

Management Skill and Organizational Performance: Mediating Role of Self-Management in Nigeria

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#### **Abstract**

Drawing on the social exchange theory, this study aims to analyze the influence of management skill on organizational performance. Specifically, this study sought to investigate mediating role of self-management between management skill, and organizational performance by utilizing structural equation modeling (SEM) technique. Four propositions which explained the relationships among the variables in the study were postulated. In the context of the study, the introduced model was tested by a questionnaire instrument with 18 items, excluding the demographic variables in Nigeria. A total of 317 completed copies of questionnaires were evaluated for analysis. The findings of the study indicated positive correlations among the variables with high factor loadings. The results of this study also revealed that self-management mediated the relationship between management skill and organizational performance.

**Keywords:** Management Skill, Self-Management, Organizational Performance, Structural Equation Modeling, and Nigeria

#### **INTRODUCTION**

Performance evaluation and determining its antecedents and consequences is an important gap in research to fill. Nevertheless, there have been various researches on the determinants of organizational performance and its relationship with management skill and self-management. However, there is no consensus on the main determinants of the performance in organizations.

The quality of employees has an important influence on performance. This study applies Structural Equation Modeling (SEM) to determine the scope which management skill and self-management influence and the perceived organizational performance among employees of different sectors in Nigeria. Also, it was aimed in this study to investigate the relationships between management skill, self-management and organizational performance. Finally, it was aimed to discover mediating role of self-management between management skill and performance.

The findings of this research will help the managers, supervisors and administrators of both public and private sectors such as communication, petroleum, construction, real estate, service, automotive,

finance, agriculture, technology, and postal services to receive more information or guidelines about how to train and treat the employees.

This study is intended to promote a better theoretical understanding and recognition of the complexities associated with overall job performance. The present study sought to answer the following question: What is the mediating role of self-management between management skill and organizational performance?

## **LITERATURE REVIEW**

In this section, management skill, organizational performance, mediating role of self-management and the relationships between these three concepts are examined separately.

### ***Management Skill***

The necessity for high-quality managers, "people who can manage themselves and others in a high stress environment, is increasing" (Popovici, 2012). It is emphasized by Henry Fayol that educating managers is "chiefly a matter of putting young people in the way of understanding and using the lessons of experience" (McEvoy, Cragun, 2010).

Leaders may bring us vision, inspiration and challenge, yet these things count for nothing without the efficient implementation brought about by good management. A manager must have an extensive set of skills - from planning and delegation to communication and motivation. Each firm is endowed with a level of management skill which can lead to higher productivity (Brynjolfsson, Hitt, 1995). Accomplishing organizational goals is vital for a manager, which is possible by: organizing, forecasting, coordinating, training and monitoring-evaluation (Popovici, 2012).

Productive and effective management skills are not innate qualities; management skills can be cultivated, developed and learned. When employees choose to leave a position, it is often because of their manager or relationships with people in their working environment. Popovich (2012) suggests that managers should also have skills in conflict resolutions, compromising between the two trends, considered comments, survival strategies, and leadership.

### ***Self-Management***

Self-management can be defined as a self-influence process through which individuals achieve the self-direction and self-motivation (Mahembe, et al., 2013). Likewise, self-management designates guidance, managing and controlling self-behaviors and self-social development (Parastoo, Asghari, Poor, Zadeh, 2011). According to Manz (1980), effective self-management appears to offer potential benefits to individual employees and organizations.

However, "different scales were designed to capture the scope of both self-management and self-leadership. Self-leadership consists of behavioral and cognitive strategies that positively influence personal effectiveness for changing or eliminating ineffective and inefficient behaviors" (Mahembe et al., 2013).

To achieve behavioral changes, the focused action by enabled self-goal setting is required (Mahembe, et al., 2013). In addition to excellent skills and competence, self-management can build a role and procedures for completion of tasks (Jiang & Chen, 2011). Thus, self-management, which has a substantial power on behavior, is examined in this study

### **Organizational Performance**

Organizational performance has been an important output and the subject matter of all organizational activities (Ahmed, et al., 2013). Wang (2009) defined performance as products, accomplishments, results, impacts or achievements. Nevertheless, performance was defined by Williams and Anderson (1991) as employees' accomplishment level in their responsibilities and duties assigned in the work. According to Campbell's (1990) definition, performance is attitudes or behaviors of employees related to the organization's objectives and success. Bakiev (2007) defined performance as productivity which is the output achieved by organizations for a certain amount of investments or input. One of the fundamental opinions of organizational performance cited in all these descriptions was positive behaviors of employees.

