

CONSTRUCTION AND VALIDATION OF LEADERSHIP ARCHETYPES SCALE FOR BUSINESS LEADERSHIP

Samina Riaz*

Lecturer, Gender and Development Studies, Lahore College for Women University
samina_riaz1@hotmail.com

Sarah Shahed

Professor of Psychology, Forman Christian College University
sarahshahed@yahoo.com

ABSTRACT

Literature suggests that people hold different perceptions of leadership, particularly ideal leadership, and associated characteristics. Building on this, it was proposed that an instrument that could assess local views or 'archetypes' of what a leader should be like can be helpful in Pakistani organizational settings. Owing to the dearth of a reliable and valid scale for assessment of leadership archetypes in business settings, this study aimed to develop the Leadership Archetypes Scale. Initially item pool of 90 statements was formulated with the aid of previous literature and interviews with 30 business sector employees. Advice from subject matter experts resulted in the final selection of 81 items which were put through an EFA after obtaining data from 365 employees. A five-factor solution containing 57 items was suggested and it was confirmed through a CFA on an independent sample (N = 359).

Keywords: Leadership, archetypes, Leadership Archetype Scale, Business leadership

INTRODUCTION

The topic of leadership garners universal interest (Northouse, 2015) and this interest has been present ever since people started organizing (Wheatley, 2010). Successful organizations owe their existence to the efforts of leadership that is distributive, collective, and complementary (de Vries, 2007). Now, when the environment is marked by frequent change, organizations are considering assessment and measurement of leadership to be their top priority (Santora & Ó Sullivan, 2014). It is pertinent to assess what characteristics should an effective leader possess that can help deal with the demands of their environment.

Since leadership is a collective process, therefore, important insight can be gained by assessing how leaders are perceived by their followers. In this endeavor, the concept of archetypes can be helpful. According to Pandey (2018), leadership archetypes can be thought of as collective images that serve as an ideal of a what leader should be. This concept is inspired from the theory of Carl Jung who defines archetypes as ubiquitous and ever-present forms that exist in our collective unconscious, that are inherited (Jung, 1959). Stevens (2003) suggests that these archetypes are dynamic psychological categories that reflect images and emotions as well as systems of readiness for action. Building on this, our archetypes about leadership can help explain what images and common meanings about leadership do we share. Such archetypes have been explored psychometrically.

De Vries (2007) suggested that there were consistent patterns of behavior that influence effectiveness of individuals in an organization. He formulated these patterns into eight leadership archetypes: strategist, change-catalyst, transactor, builder, innovator, processor, coach, and communicator. These archetypes were assessed by his Leadership Archetypes Questionnaire (LAQ).

Pandey (2018) used projective techniques to come up with four leadership archetypes, the achiever, the guide, the administrator, and the catalyst from which a 60 item questionnaire was built. This instrument was used to assess a leader's self-concept.

Such instruments can be helpful in assessing leadership archetypes in Pakistani context as well. There is a need to examine the archetypes or the images of leaders that are collectively held in our society. Such archetypes may be universally present. However, culture can impact the perception of

* Corresponding Author

leadership (Yan & Hunt, 2005). For instance, ideal leaders in collectivistic societies are thought to be paternalistic, directive, and supportive, whereas leaders in individualistic societies are preferred to be ambitious, autonomous, and less directive (Campion & Wang, 2019).

There have been studies in Pakistan centered on the efficacy of various leadership styles in organizational settings. Raziq and Borini (2018) have shown how transactional leadership style has a positive influence on the success of a project. On the other side of the spectrum, there is evidence for a positive link between transformational leadership and employees' affective commitment (Riaz et al., 2011). Ismail and Siddiqui (2019) conceptualized the leadership personality traits of proactiveness, agreeableness, conscientiousness, and neuroticism into the categories of ethical and servant leaders both of which are essential for growth of an organization.

