Factors that Influence Drop Out of Vocational High School

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Article Info	Abstract

Abstract

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The purpose of this study is to analyze the factors that influence the likelihood of students dropping out of school in Pekalongan City. The sample in this study was 100 ex-students vocational school in Pekalongan City. Data were obtained from the questionnaire using the convience sampling. The method used in this study is quantitative with logit analysis. The results of the study showed that perception, number of siblings, helping parents, problems with friends, and punishments had a significant effect on increasing the probability of dropping out of school. And than, financial assistance variable were the only variable examined and had a significant effect on reducing the probability of dropping out. The Suggestion in this study is to provide knowledge about the importance of education as a future investment and provide reguler counseling to students. They should not involve their children too much to help with the work of the parent. Then from the government, through optimizing financial assistance.

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INTRODUCTION

One of the phenomena of the bonus demography that will occur is the problem of human resources, especially labor and education problems. Therefore, the role of education is very important especially vocational education (Tarma, 2016) . Vocational education is considered important because its function is to equip students with the ability of science and technology as well as professional vocational skills in accordance with the needs of the community (PP No. 17 of 2010 concerning Management and Implementation of Fish Education in Article 76 paragraph (2) point C).

Along with the Government's desire to increase the number of SMK graduates, there are problems that are not affordable from vision, namely the number of dropouts (not yet graduating from school) the level of vocational high school is still high compared to high school. Table 1 shows the number of school dropouts every seven years throughout Indonesia. From these data it can be seen that Vocational School is the school level which contributes to the highest number of school dropouts even though the quantity shows a declining trend
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Table 1. Number of Dropouts in Schools in Indonesia by the Education Level in 2010-2017

Year	Elementary school		Junior high school		Senior High school		Vocational School	High
	total	%	total	%	total	%	total	%
2010/2011	439033	1.59	166328	1.78	139999	3.41	98640	2.64
2011/2012	248988	0,90	146871	1.56	47709	1.14	124792	3.10
2012/2013	352673	1.32	134824	1.40	42471	0.99	124791	2.98
2013/2014	294045	1.11	137430	1.41	42008	0.98	129037	3.07
2014/2015	176909	0.68	85000	0.86	68219	1.61	86282	2.05
2015/2016	68055	0.26	51541	0.51	40454	0.94	77899	1.80
2016/2017	39213	0.15	38702	0.38	36419	0.78	72744	1.55
Total	2946674	6.01	1370065	7.90	811592	9.85	1074987	17,19

Source: Ministry of Education and Culture, 2017

Table 2 shows five provinces that have the highest dropout rates in Indonesia from the 2012/2013 school year to 2016/2017. From thetable, it can be seen that in Central Java Province, each school has more vocational school dropout rates than other provinces in Indonesia, although from year to year it shows a declining number**.**

Table 2. Number of Dropouts in Vocational Schools for Each School in Five Provinces The Biggest Dropout Contributors in Indonesia

Province	2012/13	2013/14	2014/15	2015/16	2016/17
Central Java	28.31	25.54	8.11	7.29	7.02
West Java	21.29	18.41	6.44	6.63	5.90
Banten	19.50	18.86	7.04	0.59	4.91
North Sumatra	4.67	4.15	9.56	7.83	6.47
East Java	0.52	0.81	6.86	5.96	5.81

Source: Ministry of Education and Culture, 2017

Table 3 shows the number of students dropping out of school at the 2016/2017 vocational high school level in Central Java Province. Of the 35 regencies /cities in Central Java, the regions with the most school dropouts can be known, namely Cilacap Regency, Banjarnegara Regency, Grobogan Regency, Kendal Regency and Pekalongan City. When averaged by the number of vocational schools in each district/city, the highest number of dropouts is in Pekalongan City where there are approximately 15 vocational secondary schools dropping out of school. Table 1.3 also shows that dropouts in other districts / cities are below 10 students each school. This makes the reason for the need for this research to be carried out in Pekalongan City.

Table 3. Average Highest each School Dropout in five regencies / cities in Central Java

Regency / City	Dropout	School	Dropout Average Each School
Kab. Cilacap	695	65	10.69
Kab. Banjarnegara	239	24	9.96
Kab. Grobogan	561	58	9.67
Kab. Kendal	501	48	10.44
Pekalongan City	190	12	15.83

Source: Ministry of Education and Culture, 2017

Based on preliminary observations in Pekalongan City on June 4, 2018, most school dropouts come from private schools. Although private schools impose a portion of their operational costs on parents, the main cause of school dropouts is not a problem in the absence of costs because the Pekalong City government has provided Operational Cost Facilitation (FOP) and scholarships for students from disadvantaged families. One BK teacher in a private school in Pekalongan City also mentioned that the school had tried to alleviate the economic burden of students by allowing payments to be paid in installments, but what was often found was that children did not want to go to school because of the existence of the school's only waste of time friends and prefer to work.

