

Application of Leadership and Personal Competencies for Augmented Managerial Performance: Empirical Evidence from Indian Manufacturing Units

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Numerous studies on managerial competencies illustrates that effectiveness of the managerial workforce is highly dependent on the personal attributes of an individual within a firm. The primary purpose of this study is to ascertain whether the application of personal and leadership competencies has any considerable effect on the overall performance of the managerial workforce within a firm. For successful conduction this study a self designed pre-tested questionnaire has been instigated. About 520 managers from selected Indian manufacturing units were contacted for this purpose and data was collected from them by administering a structured schedule, out of which only 380 useable responses were utilized. The obtained data was subjected to analysis through SPSS statistical software. The result of the study showcases that personal and leadership competencies have considerable influence on the effectiveness of managerial performance in an organizational setup.

JEL Codes: L2, L6, M1 and M5

1. Introduction

Competencies are the standardised requirement of an individual, comprising of knowledge, skills and behavior which are necessary for performing a specific job adequately as well as improves the overall individual performance within an organizational setup. Competent employees are not only linked to augmented work environment but also help in improving the organization's performance as a whole (Boyatzis, 1982; Woodruffe, 1993; Bass and Bass, 2006). This has created urgency among organizations to develop their managers with adequate managerial competencies, so that they can deploy these competencies efficiently and can gain superior performance in their respective job roles (Tutu & Constantin, 2012). To achieve this goal the organizations are now focusing of building the capabilities of their managerial workforce so as to sustain and lead the competition.

The thrust for competent managerial workforce, has instigated the need to identify the essential managerial competencies that can promote managerial performance within manufacturing industries. Though the manufacturing industries have realized the importance of managerial competencies in relation to overall performance of the firm, still there is a lack of adequate measurement scale to evaluate the essential competencies directly with managerial performance. Numerous studies on managerial

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competencies illustrates that, effectiveness of the managerial workforce is highly dependent on the personal attributes of an individual within a firm.

The primary purpose of this study is to ascertain whether the application of personal and leadership competencies has any considerable effect on the overall performance of the managerial workforce within a firm. The current study proposes an integrated measurement scale that can evaluate competencies with superior managerial performance, as well as it would demonstrate a quantitative relationship existing between competencies and enhanced managerial performance.

2. Literature Review

The leadership competencies are the knowledge, skills, abilities, and attributes that leaders need to possess and demonstrate in order to perform their roles and jobs competently. Previous researches on leadership competencies have been focused on identifying the qualities and abilities possessed by successful leaders, which can be extended to other members of the organization; in order to enhance their productivity level within the organization (Javidan et al., 2006; Wolduet al., 2006; Chan and Cheung, 2008). The leadership competencies can be defined as the ability to adapt effective interpersonal communication, be a good decision maker and the ability to provide appropriate guidance towards the ultimate goal for continual quality improvement (Barner, 2000; Srinivas, 1995). The competent leaders have interpersonal skills that elicit the best in people, increase the capability for cooperation and team building, attract and develop talent, motivate and align people to one vision and communicate in both oral and written form (Spreitzer et al., 1997; Kaiser & Craig, 2004; Ludeman & Erlandson, 2006). Studies on leadership competencies have illustrated that there is positive relationship between the knowledge base of the executives and the firm's ability to compete in marketplace effectively, which is augmented by the executives behavioural characteristics such as seeing a big picture perspective, spotting unique opportunities, making a total commitment, welcoming uncertainty, etc. (Gabrielsson & Tell, 2009).

H1: It is hypothesized that leadership competencies of participants will be positively correlated to that of managerial performance with the organization.

