



Journal Homepage: www.journalijar.com
**INTERNATIONAL JOURNAL OF
ADVANCED RESEARCH (IJAR)**

Article DOI: 10.21474/IJAR01/23212
DOI URL: <http://dx.doi.org/10.21474/IJAR01/23212>



RESEARCH ARTICLE

**THE EFFECT OF ORGANIZATIONAL CHANGE AND HUMAN RESOURCE
COMPETENCE ON WORK PRODUCTIVITY**

Wilson Bangun¹ and Lina Anatan²

1. Professor, Faculty of Digital Business and Law, Universitas Kristen Maranatha, Indonesia.
2. Faculty of Digital Business and Law, Universitas Kristen Maranatha, Indonesia.

Manuscript Info

Manuscript History

Received: 8 February 2026
Final Accepted: 10 March 2026
Published: April 2026

Key words:-

Organizational Change, Human
Resource Competence, Work
Productivity.

Abstract

This study aims to examine the effect of organizational change and human resource competence on work productivity, both partially and simultaneously. The research was conducted among employees in the footwear industrial cluster in Cibaduyut, Bandung City, West Java Province, Indonesia. A total of 67 employees were selected as the sample using a simple random sampling technique. Data was analyzed using multiple regression analysis. The results indicate that several footwear companies have implemented organizational structural changes in response to environmental shifts driven by technological advancements. These changes have led to job redesign, requiring enhanced human resource competencies in certain functional areas. Furthermore, the findings from the explanatory analysis reveal that both organizational change and human resource competence have a significant effect on work productivity, both partially and simultaneously.

"© 2026 by the Author(s). Published by IJAR under CC BY 4.0. Unrestricted use allowed with credit to the author."

Introduction:-

In the era of Industry 4.0, characterized by digitalization, business activities are increasingly conducted online. Consequence of technological advancement, markets for goods and services have expanded significantly. Many companies are growing and striving to achieve their business objectives successfully. Firms are competing to capture larger market shares, and to remain competitive, they are required to enhance their services through organizational change. Technological development has also contributed to the emergence of leading firms within their respective industries. The success of an organization in achieving its objectives depends on its ability to establish mechanisms that enhance value creation by effectively utilizing all assets, potential, and human resources. Organizations with low productivity levels will gradually lose competitiveness in the global market. Successful companies must possess the capability to manage human resources effectively to improve productivity. Efforts to achieve high productivity require attention to several factors, one of which is human resource competence. Indonesia is the largest country in Southeast Asia; however, its labor productivity remains lower than that of Singapore, Malaysia, and Thailand (Bangun, 2021). To sustain economic growth, Indonesia can no longer rely solely on traditional sources of comparative advantage, such as low-cost labor and natural resources. Instead, it must develop dynamic comparative advantages, particularly through high-quality, productive, and professional human resources.

Corresponding Author: Wilson Bangun

Address: Professor, Faculty of Digital Business and Law, Universitas Kristen Maranatha, Indonesia.

Low productivity is often associated with the level of education, as higher educational attainment is generally assumed to lead to higher productivity.

Human resources constitute a critical factor of production that significantly influences organizational productivity. Therefore, companies strive to recruit and develop human resources to achieve organizational outcomes. Work productivity is a key objective for every company in maintaining or improving organizational performance. It serves as an important measure of organizational success in achieving its goals. Understanding work productivity is closely related to the efficiency and effectiveness of human resource utilization in accomplishing predetermined objectives. Various strategies are implemented to influence and improve work productivity. Previous studies have highlighted the importance of organizational change in enhancing efficiency and effectiveness to achieve higher productivity. Intensifying business competition requires companies to implement organizational changes across multiple aspects, including systems and work mechanisms. Technological advancements may lead to changes in work systems, requiring companies to redesign jobs. Organizations are also required to revise career development programs, particularly when job structures are not yet clearly defined. Well-implemented career development programs can provide a strong foundation for workforce planning, enabling employees to develop realistic career plans aligned with organizational needs and priorities, which ultimately impacts work productivity.