In spite of many insightful findings, there is a dearth of studies that utilize indigenous instruments in organizational settings. As it has been discussed already that archetypes are collective images, therefore, an instrument that assesses local images of leadership can be comparatively more insightful than an instrument adopted from the West. With this goal in mind, the present study aims to:

1. To construct an indigenous scale to measure leadership archetypes in business sector.
2. To establish the psychometric properties of the scale.

METHODS

In order to develop the Leadership Archetypes Scale (LAS), initially an item pool containing 90 statements was formulated. This pool was generated by consulting literature in leadership archetypes (Burisch, 1984) and by obtaining feedback from employees of large, medium and small enterprises. The latter strategy aided in exploring more culturally relevant archetypes in Pakistani business sector. The interview sample consisted of 10 employees each from large, medium and small enterprises, who had work experience of more than one year. These individuals were asked to describe their team leaders at their work place in three sentences.

Four subject matter experts (SMEs), an HR manager, two organizational psychologists and an assistant professor of psychology evaluated the item pool on the following criteria: clarity, relevance with the construct, redundancy, comprehension, face validity and cultural relevance. All those items which received less than 75% of agreement were deleted and the final set consisted of 81 items scored on a 5-point Likert scale (1 = *strongly disagree*, 3 = *neutral*, and 5 = *strongly agree*).

This list was further put through a pilot test in which 30 business sector employees (with equal number of men and women) were asked to rate the clarity, comprehension, cultural appropriateness and relevancy of items. Modifications were made based on their feedback. Now the LAS was ready for the exploration of its factor structure.

For the purpose of establishing construct validity, a sample of 365 business sector employees within the age range of 23 to 60 years was selected from large, medium and small enterprises of Punjab province of Pakistan. Their experience level ranged from 1 year to 40 years at different posts in these organizations. Their further demographic details are presented in Table 1.

Table 1

Demographic of Participants (N = 365).

Variables	Men		Women		Total	
	<i>F</i>	%	<i>F</i>	%	<i>f</i>	%
Gender	182	49.9	183	50.1	365	100
Age						
21-30	57	15.6	54	17.79	111	30.41
31-40	104	28.49	100	27.39	204	55.89
41-50	20	5.47	19	5.20	39	10.68
51-60	1	3.04	10	2.73	11	3.01

Construction and Validation of Leadership Archetypes Scale for Business Leadership

Experience							
1 -10	146	40	148	40.54	294	80.54	
11-20	30	8.21	22	6.02	52	14.24	
21-30	6	1.64	10	2.7	16	4.38	
31-40			3	.82	3	.82	
Type of organization							
Large	43	11.78	35	9.58	78	21.36	
Medium	81	22.19	85	23.28	166	45.47	
Small	58	15.89	63	17.26	121	33.15	

The process of sampling began by obtaining lists of organizations present in lists from Lahore Chamber of Commerce and Industries and from these lists random selection of organizations was done. Permission was sought from HR departments of these organizations and then employees were contacted. Employees and their organizations were assured of confidentiality after which, the questionnaire was distributed at their work places and any ambiguities raised were assuaged.

After obtaining the data, SPSS 21 was utilized for the purpose of determining the underlying factor structure of LAS.

RESULTS

Principal Component Analysis (PCA) was performed for factor extraction of LAS and a 27-factor solution emerged which was not interpretable, therefore, parallel analysis (Patil et al., 2017) was used to retain five factors. Varimax method of rotation was used to extract this factor solution after convergence of factor solution in 50 iterations (KMO > .80; Bartlett’s statistic $p < .001$; 29.73% of explained variance).

Table No. 2 Factor Loadings of 81 Items through Principal Component Analysis by Using Varimax Method (N = 365)

