The Influence Of Production Factors On Productivity In Batik SME’s In Malang Raya

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Abstract. Productivity is one of the benchmarks to find out the number of products or services produced by a business with various inputs used. Small and Medium Enterprises (SME’s) Batik in Malang Raya is relatively new, developing compared to the centers of Indonesian batik, especially in Central Java. In Small and Medium Enterprises specifically batik that is needed traditionally as a result of local wisdom in Malang Raya, it is necessary to review the factors of production that increase productivity. By knowing these decisive factors, it is expected to provide input especially to SME managers to be able to increase the factors that still need to be driven in order to increase productivity. By using the Multiple Linear Regression method, the influence of 9 factors of production, namely human resources, raw materials, machinery, methods, capital, markets, technology, time, and information, is sought for productivity factors. As a result, 7 production factors affect the productivity of traditional batik in Malang. The 7 determining factors are human resources, machinery, methods, capital, technology, time, and information.

Keyword: Batik 1; Production 2; Productivity 3; SME’s 4

1. Introduction

Productivity is a business that represents a particular company that manages resources to be optimal results. Many factors can affect this productivity. According to Hatta, (1994: 4), the production is all the work that give rise to, in order to enlarge the existing and to share it among people. To be able to conduct the necessary production variables that affect the production process, these variables are man (human Resources), money (capital), material (raw material) production support, machines (Machinery and equipment supporting production), methods (method or procedure), market ie the market is a group of people who were satisfied with the results of production, technology is a means in the form of systems and equipment that provide convenience to the production process, time is the time used in the production of, and information is a set of data that is used to increase the knowledge required in the production process. All the variables described so-called factors of production.

Factors to increase productivity, do some analysis using some technique involves sampling technique used was probability sampling and analysis technique used is multiple linear regression. The purpose of this study was to determine the effect of the production factors on productivity.

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Similar research results in the fisheries sector, production factors have a significant influence on trawl productivity with a confidence level of 95% [1]. In the agriculture sector for Torjun Regency, it is known that the most influential factor on maize productivity is the variable use of seeds (raw materials). Similarly, in Karangpenang Regency it is known that the most influential variable is the use of fertilizers (raw materials) [2]. In another study showed that the production factor is very influential on the productivity of lowland rice [3].

2. Research Methods
The sampling technique used is probability sampling, which is a technique that gives an opportunity or equal opportunity for each element or member of the population to be selected into the sample. The samples in this study using proportional sampling technique. The analysis technique used is linear regression, which is a regression analysis is used to determine how the dependent variable can diprediksisikan through independent variables partially or simultaneously. Variables that were taken in this study had nine variables, namely, Man, Money, Materials, Machines, Methods, Market, Technology, Time, Information, and Productivity. With the number of respondents who take the 97 respondents.

3. Results and Discussion
Descriptive analysis of this study are shown in the following tables and explanations.

| Variable   | Mean    | Std. Deviation | N  |
|------------|---------|----------------|----|
| Produktivity | .25861  | .214875        | 97 |
| Man        | 9.31    | 6.972          | 97 |
| Money      | 2.57E8  | 3.161E8        | 97 |
| Materials  | 4.65    | .708           | 97 |
| Machine    | 8.52    | .879           | 97 |
| methods    | 5.57    | .889           | 97 |
| Market     | 84.07   | 5.743          | 97 |
| Technology | 5.58    | 2.281          | 97 |
| Time       | 72.84   | 17.138         | 97 |
| Information| 3.61    | 1.160          | 97 |

Descriptive Statistics table presents variables man, money, materials, machines, methods, markets, technology, time, information (X) to the productivity variable (Y).

- Descriptive results of the productivity variable (Y) are explained by the number of cases (N) = 97 with an average (mean) of 0.25861 and standard deviation (standard deviation) = 0.214875
- Descriptive results of the man variable (X1) are explained by the number of cases (N) = 97 with an average (mean) of 9.31 and standard deviation (standard deviation) = 6.972
- Descriptive results of the money variable (X2) are explained by the number of cases (N) = 97 with an average (mean) of 2.57E8 and standard deviation (standard deviation) = 3.161E8
- Descriptive results of the materials variable (X3) are explained by the number of cases (N) = 97 with an average (mean) of 4.65 and standard deviation (standard deviation) = 0.708
- Descriptive results of the machine variable (X4) are explained by the number of cases (N) = 97 with an average (mean) of 8.52 and standard deviation (standard deviation) = 0.879
- The results of the descriptive variable methods (X5) are explained by the number of cases (N) = 97 with an average (mean) of 5.57 and the standard deviation (standard deviation) = 0.889
Descriptive results of Market variables \( (X_6) \) are explained by the number of cases \( (N) = 97 \) with an average (mean) of 84.07 and standard deviation (standard deviation) = 5.743