Organizational performance refers to the extent to which an organization performs well in pursuing its mission or produces outputs towards its mission (Kim, 2005). The literature proposes different approaches to understanding and evaluating organizational performance.

Popovich (1998) stated that in high-performance organizations, assignments and outcomes are clearly defined and employees are empowered, motivated, and inspired to achieve. Flexibility, communicating with stakeholders, and restructuring work process are important characteristics of organizations that are able to adapt to new conditions and respond to customers, two features necessary for high performance (Sahin, 2010). While some scholars evaluate organizational performance generally (Berman, & West, 1998), others emphasize the importance of performance measurement and monitoring (Hatry, 1999; Hatry, & Wholey, 1999; Kopczynski, & Lombardo, 1999).

The main problem of organizational performance is goal ambiguity and measurement deficiencies (March, & Sutton, 1997; Chun, & Rainey, 2005). Performance measurement can help businesses and organizations establish organizational efficiency. Nonetheless, due to the objective dissimilarities of organizations, firms and corporations, there is no consensus on the performance measurement indicators. However, academics utilize recovery rate, mortality rate, arrest rate, rewards system, cost-benefit analysis and cost-effectiveness analysis to assess organizational performance (Grabosky, 1989; March & Sutton, 1997; Wang, 2009; Robbins & Judge, 2012). For instance, Grabosky (1989) stated that cost-benefit analysis determines if any activity has a creditable use of resources where the monetary costs are compared with its monetary outcomes. Accordingly, based on the statement above, the main deficiency of organizational performance is not only monetary factors, but also its openness to manipulations and dependence of performance measurement to organizational political environment (Ahmed et al., 2013).

### **Theoretical Framework**

The Social Exchange Theory was used as the theoretical framework for this study. Main assumption of this theory is that individuals feel obliged to respond in the same way when others treat them well or reward them. This concept is also contained in the "norm of reciprocity." When an organization treats employees well, the employees reciprocate in the same way (Tongur, 2011). Good treatment of an organization could be illustrated as; rewarding employees, being respectful of their thoughts and values, and being in compassionate manner (Brown & Leigh, 1996; Netemeyer, et al., 1997).

Employees' response in the same way means that individuals who are working in the organization value the good treatment from organization and they respond to this by developing good behaviors, starting to serve and perform better in the organization (Tongur, 2011). This circular system is called social exchange in the organizations. This circulation was proved by empirical studies.

The crux of the matter is that the mediatory role of the three concepts management skill, self-management, and organizational performance cannot be over-emphasized in Nigeria.

### Study Hypothesis

To understand the mediating role of self-management between management skill and self-management, the following research hypotheses were formulated to be tested based on the theoretical framework of the study and the findings of the literature review;

H<sub>1</sub>: Management skill positively correlates with organizational performance.

H<sub>2</sub>: Self-management positively correlates with organizational performance.

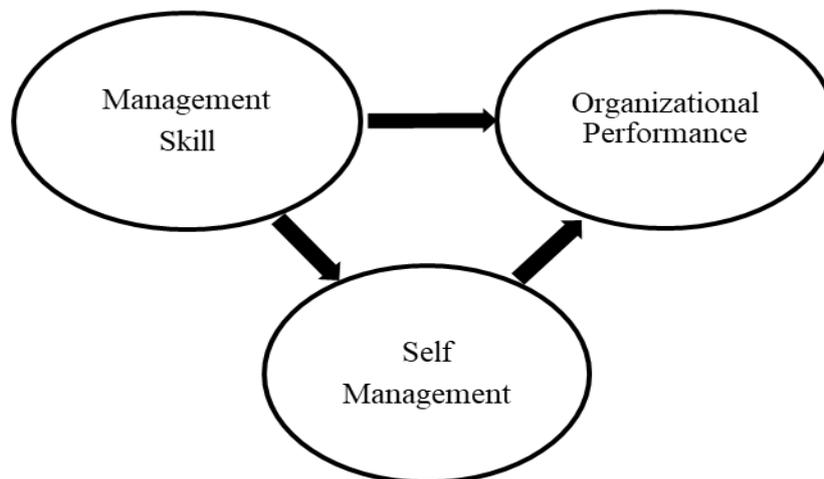
H<sub>3</sub>: Management skill positively correlates with self-management.

