A TWO-STEP CLUSTER MODEL OF THE EMOTIONAL INTELLIGENCE AND LEADERSHIP STYLE PREFERENCES OF FOUR-STAR HOTEL EMPLOYEES

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Abstract

Purpose - The main objective of this study is to determine the leadership style preferences of four-star hotel employees based on their emotional intelligence (EI) profiles and demographics. Design/methodology - Data were collected from a sample of 190 four-star hotel employees. Descriptive statistics were used in identifying the level of employees' emotional intelligence and the leadership styles preferred in the sampled hotels. Further, two-step cluster analysis was used in clustering the respondents based on their level of emotional intelligence and their leaders' leadership styles/demographic profiles. Findings - Two clusters emerged: low EI cluster of employees (44.21% of study sample) and high EI cluster of employees (57.79% of study sample). The low EI cluster is predominantly single, male, having 1–3 years of working experience and educational level less than high school; the high EI cluster are mostly married, female, with 4–6 years of working experience and have diplomas. However, employees from both clusters expressed preference for transformational leadership. Originality/value - The study extends prior research that identified employees’ EI, preferred leadership styles from employees’ perception and developed an EI model for evaluating hotel employees. The result could be used in soft-skills training need determination in hotel industry.

Keywords: Emotional intelligence, Transformational leadership, Transactional leadership, Hotel employees

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1.0 RESEARCH BACKGROUND

One sector of the Malaysian economy that witness the effects of rapid economic growth is the hospitality industry. The industry caters for people's leisure and business needs. In 2010, the Malaysia Tourism Transformation Programme (MTTP) was established to boost the development of tourism. In the time since then, Malaysia’s tourism industry has rapidly grown, becoming the second main factor that contributes to the growth of the Malaysian GDP (Khan, 2014). The Malaysian government has formulated many policies directed at both public and private organisations towards attracting tourists (Giap, Gopalan and Ye, 2016). While development of hotel infrastructure is vital to the tourism industry, the attitudes and behaviours of hotel employees contribute significantly to the development of tourism (Suhartanto et al., 2018), and their leaders are even of greater interest when it comes to the promotion of tourism (Shakeela and Becken, 2015). Therefore, there is value and justification in understanding the dispositional preferences of frontline employees in the industry who often represent the first point of contact with tourist and other industry customers. Emotional intelligence and leadership styles are two factors that always play important roles in frontline office development (Sensen, 2016).

Emotional intelligence (EI) plays an important role in the workplace, influencing work efficiency, co-workers and boss, work performance (Shahhosseini et al., 2012), and employee happiness (Schutte and Loi, 2014). Similarly, leadership style influence employee's behaviours, attitude, team effectiveness and organisational performance. Suitable leadership style contributes to making decisions and achieving high organisational performance (Vargas, 2015). Both EI and leadership styles underpins the relational skills of frontline employees.

Relational skills are important in hotel management settings because interactions between people are at the core of all service encounters (Li et al., 2018), such skills include communication skills, the approach of dealing with important problems (Serrat, 2017). The degree to which an employee possesses these skills determines how he or she understand the leadership style of their leaders (Khalili, 2017). Thus, the main objective of this study is to determine the leadership style preferences of four-star hotel employees based on their EI profiles and demographics. To achieve this objective, we used the Mayer and Salovey (1997) model of EI to generate respondents’ EI profiles. A two-step cluster analysis was applied in analysing the level of employees’ EI and its alignment with their leadership preferences.

2.0 OBJECTIVES OF THE STUDY

This study seeks to identify the levels of emotional intelligence among four-star hotel employees in Johor Bahru, Johor, Malaysia; to identify the preferred leadership styles of leaders in four-star hotels in Johor Bahru from the perception of their subordinates; to classify the levels of emotional intelligence of four-star hotels employees using two-step cluster analysis based on their leader's leadership style and demographic background; and to develop an emotional intelligence model based on the clusters developed.
Emotional Intelligence

EI has become an important topic because it is related to organisational performance (Slaski and Cartwright, 2002). With the advance of societies and organisations, more and more enterprises look forward to pursuing high business performance. EI is of great importance in terms of the relationship between leaders and employees, which is also closely related to organisation performance (Holt and Jones, 2005), work efficiency and team cohesiveness (Druskat and Wolff, 2001). Some popular models explain the development of EI. Based on the literature, EI plays a vital role in the workplace (Singh, 2006), and human resources development (Brooks and Muyia Nafukho, 2006). The following sub-sections will explain the development of emotional intelligence models, as shown in Table I.

