Survival of the Fittest: Analysing the Triangulation of Employee Mindfulness and Authentic Leadership and Organizational Intelligence

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Abstract

This study focuses on the relationship between authentic leadership, employee mindfulness, and organizational intelligence in the backdrop of social exchange theory and complex system theory. The paper examines the direct and indirect effect of authentic leadership on organizational intelligence with the mediating role of employee mindfulness using Preacher and Hayes (2014) process macro, model four. Hypothesized relationships data is collected cross-sectionally in a natural environment from 342 employees from the NGO sector of Pakistan via a simple random sampling technique. Statistical analysis including correlation and regression indicates a positive relationship between authentic leadership and organizational intelligence both directly and indirectly. A shift in the strength of variance is observed in the direct relationship after the introduction of the mediating variable, confirming the mediating role of employee mindfulness. Employee mindfulness independently indicates a much stronger variance on organizational intelligence compared to authentic leadership explaining high levels of contribution of employee mindfulness in achieving organizational intelligence.

Keywords: NGO’s Re-registration, Pakistan, Organizational Intelligence, Authentic Leadership, Employee Mindfulness

Introduction

Organizational intelligence is a buzzing area not only for academicians but for business circles as well. It has been proven by research that only those organizations can survive in today’s dynamic business environments which are involved in sustainable intelligence (Akgün, Byrne, & Keskin, 2007), (Boyer & Lewis, 2002). Most researches conducted in the field of organizational intelligence are focused on the use of technology however researchers tend to overlook the contribution of important human aspects in organizational intelligence. Our research bridges this gap by focusing on the human aspects of leadership and mindfulness. Both are leveraged to provide solution to complex problem of achieving a sustainable organizational intelligence during flux in the development sector of Pakistan, (Gholamreza, Kazemi, Lagzian, & Mortazavi, 2016), (Halal & Kull, 1998), (Albrecht, 2002).

The development sector of Pakistan is facing turbulent times after the introduction of strict regulatory policies introduced by the government in the year 2015. All the INGO’s working within the territory need to re-register themselves to gain approval from the government to continue their operations within the country (Shah, 2016), (Nazuk & Shabbir, 2018). A total of 132 INGO’s have applied for registration. As per the statistics from the official website of the ministry of interior of Pakistan, there are still 23 INGO’s who have not received a final decision and their registration are still under process. These are the INGOs that are facing challenges in maintaining organizational intelligence and are the population of the study.

Our study aims to examine the contributing role of authentic leadership and employee mindfulness in achieving organizational intelligence. The model of our study presents its significance
as an example of a cost-free solution for achieving organizational intelligence by organizations facing similar circumstances.

**Objectives**
To measure the relationship between authentic leadership, employee mindfulness, and organizational intelligence in the backdrop of social exchange theory and complex system theory

**Research Question**
How to measure the relationship between authentic leadership, employee mindfulness, and organizational intelligence in the backdrop of social exchange theory and complex system theory?

**Literature Review**
The human aspects for organizational intelligence are pushed behind the back and their contribution to achieving organizational intelligence is compromised (Metaxiotis, Ergazakis, & Samouilidis, 2003) (Gholamreza, Kazemi, Lagzian, & Mortazavi, 2016). Literature defines organizational intelligence as a collective contribution, this study factors in the contribution of human aspects in achieving organizational intelligence. Halal (2006) defines organizational intelligence as the ability of organizations to make sense out of complex situations and act effectively to the events and signals from the environment. Thannhuber & Brunrsch (2017) enhances the importance of organizational intelligence by mentioning that organizational intelligence is given serious devotion because of its role in sustainable excellence in the business milieu. Haviland (2017) reinforced the concept by explaining its role in a long-term learning environment and committed workforce. Existing literature holistically define organizational intelligence as the collective intelligence of all the components of the organization (McMaster, 1996) (Albrecht, 2002) (Ancona, 2011) (Wilensky, 2015).

