

THE IMPACT OF PHYSICAL WORK ENVIRONMENT TOWARD EMPLOYEE PERFORMANCE AT PT. BANK NEGARA INDONESIA MANADO REGIONAL OFFICE

DAMPAK LINGKUNGAN KERJA FISIK TERHADAP KINERJA KARYAWAN DI PT. BANK NEGARA INDONESIA KANTOR WILAYAH MANADO

by:

Syutrika Vergie Rorong¹

¹*Faculty of Economics and Business
International Business Administration (IBA), Management Program
University of Sam Ratulangi Manado*

email: ikarorong@gmail.com

Abstract: *Physical work environment is one of the essential human requirements that enable people to perform their work effectively under defined conditions. It is the quality of the employee's workplace environment that has most influence on the level of employee's motivation and subsequent performance. Research sought to understand the influence of physical work environment on employees' performance. Population this research is the employees of PT. Bank Negara Indonesia Manado Regional Office with sample as many as 29 respondents. Data analysis was Simple Linear Regression Analysis and the instrument of data collection was structured questionnaires for the top level managers and lower level employees. Research concludes that there is a significant effect of Physical Work Environment on Employee Performance. To ensure productivity of employees, management needs to pay attention to the Physical Work Environment so that employees feel comfortable and happy to work in the company.*

Keywords: *physical work environment, employee performance*

Abstrak: *Lingkungan kerja fisik merupakan salah satu persyaratan penting yang memungkinkan orang untuk melakukan pekerjaan mereka secara efektif dalam kondisi yang ditentukan. Ini adalah kualitas lingkungan tempat kerja karyawan yang memiliki pengaruh terbesar pada tingkat motivasi karyawan dan kinerja selanjutnya. Penelitian bertujuan untuk mengetahui pengaruh lingkungan kerja fisik terhadap kinerja karyawan. Populasi dalam penelitian adalah karyawan PT. Bank Negara Indonesia Kantor Wilayah Manado dengan sampel sebanyak 29 responden. Analisis data menggunakan Analisis Regresi Linear Sederhana dan instrumen pengumpulan data kuesioner terstruktur untuk manajer tingkat atas sampai karyawan tingkat yang lebih rendah. Penelitian menyimpulkan bahwa terdapat pengaruh yang signifikan dari Lingkungan Kerja Fisik terhadap Kinerja Karyawan. Untuk memastikan produktivitas karyawan, manajemen perlu memperhatikan Lingkungan Kerja Fisik sehingga karyawan merasa nyaman dan senang bekerja di perusahaan.*

Kata kunci: *lingkungan kerja fisik, kinerja karyawan*

INTRODUCTION

Globalization and increased use of technology has brought tremendous change and created new demands for the business world. The strategic intention of organizations today is to achieve innovation at lightning speed and want people to work better, smarter and faster. Realizing the current challenges of business environment and to make survival possible, organizations have started paying more emphasis on managing the performance of their employees, fulfilling their comfort needs by providing them an effective workplace environment which helps them to attract and retain best talent.

In today's competitive business environment, organizations can no longer afford to waste the potential of their workforce. There are key factors in the employee's workplace environment that impact greatly on their level of motivation and performance.

It is not just coincidence that new programs addressing lifestyle changes, work/life balance, health and fitness previously not considered key benefits are now primary considerations of potential employees, and common practices among the most admired companies. In an effort to motivate workers, firms have implemented a number of practices such as performance based pay, employment security agreements, practices to help balance work and family, as well as various forms of information sharing. In addition to motivation, workers need the skills and ability to do their job effectively. And for many firms, training the worker has become a necessary input into the production process.

The work place environment in a majority of industry is unsafe and unhealthy. These includes poorly designed workstations, unsuitable furniture, lack of ventilation, inappropriate lighting, excessive noise, insufficient safety measures in fire emergencies and lack of personal protective equipment. People working in such environment are prone to occupational disease and it impacts on employee's performance. Thus productivity is decreased due to the workplace environment. It is a wide industrial area where the employees are facing a serious problem in their work place like environmental and physical factors. So it is difficult to provide facilities to increase their performance level.