Table I: Emotional Intelligence (EI) Theory Development

<table>
<thead>
<tr>
<th>Year</th>
<th>Model</th>
<th>Model Developer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>Hierarchical Model of Emotional Intelligence</td>
<td>Salovey, Peter and Mayer, John D</td>
</tr>
<tr>
<td>1997</td>
<td>Ability Model of Emotional Intelligence</td>
<td>Mayer, John D, and Salovey, Peter</td>
</tr>
<tr>
<td>1998</td>
<td>Mixed Model of Emotional Intelligence</td>
<td>Goleman, Daniel</td>
</tr>
<tr>
<td>2001</td>
<td>Trait Model of Emotional Intelligence</td>
<td>Konstantinos Vasilis Petrides</td>
</tr>
</tbody>
</table>

Hierarchical Model of Emotional Intelligence

Peter Salovey and John D. Mayer in 1990 first proposed the concept of emotional intelligence (Salovey and Mayer, 1990), and formulated a hierarchical model of emotional intelligence (Petrides and Furnham, 2000). The sense of the evaluation of oneself and others is not included in emotional intelligence, which refers to solving problems and normative behaviours through realizing our own and others’ behaviours and emotional states. Interpersonal intelligence mainly involves the capability of monitoring others’ moods and temperaments (Mukadam et al., 2012).

This model is about the conceptualisation of emotional intelligence, which includes appraisal and expression, regulation of emotion, and utilization of emotion. To be more specific, emotions regarding the self and others are parts of appraisal of expression of emotion. Regulation of emotion mainly talks about that in oneself and others. Utilization of emotion refers to flexible planning, creative thinking, redirected attention, and motivation.

Ability Model of Emotional Intelligence

The early models about emotional intelligence were ambiguous, which promote the development of Mayer and Salovey (1997) ability model of EI (Petrides and Furnham, 2000). Mayer and Salovey constructed a substantial modification model in 1997. The first branch is emotional perception and expression; the second branch is emotional facilitation of thought; the third branch is emotional understanding, that involves understanding the emotional relationships, reasons, status, as well as transfer of emotion. The last branch is emotional management that refers to managing and monitoring the emotions of individuals themselves and others (Mayer and Salovey, 1997).

This four-branch model was used by many researchers to test EI. Mayer-Salovey-Caruso Emotional Intelligence Test, Version 2.0 [MSCEIT V2.0] (Mayer, Salovey and Caruso, 2002) measures the branch model proposed by Mayer and Salovey. EI involves solving the problem; therefore, the test of MSCEIT is an appropriate approach to assessing EI (Mayer, Salovey and Caruso, 2002). The measure assess participants on perceiving emotion, employing emotion, understanding emotion, and regulating emotions (Rosete and Ciarrochi, 2005).

Mixed Model of Emotional Intelligence

Based on Rosete and Ciarrochi (2005), mixed models of EI contain competency-based models (Goleman, 1995). In terms of emotional intelligence, Goleman (1995) talk about self-awareness, managing emotions, self-motivation, empathy, and handling relationships. This model is taken from the book of emotional intelligence.

Regarding the mixed model of emotional intelligence, which represented by Goleman and Colleagues (Boyatzis, Goleman and Rhee, 2000; Goleman, 1998). The outlines of Goleman’s model contain five emotional intelligence constructs, which are self-awareness, self-regulation, motivation, empathy and social skills (Fidha and Haris). Based on Goleman (1998), the book titled working with emotional intelligence talks about a significant signal indicating that emotional ability is the main factor affecting people or institutions going towards success. Daniel Goleman describes a framework of emotional intelligence skills and abilities and gives many examples showing the importance of emotional intelligence and ability. There are 25 types of emotional competencies, which can be divided into five categories: personal competency includes self-awareness and self-regulation. Motivation mainly refers to how we manage ourselves, recognize an individual's internal status, and manage moods. Social competence includes empathy and social skills, which involves the way we deal with complex relationships, such as understanding others, leadership abilities, and group cooperation (Serrat, 2017).

