Original article

Human Capital and Employment Creation in Southeast Minahasa, Indonesia: Household-Based Primary Data Analysis

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Abstract

Employment or job opportunity is an importan economic variable enable to give a general description of public well-being. Employment growth reduces unemployment and increases income.

In this research, employment does not explain macroeconomic condition, but shows the ability of households of research sample to create job. The objective of this research is to know the influence of the independent varibles of education and working hour as the proxies of human capital, and household saving, on the dependent variable of household employment creation.

This research was conducted toward 76 sample households in Southeast Minahasa Regency, North Sulawesi Province, Indonesia. The respondents are the heads of households and/or housewives with at least secondary school education. The analysis was conducted using multiple linear regression method.

The findings of this research is that household employment creation is influenced by length of working hour, household saving, and housewive education.

Keywords: *employment, human capital, education, working hour, household saving.*

1. Introduction

Employment expansion is usually required to absorb labor force that keeps growing and, hence, reduce unemployment. Government is responsible and has the role to guarantee job creation, but the private sector and households also have important role to create jobs. Being short of of employment opportunity is one of main reasons of unemployment in many countries including Indonesia. Unemployment causes poverty and misery of the lack of food as well as nutrition, lack of health and education, and the other forms of backwardness.

Employment is one of important economic indicators. Increasing employment tends to reduce the number of unemployed population, increase productivity and total production as well as national income. Employment is basically the demand for labor as a derived demand of the demand for goods and services (Situmorang, 2005:1).

Increasing employment is one of the critical targets of government in many countries and is always expected to exist by the public in order to realize increasing economic and social welfare through decreasing unemployment, increasing income, and certainly reducing poverty. In Indonesia, in general, and in North Sulawesi Province as well as Southeast Minahasa in particular, unemployment is still one of the economic and social problems that need to be reduced.

Various endeavors have been conducted by national as well as regional and local governments to increase employment or to reduce unemployment such as by allocating budget in various economic sectors and attracting investors to increase investment. Infrastructure development is one of the main endeavors to push investment growth in this country regions.

Attracting investors from foreign counties is very important, but encouraging domestic investment including that of local people is also essential since through various local people activities, especially of the activities of households, employment opportunities can be augmented.

The capability of local society or households to increase productive activities and hence increase employment by providing jobs to local people or labor force can be influenced by knowledge or education and perseverance or working hour of head of household and/or housewive. Capability to increase employment can also be affected by fund availability to finance a number of productive activities. Fund sufficiency can be affected, among athers, by household saving.

Education is assumedto have important relationship with employment opportunities created by households. Households with better or higher education or knowledge have better ability to create employment. Then, perseverance of households as represented by working hour of the heads of households or of the housewives is thought to have positive influence on the ability of

households to create jobs. Saving is also believed to be an important variable for employment creation of local households. Saving enables households to finance workers for a number of productive activities.

The objective of this research is to find out the role of education, working hour, and saving on employment creation of households in Southeast Minahasa.

2. Theoretical Review

2.1. Employment and Employment Creation

Kristianto mentions five important things related to employment (Tjiptoherijanto, et al., 1982:145; Kindangen and Tumiwa, 2015). First, employment creation and wage payment might be the only mechanism to redistribute income to workers. Second, unemployment weakens the passion of or demoralizes someone after sometime in searching or waiting for the chance to get work. Those without job could lose his or her self pride. Third, essentially, working is good, has positive impact on morale, self pride, or other excitements. Fourth, Being unemployed could cause social and political tensions or enxieties. Fifth, A large number of people looking for work arise every year.

Following Boediono, employment creation is an urgent conomic problem (Ananta and Trisulo, 1990:27). This view is influenced by the fact of huge people being unemployed in Indonesia, especially in the years of 1980s. Currently, unemployment in Indonesia has decreased much. In August 2019 (BPS, 2019), unemployment rate in Indonesia is 5.28 percent, decreased from 6.18 percent in August 2015. But, in terms of number of people, the figure is 7.05 million, still a big number of unemployed.

The number of people unemployed is expressed in poverty rate which, though has been reduced to less than 10 percent, but again, it still means more than 25 million people live in misery of inability to meet basic needs. In order to overcome the problem of unemployment or lack of employment as an economic urgent problem, Boediono suggests that a strategy of industrialization to be implemented needs to meet five conditions. One of the conditions is that industrialization must emphasize even distribution by developing small industry and home industry with first orientation to local market, then to national market, and further to international market (Ananta & Trisilo, 1990:276). Still, in order to enlarge employment, even large business is required to be directed to employ large number of workers using labor-intensive technology.