H<sub>4</sub>: Self-management mediates the relationship between management skill and organizational performance.

### Theoretical Model

This study has three latent variables, one exogenous variable, one endogenous variable, and one mediating variable. The conceptual model of this study is presented in

Figure 1: Hypothesized Model



### METHODOLOGY

**Study Design and Sample:** The research was conducted on various sectors (communication, petroleum, construction, automotive, banking, technology etc.) in Nigeria. Approximately 400 questionnaires were delivered randomly according to the number of employees in the organizations. Some of the organizations allowed random distribution of the forms to their employees while others requested that the forms should be left at the information desk. Subsequently, the banks took responsibility of distributing the surveys to the employees randomly. A few days after delivery, all the participants were re-visited so that the forms could be collected. A total of 334 survey forms were collected and 17 survey forms were excluded from the analysis due to missing data. Thus, exactly 317 (94%) complete forms were evaluated for further analysis.

**The survey instruments:** The survey instrument consisted of questions derived from the literature. 6 questions were postulated on management skill scale and followed by 4 questions on the self-management scale and finally, 8 questions on organizational performance scale. Also, the survey instrument consisted of a demographic information section.

a) *Demographic Information:* Information about the demographic characteristics of the participants covering their, gender, sector, and occupational rank was collected.

*b) Management Skill Scale:* The scale, developed by Burke and Collins (2001), has been used in numerous studies. It confirms validity and reliability of the scale. Management skill was measured using 6 questions. A five-point Likert scale was used for each of the 15 questions, scoring from 1 to 5 where number (1) means strongly disagree, (2) disagree, (3) neutral, (4) agree, and (5) strongly agree. The five-point Likert scale was again used for all these questions. The Cronbach's alpha score for management skill was 0.88. Skewness and Kurtosis scores were between -1 and +1, which indicated that the distribution was normal. The Cronbach Alpha coefficient of the scale was found 0,89.

*c) Self-Management Scale:* The scale was developed by Castaneda, Kolenko, and Aldag (1999) and was measured using 4 questions. A five-point Likert scale was used for each of the 4 questions, scoring from 1 to 5 where number (1) means strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree. The five-point Likert scale was again used for all these questions. The Cronbach's alpha score was 0.77. Skewness and Kurtosis scores were between -1 and +1, which indicated that the observed distribution was normal. The Cronbach Alpha coefficient of the scale was found 0,77.

*d) Organizational Performance Scale:* The scale was developed by Bakiev (2007) from Nyhan (2000) and Sahin (2010). A five-point Likert scale was used for each of the 6 questions, scoring from 1 to 5 where number (1) means strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree. The five-point Likert scale was used for all these questions. The Cronbach's alpha score was 0.87. Skewness and Kurtosis scores were between -1 and +1, which indicated the existence of a normal distribution. The Cronbach Alpha coefficient of the scale was found 0,87.

### **Analysis of the Data**

In the analysis of the data, Statistical Software for Social Science (SPSS) 18.0 was used. The Structural Equation Modeling (SEM), with AMOS 18.0 software, was used to analyze the data. SEM is a method that has the ability to analyze many variables at the same time (Wan, 2002) and take measurement errors into account (Byrne, 2001). Unlike other statistical analyses, using SEM in data analysis has the strength to extract measurement error from estimates of observed variables, which provides more accuracy in estimating the strength and degree of relationship (Byrne, 2001). Kula (2011) emphasizes the advantages of SEM arguing that the technique allows the researcher to estimate a measurement model simultaneously, specifying relations between measured variables and underlying latent variables. SEM consists of measurement models of exogenous variable and endogenous variable, and control variables to investigate the structural relationship between the variables. The literature suggests that various goodness-of-fit indices can be used for Structural Equation Modeling (Byrne, 2010, Kline, 2011). The following indices are the most commonly used goodness-of-fit statistics in the related literature:  $\chi^2$ -p- $\chi^2$ /df, RMSEA-PCLOSE, TLI-CFI values and HOLTERR Index value (Uryan, 2010: 70-73; Kula, 2011: 65-74). The significance level for acceptance was set as  $p < 0.05$ .