Survey findings indicate that low work motivation and job uncertainty contribute to reduced productivity, thereby necessitating organizational change. Even organizations that have effectively managed their resources still face challenges that require job improvement and redesign. Organizational change can mitigate threats of declining productivity and support continuous improvement initiatives. Another critical factor contributing to increased work productivity is human resource competence. Consequently, many companies place significant emphasis on developing their human resources. Rapid technological advancement has intensified competition among firms, prompting the adoption of various strategies to compete in the global market. In this context, organizations must adapt by enhancing employees' knowledge and skills to improve work performance. Human resource competence has become an essential requirement for achieving work productivity. Individuals possessing specialized knowledge and skills in specific fields are more likely to achieve superior work outcomes. Therefore, this study aims to analyze the effect of organizational change and human resource competence on work productivity.

Literature Review:-

Organizational Change:-

In the era of industry 4.0, characterized by rapid digitalization, business activities are increasingly conducted online. Because of technological advancement, markets for goods and services have expanded significantly. Many companies are now growing and striving to achieve their business objectives more effectively. In this competitive landscape, organizations continuously compete to secure larger market shares. To remain competitive, companies are required to enhance service quality through organizational transformation. Technological development has also played a crucial role in enabling companies to evolve into major players within their respective industries. The success of an organization in achieving its objectives largely depends on its ability to establish mechanisms that generate added value by optimizing the use of assets, potential, and human resources. Organizations with low productivity levels will gradually lose their competitive advantage in the global market. Therefore, successful companies must possess the capability to effectively manage human resources to improve productivity. Efforts to achieve high productivity must consider several key factors, one of which is human resource competence.

Indonesia is the largest country in Southeast Asia. However, its labor productivity remains lower compared to countries such as Singapore, Malaysia, and Thailand (Bangun, 2021). To sustain economic growth, Indonesia can no longer rely solely on traditional sources of comparative advantage, such as low-cost labor and abundant natural resources. Instead, the country must develop dynamic comparative advantages, particularly through high-quality, productive, and professional human resources. Low productivity is often associated with education levels, as it is generally assumed that higher levels of education contribute to greater productivity potential. Human resources represent a critical production factor that significantly influences organizational productivity. Consequently, companies seek to recruit and develop human capital to achieve desired organizational outcomes. Work productivity is a primary target for organizations aiming to maintain or enhance their performance. It serves as an important indicator of a company's success in achieving its goals. Understanding work productivity involves assessing the efficiency and effectiveness of human resource utilization in fulfilling organizational objectives. Various strategies have been implemented to improve work productivity. Previous studies have highlighted the importance of organizational change in enhancing efficiency and effectiveness to achieve higher productivity. Increasingly intense

business competition requires companies to implement organizational changes across multiple aspects, including work systems and operational mechanisms. Technological advancements often lead to changes in work systems, requiring organizations to redesign job structures. Additionally, organizations are expected to improve employee career development programs, particularly as current job structures are often not well-defined. Well-implemented career development programs can provide a strong foundation for workforce management, enabling employees to develop realistic career plans aligned with organizational needs and priorities, ultimately contributing to improved productivity.

Survey findings indicate that low employee morale and job uncertainty, which contribute to decreased productivity, necessitate organizational change. Even organizations that have effectively managed their resources still face areas requiring improvement and job redesign. Organizational change plays a crucial role in mitigating the risk of declining productivity and supporting the implementation of continuous improvement programs. Another key factor contributing significantly to increased productivity is human resource competence. For this reason, many companies place strong emphasis on the quality of their human capital. Rapid technological advancements have intensified competition among organizations, prompting the adoption of various strategies to succeed in the global market. In this context, companies must continuously adapt by enhancing employees' knowledge and skills to improve their work capabilities. Human resource competence has become a fundamental requirement in achieving optimal productivity. Individuals who possess specialized knowledge and skills in specific fields are more likely to achieve superior performance outcomes. This study aims to analyse the influence of organizational change and human resource competence on work productivity.