Trait Model of Emotional Intelligence

Konstantinos Vasilis Petrides developed trait emotional intelligence in 2001 (Petrides, 2010), which included behavioural dispositions and self-perceived abilities (Barker, Johnson and Santos, 2016). Konstantinos Vasilis Petrides proposed a conceptual difference between the ability model and trait model of emotional intelligence. Trait emotional intelligence means individuals' perception of their emotional abilities, which can be measured by self-report, unlike the ability model that refers to actual abilities (Fidha and Haris). According to
Petrides (2010), trait emotional intelligence involves the emotional self-perceptions at the low levels of personality hierarchies, and it is measured by the trait emotional intelligence questionnaire (Petrides, Pita and Kokkinaki, 2007)

**Transformational Leadership**

Compared with transactional leadership, transformational leadership is more popular, and it is widely considered by many researchers (Jaiswal and Dhar, 2015). Related data about transformational leadership and many proofs revealed that transformational leadership is more effective than transactional leadership, and it has a significant influence regarding followers' efficiency and job satisfaction (Long et al., 2014). Leaders can cultivate higher motivation and morale of followers, and this is a process that leaders use to affect followers in a way to go towards success. Transforming leadership style is suitable for the development and change of individuals and organisation, in which core thought, and strategies will encourage and inspire followers (Wang, Tsai and Tsai, 2014). This kind of leadership would like to do a good exemplar in front of followers regarding organisation performance, and also they will focus on their followers' requirements (Burns, 1978).

Also, transformational leadership plays a significant role in organisational and individual performance. The followers with a transformational leader showed low levels of turnover rate (Cheng et al., 2016), higher satisfaction (Atmojo, 2015). However, in this study, the researchers mainly focus on the transformational leadership based on a full range of leadership of Avolio and Bass (2001), which involve in transformational leadership, transactional leadership and laissez-fair leadership (Avolio and Bass, 2001). In a comparison between transformational leadership and transactional leadership, Avolio and Bass (2001) maintained that the components of transformational leadership are same, which are idealized leadership, inspirational motivation, intellectual stimulation, and individualized consideration.

**Transactional Leadership**

In terms of the concept, in 1978, Burns described the leadership using transforming and transactional leadership concepts. Both transformational leadership and transactional leadership have been studied by Burns (Burns, 1978). Transactional leadership is an exchange relationship and refers to self-interests and reward in terms of followers' performance. It cannot increase the employee's work satisfaction (Bass, 1999).

According to Bass and Avolio, transactional leadership is based on follower's desires and needs and attempts to exchange their work role and achieve its objectiveness effectively. Furthermore, the reward and punishment of leaders for followers are dependent on their performance (Han, Bartol and Kim, 2015). Moreover, transactional leadership is only the primary approach that effectively leads others. Also, transactional leadership culture is an agreement relationship to some extent. Self-interest is vital for them, and the engagement is temporary (Bass and Avolio, 1990). Exchanging reward services supported is one way that transactional leaders motivate their followers (Bass, 1995).

### 4.0 METHODOLOGY

**Research Design**

This is a descriptive research that used survey to collect data. The purpose of the study is to identify the levels of emotional intelligence and which leadership styles are the main preferred leadership style among hotel employees in Johor Bahru. Cluster analysis was used in classifying the level of the employees' EI considering the leadership style of the leaders in the hotels and the demographic background of the respondents during the survey. The questionnaire was distributed by hand and by email to respondents selected from the Front Offices and Food and Beverage Departments of six (6) four-star hotels in Johor Bahru (JB) Malaysia.

