

# Trivariate Analysis of Organizational Culture, Leadership and Organizational Effectiveness: An Exploratory Study

Dr. Shivani Mishra

Department of Social Work, Sardar Patel University, Vallabh Vidyanagar, Gujarat, India

**Abstract-** In any organizations culture is subtle way which significantly helps in developing and maintaining leadership and organizational effectiveness. The present study demonstrated the empirical link between the organizational culture, leadership and organizational effectiveness. In present study data were gathered from selected manufacturing units of Gujarat from 440 samples. Descriptive and exploratory research design had been adopted. The finding of the study necessitated that the null hypotheses is rejected. In this survey it is found that there was non-spurious relationship found between organizational culture, leadership and organizational effectiveness. Present study contributes to the existing pool of knowledge on the relationship between culture, leadership and organizational effectiveness.

**Index Terms-** Leadership, Organizational Culture, and Organizational Effectiveness

## I. INTRODUCTION

Organizational culture means two different but related things. First, it is the culture that exists in an organization. When the phrase is used in this sense, it means something similar to the culture is a society and consists of such things as shared values, beliefs, assumptions, perceptions, norms, artifacts and patterns of behavior. It is the unseen and unobservable force that is always behind organizational activities that can be observed. It is the work of Bass (1985) and Burns (1978) that defined most of the initial work in the field and laid the groundwork for Edgar Schein (1985) to focus on culture as the fundamental role of the leader in bringing about and solidifying the implementation of change in an organization. Schein's theories on culture seek to dispel several common myths about organizational culture. Taormina(2008) rightly point out in his study that by virtue of the authority of their positions, leaders have considerable freedom to decide how their organizations will be run, and can thus be expected to play a major role in influencing the culture of an organization. Further Hackman's theory (1976) can provide us a considerably strong framework to understand how an organization, particularly its norms as the basic blocks of organizational culture, influences individuals' work behavior and effectiveness. Since organizational culture influences all members, the increase in individual's effectiveness will result in an increase in organizational effectiveness.

Aim of this paper is to understand the effect of organizational culture on remain key variables by controlling other variables. To draw the causal inference, one has to re-examine the bi-variate relations by controlling the effect of other variables into the analysis. In cross tabulation or bi-variate relationship may be observed just due to chance, or it may exist due to a third variable which is yet to be revealed. If the two variables are associated, it is not necessary that there is cause and effect relationship between the two variables. It is essential that effects of other variables are ruled out as alternative explanation of the relationship. Hence tri-variate analysis that is re-examinations of the bi-variate relationship by controlling the effect of third variable serves the purpose of clarifying and elaborating the original relationship.

## II. OBJECTIVES OF THE STUDY

1. To study the associations between organisational culture, leadership and organisational effectiveness.
2. To study and understand the effect of organisational culture on remains key variable such as leadership and organisational effectiveness.
3. To draw out causal inference between organisational culture, leadership and organisational effectiveness.

## III. METHODOLOGY OF THE STUDY

Present study is descriptive and exploratory in nature. The required data was collected from primary sources through questionnaire. The primary data was collected from the 440 respondents had responded who are in managerial cadre positions from industries by applying simple random sampling method. Research instruments were pre-tested. Reliability test (Spilt-half) were applied on data collected in pre-testing. Coefficients of reliability of the above instruments are presented in the following:

| Research instruments         | No. Of items | Reliability |
|------------------------------|--------------|-------------|
| Organisational Culture       | 40           | 0.7414      |
| Leadership                   | 37           | 0.9254      |
| Organisational Effectiveness | 35           | 0.8570      |

**Hypotheses**

H1: There is non-spurious relationship between organisational culture, leadership and organisational effectiveness.

H2: There are non significant associations between organisational culture, leadership and organisational effectiveness.