Human Resource Competence:-

Human resource (HR) competence refers to the fundamental characteristics possessed by individuals that enable them to perform effectively and excel in their work. It encompasses an integrated combination of knowledge, skills, attitudes, and personal attributes required to achieve success in each job. Such competence guides what tasks should be performed, what knowledge must be acquired, and how work can be executed in the most effective manner. Furthermore, this concept is closely associated with measurable standards that can serve as benchmarks, allowing competencies to be systematically enhanced through training and development programs recognized at general, national, and international levels. Therefore, human resources must possess a set of competencies aligned with labor market demands to effectively support the realization of an organization's vision and mission. HR competence is also applicable in various technical and operational contexts, including the use of production equipment and machinery. It involves the ability to assemble, disassemble, repair, maintain, and optimize the functionality of machines and tools. Additionally, it enables individuals to accurately identify the appropriate equipment required to complete specific tasks or produce goods and services. Beyond that, competence is essential in assessing an individual's capability to design, integrate, and assemble components into high-value products.

Competence is widely recognized as an underlying human characteristic that can be used to predict job performance effectiveness (Siswanto, 2013). In the context of Industry 4.0, HR competence extends to the ability to manage and adapt to digitally driven transformations in organizational resources. This capability is crucial for evaluating the readiness of human resources in facing the challenges of the industry 4.0 era. Measurements of organizational or employee readiness typically encompass six key dimensions: technology, industry sector, software lifecycles, transversal skills, proficiency, and job profiles (Fitsilis et al., 2018).

Work Productivity:-

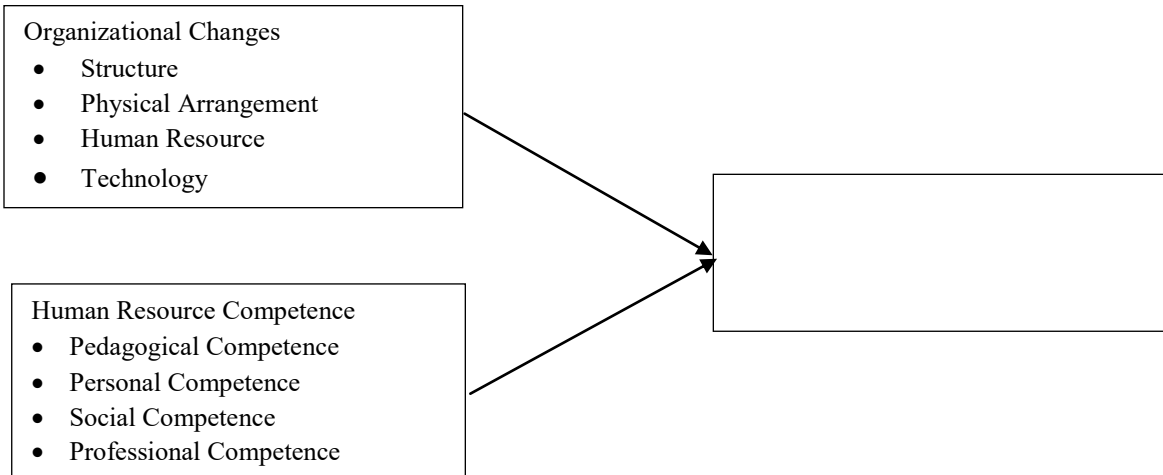
In general, productivity is commonly defined as the relationship between inputs and outputs generated by a system relative to the resources utilized. Outputs may take the form of goods or services resulting from production processes, while inputs consist of human and physical resources employed within those processes. Accordingly, improving productivity requires a system to produce a greater quantity or higher quality of goods using the same resources, or to generate the same level of output with fewer resources. In this sense, productivity enhancement refers to an increase in the ratio of outputs to inputs. According to Bernolak (1997), productivity is concerned with both the quantity and quality of outputs produced from the resources utilized. The European Association of National Productivity as the efficient and effective use of production factors in generating goods and services. Efficiency refers to performing tasks in the correct manner by optimizing resource utilization to achieve desired outputs (Grünberg, 2004). In contrast, effectiveness relates to the extent to which outputs meet customer requirements (Neely et al., 1995). Thus, effectiveness emphasizes the achievement of intended goals, whereas efficiency focuses on the processes and means employed.

