Examining the Impact of Personality Traits on Cultural Intelligence

Abstract
The purpose of the study is to examine the impact of personality traits on cultural intelligence. Further, the study examines the dimension-wise impact of personality traits on cultural intelligence. Data for the study have been collected from 530 managers working in Nationalized banks in Delhi (North India). Exploratory and Confirmatory factor analysis have been conducted to explore and validate the factor of different constructs. Structural equation modeling has been used to test the hypotheses. The study reveals that personality traits positively affect cultural intelligence. Further, the result reveals that all the dimensions of personality traits affect cultural intelligence. The study is cross-sectional in nature and is conducted in Indian context. Implications of the study have also been discussed.

Keywords: Cultural Intelligence, Personality Traits, Banks, Delhi.

Introduction
Globalization has made the world smaller and flat in many different ways, increasing cultural diversity brings challenges for individuals as well as organizations, making the world ‘not so flat’ (Ang, 2007). The managers have to work with the people belonging to different cultural background. Organization’s need to focus on cultural diversity and look for ways to manage the diversity as it is the key component of effective people management, which improves workplace productivity (Jyoti & Kour, 2015). Therefore, the art of managing diversity is of great concern to all persons charged with the responsibility of overseeing the work of others. Success in these situations requires a unique set of skills known as cultural competence. Thus, cultural intelligence is a tool, which increases an individual’s ability to communicate with people outside their cultures (Jyoti & Kour, 2015; Jyoti, Kour & Bhau, 2015). It is the capability to function effectively across a variety of cultural contexts, such as ethnic, generational, and organizational cultures (Livermore, 2011). Culturally intelligent people are able to communicate effectively with individuals belonging to different cultural background. They can detect, assimilate reason and act on cultural cues appropriately in situations characterized by cultural diversity (Jyoti & Kour, 2015). “Cultural intelligence captures a person’s capability to adapt effectively to new cultural context further; it has both process and content features” (Earley&Ang, 2003, p. 9).

Cultural intelligence is a new and growing concept with limited research on this. It has become one of the most important capability to
function effectively in cross-cultural settings. Understanding the nature and impact of cultural intelligence have important implications for individuals, teams and organizational functioning in a multicultural environment (Ng & Earley, 2006, p. 6). Therefore, cultural intelligence is a tool which can help managers to be successful in different cultural contexts.

After reviewing the literature it has been found that most of the studies conducted on cultural intelligence have focused on the concept (Earley & Peterson, 2004; Ng & Earley, 2006; Triandis, 2006; Turner & Trompenaars, 2006; Kumar, Rose & Subramaniam, 2008; Thomas et al., 2008; Crown, 2009; Van Dyne, Ang & Livermore, 2010; Blasco, Feldt & Jakobsen, 2012) and explored cultural intelligence from expatriates perspective or between the country perspective (Selmer, 2006; Lii & Wong, 2008; Lee & Sukoco, 2010; Ramalu et al., 2010; Chen, Lin & Sawangpattanakul, 2011; Ramalu, Wei & Rose, 2011; Wu & Ang, 2011; Peltokorpi & Froese, 2012; Ramalu et al., 2012; Wang & Tran, 2012; Froese & Peltokorpi, 2013; Malek&Budhwar, 2013; Gupta et al., 2013; Huff, Song & Gresch, 2014; Moon, Choi & Jung, 2012; MacNab & Worthley, 2012; Koveshnikov, Wechtler & Dejoux, 2014; Lee, Veasna & Wu, 2013; Lee & Kartika, 2014). Further, extensive conceptual and empirical research has also been conducted on the impact of personality traits on CQ (Ang, Van Dyne & Koh, 2006; Kumar, Rose & Subramaniam, 2008; Sahin, Gurbuz & Koksal, 2013). These studies concluded that individuals, who are high on “Big Five” traits and have capability of adapting one’s emotional awareness and expression, and choosing what is most appropriate in cross-cultural interactions are more culturally intelligent. But none of the above mentioned studies have examined the dimension-wise impact of personality traits on cultural intelligence in Indian Context. Further, review of literature revealed that no research has been conducted in banking sector, so data have collected from employees working in banking sector. The employees of nationalized banks are posted to different regions from time to time, e.g. person belonging to the northern region may be posted to the southern region or vice versa, a person belonging to the eastern region may be posted to the western region or vice versa, which gives them exposure and experience to interact with people belonging to different cultures (Jyoti & Kour, 2015).

