

Leadership and Innovation: A Gap in Aspirations and Execution

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Abstract

In the contemporary business world where change is an absolute certainty, developing and sustaining an innovative culture is a great challenge for business leaders. The issue is not limited towards sustaining innovation, even sustainability may lead to inertia, avoidance of risk, fear of unknown and challenge for creating something new constantly. In other words, the barriers are not necessarily about generating ideas or understanding trends in the marketplace, or the ability to convert good ideas into new products and services. The leaders' must engage, empower and encourage their people to embrace creative thinking and pursue new ideas.

The present study is an attempt to identify the perception of the employees towards leadership and Innovation and how leadership impacts innovation in an organization. An empirical study was conducted through self-administered questionnaire on employees of IT companies. Parametric methods are used to discover the gaps in leadership practice. The study will help in minimizing the gaps to create a better workplace.

Key words: Leadership, Innovation, Employee Perception, IT Company

1. Introduction

A leader can face the challenges of the organization by applying his innovative thinking for creating an innovative response, but at the same time making others throughout the organization apply their innovative thinking to resolve the problems and develop new product and services and create an innovative culture, needs extra effort. In other words, it is pertinent for the leaders to act in a manner that supports and develop innovation in the organization. There should be no scope for gap in thinking and executing the innovative ideas. A leader has to

understand that to make organization more productive and innovative proper direction, alignment and commitment is needed towards the creation of innovation. It has been observed in the research conducted by Mc Kinsey that though leaders understand that innovation is an important driver for growth but very few of them lead and manage it. Further it suggests that one third of the leaders manage it on ad hoc basis and others finds it in team agenda. Most of the leaders do not actively support the innovative culture.

2. Literature Review

Leadership and Innovation

It has been consistently postulated by empirical studies that one of the most important factor for organizational success and excellence is leadership (LeBrasseur, Whissell, & Ojha, 2002; Samad, 2012; Seltzer, 1990). It plays varied roles in facilitating innovations in the organizations especially in influencing creativity and innovation. Effective leadership leads to successful innovations and goals becomes realistic and achievable (Hunter & Cushenbery, 2011).

There is little consensus on defining leadership (Bass, 1990; Yukl 2002). Hambrick (1989) and Wright, Kroll, and Parnell (1998) defines leadership as a management activity where leaders in pursuit of vision secures the cooperation of others. In the opinion of House, Hanges, Javidan, Dorfman and Gupta, (2004) it is the ability to influence, motivate and encourage others to contribute towards the achievement of goals for the success and effectiveness of the organization.

In other words, leaders influence others to execute group or organizational goals (**House et al., 2004**)

Research suggests that innovation is crucial for success of any organization. Damanpour ,1991 opined that to enhance the performance of the organization it is intended to adapt innovation. Further he suggests that innovation can be in the form of new product development, production process, services, plan, program and administrative system. Hoffman Hegarty has defined the dimensions of the innovative process and has described the relationships between innovation and leadership. According to Damanpour (1987) innovation is subject to individual, organization and environmental influences.

According to Amabile, (1983, 1998; Amabile et al., 1996) successful implementation of creative ideas can be defined as Innovation. Cummings and O'Connell, (1978) is of the opinion that Innovation is influenced by leadership due to organizational characteristics such as structure, strategy, culture, rewards (Woodman, Sawyer, and Griffin, 1993) or the direct impact of their behavior on the creativity and motivation of the employees (Tierney, Farmer, and Graen, 1999).

Leaders can establish a supportive work

environment (Amabile et al., 2004; Amabile et al., 1996), facilitate creative work processes by creating an organizational work climate (Scott and Bruce, 1994) and can develop and maintain a rewarding system for creative performance (Jung, Chow, and Wu, 2003).