Existing literature on organizational intelligence has shown the amalgamation of strategic drivers and organizational capability indicators for elevated performance outputs (Halal W. E., 1997) (Yaghoubi, inejad, Gholami, & Ramesh, 2012). However, recent literature has shown advancements in knowledge management and decision making for organizational intelligence with the maximum use of technology (O’Hare, 1996) (Schwaninger, 2003) (Liebowitz, 2006).

Human capital aspects in an organization include leader and follower. The impact of leadership on employees and eventually on organizational performance is measured in the backdrop of social exchange theory (Blau, 1968), (Emerson, 1976), (Mitchell, Cropanzano, & Quisenberry, 2012) and the working process in the system is observed by complex system theory (Parsons, 1956), (Bar-Yam, 2002). Social exchange theory reflects the social behavior because of interaction between two parties and complex systems theory explains systems that function with inputs, processes, and outputs. Complex system theory presented by (Parsons, 1956) and modified by (Bar-Yam, 2002) is pictorially illustrated by (Bastedo, 2014). The pictorial image is depicted below,
Similarly, the series of successive social exchanges between the involved parties is taken into consideration. The exchanges marked by greater levels of flexibility and trust between leadership and employees in the contribution towards appreciated levels of organizational performance are observed in the perspective of social exchange theory, introduced by Blau in 1964.

**The Concept of Organizational Intelligence**

Organizational Intelligence is defined as the competence of the organization to adapt itself from the changes existing in its environment. This adaptation helps in organizational learning and managing organizational knowledge as an essence for effective decision making (Choo, 1995). In comparison to human intelligence, organizational intelligence is the proficiency of an organization to articulate itself with the changing environment it works in. The decisions are made in relevance to the critical changing environment and the available knowledge (Mason, 1996). The collective thinking of the organization and its rational decision making is organizational intelligence (McMaster, 1996). Organizational intelligence is the collective intelligence of all the components of the organization. The efficient use of these components to make rational decisions by the organization those are in relevance to the critical dynamics in the environment (Weber & Diderler, 1996) (Halal & Kull, 1998) (Minch, 1996).

There are three main approaches in organizational intelligence studies namely cognitive, behavioral, and adaptive approaches (Zara, 2004). The cognitive approach deals with the technological aspect of organizational intelligence including deep learning models for artificial intelligence. The behavioral approach deals with human and organizational behaviors for the organizational intelligence and the adaptive approach talks about the selection of either of the above approach after environment scanning. (Zara, 2004). Keeping in focus the importance of human aspect contribution to organizational intelligence, this study kingpins the behavioral approach of organizational intelligence.

**Organizational Intelligence and Authentic Leadership**

All the approaches of organizational intelligence converge on the theme of information collection, it's processing, understanding, and disbursement for rational decision making to cope up with challenging stimuli from the environment (Wilensky, 1967) (Gholamreza, Kazemi, Lagzian, & Mortazavi, 2016). The way information is gathered and used by the organization for sanctioning behaviors is critical and of major concern (Gholamreza, Kazemi, Lagzian, & Mortazavi, 2016). Leadership acts as a moderator for modifying employee behaviors, a sustainable HRM practice (Guest, 2017). Challenging times call for the most genuine style of leadership which is authentic leadership (Avolio & Gardner, 2005).

**H1: Authentic leadership has a positive relationship with organizational intelligence**

**Authentic Leadership and Employee Mindfulness**

This paper discusses organizational intelligence with the behavioral approach. In this approach organizations and individuals in it are aligned on the same thoughts of organizational vision and goals (Gholamreza, Kazemi, Lagzian, & Mortazavi, 2016). The alignment in individuals is observed on the lines of employee relations, the relationship between leaders and their staff members. Human resource management practices put employee’s wellbeing at the forefront for elevated organizational performances (Boxall & Macky, 2009). HRM practice of evolving employee wellbeing with the influencing role of leadership is believed to influence organizational performance (Marescaux, Winne, & Forrier, 2018).