### **FINDINGS**

#### ***Demographic variables***

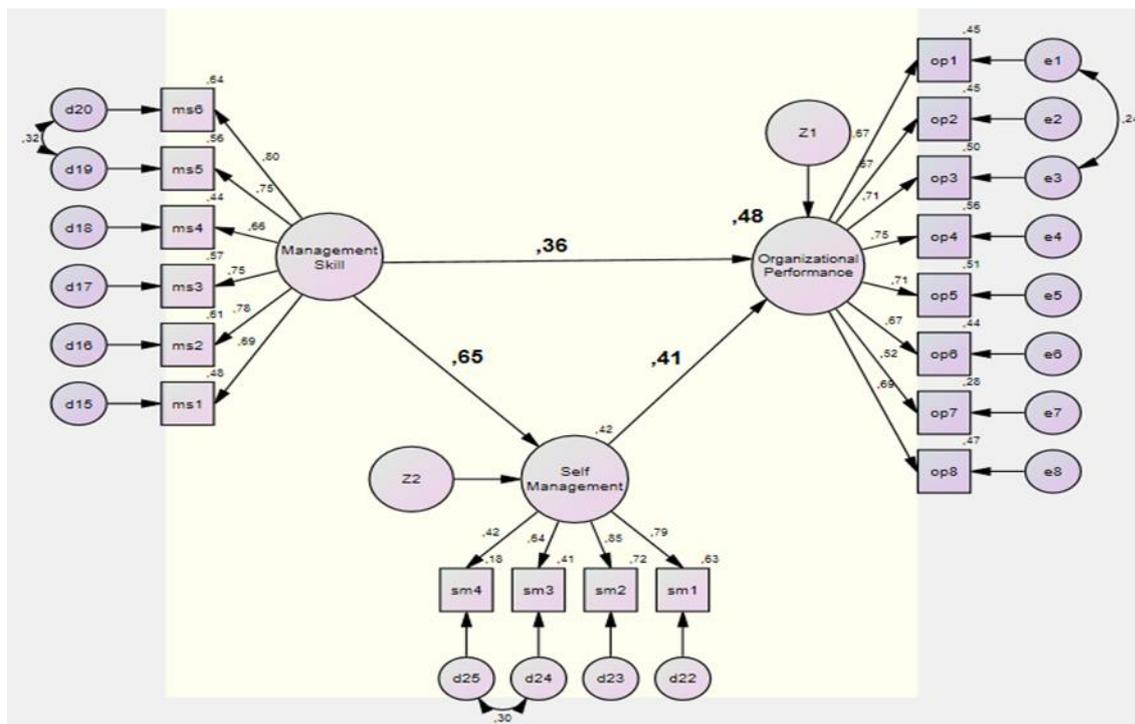
This study has three demographic variables: gender, sector, and occupational rank. The distribution of the respondents related to the demographic variables is presented in Table 1. A total of 317 employees participated in the survey.

**Table 1:** Demographic variables

Variable	Frequency	Percentage (%)
<b>Gender</b>		
Female	87	27.4
Male	230	72.6
<b>Sector</b>		
Communication	43	13.6
Petroleum	33	10.4
Construction	45	14.2
Real Estate	43	13.6
Service	40	12.6
Automotive	14	4.4
Finance	54	17.0
Agriculture	11	3.5
Technology	19	6.0
Postal	15	4.7
<b>Occupational Rank</b>		
General Manager	16	5.0
Director	55	17.4
Middle Level Manager	133	42.0
Expert	39	12.3
Other	74	23.3
N=	217	

As displayed in table 1, it is not surprising that the majority of the participants were male (230; 72.6 %) while female respondents constitute 27.4 % (87). For the distribution of the respondents in terms of sector, 54 respondents were from communication sector (17%), the next largest group, 45, was from construction sector (14.2%), and it was followed by communication and real estate sectors with 43 and 43 respondents. The distribution percentages of these two sectors were 13.6% and 13.6% respectively. Of the total 317 respondents, 40 (12.6%) of them were in service sector while 33 (10.4%) respondents were in petroleum sector. In addition, 19 respondents were in technology sector, 15 of them were in postal service, 14 respondents were in automotive, and 11 of them were in agriculture sectors. The distribution percentages of these sectors were 6.0%, 4.7%, 4.5%, and 4.4% respectively. According to the distribution of the respondents in terms of occupational rank, 16 of the total 317 respondents (5%) were general managers. Directors constituted 17.4% of the respondents. A great majority of the respondents were middle level managers (133; 42.0%). Finally, 39 respondents listed their rank as expert, which is 12.3 % of all the respondents while 74 of the respondents were others (23.3%).