John Maynard Keynes (1953:29), in The General Theory of Employment, Interest, and Money, mentions that one of the factors influencing employment is investment investment. Investment can have the form of physical investment and human investment. Human investment is conducted, among other, through education and training which result in the accumulation of human investment. A country with a larger human investment has better chance to grow faster compared to that with the country with less human investment (Cypher and Dietz, 2004:365).

An educated person tends to earn higher income as a consequence of higher knowledge and expertise that enable him or her to be more productive.

2.2. The role of human capital

In an organization, human capital refers to the collective ability, knowledge, and expertise of those who work in the organization. Kwon (2009) quoted Lucas stating that in a microeconomic model, education investment for the workers influences significantly on worker productivity, and cited Griliches & Regev emphasizing the importance of education and training in human capital. Romer in 1986 stated that investment in human capital affects economic growth through its impact on worker productivity.

Following Schultz (Marimuthu, et al., 2009), human capital is defined as a main key in increasing or developing asset as well as employees of a company in order to enhance productive and sustainable competitive advantage. Human capital has the role to increase productivity of an organization and, thus, help the organization to enhance and sustain competitiveness. Human capital refers to the process connected to training, education, and other professional initiatives to increase knowledge, skill, ability, value, and social asset of employees that result in their performance and satisfaction. OECD defines (Marimuthu, et al., 2009) human capital as knowledge, skills, and attributes embodied to individuals that help in creating *personal, social, and economic well-being*.

Peter Drucker observes knowledge as a main factor of economic development, especially in knowledge economies, and the conventional production factors such as land, land, and labor to be secondary (Akram et al., 2011:125). Knowledge is a liquid mix of experiences, values, information, and expert views that give a framework to evaluate and integrate various experiences and new information (Davenpoprt and Prusak, 2014: 4). Zuhal (2010:68) emphasizes that knowledge is a valuable resource to a wide-ranging society, that is when knowledge is pursued, acquired, and applied to propel the economy.

An empirical study of Kindangen dan Tumiwa (2017) shows that entrepreneurship as an element of human capital enhances income of people and reduces poverty in Kotamobagu and Bolaang Mongondow of North Sulawesi. Kindangen, Rotinsulu, and Murni (2017) found that knowledge as represented by education influences positively on poverty alleviation in urban areas of North Sulawesi.

Robert E. Hall and Charles I. Jones are considered disregard or neglect all the diversities in human capital unless the differences in the length or years of education (Romer, 2012:159). Thus, education is thought as an extremely important factor in the formation of human capital. Romer then states that the qualities of school or education, on-the-job-training, informal acquisition of human capital, nurturing and educating children, and even prenatal care are important factors in the formation of human capital.

Following Todaro and Smith (2003), education and health have central and vital role in economic development. Education and health are kinds of human capital and that education is a main factor in achieving satisfying and valuable life, play a key role to form capability to absorb modern technology and develop capacity in order to sustain growth. As the capability to absorb modern technology and develop capacity to grow sustainably is the result of education, it can be said that education results in the ability to enhance production and income.

Kindangen and Tumiwa (2015) found that human capital represented by entrepreneurship variables, especially commitment and perseverance as well as initiative and action, have significant positive influence on employment in Southeast Minahasa

2.3. The role of labor and saving

In economic theory, production quantity is influenced by inputs. One of the important inputs is labor, measured in working hour or length of working time (Pindyck and Rubinfeld, 2009:196; Miller (2010:28,29). The more is the labor or the longer the working hour, the higher the production will be. Applied in a household, quantity of production or income is influenced by the length of working

hour of the household head and/or housewive. The more hardworking and persevere the household head and/or housewive, the higher is the production or income gained. Those who work longer productively tend to gain more production and income compared to those who work less.

A finding in an empirical study of Kindangen, Rotinsulu, and Murni (2019) shows that household the length of working hour in urban areas of North Sulawesi has positive influence income and on poverty alleviation. The longer the working hour, the higher is the household income. Hence, those who work in perseverance with longer working hours tend to have more financial capability to conduct more productive works by employing workers or creating job opportunity.