Employees as organizational stakeholders and employee relations as key drivers in organizational performance tend to act as a strong influencer for sustainable HR practices (Therio & Chatzoglou, 2008). These drivers are significant in the era of rapidly changing business landscape due to organizational change (Therio & Chatzoglou, 2008).

Leader-member exchanges of knowledge in organizational perspective have the tendency to foster trust among each other, harnessing alignment with the objectives of the organization (Pececi, Van de Voorde, & Van Veldhoven, 2013). A style of leadership plays an important role in influencing cognitive and behavioral changes within employees. Leadership plays an influencing role in raising consciousness among employees on the current agenda of the organization (Avolio & Gardner, 2005). This in turn enhances organizational performance in traditional and turbulent times, creating a win-win situation (Marescaux, Winne, & Forrier, 2018). Therefore, consistent with the literature review we propose the following hypotheses.

**H2: Authentic leadership has a positive relationship with employee mindfulness**
**Employee Mindfulness and Organizational Intelligence**

The second link in leader-member exchange is the employees and their contribution towards organizational performance. Mindfulness-based interventions are practiced in major leading organizations. Such organizations bear the fruit in enhancing mindfulness capacity of its employees and increasing organizational performance (Reb & Choi, 2014), (Janssen, Heerkens, Kuijer, & Heijden, 2018), (Bartlett, Martin, Amanda L, & Memish, February 2019). Google incorporation is one such example. Google has implemented the “Search inside Yourself – (SIY)” program in collaboration with Dr. Daniel Goleman. Google implemented the program because of two reasons, first to be the “early adopters” of change and innovation and second to inculcate the high-profile culture of mindfulness in Silicon Valley (Carter A & Spiegelhalter, 2016). Based on the literature, exploring the role of employee mindfulness on organizational intelligence following hypotheses is conceived,

**H3: Employee mindfulness has a positive relationship with organizational intelligence.**

**Employee mindfulness as a Mediator for Organizational Intelligence**

Mindfulness acts as a mediator in the psychological capital of employees and their positive emotions (Avey, Wernsing, & Luthans, 2008). Leaders facilitates in enhancing mindfulness within their employee for knowledge sharing and contribution to organizational success (Fabiola, Ulrike, & Anne, 2019). In this phenomenon employee mindfulness becomes an outcome variable. Employee mindfulness mediates the relationship between a leader’s legitimacy and organizational success (Rima, 2017). In relevance to the literature above following hypotheses are constituted.

**H4: Employee mindfulness mediates the relationship between authentic leadership and organizational intelligence.**

**Research Methodology**

The main objective of this research is to study the contribution of human behavioral aspects of authentic leadership and mindfulness in achieving organizational intelligence in non-governmental organizations of Pakistan.

The study type is Descriptive and Quantitative. The nature of this study is empirical and cross-sectional as the data is collected at a given point in time. The data is collected in a natural environment with no control variable. The study is conducted by using the survey method. Questionnaires are used for data collection. Subjective responses are collected from respondents. The unit of analysis is employees. A questionnaire is used as a research instrument.

The research questionnaire is adapted by three valid scales. Organizational intelligence, authentic leadership, and employee mindfulness are measured by Karl Albrecht (2003) indicators of organizational intelligence, Walumbwa et.al (2008) authentic leadership scale, and Baer, Smith, and Hopkins (2006) five facet mindfulness measurement scale, respectively. Figure 3 represents the research model.

![Research model](image.png)

**Figure 3** Research model of the study

**Measurement tool of the study**

This research has used valid scales for measuring organizational intelligence, authentic leadership, and employee mindfulness. Organizational intelligence is measured on the dimensions proposed by...
Karl Albrecht (2003) including strategic vision, shared fate, appetite for change, heart, alignment and congruence, knowledge deployment, and performance pressures. Authentic leadership is measured on the dimensions proposed by Walumbwa et.al (2008) including self-awareness, relational transparency, internalized moral perspective, and balanced processing. Employee mindfulness is measured on the dimensions proposed by Baer, Smith, and Hopkins (2006) including observing, describing, acting with awareness, non-judgment, non-reactivity. Responses are collected from respondents indicating the levels of mindfulness in them, organizational intelligence in the organization, and authenticity in their leaders.