Review of Literature and Hypotheses Development

Personality Traits and Cultural Intelligence

Cultural intelligence is an individual’s capacity to deal effectively in situations characterised by cultural diversity. The four dimensions of cultural intelligence relate to Big Five personality traits, which include extraversion, conscientiousness, emotional stability and openness to experience (Ang, Van Dyne & Koh, 2006, pp. 103). Personality traits describe what a person typically does across time situations and relatively stable individual difference influence choice of behaviours and experiences that shape CQ (Ang, Van Dyne, & Koh, 2006, pp. 102; Earley & Ang, 2003). Personality characteristics help an individual cope with physical, social and cultural environments. The personality characteristics serve as adaptive mechanisms that help humans to cope and meet the demands of physical, social and cultural environment (Mac Donald, 1998c). Personality traits are associated with cultural intelligence capabilities. The same relation has been explored by various researchers (Mac Donald, 1998c; Caligiuri, 2000; Ones & Viswesvaran, 1997). The previous research has provided strong empirical evidence of the value of using a coherent organizing framework such as the personality characteristics (Big Five) in linking facets of personality with cultural intelligence (Ang, Van Dyne & Koh, 2006, pp. 115). Openness to Experience is positively related to all four CQ factors. Conscientiousness is positively related to meta-cognitive CQ (Ang, Van Dyne & Koh, 2006, pp. 115). An individual high in agreeableness reflects behavioral CQ because those who are agreeable are easy going in their social behaviours. People, who are highly extroverted, have high cognitive CQ, motivational CQ and behavioural CQ (Ang, Van Dyne & Koh, 2006, pp. 115).

Hypothesis 1: Personality traits positively affect cultural intelligence.

Hypothesis 1a: Extraversion positively affects cultural intelligence.

Hypothesis 1b: Openness to experience positively affects cultural intelligence.

Hypothesis 1c: Agreeableness positively affects cultural intelligence.
Hypothesis 1d: Emotional stability positively affects cultural intelligence.

Hypothesis 1e: Conscientiousness positively affects cultural intelligence.

Research Design and Methodology

In order to make the study objective following steps have been taken:

Data collection

The population for the study consisted of 530 bank managers working in nationalized banks operating in Delhi (North India). They have been contacted on the basis of random sampling (chit method). There are 2539 nationalized banks operating in Delhi out of which 10% have been selected with the help of random number table. From each selected bank two managers (on the basis of hierarchy) have been contacted personally for data generation. All branch managers and immediate junior managers have been contacted for data collection but in some banks there were only one manager in that case one extra branch has been contacted. Therefore, total 265 banks have been contacted. Structured questionnaire was used as a research tool for collecting the data. In order to establish normality of the data 18 respondents have been deleted by inspecting boxplots (Hair et al., 2010). The retained data exhibited normal distributed (skewness = .066; Kurtosis = -.101) are within the range. Therefore, the effective sample came to 512.

The sample included 286 (56%) male and majority of the managers (88%) are married. About 29% managers are in the age group 35-40 years followed by 31-34 years (17%). Majority of managers (43%) have 6-10 years of experience of working outside their home state. About 55% of managers can speak 4-5 languages. Majority of managers have 6-10 years of total work experience (24%).

Measures

Five point Likert scale was used for the sake of uniformity in measuring the variables ranging from strongly disagree (1) to strongly agree (5).

Cultural Intelligence: CQ has been measured with the help of 20-items (Ang et al., 2007). The scale includes four items for meta-cognitive CQ, six for cognitive CQ, five for motivational CQ and five for behavioral CQ.

Personality Traits: It has been measured with the help of 20-items (McCrae, Costa & Martin, 2005). The scale includes four items each of openness to experience, emotional stability, agreeableness, extraversion and Conscientiousness.