Transformational leadership and transactional leadership theory are the most prominent theory of leadership. Transformational leaders transform the self-concepts and personal values of the followers and motivate them for higher levels of needs and aspirations (Jung,2001), that raises the performance expectations of the followers (Bass ,1995). There are four components of this leadership namely; charismatic role modeling, intellectual stimulation, individualized consideration and inspirational motivation. Through charisma leaders instills admiration, respect and loyalty from the followers and make them work for collective mission. Through Intellectual stimulation the leader broadens the interest of the followers and stimulate them to think in a new way (Bass,1985). In Individualized consideration leaders develops one to one relationships with the followers and tries to understand the individual needs, skills and aspirations and meet the emotional needs of each employee (Bass, 1990). Through inspirational motivation leaders articulates employees visualize the future and give direction to followers to achieve the goal and instill the belief of self-efficacy. Transactional leadership promotes compliance of his followers through rewards and punishments and focus on the role of supervision and concerned with the processes rather than forward-thinking ideas.Organizational encouragement is an important enabler for innovation; challenging work environment is important but not a substitute for creativity and innovation (Richard Dodge, J Dwyer et al, 2017)

From the above literature it can be observed that Innovation is influenced by Transformational leadership and Transformational leaders are engaged with theirfollowers and focus on higher order intrinsic needs, and raise the organizational performance consciousness.

3. Research Gap

It can be seen many organizations are not innovative as the leaders do not walk the talk; they still practice the tenets that made

organizations successful in the industrial economy. A one size fits all approach does not work across the entire organization and areas as diverse as R&D, Sales or Operations. One reason could be multiple locations across different cities and nations and the other is rigid hierarchical system symptomatic of legacy leadership behavior. Innovation projects are complex and need leadership support to crystallize ideation and pilot innovations effectively.

The present study focuses on identifying the gaps between intent and practice vis-à-vis leadership in IT organizations.

4. Research Methodology

The study is exploratory and analytical in nature. The main purpose is to obtain an insight into how innovation agenda is implemented in IT organizations where things change at the speed of thought. The main objectives are:

- To identify the gaps between intent and practice with respect to innovation
- To find out the degree of association between domain areas and sources of innovation

A self-administered structured questionnaire as administered to junior/middle-level executives in Noida region to assess their opinions about the innovation practice in their respective IT organizations. The instrument was scaled on a 5-point Likert scale for 28 statements. The sampling method used is purposive sampling, the calculated Cronbach alpha is 0.809 (Table 1) which shows that there is internal consistency

in the data set. An EFA was carried out using Principal Component Analysis to identify the factor structure and VARIMAX rotation was used to identify the items in the respective factors. In EFA an accepted value of factor loadings of greater than 0.30 is considered to be valid for a sample size of more than 50 respondents. But, loadings of 0.40 are generally used as the cut-off value while any factor loading above 0.50 is considered as very good (Hair et al. 1998).

The calculated KMO at 0.756 shows that the data is amenable for EFA (Table 2). A total of seven factors were extracted; the total variation captured is 64.356% (Refer Table 3). The Factor Matrix with factor loadings is displayed in the table 4. It can be observed that the internal consistency (reliability score) of Factor 6 is very low and Factor 7 has only one item; therefore, it can be excluded from future analysis.

Table 1. Reliability Statistics

Cronbach's Alpha	N of Items
0.809	28

Factor Analysis

Table 2. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.756
Bartlett's Test of Sphericity	Approx. Chi-Square	1764.762	
	df	378	
	Sig.	.000	

Table 3: Total Variance Explained

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.953	21.260	21.260	5.953	21.260	21.260	3.238	11.564	11.564
2	2.997	10.703	31.964	2.997	10.703	31.964	3.190	11.394	22.958
3	2.565	9.160	41.124	2.565	9.160	41.124	2.857	10.204	33.162
4	1.940	6.928	48.052	1.940	6.928	48.052	2.673	9.548	42.710

5	1.809	6.459	54.511	1.809	6.459	54.511	2.614	9.337	52.046
6	1.465	5.232	59.743	1.465	5.232	59.743	1.809	6.461	58.507
7	1.292	4.613	64.356	1.292	4.613	64.356	1.638	5.849	64.356
8	.973	3.473	67.829						
9	.878	3.135	70.964						
10	.794	2.837	73.801						
11	.759	2.710	76.511						
12	.693	2.476	78.988						
13	.647	2.309	81.297						
14	.611	2.183	83.480						
15	.536	1.916	85.395						
16	.497	1.773	87.169						
17	.465	1.660	88.828						
18	.442	1.578	90.407						
19	.416	1.486	91.892						
20	.372	1.328	93.220						
21	.325	1.162	94.382						
22	.279	.995	95.377						
23	.272	.971	96.348						
24	.252	.898	97.246						
25	.224	.799	98.046						
26	.201	.719	98.765						
27	.183	.652	99.417						
28	.163	.583	100.000						