The personal competencies are illustrated as a cluster of related knowledge, attitudes, skills, and other personal characteristics that affect a major part of one's job, correlates with performance on the job, can be measured against well-accepted standards, can be improved through training and development and can be broken down into dimensions of competencies (Gharehbaghi, 2003). These personal competencies help to increase role clarity, knowledge and personal learning skill of individuals helping them in resolving and processing the ambiguous information present in their work environments. When these competencies are reinforced and acquired within an organization properly, then it can be effectively converted into developing an empowered workforce (Rawson, 2000; Singh, 2010). Therefore, an individual needs to upgrade their personal competencies periodically so as to enhance their organizational performance.

H2: It is hypothesized that enhanced managerial performance of the participants are highly dependent on acquisition of personal competencies.

3. Methodology

A. Research Objective

Previous studies illustrate that the leadership and personal competencies are vital for generating performance excellence among the managers of the manufacturing sector. In order to identify the impact of these competencies on managerial performance, the following objectives were identified for this study:

- To explore the various attributes of leadership and personal competencies that are considered to be most important, for the managers to acquire within the organization.
- To identify which attributes of leadership and personal competencies have been considered the most significant for improving managerial performance.

B. Scope of the Study

This study is primarily focused on determining the competency profile of the managerial level employees in the manufacturing units, in order to investigate the relationship between leadership and personal competencies and their impact on managerial performance. The scope of the study has been limited to the middle and lower level managers working in the Indian manufacturing units.

C. Participants

A sample of 380 respondents consisting of middle and lower level managers belonging to some Indian manufacturing units have been selected for the conduction of this study. The data collected in the duration of this study has been tabulated in the form of tables in order to get better insight into the relationship between leadership and personal competencies on managerial performance within an organisation.

D. Measures

To measure the effectiveness of leadership and personal competencies on managerial performance a self-designed, pre-tested questionnaire has been implemented to collect primary data. The items of the questionnaire were tested for its reliability. The value of Cronbach alpha was found to be 0.83, which indicates that the items included in this study have a higher reliability value.

Owing to the previous literature review an inventory of items were generated for each of the dimensions, where the ultimate motive was to develop a generalised instrument for the managers of the manufacturing units partaken for this study. A 17 item questionnaire was designed consisting of various attributes of leadership and personal competencies, which was measured by using a five point Likert scale (5= *Strongly Agree* to 1= *Strongly Disagree*).

4. Findings

A total of 450 questionnaires were distributed among the managers, out of which a total of 380 useable responses were obtained and the data collected was set for further analysis by using SPSS 20.0 software. Factor analysis was been chosen as a method for data reduction, since it is suitable for identifying correlation among variables in complex sets of data (Mitchelmore & Rowley, 2013). Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity were conducted to measure the sampling adequacy as shown in Table I. A value of 0.50 or more in KMO test indicates that the data is adequate for factor analysis. Bartlett's test of sphericity relates to the significance of the study and thereby shows the validity and suitability of the responses collected for the problem being addressed through this study, as well as tests the presence of correlations among variables. A small value less than 0.05 of significance level has been recommended suitable for the study. In this study the KMO measure was .784 while the Bartlett's test of sphericity indicates a significance level of 0.00. Both the KMO and Bartlett's test of sphericity are found to be significant for this study. On the basis of the results it was implied that the dataset was fit for conducting factor analysis.

Table I: KMO and Bartlett's Test	
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	.784
Bartlett's Test of Sphericity	
Approximate Chi - Square	4420.408
df	136
Sig.	0.000

The communalities represent the amount of systematic variation for each variable that is accounted for by the set of factors in a study and the value ranges from 0 to 1 (Table II). All variables having communalities greater than .50, except the variable "Can tolerate stressful situations effectively" which is accounted for 32% variance. Therefore majority of the variables provide a sufficient explanation for the factor solution. For instance over 87% variance in "Can manage their own operations efficiently" is accounted, while 83% of the variance in "Has the ability to improve oneself and manage work independently" and 82% of variance for "Have the knowledge, skills and ability to adapt to various situations properly" and "Has the self-confidence to achieve the set goal".

