

# Managerial Competencies, Self Efficacy, and Job Performance : A Path Analytic Approach

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## Abstract

There is no dearth of studies establishing the relationship between managerial competencies and job performance across sectors. However, the manufacturing sector in India has received less attention from the researchers. Furthermore, previous studies provided fewer insights into 'how' managerial competencies affect job performance. This study precisely aimed to fill these observed gaps by first focusing on middle managers from the manufacturing sector in India, and secondly, by expounding the role of proximal variables like self-efficacy in understanding the relationship between managerial competencies and job performance. The results from this study indicated that 'self-management' competency exerted the maximum influence on job performance followed by 'relationship management' and 'analytical skills'. Self-efficacy was found to partially mediate the relationship between competencies and job performance. Also, the results wielded strong evidence that managerial competencies and self-efficacy together are relatively stronger in predicting job performance than either predictor by itself. Furthermore, the study provides insights into the research and managerial implications of such findings.

**Keywords :** managerial competencies, self-efficacy, job performance, managers

**JEL Classification:** E24, J24, M00, M12

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**A**mong the developing countries, India is found to be distinctly the fastest growing economy, explicated by a GDP of 7.2% for the fiscal 2014-15 (CSO, 2015; "GDP for FY15 revised downward to 7.2%," 2016). Despite a steady GDP, India's worrisome GVA of 7.1% is attributed mainly to under par performance of sectors like manufacturing, utilities, and real-estate (ibid). And yet, what is perhaps most striking about the manufacturing sector is its potential to contribute 25% to India's GDP by 2025 (CII, 2016). Thus, it is axiomatically projected to create 90 million employment opportunities, covering 30% of the total workforce as against 12% coverage in 2014 (IBEF, 2015).

With the Indian government's noteworthy policies striving to capture myriad and curiously shaped opportunities in the manufacturing sector, the growth in the sector itself is expected to be 1.5 times more than the best achieved prior to the financial crisis of 2008 (KPMG, 2014). Albeit, propitious optimism that surrounds the

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Indian manufacturing sector, industry experts feel that the growth is sustainable, only if the organizations are able to innovate continuously and remain competitive in the market (CII, 2016).

From a resource-based view, it is argued that organizations secure competitive advantage through their internal resources by synchronizing diverse production skills and synergizing different technologies (Foss & Knudsen, 1996). Among various internal resources, human capital is viewed as a key strategic lever in achieving competitive advantage (Campbell & Sommers Luchs, 1997; Wright & Kehoe, 2008). Needless to say, organizations strive to capture key drivers to individual performance as well as organizational performance. In this regard, managerial competencies are found to be one of the most potent precursors to individual and organizational effectiveness (Rathnam, Suresh, & Satish, 2008). This indubitable relationship is established in the affirmative through various studies (Conant, Mokwa, & Vardarajan, 1990 ; Laguna, Wiecheteck, & Talik, 2012 ; Levenson, Van Der Stede, & Cohen, 2006) that expounded the crucial role played by managerial competencies in convalescing the overall organizational and individual performances. Furthermore, studies (Cizel, Anafarta, & Sarvan, 2007; Grandbois, 2009 ; Mohd-Shamsudin & Chuttipattana, 2012 ; Wickramasinghe & Zoyza, 2009 ; Xuejun & Wang, 2009) in healthcare, telecommunication, tourism and information technology sectors predominantly focused on 'enlisting' most potent managerial competencies and their strengths in predicting different outcome variables including individual performance. However, these studies provided very less insights into 'how' managerial competencies affect self perceptions of job performance. In order to understand the causal process better, it is imperative to explore and elucidate the role of mediating variable like self efficacy.

Also, research based studies on competencies for middle managers in the manufacturing sector are scarce. Taking into cognizance the gaps observed, the present study aims at identifying managerial competencies that significantly influence self perceptions of job performance among middle managers and further explore the role of self efficacy as a mediator variable between competencies and perceived job performance.

## Review of Literature

**(1) Competencies and Job Performance** : McClelland (1973) asserted that while aptitude and knowledge are potent predictors of performance, an individual's underlying personal characteristics are the best predictors of outstanding on the job performance. In common parlance, competency is viewed upon as an individual's underlying multidimensional characteristic (i.e. knowledge, skills, abilities, traits, and motives etc.) that causally lead to superior job performance (Boyatzis, 1982).

Borrowing from McClelland and Boyatzis, many experts lend their insights to succinctly define 'competencies' in terms of ability, attitude, self-concept, and group of related behaviours that are coherent with skills, abilities, and knowledge required to perform a task optimally (Cardona & Chinchilla, 1999 ; Catano, Cronshaw, Wiesner, Hackett, & Methot, 2001 ; Hornby & Thomas, 1989 ; Lee & Beard, 1993 ; Rajadhyaksha, 2005).

Viewing middle managers and production supervisors in the same light, Dhar (1978) precisely expounded on a number of key characteristics that supervisors or middle managers should possess for effective job performance. These included physical courage, vibrant communication skills, job knowledge, concern for others & team members, discipline, sincerity, and obedience to code of the organization. Contrary to usually held beliefs, Martin and Staines (1994), in their study of 150 small-scale company owners in UK, discovered threshold competencies to be relatively much stronger predictors of individual as well as organizational performance compared to functional and technical competencies. Interestingly, dimensions like experience, leadership, innovativeness, creativity and risk taking behavior contributed significantly to small scale enterprise's success but were not as strong as business and product knowledge. This again was contradicted by Cizel et al. (2007), who found evidence of technical competencies being rated much higher than generic competencies like self control and proactivity in the tourism sector in Turkey.

A study conducted in Iran on 98 senior managers categorically listed leadership and interpersonal skills to be the most influential aspect affecting managerial effectiveness (Labbaaf, Analoui, & Cusworth, 1996). However, a similar study by Khandwalla (2004) on 73 senior managers in India found evidence of task execution skills and contextual sensitivity to be the core predictors of role effectiveness. Camuffo and Gelli (2005) found people management competencies along with persuasion skills and self control to be the most potent influencers of job performance among production supervisors. In a study pertaining to 198 telecommunication managers in Sri Lanka, a majority of the managers reported competencies associated with skills to be relatively more influential than ability and knowledge (Wickramasinghe & Zoyza, 2009). Xuejun and Wang (2009) found team building skills, communication, coordination, execution and learning ability to be the most critical competencies ; wherein, in an Indian context, of the 200 managers surveyed from both public and private sectors, adaptability and flexibility were found to be the most prominent predictors of managerial performance (Bamel, Rangnekar, Stokes, & Rastogi, 2015).