In addition to knowledge and working hour, household saving has essential role to enhance household capability to finance expenditure in the future or to fund productive activities. Income that is not used for consumption is saved and accumulated to meet the needs or increase consumption in the future (Samuelson and Nordhaus, 2002; Abel and Bernanke, 2001). Household saving is usually used to support various activities in order to increase revenue or income. Using saving, household can increase productive work by employing people in agriculture, construction, handicraft, manufacturing, and other activities.

3. Research Method and Analysis

3.1. Research Method
Primary data of 76 respondent households in Southeast Minahasa was analysed using multiple linear regression model. The sample households were selected using purposive sampling method. The selected households are those of heads and/or housewives have at least secondary school education. The household heads and/or housewives vary in their main job, ranging from small-scale farmers to micro-small-scale business persons of culinary, furniture, fish processing, construction, etc.

Data analysis is conducted by employing regression method, analysing the influence of education of household head, education of housewive, productive working hour of household head, productive working hour of housewive, and household saving as independent variables toward employment as dependent variable.

Employment is measured in the quantity of workers employed in one year by every sample household to do various productive works in agriculture, plantation, livestock, or construction, etc. Education is measured in the number of years a housewive pursue formal education. Productive working hour is the total hours in average a head of household and/or housewive conduct productive

work in a week. Household saving is the amount of money that a household saves either for future consumption or for any transaction including transaction to employ workers for productive works

The regression model used in data analysis is expressed in the following equation:

$EMP = b_0 + b_1EDW + b_2WHH + b_3WHW + b_4 HHS$;
b_0 = constant
b_1, b_2, b_3, b_4 = regression coeficients
EMP   = employment
EDW   = education of housewive
WHH   = productive working hour of the head of household
WHW   = productive working hour of housewive
HHS   = household saving

3.2. The Result of Analysis and Discussion
The data of this research were collected from 76 households in Southeast Minahasa Regency. The sample households are selected purposively from 5 subdistricts. Data collection was conducted during May to July 2019. Table 1 shows the descriptive statistics of the data.

The table shows that in average every household employs 367.89 daily workers in a year which means that every household in average employs at least 1 worker a day if the works are conducted 7 days a week. If we reduce all the holidays including Saturdays and Sundyas, then there are only 240 working days a year. Thus, in average, in 240 working days, every household in average employs 1.53 daily workers (workers are daily-based waged).

Table 1: DescriptiveStatistics

	Mean	Std. Deviation	N
EMP	367.8947	495.67755	76
EDH	10.8421	3.49877	76
EDW	11.8026	3.26607	76
WHH	40.4737	11.39178	76
WHW	38.5658	13.12335	76
HHS	2329484.2105	2944843.74780	76

The result of regression analysis is shown in Table 2. The result show that two independent variables, namely working hours of the head of household (WHH) and household saving (HHS) have positive and significant influence on employment creation (EMP). Household saving even has very significant positive influence on employment creation.

Table 3: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
	(Constant)	223.072	241.455		.924	.359		
	EDH	-5.249	16.282	-.037	-.322	.748	.768	1.301
	EDW	-32.563	17.199	-.215	-1.893	.062	.790	1.265
	WHH	10.170	4.748	.234	2.142	.036	.853	1.173
	HHS	7.488E-5	.000	.445	4.130	.000	.875	1.143
a.	Dependent Variable: EMP							

Education variables, education of the head of household (EDH) and education of housewive (EDW), both have negative signs or influence employment (EMP) negatively and, thus, do not meet

theoretical expectation. By releasing education of head of household, the result is shown in Table 4.

Table 4: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
			Coefficients				

	B	Std. Error	Beta			Tolerance	VIF
(Constant)	201.195	230.275		.874	.385		
EDW	-34.495	16.020	-.227	-2.153	.035	.900	1.112
WHH	9.924	4.656	.228	2.131	.036	.875	1.142
HHS	7.391E-5	.000	.439	4.160	.000	.900	1.112
a. Dependent Variable: EMP							

The variable of education of housewive (EDW) partially has significant influence on employment creation of household (EMP), even though the influence is negative. Productive working hour of household head (WHH) partially influences positively and significantly the variable of employment creation of household, while the variable of household saving (HHS) partially has very significant positive influence on employment creation.

Table 5: ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	5127318.865	3	1709106.288	9.252	.000[b]
	Residual	13299898.292	72	184720.810		
	Total	18427217.158	75			
a. Dependent Variable: EMP (KKJ)						
b. Predictors: (Constant), EDW, WHH, HHS.						

