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Does Education Matter for The Development of Creative Industry Enterprises? Evidence From Jember Regency

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A B S T R A C T

Jember Regency is one of the regional areas in East Java Province, famous for its creative industry potential. This study aims to determine the growth of creative industry enterprises and analyze capital's role in supporting the development of creative industry institutions in the Jember Regency. Based on the research results using OLS processing, creative industry players in creative industry areas in the Jember Regency have not built with their capital. The profit earned from the creative industry can contribute to regional income and product turnover > 5 times a month. The variable number of workers and education (at all levels) positively affects the growth of creative industry enterprises in the Jember Regency. In addition, the amount of capital and age does not affect the growth of creative industries enterprises in the Jember Regency. The research results show the government's role as a supporter is still not optimal, and businesses haven't incorporated or have legality. Communication and cooperation between the regional creative industry and the central government are stringent. Strategies for developing business capacity-building policies and access to financing, increasing the creation of start-up opportunities, and increasing the added value of social enterprises can be applied to support the development of creative industries.

Keywords: *Creative Industry, Education, Workers, OLS, Jember Regency*
JEL Classification Code: *E2, E6, P3*

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INTRODUCTION

The existence of social capital has been shown to significantly increase the productivity of regions in Indonesia (Juhro et al., 2022). This is because the reality of social capital is a foundation for managing social relations in society, government, education, and public policy. Several studies have identified the role of social capital from various aspects, such as its impact on improving education (Putro et al., 2022); Lenkewitz & Wittek, 2022; Fu et al., 2019), increasing economic activity(Aritenang, 2021; Rahajuni et al., 2019), agricultural productivity(Daulay & Sanny, 2019; De Grandpré et al., 2022; Kehinde et al., 2021), and improving the quality of sustainable economic growth (Auliah et al., 2022; Hashmi, 2022; Prasetyo & Kistanti, 2020). However, few of these studies specifically discuss the role of social capital in micro, small, and medium enterprises (MSMEs) in the creative industries. Therefore, this study aims to fill the research gap by examining the role of social capital on the productivity of MSMEs.

The proof of the hypothesis in this study based on the theories of Romer (1986), Lucas (1988), and Grossman & Helpman (1991), who argue that there is the influence of technological progress originating from innovation as a contributor to productivity, social capital will play an essential role in creating innovation through social relations between economic agents. In this case, interaction will increase the exchange of information so that the performance of each economic agent will improve one another. Social capital positively impacts knowledge creation because it influences the process of combining and exchanging and allows easy access to resources and networks between people (Ha & Nguyen, 2020; McFadyen & Cannella Jr, 2004; Navas et al., 2019). In this case, access to inter-community networks will also reduce the potential for market failures due to information imbalances (asymmetric information) due to monitoring tools, thereby ensuring an efficient allocation of scarce resources to generate knowledge and innovative activities (Arrow, 2000; Jackson & Jabbie, 2020; Kruk et al., 2018).

This study uses primary data from a survey of MSME's creative economy in the Jember Regency. Creative economy villages in Arjasa District, Jelbuk District, Ledokombo District, and Balung District are regional groups with high regional income for the creative sector in Jember Regency. The average income contribution to the creative industry sector is IDR 1,000,000 - to IDR 6,0000,000 per capita to regional GRDP in the tourism and creative industry sectors. These areas have a high potential to foster creativity and innovation in developing the creative economy industry in Jember Regency. Specifically, the areas designated as samples in the study have unique creative economic advantages in each region. Arjasa District is famous for the Jember Fashion Carnival (JFC) Village. Jelbuk District is renowned for the art of Ta'bhuta'an and Buto-buttoans. Ledokombo District is famous for the Tanoker educational tourism village. Moreover, Balung District, famous for its Tutul accessories, has penetrated the world market. Furthermore, researchers will also explore other types of creative economy, such as various culinary delights, souvenirs, homestay facilities, and others available in the sample areas.

In another study, researchers will research by proposing a theoretical solution package tested qualitatively and quantitatively for its effect using econometric software. The results of purely qualitative research should be followed up by examining regional regulations and active policies during the research period. This stage has the potential to cause a blurry description of research results. However, by examining the results of multiple linear regression, we can see that the results are more empirical, and the conclusions obtained

will be more complex than those of other studies. Researchers can evaluate the parts that are lacking and that need to be developed in research. Policy elements have a dynamic variable nature, which can change due to certain phenomena. Using a quantitative approach from the results of the interviews, which were then analyzed, researchers can easily conclude the determining factors for the success of the development of creative industries in Jember Regency. Departing from the shortcomings of previous research and further development, the findings of this study are special compared to those of other studies.

This study aims to 1) analyze the determinants (macro and micro-economic business growth of creative industry enterprises in Jember Regency and 2) analyze the role of social capital in the institutional development of creative industries in Jember Regency. This research will have implications for policies and recommendations so that research partners and industrial players in the sample areas can jointly renew a system that previously did not work optimally. The research elements involved include institutional factors, service factors, government policy or program factors, innovation factors, and the sample's community openness to technological advances.