It is quite evident that managerial competencies have attracted extensive coverage across sectors and countries, and results show substantial evidence of its strength as a powerful antecedent to managerial performance. Interestingly, different studies have covered diverse competency dimensions.

↳ **Ha** : Managerial competencies positively influence self-perception of job performance among middle managers in manufacturing firms.

**(2) Competencies and Self-Efficacy** : Bandura (1977) defined self-efficacy as an individual's belief and conviction in his or her capability to carry out a specific task successfully. Similar in conceptualization to competencies, many a times, both terms have been interchangeably used in research. However, a methodical examination of the literature suggests that there exists a subtle difference between the two. Harter (1978), through his 'effectance-motivation' concept, differentiated competencies from self-efficacy by extrapolating competencies as an attribute that strives to 'encounter challenges' and subsequently projecting efficacy as a trait that strives to 'master challenges'. In the context of task performance, the former represents 'readiness' to perform a task and the later 'mastery' in performing a task. This conceptual difference was further elucidated by Bandura and Cervone (1983) who exclaimed that performance at work is subject not only to the knowledge, skills, and abilities that an individual possesses, but also on the extent to which he/she experiences control or is motivated to be in control. In fact, competencies act as a precursor to self-efficacy. Kak, Burkhalter, and Cooper (2001) in their study of health care providers stressed on potential risks of inadequately and inappropriately using competencies that lead consequently to lowered confidence and poor self perception of self-efficacy. In fact, lack of technical and managerial competencies was found to lower self-efficacy among the expatriates employed in the information technology sector in India that further led to a negative employee outcome of voluntary turnover (Raghavendra & Nijaguna, 2014).

Of-late, Rodgers, Markland, Selzer, Murray, and Wilson (2014) in their research with two separate samples of 357 middle-aged adults and 247 undergraduate students conceptually and statistically differentiated the constructs of efficacy and competency. A study in Korea by Tyler et al. (2012) focused on understanding the perceptions of staff nurses on their existing clinical competency, general self efficacy, and job satisfaction. The results indicated that a perception of increased competency significantly improved the perception of self-efficacy and eventually, job satisfaction. Similarly, a study of 214 nurses in Seoul found that the communication education programme (CEP) significantly improved communication competency, further correlating positively with self-efficacy and job satisfaction (Park, Jeoung, Lee, & Sok, 2015).

It is quite clear that studies have been able to affirmatively distinguish and also confirm the underlying positive relationship between competencies, self-efficacy, and various outcomes like satisfaction, commitment, and job performance. However, they predominantly belong to the healthcare sector with other sectors getting inadequate coverage. Taking into consideration the aforementioned points, the following hypothesis is postulated :

↳ **Hb** : Managerial competencies positively influence perception of self efficacy among middle managers in manufacturing firms.

**(3) Self-Efficacy and Job Performance** : There is overwhelming evidence of self-efficacy positively influencing job performance. Burling and Beattie (1983) concurred that self-efficacy perceptions were strongly correlated to sales performance among insurance agents. A similar study in Taiwan, Taipei of 616 sales personnel in the automobile sector brought to the forefront very strong influence of self-efficacy beliefs on performance (Lai & Chen, 2012). Further, efficacy beliefs are found to significantly predict the level of effort, negative withdrawal intention, and situation coping that eventually leads to superior work performance (Bandura & Locke, 2003 ; Kane, Marks, Zaccaro, & Blair, 1996).

Cherian and Jacob (2013), in their systematic review of studies pertaining to self- efficacy and motivation, reported that in all studies except one, that is, the study conducted by Judeh (2012) established efficacy to be a key antecedent to job performance. Luthans and Peterson's (2002) study on 270 managers found self-efficacy to significantly but partially mediate the relationship between employee engagement and manager effectiveness. Self-efficacy was also found to be a strong mediator between leadership, performance, and job satisfaction (Liu, Siu, & Shi, 2010).

↳ **Hc** : Self-efficacy positively influences self perception of job performance among middle managers in manufacturing firms.

↳ **Hd** : Self-efficacy mediates the relation between managerial competencies and job performance.

## Research Methodology

**(1) Sample Characteristics and Respondent Profiles** : The study, predominantly descriptive and cross-sectional in nature, focused on middle managers from valve manufacturing organizations in Pune region, India. The departments of interest included design, casting, forging, assembly, testing, and dispatch. Thirty six (36) middle managers participated in the pilot study. For the final survey, 168 middle managers were approached between August 2014 and May 2015, out of which 117 agreed to participate in the survey ; 106 responses were considered for the final analysis citing 'completeness of responses' with regards to the survey instrument. This yielded a response rate of 63 %. All the respondents (100%) were men. The average age of the respondents was found to be 33.9 years. The majority of the managers (67%) fell in the age group of 30 - 40 years. For the pilot as well as the final survey, the participation was voluntary.

**(2) Data Collection Instruments and Procedures** : Data collection was administered through a structured questionnaire, having four distinct sections, that is, demographic profile, self-perception on managerial competencies, general self-efficacy, and job performance. The questionnaire was administered personally as well as through electronic medium (i.e. web based survey).

**(i) Managerial Competencies** : Taking into cognisance, managerial and emotional competence framework proposed by Boyatzis, Cowen, and Kolb (1995) and Goleman (1998) SAQ and ECI-2 scales were deliberated upon in detail to decide upon the representative items for the questionnaire. In order to keep the survey instrument manageable, 30 items adequately representing managerial competency dimensions were chosen. Respondents were requested to rate the frequency of use of each dimension on a 5 - point likert scale. The scale ranged from (1) *never* to (5) *consistently*.

**(ii) Self Efficacy :** For measuring the general self-efficacy, the 'New General Self Efficacy- NGSE' instrument was administered on respondents (Chen, Gully, & Eden, 2001). NGSE consists of eight items. The respondents were requested to rate the statement on their level of agreement ranging from (1) *strongly disagree* to (5) *strongly agree*.