The commercial banks play important roles in worldwide economies and their employees are the best sources of delivering good services to their customers. In Indonesian banking sector is growing very fast. Now performing job in banks is becoming challenging. A banking job is considered a job full of stress. A lot of mental exercise is involved while working in a bank. As banking sector is categorized among the services sector so this profession depend on their employees for generating efficiency, effectiveness, and core competencies for attracting and retaining potential customers and for rendering quality of the services to the customers. So for this reason direct and indirect factors related to job satisfaction are given great importance so that the employees are able to put their best efforts to generate best results in the organization.

As a company Bank also requires employees to run their organization. Bank require employees to perform their duties to collect public funds in the form of deposits and distribute to other communities in the form of loans in order to improve the standard of people's prosperity. Bank employees as well as employees in other kind of public service relates to the duty to carry out all work activities in accordance with their respective fields. It is also take part in maintaining the stability of the system in its implementation.

Research Objectives

The objectives in the research can be formulated as follows:

1. To explain the description of physical work environment and employees' performance.
2. To analyze the significant influence of physical work environment on employees' performance.

THEORETICAL REVIEW

Human Resource Management

HRM contributes to create high performance work systems by linking various employees in different departments in the same organization. Organizations use the effectual HRM system to increase their competitiveness by investing in employee development. Rowley (2011) stated that the initial development of the HRM concept is based on the effective utilization of people, and to treat them as resources leading to the realization of business strategies and organizational objectives. HRM is concerned with the people dimensions in management. Since every organization is made up of people, acquiring their services, developing their skills, motivating them to higher levels of performance and ensuring that they continue to maintain their commitment to the organization are essential to achieving organizational objectives.

Physical Work Environment

The physical work environment has effects on the productivity of employees. The conditions of physical work environment influence the employee's functions and it will determine the well-being of organizations. Physical Work Environment includes the internal and external office layout, temperature, comfort zone and also the office work setting or arrangement. Amir (2010) stated there are two main elements that related to the physical environment which are the office layout plan and also the office comfort. He also stated that a physical workplace is an area in an organization that is being arranged so that the goal of the company could be achieved. A physical work environment can result a person to fit or misfit to the environment of the workplace.

Employee Performance

Employee performance means the level at which your employee are performing. So that it's become the important things when someone or organization achieve their goals. Many organizations said that, our people are our most important asset, or something close to it, to acknowledge the important role that employees play in organizational success. Employee performance also influence the organization goals, when they running their job with high and professional performance, it's can help the organization to increase the level of success, and automatically have a positive effect for organization to achieve their goals.

Key Elements of the Environment

A productive office environment consists of a number of elements. Al-Anzi (2009) identifies; furniture, noise, flexibility, comfort, communication, lighting, temperature and air quality as the constituents of an office design and productivity. These elements are shown on figure:

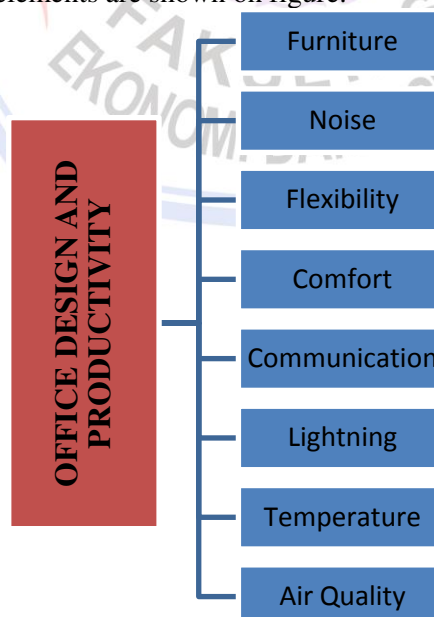


Figure 1. Office Design and Productivity

Source: Al-Anzi (2009)

