THE RELIABILITY OF ENTREPRENEURIAL PRODUCTIVITY AS DRIVER OF ECONOMIC GROWTH AND EMPLOYMENT

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ABSTRACT

Productivity is not only the key of competitiveness, but also the main driver economic growth and employment. The purpose of this research is to prove that productivity considered as the multifactor productivity in industrial entrepreneurship may serve to be the main driver of regional economic growth and employment. The main source of data of this research is the fundamental primary micro data used to measure the economic growth and employment macro variables. This research employs a path analysis model with one-path and two-path recursive forms. The research results show that the entrepreneurial productivity factor serves to be the main and first driver of regional economic growth and employment, followed by entrepreneurial commercialization and entrepreneurial competitiveness factors.

Keywords: Productivity, Commercialization, Competitiveness, Economic Growth & Employment.

INTRODUCTION

Work opportunity or (employment) frequently becomes the main issue in development. The important role of entrepreneurial education in economic development is to build employment, productivity, economic growth, innovation, competitiveness and source of income, (Chen, 2014; Decker, 2014; Korez, 2016; Khan, 2016; Panigrahi, 2016; Sheila, 2016; Nimeshi, 2017; Tambari, 2017; Chen, 2018; Ogunlana, 2018). The main finding of research conducted by (Gamede, 2019) shows that entrepreneurial education is not completely supported based on the curriculum provisions adopted. Employment created by SMSEs in Indonesia may become an important element serving to be the bridge between economic growth and poverty and unemployment alleviation, (Prasetyo, 2008). In economic theory, the growth of employment in reduction of unemployment is influenced by economic growth and economic development facilities including productivity, competitiveness and commercialization. The main problem is that new employment provision and unemployment reduction is generally hard to achieve, particularly when the economic growth is low and the economic facilities are weak. Creation of employment from economic growth is slowing down with a declining elasticity, (Boateng, 2016). Employment grows more rapidly than economic growth, (Meyer, 2017). State and entrepreneurial competitiveness serve to be the driver of economic growth, (Korez, 2016). The problem is that the tendency of employment creation by small entrepreneurs and SMSEs is frequently deemed to be troublesome, since they are frequently associated with low and less dynamic productivity, (Ellis, 2017). The results of research conducted by (Aparicio, 2018) explain the importance of motivating public policy in creating an environment which may stimulate productive entrepreneurship and expansion from time to time.

Labour productivity and economic growth are the key factors to maintain and improve the competitiveness of countries at global market, (Emsina, 2014). Productivity, besides serving

to be the key of competitiveness, is also the main driving factor to improve economic growth, (Prasetyo, 2017b). Productivity may differ between regions for a number of different reasons. However, how such difference is predicted and may develop over time are also equally important, (Gardiner, 2004). A higher productivity is the synonym of increasing competitiveness, (Wysokińska, 2003). Therefore, regional competitiveness must raise debates of to what extent this discrepancy is harmful to their national competitiveness, and that variation may be overcome/corrected, (Dijkstra, 2011). Productivity may differ between regions for a number of different factors with various argumentations, (ILO, 2011). The concept of productivity variable in this research is measured with a multifactor productivity approach previously tested through a concept of standardization and commercialization, (Prasetyo, 2017a; 2017b). Meanwhile, the said determinant or reliability of competitiveness in the article is interpreted as industry's capability in generating goods and services to fulfil market/customers' need and maintaining the level of efficiency, effectiveness and adaptability to local, domestic and export demands. Therefore, the urgency and novelty of the variable's operational limitation are that these fundamental micro data may be used to measure macroeconomic variable. The argumentation is that, besides more empirical, the information obtained is also deemed more relevant as an explicit choice to prevent the weaknesses of macroeconomic modelling in case of big crisis. The empirical investigation makes it an important factor of economic growth. Therefore, developing countries must concentrate on R&D for sustainable economic growth, (Khan, 2015).

ILO, (2011) concludes that the issues of descent employment and poverty throughout regions may be overcome through productivity growth, improving the industries' competitiveness and increasing the number of decent employments. According to ILO (2011), increasing productivity may cause loss of employment in some sectors, for example, because of a change in labour efficient technology. However, in the long run, there will be no trade-off needed between productivity growth and employment creation. Companies which become more competitive by improving their productivity are also in a better position in creation of new employment. The advantage of productivity may also work through macro economy since employment creation in developing sectors counterbalances the loss of employment in declining sectors. Whether or not this is the problem, they mostly depend of the environment where the companies operate, (ILO, 2011). On the other hand, technology innovation commercialization is deemed the key component in survival, competitiveness, and decent employment. The concept of entrepreneurial commercialization in this research is assumed to help the growth of new employment creation. The main problem is how productivity, competitiveness, and entrepreneurial commercialization of creative industries in this research may drive regional economic growth and creation of employment.

