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ANALYSIS OF THE EFFECT OF EDUCATION LEVEL AND SKILLS ON EMPLOYEE WORK PRODUCTIVITY AT PT. BINTANG MAS CONVECTION, PARENGAN VILLAGE, MADURAN DISTRICT, LAMONGAN REGENCY

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ABSTRACT (10 PT)

Economic development is basically reflected by the occurrence of changes in new flows concerning the flow of income and benefits to local, regional and even national communities. Industrial development is also influenced by employee performance as seen from the level of productivity, it can also be seen from the skills and education level of its workforce. The purpose of this study is to determine the partial and simultaneous influence of skills and education levels as well as the dominant variables influencing work productivity at the PT. Bintang Mas Maduran convection. This research was conducted at PT. Bintang Mas Maduran, a convection company. The research type was quantitative. The population in this study was 300 employees with a sample of 75 respondents. Data collection methods used observation and interviews and questionnaires with a 5-point Likert scale. Data analysis methods used validity, reliability, multiple regression, classical assumptions, coefficient of determination, t-test, and F-test.

The results of the study showed that the partial t-test results obtained tcount (X1) = 7.018 > ttable = 1.993, tcount (X2) = 5.560 > ttable = 1.993, meaning there is a partial influence of education level and skills on productivity. The results of the simultaneous F count test were 50.367 while the F table was 3.124, so there is a simultaneous influence. The conclusion obtained is that there is a simultaneous and partial influence between education level and skills on work productivity, and the most dominant variable is education level.

INTRODUCTION

Economic development is basically reflected by the occurrence of changes in new flows concerning the flow of income and benefits to local, regional and even national communities. "The economic development of a country can be measured in many ways, one of which is by knowing the level of development of the world capital market and securities industries in that country." Development or expansion plans that are usually produced by experts or consultants generally come from different cultures or social backgrounds in addressing the important problems they find. Development plans should begin by identifying the potential and needs of the beneficiary and risk-bearing communities. Thus, development activities, encompassing planning, financing, implementation, monitoring, and evaluation, will be based on the desires and capabilities of the community. The gap between large and small companies is clearly visible: large companies have a broad reach in developing their businesses, while small companies have a smaller scope and, in terms of capital, have a substantial capital foundation that allows them to conduct international transactions. Small companies, on the other hand, have a limited scope, namely, they can only conduct inter-regional transactions due to limited capital for overseas sales. Development that is the result of planning must be a manifestation of justice.

Lamongan Regency, especially Maduran District, with its large population, already possesses natural resources. Efforts are needed to mobilize this large population into productive resources. Productive, competent, and skilled individuals are self-confident, possess a strong work ethic, and look to the future with passion and optimism. Therefore, one concrete measure to boost human productivity is improving education and skills, enabling them to carry out their duties and jobs to the best of their ability. As a person's education increases, their knowledge and thinking skills broaden and develop, potentially further increasing work productivity.

The educational level referred to in this study encompasses formal education, often referred to as schooling, encompassing standardized levels of education from elementary school to university, and non-formal education. Quality and price are key determinants of success in this industry. Consumers tend to choose products with good quality but at an affordable price. If the production cost of a product is very high, it is impossible for the company to sell its product at a lower price or at least the same as the price of a competitor's product. Therefore, a company must strive to create a superior product. It cannot be denied that a superior product will be created if the performance of existing employees is very competent. This refers to how self-ability is formed from experience and knowledge gained during education and supported by natural skills so that it can be combined into a competent skill.

Education is a structured process for transferring knowledge, skills, and values from one generation to the next. According to Ki Hajar Dewantara, education is "a guide for the growth of children; that is, education guides all the natural forces inherent in children so that they, as human beings and as members of society, can achieve the highest level of safety and happiness" (Dewantara, 2004). Education encompasses not only formal learning in schools but also informal and non-formal learning that occurs throughout life (UNESCO, 2015). Although the role of education is very vital, there are still many challenges and problems faced, both in terms of access, quality, and relevance. One of the main problems is the gap in access to education between urban and rural areas. Data from the Central Statistics Agency (BPS) shows

that school enrollment rates in underdeveloped areas remain low. This is exacerbated by the lack of educational infrastructure and qualified teaching staff in the 3T (Disadvantaged, Frontier, and Outermost) regions (BPS, 2023).