Involving the role of institutional factors, policy factors, and analysis of innovation factors as research elements can encourage development and various determining factors that influence the business growth of creative industry enterprises in Jember Regency. The combination of deciding factors, involvement of elements, and specific research objects in the creative industry has complex conclusions and images compared to previous research. Apart from that, the number of studies and research themes that address the district's policies, institutions, and creative industries are few and far between. This research background is what encouraged researchers to conduct this research.

To find out the role of institutional factors, policy factors, and analysis of innovation factors as research elements that can encourage development and various determining factors that influence the business growth of creative industry enterprises in Jember Regency, a natural analysis and description are needed between theoretical and empirical. The Cobb-Douglass production theory is a macroeconomic theory that is appropriate and suitable for describing the role of each element used in this study.

The production function is defined as a technical relationship between input and output, where this relationship shows output as a function of input. The production function in several discussions of production economics is of great interest. It is essential because the production function can directly explain the relationship between production factors and production itself, and the relationship can be understood more easily. The production function can determine the relationship between the variables explained (Q) and the variables that explain (X) and, at the same time, can decide on the relationship between the explanatory variables (between X and other X).

The inputs used in the production process include capital, labor, and others. In economics, output is denoted by Q, while the inputs (production factors) used usually (for simplification) consist of capital input (K) and labor (L).

One form of non-linear model is the Cobb-Douglas production function. The Cobb-Douglas production function involves two or more variables; one variable is called the dependent variable (the variable explained, Y), and the other is called the independent variable (the variable that explains, namely X). In this study, Y as profit and turnover each have a role in defining the results of the combination of the relationship between capital, labor, age, and education in the sample of creative in-

dustry enterprises in Jember Regency.

METHODOLOGY

The model used in this study is based on the Cobb-Douglas production function as follows:

$$Y = f(K, L)$$

Where Y is total production, K is capital, and L is the amount of labor. In the theory of the production function, capital and labor will have a positive effect on total production. Then, the equation expands into the following model:

$$lnProfit_i = \beta_0 + \beta_1 lnCapital_i + \beta_2 lnLabour_i + \beta_3 AGE_i + \beta_4 EDUC_i + \epsilon_i$$

$$lnOmzet_i = \beta_0 + \beta_1 lnCapital_i + \beta_2 lnLabour_i + \beta_3 AGE_i + \beta_4 EDUC_i + \epsilon_i$$

Profit is the profit earned by MSMEs in one month, while turnover is the total turnover obtained in one month. These two variables were tested to determine the performance indicators of MSMEs in the Jember Regency. Meanwhile, capital is the amount of initial capital issued, labor is the number of workers owned by MSMEs (if the number of workers is zero, then we assume that the number of workers is 1, who is the business owner), AGE is the age of the business since it founded. EDUC is the level of education that includes Not Schooling, Elementary, Middle School, High School/Vocational School, and Higher Education. The coefficients in the model are estimated using Ordinary Least Square (OLS) with Robust-Standard Errors with Heteroscedasticity alleviation.

Several assumptions must be applied in OLS estimation to ensure a BLUE (Best Linear Unbiased Estimator) estimator. This test includes multi-collinearity, heteroscedasticity, strict homogeneity, and normality tests.

If a single independent variable and a single independent variable are used to explain variations, then the model is known as a simple regression model (Dogde, 2008). It is called a multiple regression model if multiple independent variables are used to explain the variation in a single dependent variable (Schober & Vetter, 2021). Multiple regression is an appropriate analysis method when the research problem involves a single metric-dependent variable that is presented to be related to two or more metric or nonmetric-independent variables (Hazra & Gogtay, 2017). It can be linear as well as non-linear regression.

Multiple regression helps predict changes in dependent variables in response to changes in independent variables (Sinharay, 2010). This objective is most often achieved through the rule of least squares. The main aim of regression analysis is to explain the variations in one variable (dependent variable) based on the variations in one or more variables (independent variables) (Ali & Younas, 2021). The form of the regression equation could be linear or non-linear.

The multiple linear regression model is:

$$Y=\beta_0+\beta_1 X_1+\beta_2 X_2+\cdots+\beta_n X_n+e_i$$

β_0 is the intercept term, β_i is the slope of Y on the dimension X_i and β_1, β_2,..., β_n called “partial” regression coefficients.

The magnitudes (and even signs) of β_1,β_2, ..., β_n depend on which other variables are included in the multiple regression model might not agree in magnitude (or even sign) with the bivariate correlation coefficient between X_i and Y.

The difference between the observed value of the dependent variable (y) and the predicted value ($\hat{y}$) is called the residual (e) (Zhou et al., 2021). Each data point has one residual (Pant & Rajput, 2019).

$$residual = observedvalue - predictedvalue$$

$$e = y - \hat{y}$$

$$SSE = \sum_{i=1}^{n} (y_i - \hat{y}_i)^2$$

Here $\hat{y} = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \cdots + \beta_n X_n$

$$\sum \hat{u}_i^2 = \sum (Y_i - \hat{\beta}_1 - \hat{\beta}_2 X_{2i} - \cdots - \hat{\beta}_k X_{ki})^2$$

A residual sum of squares (RSS) is a statistical technique used to measure the amount of variance in a data set that a regression model does not explain (Kiebel et al., 2007). The residual sum of squared is one of many statistical properties enjoying a renaissance in the financial market. Ideally, the sum of squared residuals should be a smaller or lower value in any regression model.