LITERATURE REVIEW

The early entrepreneurial theory is developed by Schumpeter (1934), assuming that entrepreneur is an innovator that adds new combination. This combination brings developed products to the market and eventually stimulates economic growth. Schumpeter, as the founder of entrepreneurship, explains that entrepreneur is the key figure in Schumpeter's analysis on development process. Schumpeter's theory introduces two effects of development process. First, according to refugee effect, or push effect, unemployment may encourage establishment of new companies (entrepreneurships). Second, Schumpeter effect states the fact that new entrepreneurship may reduce unemployment. Schumpeter's two effects are applicable in the long run. The results of Schumpeter's empirical research greatly highlights interaction between new

entrepreneurships, economic growth and employment, (Aubry, 2015; Langroodi, 2017). In addition, Neo-Schumpeterian modern approach has proven the importance of a change in national economic structural innovation technology for economic development, (Bazhal, 2016).

Current entrepreneurial ecosystem theories have arisen as popular concept in entrepreneurial policy and practitioner's research, and as a regional economic development strategy which is based on creation of environment which supports and grows new innovative entrepreneurship, (Piazza, 2016, Malecki, 2018, Spigel, 2018). Entrepreneurial ecosystem is a new keyword in research and managerial domains, (Spigel, 2018). Entrepreneurial ecosystem in this research is interpreted as a set of variables (productivity, competitiveness, commercialization, regional economic growth and employment) as the main factors studied, dependent one another and coordinated in such a way, allowing the role as productive entrepreneurship in the field of research. Standard micro theory shows a clear relationship between productivity, wage, production output and demand for labour. This theory also states that; withholding wage rise under productivity growth rate will increase employment, and to obtain full employment, it should be ensured to maintain wage not to exceed productivity growth, (Meager, 2011).

Technology innovation commercialization is considered the key component for the survival, competitiveness, and growth of industrial organization, (Geisler, 2015). However, not all innovations may be commercialized, (Ballot, 2015; Ludmila, 2016). According to Ludmila (2016), to achieve potential success, commercialization potentials are quite useful, since they help minimize risks related to any failure of the whole commercialization processes. Entrepreneurial innovation commercialization is an important element in well-functioning market economy. The main function of commercialization is to be an experiment or choice of strategy in improving entrepreneurial benefits. Entrepreneurial experiment consists of "technical" and "market" experiments, in which entrepreneurship must be conceptualized in its function as innovation system instead of outcome, (Dahlstrand, 2017). Generally, there are two choices of commercialization strategy; competition strategy and cooperation strategy, (Gans, 2013; Marx, 2015). In this case, the competence bloc theory may be employed to model an offering process and innovation commercialization, (Ballot, 2015). This Ballot's micro based theory shows companies and market's endogenous resource allocation. Furthermore, Ballot, (2015) has employed micro based macro model (company) used to explore the dynamics of commercialization process and its implication in the efficiency of dynamic allocation and economic growth. This is a complete economic system model which simultaneously displays the pricing and the amount and growth of endogenous economy.

The productivity theory starts with the following simple concept; the ratio of output per unit input to generate economic growth. Economic growth is an increase of production achieved by a community's economy. In the production function theory, economic growth is created by an increase of input and an increase of productivity. There are a number of ways to measure the productivity, generally with a multifactor productivity (MFP) or total factor productivity (TFP), and labour productivity (LP) or partial productivity, (Gordon, 2015; Goshu, 2017; Moulton, 2018). This research employs the multifactor productivity. The theoretical prediction of the influence of TFP growth on employment is ambiguous and depends on to what extent the new technology is realized in new works, (Pissarides, 2008). The results of researches conducted by Kim, (2017); Levenko, (2018) acknowledge that TFP is one of the most important stimulants to drive economic growth. The results of research conducted by Adak (2009) show a significantly linear relationship between TFP and Economic Growth rate. TFP is the only source of

sustainable long-term economic growth, (Ark, 2015). The research conducted by Erken, (2018) concludes that entrepreneurship is proven to have long term effect in TFP and economic growth. Competitiveness and productivity are closely related. The World Economic Forum defines competitiveness as a collection of factors, policies, and institutions which determines the productivity of an economy and its prosperity level. Labour productivity is a source of middle-term to long-term economic growth, (Jones, 2016; Nakamura, 2018; BCAR, 2018; Nekrep, 2018). The problem is that labour productivity in major developed countries has declined or decelerated in recent years, (Prasetyo, 2017b; Nakamura, 2018). According to Nakamura, (2018) this problem is mainly influenced by deceleration of Total Factor Productivity (TFP). In Japan, the deceleration is influenced by two things; first, technology and ideas are accumulated by research and development (R&D) and management resources like capital and labours are not efficiently used. Second, these resources are inefficiently allocated among the companies. According to Korres, (2003) the declining productivity problem may be explained with deceleration of innovative activities. He/she confirms a close relationship between innovation level and productivity as well as GDP growth.