Physical Work Environment and Employee Performance

There are a few factors that could affect employees' performance in term of the physical work environment. The factors are such as the lightings of the workplace. There are also some other disturbance that could affect the employees performance, the other disturbances are such as noise which will cause discomfort on the employees and thus reduce the employees' performance. In addition, the satisfaction of the employees can result to the performance of the employees. Therefore, in order to make the employees satisfied, the factor of physical workplace need to be applied to all workplace. Temessek (2009) stated that features assist on the functional and aesthetic side, the décor, and design of the workplace environment that ultimately helps improve the employees experience and necessitate better performance. Furthermore, once the employees had become stressors at the workplace, the employees have the high potential of getting their job done very slowly and it will affect the employees' performance. An employees could be affected depending on the task they are given and also the environment of the place they are working. By having a good environment, the employees could apply their energy and their full attention to perform work.

Conceptual Framework

The conceptualized framework defines the set of workplace elements that are perceived to impacts on an employee performance. Emphasizing on the relationship that exist between an employees' workplace environment and his/her level of performance on the job, Al-Anzi (2009) posits that, how well employees engage with the organization, especially with their immediate environment, influences to a great extent their error rate, level of innovation and collaboration with other employees, absenteeism and, ultimately, how long they stay in the job.

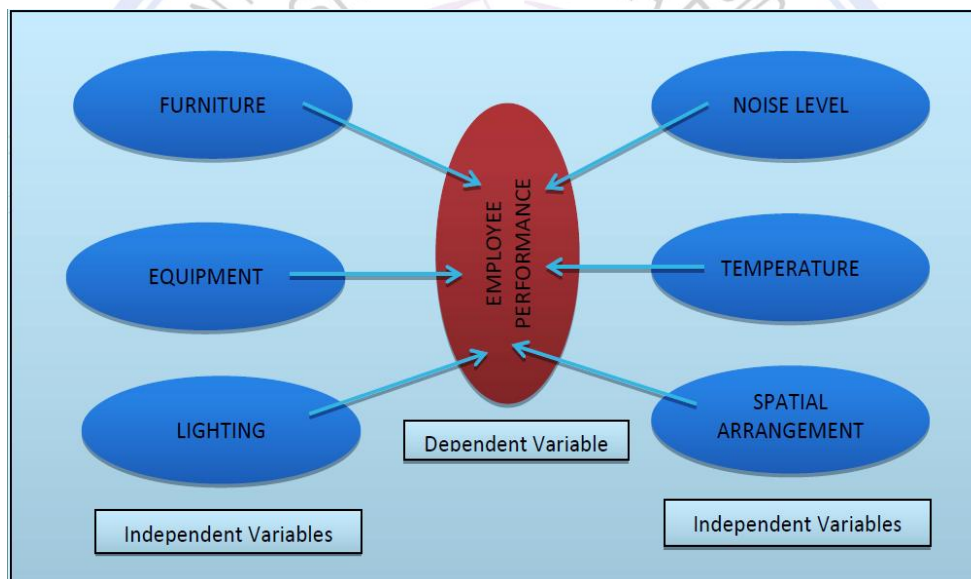


Figure 2. The Elements Affecting Employee Performance

Source: Al-Anzi (2009)

Research Hypothesis

H₁: Description of physical work environment and employee's performance.

H₂: Physical work environment has significant influence on employee's performance.

Previous Research

Naharuddin and Sadegi (2013) conducted research on factors of workplace environment that affect employees' performance: study case of Miyazu Malaysia, data was collected through the survey and the result shows that only supervisor support is not significant towards the employees' performance, meanwhile job aid and physical workplace environment are having a significant relationship towards the employees' performance. Ismail, et al (2010) conducted research on the influence of physical workplace environment on the productivity of civil servants: the case of the ministry of youth and sports Putrajaya Malaysia and the results show that physical environment (comfort level, temperature) strongly influences the employee productivity. Kithuka

(2015) conducted research on the influence of work environment on bank employees' performance: a case of commercial banks in Machakos town, findings showed that there is a positive relationship between workplace design that is suitable for employee's work and the level of employee performance; workforce diversification is a vital tool in enhancing employee satisfaction in the organization.