Normality test shows that the data distribute normally as shown by distribution of error of the bell form. Normal probability plot also shows the distribution of error (the dots) are around the diagonal linear line.
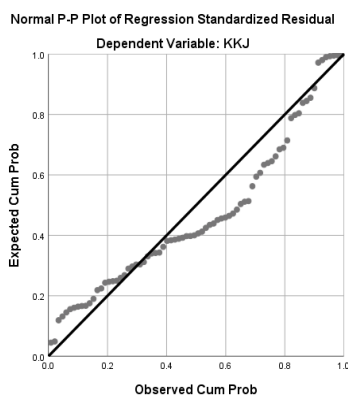
The result of heteroscedasticity test is shown by the scatter plot. The data distribution in the picture does not indicate certain pattern which means that the regression model is free from heteroscedasticity problem.
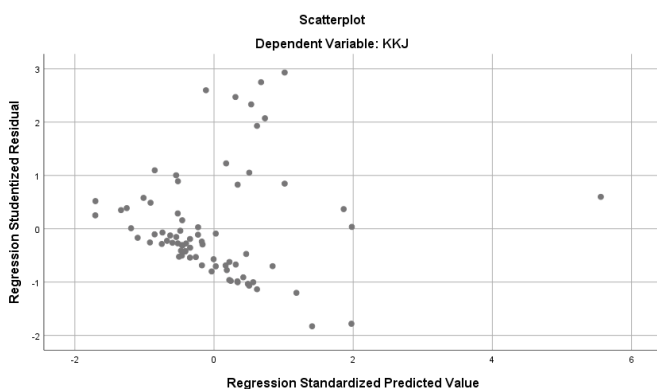
3.3. Discussion

Table 5 shows that simultaneously all three independent variables, namely education of housewive, working hour of household head, and hosehold saving do influence positively and very significantly the variable of household employment creation. This result meets the theoretical expectation.

As shown in Table 5, all independent variables simulateously influence the dependent variable very significantly. The positive role of working hour of household head and household saving on employment creation is an important finding of this research. Thus, being hard work or diligence, the head of household contribute to the endeavour to increase employment. Long hour of productive work or hardwork of head of household enable household to increase production and income. A head of household who works productively in longer hours or has the perseverance in doing productive work usually has a will or strong motivation to make his family enjoys better life in the future. Someone of this quality of human resources will make his best to increase production. Increasing production and income can be done through the work that he can conduct himself, but also through the employment of other people in doing various productive work. Having higher income enable a household to finance more productive works by employing other people to do the works. Thus, a hardwork head of household makes him or his household more capable in creating employment.

Households saves their mone for various reasons such as for better consumption in the future, education of children, health care, or for any transaction in the future. Among the transactions is that for obtaining or employing workers to do productive works in order to increase production and income of household. In otherwords, transaction for the creation of eployment. Household with higher amount of saving has better opportunity to create jobs or employment.

Education is theoretically expected to have positive influence on employment. The result of this research shows the opposite, the coefficient of education variable is negative which means the higher the education the less is the employment creation of household. Education is measured as the amount of years of pursuing education; in this case, education of housewive. Higher education should contribute positively on employment, but the unexpected finding could explain that those who have higher education have better chance to work as employees, especially regency government employees, and have weak tendency to do business activities including employing worker to do productive

works. Being an employee with regular salary could make someone feels save enough to meet household needs and the has less motivation to do productive work after office hours. The result is that they have lower ability to create employment for other people.

Those with lower education and less opportunity to get employed in government sector, hence do not have salary or regular income, tend to have more motivation to find ways to generate income by doing their own productive works. They might even have better motivation to increase income over the income they can generate by their own work. They can create more productive job(s) which require other people to be employed. They can even create and develop micro or small business to enlarge their productive works and hence have better ability to employ more workers. Thus, those with lower education in Southeast Minahasa might have better chance to develop entrepreneurship spirit and entrepreneurship practice that result in increasing employment.

4. Conclusion

Based on the analysis and discussion, three conclusions can be raised.

First, working hour (length of working hour) of head of household influences positively and significantly household employment creation in Southeast Minahasa. Second, household saving influences positively and very significantly on household employment creation in Southeast Minahasa. Third, education of head of household does not influence significantly, but education of housewive influence significantly on household employment creation though with negative sign.