RESEARCH METHOD

This article employs a recursive formed explorative quantitative descriptive method as its research design. This type of explorative research design aims at explaining ideas and inputs useful to solve economic growth and employment problems which are initially wide and vague to be clearer, narrower and deeper. Therefore, the novelty urgency of this method lies on the use of fundamental microeconomic data in explaining macroeconomic issues in the form of recursive model. The main source of data is derived from fundamental microeconomic primary data (cross-section) with 125 units of doormat creative industrial entrepreneurship obtained with simple random sampling out of the total population of 256 units of entrepreneurial households. The data are collected using survey with questionnaire and structured interview, and observation of the samples. The quality of data is tested before instrument experiment as well as validity and reliability tests. According to the tests, the results may be declared valid and reliable.

The operational definition and measurement dimension of each variable employed in this research are as follows. The main endogenous employment variable (Z) is measured as a ratio of the number of active workers per month to total craftsmen households and number of paid workers. The economic growth variable (Y) is measures as percentage of growth ratio of old product to new product which may averagely be produced before and during the period of this research. Furthermore, the explanatory productivity rate variable (X_1) is measured based on the ratio of index value of multifactor productivity rate of Mudels model focused more on craftsmen household respondents' labour productivity, (Prasetyo, 2017). The competitiveness variable in this article is interpreted as the capability of industry to produce goods and services to meet market's demand and to keep the efficiency level and productivity level high. The competitiveness variable (X_2) is measured as a ratio of general index of doormat industrial efficiency to demand rate index; local, domestic and export demand. The commercialization variable (X_3) is interpreted as a ratio of profit turnover rate to market share faced with income level obtained within 1 year. Based on the operational limitation, the new developed products commercialization in this research have had dimensions of; efficiency, effectiveness, creativity, innovation and adaptability.

This research employs a recursive formed path analysis with one-path and two-path equation systems. The main purpose of using this regression path analysis function is to trace the

real role of the abovementioned explanatory variables. Meanwhile, the meaning of the said recursive formed system structure is that the causal relationship between endogenous variable and explanatory variable is unidirectional. The form of structural model of one-path equation is arranged as follows.

$Z = \rho_{ZX1}X_1 + \rho_{ZX2}X_2 + \rho_{ZX3}X_3 + \rho_{ZY}Y + \varepsilon_1$ …… .. (1)

Furthermore, the forms of structural model of two-path equation are arranged as follows.

$Y = \rho_{YX1}X_1 + \rho_{YX2}X_2 + \rho_{YX3}X_3 + \varepsilon_1$ ……..…….. (2)

$Z = \rho_{ZX1}X_1 + \rho_{ZX2}X_3 + \rho_{ZY}Y + \varepsilon_2$ ……..……. (3)

Meanwhile, the path diagram (Figure 1) of the said two-path equation model in the research article is as follows.