Sr. No	Item No		Factors					Sr. No	Item No.		Factors				
	Initial Form	Final Form	I	II	III	IV	V		Initial Form	Final Form	I	II	III	IV	V
1	22		.52	.05	.20	.02	.12	44	14		.17	.17	.50	.18	.03
2	70		.52	.11	-	.07	.04	45	29		.16	.09	.50	.20	.13
3	63		.50	.25	.10	.25	-	46	12		.26	.14	.46	.15	.13
4	71		.50	.32	-	.18	.05	47	33		.19	.39	.40	.04	-.05
5	69		.48	.18	.07	.14	.05	48	3		.24	.08	.39	.10	.01
6	68		.47	.22	.17	.10	.09	49	15		.34	.09	.38	-.02	.12
7	31		.45	.17	.20	-.01	.20	50	78		.06	.22	.36	.33	.07
8	30		.45	.15	.18	.01	.23	51	23		.32	.02	.34	-.01	.31
9	56		.42	.16	.21	.08	.32	52	17		.22	.03	.33	.27	-.01
10	20		.41	.10	.30	.07	-	53	6		.00	-.11	.07	.49	.10
11	65		.40	.39	.17	.18	-	54	77		.15	.26	.18	.47	-.04
12	16		.39	.22	.26	.08	.00	55	54		.11	.06	.08	.45	.18
13	2		.37	-	.21	.07	.19	56	60		.28	.18	.08	.44	.04
14	44		.37	.23	.19	.08	.06	57	76		.33	.14	.01	.42	-.01
15	47		.36	.23	.18	.13	.16	58	58		.07	.05	.07	.40	.20

16	62	.36	.31	.04	.12	.15	59	66	.27	.37	.04	.38	.01	
17	4	.35	.05	.14	-.31	.35	60	55	.23	.17	.15	.37	.32	
18	67	.35	.34	.07	.19	.12	61	48	.26	.17	.13	.37	.23	
19	49	.35	.17	.12	.20	.05	62	73	-.01	.15	-.00	.36	.26	
20	21	.35	.30	.27	.10	.08	63	24	.03	.04	-.00	.35	.08	
21	46	.33	.05	.27	.26	.11	64	11	-.04	.02	.29	.33	.16	
22	32	.31	.25	.30	.22	.14	65	50	-.01	.14	.14	.33	.31	
23	19	.28	.21	.25	.15	.14	66	64	.31	.25	.17	.31	-.02	
24	59	.14	.57	.16	.20	.08	67	25	.23	.07	.15	.31	.20	
25	35	.13	.54	-.01	.06	.12	68	5	.13	-.01	.12	.30	.17	
26	39	.25	.54	.23	-.06	.18	69	51	.11	.02	-.05	.09	.54	
27	57	.23	.53	-.01	.15	.16	70	79	-.03	.01	-.01	.15	.49	
28	52	.30	.50	.22	.14	.01	71	74	.15	.12	-.05	-.02	.49	
29	45	.07	.49	.24	.16	.21	72	80	.07	.08	.08	.20	.40	
30	28	.13	.48	.32	-.02	.16	73	7	.00	.17	.03	.17	.38	
31	75	.23	.46	.10	-.02	.13	74	18	.08	.03	.22	.13	.37	
32	53	.21	.42	.22	.27	.03	75	41	-.12	.28	.03	.21	.36	
33	38	.06	.42	.38	-.00	.07	76	27	.16	.10	-.07	.03	.34	
34	37	.16	.40	.24	-.06	.18	77	34	-.02	.21	.19	.22	.33	
35	43	.21	.40	.24	.08	.23	78	42	.11	.09	.19	.29	.32	
36	72	.22	.37	.06	.12	.14	79	26	.26	.16	.14	.06	.30	
37	40	.31	.37	.20	.01	.20	80	81	-.06	.27	.13	.19	.28	
38	36	.29	.32	.30	.15	.05	81	8	.12	-.00	.22	.19	.24	
39	61	.16	.28	.03 3	.20	.11								
40	9	.05	.15 3	.56	.04	.05								
41	1	.03	.03	.54	.12	-.05			Variance	19.0 2	3.32	2.64	2.43	2.32
42	10	.23	.11	.52	-.01	.06			Cumulative Variance	19.0 2	22.3 4	24.9 8	27.4 1	29.7 3
43	13	.05	.22	.51	.07	.02			EigenValues	15.4 0	2.68	2.14	1.96	1.88

Note. IF= Initial Form; FF = Final Form. Boldfaced loadings indicate the retained items under the relevant factor based on Hair et al.'s (2009) criteria. Highlighted loadings show cross loadings of items with a difference of .20 between primary and alternative factor.