Assumptions of multiple linear regression. Linear regression is an analysis that assesses whether one or more predictor variables explain the dependent (criterion) variable (Schreiber-Gregory et al., 2018). The regression has five key assumptions (Gujarati & Porter, 2009): linear relationship, multivariate normality, no or little multi-collinearity, no auto-correlation, and homoscedasticity. The properties of a good estimator are unbiasedness, consistency, sufficiency, and efficiency.

Gauss Markov Theorem states that in a linear regression model where errors have expectation zero (Hansen, 2022), they are uncorrelated and have equal variances (Hallin, 2014). The best linear unbiased estimator (BLUE) of the coefficients is given by the ordinary least squares (OLS) estimator(Taboga, 2021).

Here, “best” means giving the lowest variance of the estimate compared to other unbiased, linear estimators.

The Gauss-Markov assumptions concern the set of error random variables (ε_i). They have mean zero is $E[\varepsilon_i]=0$. They are homoscedastic; that is, all have the same finite variance $\mathrm{var}(\varepsilon_i)=\sigma^2$. Distinct error terms are uncorrelated $\mathrm{cov}(\varepsilon_i,\varepsilon_i)=0,\forall i\neq j$ (no autocorrelation). The explanatory variables are uncorrelated with each other (no multi-collinearity). The model is completely specified (no specification bias). The model is precisely identified (no identification bias).

The multicollinearity test determines whether there is a significant correlation between the independent variables in a particular multiple-linear regression model (Shrestha, 2020). If there is a strong correlation between the two independent variables, the relationship between the independent and dependent variables becomes unstable. The multi-collinearity test is derived using the Variance Inflation Factor (VIF) and Tolerance indices and the magnitude of the correlation between the independent variables (H. Y. Kim, 2019). Any regression model can be considered multicollinear if it has a VIF value of no more than ten and a tolerance of no less than 0.10 (D. Gujarati, 2015).

The heteroscedasticity test aims to identify whether the variation of the residuals in the regression model changes between different observations (Nawawi, 2020; Raza et al., 2023; Sari et al., 2022; Syahputri et al., 2022). Examining the histogram between the expected values of the dependent variable is one technique to determine whether there is variance. The points above and below 0 on the y-axis are not stretched; there are no clear samples, variable variance, or variable variance (Ross, 2014). If the observed residual variance is constant from other observations, or if the regression model should not have variable variance (J. H. Kim, 2019).

The autocorrelation test is applied to assess whether there is a correlation between disturbances in period t and disturbances in the previous period in linear

regression (Oktavia et al., 2024). Autocorrelation test. Durbin Watson is used in this test. According to Navianti et al. (2023), autocorrelation arises because sequential observations correlate over time. This phenomenon is caused by the fact that the residuals are not free from one observation to the next (Dormann et al., 2007).

The regression model is linear in the coefficients, correctly specified, and has an additive error term. The error term has a zero population mean $E(\varepsilon_i)=0$. All independent variables are uncorrelated with the error term $(E(X_i,\varepsilon_i)=0)$ for each independent variable X_i. Errors are uncorrelated across observations.$Cov(\varepsilon_i,\varepsilon_j)=0$ for two observations *i* and *j* (no serial correlation). The error term has a constant variance $Var(\varepsilon_i)=\sigma^2$ for every *i* (no heteroskedasticity). No independent variable is a perfect linear function of any other independent variable (no perfect multicollinearity). The error terms are normally distributed.

Assumption 1: linearity, Correct Specification, and Additive Error. Remember that the regression model as $Y_i = E\left[\frac{Y_i}{X_i}\right] + \varepsilon_i$

Assumption 1 says three things:

The regression model has an additive error term. That is, can write the regression model like $Y_i = E\left[\frac{Y_i}{X_i}\right] + \varepsilon_i$.

That's the additive error part. This is not very restrictive. The regression model is always written this way if we define the error as $\varepsilon_i = Y_i - E\left[\frac{Y_i}{X_i}\right]$.

The regression is linear in parameters. That is, $E\left[\frac{Y_i}{X_i}\right]$ is linear in parameters.

Example: $E\left[\frac{Y_i}{X_i}\right] = \beta_0 + \beta_1 X_i + \beta_2 (X_i)^2$

The regression is correctly specified. That is, the correct functional form for $E\left[\frac{Y_i}{X_i}\right]$. $E\left[\frac{Y_i}{X_i}\right]$ is not only linear in parameters but has all the right X's on the right-hand side, squared them if they should be squared, and took logarithms if they should be in logarithms, etc.

Assumption 2: $E(\varepsilon_i)=0$. This is a pretty weak assumption. All it says is that the regression function has no expected error. If a particular error value (e.g., if$E(\varepsilon_i)=5$), then (part of) the error term would be predictable, and it could just add that to the regression model. Example: suppose $Y_i=\beta_0+\beta_1 X_i+\varepsilon_i$ and $E(\varepsilon_i)=5$. Then $E(Y_i/X_i)=E(\beta_0+\beta_1 X_i+\varepsilon_i)=\beta_0+\beta_1 X_i+E(\varepsilon_i)=\beta_0+\beta_1 X_i+5$. It could just define a new intercept $\beta_0^*=\beta_0+5$ and a new error term $\varepsilon_i^*=\varepsilon_i-5$. Then, a new regression model $Y_i=\beta_0^*+\beta_1 X_i+\varepsilon_i^*$ that satisfies Assumption 2.