**IV. DISCUSSION AND FINDINGS**

**Table 1: Showing Cross Tabulations between Organizational Culture and Leadership**

| Organizational Culture | Leadership |           |          | Total           |
|------------------------|------------|-----------|----------|-----------------|
|                        | Low        | Moderate  | High     |                 |
| Low                    | 57(49.1)   | 58(50.0)  | 1(0.9)   | <b>116(100)</b> |
| Moderate               | 44(20.1)   | 123(56.2) | 52(23.7) | <b>219(100)</b> |
| High                   | 10(9.5)    | 43(41.0)  | 52(49.5) | <b>105(100)</b> |

**Table 2: Showing Cross Tabulations between Organisational Culture and Organisational Effectiveness**

| Organisational Culture | Organisational Effectiveness |                  |                  | Total           |
|------------------------|------------------------------|------------------|------------------|-----------------|
|                        | Low                          | Moderate         | High             |                 |
| Low                    | 61 (52.6)                    | 47(40.5)         | 8(6.9)           | <b>116(100)</b> |
| Moderate               | 49(22.4)                     | 128(58.4)        | 42(19.2)         | <b>219(100)</b> |
| High                   | 12(11.4)                     | 39(37.1)         | 54(51.4)         | <b>105(100)</b> |
| <b>Total</b>           | <b>122(27.7)</b>             | <b>214(48.6)</b> | <b>104(23.6)</b> | <b>440(100)</b> |

$\chi^2 = 96.841$        $d.f = 4$        $p = .000$        $C = .425$

From table 2 it can be seen that those who perceived high organisational culture and also perceived high on organisational effectiveness say 51.4 percent (n = 54). Similarly it can be also seen that those who perceived low organisational effectiveness also perceived low organisational culture say 52.6 percent (n = 61). Further there is a significant association p.000 between two. And such association found to be moderate as value of contingency coefficient is 0.425. Mehralizadeh & Atyabi (2006) significantly explained through his research that organizational culture significant influence to Organizational Effectiveness variability.

Further by looking to the Table no 3 is evident from the table no.3 that the original bi-variate associations that is organisational culture and leadership is unchanged by organisational effectiveness in its first two sub categories that is

|                   |                  |                  |                  |                 |
|-------------------|------------------|------------------|------------------|-----------------|
| <b>Total</b>      | <b>111(25.2)</b> | <b>224(50.9)</b> | <b>105(23.9)</b> | <b>440(100)</b> |
| $\chi^2 = 96.785$ | $d.f = 4$        | $p = .000$       | $C = .425$       |                 |

From above table it can be viewed that in case of organizational culture that those who perceived high also perceived high leadership say 49.5 percent ( n = 52). Considerably it also found that those who perceived low leadership also perceived low organizational culture that is 49.1 percent (n =57). Further there is a significant association p.000 between organisational culture and leadership. Looking at contingency coefficient value 0.425 it can be inferred that associations are moderate. Taormena (2008) precisely demonstrate in his research study that there was correlations which revealed that leader behaviors to be more control-oriented in bureaucratic culture; and more flexible-oriented in innovative culture; but, contrary to expectations, more control-oriented in supportive culture

low p.000 and moderate one p.000. In other words, it can be say that organisational culture and leadership is unchanged organisational effectiveness is either low or medium. However it is found that both variables are changed when organisational effectiveness is high p.071. Therefore it may be concluded that leadership is independent of organisational culture when organisational effectiveness is high. To be specific, it may be inferred that in case of high organisational effectiveness, the leadership played an influencing role irrespective of the level of organisational culture. Effect of third variables that is organisational effectiveness found to be partial. Hence organisational culture and leadership accounted by organisational effectiveness when it is high category