To analyze the relationship between the variables of the study, SEM model was developed as shown in Figure **Hata! Başvuru kaynağı bulunamadı.**2. In the revised SEM model, all of the indicators revealed significant relationship with the connected latent variables ( $p < 0,001$ ).



CMINN/DF:2.48, TLI:0.92 CFI:0.93, RMSA: .068, HOLTER:168

**Figure 2:** The Relationship between Management Skill, Self-Management, and Organizational Performance with Structural Equations Modeling (SEM)

A positive significant relationship was observed between management skill and performance ( $p < 0.001$ ). Likewise, the relationship between management skill and self-management was positive and significant ( $p < 0.001$ ). In this model, it can be observed that self-management mediates between transformational leadership and performance.

The revised structural equation model reveals that all indicators have a significant association with latent variables ( $p < 0.001$ ). It was found that management skill positively correlated with organizational performance ( $p < 0.001$ ). Moreover, self-management positively correlated with organizational performance ( $p < 0.001$ ). In addition, management skill positively correlated with self-management ( $p < 0.001$ ). Finally, self-management mediated the relationship between management skill and organizational performance ( $p < 0.001$ ). As a result, research hypotheses  $H_1$ ,  $H_2$ ,  $H_3$  and  $H_4$  were supported.

According to these results, management skill, self-management, and organizational performance have been found significantly associated ( $P < 0.001$ ).

In this context, the relationship weight of management skill and organizational performance (standardized regression weight) was 0.36, the relationship weight of management skill and self-management was 0.65, and, the relationship weight of self-management and organizational performance was found 0.41.

Initially, the coefficient/weight of the relationship between management skill and performance was determined as 0.61. Subsequently, self-management was added to the model as a mediator. Then, the weight of the relationship was decreased to 0.36.

Consequently, management skill and self-management variables explained 48% of the change (variance) on organizational performance.

## **DISCUSSION**

The purpose of this study was to examine the mediating role of self-management between management skill, and organizational performance with Structural Equation Modeling in Nigeria.

This study reveals several attractive findings that merit further discussions.

The findings are also in line with previous findings in organizational performance studies (Sahin, 2010; Bakiev, 2007; Kula, 2011). The results of this study provide support for the concept that management skill and self-management has impacts upon organizational performance.

The SEM results of this study indicated that the first hypothesis ( $H_1$ ) had a significant relationship with a positive regression coefficient of .29. This finding illustrates that it is very important to display strong management skills by eliminating the problems caused by lack of coordination, establishing robust, reliable, and effective decision-making mechanism, strong leadership, managing and resolving conflict in a positive way, and clear, effective, and achievable planning. These factors significantly affect employee performance that managers need to be aware of and should work to improve all the time. In Nigerian context, among the employees of almost all sectors, it is observed that people complained about the poor management skills and styles. When a better management skill was revealed, the performance level of the employees increased dramatically.

The results of the SEM analysis confirmed the second hypothesis ( $H_2$ ) and the presence of a positive and statistically significant relationship with a regression coefficient of .44. This finding indicates that self-management indicators such as having the desire and the skill to learn, capability to use time successfully, having relevant personality traits with profession, and problem-solving skills have a significant positive impact on all the aspects of organizational performance. If management wants to increase performance perception, it should maintain to enhance the individual abilities and capabilities of employees.

The results of the SEM analysis supported the third hypothesis ( $H_3$ ) and suggested that there is a positive and statistically significant correlation between management skill and self-management. A strong positive correlation was found between management skill and self-management variables. Based on these findings, management supports self-improvement, learning skill and relevant personality traits with the profession.

Self-management was a mediating variable of this study. The CFA results of the measurement model of self-management confirmed that self-management had a positive significant correlation with organizational performance variable. Self-management variable mediates the relationship between management skill and organizational performance variables. It was also found that self-management explained 45% percent of variation on organizational performance variable, which supports hypothesis four ( $H_4$ ). This result implies that managing individual effectiveness within the wider complexities of a management role requires a holistic approach that will highlight the crucial links between individual effectiveness and the achievement of an organizational objective.

The results of this study indicated that the dimensions of management skill and self-management have positive and significant relationships with the organizational performance.