**Instruments**

Based on Mayer and Salovey (1997) model, a Self-Rated Malaysian Emotional Intelligence Scale (SRMEIS) was developed and validated by Ahmad Tharbe, Ng, and Sumari (2015). The Malaysian population used in the study consisted of students and adults. The validity and reliability of SRMEIS is adequate with Cronbach α of .922. The Malay language was used in developing the SRMEIS (Ahmad Tharbe, Ng and Sumari, 2015). The instrument consists of four branches with seventeen abilities measured in 41 items. Ahmad Tharbe, Ng, and Sumari (2015) reported alpha values for the respective four branches as follows: .859, .868, .683 and .893.

To evaluate frontline hotel leaders' transformational leadership and transactional leadership style from employees’ perceptive, Multifactor Leadership Questionnaire (MLQ) was chosen as the measuring instrument. Based on Kolesnikova (2012), data from hotel employees were used to evaluate supervisors’ leadership style with MLQ (Avolio and Bass, 2004). The MLQ assesses effective leadership dimensions (Kolesnikova, 2012).

### 5.0 RESEARCH FINDINGS

**Levels of EI among Hotel Employees**

EI is classified into three levels: high, mediocre, and weak (Awang, 2008). Based on this classification, results show that 55.79% of the
respondents evinced high level of EI, which accounts for a large proportion, while 41.58% of them showed a mediocre EI (Figure 1). The EI-weak accounts for 2.63% of the respondents. We combined the mediocre and weak group to form one single cluster: the low EI cluster, as shown in Figure 2. Thus, for analysis, only two groups were considered. We can see from Figure 2, the low EI respondents account for 44.21% (84 employees), while 55.79% (106 employees) represent high EI cluster.

![Figure 1: Three Levels of Employee EI](image)

![Figure 2: Two Levels of Employee EI](image)

**Employees’ Perception of Preferred Leadership Styles**

The preferred leadership style identified from the perception of employees is the transformational variant. Survey data shows the highest mean value for leadership style dimensions is that of individualised consideration (M=3.32; SD=0.83), a factor of the transformational leadership style. The means for the other four factors also indicate strong preference: idealized influence attributes (M=3.32; SD=0.83), inspirational motivation (M=3.32; SD=0.78), idealized influence behaviour (M=3.29; SD=0.76), and intellectual stimulation (M=3.28; SD=0.77). The overall mean or the transformational leadership style is 3.30. However, the mean scores for factors of the transactional leadership style are lower than those of transformational style. The mean preference scores for the transactional leadership factors are: Contingent Reward (M=2.97; SD=0.89), Management-By-Exception Passive (M=2.69; SD=0.87) and Management-By-Exception Active (M=2.81; SD=0.89). The overall mean of the transactional leadership style is 2.83. Accordingly, we conclude that the most preferred leadership style in the four-star hotels in Johor Bahru is the transformational leadership style.

**Two-Step Cluster Analysis of Employee EI based on Leadership Styles and Demographics**

**Number of Clusters**

A two-step cluster analysis can automatically determine the number of clusters. Since the variables involved in this study are categorical and continuous, the Log-likelihood was applied as the distance measure. Bayesian Information Criterion (BIC) and Akaike’s Information Criterion (AIC) were run separately to get the same cluster number. Table II presents the auto-clustering statistics of BIC and the appropriate cluster number. A significant change can be seen as the number of clusters changes from 1 to 2, from BIC 3368.579 to BIC 2709.923 at BIC ratio = 1 and ratio distance at the highest value of .739. Therefore, it suggests that the appropriate cluster number is two.