**(iii) Job Performance :** The items corresponding to measuring the self-perception on job performance were chosen such that it would represent aspects of benefit to organization as well as the self. The items chosen to measure job performance drew inspiration from previous work of O'Reilly and Chatman (1986). Five items were chosen in this regard. Respondents were asked to rate the statement on their level of agreement ranging from (1) *strongly disagree* to (5) *strongly agree*.

**(3) Pilot-Test :** A pilot-test was undertaken to ascertain the survey instrument's reliability and to group variables into identifiable factors through exploratory factor analysis (EFA). Pilot data was run through principal component analysis (PCA) without rotation. Factors that accounted for eigenvalue  $\geq 1$  were retained (Kaiser, 1960). Eight factors met the threshold criteria of eigenvalue with 69.66% variance explained. Further, maximum likelihood estimation (MLE) established goodness of fit indices, statistical significance of factor loadings, and correlations among identified factors (Fabrigar, Wegner, MacCallum, & Strahan, 1999). To justify the choice of 'rotation' technique, MLE was first run with 'direct oblimin' rotation to extract the factor correlation matrix. Citing the evidence of moderate correlation among the factors (that is,  $r \geq 0.32$ ), results from direct oblimin method were retained for further analysis (Costello & Osborne, 2005).

From the Table 1, it can be observed that KMO value for managers is 0.812, which is well above the threshold value of 0.70, indicating that factor analysis was an appropriate method for data analysis. The Table 2 exhibits factor loadings and reliability scores (Cronbach's  $\alpha$ ). The Cronbach's  $\alpha$  value for each construct is well above the threshold limit of  $\alpha \geq 0.70$  (Nunnally & Bernstein, 1994). The factor loadings ranged from 0.701 to 0.941. Thirty items were grouped into six managerial competencies (factors). The rest of the two factors grouped the items of general self-efficacy (eight items) and job performance (five items). Further, factors were labelled according to the commonalities among the variables grouped in their respective clusters.

**Table 1. Maximum-Likelihood Extraction Output**

A EIGEN VALUE $\geq 1$		% Variance	Factors						
MANAGERS		69.66	8						
B Factor correlation matrix- Pilot Study				n = 36					
MANAGERS	F1	F2	F3	F4	F5	F6	F7	F8	
F1	1								
F2	0.28	1							
F3	0.17	0.21	1						
F4	<b>0.36</b>	0.23	<b>0.46</b>	1					
F5	0.21	0.17	<b>0.36</b>	0.28	1				
F6	0.19	0.23	0.27	0.30	<b>0.51</b>	1			
F7	0.22	0.10	0.19	0.21	0.12	0.21	1		
F8	0.14	0.33	0.37	0.23	0.17	0.29	<b>0.40</b>	1	
C		KMO	Bartlett's	Df	Sig	$\chi^2$	df	Sig	
MANAGERS		0.812	6147.015	903	***	714.991	587	***	

**Table 2. Exploratory Factor Analysis - Maximum Likelihood Extraction and Reliability Scores**

Factor	Items	Loadings	Cronbach's ( $\alpha$ )
<b>1. Goal &amp; Action Management</b>	1. Continuously strive towards achieving efficiency.	.936	.916
	2. Planning each task meticulously.	.818	
	3. Paying attention to minutest of details.	.767	
	4. Exhibit flexibility with regards to processes and solutions.	.721	
<b>2. Analytical Skills</b>	1. Appropriate usage of concepts.	.941	.944
	2. Systems thinking.	.908	
	3. Recognizing pattern through assorted data.	.883	
	4. Building theory for process improvement and trouble shooting.	.836	
	5. Using advanced technologies.	.811	
	6. Analyzing data quantitatively.	.774	
	7. Social objectivity.	.716	
	8. Clearly communicating important aspects of task.	.701	
<b>3. Self-Awareness</b>	1. Taking efforts to understand the self.	.911	.911
	2. Accurately assessing the self.	.889	
	3. Exhibit self confidence in all situations.	.841	
<b>4. Self-Management</b>	1. Demonstrate self-control.	.896	.893
	2. Behaviour driven by achievement motivation.	.874	
	3. Taking initiatives.	.831	
	4. Showcase transparency in all work related issues.	.808	
	5. Display adaptability in a dynamic work environment .	.761	
	6. Evince optimism in all situations.	.709	
<b>5. Social Awareness</b>	1. Showing empathy.	.874	.852
	2. Displaying continuous orientation towards service.	.811	
	3. Being aware of organizations processes, policies, and rules.	.742	
<b>6. Relationship Management</b>	1. Lead by example.	.941	.916
	2. Positively influence and motivate co-workers.	.911	
	3. Effectively manage conflicts.	.853	
	4. Be a catalyst to change.	.846	
	5. Develop others.	.767	
	6. Promote teamwork and collaboration.	.715	
<b>7. Self-Efficacy</b>	1. I will be able to achieve most of the goal that I have set for myself.	.931	.892
	2. When facing difficult tasks, I'm certain I will accomplish them.	.898	
	3. In general, I think I can obtain outcomes that are important to me.	.853	
	4. I believe, I can succeed at most any endeavor to which I set my mind.	.811	
	5. I will be able to successfully overcome many challenges.	.769	
	6. I'm confident that I can perform effectively on many difficult tasks.	.731	
	7. Compared to others, I can do most of the tasks well.	.723	
	8. Even when things are tough, I perform quite well.	.706	
<b>8. Job Performance</b>	1. I adequately complete all my duties.	.901	.916
	2. I fulfill all important responsibilities.	.873	
	3. I perform expected tasks.	.848	
	4. I meet the desired performance outcomes.	.801	
	5. I engage in activities that will affect performance evaluations.	.776	

## Analysis and Results

Barron and Kenny's (1986) model of mediation analysis was utilized to test the research hypotheses and to establish the relationship between independent and dependent variables. This was achieved through multiple regression method.

The Table 3 exhibits the strength of relationship between managerial competencies and job performance. The prediction model is statistically significant with  $F(6, 99) = 36.462, p < 0.001$ . Further, it accounts for 43% of the variance of job performance ( $R^2 = 0.430, \text{Adjusted } R^2 = 0.421$ ).