The descriptive results of the technology variable \( (X_7) \) are explained by the number of cases \( (N) = 97 \) with an average (mean) of 5.58 and the standard deviation (standard deviation) = 2.281

Descriptive results of the time variable \( (X_8) \) are explained by the number of cases \( (N) = 97 \) with an average (mean) of 72.84 and standard deviation (standard deviation) = 17.138

Descriptive results of the information variable \( (X_9) \) are explained by the number of cases \( (N) = 97 \) with an average (mean) of 3.61 and the standard deviation (standard deviation) = 1.160

### Table 3.2 Model Summary

| Model | R     | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------|----------|-------------------|---------------------------|
| 1     | .963  | .927     | .919              | .06120                    |

a. Predictors: (Constant), Information, Market, Time, Money, Technology, methods, Materials, Machine, Man

b. Dependent Variable: Produktiviti

### Table 3.3 ANOVA

| Model | Sum of Squares | Df  | Mean Square | F      | Sig. |
|-------|----------------|-----|-------------|--------|------|
| 1     | Regression     | 4.107 | 9    | .456 | 122.168 | .000 |
|       | Residual       | .325 | 87    | .004 |        |      |
| Total |                | 4.432 | 96   |      |      |      |

a. Predictors: (Constant), Information, Market, Time, Money, Technology, methods, Materials, Machine, Man

b. Dependent Variable: Produktiviti

The results of the ANOVA test in this section displayed the results obtained are the value of \( F = 122.168 \) with the level of probability sig. 0.000. Because the probability (0.000) is much smaller than 0.05, the regression model can be used to predict productivity.
Table 3.4 Coefficients

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|----------------------------|---------------------------|---|------|
|       | B   | Std. Error | Beta |      |     |
| 1     | 1.625 | .126 | 12.944 | .000 |
| Man   | -.079 | .005 | -2.569 | -14.733 | .000 |
| Money | 1.314E-9 | .000 | 1.933 | 12.774 | .000 |
| Materials | .015 | .021 | .051 | .723 | .472 |
| Machine | -.039 | .019 | -.159 | -2.004 | .048 |
| Methods | -.155 | .011 | -.641 | -14.149 | .000 |
| Market | .000 | .002 | .003 | .065 | .948 |
| Technology | .034 | .004 | .357 | 7.537 | .000 |
| Time | -.002 | .001 | -.159 | -3.413 | .001 |
| Information | .028 | .010 | .154 | 2.987 | .004 |

a. Dependent Variable: Productivity

Figure 3. Research Models The Effect Of Production Factors On Productivity Batik SME’s

The results of the Coefficients test, in this section stated values (constant) = 1.625 and the value of B man = -0.079, money = 1.314E-9, materials = -0.015, machine = (-0.039), methods = -0.155, market = 0.000, technology = 0.034, time = -0.002, information 0.028 and the price of t-count and significance level =. From the Coefficients table, the simple regression calculation equation is obtained: Y = a + bX = 1.625 + (-0.079) X₁ + 1.314E-9X₂ + (-0.015) X₃ + (-0.039) X₄ + (-0.155) X₅ + (0.000) X₆ + 0.034X₇ + (-0.002) X₈ + 0.028X₉. Note: Constant (a) of 1.625 states that if there is no x variable, then productivity is 1.625. Regression coefficient of man -0.079, money 1.314E-9, materials -0.015, machine -0.039, methods -0.155, market 0.000, technology 0.034, time -0.002, information 0.028 states that each addition (due to the + sign) one point to the variable x is predicted to increase the productivity sector by man -0.079, money 1.314E-9, materials -0.015, machine -0.039, methods -0.155, market 0.000, technology 0.034, time -0.002, information 0.028. Vice versa. The + sign represents the direction of the prediction in the same direction (linear).

Test the Significance:
- T test to test the significance of constants and dependent variables (productivity)
- Regression equation \( Y = a + bX = 1.625 + (-0.079) X₁ + 1.314E-9X₂ + (-0.015) X₃ + (-0.039) X₄ + (-0.155) X₅ + (0.000) X₆ + 0.034X₇ + (-0.002) X₈ + 0.028X₉ \), will then be tested whether
it is valid to predict the dependent variable, then the significance testing is done whether the variable cost \( x \) can really predict productivity in the future.

In this study, the variable Man or Human Resources and significant positive effect on productivity. This is consistent with other studies that show that there is significant influence consisting Resource Quality of Technical Skills, Attitude, Discipline Work and Work Motivation both simultaneously and partially to performance Sentra Small Industrial Craftsmen Ikat Weaving in Lamongan [4]. Judging from several other studies that explain the effect of human variables on productivity, simultaneous results from the production area of labor, seeds and fertilizers have a positive and significant effect on pepper production in Era Baru Village, Tellulimpoe District, Sinjai District. partially, the factors that have a positive and significant effect on pepper production are land area, labor and fertilizer, while the factors that have a positive but not significant effect in Era Baru Village, Tellulimpoe District, Sinjai Regency are seeds [5].