Bhatti (2007) and Qureshi (2007) conceptualize productivity as a performance measure that incorporates both efficiency and effectiveness. It may also be understood as the ratio between inputs and outputs, or as the productive capacity of employees within an organization. In this context, productivity reflects the relationship between the quantity of inputs and outputs within a clearly defined process. The sustainability and growth of a business are highly dependent on the productivity levels of its workforce. Furthermore, Yesufu (2000) asserts that the prosperity of a nation, along with the social and economic well-being of its citizens, is determined by the efficiency and effectiveness of its various subsystems.

Research Model:-

Based on the literature review, the proposed research model can be conceptualized in Figure 1.

Figure 1: Research Model.



Hypothesis:-

Drawing upon this model, the study formulates the following hypotheses:

1. Organizational change has a significant effect on work productivity.
2. Human resource competence has a significant effect on work productivity.
3. Organizational change and human resource competence simultaneously have a significant effect on work productivity.

Research Methodology:-

Cibaduyut is a well-known footwear production center located in Bandung, West Java Province, Indonesia. According to data from the West Java Department of Trade, there are 67 shoe artisans operating within the Cibaduyut area. To determine the number of respondents, this study employs a saturated sampling technique, in which all members of the population are included as respondents. Accordingly, the total sample size consists of 67 participants. Data collection was conducted through the distribution of structured questionnaires to all respondents. To analyze the data, this study applies multiple regression analysis. Multiple regression is a linear regression model that involves more than one independent variable. This analytical approach is used to examine and predict the extent to which one or more independent variables (X) influence the dependent variable (Y). The general form of the multiple linear regression model can be expressed as follows:

$$Y = a + b_1X_1 + b_2X_2$$

Y = Work Productivity

a = Intercept

b₁ = Regression coefficient of Organizational Changes

b₂ = Regression coefficient Human Resource Competence

X₁ = Organizational Changes

X₂ = Human Resource Competence

Result and Discussion:-

Validity and Reliability Testing:-

Validity testing in this study was conducted using the Pearson Product-Moment Correlation (PMP) analysis. Each variable consists of a set of questionnaire items, for which the calculated correlation coefficient ($r_{\text{calculated}}$) was compared with the critical value (r_{table}) at a significance level of $\alpha = 0.05$ and degrees of freedom ($df = n - 1$). An instrument is considered valid when the correlation coefficient satisfies the criterion ($r_{\text{calculated}} \geq r_{\text{table}}$) (Suliyanto, 2006:149). The $r_{\text{calculated}}$ values were obtained using Microsoft Excel and IBM SPSS Statistics 26. For the three variables examined in this study, the results are as follows. The Organizational change variable, consisting of 12 indicators, produced an r_{table} value of 0.523, with $r_{\text{calculated}}$ values presented in Table 1. The statistical analysis indicates that all indicators are valid. The human resource competence variable comprises 15 indicators, yielding an r_{table} value of 0.457, with corresponding $r_{\text{calculated}}$ values shown in Table 2. The results confirm that all questionnaire items are valid. Furthermore, the Work productivity variable includes 19 indicators, with an r_{table} value of 0.399 and $r_{\text{calculated}}$ values reported in Table 3. Based on the statistical findings, all items are deemed valid.