RESEARCH METHOD

Type of Research

This research uses causal type of research where it will investigate the influence of physical work environment on employee's performance. This research has two variables, independent variable/variable that affect and dependent variable/variable that affected. This study was conducted to determine the influence of the physical work environment as an independent variable to employee performance as dependent variable.

Place and Time of Research

This research was conducted at PT. Bank Negara Indonesia Manado Regional Office between July – August 2015.

Population and Sample

Population is the entire group of people, events, of things of interest that the researcher wishes to investigate (Sekaran & Bougie, 2010). The population that is mainly observed in this current research is the employees of PT. Bank Negara Indonesia Manado Regional Office. Sample is a segment of the population selected for marketing research to represent the population as a whole (Kotler, et al 2009). In this research, the sample is all of the regular employees of PT. Bank Negara Indonesia Manado Regional Office that are 29 respondents.

Data Collection Method

Primary data were taken from the result of questionnaires that are distributed to 29 respondents that are the regular employees of PT. Bank Negara Indonesia Manado Regional Office. The secondary data were taken from books, journals, company archives, and relevant literature from library and internet.

Operational Definition and Measurement of Research Variables

1. Physical Work Environment (X) is the environment where these human beings are fit with their job. This physical work environment might include the lightings, ventilation and also the temperature.
2. Employee performance (Y) is depending on the willingness and also the openness of the employees itself on doing their job. By having this willingness and openness of the employees in doing their job, it could increase the employees' productivity which also leads to the performance.

Data Analysis Method

Validity and Reliability Test

The use of Reliability test is to ensure the measurement tool (questionnaire) is consistent in measuring some cases, even though the observation is conducted frequently at the same object. To ensure that all questions in the questionnaire are truly reliable, the measurement of the internal consistency is made. It also can be defined as the correlation between questions items that is evaluated at the same factor. This internal consistency can be seen from *Cronbach* Alpha Parameter with ideal score above 0.6.

Correlation Analysis

Correlation is a bivariate analysis that measures the strengths of association between two variables. In statistics, the value of the correlation coefficient varies between +1 and -1. When the value of the correlation coefficient lies around ± 1 , then it is said to be a perfect degree of association between the two variables. As the correlation coefficient value goes towards 0, the relationship between the two variables will be weaker. Usually, in statistics, we measure three types of correlations: Pearson correlation, Kendall rank correlation and Spearman correlation.

Pearson r correlation is widely used in statistics to measure the degree of the relationship between linear related variables. For example, in the stock market, if we want to measure how two commodities are related to each other, it is used to measure the degree of relationship between the two commodities. The following formula is used to calculate the *Pearson r correlation*:

$$r = \frac{N \sum xy - \sum (x)(y)}{\sqrt{[N \sum x^2 - (\sum x)^2][N \sum y^2 - (\sum y)^2]}}$$

Where:

- r = *Pearson r correlation coefficient*
 N = *number of value in each data set*
 $\sum xy$ = *sum of the products of paired scores*
 $\sum x$ = *sum of x scores*
 $\sum y$ = *sum of y scores*
 $\sum x^2$ = *sum of squared x scores*
 $\sum y^2$ = *sum of squared y scores*

Simple Regression

Regression is a methodology for studying relations between variables, where the relations are approximated by functions. In the late 1880s, Francis Galton was studying the inheritance of physical characteristics. In particular, he wondered if he could predict a boy's adult height based on the height of his father. Galton hypothesized that the taller the father, the taller the son would be. He plotted the heights of fathers and the heights of their sons for a number of father-son pairs, and tried to fit a straight line through the data. If we denote the son's height by y and the father's height by x , the relation between y and x can be described by a simple linear model:

$$Y = a + bX$$

Where:

- Y = *dependent variable*
 X = *independent variable*
 a = *intercept value (constant)*
 b = *coefficient regression direction*

$$a \text{ calculated with formula: } a = \frac{(\sum y)(\sum x^2) - (\sum x)(\sum xy)}{n(\sum x^2) - (\sum x)^2}$$

$$b \text{ calculated with formula: } b = \frac{n(\sum xy) - (\sum x)(\sum y)}{n(\sum x^2) - (\sum x)^2}$$