Assumption 3: $Cov(X_i,\varepsilon_i)=0$. Assumption 3 to be satisfied for all the independent variables X_i. When assumption 3 is satisfied, X_ii is exogenous. When assumption three is violated, X_i is endogenous. The reason endogeneity is a problem is ε_i Can't be observed. If $Cov(X_i,\varepsilon_i)\neq 0$ and X_i is in the model, then OLS attributes variation in Y_i to X_i that is due to ε_i varying with X_i. That is, Y moves around when ε moves around. The estimator should not "explain" this variation in Y using X because it is due to the error, not to X. But if Cov(X,ε)≠0, then when εmoves around, so does X. When X and Y move together, the least squares estimator, therefore, "explains" some of this variation in Y using X. But really, the variation comes from ε. Consequently, an estimate of the coefficient on X, i.e.,β is biased because it measures the effect of X and ε on Y. Sign's assumption three is satisfied and relies on economic theory (and some common sense) to tell us that our independent variables are exogenous (there are also some tests available but not very convincing).

If assumptions 1-3 are satisfied, then the least squares estimator of the regression coefficient is unbiased. Suppose the simple linear regression: $Y_i=\beta_0+\beta_1 X_i+\varepsilon_i$ then can write the least squares estimator of β_1 as:

$$\hat{\beta}_1 = \frac{\sum_i (X_i - X)(Y_i - Y)}{\sum_i (X_i - \bar{X})^2}$$

$$= \frac{\sum_i (X_i - \bar{X})(\beta_0 + \beta_1 X_i + \varepsilon_i - \beta_0 - \beta_1 \bar{X} -}{\sum_i (X_i - \bar{X})^2}$$

$$= \frac{\sum_i (X_i - \bar{X})(\beta_1 (X_i - \bar{X}) + \varepsilon_i - \bar{\varepsilon}}{\sum_i (X_i - \bar{X})^2}$$

$$= \frac{\beta_1 \sum_i (X_i - \bar{X})^2}{\sum_i (X_i - \bar{X})^2} + \frac{\sum_i (X_i - \bar{X})(\varepsilon_i - \bar{\varepsilon})}{\sum_i (X_i - \bar{X})^2}$$

$$= \beta_1 + \frac{\sum_i (X_i - \bar{X})(\varepsilon_i - \varepsilon)}{\sum_i (X_i - \bar{X})^2} \Longrightarrow E(\hat{\beta}_1)$$

$$= \beta_1$$

Assumptions 4 and Assumption 5: $Cov(\varepsilon_i,\varepsilon_j)=0$ and $Var(\varepsilon_i)=\sigma^2$. If these assumptions are violated, the errors are serially correlated (violation of Assumption 4) and heteroskedastic (violation of Assumption 5). The least squares estimator is unbiased even if these assumptions are violated. But it turns out there are more efficient estimators than least squares if the errors are heteroskedastic and/or serially correlated.

Assumption 6: No perfect collinearity. This is a technical assumption. With perfect collinearity, one or more independent variables is a perfect linear function of others. Perfect collinearity is problematic because the least squares estimator cannot separately attribute variation to the independent variables. The solution is to exclude one of the (redundant) variables from the model.

When these six assumptions are satisfied, the least square estimator is BLUE. Always use least squares to estimate the linear regression model. Suppose all the requirements for examining a regression model have been met. In that case, the proposed hypothesis is tested simultaneously (F test), and a significance test is carried out to determine whether it is accepted (T-test).

The F test is used to assess the significance of the influence of each independent variable on the dependent variable (Sureiman & Mangera, 2020). This concept is emphasized by Theofani & Sediyono (2022), who states that the validity of this hypothesis is tested through F statistics. If the p-value generated from the F test is smaller than the 5% significance level, then the dependent variable is considered to be influenced by all independent variables simultaneously. Conversely, suppose the p-value generated from the F test exceeds the 5% significance limit. In that case, it can be concluded that there is insufficient evidence to say that the independent variables simultaneously influence the dependent variable.

The t-test is used to determine whether the independent variables in the regression model partially have a significant effect on the dependent variable (Mishra et al., 2019). According to Aslam (2024), it is the decision to make a t-test. If the p-value is less than the 5% significance level or the t-count is greater than the t-table, it can be concluded that the independent variable affects the dependent variable independently. Suppose the p-value is more than the 5% significance level, or the t-count is smaller than the t-table. In that case, it can be concluded that there is insufficient evidence to say that the independent variable individually affects the dependent variable.

The coefficient of determination (R2) essentially measures how far the model can explain the variation of the respondent variable. Using the adjusted R square or Adjusted R square (R2) is better for multiple linear regression, but it is harmful. Then, the adjusted R square (R2) value is considered zero (Chicco et al., 2021). This coefficient of determination (R2) aims to see how much or how little the independent variable influences the dependent variable.