Results

Exploratory Factor Analysis (EFA)

Exploratory factor analysis has been conducted to identify the dimensions of different scales used in the present study. Principle component analysis with varimax rotation has been used. The test of appropriateness of a factor analysis has been verified through KMO measure of sampling adequacy, where values greater than 0.50 are acceptable (Hair, Black, Babin, Anderson & Tatham, 2010), which indicated its relevance for further analysis. The statement with factor loading less than 0.50 have been deleted (Hair et al., 2010). The personality traits scale consisted of 20 items that got reduced to 15 items and converged under five factors (viz., openness to experience, emotional stability, agreeableness, extraversion and Conscientiousness). Similarly, CQ scale initially consisted of 20 items that got reduced to 14 items and converged under the four factors (viz., meta-cognitive, cognitive, motivational and behavioral). The KMO value of all the constructs is above 0.80 and total variance explained for all the constructs is above eighty percent (Hair et al., 2010). Detailed results are presented in Table 1.

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<th>Table 1 - Results of Exploratory Factor Analysis</th>
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Confirmatory Factor Analysis (CFA)

Before using the inferential analysis, we assessed the validity and reliability of the constructs with the help of CFA. Two stage procedures have been used to test the theoretical framework (Anderson & Gerbing 1988). In the first phase measurement models have been tested to assess the convergent and discriminant validity. In the second stage structural equation modeling (SEM) has been used for hypotheses testing.

Second order factor models have been designed for all the scales as multiple factors emerged after EFA. Fit indices of all the second order models are within the prescribed limit as all the values of the absolute goodness of fit (GFI and AGFI), incremental fit (NFI and CFI) and badness of fit (RMR and RMSEA) were within the prescribed limit (Table - 2).

Convergent validity has been established as all the standardized estimates are greater than 0.5 and the variance explained by each construct is also greater than 0.50 (Hair et al., 2010, Table - 2). Further, to check the internal consistency Cronbach’s alpha and composite reliability has been used as it is the indicator of the reliability of the construct (Hair et al., 2010). In the present study alpha values for all constructs are greater than 0.70 (Table 1) and composite reliability for all constructs is above 0.80 (Table - 2). Thus, the Cronbach’s alpha and composite construct reliability indicate that the scales are reliable. Further, discriminant validity has also been proved as average variance extracted for all the scales is higher than the squared correlation (Fornell and Larcker, 1981, Table - 3).

| Table 2-Reliability and Validity Analysis of Second Order Factor Models |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Scales | Standardized Regression Weight | Average Variance Extracted | Composite Reliability | Cronbach’s Alpha | Fit Indices |
| Cultural Intelligence | | | | | |
| 1. Meta-Cognitive | 0.62 | 0.95 | 0.98 | 0.71 | χ²/df = 3.387 |
| 2. Cognitive | 0.66 | 0.88 | 0.97 | 0.70 | GFI = 0.937 |
| 3. Motivational | 0.73 | 0.95 | 0.98 | 0.78 | NFI = 0.976 |
| 4. Behavioral | 0.70 | 0.94 | 0.98 | 0.72 | AGFI = 0.910 |
| Conscientiousness | | | | | |
| 1. Emotionally Stable | 0.81 | 0.64 | 0.84 | 0.75 | RMR = 0.054 |
| 2. Extraversion | 0.96 | 0.94 | 0.98 | 0.77 | GFI = 0.922 |
| 3. Openness to Experience | 0.98 | 0.88 | 0.95 | 0.66 | NFI = 0.912 |
| 4. Agreeableness | 0.96 | 0.93 | 0.97 | 0.74 | AGFI = 0.890 |
| 5. Conscientiousness | 0.76 | 0.93 | 0.97 | 0.83 | CFI = 0.932 |