RESULT AND DISCUSSION

Validity Test

Table 1. Validity Test Table

Indicator	Pearson Correlation
X ₁	.777
X ₂	.715
X ₃	.818
X ₄	.657
X ₅	.777
X ₆	.715
X ₇	.818
X ₈	.311
X ₉	.657

Indicator	Pearson Correlation
Y. ₁	.321
Y. ₂	.423
Y. ₃	.393
Y. ₄	.320
Y. ₅	.725
Y. ₆	.737
Y. ₇	.647

Source: SPSS Data Analysis, 2015

The table shows validity test of variable X as independent and dependent variable Y are bigger than r value. The table shows the total number for X and Y are above 0.3, means that all the indicators are valid.

Reliability Test

Table 2. Reliability Test Table

Variable	Cronbach's Alpha
X	.849
Y	.750

Source: SPSS Data Analysis, 2015

The table shows the *Cronbach's Alpha* > 0.6, indicated that all research instrument indicator of variable are reliable.

Normality Test

Testing the normality assumption is to test whether the regression model, the independent variable X and Y has a normal distribution or not. Regression model is good if the data distribution is normal or near normal, if the data is spread around the diagonal line and follow the direction of the diagonal line, then the regression fulfill the normality assumption.

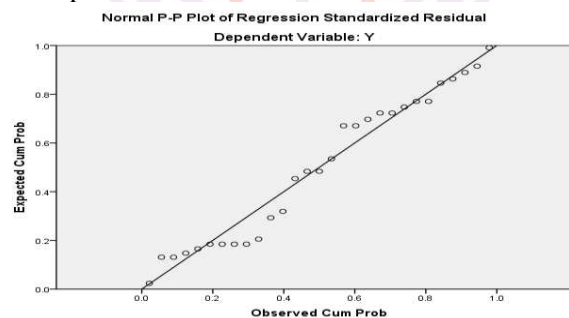


Figure 3. Normality Test

Source: SPSS Data Analysis, 2015

The figure shows that the points spread and spread around the diagonal line in the direction diagonal lines. This proves that the model regression of the influence of X on Y in test normality assumption was met.

Coefficient Regression

The objective of this study to know the effect of X on Y and to test the truth of the hypothesis used quantitative analysis with simple linear regression methods. Based on the statistical software SPSS Version 19.0, of the data processing on the attachment is as follows:

Table 3. Unstandardized Coefficient Beta Table

Variable	B
(Constant)	2.216
X	.581

Source: SPSS Data Analysis, 2015

The analysis, obtained by linear regression equation as follows:

$$Y = \alpha + bX + e$$

$Y = 2.216 + 0,581 X + e$. The simple linear regression equation above, this equation shows that the coefficient of X is $b = 0.581$ (positive) which means that the greater of X the better of Y will be. If there is increasing in X by 1 scale or 1 unit will increase Y by 0.581. Thus, if there is any change in factors measuring of X will change dependent variable Y.

Coefficient Correlation (r)

The correlation coefficient is used to measure the The Influence of X on Y. The correlation coefficient values can be seen in the table below:

Table 4. Coefficient Correlation (r) and (r²) table

R	R Square
.752 ^a	.566

Source: SPSS Data Analysis, 2015

The analysis of correlation (r) is equal to 0.752 indicating that the Correlation of The Influence of X on Y has a strong relationship.

Coefficient Determination (r²)

To determine the contribution The Influence of X on Y can be seen that the determinant of the coefficient (r²) in the table. r² value of 0.566 in this study may imply that the contribution of X on Y of 56.6 % while the remaining 43.4 % is affected by other variables not examined in this study.

Hypothesis Test

Partial test is used to test the effect of independent variable X has influence on Y by performing comparisons between the t_{count} values with t_{Table} value at $\alpha = 0.05$ or compare the probability of the real level 95% of the partial coefficient (r) so that it can be seen the influence of the independent variables individually. Using the criteria of hypothesis testing by t test as follows:

- $t_{\text{count}} \leq t_{\text{tabel}} (0,05)$, then H_0 is accepted and rejecting H_a .
- $t_{\text{count}} > t_{\text{tabel}} (0,05)$, then H_0 is rejected and accepting H_a .