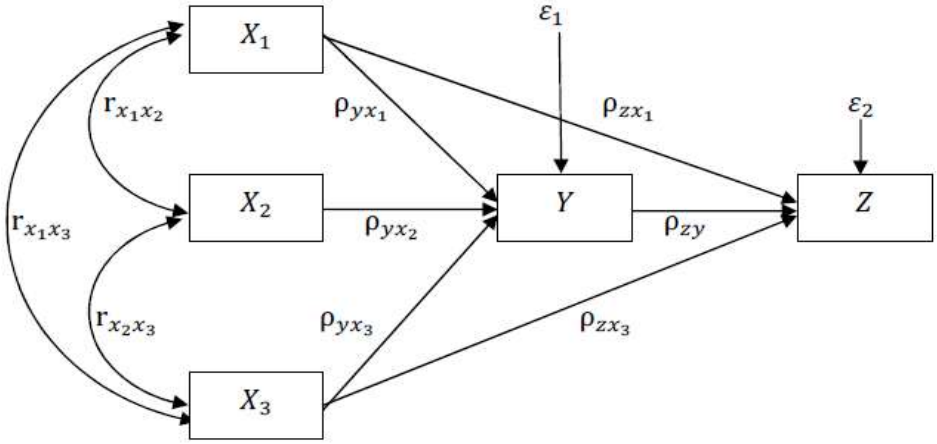

FIGURE 1
DIAGRAM OF TWO-PATH EQUATION RECURSIVE MODEL PATH ANALYSIS

According to the path analysis above, we may examine the direct influence of each explanatory variable separately on non-independent variable, and the indirect influence and its total influence. The advantage of this path analysis model is that it may use standard regression coefficient, thus the coefficient nominal of its predictive function will be more appropriate and more efficient. In addition, the role of path analysis in econometrics may serve to be one solution to reduce multicolinearity cases.

RESULT AND DISCUSSION

One-Path Recursive Model Path Analysis

The success of government's policy to stimulate an increase of economic growth and improve employment or reduce unemployment depends on many factors. The national productivity depends on regional productivity, and regional productivity depends on the industrial and entrepreneurial productivity in its area. Similarly, industrial and entrepreneurial competitiveness in a region is the reflection of regional and national competitiveness. The results of this research based on Table 1 with confidence level of 90% show that all independent variables positively and significantly influence employment. The results of this research conform to Keynes's general macroeconomic theory and supports previous research conducted by Dona, (2018) that economic growth dominantly and significantly influences employment. Based on Table 1, besides regional economic growth (Growth, ER), productivity is seemingly the main

and first driving factor of employment at 0.215 and is significant with confidence level above 95%.

TABLE 1
INFLUENCE OF MULTIPLE LINEAR REGRESSION LINER ON EMPLOYMENT

Model		Unstandardized Coefficients		Standardized Coefficients	t-stk	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.145	0.038		3.772	0
	Productivity (X_1)	0.2	0.089	0.215	2.245	0.027
	Competitiveness (X_2)	0.191	0.108	0.148	1.763	0.08
	Commercialization (X_3)	0.15	0.09	0.162	1.667	0.098
	Growth_ER (Y)	0.366	0.102	0.335	3.572	0.001
a. Dependent Variable: Employment (Z)						

In path analysis, determinant is formally recursive and may be obtained using smaller and simpler matrix determinant like those presented in Table 2. Table 2 shows that the determinant correlation value is 73.22%, regression determinant is 53.68% and standard regression determinant is 52.64%. All of the determinants' values are above 50%, which may be considered good or strong. Generally, the statistical determinant value is 0.5368, which means that the predictor variable variations (productivity, competitiveness, commercialization and regional economic growth) may jointly explain the employment variable of 53.68%, and the remaining 46.32% is influenced by other factors out of the model. Although the out-correlation problem in the cross-section data is irrelevantly discussed, but there is no correlation problem with DW value of 2.156, which means that there is no out-correlation. This is one of the evidences that the recursive model is efficient (BLUE), which means that the recursive model path analysis method is scientifically acceptable and valid. Besides, the benefit of this path analysis model is that it may result in standard regression coefficient value and lower error standard value than common regression, thus the predictive function is more appropriate and efficient.

TABLE 2
RESULT OF ANALYSIS ON THE DETERMINATION OF VARIABLE PREDICTORS ON EMPLOYMENT

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.7322	0.5368	0.5264	0.19131	0.5368	34.606	4	120	0	2.156
a.Predictors: (Constant), Productivity, Competitiveness, Commercialization and Growth_ER, b.Dependent variable: Employment										

Furthermore, to strengthen the argumentation of the question above, the results of this research may be described with a path analysis model like that in Figure 2. In this research, the

path analysis model is generated from the partial matrix correlation model of Karl Pearson Product Moment in Table 3. Based on Table 3, we may view that there is strong, positive and significant partial correlation at level (1-tailed). Based on the results of correlation calculation of Pearson Product Moment in Table 3, the level of relationship between variables used in this research may be examined. Based on the result, there is seemingly strong, positive and significant correlation at level 1% (1-tail), of each explanatory variable (productivity, competitiveness and commercialization and economic growth) with endogenous employment variable. Table 3 still seems to be consistent with the result above, that besides economic growth, the productivity factor still has the first strongest correlation (0.626) compared to competitiveness (0.540) and commercialization (0.623).