The standardized regression estimates of competency dimensions as predictors are shown in the Table 4. Self-Management ( $\beta = 0.332, p = 0.000$ ) is found to exert the strongest influence on self-perceptions of Job Performance followed by Relationship Management ( $\beta = 0.249, p = 0.000$ ) and Analytical Skills ( $\beta = 0.211, p = 0.004$ ). Inspection of path weights suggests that all competency dimensions are significant predictors of Job Performance at  $p < 0.05$  or  $p < 0.01$ . Hence, hypothesis Ha, which postulates that managerial competencies positively influence self-perception of job performance among middle managers in the manufacturing sector is supported. From the Figure 1, it can be observed that the values of structural coefficients in the path diagram are analogous to standardized  $\beta$  coefficients obtained through multiple regression and projected through the Table 4.

The Table 5 evinces the relationship between managerial competencies and Self-Efficacy. The Self-Management ( $\beta = 0.292, p = 0.000$ ) dimension is found to wield the strongest influence on Self-Efficacy followed by Self-Awareness ( $\beta = 0.195, p = 0.003$ ) and Analytical Skills ( $\beta = 0.164, p = 0.004$ ). Hence, hypothesis Hb, which posits that managerial competencies positively influence Self-Efficacy among middle managers in the manufacturing sector is supported.

The Table 6 displays the regression weights of managerial competencies on Job Performance in presence of Self-Efficacy as the mediator. As compared to direct effects reported between competencies and performance, it is observed that strength of the standardized path weights ( $\beta$ ) for each competency dimension reduces with a corresponding moderate increase in the significance value in presence of Self-Efficacy as a mediator. This signifies partial mediation by Self-Efficacy.

**Table 3. Model Summary - Managerial Competencies' Job Performance- Before Mediation**

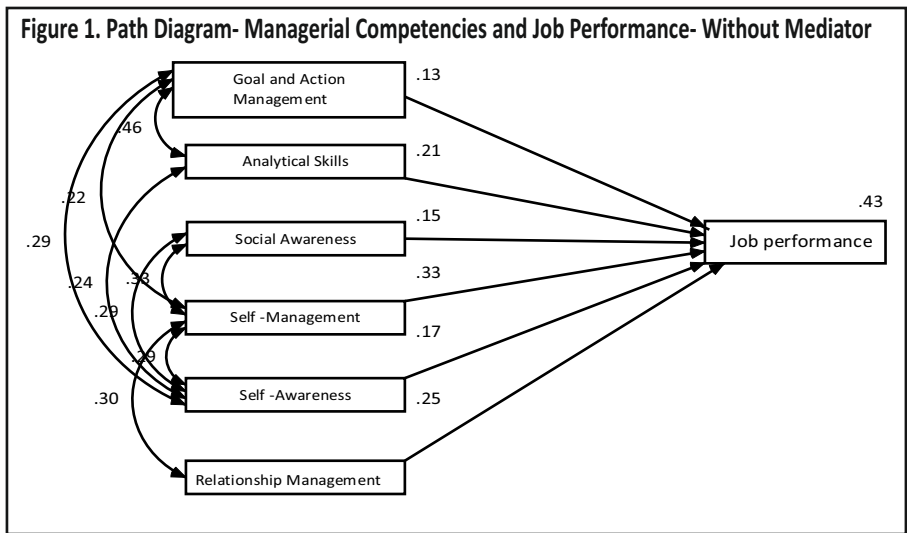
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.655 <sup>a</sup>	.430	.421	.21166	36.462	.000 <sup>b</sup>

a. Predictors: (Constant), Relationship Management, Goal and Action Management, Social Awareness, Self-Awareness, Analytical Skills, Self-Management

**Table 4. Standardized Estimates for Relationship Between Job Performance and Managerial Competencies**

Dependent Variable	Independent Variables	Standardized Estimate ( $\beta$ )	S.E.	Sig. ( $p$ - value)	Result (Hypothesis-Supported/not supported)
Job Performance	← Goal and Action Management	.127*	.060	.026	Supported
Job Performance	← Analytical Skills	.211**	.056	.004	Supported
Job Performance	← Social Awareness	.147*	.048	.021	Supported
Job Performance	← Self-Management	.332**	.061	.000	Supported
Job Performance	← Self-Awareness	.171*	.059	.015	Supported
Job Performance	← Relationship Management	.249**	.055	.000	Supported

\* Significant at  $p < 0.05$ , \*\* Significant at  $p < 0.01$



**Table 5. Standardized Estimates for Relationship Between Self-Efficacy and Managerial Competencies**

Dependent Variable		Independent variables	Standardized Estimate (β)	S.E.	Sig. (p - value)	Result (Hypothesis-Supported/not supported)
Self-Efficacy	←	Goal and Action Management	.132*	.094	.021	Supported
Self-Efficacy	←	Analytical Skills	.164**	.087	.009	Supported
Self-Efficacy	←	Social Awareness	.139*	.074	.015	Supported
Self-Efficacy	←	Self-Management	.292**	.096	.000	Supported
Self-Efficacy	←	Self-Awareness	.195**	.093	.003	Supported
Self-Efficacy	←	Relationship Management	.114*	.082	.033	Supported

\* Significant at  $p < 0.05$ , \*\* Significant at  $p < 0.01$

**Table 6. Standardized Estimates in Presence of Mediator Variable : Self-Efficacy**

Dependent Variable		Independent variables	Standardized Estimate (β)	S.E.	Sig. (p - value)	Result (Hypothesis-Supported/not supported)
Job Performance	←	Goal and Action Management	.114*	.060	.048	Supported
Job Performance	←	Analytical Skills	.186**	.056	.009	Supported
Job Performance	←	Social Awareness	.129*	.049	.047	Supported
Job Performance	←	Self-Management	.309**	.063	.000	Supported
Job Performance	←	Self-Awareness	.151*	.060	.019	Supported
Job Performance	←	Relationship Management	.225**	.055	.005	Supported
Job Performance	←	Self-Efficacy	.324**	.061	.000	Supported