**Population and Sampling**

The population is known and therefore probability sampling is used for extracting samples out of the population. The list of INGOs under the process of registration is excerpted from the official website of the ministry of interior of Pakistan. The total number of INGO’s under process is 23. A simple random sampling technique is used for data collection. The sample size of the study is 372. The response rate is calculated to be 88%.

Factor analysis, validity, and reliability tests are applied to measure the reliability and validity of the scale. KMO and Bartlett’s test is conducted to measure the adequacy of the sample data. Assumptions of regression were fulfilled before conducting the regression analysis. Regression and correlation analysis are applied and a very well-known technique of Preacher and Hayes (2014) process macro model number 4 is applied for mediation analysis. Statistical tests and analyses are conducted in SPSS 21.

**Data Analysis Tools**

Factor analysis is conducted to uncover the reliability of the adapted scale. Each item’s standard score is measured using principal component extraction and varimax rotation. All calculated scores valued greater than 0.3 and less than 0.1. KMO and Bartlett’s test is conducted to check the sampling adequacy. Cronbach alpha test is used to measure the reliability of the responses from the respondents.

Data are analyzed using the statistical package SPSS 21. Descriptive statistics mean and standard deviations are calculated to measure the normality and linearity of the data of the study. Linear regression and correlation analysis are conducted to measure the direction, strength, and effect of the variables. The mediating role of employee mindfulness is measured by Preacher and Hayes process macro applicable in SPSS.

**Data Analysis, Results, and Discussion**

This study explored the importance of human capital aspects of authentic leadership and employee mindfulness on achieving organizational intelligence. It is gravely important to fulfill the reliability, validity of the scale, and data before examining the relationship among the variables.

**Reliability and Validity Analysis**

Three factor - confirmatory factor analysis (CFA) is performed on multi-item measures (authentic leadership, employee mindfulness, and organizational intelligence). Satisfactory fit is obtained in results (Table 1). A total of 16 items are included in CFA, all items scores are calculated to be above 0.3 and below 1.0 showing significant loadings. KMO and Bartlett’s test is used for sampling adequacy. KMO measures 0.627 with the significance of 0.000, therefore implying a valid measurement model for research.

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1: Authentic Leadership</th>
<th>Factor 2: Employee Mindfulness</th>
<th>Factor 3: Organizational Intelligence</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Your top management gives you feedback regarding your performance</td>
<td>0.767</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 The top leadership is honest and clear in communicating the organization’s future structure (Merger/Acquisition)</td>
<td>0.714</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 The management considers and addresses the employee’s insecurities during the transition process.</td>
<td>0.775</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 The top leadership rarely present the false front to others</td>
<td>0.644</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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5. When two people are talking with each other, I simultaneously listen to them and perform my task also. 0.961

6. My attention towards work deviates because I am worrying daydreaming or otherwise distracted 0.743

7. I criticize myself for having irrational emotions 0.453

8. I tell myself I should not be feeling the way I am feeling. 0.644

9. I am easily distracted. 0.789

10. A formal and disciplined process for “environmental scanning,” exist within the organization to identify market threat and opportunities 0.961

11. Employees in different departments help one another, share information, and generally support one another in getting work done? 0.628

12. Are natural mechanisms in place to encourage innovation, e.g. experiments with new ideas, new product development concepts, and employee suggestion programs? 0.655

13. Are employees willing to put in extra effort to help the organization succeed and achieve its goals? 0.821

14. Do business processes facilitate employee performance and productivity rather than impede it? 0.789

15. Do the information systems support the wide availability and free flow of useful operating information? 0.494

16. Do executives, managers, and supervisors communicate the performance goals, targets, and expectations clearly and continually to employees 0.764

Table 2. Indicates the composite reliability and average variance extracted (AVE) scores for measuring reliability.