TABLE 3
RESULT OF CALCULATION OF KARL PEARSON PRODUCT MOMENT MATRIX COEFFICIENT VALUE

	Equation Model-1	Employment	Productivity	Competitiveness	Commercialization	Growth
Pearson Correlation	Employment (Z)	1	0.626	0.54	0.623	0.658
	Productivity (X_1)	0.626	1	0.653	0.65	0.624
	Competitiveness (X_2)	0.54	0.653	1	0.542	0.489
	Commercialization (X_3)	0.623	0.65	0.542	1	0.718
	Growth_ER (Y)	0.658	0.624	0.489	0.718	1

Source: Primary processed data, (2018). All value correlations are significant at level 0.01 (1-tailed). N=125

If the correlation analysis in Table 3 is associated to the result of regression analysis of path analysis model in Table 1, it strengthens more the evidencing statement that productivity and commercialization serve to be the key to driving an improvement of employment. The results of this research explain the evidence in conformance to the refugee effect and Schumpeter effect theory. The high rate of unemployment resulted from termination of employment in 1998 stimulates new entrepreneurships in the research location (refugee effect). Furthermore, the new emerging entrepreneurships are able to reduce unemployment as a (Schumpeter effect) in the research location. When the unemployment is initially quite high, entrepreneurships with low real wage emerge. The facts of low real wage and no better choice of work stimulate total entrepreneurial productivity factor to rise for better income, which means that these phenomena contributively improve new employment. Therefore, as long as the wage is low, there will be positive relationship between the productivity and the employment in the research location. Therefore, the results of this research conform to the results of research conducted by Erken, (2018) that entrepreneurship has long term effect in TFP and regional economic growth, and better supports previous research that there is positive relationship between productivity and employment, (Landmann, 2004; Pissarides, 2004; Bhattacharya, 2011; Manyikam, 2017). However, this research does not support the research conducted by (Junankar, 2013; Tang, 2015;

Kugler, 2018; Poschke, 2018) that there is negative influence between productivity and employment.

According to Tang, (2015), the growth of employment is likely to negatively correlate with productivity growth at industry level. Germany and France are two countries with increasing productivity for the last 20 years. According to Kugler (2018), wage in France grows in line with productivity, thus the gap declines, but unemployment remains high. On the contrary, wage in Germany partially ceased (from increasing) (2008), and the gap increases (2010), but unemployment is now the lowest, (Kugler, 2018). Poschke, (2018) explains that labour market friction influences output not only through employment, but also by encouraging job seekers to go for self-employment with low productivity. Junankar (2013) finds that there is statistically negative, significant relationship between productivity growth and employment growth. Therefore, there is an evidence of trade-off between employment and productivity growth. If productivity growth is not accompanied with employment growth, we need to emphasize more on employment in economic policy. Policy needs to solve the quality of employment instead only of increasing employment (Junankar, 2013).

According to Landmann (2004), unemployment is only the peak of deficit in decent employment. He concludes that there is relationship between employment, productivity and poverty alleviation. He explains that they do not only need employment, but mostly need productive employment, and employment which may raise them and their family from poverty. Meanwhile, Pissarides, (2004), finds that FTP (Total Factor Productivity) growth increases employment. Bhattacharya, (2011) proposes that flexible labour market and manufacturing industry productivity significantly influence employment and real wage in India. Based on automatic modeling, (Manyikam 2017) explains an increase of productivity by assuming that they who lost their work will always find new work for themselves. Meanwhile, David Autor, (2017) finds two things. First, employment in industry declines strongly when industry increases its productivity, if technically progressive sectors tend to decline. Second, he finds that employment at country level generally grows when aggregate productivity increases, since sectoral productivity growth increases income and consumption, which later increases employment.