Table 1. Job Satisfaction Validity

Item n=12	r_{table}	$r_{\text{calculated}}$	Cronbach's Alpha if Item Deleted
PO1	0,523	.769	Valid
PO2	0,523	.849	Valid
PO3	0,523	.817	Valid
PO4	0,523	.851	Valid
PO5	0,523	.862	Valid
PO6	0,523	.794	Valid
PO7	0,523	.861	Valid
PO8	0,523	.849	Valid
PO9	0,523	.825	Valid
PO10	0,523	.865	Valid
PO11	0,523	.834	Valid
PO12	0,523	.745	Valid

Table 2. Human Resource Validity

Item n=15	r_{table}	$r_{\text{calculated}}$	Decision
KSDM1	0,457	.584	Valid
KSDM2	0,457	.793	Valid
KSDM3	0,457	.547	Valid
KSDM4	0,457	.733	Valid
KSDM5	0,457	.745	Valid
KSDM6	0,457	.671	Valid
KSDM7	0,457	.475	Valid
KSDM8	0,457	.497	Valid
KSDM9	0,457	.542	Valid
KSDM10	0,457	.558	Valid
KSDM11	0,457	.657	Valid
KSDM12	0,457	.468	Valid
KSDM13	0,457	.476	Valid
KSDM14	0,457	.479	Valid
KSDM15	0,457	.458	Valid

Table 3. Work Productivity

Item n=19	r _{table}	r _{calculated}	Decision
Kin1	0,399	.798	Valid
Kin2	0,399	.784	Valid
Kin3	0,399	.851	Valid
Kin4	0,399	.827	Valid
Kin5	0,399	.834	Valid
Kin6	0,399	.773	Valid
Kin7	0,399	.818	Valid
Kin8	0,399	.841	Valid
Kin9	0,399	.788	Valid
Kin10	0,399	.810	Valid
Kin11	0,399	.806	Valid
Kin12	0,399	.830	Valid
Kin13	0,399	.833	Valid
Kin14	0,399	.800	Valid
Kin15	0,399	.837	Valid
Kin16	0,399	.777	Valid
Kin17	0,399	.804	Valid
Kin18	0,399	.834	Valid
Kin19	0,399	.590	Valid

Reliabilitas:-

To assess the reliability of each variable, the results can be observed in Table 7, particularly through Cronbach’s Alpha if Item Deleted values. An instrument is considered reliable if it achieves a coefficient greater than 0.80 (Sekaran, 2006). Based on the statistical analysis, the organizational change variable demonstrates a Split-Half Coefficient of 0.958, indicating that all questionnaire indicators are highly reliable. Similarly, the human resource Competence variable yields a Split-Half Coefficient of 0.834, suggesting that all indicators within this variable are reliable. Furthermore, the Work Productivity variable shows a Split-Half Coefficient of 0.701, which also confirms that all questionnaire items are reliable. Overall, the findings indicate that all variables, comprising a total of 78 items, meet the reliability criteria, as presented in Table 4.

Table 4. Reliability

Variabel	Item Count	Split-Half Coefecient	Remarks
Perubahan Organisasi	12	0,958	Reliabel
Kompetensi Sumber Daya manusia	15	0,834	Relaibel
Produktivitas Kerja	19	0,701	Relaibel

Correlation Among Variables:-

The statistical results indicate that organizational change and human resource competence are significantly associated with work productivity.

Table 5. ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	99.340	2	49.670	3.443	.038 ^b
	Residual	923.406	64	14.428		
	Total	1022.746	66			
a. Dependent Variable: Work Productivity						
b. Predictors: (Constant), Human Resource Competence, Orgnizational Changes						

The ANOVA results reveal a significance level of 0.038 ($p < 0.05$), leading to the rejection of the null hypothesis (H_0). This indicates that the relationships among the variables in this study are statistically significant.

