years.

BRAC has organized the isolated poor and learned to understand their needs by finding practical ways to increase their access to resources support their entrepreneurship and empower them to become agents of change. Women and girls have been the focus of BRAC's anti-poverty approach; BRAC recognizes both their vulnerabilities and thirst for change.

BRAC was founded in Bangladesh in 1972 and over time, it has established itself as a pioneer in recognizing and tackling the many different realities of poverty. We have learned over time to find the poorest of the poor—those who are destitute and outside the reach of most NGOs—and help them rebuild their lives from scratch and achieve financial independence.

Today, in Bangladesh alone, BRAC (Table 4.1) works to combat poverty in 70,000 villages and 2,000 slums, reaching three quarters of the entire population with an integrated package of services for rural and urban communities. It employs more than 120,000 people—microfinance officers, teachers, health staff and enterprise managers—to be on the very doorstep of the poorest families, making its services accessible, relevant and adaptable.

BRAC is conglomerate of organizations that mirrors the six sectors of organizations chosen in the Chinese study. Participants of the survey are entry to mid level managers in the various enterprises of BRAC- Bangladesh. The initial model as depicted in Fig. 4.1 was tested successfully with data from 78 entry to mid-level managers of this organization (Amin & Afza, 2008).

4.3 Findings

We have used SPSSX Sub-routine, Pearson correlation to determine the level of associations among the variables. Table 4.2 reports result on the Chinese data and Table 4.3 reports results on the Bangladesh (BRAC) data.

Based on coefficients (r) reported on Table 4.2, EI is positively related to managerial problem solving ($r = .673$). It means that an interval increase in EI leads to a corresponding increase in Problem Solving index by 67.3 % of an interval. Similarly, an increase in IQ (KSA) index by one interval leads to a corresponding increase in Problem Solving index by 67.1 % of an interval. In the same way, an increase of one interval in Executive Development (ED) index leads to a corresponding increase in Problem Solving index by 88.4 % of an interval.

Table 4.1 BRAC's programs in Bangladesh include

• Agriculture and food security	• Environment
• Microfinance	• Gender justice and diversity
• Targeting extreme poverty	• Social communications and advocacy
• Empowering adolescents	• Social enterprises
• Education	• Socially responsible investment
• Health	• Technical assistance
• Legal empowerment	• Community empowerment

Table 4.2 Pearson correlation coefficients (r)—China

	EI	IQ	ED	PSolve
EI	1.00	.820**	.650**	.673**
IQ	.820**	1.00	.630**	.671**
ED	.650**	.630**	1.00	.884**
PSolve	.673**	.671**	.884**	1.00

**Significant at .001 level

Table 4.3 Pearson correlations coefficients (r)—BRAC, Bangladesh

	EI	IQ/OS	ED	PSolve
EI	1.00	.630**	.576**	.497**
IQ	.630**	1.00	.588**	.723**
ED	.576**	.588**	1.00	.613**
PSolve	.497**	.723**	.613**	1.00

**Significant at .001 level

These associations are significant at .001 which means that the same relationships would be found in 999 samples out of 1,000 sample if the study is replicated.

Based on coefficients reported on Table 4.3, EI is positively related to Problem Solving (r = .497). It means that an increase in one interval of EI index leads to a corresponding increase in Problem Solving by about 50 % of an interval. Similarly, an increase of an interval in IQ (KSA) leads to a corresponding increase of 73.23 % of an interval in Problem Solving index. In the same manner an increase of one interval in ED leads to corresponding increase of 61.3 % of interval of Problem Solving index. The above coefficients are also highly significant at .001.

It appears that both Chinese and Bangladesh studies support linear positive relationships of three independent variables i.e., EI, IQ and ED with Managerial Problem Solving index representing managerial effectiveness. There are however noticeable difference in the magnitude of associations (i.e. sizes of r). Whether these differences are significant may be a subject matter of future studies with larger sample sizes.

However, linear positive associations could often be spurious and that is why we conducted a multiple regression analysis. Multiple regression also enables us to test complex relationships stipulated H_2 and H_3. Table 4.4 below shows findings of the regression equation with Managerial Problem Solving as dependent variable and EI, IQ, and ED indices as independent variables respectively. The subroutine Enter

Table 4.4 Regression analysis (Chinese organizations)

Equation: PSolve = $\alpha + b_{EI} + b_{IQ} + b_{ED} + \varepsilon$					
Independent	Dependent	Beta	R	R^2	F
EI	PSolve	.079			
IQ	PSolve	.141			
ED	PSolve	.746**			
			.898	.807	64.212**

**Significant at .001 level

of SPSS-16: Linear Regression was chosen to determine the contribution of each of the independent variables while keeping the impact of the other variables constant.

Table 4.4 above reports the result of regression analysis with data from the Chinese organization. The model in Table 4.4 explains 80.7 % of the variations (R^2) in Managerial Problem Solving by all the independent variables in the equation. The highly significant F-value confirms the efficacy of the model. The multiple R = .898 also confirms the high association of the independent variables with the dependent variable. The standardized B coefficient for Executive Development Index (B = .746) is positive and highly significant. The coefficient (B = .079) for EI Index while positive however did not show any significant association with managerial Problem Solving when the impact of both IQ and ED indices are kept constant. The coefficient (B = .141) for IQ is positive, but not significant while both EI and ED are kept constant. It seems that Executive Development (ED) stands out as the single most significant variable with strongest association (B = .746) with Problem Solving while the impact of both EI and IQ are kept constant. When B coefficients are compared with Pearson correlation coefficients, it reveals underlying interaction effect between EI and IQ variables. Such an underlying relationship was demonstrated in the Pearson correlation coefficient of r = .820 between EI and IQ variables. This was not an unexpected phenomenon considering the fact that IQ index is composed of KSA, and some of the skills and ability items of IQ index are expected to be collinear with items of EI index.