RESULTS AND DISCUSSION

Based on the research results, a Likert scale was used in five sub-districts in Jember Regency. Creative industry en-

terprises in Jember Regency are known to be dominated by middle-income industry players and develop their creative economy in crafts, fashion, painting, and printing. Creative industry enterprises in Jember Regency tend to choose the craft creative economy sector because their market share makes it easier to find consumers in the domestic market. In addition, creative industries in the craft sector are more likely to be related to souvenirs if connected with the Jember Regency. Which is famous for its local culture; choosing to do business in the creative craft industry is the right choice. The potential to develop and innovate following consumer demand can be a manageable amount of capital. Depending on market demand, innovations and ideas will emerge in packaging or newer forms of handicrafts or additional knick-knacks.

Following the elaboration of the concept and research design that has been adapted to the KerRisDiMas MPES research activity roadmap, discussion of the role of macroeconomic policies and social capital in the institutional development of creative industries in Jember Regency can begin with the elaboration and analysis of the processing results using a Likert scale. Then, the analysis and discussion will continue with the processing results using OLS on each variable used to analyze the role of social and institutional capital in developing creative industries in the Jember Regency.

Descriptive Analysis

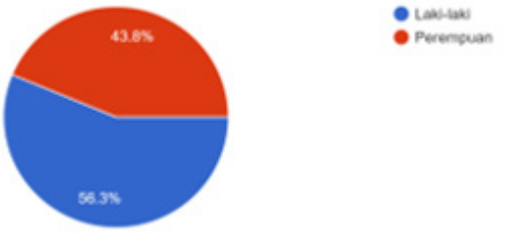
The data used in this study is primary data from creative industry enterprises in the Jember Regency. Using snowball sampling, 46 out of 48 respondents gave answers that met the requirements for analysis.

Entrepreneurs in the creative industry are filled mainly by men, as much as 56.3%, while women are 43.8%.

Data from the research results show that the male gender dominates creative industry entrepreneurs in the Jember Regency. The dominance of male creative industry enterprises is often associated with symbols of persistence, hard work, and never giving up. The need for creative industry enterprises in the Jember Regency can be identified by conflicting work assignments who prefer to take care of the household or other businesses that do not have long working hours. Domination by sex is seen in Figure 1.

ther factors that cause male domination as creative industry enterprises in the Jember Regency are psychological. Men and women analyze a problem differently, and women tend to make decisions emotionally without using the dominant side of logic. Making decisions and solving problems using this thinking often makes the creative industry develop slowly. Factors weighing too much on one strategic plan and its widening impact can explain why women's gender contributes less actively to the creative industry sector than men in the Jember Regency.

The direction of one-way thinking or branching thinking influences the formation of patterns of cooperation within the team. Men tend to focus on the results of



Source: Primary Data, 2023

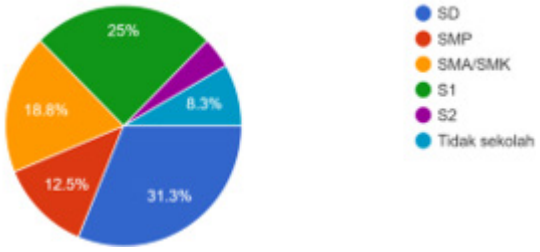
Figure 1

Contribution of Creative Industries Actors Based on Gender in Jember Regency

work individually or in teams. In contrast, women usually take a persuasive approach, which means it takes much longer to achieve something in a team. This can also be another factor that explains why women are of a lower gender than men in the creative industries sector, which requires ideas and innovations that are sustainable with changing market demands.

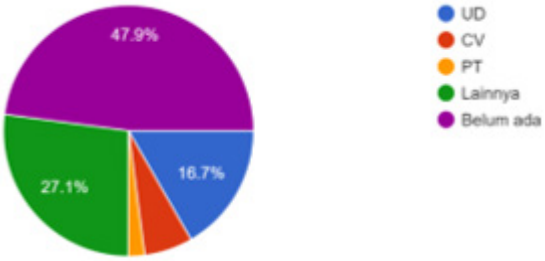
business way can also affect the formation of social capital. However, the data in Figure 2 also shows that education at the undergraduate level is the second level of education that dominates the last level for creative industry enterprises in the Jember Regency.

The right solution to build social capital and develop it based on these factors



Source: Primary Data, 2023

Figure 2.
Contribution of Creative Industries Actors Based on Level of Education in Jember Regency



Source: Primary Data, 2023

Figure 3.
Contribution of Creative Industries Actors Based on Business Legality in Jember Regency

Among the factors that explain the reasons for male domination in the creative industries in Jember Regency, a conclusion can be drawn that social capital affects this domination. One of the ways to form excellent and quality social capital is determined by the educational factor. Education can start from an educational status. Figure 2 shows that creative industry enterprises in Jember Regency are creative industry enterprises whose last educational status is elementary school. The demand to work fast and shape the way of the future in a

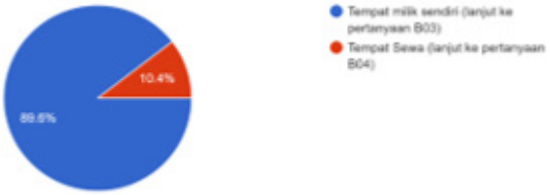
is through education. One way is to assist in the willingness of creative industry enterprises in Jember Regency to attend public lectures or short courses that can increase their knowledge about the market, market developments, and market demand for creative industries domestically and internationally. The second way can also be pursued by combining skills and expertise. This method aims to strengthen and reinforce the combination of education level and capabilities to be more honed and sensitive to economic development.