Table 2 shows the factor loadings of items on five factors. Conventions by Hair et al. (2009) were consulted for retaining items. Items 56, 20, 65, 62, 4, 67, 21, 28, 38, 40, 36, 15, 23, 66, 55, 50, and 64 were discarded for cross loading. Whereas items 19, 61, 81, and 8 can be discarded for having factor loadings less than .30. As for items 71 and 52, the decision to discard or retain them was assigned to SMEs as well since cross loadings of items with a difference of .20 between primary and alternative factor may indicate that an item can be retained for its primary factor (Howard, 2016). The input of SMEs complemented our final retention of 57 items.

Five factors formed after exploratory factor analysis, were labeled according to the characteristics under each factor. Archetypes presented by De Vries (2007) were used to label factors.

First factor identified was labeled as “Transactor”. This factor has 15 items. Items encompass the characteristics of transactor archetype such as, identifying new prospects and opportunities, successfully negotiate with others, and are great deal makers. Second factor explored was labeled as “Coach” with 11 items. Leaders having this archetype have characteristics of developing people. They build high performance teams and cultures within organization. Third factor was identified as “Processor” archetype with nine items. It possesses characteristics of being able to set up structures of organization effectively for smooth functioning. Fourth factor had 11 items and was identified as “Builder”. People related to this archetype are considered to have entrepreneurial skills. They are ready to start from scratch. They like long term goal and strategies. Fifth factor was labeled as “Strategist” with 11 items. Leaders identified with this archetype handle developments in the organization’s environment efficiently. They present vision and strategic direction to produce future growth.

Alpha coefficients for Factor I, II, III, IV, and V are .80, .79, .75, .69, and .67 respectively. Therefore, a five-factor solution of LAS was considered to be valid and reliable for use with Pakistani sample of business sector employees. To further strengthen its validity, its structure had to be confirmed on an independent sample.

Confirmatory Factor Analysis (CFA)

AMOS 22 statistical package was used to carry out CFA with maximum likelihood in order to test whether the factor structure of Leadership scale discovered through EFA, could be replicated on an independent sample. The sample for this phase consisted of 359 business sector employees.

To examine the goodness-of-fit indices following conventions were followed: NFI > .90, CFI > .93 and GFI > .90 (Byrne, 1994); TFI > .90 (Bentler & Bonett, 1980); RMSEA < .08 (Browne & Cudeck, 1993); $\chi^2/df < 2$ or 3 (Kline, 1998). Table 3 shows these indices.

Table No. 3 Confirmatory Factor Analysis (Indices of Model Fit) for Leadership Scale (N = 359)

Indices	$\chi^2(df)$	χ^2/df	GFI	NFI	CFI	IFI	TLI	RMSEA
M 1	3644.07 (1474)	2.47	.72	.68	.78	.79	.77	.06
M 2	3380.45 (1484)	2.27	.75	.71	.82	.82	.80	.06

Note. $\chi^2(df)$ = chi-square; χ^2/df = normed chi-square; GFI = Goodness of Fit Index; CFI = Comparative Fit Index; IFI = Incremental Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Squared Error of Approximation. M1 = Default Model; M2 = After adding error covariance.

Error covariances have been drawn between all suitable error terms suggested by modification indices in order to improve poor model fit indices. However, no marked change in indices of model fit has been observed. Since χ^2/df and RMSEA values fit within conventions and keeping in view of Hu and Bentler (1999) who suggested that two model fit indices are enough for determining goodness of fit of a model, the model can be considered as satisfactory.

Figure 1 represents the graphical picture of the measurement model of the LAS Scale for its five factors. The covariances drawn between error terms are represented.

Table 4 shows the factor loadings of 57 items on LAS. It is evident that all items possess acceptable factor loadings as per conventions (Hair et al. 1998). Only item 39 and item 50 have item loadings below .40.