BRAC in Bangladesh shows a different picture based on the regression analysis as reported on Table 4.5. It states that about 63 % of the variation in the Managerial Problem Solving is explained by the regression model. The F ratio (F = 37.73) is highly significant and the multiple correlation coefficient R = .79 attest to the strong association between independent and dependent variables. The striking difference between BRAC and the Chinese organizations are that: (1) the fact that EI produced a significant Beta (B = .341) with Managerial Problem Solving (while keeping the influences of IQ and ED constant) in the case of Bangladeshi organization; and (2) IQ also produced a significant Beta (B = .422) with Managerial Problem Solving for BRAC while keeping two other independent variables constant; (3) Contrary to Chinese organizations, Executive Development (ED) does not show any significant association with Problem Solving while EI and IQ are kept constant for BRAC.

Table 4.5 Regression analysis (BRAC, Bangladesh)

Equation: PSolve = $\alpha + b_{EI} + b_{IQ} + b_{ED} + \varepsilon$					
Independent	Dependent	Beta	R	R^2	F
EI	PSolve	.341**			
IQ/OS	PSolve	.422**			
ED	PSolve	.089			
			.79	.625	37.734**

**Significant at .001 level

Based on significant Pearson correlation coefficient between EI Index and PSolve Index (r = .673) and the positive standardized regression coefficient (B = .079) with the Chinese data; and the association between EI index and PSolve index (r = .497; B = .341) with Bangladeshi data, our hypothesis, H_1: Higher the observed EI (Emotional intelligence), higher is the managerial problem solving (or managerial effectiveness) is substantiated by the empirical evidence.

Again, based on Pearson correlations between IQ index and PSolve index (r = .671; r = .723) respectively of the Chinese and Bangladeshi organizations which correspond to significant standardized regression coefficients (B = .141; B = .422), our hypothesis, H_2: Higher IQ, higher is the managerial problem solving (or managerial effectiveness) seems verified by the empirical evidence.

Moreover, based on Pearson correlations of EI index, IQ index with PSolve index (r = .673 and r = .671 respectively; r = 497, r = .723 respectively) and significant as well non significant but positive standardized regression coefficients (B = .079 and B = .141 respectively; B = .341 and B = .422 respectively), our hypothesis, H_3: Higher EI along with higher IQ lead to higher managerial problem solving (or managerial effectiveness) received empirical justification.

Finally, based on Pearson correlations of EI index, IQ index and ED index with PSolve index both in the Chinese and Bangladeshi organizations (i.e. r = .673, r = .671 and r = .884 respectively; and r = .497, r = .723, r = .613 respectively) and on significant positive standardized regression coefficients for EI and IQ indices and a highly significant positive B coefficient for ED (B = .746), our hypothesis H_4: Higher EI along with higher IQ and ED (Executive Development) lead to higher managerial problem solving (or managerial effectiveness) seem to be at least partially supported by empirical evidence. However, the evidence from the Chinese organizations seemingly suggest that the Executive Development and training relative to EI contributes more to Managerial Problem solving than their Bangladeshi counterpart organization. It is expected that positive Beta (i.e. B = .079 and B = .141) coefficients with EI in the Chinese organization and positive Beta (i.e. B = .089) coefficient for ED with Problem Solving are likely to be significant in future studies with larger sample sizes in both countries.

4.4 Conclusion

A model of managerial competency was developed with observed emotional intelligence (EI), managerial IQ (KSA), employee development (ED) as antecedent variables explaining managerial effectiveness. Highly reliable indexes (determined by their respective Cronbach's alpha coefficients that are greater than $\alpha = .70$) created to measure each of the above variables. By reviewing relevant literature, four illustrative hypotheses dealing with linear relationships among EI, IQ, ED and the managerial effectiveness (managerial problem solving) were developed. This model was originally developed by Amin and tested with data (Amin & Afza, 2008) collected in Bangladesh. The Bangladeshi data is used again here to provide a comparative basis with the Chinese organizations. The Chinese data came from organizations in Shandong Province of the Peoples' Republic of China. The measurement uniqueness of the study is also notable. It used an interval level quantitative grading scale (an appropriate for respondent's judgment of the superiors' ability) relative to Likert type semantic differential interval scale.

The findings established both individual as well as joint contributions of EI (Emotional Intelligence), IQ (KSA) and ED (Executive Development) to managerial effectiveness (problem solving skills). Four hypotheses were tested with the collected data. All four hypotheses were supported by significant Pearson correlation coefficients and multiple regression coefficients and significant F statistics. While both the Chinese and Bangladeshi studies provide support for the model, there were noticeable differences between the two countries with regard to performance of the regression model especially on the issue of Executive Development. In Bangladesh, ED did not seem be contributing significantly to managerial effectiveness while influences of both EI and IQ variables were kept constant. But in China, ED seems to be a more significant variable in terms of explaining managerial problem solving when both EI and IQ are kept constant. We attribute this difference to managerial cultural factors differentiating the two countries. Future research should address the issue further. In terms of significant contribution, this study provides a model of managerial effectiveness. It also provides a reliable measures of EI, IQ, managerial Problem Solving (or effectiveness) and ED (Executive Development). The authors claim that these measures are more viable and more objective than many others that came out in the EI literature. The main reason for this claim is the fact the data addressed the demonstrated ability perceived by the subordinates, contrary to self- reports of the respondents. As a result of this study we now know how much emotional intelligence contributes to managerial effectiveness (Problem Solving).

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