The data table shows the t-test result:

Table 5. Partial Test Analysis Table (t-test)

Variable	T	Sig.
X	5.935	.000

Source: SPSS Data Analysis, 2015

The calculations in the table shows that t_{count} for X 5.935 bigger than the value of 1.984 t_{table} means X has significant influence on Y. The sig. value at 0.000 means that prediction of X influence on Y doing errors is less than 5% which is almost 0 %, thus the confidence of this prediction is below 95%. Therefore, H_a accepted.

Discussion

The results of the above data processing, this research shows that the variable physical work environment has a significant influence on employee performance. Physical work environment overview on PT. Bank Negara Indonesia Manado Regional Office taken from several indicators. Most the employees are agree that the work room arranged neatly makes the employee are comfort with this arrangement. Also temperature and humidity in a room has contribution to increase the employee performance. A good air conditioner controls, not too cool or not too warm makes the employee more relax and comfort to finish their Job. A good control with the air conditioner not only give a good temperature and humidity but also makes the air flow better and eventually will increase the employee performance. A good lighting arrangement also plays important role to

enhance the employee performance. With a good lighting, employees are able to read and write properly, not to shine or to dark. Another indicator that has a contribution to the employee performance is the free of noise. Without noise employees are more focus on their task, not get disturb by other noise such as the sound of the exhaust of motorcycles or cars. Free from smelly things also has a significant contribution to employee performance because how employee can think better if the room is smelly. Not only free from smell, but a clean room and work space also makes the employee work better. And the last but not the least is safely. Employee will work better if they know their work place is safe (Naharuddin and Sadegi, 2013; Leblebici, 2012; Samson, 2014).

There are also some other disturbance that could affect the employees performance such as noise which will cause discomfort on the employees and thus reduce the employees' productivity (Hedge, 1986). In addition, the satisfaction of the employees can result to the performance of the employees. Therefore, in order to make the employees satisfied, the factor of physical workplace that had been mentioned by Brill et al. (1985) need to be applied to all workplace. Furthermore, McCoy and Evans (2005) stated that once the employees had become stressors at the workplace, the employees have the high potential of getting their job done very slowly and it will affect the employees' performance. An employees could be affected depending on the task they are given and also the environment of the place they are working. By having a good environment, the employees could apply their energy and their full attention to perform work (Vischer, 2008).

CONCLUSION AND RECOMMENDATION

Conclusion

From the data analysis and discussion, this research concludes finding that there is a significant effect of Physical Work Environment on Employee Performance.

Recommendation

With regard to the outcome of analysis and discussion above, the suggestions to be used as input to the PT. Bank Negara Indonesia Manado Regional Office in the work environment and improve employee performance, are as follows:

1. The management needs to pay attention to the Physical Work Environment so that employees feel comfortable and happy to work in the company.
2. For the next researchers who want to conduct similar studies, in order to develop this research by lifting the object of research on other companies with different jobs and adding independent variable in addition to the physical working environment which may affect the performance of employees.

REFERENCES

- Al-Anzi, N. M. 2009. Workplace Environment and its Impact on Employee Performance. *A Thesis Submitted in Partial Fulfillment of the Requirements of Open University of Malaysia for the Degree of Master of Business Administration*. Bahrain: Open University of Malaysia. <http://www.readbag.com/masterstudies-media-pdf-mba-proj-workplace-environment-its-impact-on-employee-performance>. Accessed on September 18, 2015. Pp. 6-21.
- Amir, F. 2010. Measuring The Impact of Office Environment on Performance Level of Employees: A Case of Private Sector of Pakistan. *Proceedings of the 2nd International Conference of AGBA South Asia Chapter on Nurturing Innovation, Entrepreneurship, Investments and Public Private Partnership - in Global Environment*. Bhurban, Pakistan.
- Brill, et al. 1984. *Using Office Design to Increase Productivity: Vol.2*, 1984. Buffalo, N.Y. Workplace Design and Productivity. Buildings/IAQ. Pp. 495 500.
- Hedge, A. 1986. *Open Versus Enclosed Workspace: The Impact of Design on Employee Reactions to Their Offices*. In J.D. Wineman (Ed.), *Behavioural Issues in Office Design*. NY: Van Nostrand Reinhold. Pp. 139-176.