The third way of building social capital can be done through group training. Learning groups can be the right choice to increase the results of groups of creative industry actors, and feelings/empathy between creative industry enterprises in the Jember Regency can unite. Community relations are no less critical for building social capital because it is known that social capital refers to the benefits and opportunities that a person gets within the membership of a particular social entity, so forming groups of associations or groups of creative industry enterprises can be the right solution.

used for selling product turnover will decrease.

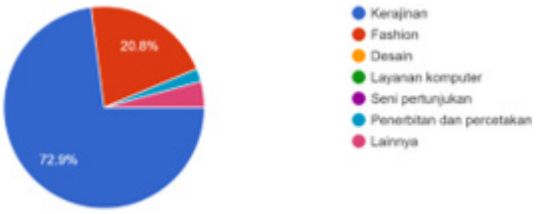
As a result, it is difficult for industrial business actors to occupy a profitable period in the long term. Regional government apparatus can help or advise creative business actors to legalize their business so that the government's role as a catalyst appears in creative industry institutions in the Jember Regency.

Types of business ownership owned by creative industry enterprises in the Jember Regency are dominated by single persons. The creative industries in Jember Regency tend to use their place



Source: Primary Data, 2023

Figure 4.
Contribution of Creative Industries Actors Based on Place Ownership in Jember Regency



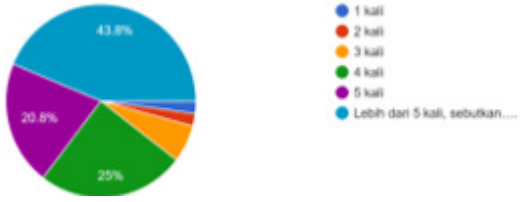
Source: Primary Data, 2023

Figure 5.
Contribution of Creative IndustriesActors Based on The Creative Sector in Jember Regency

Figure 3 shows that the creative industries in Jember Regency tend to be dominated by trade unit (UD) business forms. A trading unit (UD) is a company run by only one individual without any accountability from other parties. This company is classified as micro because it does not require significant capital. In addition, the trading unit does not have a division of wealth, which means that if the creative business actor suffers a loss, the capital

of business. That way, the money from the sale goes into something other than large spending posts to pay for the rent. However, in Figure 4, only some creative industry enterprises in Jember Regency choose to rent a place to carry out their creative industry—one factor influencing the amount of capital creative industry entrepreneurs own.

The type of creative industry sector also determines the choice of place of

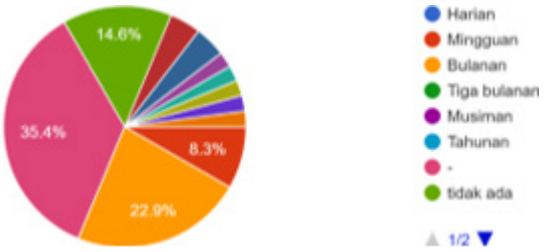


Source: Primary Data, 2023

Figure 6.
Contribution of Creative IndustriesActors Based on Product Sales Turnover in Jember Regency

Source: Primary Data, 2023

Figure 7.
Contribution of Creative IndustriesActors Based on an Acquisition of Capital in Jember Regency



Source: Primary Data, 2023

Figure 8.
Contribution of Creative Industries Actors Based on Capital Information in Jember Regency

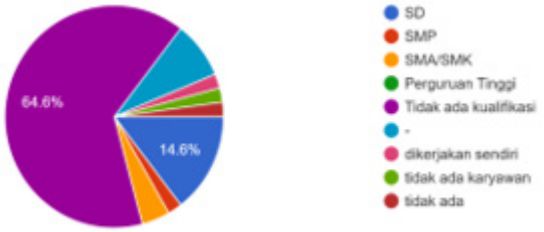
business for the creative industry. If creative industry enterprises choose to pursue business in the creative industry sector in the craft sector (see Figure 5), renting a place is a good choice, especially if this is the beginning of a journey for creative industry enterprises to enter the creative industry. In addition, renting a place to find more consumers can support the development of creative industries in the craft sector. Creative industry enterprises often rent craft shops in strategic locations in tourist areas.

Having a creative industry site for actors developing their creative business can also be an option for industry players because it happens to be in a place close to highway access, near tourism areas, or large business areas with a high level of human mobility. Industry actors in other creative industries are no less the same as those in the craft creative industries in Jember Regency. The right solution is for the local government to immediately provide a place or area for creative industry enterprises close to tourist access and

particular event areas that invite many domestic tourists to Jember Regency.

The data in Figure 6 shows that product or service sales turnover in the creative industries sector is more than five times in one month. Product sales turnover in more than three of these can be affected by changes in marketing methods that often change over time. If creative industry enterprises feel that marketing with the first method is unsatisfactory, they will replace it with other popular methods with start-ups—for example, promotion via social media.