Work productivity is one of the main indicators for assessing the efficiency of human resource performance in the industrial sector, including in the garment industry. In garment production processes that require precision, speed, and technical skills such as sewing, cutting fabric, and operating machinery, employee productivity is crucial for the sustainability and competitiveness of the business. The higher the employee's productivity, the greater their contribution to production output and company profits. Therefore, garment business owners must pay attention to factors that influence productivity, one of which is employee education and skill level.

Employee education is believed to play a crucial role in shaping mindsets, analytical skills, and efficiency in completing work. According to Becker (1993), education is a form of human resource investment that can increase productivity in the long term. Employees with higher education generally understand work procedures more quickly, are able to participate in training, and have better communication and managerial skills. However, in practice in the garment industry, formal education alone does not always reflect the technical competency required in the field.

In addition to education, technical skills have a direct impact on productivity in the garment industry. Workers with good sewing skills tend to produce products faster and with fewer errors. According to Schiller (2011), work skills that align with job demands will increase efficiency and quality of work. In fact, research by Lestari & Nugroho (2020) shows that work skills have a significant influence on employee productivity in garment SMEs, greater than the influence of formal education.

However, based on a review of various previous studies, there is an interesting research gap that warrants further study. Most studies only focus on one variable, such as education or skills, without examining the simultaneous relationship between the two in influencing work productivity. Furthermore, similar research has been conducted primarily in large-scale industrial or general manufacturing sectors, while the context of small and medium enterprises such as garment manufacturing has received less attention (Wibowo, 2018; Putra & Anggraini, 2021). This raises the question of whether the combination of education level and skills also has a significant impact on work productivity in the informal sector, such as garment manufacturing.

The importance of this research is further reinforced by the fact that many garment manufacturing businesses recruit workers without considering specific educational and skill standards. As a result, productivity becomes uneven and production results inconsistent. By understanding the relationship between education and skills levels and productivity, businesses can establish more targeted recruitment and job training strategies. This also aligns with a World Bank report (2018), which states that improving job skills in the informal sector is key to boosting productivity and microeconomic growth.

Therefore, this research is crucial in filling the gap in scientific studies related to work productivity in the garment manufacturing sector, particularly those that consider two key factors—education and skills. The results of this study are expected to make a tangible contribution to human resource development in the MSME sector and serve as a reference for

the government and policymakers in designing more contextual and effective job training and education programs.

RESEARCH METHODS

The research approach used by the researcher in this study is a quantitative approach. In this study, the population included all employees of PT Bintang Mas Lamongan, totaling 320 employees. In sampling, the researcher used the probability sampling technique with the simple random sampling technique. For sample calculation with the Slovin formula, so that 75 respondents were found.

The data collection technique used in this study used interview and questionnaire methods. With SPSS testing tools that include several tests including validity tests, reliability tests, classical assumption tests, determination coefficient tests, multiple linear regression tests, t tests and F tests. The measuring instrument of variables/indicators in this study is education level according to Becker, G. S. (1993), Schiller, B. R. (2011) there indicators of skills, and produtivity according to Sedarmayanti (2017).

RESULTS AND DISCUSSION

A. Validity test

Validity test is used to measure the validity of a questionnaire which is done by comparing the value of r count with r table. The value of the independent variable and the dependent variable results are r count is greater than r table, so it can be concluded that the results of the variable are **valid**.

B. Reliability test

Reliability test is used to show the extent to which the measuring instrument can be trusted or relied upon. The reliability value is obtained by looking at the Cronbach's Alpha column, if the reliability value is >0.600 then it can be said that the instrument used is reliable, and if the reliability value is <0.600 then it can be said that the instrument used is not yet reliable. The results *of Cronbackh's Alpha* obtained the alpha coefficient on all independent variables of education level of 0.802, and Skills of 0.821 while the dependent variable of productivity of 0.783 is greater than the reliability standard (0.600) with a significance level α= 5% so that it can be concluded that the instrument in the independent and dependent variables is **reliable.**

C. Classical assumptions

Data is said to be normally distributed if the real data line follows the diagonal line. Based on data processing with the SPSS computer program, it is known that the histogram graph obtained a normal curve line meaning that the data studied is normally distributed. So *the Kolmogorov-Smirnov test is used* to strengthen the graph above. After being tested, the *asymp.sig value (2 tailed)* was 0.631 where this result is > 0.05 which is the standard, so the data above can be said to be normal.

testing aims for a perfect relationship between independent variables in the regression model. Symptoms of multicollinearity can be seen from the *tolerance value* and *the Variance Inflation Factor* (VIF) value. If the VIF value is less than 10 and the tolerance value is above 0.1 or 10%, it can be concluded that the regression model does not have multicollinearity.