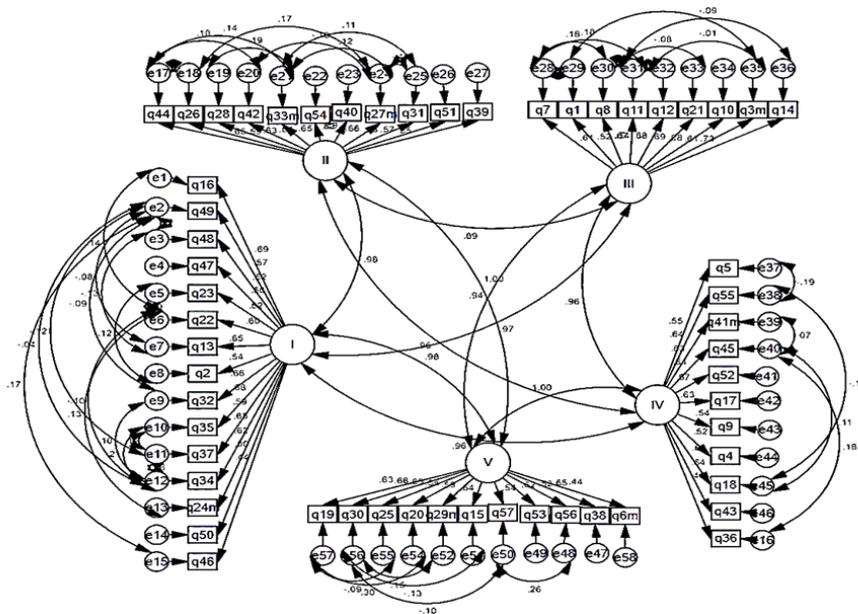


Figure 1 Measurement model of Leadership Scale

Table No. 4 Factor Loadings of Items of Leadership Scale (N = 359)

Item no.	Loading						
1	.52	17	.63	33	.65	49	.57
2	.54	18	.66	34	.65	50	.29
3	.61	19	.63	35	.68	51	.57
4	.52	20	.58	36	.49	52	.57
5	.55	21	.69	37	.59	53	.62
6	.44	22	.60	38	.65	54	.62
7	.61	23	.62	39	.34	55	.63
8	.54	24	.62	40	.65	56	.52
9	.54	25	.63	41	.63	57	.54
10	.68	26	.59	42	.63		
11	.67	27	.66	43	.64		
12	.68	28	.63	44	.65		
13	.65	29	.59	45	.64		
14	.73	30	.68	46	.44		
15	.64	31	.63	47	.56		
16	.68	32	.66	48	.62		

DISCUSSION

A tool that assesses archetypes of leaders can assist organizations in assigning more suitable and effective leadership to teams following the line that leadership is distributive, collective, and complementary (de Vries, 2007). Since these archetypes can differ according to social realities of groups (Pandey, 2018), therefore, an indigenous instrument is more appropriate in assessing local archetypes.

A Leadership Archetypes Scale for use in Pakistani business settings was formulated with this objective in mind. Business sector employees were involved for the generation of its items and establishment of its psychometric properties. Exploration of its factors suggested the presence of

meaningful and internally consistent five factors which were further confirmed through a CFA on an independent sample.

Further assessment of LAS may involve establishment of convergent validity by assessing the association of scores on LAS with variables that have been previously shown to be linked with leadership archetypes, for example, crisis management (Lalonde, 2004), strategic change (Greenwood & Hinings, 1993), learning (Kang et al., 2007), management of organizational change (Carr, 2002), innovation management (Keupp & Gassmann, 2009), and associated leader traits (Cameron & Quinn, 2005) to name a few.

Translation of this instrument into local languages of Pakistan can further strengthen the claim of LAS being a culturally relevant instrument. Future studies can take on this endeavor. Another arena of exploration lies in examining the underlying reasons the formation of these archetypes.

CONCLUSION

Overall, the factor structure of the Leadership Archetypes Scale, as proposed by EFA, has been confirmed through a CFA on an independent sample. It can be concluded that Leadership Archetypes Scale along with its five factors is a statistically valid instrument for measuring attitudes towards leadership.