Impact of Personality traits on cultural intelligence

To check the various relationships proposed Structural equation modeling has been used (Byrne, 2010). The path revealed that personality traits influence the level of cultural intelligence (SRW = 0.52, p<0.001, Figure - 2). Further, the model yielded good fit ($\chi^2$/df = 4.503, RMR = 0.016, GFI = 0.966, AGFI = 0.919, CFI = 0.950, RMSEA = 0.083). Hence, hypothesis 1 stands accepted. Further, dimension-wise impact of personality traits on cultural intelligence have been tested and results revealed that all the dimensions of personality traits (PT) viz., Extraversion ($EX \rightarrow CQ = 0.18^{***}$), agreeableness ($AGN \rightarrow CQ = 0.22^{***}$), emotional stability ($ES \rightarrow CQ = 0.13^{***}$), openness to experience ($OTE \rightarrow CQ = 0.11^*$) and conscientiousness ($CON \rightarrow CQ = 0.25^{***}$) have significant and positive impact on cultural intelligence (Figure 2). Hence $H1a$, $H1b$, $H1c$, $H1d$ and $H1e$. In addition, the impact all personality traits on all the dimensions have also been checked and results revealed that personality traits positively affects all the dimensions of cultural intelligence (Figure - 2).

<table>
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<tr>
<th>Constructs</th>
<th>Cultural Intelligence</th>
<th>Personality Traits</th>
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<tbody>
<tr>
<td>Cultural Intelligence</td>
<td>0.93</td>
<td></td>
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<tr>
<td>Personality Traits</td>
<td>0.44**</td>
<td>0.96</td>
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Table 3 - Discriminant Validity and Correlation Analysis

Note: Values on the diagonal axis represents the average variance extracted. Values below the diagonal axis are correlation and values in the parentheses represent the squared correlation. $^{**}p<0.01$

Discussion

The Big Five personality characteristics represent universal adaptive mechanisms that allow humans to cope with and meet the demands of physical, social and cultural environment (MacDonald, 1998). Personality characteristics help managers to cope with physical, social and cultural environments (Ang, Van Dyne and Koh, 2006). Managers, who have these traits, are culturally intelligent as they do not hesitate to interact with people belonging to other culture and are confident to involve them self in cross-cultural interactions when posted to out of home state. Managers with positive personality traits perform effectively and efficiently their work which are assign to them (Yakunina et al., 2012). The Big Five strongly predicts work behaviour across time, contexts and cultures in domestic settings (Barrick & Mount, 1991) and in overseas assignments (Caligiuri, 2000). Therefore, managers who are sociable, open to new experience, friendly, emotionally stable and good natured perform their task with efficiency. Managers who are sociable, ready to learn new things, have flexibility are motivated to interact with the new cross cultural environment which make them culturally intelligent (Ang, Van Dyne and Koh 2006). These traits help individual to deal with people who are culturally different. Further, results revealed that all the dimensions of personality traits...
i.e., extraversion, emotional stability, agreeableness, openness to experience and conscientiousness affects cultural intelligence. Managers who are extrovert and empathies with others are culturally more intelligent as they are emotionally stable and connect easily with people belonging to other culture. Managers who are imaginative and creative finds new ways of dealing or communicating with people host region thereby making them culturally more intelligent. Therefore, it can be concluded that managers who possess Big Five personality traits are culturally more intelligent.

Implications

The study contribute to the theoretical development of Earley and Ang (2003) CQ concept. The study confirmed the reliability and validity of cultural intelligence and personality traits scale in Indian context. Further, study enhances the knowledge about personality traits by providing relationship between personality traits and cultural intelligence. In, addition the study also examined the dimension wise impact of personality traits on cultural intelligence.

Cultural Intelligence can be used as criteria for evaluation, improvement and service compensation. Therefore, it should be reflected in the performance management system. Higher level of cultural intelligence can lead to less culture shock and minimising culture shock will help managers to adjust them in culturally unfamiliar place. Therefore, management should frequently send managers to out of home state assignment for increasing their level of cultural intelligence. The organisations must select, train and develop managers keeping in mind the concept of cultural intelligence if the employees are to be exposed to different cultural levels.

Limitations

The study has certain limitation that can be overcome in the future. Firstly, the study is cross-sectional in nature in future longitudinal study can be conducted. Secondly, the data have been collected from single source which may create the problem of common method bias in future data can be collected from multiple sources. Thirdly, data have been collected from banking sector only in future other sectors can be taken into consideration.

References


Gupta, B., Singh, D., Jandhyala, K., & Bhatt, S. (2013). Self-monitoring, cultural training and prior international work experience as predictors of cultural intelligence – A study of Indian