<table>
<thead>
<tr>
<th>Table 2 Reliability Statistics</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authentic Leadership</td>
<td>0.700</td>
<td>0.814</td>
</tr>
<tr>
<td>Employee Mindfulness</td>
<td>0.847</td>
<td>0.739</td>
</tr>
<tr>
<td>Organizational Intelligence</td>
<td>0.803</td>
<td>0.640</td>
</tr>
</tbody>
</table>

The reliability scores are calculated to be greater than 0.50 the threshold acceptable value. The results show the scale used to measure responses is valid and reliable.

Correlation Statistics

Once the scale reliability and validity tests are measured as satisfactory, the next step is to measure the relationship among variables. Table 3. Represents the descriptive statistics and correlation matrix of the study.

<table>
<thead>
<tr>
<th>Table 3 Descriptive Statistics and Correlation matrix</th>
<th>Mean</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authentic Leadership</td>
<td>3.28</td>
<td>0.959</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Mindfulness</td>
<td>3.46</td>
<td>0.569</td>
<td>0.517**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Organizational Intelligence</td>
<td>3.39</td>
<td>0.798</td>
<td>0.707**</td>
<td>0.790**</td>
<td>1</td>
</tr>
</tbody>
</table>

Correlation is sig at 0.01 level (2 tailed)

The mean values in the table above are closer to 3. Authentic leadership (x = 3.28), employee mindfulness (x = 3.46), organizational intelligence (x = 3.46). Standard deviation values also lie within the acceptable threshold. Authentic leadership (σ = 0.959), employee mindfulness (σ = 0.569), organizational intelligence (σ = 0.798). The test confirms the data is accurate and fit for conducting analysis.

Correlation statistics showed a positive correlation with each other. Authentic Leadership correlates (r=0.517, p<0.01) with employee mindfulness and (r=0.707, p<0.01) with organizational
intelligence. Employee mindfulness correlates \( r = 0.790, p < 0.01 \) with organizational intelligence. The acceptable threshold for correlation is greater than 0.5 and less than 1.0. The more the correlation value is closer to 1 the greater is the chance of multicollinearity among the variables. All the values of correlation among variables of this study are measured to be within 0.5 to 0.790. Not indicating any existence of multicollinearity.

**Preacher and Hayes Mediation Analysis**

The direct and indirect relationship between authentic leadership and organizational intelligence with employee mindfulness as a mediator is measured by a well-established Preacher and Hayes (2014) technique. Process macro model number four is used for analysis as it fits with the study model. Process macro intelligently applies regression and mediation analysis simultaneously on the variables of the study, making the analysis quick and convenient for researchers. Table 4. indicates the results of mediation analysis.

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>Direct Model</th>
<th></th>
<th></th>
<th></th>
<th>Indirect Model</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( B )</td>
<td>( S.E )</td>
<td>( p )</td>
<td>( \beta )</td>
<td>( S.E )</td>
<td>( p )</td>
<td>( \beta )</td>
<td>( S.E )</td>
</tr>
<tr>
<td>Authentic Leadership</td>
<td>0.588</td>
<td>0.031</td>
<td>0.000</td>
<td>0.306</td>
<td>0.027</td>
<td>0.000</td>
<td>0.339</td>
<td>0.026</td>
</tr>
<tr>
<td>Employee Mindfulness</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>0.812</td>
<td>0.044</td>
<td>0.000</td>
<td>0.812</td>
<td>0.044</td>
</tr>
<tr>
<td>Total</td>
<td>0.339</td>
<td>0.026</td>
<td>0.000</td>
<td>0.812</td>
<td>0.044</td>
<td>0.000</td>
<td>0.812</td>
<td>0.044</td>
</tr>
</tbody>
</table>

Note: Dependent variable: Organizational intelligence

All a, b, c, and c’ paths are statistically significant. The results of the direct and indirect relationship of authentic leadership with organizational intelligence are depicted in Figures 2 and 3. Below.