Table 4: Factor Matrix

Top Management encourages experimentation in new areas.	.561	FACTOR1
Management is very enthusiastic about	.726	Intellectual
The organization believes in pursuing tried and tested ideas	.600	stimulation
Innovation adds value to the work done by the employee	.690	$\alpha = 0.766$
Organization provides necessary training to employees to upgrade their skill sets.	.589	
Employees are criticized for failure	.563	
The organization devotes more time/resources for innovation than other activities	.783	FACTOR 2
Top Management encourages	.675	Innovative
Data/Information dissemination in the organization is free flowing	.547	Culture
Information flow/inter change is not hampered	.628	$\alpha = 0.755$
Organization has flexible work environment	.634	

Ideas from non-conventional sources are dismissed completely	.770	FACTOR 3
New product ideas get diluted when	.496	Transactional
The worth and contribution of employees involved in innovation is belittled	.698	Leadership $\alpha = 0.690$
There is lack of information on customers/ external data in the organization	.747	
Most of the organization's time goes in resolving conflicts	.503	
In my organization product suggesting new ideas for innovation is encouraged.	.743	FACTOR 4
The organization encourages brainstorming for product ideas	.619	Transformational leadership
The organization makes consistent efforts for innovation	.580	$\alpha = 0.795$
Innovation is necessary to stay ahead of competition	.620	
Employees are strictly supervised and control.	-.572	FACTOR 5
Extra incentive / benefits are given to employees engaged in innovation	.740	Rewards & Benefits $\alpha = 0.707$
Most employees look forward to being part of an innovation agenda	.841	
Workforce actively participates in different activities organized by the organization	.595	
Employees involved in innovation projects are recognized	.620	FACTOR 6
The organization is result oriented rather than technique oriented	.674	Employee motivation $\alpha = 0.273$
Availability of funds/budget is not a major constraint for innovations	-.694	FACTOR 7 Leader support

Factor Discussion

Factor 1. Intellectual stimulation

Intellectual stimulation with reliability score 0.766 indicates that the leaders of the organization encourages experimentation in new areas and are very enthusiastic about the innovation in product and processes, they understand Innovation adds value to the work done by the employees and they should be provided with necessary training to update their skill sets, but at the same time in practice they believe in pursuing the tried and tested ideas and employees are criticized for their failure which acts as an impediment in implementing new ideas.

Factor 2. Innovative Culture

Factor 2 (0.755) depicts that employees of IT

company perceives that the organizations should devote more time/resources for innovation than other activities. Leaders should encourage free flowing dissemination of data should encourage flexible work environment.

Factor 3. Transactional Leadership

Factor 3 indicates (0.690) that in practice most of the leaders follow transactional leadership style. In this ideas from non-conventional sources are dismissed completely, New product ideas get diluted and the worth and contribution of employees involved in innovation is belittled. There is lack of information on customers/ external data in the organization. Employees are strictly supervised and control and most of the organization's time goes in resolving conflicts

Factor 4. Transformational leadership

It can be seen from the factor 4 (0.795) that IT companies encourages brainstorming for product ideas and employees are encouraged for suggesting new product ideas. The organization makes consistent efforts for innovation and understands that Innovation is necessary to stay ahead of competition

Factor 5. Rewards & Benefits

From Factor 5(0.707) it can be observed that for encouraging employees for adapting and accepting new ways extra incentive / benefits are given to the employees engaged in innovation due to which most of the employees look forward to being part of an innovation agenda and actively participates in different activities organized by the organization

Factor 6. Employee motivation

This factor indicates that employees involved in innovation projects are recognized and the organization is result oriented rather than technique oriented

Factor 7. Leader support

The above factor indicates that availability of funds/budget is not a major constraint for innovations.

The method of Bayesian statistics is used as the posterior analysis uncovers hunches or suspicions that cannot be systematically included in the classical approach. This is useful as there is no prior information available. As seen in the table it provides 95% credible interval and not a point estimate at 95% confidence interval. Credible intervals capture our current uncertainty in the location of the parameter values and thus can be interpreted as probabilistic statement about the parameter.