**Table3: Showing Organizational Culture and Leadership Controlling Organisational Effectiveness**

| Organisational Effectiveness   |                        | Leadership |                 |                  | Total           |                  |
|--|------------------------|------------|-----------------|------------------|-----------------|------------------|
|  |                        | Low        | Moderate        | High             |                 |                  |
| Low  | Organisational Culture | Low        | 36 (64.3)       | 25 (43.9)        | 0 (0)           | 6 (50.0)         |
|  |                        | Moderate   | 16(28.6)        | 28(49.1)         | 5(55.6)         | 4 (40.2)         |
|  |                        | High       | 4 (7.1)         | 4 (7.0)          | 4 (44.4)        | 12 (9.8)         |
|  | <b>Total</b>           |            | <b>56 (100)</b> | <b>57 (100)</b>  | <b>9 (100)</b>  | <b>122(100)</b>  |
| <b><math>\chi^2 = 22.592</math>      <math>df = 4</math>      <math>p = .000</math>      <math>C = .395</math></b> |                        |            |                 |                  |                 |                  |
| Moderate   | Organisational Culture | Low        | 20 (40.8)       | 26 (22.2)        | 1(2.1)          | 47 (22.0)        |
|  |                        | Moderate   | 27 (55.1)       | 75 (64.1)        | 26(54.2)        | 128 (59.8)       |
|  |                        | High       | 2 (4.1)         | 16 (13.7)        | 21(43.8)        | 39 (18.2)        |
|  | <b>Total</b>           |            | <b>49(100)</b>  | <b>117 (100)</b> | <b>48 (100)</b> | <b>214 (100)</b> |
| <b><math>\chi^2 = 41.236</math>      <math>df = 4</math>      <math>p = .000</math>      <math>C = .402</math></b> |                        |            |                 |                  |                 |                  |
| High   | Organisational Culture | Low        | 1 (16.7)        | 7 (14.0)         | 0 (0)           | 8 (7.7)          |
|  |                        | Moderate   | 1 (16.7)        | 20 (40.0)        | 21(43.8)        | 42 (40.4)        |
|  |                        | High       | 4 (66.7)        | 23 (46.0)        | 2 (56.3)        | 54 (51.9)        |
|  | <b>Total</b>           |            | <b>6 (100)</b>  | <b>50 (100)</b>  | <b>48 (100)</b> | <b>104 (100)</b> |
| <b><math>\chi^2 = 8.641</math>      <math>df = 4</math>      <math>p = .071</math>      <math>C = .277</math></b>  |                        |            |                 |                  |                 |                  |

**Table4 : Showing Organisational Culture and Organisational Effectiveness Controlling Leadership**

| Leadership   |                        | Organisational Effectiveness |                 |                  | Total           |                    |
|--|------------------------|------------------------------|-----------------|------------------|-----------------|--------------------|
|  |                        | Low                          | Moderate        | High             |                 |                    |
| Low  | Organisational Culture | Low                          | 36 (64.3)       | 20 (40.8)        | 1 (16.7)        | 57 (51.4)          |
|  |                        | Moderate                     | 16 (28.6)       | 27 (55.1)        | 1 (16.7)        | 44 (39.6)          |
|  |                        | High                         | 4 (7.1)         | 2 (4.1)          | 4 (66.7)        | 10 (9.0)           |
|  | <b>Total</b>           |                              | <b>56 (100)</b> | <b>49 (100)</b>  | <b>6 (100)</b>  | <b>111(100)</b>    |
| <b><math>\chi^2 = 33.452</math>      <math>df = 4</math>      <math>p = .000</math>      <math>C = .481</math></b> |                        |                              |                 |                  |                 |                    |
| Moderate   | Organisational Culture | Low                          | 25 (43.9)       | 26 (22.2)        | 7 (14.0)        | 58 (25.9)          |
|  |                        | Moderate                     | 28 (49.1)       | 75 (64.1)        | 20 (40.0)       | 123 (54.9)         |
|  |                        | High                         | 4 (7.0)         | 16 (13.7)        | 23 (46.0)       | 43 (19.2)          |
|  | <b>Total</b>           |                              | <b>57 (100)</b> | <b>117 (100)</b> | <b>50 (100)</b> | <b>2241` (100)</b> |
| <b><math>\chi^2 = 39.594</math>      <math>df = 4</math>      <math>p = .000</math>      <math>C = .388</math></b> |                        |                              |                 |                  |                 |                    |
| High   | Organisational Culture | Low                          | 0 (0)           | 1 (2.1)          | 0 (0)           | 1 (1.0)            |