**Figure 2**: Mediation Analysis, Preacher and Hayes

\[ \beta = 0.588, S.E = 0.031, p = 0.000 \]

Path c represents the direct effect of authentic leadership on organizational intelligence. The results show 58.8% of variance in organizational intelligence is explained by authentic leadership. The path has a standard error of 0.031 and 0.000 significance. The results furnish positive relationship of authentic leadership on organizational intelligence and hence accepting hypotheses 1.

**Figure 3**: Indirect (mediation) path results.

\[ \beta = 0.306, S.E = 0.027, p = 0.000 \]
\[ \beta = 0.812, S.E = 0.044, p = 0.000 \]

Here the first path that is called Path “a” represents the effect of authentic leadership on employee mindfulness. The results show authentic leadership explains 30.6% of variance in employee mindfulness. The standard error of the path is 0.027 and p-value of 0.000. The results furnish a positive relationship of authentic leadership on employee mindfulness hence accepting hypotheses 2.

Path b represents the effect of the mediator (employee mindfulness) on the dependent variable (organizational intelligence). The results show 81.2% of variance in organizational intelligence is explained by employee mindfulness with a standard error of 0.044 and a p-value of 0.000. The results furnish a positive relationship of employee mindfulness on organizational intelligence, hence accepting hypotheses 3.

Path c’ represents the combined effect of both path and path b. Path C’ statistics show 33.9% of variance in organizational intelligence is explained collectively by both authentic leadership and employee mindfulness. The direct impact of authentic leadership on organizational intelligence is denoted by path C. It is observed that 58.8% of the variance in organizational intelligence is explained by authentic leadership. This variable has a positive and significant impact on organizational intelligence. The mediation analysis is conducted by introducing the mediating variable of employee...
mindfulness. It is observed that the impact of authentic leadership is decreased after the introduction of the mediating variable, confirming mediation in the model. The effect of authentic leadership on organizational intelligence is decreased from 58.8% to 33.9% after the introduction of the mediating variable of employee mindfulness. The decrease in the effect confirms the mediation and mediating role of employee mindfulness on organizational intelligence. The bootstrapping process in Preacher and Hayes macro (2004) also yields a 95% confidence interval (0.1991, 0.302) of indirect path. This test also confirms the mediating role of employee mindfulness and confirming hypothesis 4.

**Conclusion**

Conclusively, the findings show that the conventional concept of leadership style influencing organizational intelligence is challenged. Results show that the directness of the relationship is contested by hypothesizing that leadership is solely not responsible for organizational intelligence. Human capital contribution via leader-member exchange has a significant role to play in this domain. Leader-member exchange is bifurcated into leadership style and employee conscious state of mind at work. Additionally, this bifurcation generated a model that measures the direct effect of leadership style on organizational intelligence and its indirect effect on the mediating role of employee mindfulness. The relationship is hypothesized as an authentic leadership style of leaders in INGO’s develop mindfulness in employees and it is this mindfulness that helps organizations to achieve organizational intelligence. On the other hand, mindfulness because of employee relations acts as a mediator in the relationship between authentic leadership and organizational intelligence. Human capital factors serve as a significant construct in organizations struggling for organizational intelligence.

**Limitations and Future Research Direction**

The paper address employee relations and organizational intelligence about INGO in Pakistan. We encourage future researchers to generalize the study in other sectors as well in other countries. Secondly, the idea of authentic leadership harness employee mindfulness can be broadened to other styles of leadership. Maximum contribution in organizational intelligence is done by employee mindfulness and this variable is gauged by using a valid scale of future researchers are encouraged to operationalize other valid scales for measuring employee mindfulness to see the same level of contribution of employee mindfulness towards achieving organizational intelligence.

**References**


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