Table 6. Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.514	4.141		6.403	.000
	Organizational Changes	.011	.049	.027	.228	.821
	Human Resource Competence	.163	.064	.307	2.563	.013

a. Dependent Variable: Work Productivity

As presented in Table 6, the results of the multiple linear regression analysis yield the following equation:

$$Y = 26,514 + 0,011X_1 + 0,163X_2$$

The multiple linear regression equation indicates that when both organizational change and human resource competence are equal to zero, the level of work productivity is 26.514. The regression coefficient for organizational change is 0.011, which implies that, holding human resource competence constant, a one-unit increase in organizational change leads to an increase of 0.011 units in work productivity. Similarly, the regression coefficient for human resource competence is 0.163, indicating that, with organizational change held constant, a one-unit increase in human resource competence results in an increase of 0.163 units in work productivity.

Table 10. Model Summary

R Square	Adjusted R Square
.097	.069
Predictors: (Constant), Human Resource Competence, Organizational Changes. .a	
.b	

Based on the statistical results, the p-value for the organizational change variable is 0.821, which exceeds the significance threshold of 0.05, indicating that the null hypothesis (H_0) is accepted. This finding suggests that organizational change does not have a statistically significant effect on work productivity. In contrast, the p-value for the human resource competence variable is 0.013 ($p < 0.05$), leading to the rejection of H_0 . This indicates that human resource competence has a significant effect on work productivity. Furthermore, human resource competence contributes approximately 9.7% to work productivity, while the remaining 90.3% is explained by other variables not included in this model. Interestingly, the findings also highlight that organizational change can play an important role in influencing work productivity in a broader organizational context. Organizational structure represents a critical system that must be carefully managed. Changes in the organizational environment—such as technological advancements, economic conditions, and socio-cultural dynamics—necessitate adjustments in organizational structure. As a result, organizational structure is inherently dynamic and flexible, adapting to evolving circumstances.

Technological development has significantly transformed work systems, requiring companies to redesign jobs and transition from manual processes to digital systems. In the case of several footwear industries in Cibaduyut, Bandung, organizational restructuring is frequently undertaken in response to technological changes. The present, organizations across industries face increasing challenges in building their capacity to manage change effectively. All functional areas within an organization are subject to transformation. The organizational environment can be broadly categorized into three key components: internal environment, external environment, and the interface between them. External factors include social change, societal structure, culture, technology, demographics, politics, and economic conditions. Meanwhile, internal factors encompass human resource conditions, organizational culture, communication systems, and work systems. Improving productivity requires a comprehensive analysis of factors related to employee performance outcomes. Accordingly, organizations have implemented competency-based programs to ensure alignment between organizational goals and individual objectives. Human resource competence can be classified into core competencies, role competencies, and functional (technical) competencies. Functional competencies enable employees to perform technical tasks independently, while core and role competencies emphasize the ability to collaborate effectively within teams.

Conclusion:-

Based on the results of the descriptive and explanatory analyses, several conclusions can be drawn. The descriptive findings indicate that changes in organizational structure frequently occur because of technological advancements that transform work systems. As a result, companies are required to redesign their work systems, compelling employees to adapt to new ways of working. Results of hypothesis testing reveal that organizational change and human resource competence jointly influence work productivity, both partially and simultaneously. However, when examined individually, organizational change shows a positive but not statistically significant effect on work productivity. This suggests that organizational change alone does not substantially contribute to improving productivity levels. In contrast, human resource competence demonstrates a significant positive effect on work productivity. This finding indicates that improvements in employee competence are a key driver in enhancing productivity. In response to environmental changes, particularly technological developments, employees are required to continuously adapt to new work systems, further emphasizing the importance of developing relevant competencies.