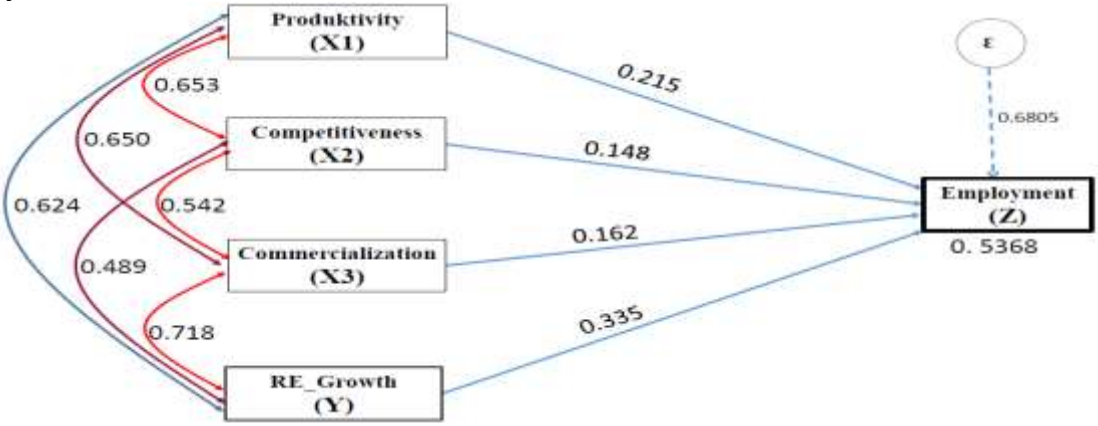

FIGURE 2
RESULTS OF DIAGRAM OF ONE-PATH EQUATION RECURSIVE MODEL PATH ANALYSIS

Based on Figure 2, we may find the path coefficient as a clue of the extent of influence of each variable studied. The extent of influence of independent variables on employment is

sequentially arranged from the biggest to the smallest as follows. The first biggest influence is given by economic growth (33.50%), the second is productivity (21.50%), the third is commercialization (16.20% and the fourth is competitiveness (14.80%). All of the variables have positive and significant influence. This means that, in order to increase employment, it must first increase the economic growth and improve the productivity. The results of this research conform to the economic theory and support the Indonesian government's policy to stimulate economic growth in reduction of unemployment.

TABLE 4
RESULTS OF DIRECT INFLUENCE, INDIRECT INFLUENCE, AND TOTAL INFLUENCE

Variable	Direct Influence	Indirect Influence				Total Indirect Influence	Total Influence
		X_1	X_2	X_3	Y		
X_1	0.0462		0.0208	0.0226	0.0449	0.0883	0.1345
X_2	0.0219	0.0208		0.013	0.0242	0.0372	0.0591
X_3	0.0262	0.0226	0.013		0.039	0.052	0.0782
Y	0.1122	0.0449	0.0242	0.039		0.0632	0.1754
	Total Influence						**0.4472**

Based on Table 4, we may view that regional economic growth still consistently makes the first biggest contribution to employment in direct influence (11.22%), indirect influence (6.32%) and total influence (17.54%). Figure 2 shows strong correlation between commercialization and economic growth (0.718) before influencing employment. In addition, there is also strong correlation between productivity and economic growth (0.624), before influencing employment. The value of correlation between productivity and commercialization is stronger than that of the correlation between competitiveness and economic growth (0.489). Table 4 also shows that after economic growth, productivity and commercialization factors still consistently have bigger influence on employment than competitiveness. Figure 2 and Table 4 show stronger evidence of the statement that productivity and commercialization are two important variables in support of employment in entrepreneurial sector, either in direct influence, indirect influence or total influence.

Two-Path Recursive Model Path Analysis

The research method above has determined the structural model of two-path equation used in this analysis as written in equations (2) and (3). Based on the model, the results of relevant path analysis may be presented like those in the table and path diagram below. Based on Table 5; both in equations 2 and 3, the argumentation of statement productivity and entrepreneurial commercialization serving to be the main driver of regional economic growth and employment is increasingly stronger. In equation model 2; the results of standard regression analysis proves that productivity positively and significantly influences regional economic growth at 0.254 and commercialization variable is able to influence economic growth at 0.534. Meanwhile, competitiveness variable positively, insignificantly influences economic growth. Their competitiveness is low since, for them, it is more important to run business together with other craftsmen in their area. Through social network commercialization, they choose a mutual

assistance cooperation strategy instead of competitive strategy. The results of this research conform to (Gans, 2013; Marx, 2015). Their products also tend to be easily imitated by and disseminated to their fellowmen (neighbours) through a cooperation strategy, thus, cooperatively, their competitiveness remains high and positive, but competitively, their competitiveness is low. Therefore, it is natural if this competitiveness generally has positive but insignificant influence in influencing their regional economic growth. In other words, we may say that there is no significant competition and there is no adversarial competition.

Table 5
RESULTS OF TWO-PATH RECURSIVE MODEL REGRESSION ANALYSIS WITH STRUCTURAL EQUATIONS 2 & 3

Equation Model-2		Unstandardized Coefficients		Standardized Coefficients	t-stk	Sig.
		B	Std. Error	Beta		
2	(Constant)	0.163	0.031		5.31	0
	Productivity (X_1)	0.216	0.077	0.254	2.823	0.006
	Competitiveness (X_2)	0.04	0.096	0.034	0.419	0.676
	Commercialization (X_3)	0.451	0.068	0.534	6.583	0
Equation Model-3		Unstandardized Coefficients		Standardized Coefficients	t-stk	Sig.
		B	Std. Error	Beta		
3	(Constant)	0.177	0.034		5.199	0
	Productivity (X_1)	0.27	0.081	0.29	3.357	0.001
	Commercialization (X_3)	0.175	0.09	0.189	1.948	0.054
	Growth_ER (Y)	0.373	0.103	0.341	3.61	0
a. Dependent Variable Equation-2: Growth_ER (Y)						
b. Dependent Variable Equation-3: Employment (Z)						