- Ismail, et al. 2010. The Influence of Physical Workplace Environment. *Voice of Academia*. http://kedah.uitm.edu.my/v1/images/stories/industrial_linkages/uitm_press/voa_5_1_2010/5_1_2010_8.pdf. Accessed on September 18, 2015. Vol. 5 No.1. Pp. 71-78.
- Kithuka, N. 2015. *The Influence of Work Environment on Bank Employees' Performance*. A Research Project Submitted to the School of Business and Economics in Partial Fulfillment of the Requirements for the Degree of Master of Business Administration of the South Eastern Kenya University. http://repository.seku.ac.ke/bitstream/handle/123456789/1058/Kithuka_The%20influence%20of%20work%20environment%20on%20bank%20employees%E2%80%99%20performance%20a%20case%20of%20commercial%20banks%20in%20Machakos%20Town.PDF?sequence=1&isAllowed=y. Accessed on September 18, 2015. Pp. 45-48.
- Kotler, P. 2009. *Marketing Management*. 13th Edition. Pearson Education. Upper Saddle River, New Jersey, U.S.A.
- Leblebici, D. 2012. Impact of Workplace Quality on Employee's Productivity: Case Study of a Bank in Turkey, Turkey. *Journal of Business, Economics and Finance*. http://sosyalbilimler.okan.edu.tr/media/06/50ed303d150ba0f350000006/4-Demet_Leblebici.pdf. Accessed on September 18, 2015. Vol. 1 Iss. 1. Pp. 38-40.
- McCoy, J.M., & Evans, G. 2005. Physical Work Environment. In J. Barling, E.K. Kelloway, & M. Frone (Eds). *Handbook of Work Stress*. Thousand Oaks, CA: Sage Publications. Pp. 219–245.
- Naharuddin, N. M., & Sadegi, M. 2013. Factors of Workplace Environment that Affect Employees Performance. *International Journal of Independent Research and Studies*. [http://pakacademicsearch.com/pdf-files/art/68/66-78%20Vol.%202,%20No.2%20\(April,%202013\).pdf](http://pakacademicsearch.com/pdf-files/art/68/66-78%20Vol.%202,%20No.2%20(April,%202013).pdf). Accessed on September 18, 2015. Vol. 2 No. 2. Pp. 66-78.
- Rowley, C. 2011. Human Resource Management with 'Asian' Characteristics: A Hybrid People-Management System in East Asia. *The International Journal of Human Resource Management*. Vol. 18 No. 5. Pp. 745-768.
- Samson, G. N. 2014. *Effect of Workplace Environment on the Performance of Commercial Banks Employees*. A Research Project Submitted to the School of Business in Partial Fulfillment for the Award of the Degree of Master in Business Administration [Strategic Management Option], of Kabarak University. <http://ir.kabarak.ac.ke:8080/bitstream/handle/123456789/461/Gitahi%20Final.pdf?sequence=1&isAllowed=y>. Accessed on September 18, 2015.
- Sekaran, U. & Bougie, R. 2006. *Research Methods for Business: A Skill Building Approach*. 5th Edition. John Wiley & Sons Ltd. West Sussex, UK.
- Temessek. 2009. *Expanding the Psychosocial Work Environment: Workplace Norms and Work– Family Conflict as Correlates of Stress and Health*. Vol. 3 No. 1. Pp. 71-88.
- Vischer, J. C. 2008. Towards an Environmental Psychology of Workspace: How People are affected by Environments for Work. *Architectural Science Review*. <http://www.seedengr.com/An%20Environmental%20PsychologyOf%20Workspace.pdf>. Accessed on September 18, 2015. Vol. 51.2. Pp.97-108.