Table II: Communalities	
<i>Loaded Items</i>	<i>Communalities</i>
Have the knowledge, skills and ability to adapt to various situations properly	.826
Has the ability to improve oneself and manage work independently	.832
Showcases integrity and veracity at work	.671
Self-motivated to achieve the goals at hand	.640
Can tolerate stressful situations effectively	.326
Has the ability to complete tasks and reach goals efficiently	.753
Can manage their own operations efficiently	.875
Adoption of appropriate means towards situational demand	.794
Has the self-confidence to achieve the set goal	.826
Has the ability to complete tasks and reach goals successfully	.700
Superiors can organize the tasks within the organization effectively	.700
Encouragement of group participation and empowering of the team members	.774
Capable enough to assess subordinates' performance	.762
Providing adequate information for team performance and leading the team towards the desired end	.649
Have the ability to motivate and develop others	.645
Developing the sense of shared leadership among the team members	.703
Proper emphasis on team dynamics and resolving conflicts	.681

From the total variance table as shown in Table III, we get the eigenvalues which are the variances of the factors that have been extracted by using the principal component analysis method. Four factors have been extracted for this study whose eigenvalue is greater than 1, as they explain nearly 71% about the total variables taken into account. The first factor “Leadership and team dynamics” accounts for considerably more variance than the remaining four (29.473 % compared to 23.439%, 11.337% and 7.256%). Rotation sums of squared loadings represent the distribution of the variance after the varimax rotation. Varimax rotation tries to maximize the variance of each of the factors, so the total amount of variance accounted for is redistributed over the three extracted factors. Table III shows factor loadings of the items under three extracted factors after varimax rotation.

Table III: Factor Loadings after Varimax Rotation				
<i>Loaded Items</i>	<i>Factor Loadings</i>			
	1	2	3	4
Factor 1: Leadership and team dynamics				
Superiors can organize the tasks within the organization effectively	.833			
Encouragement of group participation and empowering of the team members	.879			
Capable enough to assess subordinates' performance	.872			
Providing adequate information for team performance and leading the team towards the desired end	.805			
Have the ability to motivate and develop others	.797			
Developing the sense of shared leadership among the team members	.838			
Proper emphasis on team dynamics and resolving conflicts	.824			
Factor 2: Efficiency				
Can tolerate stressful situations effectively		.455		
Has the ability to complete tasks and reach goals efficiently		.832		
Can manage their own operations efficiently		.899		
Adoption of appropriate means towards situational demand		.867		
Factor 3: Adaptability				
Have the knowledge, skills and ability to adapt to various situations properly			.885	
Has the ability to improve oneself and manage work independently			.797	
Showcases integrity and veracity at work			.674	
Self-motivated to achieve the goals at hand			.739	
Factor 4: Goal oriented				
Has the self-confidence to achieve the set goal				.836
Has the ability to complete tasks and reach goals successfully				.611

The four extracted factors are further utilized in regression analysis for validation. Out of the four extracted factors only three of them “leadership and team dynamics”, “adaptability” and “goal oriented” are significant for personal competencies and considered as predictors of the criterion variable (managerial performance). Regression analysis was carried out by considering these variables. In Table IV, model 1 illustrates the value of R^2 , which is the proportion of variance of the dependent variable (managerial performance) explained by the independent variables. Higher the value of R^2 , the higher the explanatory power of the model (Fields, 2009). In this study the value of R^2 is 0.592, which implies that 59% of the variance in the dependent variable may be explained by the predictor variables. Adjusted R^2 is modified measure and it indicates the fitness of the model; its value should ideally be equal to or near the value of R^2 . In this model the value of adjusted R^2 is 0.587, which is close to the value of R^2 (0.592), thus indicating the fitness of the model. A small standard error of 0.688 is good enough to imply reliable prediction of the model. The value of F is 135.842 and is significant at ($p < 0.001$), thus making the model statistically significant. For leadership competencies

we find that only three variables “leadership and team dynamics”, “efficiency” and “goal oriented” are significant. In model 2, the value of R^2 is 0.561, which implies that 56% of the variance in the dependent variable may be explained by the predictor variable. The value for adjusted R^2 is 0.556. A small standard error of 0.797 is good enough to imply reliable prediction of the model. The value of F is 119.885 and is significant at ($p < 0.001$), thus depicting the overall significance of the model. Therefore, we can conclude that the extracted variables suitably explain that both the personal and leadership competencies are good indicators of superior managerial performance.