Recommendation:-

Based on the conclusions of this study, several recommendations can be proposed for each variable examined. Regarding organizational changes, companies are advised to implement physical restructuring, particularly by redesigning office layouts to align with new ways of working. In addition, to support the transition toward digital work systems, employees should continuously update their knowledge and skills in accordance with evolving technological demands. Regarding human resource competence, organizations should prioritize training and development programs to enhance employees' ability to adapt to digital work systems in the industry 4.0 era. Providing professional certification programs is also recommended to strengthen employees' expertise and competencies in their respective fields. Furthermore, employees are encouraged to continuously improve their work performance in line with their individual competencies, thereby contributing to overall organizational productivity.

References:-

1. Ailabouni, Nabil., Noel Painting, Phil Ashton. (2009). Factors Affecting Employee Productivity in The UAE Construction Industry. ResearchGate.
2. Amanda Hamilton-Attwell, (1998) "Productivity and work ethics", Work Study, Vol. 47 Issue: 3, pp.79-86.
3. Antônio Márcio Tavares Thomé, Luiz Felipe Scavarda, Nicole Suclla Fernandez, Annibal José
4. Bhatti, K. K., & Qureshi, T. M. (2007). Impact Of Employee Participation on Job Satisfaction, Employee Commitment and Employee Productivity. International Review of Business Research Papers, 3(2), 54–68.
5. Elizabeth Burke, Mary., Evren Esen. (2005). Workplace Productivity. A Study by The Society for Human Resources ManagementP
6. Fitsilis, P., Tsoutsas, P., & Gerogiannis, V. (2018). Industry 4.0: Required Personnel Competences. International Scientific Journal "Industry 4.0," 3(2), 130–133.
7. Grip, A.D. & Sauermaann, J. (2011). The Effects of Training on Own and Co-Worker Productivity: Evidence from a Field Experiment. IZA Discussion Paper, No. 5976.
8. Grünberg, T. (2004). Performance improvement: Towards a method for finding and prioritising potential performance improvement areas in manufacturing operations. International Journal of Productivity and Performance Management, 53(1), 52–71. <https://doi.org/10.1108/17410400410509969>
9. Housman, Michale., Dylan Minor. 2016. Workplace Design: The Good, The Bad and The Productive. Working Paper. Harvard Business School.OLL
10. Neely, A., Gregory, M., & Platts, K. (1995). Performance measurement system design: A literature review and research agenda. International Journal of Operations & Production Management, 15(4), 80–116. <https://doi.org/10.1108/01443579510083622>
11. Ohno, Izumi., Kitaw Daniel. 2009. Productivity Movement in Singapore. National Institute of Education, Singapore, and World Bank.
12. P. Shurchuluu, (2002) "National productivity and competitive strategies for the new millennium", Integrated Manufacturing Systems, Vol. 13 Issue: 6, pp.408-414
13. Pekuri, A., et al. (2011). Productivity and Performance Management – Managerial Practices in The Construction Industry. International Journal of Performance Measurement, Vol. 1, p. 39-58.
14. Scavarda, (2012), "Sales and operations planning and the firm performance", International Journal of Productivity and Performance Management, Vol. 61 Iss: 4 pp. 359 – 381.
15. Sekaran, U. (2003). Research and Markets: Research Methods for Business - A Skill Building Approach.

16. Spencer and Spencer. (2001). *The Competency Handbook. Volume 1 & 2.* Boston: Linkage.
17. Straubhaar, Joseph & LaRose, Robert, Lucinda Davenport. (2011). *Media Now: Understanding Media, Culture and Technology.* (7th edition). Wadsworth Thomson Learning, USA.
18. Straubhaar, Joseph & LaRose, Robert. (2000). *Media Now: Communications Media in Information Age* (2nd edition). Wadsworth Thomson Learning, USA
19. Suliyanto, 2006. *Metode Riset Bisnis.* Yogyakarta: CV. Andi
20. Yesufu, T.M. (2000). *The human factor in national development : Nigeria.*
21. Yesufu, T.M. (2000). *The human factor in national development: Nigeria,* Spectrum Books Limited, Ibadan, Nigeria.