The results of this research are in line with the previous research conducted by (Prasetyo, 2017a, 2017b), stating the existence of tuna satak bati sanak principle. This means that micro; small and middle businesses may grow and develop more because of their creativity and togetherness instead of facilities given by the state. Therefore, this SMSE's entrepreneurial business competitiveness tends to be used more to improve productivity and profit and production output together instead of increasing output and profit with adversarial competition. This argumentation is strengthened by the research results in Table 6, in which there is positive and stronger correlation between productivity and competitiveness (0.653), and between

competitiveness and commercialization (0.542) instead of correlation between competitiveness and growth (0.624) and between commercialization and growth (0.489).

With argumentation pursuant to the rule of path analysis and in compliance with the research method above, and the research results in question-2 showing competitiveness variable's insignificancy to economic growth, it is no longer used in structure path equation model of this equation-3, although competitiveness partially, significantly influences employment. In equation model-3, productivity and regional economic growth remain consistently, positively and significantly influence employment at confidence level above 99%. There is a slightly declining role of commercialization to be positive and significant influence on employment at confidence level 90%. The research results above, from Table 1 to Table 5, may be taken as evidence that the reliability of SMSEs entrepreneurial productivity factor in the research location may remain serving to be the main driver of regional economic growth as well as employment and entrepreneurship, particularly in research location.

TABLE 6
RESULTS OF ANALYSIS ON DETERMINATION OF VARIABLE PREDICTORS ON ENDOGENOUS EMPLOYMENT

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
2	0.748	0.559	0.548	0.16975	0.559	51.099	3	121	0	2.156
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
3	0.724	0.524	0.512	0.19297	0.524	44.334	3	121	0	2.144

Model-2: Predictors (constant, productivity, competitiveness & commercialization), and dependent (Growth_ER).

Model-3: Predictors (constant, productivity, commercialization & growth_ER), and endogenous (Employment) with determinant R^2 in equation model-2, the three predicting variables (productivity, competitiveness and commercialization) together significantly influence economic growth at 55.90% and the remaining 44.10% is influenced by other factors out of the model. Meanwhile, in equation model-3, the three explanatory variables (productivity, commercialization and economic growth) together contribute to employment at 52.40% and the remaining 47.60% is influenced by other factors out of the model-3. Furthermore, we may view that each R square value (R^2) with adjusted R square value in equations-2 and 3 are small, and based on Durbin Watson value there is no autocorrelation, thus both equation models are good and predicting factors are efficiently and scientifically acceptable.

TABLE 7
RESULTS OF COEFFICIENT OF PARTIAL MATRIX CORRELATION OF KARL PEARSON PRODUCT MOMENT IN EQUATIONS-2 & 3

Equation Model-2		Gowth_ER	Commercialization	Productivity	Competitiveness
Pearson Correlation	Growth_ER	1	0.718	0.624	0.489
	Commercialization	0.718	1	0.65	0.542
	Productivity	0.624	0.65	1	0.653
	Competitiveness	0.489	0.542	0.653	1
Equation Model-3		Employment	Commercialization	Productivity	Growth_ ER

Pearson Correlation	Employment	1	0.623	0.626	0.658
	Commercialization	0.623	1	0.65	0.718
	Productivity	0.626	0.65	1	0.624
	Growth_ER	0.658	0.718	0.624	1
Model-2: Predictors (constant, productivity, competitiveness & commercialization), and dependent (Growth_ER). Model-3: Predictors (constant, productivity, commercialization & growth_ER), and endogenous (Employment).					

All value correlation is significant at the 0.01 level (1-tailed). N=125

Like the regression results in Table 5, commercialization makes the first highest contribution (0.534) to regional economic growth, but commercialization's contribution (0.189) makes the lowest contribution to employment. According to the correlation results in Table 7, commercialization is strongly and first highest correlated (0.718) with economic growth, but commercialization gets lowest correlated with employent (0.623). Meanwhile, productivity remains reliable and consistent since it positively and significantly makes contribution at confidence level 99% (in Table 5 and Table 7), both to economic growth and employment. In Table 7, productivity also remains reliably and consistently making strong causal correlation both with economic growth (0.624) and employment (0.626). This means that, to stimulate an improvement of regional economic growth and employment in the research location, the total multifactor productivity must first be increased, particularly worker is productivity.