\* Significant at  $p < 0.05$ , \*\* Significant at  $p < 0.01$

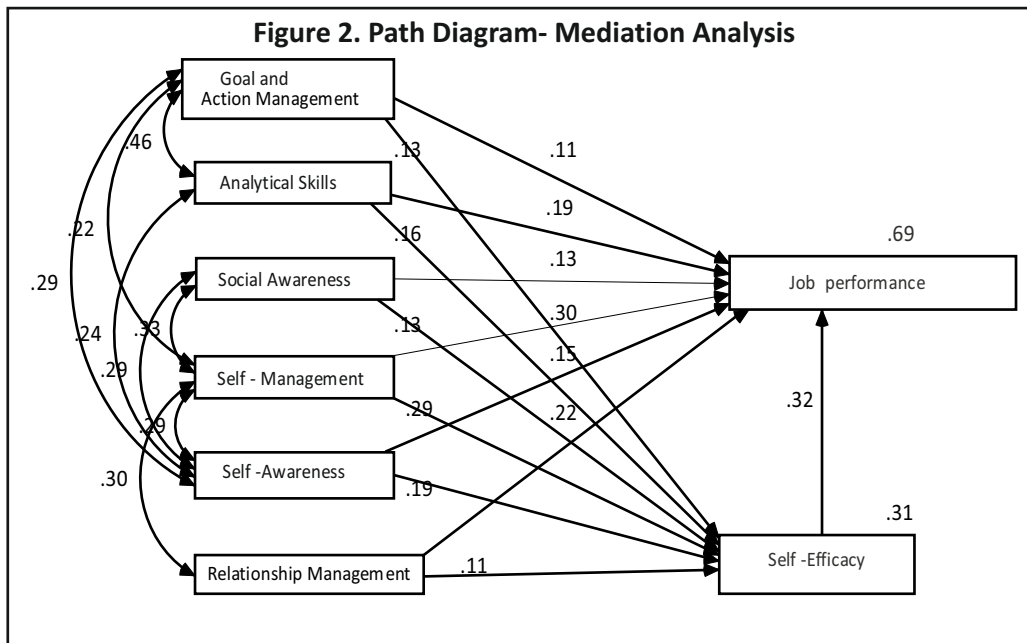
The Table 7 delineates the regression summaries, when the mediator variable is included in the model. The prediction model is statistically significant  $F(7, 98) = 31.938, p < 0.001$ . Further, it accounts for 69.5% variance of Job Performance ( $R^2 = 0.695, \text{Adjusted } R^2 = 0.683$ ). When competencies and Self-Efficacy together predict job performance, the  $R^2$  increases to 0.695 at  $p < 0.001$ . The relative increase in  $R^2$  is found to be 0.265, suggesting that



**Table 7. Model Summary - Managerial Competencies + Self Efficacy → Job Performance- After Mediation**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.
1	.834 <sup>a</sup>	.695	.683	.18973	31.938	.000 <sup>b</sup>

a. Predictors: (Constant), Self-Efficacy, Relationship Management, Analytical Skills, Social Awareness, Self-Awareness, Goal and Action Management, Self-Management



predictive ability of the model increases by 26.5 % in presence of Self-Efficacy as a mediator. Hence, the research hypotheses Hc and Hd are supported.

The Figure 2 represents the causal relationship between independent, mediator, and the dependent variables. All path coefficients are found to be significant at  $p < 0.05$ . The model accounts for 31% variance of Self-Efficacy and 69% of variance for Job Performance, both significant at  $p < 0.001$ . The model fit indices were estimated through the model chi-square ( $\chi^2$ ) (Bollen, 1989), root mean square error of approximation- RMSEA, goodness-of-fit- GFI (Steiger, 2007), comparative fit index- CFI (Bentler, 1990), and Tucker Lewis index- TLI (Tucker & Lewis, 1973). The structural model produced through a path analytic approach provided a good fit to the data :

$$\chi^2 (7) = 17.521 ; \chi^2 / df = 2.503 ; p = 0.07 ; CFI = 0.962 ; GFI = 0.970 ; TLI = 0.956 ; \text{and } RMSEA = 0.037.$$

The model chi- square ( $\chi^2$ ) indicates a good model fit at  $p > 0.05$  (Barrett, 2007) and  $\chi^2 / df$  value ranging between 1 and 3 (Carmines & McIver, 1981). RMSEA is found to be a perfect fit with the value falling well below the threshold limit of 0.05 (Hu & Bentler, 1995 ; MacCallum, Brown, & Sugawara, 1996 ; Steiger, 2007). The GFI statistic is found to be greater than the upper limit of 0.90, indicating a good fit (Miles & Shevlin, 2007). Among the incremental fit indices, CFI (0.962) and TLI (0.956) are observed to hold values greater than the threshold limit of 0.90 and 0.95 as proposed by Hu and Bentler (1995). Based on the acceptable fit indices in the structural model, it is evident that the proposed model can be effectively used to explain the relationship between competencies and perceived Job Performance through Self-Efficacy.

## Discussion and Conclusion

The purpose of this study is to identify key competencies that would predict job performance among managers in manufacturing firms in India so as to examine the role of self-efficacy to facilitate an understanding of the relationship between competencies and job performance. Results of this study confirm the existence of a positive relationship between managerial competencies and job performance, which is consistent with the findings of previous empirical studies (Camuffo & Gelli, 2005; Cizel et al., 2007 ; Jena, Sahoo, & Tripathy, 2015 ; Lakshminarayanan, Pai, & Ramaprasad, 2016 ; Xuejun & Wang, 2009). Also, empirical evidence that emerges out of this study indicates the partial mediating effect that the construct of self-efficacy exercises in the relationship between managerial competencies and job performance. Further, the study identifies six competency dimensions that affect the self-perceptions of job performance, that is, Goal and Action Management, Analytical Skills, Self-Awareness, Self-Management, Social Awareness, and Relationship Management. The identified competency dimensions are consistent with the competency clusters identified by Boyatzis (1982), Boyatzis et al. (1995), and Goleman (1998).

Managers perceive Self Management, among the identified competency clusters, to be the most crucial dimension along with Relationship Management and Analytical Skills in predicting effective job performance. This is because of several reasons. First, the findings suggest that managers' perception regarding their ability to control emotions, handle ambiguity, pursue excellence, and possess positive outlook contributes significantly towards their superior performance. This is because of the scholarly assertion that the ability to manage one's 'self' leads progressively towards superior job performance as the competency of 'self-management' is essentially viewed as an inherent dimension of emotional intelligence competency (Boyatzis, 2008).

Secondly, middle managers and supervisors act as a vital link between top management executives and shop floor workers in the manufacturing sector. Consequently, in today's competitive environment, line supervisors and middle manager roles have become critically important for successful implementation of quality-centric continuous improvement programs and lean management systems (Golhar, Deshpande, & Ahire, 1997). In this context, relationship management competencies that constitute heightened abilities and skills to influence workers, manage conflict, negotiate and stimulate others to work effectively in group settings become essentially the most important aspects for effective job performance (Camuffo & Gelli, 2005). Such competencies, if present, foster collaborative and synergetic efforts towards problem solving (Waldman, 1994), allow for greater transparency and knowledge sharing among a work-group (Oakland, 1989), and would lead, consequently, to improved cooperation between managements and workers (Coyle-Shapiro, Jacqueline, & Shore, 2007).