REFERENCES

- Bentler, P. M., & Bonett, D. G. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Psychological bulletin*, 88(3), 588.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long, *Testing structural equation models* (pp.136-154). London, UK: Sage Publications.
- Burisch, M. (1984). Approaches to personality inventory construction: A comparison of merits. *American Psychologist*, 39(3), 214–227
- Cameron, K. S., & Quinn, R. E. (2005). *Diagnosing and changing organizational culture: Based on the competing values framework*. John Wiley & Sons.
- Campion, Linda L.; Wang, Charles Xiaoxue (2019). Collectivism and Individualism: the Differentiation of Leadership. *TechTrends*, 63(3), 353–356. doi:10.1007/s11528-019-00399-
- Carr, A. (2002). Jung, archetypes and mirroring in organizational change management: Lessons from a longitudinal case study. *Journal of Organizational Change Management*, 15(5), 477-489.
- de Vries, M. F. K. (2007). Decoding the Team Conundrum:: The Eight Roles Executives Play. *Organizational Dynamics*, 36(1), 28-44.
- Greenwood, R., & Hinings, C. R. (1993). Understanding strategic change: The contribution of archetypes. *Academy of Management Journal*, 36(5), 1052-1081.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analysis (7th Edition)*. NJ,USA: Pearson Prentice Hall.
- Howard, M. C. (2016). A review of exploratory factor analysis decisions and overview of current practices: What we are doing and how can we improve?. *International Journal of Human-Computer Interaction*, 32(1), 51-62.
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Ismail, M., & Siddiqui, D. A. (2019). *Leader Personality Traits and Organizational Citizenship Behavior with the Combined Mediating Role of Ethical & Servant Leadership, and the Work Group Psychology: Evidence from Pakistan*. Available at SSRN 3510602
- Jung, C. G. (1959). *The archetypes and the collective unconscious*. New York, NY: Bollingen Foundation.
- Jung, E. (1957). *Animus and Anima: Two Essays*. Putnam, CT: Spring Publications.
- Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika*, 39(1), 31–36. <https://doi.org/10.1007/BF02291575>
- Keupp, M. M., & Gassmann, O. (2009). *Determinants and archetype users of open innovation*. *R&d Management*, 39(4), 331-341.
- Kline, R. B. (1998). *Methodology in the social sciences: Principles and practice of structural equation modeling*. New York, US: Guilford Press.

- Lalonde, C. (2004). In search of archetypes in crisis management. *Journal of Contingencies and Crisis Management*, 12(2), 76-88.
- Patil, V. H., Singh, S. N., Mishra, S., & Donovan, D. T. (2017). *Parallel analysis engine to aid in determining number of factors to retain using R. Computer software*. Retrieved from <https://analytics.gonzaga.edu/parallelengine>.
- Pandey, S. (2018). The Archetypal Images Of Leadership. *Journal of Organisation & Human Behaviour*, 7(1).
- Raziq, M. M., Borini, F. M., Malik, O. F., Ahmad, M., & Shabaz, M. (2018). Leadership styles, goal clarity, and project success: Evidence from project-based organizations in Pakistan. *Leadership & Organization Development Journal*.
- Riaz, T., Akram, M. U., & Ijaz, H. (2011). Impact of transformational leadership style on affective employees' commitment: An empirical study of banking sector in Islamabad (Pakistan). *The Journal of Commerce*, 3(1), 43.
- Santora, J., & Ó Sullivan, P. (2014). Introduction to the special issue on ethics and leadership. *International Leadership Journal*, 6, 3-6.
- Stevens, A. (2003). *Archetype revisited: An updated natural history of the self*. Toronto, ON: Inner City.
- Wheatley, M. J. (2010). *Leadership and the new science: Discovering order in a chaotic world*. Berrett-Koehler Publishers, California, USA.
- Yan, J., & Hunt, J. G. J. (2005). A cross cultural perspective on perceived leadership effectiveness. *International Journal of Cross Cultural Management*, 5(1), 49-66.