References

[1] Akram, K., Siddiqui, S.H., Nawaz, M.A., Ghauri, T.A., and Cheema, A.K.H., 2011, Role of Knowledge Management to Bring Innovation: An Integrated Approach, International Bulletin of Business Administration, issue 11

[2] Ananta, A, dan Trisilo, R. B., 1990, Tenaga Kerja dan Pembangunan Ekonomi, Beberapa Teori dan Empiri, dalam Aris Ananta (Penyunting): Ekonomi Sumber Daya Manusia, Lembaga Demografi FE dan Pusat Antar-Universitas Bidang Ekonomi Universitas Indonesia, 1990, hal. 265-290

[3] Abel, A. B. and Bernanke,B.S., 2001, Macroeconomics, Fourth Edition, AddisonWesley Longman, Inc.

[4] BPS, 2019, Berita Resmi Statistik, Keadaan Ketenagakerjaan di Indonesia Agustus 2019, No.91/11/Th. XXII, 05 November 2019.

[5] BPS, 2019, Berita Resmi Statistik, Profil Kemiskinan di Indonesia Maret 2019, No. 56/07/Th. XXI, 15 Juli 2019 Berita Resmi Statistik

[6] Cypher, J.M. and Dietz, J.L., 2004, The Process of Economic Development, 2nd Edition, Routledge, New York

[7] Davenport, Th. H. and Prusak, L., 2014, Working Knowledge: How Organizations Manage What They Know, Research Gate, http://www.acm.org/ubiquity/book/t_davenport_1.html

[8] Keynes, J. M., 1953, The General Theory of Employment, Interest,and Money, McGraw-Hill

[9] Kindangen, P., Tumiwa, J.R., and Sepang, J.L., 2019, Poverty Alleviation in Urban Areas of North Sulawesi, Indonesia: The Role of Human Resources, International Journal of Social Science and Economic Research, Vol. 04, No. 02, February 2019

[10] Kindangen, P., Rotinsulu, T.O., and Murni, S., 2017, Human Resource Quality and Household Income in North Sulawesi, Indonesia, International Journal of Innovation and Economic Development, Vol. 3, Issue 5, December, p.26-37

[11] Kindangen, P. and Tumiwa, J.R., 2017, Entrepreneurship and Household Income in Kotamobagu and Bolaang Mongondow, Jurnal Manajemen Bisnis dan Inovasi, Vol. 4, No. 2, Juli 2017, p.122-129.

[12] Kindangen, P. and Tumiwa, J., 2015, Kewirausahaan Dan Kesempatan Kerja Di Kabupaten Minahasa Tenggara, Jurnal LPPM Bidang EkoSosBudKum, Volume 2, Nomor 2, Tahun 2015, Edisi Oktober

[13] Kwon, D. B., 2009, Human Capital and Its Measurement, the 3rd OECD World Forum on "Statistics, Knowledge and Policy": Charting Progress, Building Visions, Improving Life, Busan, Korea

[14] Marimuthu, M., Arokiasamy, L., and Ismail, M., 2009, Human Capital Development and Its Impact on Firm Performance: Evidence from Developmental Economics, The Journal of International Social Research, Volume 2/8, Summer 2009

[15] Miller, R. L., 2010, Economics Today, Fifteenth edition, Pearson Education.

[16] Pindyck, R. S. and Rubinfeld, D.L., 2009, Microeconomics, Seventh edition, Pearson Education.

[17] Romer, D., 2012, Advanced Macroeconomics, Fourth Edition, McGraw-Hill.

[18] Samuelson, P. A. and Nordhaus, W. D., 2001, Economics, seventeenth edition, McGraw-Hill.

[19] Situmorang, B. Th., 2005, Elastisitas kesempatan Kerja terhadap Pertumbuhan Ekonomi, Upah Minimum dan Suku Bunga di Indonesia Tahun 1990-2003, Institut Pertanian Bogor

[20] Todaro, M. P. and Smith, S. C., 2003, Pembangunan Ekonomi di Dunia Ketiga, Edisi Kedelapan, Terjemahan Haris Munandar dan Wisnu C. Kristiaji, Penerbit Erlangga, Jakarta.

[21] Zuhal, 2010, Knowledge and Innovation, Plafform Kekuatan Daya Saing, Penerbit PT Gramedia Pustaka Utama.