Thirdly, middle managers' skills and abilities regarding pattern recognition, technology usage, quantitative analysis, and so forth become critical for effective job performance. Organizational preference for root cause analysis calls for a higher degree of analytical skills among managers, which would help them in proactive anticipation and prevention of potential problems so that they do not become a hindrance in the corporate value chain (Golhar et al., 1997).

Finally, the results of this study provide credence to the argument that both competencies and self-efficacy are important antecedents that exercise positive influence on job performance more efficiently when they act together than they do in isolation of each other. As a precondition for the self-efficacy construct to exercise its impact as a mediator on competencies and job performance, this study establishes empirically the existence of a significant positive relationship between different test variables such as managerial competencies and Job Performance (e.g. Jena et al., 2015), competencies and Self-Efficacy (e.g. Park, et al., 2015 ; Tyler, et al., 2012), and lastly, Self-Efficacy and Job Performance (e.g. Burling & Beattie 1983 ; Bandura & Locke, 2003 ; Kane et al., 1996 ; Lai & Chen, 2012 ; Wood & Bandura, 1989). Though managerial competencies are seen as strong predictors of job performance, scholars argue that mere presence of myriad competencies may not necessarily lead to superior job performance unless individuals are willing to and are confident of appropriately utilizing those competencies

(Bandura & Cervone, 1983; Kak et al., 2001). A pre-requisite to the strong presence of Self-Efficacy is the extent of success an individual experiences by use of such competencies (Bandura & Cervone, 1983). Success experienced by use of such competencies alone can inspire him or her to make repeated use of those competencies. This viewpoint is further reinforced by the idea that individual capabilities and competencies contribute to enhanced beliefs relating to Self-Efficacy as well as creative work performance, provided there exists the enabling factors such as leader support and effective job design (Tierney & Farmer, 2002).

## **Practical and Managerial Implications**

The results of this study have several implications for both organizations and middle managers. Though this study restricts itself to high pressure valve manufacturing firms in Pune region, most of the managerial competencies that this paper examines are useful across different sectors, domains, and functional areas. At an individual level, findings from this study would help the middle managers to identify most potent competencies that exercise significant influence on their self-perceptions of job performance. Such information in conjunction with the knowledge on current proficiency levels and future competency requirements may lay strong foundations for decision-makers and managers to collaboratively design career development and management initiatives. At an organizational level, a coherent management system that strategically links competencies management to individual development initiatives provides tremendous value to decision-makers to embrace the most potent training and development interventions to enhance managerial competencies. Having identified the most important competencies, it is vital for the organizations to develop and measure them incessantly. Moreover, organizations can bring about systemic individual development plans in such a manner that they address managers' competency requirements, increase their expertise, and thus improve self-efficacy. Obviously, such interventions are also expected to be strategically aligned to business plans and organizational objectives. Overall, well-thought and astute management of competencies can help managers perform well and thus advance in their careers to assume leadership roles. Identification and strategic focus on these competencies can help organizations to optimize their capabilities.

## **Limitations of the Study and the Way Forward**

This study is not without limitations. The first limitation of the study is its cross-sectional nature. Though cross-sectional studies provide evidence of relationship between different variables, they fall short in explaining the causal relationships in the model. Future studies are encouraged to adopt a longitudinal design that addresses the aforementioned issue. Secondly, though this study attempts to elicit important managerial competencies, it does not measure the current proficiency levels or expertise of managers on such identified competencies. Future studies could consider adopting a gap analytic approach to address the problem. The study restricts itself to one specific region (i.e. Pune) and to organizations that manufacture high pressure ball valves. Citing to its limited scope and small sample, the generalizability of the findings is questionable till the time the results are validated against similar studies across different sectors within or outside India. The study also uses a self-reporting instrument for data collection from managers. This could lead to subtle biases, where respondents exaggerated their responses in terms of their perceptions on competencies, self-efficacy, and performance. In future, studies can focus on collecting data from multiple sources and presumably adopt a 360° approach to negate self-reporting bias and common method variance.

## References

- Bamel, U. K., Rangnekar, S., Stokes, P., & Rastogi, R. (2015). Managerial effectiveness: An Indian experience. *Journal of Management Development, 34* (2), 202-225. doi: 10.1108/JMD-10-2012-0129
- Bandura, A. (1977). Self-efficacy: Towards a unifying theory of behavioural change. *Psychological Review, 84* (2), 191-215. doi:10.1037/0033-295X.84.2.191
- Bandura, A., & Cervone, D. (1983). Self-evaluation and self-efficacy mechanisms governing the motivational effects of goal systems. *Journal of Personality and Social Psychology, 45* (5), 1017-1028. doi:10.1037/0022-3514.45.5.1017
- Bandura, A., & Locke, A. E. (2003). Negative self-efficacy and goal effects revisited. *Journal of Applied Psychology, 88* (1), 87-99. doi: 10.1037/0021-9010.88.1.87
- Barrett, P. (2007). Structural equation modelling: Adjudging model fit. *Personality and Individual Differences, 42* (5), 815-824. doi:10.1016/j.paid.2006.09.018
- Barron, R. M., & Kenny, D. A. (1986). The moderator- mediator variable distinction in social psychological research: Conceptual, strategic & statistical consideration. *Journal of Personality and Social Psychology, 51* (6), 1173-1182. doi: 10.1037/0022-3514.51.6.1173
- Bentler, P. M. (1990). Comparative fit indexes in structural models. *Psychological Bulletin, 107* (2), 238-246. doi:10.1037/0033-2909.107.2.238
- Bollen, K. A. (1989). A new incremental fit index for general structural models. *Sociological Methods, 17*(3), 303-316. doi: 10.1177/0049124189017003004
- Boyatzis, R. (1982). *The competent manager*. New York: Wiley: Interscience Publications.
- Boyatzis, R. E. (2008). Competencies in the 21st century. *Journal of Management Development, 27* (1), 5-12. doi: 10.1108/02621710810840730
- Boyatzis, R. E., Cowen, S. S., & Kolb, D. A. (1995). *Innovation in professional education: Steps on a journey from teaching to learning*. San Francisco: Jossey-Bass.
- Burling, J., & Beattie, R. (1983). Self-efficacy beliefs and sales performance. *Journal of Organizational Behaviour Management, 5* (1), 41-51. doi: 10.1300/J075v05n01\_05
- Campbell, A., & Sommers Luchs, K. S. (1997). *Core competency based strategy*. London: Thomson.
- Camuffo, A., & Gelli, F. (2005). *The competent production supervisor*. MIT IPC- Working Paper Series, 1-33.
- Cardona, P., & Chinchilla, M. N. (1999). Evaluating and developing management competencies. *Technical note of the Research Department at IESE* (pp. 3-8). Madrid: International Graduate School of Management, University of Navarra.
- Carmines, E. G., & McIver, J. P. (1981). Analysing models with unobserved variables. In G. W. Bohrnstedt, & E. F. Borgotta (Ed.), *Social measurement: Current issues* (p. 80). Beverly Hills: Sage.
- Catano, V. M., Cronshaw, S. F., Wiesner, W. H., Hackett, R. D., & Methot, L. L. (2001). *Recruitment and selection in Canada*. Scarborough: Nelson.
- Chen, G., Gully, M. S., & Eden, D. (2001). Validation of new general self- efficacy scale. *Organizational Research Methods, 62* (4), 62-85. doi: 10.1177/109442810141004