|  |              |                          |                           |                           |                            |
|--|--------------|--------------------------|---------------------------|---------------------------|----------------------------|
|  | Moderate     | 5<br>(55.6)              | 26<br>(54.2)              | 21<br>(43.8)              | 52<br>(49.5)               |
|  | High         | 4<br>(44.4)              | 21<br>(43.8)              | 27<br>(56.3)              | 52<br>(49.5)               |
|  | <b>Total</b> | <b>9</b><br><b>(100)</b> | <b>48</b><br><b>(100)</b> | <b>48</b><br><b>(100)</b> | <b>105</b><br><b>(100)</b> |
|  |              | $\chi^2 = 2.594$         | $df = 4$                  | $p = .628$                | $C = .155$                 |

It can be analysis from above table that organizational culture and organizational effectiveness is unchanged in its first two categories that is low p.000 and medium p.000. However it is found that it is changed when leadership is high that is p.628. Therefore it may be concluded that organizational culture and organizational effectiveness is independent when leadership is high. To be specific it may be inferred that culture do not play a role in organizational effectiveness, whereas it is found that leadership is accounted for organizational effectiveness. Over here leadership is termed as conditional variable.

### V. CONCLUSION

Certain characteristics of this study help to increase its contribution to the research area in organizational culture, leadership and organizational effectiveness. The finding of the present study necessitated that the null hypotheses is rejected. In this survey it is found that there was non-spurious relationship found between organizational culture, leadership and organizational effectiveness. Organizational culture has been argued as one of the most powerful and stable forces operating in organizations and can influence a firm's leadership, decision making, performance, internal development, and, strategic development for the twenty- first century (Schein 1996). Further in the work Denison (1995) clearly mentioned the impact of organizational culture on organizational effectiveness can be examined from three interrelated aspects: direction, pervasiveness and strength. Given the current debate regarding the impact of organizational culture on leadership and organizational effectiveness the additional research in this area is required. The cause and effect relationship could be ascertained from various service sectors and manufacturing sectors as well.

Last but not least present study contributes to the existing pool of knowledge on the relationship between culture, leadership and organizational effectiveness.

### REFERENCES

- [1] Agarwal. R. K. and Tyagi A. (2009). "An organizational culture in Indian Organization". Journal of Indian culture and Business Management, Vol. 30, 2010.
- [2] B.M. Bass (1985) "Leadership and Performance Beyond Expectations". New York Free Press (2nd Editions).
- [3] Denison. D. R &.Mishra A.K (1995) "Towards a Theory of Organizational Culture and Effectiveness." Journal of Organizational Science, Vol: 6, Issue: 2, Page 204 -223. Blackwell Publishing Limited.
- [4] E. H. Schien (1990) "Organizational Culture and Leadership". Journal of American Psychologist. Vol. 45, Issue: 2, Page 109-111.
- [5] Kuchinke , K. Peter. (2006) "Leadership and Culture: Work- related Values and leadership Styles among one company's US and Germany Telecommunications Employee". Human Resource Quarterly Journal. Vol: 10, Issue: 2, Page 135-154. Publisher: Wiley Periodicals, Wiley Company.
- [6] Mehralizadeh Yadollah et. al.(2006) "Regression Analysis of the Relationship between Organisational Culture & Effectiveness of the Principal of Secondary School". Working paper series 5. Retrieved from www. paperssrn.com
- [7] Pareek Udai (2006) "Organisational Culture and Climate". ICFAI University Press, Hyderabad. Taormena, Robert J (2008) "Interrelating leadership behavior organizations socializations and organisational culture", Journal of Leadership and Organizational Development, Vol: 29, No.1, Page: 85-102

### AUTHORS

**First Author** –Dr. Shivani Dineshchandra Mishra, Director In-charge, Department of Social Work, Sardar Patel University, Vallabh Vidyanagar, Gujarat.