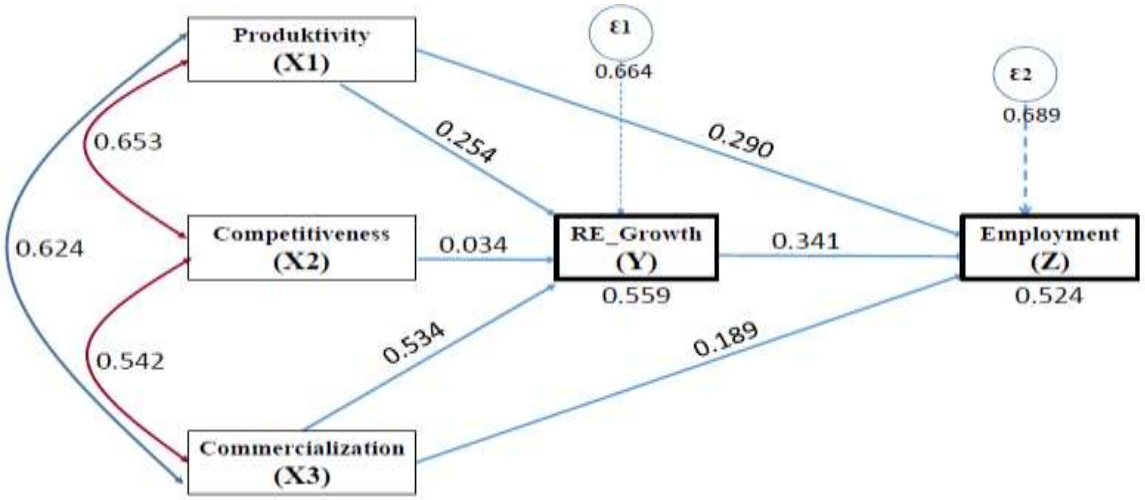

FIGURE 3
DIAGRAM OF RESULTS OF TWO-PATH EQUATION RESEARCH PATH ANALYSIS MODEL

Based on path diagram in Figure 3, we may explain that to drive the regional economic growth is particularly influenced by commercialization factor (0.534), productivity factor (0.254) and competitiveness factor (0.034). Meanwhile, employment creation is influenced by economic growth (0.341), productivity factor (0.290) and commercialization factor (0.189). In Figure 3, it seems that SMSEs' total entrepreneurial productivity remains consistently the main driving factor in improvement of regional economic growth and employment in the research location. The research results also increasingly confirm that economic growth, both based on one-path and two-path equation model, remain consistently has positively and significant influence on and

makes the first highest contribution to employment. Since this is a unidirectional recursive equation model of path analysis, the relationship is irreversible.

TABLE 8
RESULTS OF DIRECT INFLUENCE, INDIRECT INFLUENCE, AND TOTAL INFLUENCE

Variable	Direct Influence	Indirect Influence				Indirect Influence	Total Influence
		X_1	X_2	X_3	Y		
X_1	0.0841		0.0006	0.0016	0.0251	0.0273	0.1114
X_2	0.0012	0.0006		0.0006	0.0115	0.0127	0.0139
X_3	0.0357	0.0016	0.0006		0.0344	0.0366	0.0723
Y	0.1163	0.0251	0.0115	0.0344		0.071	0.1873
	Total Influence						**0.3849**

Furthermore, based on the path diagram in Figure 3, the direction and the extent of direct influence, indirect influence and total influence are also known like those in Table 8. Based on Table 8, the total influence of all variables studied on employment is 38.49% and economic growth has the first highest influence on employment, at totally 18.73%. Furthermore, it is even clearer that, after economic growth, productivity factor as the main driver of employment has direct influence at (8.41%), indirect influence at (2.73%) and total influence at (11.14%).

CONCLUSION AND RECOMMENDATION

Based on equation model-1 and equation model-3, after economic growth, it is evident that productivity factor positively and significantly makes the first highest contribution to employment, and productivity factor remains having strong correlation with opportunity. Based on equation model-2, it is evident that productivity remains making the first highest positive and significant contribution to regional economic growth. Therefore, we may conclude that SMSEs entrepreneurial multifactor productivity in the research location serves to be the main driver in improvement of regional economic growth and employment. It is recommended that productivity serve to be the key to competitiveness, and to improve national competitiveness in improvement of economic growth and employment, the productivity rate of entrepreneurship, SMSEs and other productive industrial sectors existing in the region must be kept high.

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