- Cherian, J., & Jacob, J. (2013). Impact of self-efficacy on motivation and performance of employees. *International Journal of Business and Management*, 8 (4), 80-88. doi:10.5539/ijbm.v8n14p80
- CII. (2016, January 29). *Building business leadership*. Retrieved from Confederation of Indian Industries. Retrieved from <http://www.cii.in/Sectors.aspx?enc=prvePUj2bdMtgTmvPwvisYH+5EnGjyGXO9hLECvTuNsfVm32+poFSr33jmZ/rN+5>
- Cizel, B., Anafarta, N., & Sarvan, F. (2007). An analysis of managerial competency needs in the tourism sector in Turkey. *Tourism Review*, 62 (2), 14-22. doi:10.1108/16605370780000310
- Conant, J. S., Mokwa, M. P., & Vardarajan, R. P. (1990). Strategic types, distinctive marketing competencies and organizational performance: A multiple measure based study. *Strategic Management Journal*, 11 (5), 365-383. doi:10.1002/smj.4250110504
- Costello, A. B., & Osborne, J. W. (2005). Best practices in exploratory factor analysis: Four recommendations for getting the most from your analysis. *Practical Assessment Research and Evaluation*, 10 (7), 1-9. doi:10.1.1.110.9154
- Coyle-Shapiro, Jacqueline, A. M., & Shore, L. M. (2007). The employee organization relationship: where do we go from here? *Human Resource Management Review*, 17 (2), 166-179. doi:10.1016/j.hrmr.2007.03.008
- CSO. (2015). *GDP growth India 2014-15*. New-Delhi: Central Statistics Office-India.
- Dhar, J. S. (1978). The effective supervisor. *Indian Journal of Marketing*, 8 (1), 15-17.
- Fabrigar, L. R., Wegner, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods*, 4 (3), 272-299. doi:10.1037/1082-989X.4.3.272
- Foss, N. J., & Knudsen, C. (1996). *Towards a competency theory of the firm*. London: Routledge.
- GDP for FY15 revised downward to 7.2%. (2016, January 29). *The Economic Times*. Retrieved from <http://economictimes.indiatimes.com/news/economy/gdp-for-fy15-revised-downward-to-7-2-percent/articleshow/50773508.cms>
- Goleman, D. (1998). Emotional intelligence: Issues in paradigm building. In D. Goleman, & C. Cherniss (Ed.), *The emotionally intelligent workplace: How to select for, measure, and improve emotional intelligence in individuals, groups, and organizations* (pp. 1-13). San Francisco: CA: Jossey-Bass.
- Golhar, D. Y., Deshpande, S. P., & Ahire, S. L. (1997). Supervisors' role in TQM and non-TQM firms. *International Journal of Quality & Reliability Management*, 14(6), 555-568. doi:10.1108/02656719710186173
- Grandbois, Y. D. (2009). Managerial competencies for information professionals: An international perspective. *Library Review*, 62 (4/5), 335-343. doi:10.1108/LR-06-2012-0023
- Harter, S. (1978). Effectance motivation reconsidered: Towards a developmental model. *Human Development*, 21(1), 34-64. doi:10.1159/000271574
- Hornby, D., & Thomas, R. (1989). Towards a better standard of management. *Personnel Management*, 21(1), 52-55.
- Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. Hoyle (Ed.), *Structural equation modelling: Issues concepts and applications* (pp. 76-99). Newbury Park: Sage.