**Table II: Schwarz’s Bayesian Clustering Statistics**

<table>
<thead>
<tr>
<th>Number of Clusters</th>
<th>Schwarz's Bayesian Criterion (BIC)</th>
<th>BIC Change a</th>
<th>Ratio of BIC Changes b</th>
<th>Ratio of Distance Measures c</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3368.579</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2709.923</td>
<td>-658.656</td>
<td>1.000</td>
<td>4.739</td>
</tr>
<tr>
<td>3</td>
<td>2645.463</td>
<td>-64.460</td>
<td>.098</td>
<td>1.370</td>
</tr>
<tr>
<td>4</td>
<td>2623.952</td>
<td>-21.511</td>
<td>.033</td>
<td>1.069</td>
</tr>
<tr>
<td>5</td>
<td>2609.940</td>
<td>-14.012</td>
<td>.021</td>
<td>1.016</td>
</tr>
<tr>
<td>6</td>
<td>2597.587</td>
<td>-12.353</td>
<td>.019</td>
<td>1.039</td>
</tr>
<tr>
<td>7</td>
<td>2589.246</td>
<td>-8.341</td>
<td>.013</td>
<td>1.296</td>
</tr>
<tr>
<td>8</td>
<td>2604.355</td>
<td>15.109</td>
<td>-.023</td>
<td>1.018</td>
</tr>
<tr>
<td>9</td>
<td>2620.860</td>
<td>16.505</td>
<td>-.025</td>
<td>1.121</td>
</tr>
<tr>
<td>10</td>
<td>2645.752</td>
<td>24.892</td>
<td>-.038</td>
<td>1.079</td>
</tr>
<tr>
<td>11</td>
<td>2675.738</td>
<td>29.986</td>
<td>-.046</td>
<td>1.038</td>
</tr>
<tr>
<td>12</td>
<td>2708.112</td>
<td>32.374</td>
<td>-.049</td>
<td>1.171</td>
</tr>
<tr>
<td>13</td>
<td>2749.556</td>
<td>41.445</td>
<td>-.063</td>
<td>1.063</td>
</tr>
<tr>
<td>14</td>
<td>2794.160</td>
<td>44.604</td>
<td>-.068</td>
<td>1.082</td>
</tr>
<tr>
<td>15</td>
<td>2842.561</td>
<td>48.400</td>
<td>-.073</td>
<td>1.004</td>
</tr>
</tbody>
</table>
The BIC and Log-likelihood distance statistics in Table II show the number of clusters. The cluster summary (Figure 1) presents the frequency of cases assigned to each cluster: 84 (44.2%) cases assigned to the first cluster, 106 (55.8%) assigned to the second cluster. Cluster 2 is the largest cluster with 106 respondents.

Cluster 2 is the largest cluster with 106 respondents.

**Characteristics and Identifiable Pattern of Clusters**

The two-step cluster analysis suggests two clusters (Cluster 1 and Cluster 2). Cluster 1 consist of respondents with low level EI; Cluster 2 consist of respondents with high level EI. Cluster 1 includes the males aged 20-25 years, with a low level of EI but showing preference for transformational leadership (M=3.08). Cluster 1 employees were single and possess 1-3 years working experience plus education less than high school. On the other hand, Cluster 2 includes females aged 20-25 years, with a high level of EI and showing stronger preference for transformational leadership style (M=3.49). They are married and possess 4-6 years of working experience plus diploma level education.

**Table III: The Characteristics of Two Clusters**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cluster 1</th>
<th>Cluster 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level of Emotional Intelligence</td>
<td>Low level of emotional intelligence (n=84, 44.2%)</td>
<td>High level of emotional intelligence (n=106, 55.8%)</td>
</tr>
<tr>
<td>Leadership Style</td>
<td>Transformational leadership (M=3.08)</td>
<td>Transformational leadership (M=3.49)</td>
</tr>
<tr>
<td>Gender</td>
<td>Male (59.5%)</td>
<td>Female (70.8%)</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single (66.7%)</td>
<td>Married (51.9%)</td>
</tr>
<tr>
<td>Working Experience</td>
<td>1-3 years (63.1%)</td>
<td>4-6 years (49.1%)</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Less than high school (53.6%)</td>
<td>Diploma (54.7%)</td>
</tr>
<tr>
<td>Age</td>
<td>20-25 years (40.5%)</td>
<td>20-25 years (49.1%)</td>
</tr>
</tbody>
</table>