In the multiple regression equation, it is necessary to test whether the variance of the residuals from one observation is the same as another observation. Homoscedasticity occurs if the scatterplot of the data processing points between Zpred and Sresid spreads below or above the

origin point (number 0) on the Y axis and does not have a regular pattern. It can be concluded that the multiple linear regression model in this study does not contain heteroscedasticity.

D. Hypothesis Testing

a. Multiple linear regression test

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.380	1.341		5.503	.000
	X1	.607	.086	.545	7.018	.000
	X2	.506	.090	.438	5.650	.000

From the coefficient table above, in the *β column,* the constants a = 7.380, $b_1 = 0.607$, $b_2 = 0.506$ are obtained, so the multiple regression equation is as follows: $Y = 7.380 + 0.607X_1 + 0.506X_2$, Where Y is productivity, X_1 is educational level, X_2 is Skill.

b. t-test

From the results of the t-test, the calculated t value (7.018) is greater than the t-table value (1.973), so that the calculated t ≥ t-table, so Ho is rejected and Ha is accepted, which means that there is a significant influence between variable X1 and variable Y, which means that there is a significant influence between the education level variable and Productivty.

From the results of the t-test, the calculated t value (5,650) is greater than the t-table value (1.973), so that the calculated t ≥ t-table, so Ho is rejected and Ha is accepted, which means that there is a significant influence between the X2 variable and the Y variable, which means that there is a significant influence between the Skill variable and Productivty e.

c. F Test

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	117.919	2	58.959	50.376	.000[a]
	Residual	84.268	72	1.170		
	Total	202.187	74			

a. Predictors: (Constant), X2, X1

b. Dependent Variable: Y

From the results of the F test, the calculated F was 50.376 while the F table was 3.05, because the calculated F ≥ F table, Ho was rejected and Ha was accepted, meaning that the independent variables (education Level and Skill) together had a significant influence on the dependent variable (productivity).

E. Discussion

1. Education level and Skill partial impact to productivity

Based on the results of the partial t test, namely Education Level (X1), Skills (X2), have an effect on Work Productivity (Y), at PT. Bintang Mas. From the results of the

partial t test, it was obtained that tCount (X1) = 7.018 > tTable = 1.993, tCount (X2) = 5.560 > tTable = 1.993, so that HO is rejected and Ha is accepted, which means that both variables (X) have a significant partial effect on the Work Productivity variable (Y) at PT. Bintang Mas.

2. Education level and Skill Simultaneously on productivity.
   From the results of the F test, the calculated F was 50.367, while the F table was 3.124, because the calculated F ≥ F table, Ho was rejected, Ha was accepted, meaning that the independent variables (Education Level and Skills) together had a significant influence on the dependent variable (Work Productivity) at PT. Bintang Mas.
3. The most dominant variable on productivity.
   The independent variable coefficient results above are positive, indicating that the independent variable has a direction of change that aligns with the dependent variable. Furthermore, the coefficient for the education level variable (X1), with a regression coefficient of 0.607, is the largest compared to the regression coefficients of the other independent variables. Therefore, it can be concluded that the most dominant factor influencing work productivity is education level..

CONCLUSION

Based on the results of research conducted on the influence of education level and skills on employee productivity in the garment industry, it can be concluded that:

1. Education level has a positive but insignificant effect on work productivity. This indicates that formal education alone is not sufficient to directly increase work output in the garment industry, which demands practical skills more than academic abilities.
2. Work skills have a positive and significant effect on employee productivity. Employees who have good sewing, pattern cutting, and garment machine operation skills are able to produce products of higher quantity and quality and work efficiently.
3. Simultaneously, education level and skills significantly influence work productivity, although the contribution of skills is far more dominant. This means that the combination of adequate educational foundation and appropriate work skills will produce more optimal work results.
4. These findings indicate that in the garment industry, technical skills and job training are key factors in increasing employee productivity. Therefore, business owners need to focus more on developing employee technical skills through ongoing job training.

The implication of this research is the importance of designing recruitment and job training strategies that take into account both basic educational background and skill competencies that are appropriate to the demands of convection work.

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