- IBEF. (2015, December 17). *Manufacturing sector in India*. Indian Brand Equity Foundation. Retrieved from <http://www.ibef.org/industry/manufacturing-sector-india.aspx>
- Jena, S., Sahoo, C. K., & Tripathy, S. K. (2015). Impact of social intellectual and personal competencies on managerial performance: An empirical investigation. *International Journal of Indian Culture and Business Management*, 11(2), 15. doi:10.1504/IJICBM.2015.071306
- Judeh, M. (2012). Selected personality traits and intent to leave: A field study in insurance corporations. *International Business Research*, 5(5), 10-22. doi:10.5539/ibr.v5n5p88
- Kaiser, H. F. (1960). The application of electronic computers to factor analysis. *Educational and Psychological Measurement*, 20(1), 141-151. doi:10.1177/001316446002000116
- Kak, N., Burkhalter, B., & Cooper, M.-A. (2001). Measuring competence of healthcare providers. *Quality Assurance*, 2(1), 1-28. doi:10.1.1.123.9914
- Kane, T. D., Marks, M. A., Zaccaro, S. J., & Blair, V. (1996). Self-efficacy, personal goals and wrestlers' self-regulation. *Journal of Sport and Exercise Psychology*, 18(1), 36-48. Retrieved from <http://psycnet.apa.org/psycinfo/1996-93766-003>
- Khandwalla, P. N. (2004). Competencies for senior manager roles. *Vikalpa*, 29(4), 11-24. doi:10.1177/0256090920040402
- KPMG. (2014). *KPMG analysis-India*. New Delhi: KPMG.
- Labbaaf, H., Analoui, F., & Cusworth, J. W. (1996). Senior managers' effectiveness: The case of steel industry in Iran. *Journal of Management Development*, 15(9), 47-63. doi:10.1108/02621719610146257
- Laguna, M., Wiechetek, M., & Talik, W. (2012). The competencies of managers and their business success. *Central European Business Review*, 1(3), 7-12. doi:10.18267/j.cebr.25
- Lai, M.-C., & Chen, Y.-C. (2012). Self-efficacy, effort, job performance, job satisfaction and turnover intention. *International Journal of Innovation, Management and Technology*, 3(4), 387-391. doi:10.7763/IJIMT.2012.V3.260
- Lakshminarayanan, S., Pai, Y. P., & Ramaprasad, B. S. (2016). Competency need assessment: A gap analytic approach. *Industrial and Commercial Training*, 48(8). doi:10.1108/ICT-04-2016-0025
- Lee, G., & Beard, D. (1993). *Development centers: Realizing the potential of your employees through assessment and development*. London: Tata McGraw Hill Training Series.
- Levenson, A. R., Van Der Stede, W. A., & Cohen, S. G. (2006). Measuring the relationship between managerial competencies and performance. *Journal of Management*, 32(3), 360-380. doi:10.1177/0149206305280789
- Liu, J., Siu, O., & Shi, K. (2010). Transformational leadership and employee well-being: The mediating role of trust in the leader and self-efficacy. *Applied Psychology*, 59(3), 454-479. doi:10.1111/j.1464-0597.2009.00407.x
- Luthans, F., & Peterson, S. J. (2002). Employee engagement and manager self-efficacy. *Journal of Management and Development*, 21(5), 376-387. doi:10.1108/02621710210426864
- MacCallum, R. C., Brown, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariance structure modelling. *Psychological Methods*, 1(2), 130-149. Retrieved from <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1996-04469-002>

- Martin, G., & Staines, H. (1994). Managerial competencies in small firms. *Journal of Management Development*, 13(7), 23-34. doi:10.1108/02621719410063396
- McClelland, D. C. (1973). Testing for competence rather than "intelligence". *American Psychologist*, 28(1), 1-4. doi:10.1037/h0034092
- Miles, J., & Shevlin, M. (2007). A time and a place for incremental fit indices. *Personality and Individual Differences*, 42(5), 869-874. doi:10.1016/j.paid.2006.09.022
- Mohd-Shamsudin, F., & Chutipattana, N. (2012). Determinants of managerial competencies for primary care managers in Southern Thailand. *Journal of Health Organization and Management*, 26(2), 258-280. doi:10.1108/14777261211230808
- Nunnally, J., & Bernstein, L. (1994). *Psychometric theory*. New York: McGraw-Hill.
- Oakland, J. S. (1989). *Total quality management*. UK: Heinemann Professional.
- O'Reilly, C., & Chatman, J. (1986). Organizational commitment and psychological attachment. *Journal of Applied Psychology*, 71(3), 492-499. doi: 10.1037/0021-9010.71.3.492
- Park, M. S., Jeoung, Y., Lee, K. H., & Sok, S. R. (2015). Relationship among communication competence, self-efficacy and job satisfaction in Korean nurses working in emergency medical centre setting. *The Journal of Nursing Research*, 23(2), 101-108. doi:10.1097/JNR.0000000000000059
- Raghavendra, A. N., & Nijaguna, G. (2014). Expatriate failure in the Indian information technology industry. *Prabandhan: Indian Journal of Management*, 7(3), 5-14. doi:10.17010/pijom/2014/v7i3/59268
- Rajadhyaksha, U. (2005). Managerial competence: Do technical capabilities matter? *VIKALPA*, 30(2), 47-56. doi: 10.1177/0256090920050204
- Rathnam, V. B., Suresh, A., & Satish, K. (2008). Competency models and approaches in management. *Prabandhan: Indian Journal of Management*, 1(2), 32-39. doi:10.17010/pijom/2008/v1i2/64669
- Rodgers, W. M., Markland, D., Selzer, A. M., Murray, T. C., & Wilson, P. M. (2014). Distinguishing perceived competence & self-efficacy: An example from exercise. *Research Quarterly for Exercise and Sports*, 85(4), 527-539. doi:10.1080/02701367.2014.961050
- Steiger, J. H. (2007). Understanding the limitations of global fit assessment in structural equation modelling. *Personality and Individual Differences*, 42(5), 893-898. doi:10.1016/j.paid.2006.09.017
- Tierney, P., & Farmer, S. M. (2002). Creative self-efficacy: Its potential antecedents and relationship to creative performance. *The Academy of Management Journal*, 45(6) 1137-1148. doi:10.2307/3069429
- Tucker, L. R., & Lewis, C. (1973). A reliability coefficient for maximum likelihood factor analysis. *Psychometrika*, 38(1), 1-10. doi:10.1007/BF02291170
- Tyler, S., Bourbon, E., Cox, S., Day, N., Fineran, C., Rexford, D., . . . Smith, P. W. (2012). Clinical competency, self-Efficacy and job satisfaction: perceptions of the staff nurse. *Journal for Nurses in Staff Development*, 28(1), 32-45. doi:10.1097/NND.0b013e318240a703
- Waldman, D. A. (1994). Designing performance management systems for total quality implementation. *Journal of Organizational Change Management*, 7(2), 31-44. doi:10.1108/09534819410056113

- Wickramasinghe, V., & Zoyza, N. D. (2009). A comparative analysis of managerial competency needs across areas of functional specialization. *Journal of Management Development*, 28 (4), 344-360. doi:10.1108/02621710910947371
- Wood, R., & Bandura, A. (1989). Social cognitive theory of organizational management. *Academy of Management Review*, 14(3), 361-384. doi:10.5465/AMR.1989.4279067
- Wright, P. M., & Kehoe, R. R. (2008). Human resource practices and organizational commitment: a deeper examination. *Asia Pacific Journal of Human Resource Management*, 46 (1), 6-20. doi:10.1177/1038411107086540
- Xuejun, J., & Wang, Q. W. (2009). Managerial competencies for middle managers: Some empirical findings from China. *Journal of European Industrial Training*, 33(1), 69-81. doi:10.1108/03090590910924388