**Cluster-Based Emotional Intelligence Model**

Based on the results of our analysis, a two-cluster model of EI was developed (Figure 4). The clustering used in developing the model closely follow the three issues investigated in this study: namely, employees’ level of EI, their preferences for leaders with particular leadership style, and their demographic (including age, gender and marital status). The model seems to associate high level of EI with gender in favour of females, who also seem to be better educated and more settled in life (i.e., married) with longer tenure (or experience). The empirical literature supports these premises, especially the gender–EI association (Fischer, Kret and Broekens, 2018; Koleoso, Uwadiae and Nnakife, 2019; Ożańska-Ponikwia, 2015). Furthermore, the model associates EI with transformational leadership, this time with regards to both clusters, though the female cluster shows stronger association. This is consistent with the overwhelming evidence in the empirical literature that clearly establishes the EI–transformational leadership association (Dabke, 2016; Føllesdal and Hagtvet, 2013; Kim and Kim, 2017; Stripling, 2019). The connection has also been established across various work domains (Dartey-Baah and Mekpor, 2017; Li et al., 2016; Newton, 2016; Sarabia-Cobo et al., 2017). Overall, the model suggests a convergence of preferences among both low- and high-EI individuals with regards to the style of leadership they are most comfortable. The respondents aged between 20-25 years and irrespective of their low or high level of EI, all prefer transformational leadership style against transactional leadership style.
6.0 DISCUSSIONS AND CONCLUSION

Transformational leadership style was the preferred leadership style from the perception of subordinate employees in four-star hotels at Johor Bahru. Study results show that differences in individual characteristics in terms of gender, marital status, working experience, and level of education are important antecedents of EI. Similarly, employees’ appreciation of the individualised approach to leadership demonstrated by transformational leadership is better appreciated with youthful age coupled with high level of EI. The high level of employees’ EI in the hotel industry would positively impact the quality of services offered to customers (Clark, Hartline and Jones, 2009), especially by frontline staff in the front offices and food/beverages units of hotels. Frontline employees high in EI easily make important first impressions on customers during service encounter. Similarly, while the two popular leadership styles (transformational and transactional leadership styles) are required in leading hotel employees, this study has shown that the transformational paradigm resonates better with the employees as it motivates them by taking their individual needs in the leaders – subordinate exchanges at the hotels. Thus, hotel employees of all levels of EI show marked preference for that transformational leadership style.

In addition, female and married employees with a high level of EI seemed to be most adaptive and thus should be given preference when hiring for customer services. In addition, working experience and education level are two other vital factors that contribute to the development of a high level of EI in employees. Therefore, education level and working experience are related to EI level. Further, HR Departments in the Malaysian hotel industry should give special attention to employees or potential employees with 4-6 years of working experience and at least diploma level education when hiring. These two demographic characteristics are closely associated with a high level of EI, and high EI could improve the service quality in the hotel industry and is connected with transformational leadership style generally practised in the industry.

However, this study shows that female and married employees have higher levels of EI than their male counterparts. The marital status of the female employees might have given them the advantage of experience in managing relationships, and their need for a stable source of income for their families might have contributed to their keen interest in developing the EI skills they need to do their jobs better. Therefore, married female employees show good attitude and behaviour to customers because of their life experience. Furthermore, the female employees have greater work experience (4-6 years) which, coupled with their high EI in self-expression and relationship management, made them better at interpersonal communication and the better at settling customer problems.

Educational level also plays a vital role in explaining the differences in the level of EI among hotel employees. Employees with diploma-level educational qualification have higher levels of EI than those with lower educational qualifications such as high school certificates. Because of the differences in educational level, hotel employees tend to differ in their approaches to problem-solving and in their attitude to life. These education-based differences are shown in the differences in levels of EI among hotel employees, with the more educated ones showing higher levels of EI than their less-educated counterparts and more adept at appreciating the follower development skills they need to do their jobs better.

In conclusion, frontline employees serve customers on the strength of their emotions, attitudes, and behaviours; they work rightly relying on their EI. Their leaders’ leadership style influences their emotion and behaviour, which means the leaders have impacts on subordinates work behaviours via the mechanism of EI.

References