In Figure 7, most capital acquisition or financing comes from one's capital. Furthermore, banks occupy the second position as a place to obtain financing. Creative industry enterprises in Jember Regency often use capital loan services through banks to obtain financing. According to creative industry enterprises, obtaining funds from banks can quickly solve the problem of a lack of financing capital. So, the relationship between creative industry enterprises and banks tends to be more active and close to industry players than

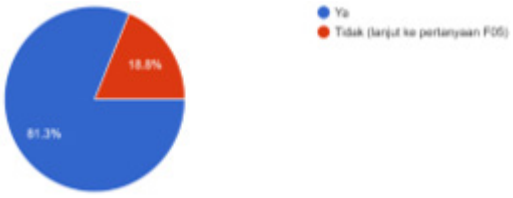


Source: Primary Data, 2023

Figure 9.
Contribution of Creative Industries Actors Based on Minimum Qualifications of Workers in Jember Regency

Source: Primary Data, 2023

Figure 10.
Contribution of Creative Industries Actors Based on The Rental of Production Components in Jember Regency



Source: Primary Data, 2023

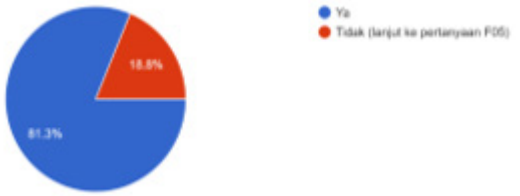
Figure 10.
Contribution of Creative Industries Actors Based on The Rental of Production Components in Jember Regency

local governments, only at certain events where the local government is present amid creative industry enterprises.

Regarding financing, creative industry enterprises tend to refrain from taking loans to finance their creative industries. That means the statement in the previous paragraph about obtaining financing through financing is more supportive of 22.9% of industry players who take monthly loans and 8.3% of industry players who take weekly loans that those who do not take loans tend to use bank institutions for deposits (see Figure 8).

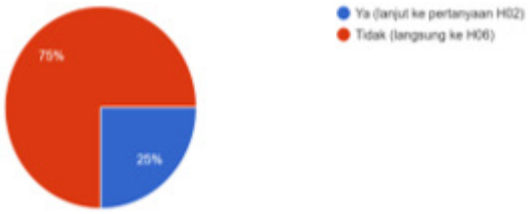
In Figure 10, in the rental of production components in the creative industry sector, building rental occupies the first position in the creative industry production component in the Jember Regency. Based on this condition, creative industry enterprises in Jember Regency prefer to rent a production business place to develop their business. They also usually choose to rent a car to help with their operations. Aims to support the operation and mobility of product sales.

Most creative industry business actors in Jember Regency know the market



Source: Primary Data, 2023

Figure 11.
Contribution of Creative IndustriesActors Based on Knowledge Market Price in Jember Regency



Source: Primary Data, 2023

Figure 12.
Contribution of Creative Industries Actors Based on Government Support in Jember Regency

The development and advancement of creative industries in a region cannot be done without the support of their employees. In Figure 9, employees employed by creative industry enterprises in the Jember Regency tend to have different qualifications. That means creative industry enterprises rely on trust when selecting employees or employees. The social capital factor has entered into this section because trust is one in social capital and institutional theory.

price of products or services. Information and the level of recognition and use of the internet are high among creative industry enterprises in the Jember Regency. Most likely, industry players have social media accounts or are actively seeking information via social media. It explains the percentage figure of 81.3% shown in Figure 11.

As many as 75% of creative industry entrepreneurs in the Jember Regency stated that there was support from the

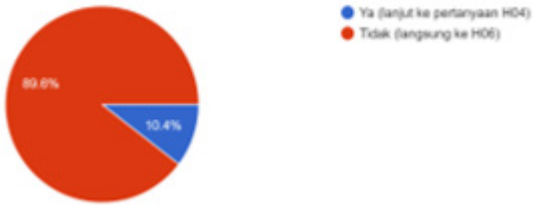
government, and 28% stated that there was no support from the government to develop products or services for the creative industries in which they are engaged. It shows that the government already has a role in the creative industry. However, the role and reach of assistance still need to be well distributed, so Figure 12 shows that 28% of creative industry enterprises still need government support. The solution to this is for the regional government to pay more attention to the issue of the flow of aid channeled to creative industry enterprises so that there are no transaction costs or information asymmetry.

Creative industry enterprises in Jember Regency also stated that 89.6% of all creative industry enterprises stated that they had never received assistance from the government to increase the productivity of creative industry products. In comparison, the remaining 10.4% stated that they had received assistance from the government. See Figure 13. It shows that the government has provided assistance, but not all creative industry enterprises have received it. The influencing factor is that the status or eligibility criteria for businesses to get government assistance need to be revised, so many creative industry entrepreneurs still need assistance from the government. The solution to this problem is for industry players to intensively seek information about the conditions for obtaining government assistance so that engaged, creative businesses receive approval for assistance.

Creative industries that still need to be legal entities also affect the ease of getting assistance. Figure 14 shows that 20.8% of creative industries have legal entities compared to 64.6% of industry players whose businesses are not yet legal entities.