Other studies that explain the man variable show that partially the bonus variable has a significant effect on Productivity, while the Salary variable and the Promotion Variable partially do not have a significant effect on Productivity [6]. Whereas in the research there is a positive and significant influence together from the variables of education, work experience, and gender on the variable work productivity of employees in the production department CV. Karunia Abadi Wonosobo [7]. The results of other studies also indicate that there is a positive effect both partially and simultaneously between wages and work experience on employee productivity in the carving furniture business unit in the Regency [8].

For wage variables, education level / expertise, work ability and work discipline have a significant effect on labor productivity on ongoing construction projects, on the construction of light steel roof housing construction projects in Green Hills, Malang, East Java [9]. For variable labor quality, business capital assistance and simultaneous technology have a significant effect on the productivity of Micro, Small and Medium Enterprises (MSMEs) in Jimbaran [10].

Variable Money or money, this research is also positive and significant effect on productivity. This is also shown by other studies that there is a positive and significant impact on the capital structure of business risk. Also, that the growth strategy has a positive effect on the capital structure. Capital structure negatively affect the performance of the company. Growth strategy a negative effect on the company's performance [11]. Other studies also explain the simultaneous capital, level of education and technology have a significant influence on MSME income [12].

In the industrial sector, capital and labor partially have a positive and significant influence on the production of the woodcarving industry in Ubud, Gianyar Regency. As for the Technology variable, it apparently has no effect because most wood craft production in Ubud, Gianyar Regency uses more human labor than technology, this is because the wood in Ubud shows carvings that cannot be worked by machines [13]. In other studies for capital, raw materials and machine variables also have a positive and significant influence on convection production [14].

Based on the calculation variable coefficients Materials or raw material production supporting it turns out there is no significant effect on productivity. This is in contrast with the results of other studies showing that capital and raw materials direct and significant influence on the production of wood sculpture artisans in the district Sukawati Gianyar Regency. In other words, if capital and raw materials rise, the production increased, too [15]. For Machine or machine variables, shows that there is a significant effect on productivity. The results of this study are supported by other studies that a significant effect on the productivity of the machine. In terms of the engine to the standard time required to process 40 tons of palm fruit bunches was 122.80 Minute sterilizer machine / unit, for
machine thesher / thresher Minute 129.47 / unit, for screw press machine Special 155.16 / unit, and Minutes 125.19 oil purification machine / unit, can improve the optimization of processing capacity of 40.81 tons / hour [16].

Methods based on the variable or method shows that there is a significant effect on productivity. Other studies show the same thing, which affects the quality of management, either directly or moderated by a culture of quality in SMEs in Semarang with numbers sig> 0.05. While it may be partially analyzed some dimensions of quality management and quality culture failed to affect the operational performance [17].

According to the Market or market variables are not significant effect on productivity. Results of other studies indicate that openness to foreign companies and the world economy have a more direct impact on the growth of TFP. The rapid growth in exports as a result of the policy of export-push and combined with the superior performance of Malaysia in allowing more foreign ownership widely explain the largest part of TFP growth during 1980-2000. Malaysia needs to increase TFP from time to time so that the dependence on physical inputs can be reduced [18].

Technology based on the variable significant effect on productivity. This is supported by the results of other studies, in which the accumulation of the average percentage of agricultural technology indicator, giving it an average percentage of 76% are included in the category of "Good" [19]. While the technology variable itself also has a positive and significant effect on the productivity of rice farmers in Mengwi Regency [20].

Variable Time or the time of production there are significant productivity. Results of other studies support these results, where there is a relationship between time management (X2) with customer satisfaction. In addition there is a relationship between the quality of work (X1) with contentment customer. There is a relationship between the quality of work and time management jointly on customer satisfaction [21].

From the calculation of the coefficient between the variable information is significant effect on productivity. These results are supported by other studies that show that Information Technology plays an important role to achieve a competitive advantage in the practice SCM SME organizations in India [22]. The level of use of Information Technology and supporting facilities has a very significant effect on overall company performance [23].

4. Conclusion
From the results of the description in the previous section on the influence of man, money, materials, machines, methods, market, technology, time, information on the productivity can be concluded that the variable man, money, machines, methods, technology, time, information positive and significant impact on the productivity. In partial, man, money, machines, methods, technology, time, information has a positive effect and significant effect on productivity. However on materials and market variables have a significant effect. The coefficient of determination (R-Square) The calculation results of the coefficient of determination for 0927 or 92.7%.

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