The significance of the extracted factors is tested using Bayesian extension commands, as there is no prior information available about the data. It can be observed that the calculated significance at .000 shows that the area of innovation (Dependent Variable) is impacted by the factors pertaining to leadership practice. The source of innovation has a considerable impact on the innovation agenda as the calculated p value at 0.000 is significant. Instead of a confidence interval, the tables 5 & 6. show 95% credible interval that implies that the difference in means for Factor 1 **Intellectual stimulation** is between -0.160 and 0.117 and so on. The posterior distribution shows that the variance for different sources of innovation viz. customers/clients, competition and internal (inside the organization) is not very dispersed around the mean.

Table 5 :ANOVA^{a,b}

Source	Sum of Squares	df	Mean Square	F	Sig.
Regression	26.354	10	2.635	3.877	.000
Residual	94.479	139	.680		
Total	120.833	149			

a. Dependent Variable: Area of innovation

b. Model: (Intercept), Source of Innovation, REGR factor score 1, REGR factor score 2, REGR factor score 3, REGR factor score 4, REGR factor score 5, REGR factor score 6, REGR factor score 7

Table 6. Bayesian Estimates of Coefficients^{a,b,c}

Parameter	Posterior			95% Credible Interval	
	Mode	Mean	Variance	Lower Bound	Upper Bound
(Intercept)	2.287	2.287	.273	1.262	3.312
Source of Innovation = Within the organisation	.695	.695	.365	-.491	1.880
Source of Innovation =	.743	.743	.281	-.298	1.784

Customers/Clients					
Source of Innovation = Competition	.929	.929	.305	-.156	2.013
REGR factor score 1	-.022	-.022	.005	-.160	.117
REGR factor score 2	.194	.194	.005	.054	.333
REGR factor score 3	.142	.142	.005	.005	.278
REGR factor score 4	.128	.128	.005	-.008	.264
REGR factor score 5	-.188	-.188	.005	-.323	-.052
REGR factor score 6	-.216	-.216	.005	-.352	-.081
REGR factor score 7	.053	.053	.005	-.083	.189

- Dependent Variable: Area of innovation
- Model: (Intercept), Source of Innovation, REGR factor score 1, REGR factor score 2, REGR factor score 3, REGR factor score 4, REGR factor score 5, REGR factor score 6, REGR factor score 7
- Assume standard reference priors.

Table 7: Bayesian Estimates of Error Variance^a

Parameter	Posterior			95% Credible Interval	
	Mode	Mean	Variance	Lower Bound	Upper Bound
Error variance	.670	.690	.007	.544	.873

- Assume standard reference priors.

Table 8: Bayesian Regression

F-test Table 1 ^a				
F	df1	df2	Sig.	
4.946	7	139	.000	

- Design: REGR factor score 7 + REGR factor score 6 + REGR factor score 5 + REGR factor score 4 + REGR factor score 3 + REGR factor score 2 + REGR factor score 1

H_{01} : There is no relationship between functional areas of innovation and the source of ideation. The calculated significance at .000 shows that the null hypothesis is rejected. This implies that employees think that a certain domain area (for innovation) is related with the source of innovation, often external to the organization. It is important to ensure that implementation of innovation agenda is shaped by the leadership and not the source from where the idea emerged. Ideation is abstract and piloting the ideation is a complex and risk-prone.

Table 9:Area of innovation * Source of Innovation Category Tabulation

			Source of Innovation			
			Within the organization	Customers/ Clients	Competition	Total
Area of innovation	Sales & Marketing	Count	1	Vendors	3	10
	Prodn & Operns.	Count	3	22	2	27
	IT	Count	2	56	4	62
	Res. & Dev.	Count	2	37	11	50
	Others	Count	1	0	0	1
Total		Count	9	121	17	150

Test of Independence^a

	Value	df	Asymptotic Sig. (2-sided)
Bayes Factor	353.789 ^b		
Pearson Chi-Square	38.417 ^c	12	.000

Conclusion and future implication

It can be concluded that the empirical investigation provided an insight about how leadership practice can impede innovation agenda in an IT organization. The management and leadership can bring about a change in the IT organizations by bringing more accountability and ownership to put ideas into action. Still this area of research is relatively new and it needs to be explored and investigated in future. The empirical analysis indentified some factors which lead to the gaps in leadership. Posterior analysis revealed that the source of innovation/ideation can have far reaching impact on how employees in an IT organization view the leadership practice.

The sample size is limited and data have been collected from Noida region; therefore it cannot be generalized to a larger population. However it provides direction for future research pertaining to how these gaps in leadership can be reduced for overall growth.

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