This study may substantially contribute to organizational performance both in terms of practice and theory, and it can be a source for important implications. In contrast, this study demonstrates that social capital may significantly contribute to organizational performance. Similarly, the findings of the study confirmed the hypothesized relationships of the trio (management skill, self-management and organizational performance). Another important finding of this study revealed that the effects of management skill on organizational performance are mediated by self-management. The indicators

of the performance latent variables reflected various aspects of organizational performance such as productivity, efficiency, quality of service, fairness, goal attainment, and customer satisfaction.

## CONCLUSION

Based on the conclusions of this study, several implications can be articulated. Management might be able to improve organizational performance by improving skills of the management. Another important implication indicated that top management can influence performance by ensuring that a firm has a professional climate and a sound company policy that will ensure all employees' self-management skill through guidance.

The study recommends several points for future researches. These recommendations are retrieved from the analyses of the results of this study. Management skill and self-management may not be fully explained with the dimensions used in this study. Consequently, deeply examining the dimensions of management skill, self-management and organizational performance from a comparative perspective will be an important contribution and a potential topic for future researches. Finally, it is also recommended that more researches on management skill, self-management and organizational performance should be conducted in Nigeria.

Moreover, management skill, self-management and organizational performance subjects have not been assessed empirically in Nigeria. From an academic point of view, this study provides comprehension to the relationship between the trio, which ought to contribute to the future development of this line of research, particularly in developing countries like Nigeria.

## REFERENCES

- Ahmed, A., Yasar, M.F., and Emhan, A. (2013). Analysis of relationships between organizational learning capacity and organizational performance: A case study of banking sector in Nigeria, *Academic Journal of Interdisciplinary Studies*, 2 (6), 191-198.
- Bakiev, E. (2007). Determinants of Interpersonal Trust, Organizational Commitment for Performance within Kyrgyz National Police, University of Central Florida, Orlando (unpublished dissertation).
- Berman, E. M., & West, J. P. (1998). Productivity enhancement efforts in public and nonprofit organizations. *Public Productivity & Management Review*, 22(2), 207-219.
- Brown, S. P., & Leigh, T. W. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81(4), 358-368.
- Brynjolfsson, E., Hitt, L. (1995) Information technology as a factor of production: The role of differences among firms, *Economics of Innovation and New Technology*, 3 (3-4), 183-200
- Burke, S., & Collins, K. M. (2001). Gender differences in leadership styles and management skills. *Women in Management Review*, 16(5), 244-257. doi:10.1108/09649420110395728
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Ed. 2, Routledge: Taylor & Francis Group, New York, NY
- Byrne, B.M., (2001). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Mahwah, N.J.: Lawrence Erlbaum Associates.
- Campbell, J. P. (1990). An Overview of the Army Selection and Classification Project (Project A). *Personnel Psychology*, 43(2), 231-239.
- Castaneda, M., Kolenko, T. A., & Aldag, R. J. (1999). Self-management perceptions and practices: A structural equations analysis. *Journal of Organizational Behavior J. Organiz. Behav.*, 20(1), 101-120. doi:10.1002/(sici)1099-1379(199901)20:13.0.co;2-z