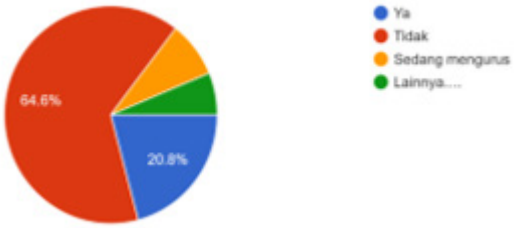
Quantitative Analysis

Table X shows the estimation results using OLS. There are four results in the table. Column (1) shows the estimation results with profit as the dependent variable, similar to column (2) but with a robust



Source: Primary Data, 2023

Figure 13.
Contribution of Creative Industries Actors Based on Government Assistance in Jember Regency



Source: Primary Data, 2023

Figure 14.
Contribution of Creative Industry Actors Based on Business Status in Jember Regency

standard error that controls for heteroscedasticity. Meanwhile, column (3) shows the estimation results with turnover as the dependent variable, similar to column (4) but with a robust standard error that controls for heteroscedasticity.

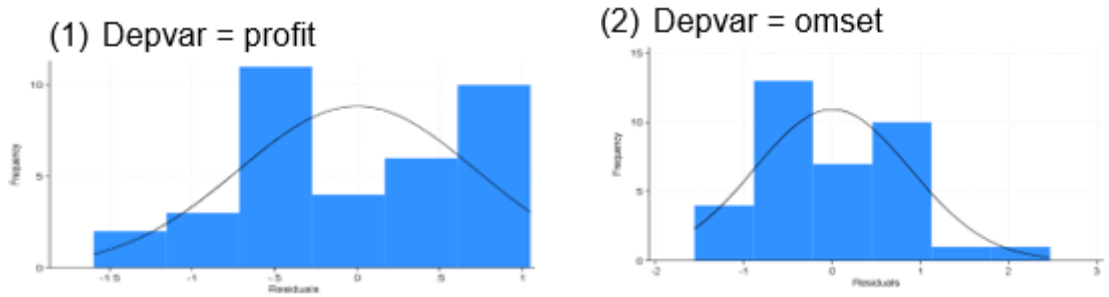
Furthermore, testing the classical assumptions shows that the estimates in columns (1) and (3) are free from omitted variables bias with F-statistics of 0.32 and 0.06 calculated using the Ramsey Reset test so that the assumption of strict exogenous met. Then, the assumption of homoscedasticity using the Breusch–Pagan/ Cook–Weisberg test for heteroscedasticity is indicated by the statistical Chi-square results of 0.00 and 0.49. Furthermore, the Vector Inflation Factor (VIF) value below 10 shows the assumption that there is no multi-collinearity; meanwhile, the error distribution is illustrated in Figure 15 below.

Based on the estimation results in Table X, the coefficient of determination that explains how much the dependent variable varies by the independent variable shows 0.557 for the profit model and 0.489 for the turnover model. It means variation in the profit and turnover variables by 55.7% and 48.9% by the independent variables. Meanwhile, only the variable number of workers and education significantly affected profit and turnover. The variable number of workers shows a coefficient of 0.46 and 0.51 for-profit and turnover,

Table 1.
OLS Estimation Results

	(1)	(2)	(3)	(4)
VARIABLES	**lnprofit**	**lnprofit (robust-SE)**	**lnomset**	**lnomzet (robust-SE)**
Ln CAPITAL	-0.034	-0.034	-0.032	-0.032
	(0.071)	(0.060)	(0.087)	(0.088)
Ln LABOR	0.466***	0.466***	0.510***	0.510***
	(0.128)	(0.135)	(0.158)	(0.141)
AGE	-0.010	-0.010	-0.009	-0.009
	(0.013)	(0.011)	(0.016)	(0.014)
EDUCATION				
No School	**BASE**	**BASE**	**BASE**	**BASE**
Elementary School (SD)	1.507*	1.507**	1.628	1.628**
	(0.811)	(0.703)	(0.998)	(0.648)
Junior High School (SMP)	1.698**	1.698**	1.877*	1.877**
	(0.806)	(0.694)	(0.993)	(0.857)
Senior High School (SMA)	1.465*	1.465**	1.511	1.511**
	(0.751)	(0.666)	(0.925)	(0.558)
College	0.889	0.889	1.121	1.121*
	(0.769)	(0.679)	(0.947)	(0.549)
Constant	13.923***	13.923***	14.433***	14.433***
	(1.087)	(0.961)	(1.339)	(1.141)
Observations	36	36	36	36
R-squared	0.557	0.557	0.489	0.489

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1
Source: Source: Primary data



Source: Primary Data, 2023

Figure 15.
Error Distribution

which means that an increase in the number of workers by 1% will increase profit by 0.46% and increase turnover by 0.51%. This result is consistent with the theory of the production function.

Meanwhile, the education level variable significantly influences profit and turnover. Based on the estimation results, the education level of elementary, junior high, and high school/vocational schools has a significantly different profit level than that of the business owner with no education level. However, there is no difference when the business owner has a higher education level and has never attended school. Meanwhile, consistent results are shown in column (4), where the education level of MSME owners at the elementary, junior high, high school/vocational school, and tertiary levels has a significantly higher turnover rate than MSME owners who do not go to school.

However, the variables of the amount of capital and the age of the business are not significant, so further research is needed; considering that the characteristics of MSMEs are pretty heterogeneous, disclosure of capital in the creative industry is quite complex.

CONCLUSIONS

Several conclusions are drawn from the analysis: 1) The variable number of workers positively affects the growth of creative industry enterprises in the Jember Regency. 2) The variable amount of education, especially education (at all levels), positively affects the growth of creative industry enterprises in the Jember Regency.

Acknowledgments

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