Table IV: Model Summary and ANOVA						
<i>Model</i>	<i>R</i>	<i>R Square</i>	<i>Adjusted R Square</i>	<i>Std. Error of Estimate</i>	<i>F</i>	<i>Sig.</i>
1	.769	.592	.587	.68816	135.842	.000
2	.749	.561	.556	.79797	119.885	.000
Notes: Model 1 (Personal Competencies) - Predictors: (Constant), Leadership and team dynamics, Adaptability and Goal oriented Model 2 (Leadership Competencies) - Predictors: (Constant), Leadership and team dynamics, Efficiency and Goal oriented						

The coefficient table showcases a range of unstandardized and standardized coefficients. In Table V model 1, the highest beta coefficient is “Adaptability” (0.802). The t- value for the significance of the each of the three predictors indicates significance at 0.000 levels. In the collinearity test both the tolerance and VIF is equal to 1, which indicates that there is no multicollinearity problem in this study. On the basis of the results we can conclude that the predictors extracted are significant indicators of superior managerial performance in case of personal competencies. Similarly, in model 2 we find that the factor “Leadership and team dynamics” has got significant beta coefficient (0.887) and t- value with significance at 0.000 levels. In the collinearity test both the tolerance and VIF is equal to 1, which indicates that there is no multicollinearity problem in this study. We can thus conclude that the take variable is a significant indicator of superior managerial performance in case of leadership competencies.

Table V: Regression Coefficients								
<i>Model</i>		<i>Unstandardized Coefficients</i>		<i>Standardized Coefficients Beta</i>	<i>Collinearity statistics</i>			
		<i>B</i>	<i>Std. Error</i>		<i>t</i>	<i>Sig.</i>	<i>Tolerance</i>	<i>VIF</i>
1	(Constant)	3.484	.035		98.698	.000		
	Leadership and team dynamics	.254	.035	.229	4.522	.002	1.000	1.000
	Adaptability	.802	.035	.749	22.701	.000	1.000	1.000
	Goal oriented	.163	.035	.152	4.610	.000	1.000	1.000
2	(Constant)	3.413	.041		83.380	.000		
	Leadership and team dynamics	.887	.041	.740	21.635	.000	1.000	1.000
	Efficiency	.140	.041	.334	5.980	.003	1.000	1.000
	Goal oriented	.133	.041	.111	3.238	.001	1.000	1.000
Notes: Model 1 (Personal Competencies); Model 2 (Leadership Competencies)								

Through the conduction of various tests, we can conclude that both the hypotheses of this study are true. It is found that, there is a significant positive relationship between personal and leadership competencies to superior managerial performance. These positive associations indicate that the managerial performance can be improved by developing personal and leadership competencies among the executives of the organization.

5. Conclusions

In manufacturing units, personal and leadership competencies, which according to literature have a positive effect on improved managerial performance, seems to hold strong in this study as well. It is evident that to enhance organizational performance, the organization should give much emphasis on the development of these competencies among their executives. This study shows that four major factors influence performance significantly such as “leadership and team dynamics”, “efficiency”, “adaptability” and “goal oriented”. We can infer that both the personal and leadership competencies play a pivotal role in influencing performance of the executives within the organization. It is of utmost importance that the organization realises the effect of these competencies on individual performance.

The items of this study were so selected that the results are applicable across organizations. The limitations of this study are that it has only been focused towards manufacturing units but it can also be tested for other sectors as well. Personal and

leadership competencies are not the only essential managerial competencies for improved performance as many other managerial competencies influence managerial performance.

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