- Chun, Y. H. & Rainey, H. G. (2005). Goal ambiguity and organizational performance in US federal agencies. *Journal of Public Administration Research and Theory*, 15(4), pp. 529-557.
- Grabosky, P. N., (1989). Efficiency and effectiveness in Australian policing. *Australian Institute of Criminology*, 16, 1-7.
- Hatry, H. (1999). Mini symposium on intergovernmental comparative performance data. *Public Administration Review*, 59(2), 101-134.
- Hatry, H. P., & Wholey, J. S. (1999). *Performance measurement: Getting results*. Washington, D.C.: Urban Institute Press.
- Holmes, A. (2013). Effective Management Skill. *Leadership Development*. Retrieved January 7, 2014, from <http://www.profilesinternational.com/solutions/leadership-development/effective-management-skills.php>
- How Good Are Your Management Skills?. (n.d.). *Team Management*. Retrieved January 7, 2014, from [http://www.mindtools.com/pages/article/newTMM\\_28.htm#sthash.JsXK2oWH.dpuf](http://www.mindtools.com/pages/article/newTMM_28.htm#sthash.JsXK2oWH.dpuf)
- Kim, S., (2005). Individual-level factors and organizational performance in government organizations. *Journal of Public Administration Research and Theory*, 15 (2 ), 245-262.
- Kline, R. B. (2011). *Principles and Practice of Structural Equation Modeling*, Ed. 3. New York, NY: The Guilford Press.
- Kopczynski, M., & Lombardo, M. (1999). Comparative performance measurement: Insights and lessons learned from a consortium effort. *Public Administration Review*, 59(2), 124-134.
- Kula, S. (2011), Occupational Stress and Work-Related Wellbeing of Turkish National Police (TNP) Members, University of Central Florida, Orlando (unpublished dissertation).
- Jiang, L. J., & Chen, J. (2011). How Chinese Enterprises Effectively Establish Self-Management Team. *Asian Social Science*, 7(2), 136-140.
- Mahembe, B., Engelbrecht, A. S., & De Kock, F. S. (2013). A confirmatory factor analytic study of a self-leadership measure in South Africa. *Journal of Human Resource Management*, 11(1), 10.
- March, J. G. and Sutton, R. I. (1997). Crossroads-organizational performance as a dependent variable. *Organization science*, 8(6), 698-706.
- McEvoy, G.M., & Cragun, J.R. (1987). Management skill-building in an organizational behavior course. *Journal of Management Education*, 11(4), 60-73.
- Netemeyer, R. G., Boles, J. S., McKee, D. O., & McMurrian, R. (1997). An investigation into the antecedents of organizational citizenship behaviors in a personal selling context. *The Journal of Marketing*, 61(3), 85-98.
- Nyhan, R. C. (2000). Changing the Paradigm-Trust and Its Role in Public Sector Organizations. *American Review of Public Administration*, 30 (1), 87-109.
- Parastoo, A., Poor, A.H., & Zadeh, M.S. (2011). Relationship between self-management skills and organizational citizenship behavior of principals in girls' high school of Urmia. *Social and Behavioral Sciences*, 31, 852 – 855.
- Popovici, V. (2012). Similarities and Differences between Management and Leadership. *Seria Economie*, 2(2), 126-135.
- Popovich, M.G., & Brizius, J. A. (1998). *Creating high-performance government organizations: A practical guide for public managers* (1st ed.). San Francisco, CA: Jossey-Bass.

Robbins, S. P. and Judge, T.A., (2012). *Essentials of Organizational Behavior*, 11<sup>th</sup> Ed. Pearson, Harlow, UK

Sahin, I. (2010). Organizational social capital and perceived performance of drug law enforcement departments: a case study in Turkey, University of Central Florida, Orlando, FL (unpublished dissertation).

Settoon, R. P., Bennett, N., & Liden, R. C. (1996). Social exchange in organizations: Perceived organizational support, leader-member exchange, and employee reciprocity. *Journal of Applied Psychology*, 81(3), 219-227.

Schreiber, J. B., Stag F. K. E., King J., Nora A. and Barlow E. A. (2006). Reporting structural equation modeling and confirmatory factor analysis results: A review. *The Journal of Educational Research*, 99(6), 323-337.

Schumacker, R.E and Lomax, R.G. (2004). *A Beginner's Guide to Structural Equation Modeling*, Second Edition, Lawrence Erlbaum Associates, Publishers, Mahwah, New Jersey.

Tongur, A. (2011). *Organizational Support, Organizational Citizenship Behavior, and Perceived Performance in Crime Scene Investigation Units of Turkish National Police*. (1 ed.). Orlando: Unpublished Dissertation.

Uryan, Y. (2010). organizational safety culture and individual safety behavior: A case study of the Turkish National Police Aviation Department, University of Central Florida, Orlando (unpublished dissertation).

Wan, T. (2002). *Evidence-Based Health Care Management: Multivariate Modeling Approaches*. Netherlands: Springer.

Wang, X. (2010). *Performance analysis for public and nonprofit organizations*. Jones & Bartlett Learning. MA

Williams L.J. & Anderson S.E. (1991). Job Satisfaction and Organizational Commitment as Predictors of Organizational Citizenship and In-Role Behaviors, *Journal of Management*, 17(3), 601-617.

Zaim, H., Yasar, M.F., & Ünal, ÖF. (2013). Analyzing the effects of individual competencies on performance: A field study in services industries in Turkey. *JGSM Journal of Global Strategic Management*, 2(7), 67-67. doi:10.20460/jgsm.2013715668