Meanwhile from the education office of Pekalongan City said that dropping out of school is also influenced by the level of parental education. The level of low parental education will affect perceptions of the school. In terms of own access, Pekalongan City has adequate transportation and the distance between schools that are close together and spread in various sub-districts so that it is easier for citizens to access education.

Based on this background , several research questions can be formulated . (1) What are the individual factors that influence students' decisions to drop out of vocational school in Pekalongan City? (2) What are the family factors that influence students' decisions to drop out of vocational school in Pekalongan City? (3) What are the school factors that influence students' decisions to drop out of vocational school in Pekalongan City? (4) What are the accessibility factors that influence students' decisions to drop out of vocational school in Pekalongan City? (5) What are the educational policy factors that influence students' decisions to drop out of vocational school in Pekalongan City? .

The purpose of this study is to find out and analyze : (1) Individual factors that influence students' decisions to drop out of vocational school in Pekalongan City. (2) Family factors that influence students' decisions to drop out of vocational school in Pekalongan City. (3) School factors that influence students' decisions to drop out of vocational school in Pekalongan City. (4) Accessibility factors that influence students' decisions to drop out of vocational school in Pekalongan City . (5) Educational Policy Factors that influence students' decisions

to drop out of vocational school in Pekalongan City .

Education is one of the human capital investments. According to Todaro and Smith (2006), human capital is a term often used by economists to education, health and human bag kapasity others that can increase productivity if things are improved . Checchi (2006) model of educational choice as an investment decision in Human Capital as follows.

$$H \text{ it } = f(A \text{ i, T it, E it, H it }) \dots\dots\dots\dots (1)$$

Information:

Hit = Formation of new human capital

Ai = Individual ability

Tit = School activities

Eit = Per capita resources used by schools (teachers, libraries, etc.)

Hit = Family background

I = Individual

t = Period

Equation (1) is known as the education function by Checchi (2006). Equation (1) can be modified into the following equation which can explain students dropping out of school (Setyadharma, 2017).

$$D \text{ it } = f(I \text{ it, Fit, Sit, GMit}) \dots \dots\dots\dots (2)$$

Description:

Dit = Decision to leave

Iit = individual characteristics

Fit = Family characteristics

Sit = School characteristics

GMit = Government policy

According to Todaro and Smith (2006) the level of education of a person, in general can be seen as a result determined between the strength of demand and supply, the sensibility of other economic goods or services . m odel benchmark Becker said that the demand for education is driven by the perception of students and parents about education as an investment in future earnings increase (Sequeira, Spinnewijn and Xu, 2016). In addition, perceptions of children's education also influence the demand for education (Alivernini and Lucidi, 2011; Fall and Roberts, 2012) .

Furthermore, Todaro and Smith (2006) explain that on the supply side, the number of schools at the elementary, secondary and university levels is more determined by the political process, which often has nothing to do with economic criteria. As more big and strong political pressure is in charge to governments in developing countries, the government needs to provide more school places, so that it can be assumed that the level supply of schools is limited by the level of government expenditure for the education sector.

Coleman's social capital heory contributes to identifying additional family factors that influence dropout (Teachman et al, 1997). Teachaman explains that student achievement is not only influenced by human resources but also how to interact with the environment as social beings.

Smitih et al (1992) said that parents may have high human capital , but if parents do not build good relationships with children, human capital given by parents to children is less effective. Therefore, suppressing low human capital in parents is important to encourage children to get higher human capital. Lack of social capital in the family can lead to dropping out of school (Coleman, 1988).

Pushout's theory says that there are several factors within the school that encourage students to leave school, such as the environment and school policies. The pullout theory states that there are factors outside of school that influence students' decisions to drop out of school. Rumberger and Lim (2008) suggest that there are school policies that make students drop out of school unintentionally. Another definition of pushout is that students are pushed out of school because of the limitations of the school system to create a comfortable environment for them.

RESEARCH METHODS

This type of research is quantitative research that can be interpreted a research method whose research data is in the form of numbers and the analysis uses statistics, used for researching populations or samples, data collection using instruments, quantitative data analysis, aimed at testing research hypotheses

(Neolaka, 2016) . In this research, design research is hypothesis testing study aimed to analyze, describe and obtain evidence empiris pattern of the relationship between two or more variables, both correlations, causality and comparative (Wahyudin, 2015). Population is the whole object under study (Neolaka, 2016).) The population in this study is the number of vocational students in Pekalongan City graduates from the 2014/2015 academic year to 2016/2017. the technique used is Convience Sampling , which is a method of selecting samples based on convenience, in this method the sample members are selected based on the ease of obtaining the data needed by researchers(Sekaran & Bougie, 2017) .

The criteria used by researchers in this study are: (1) Enter Vocational School and be registered as a student but leave before the time to graduate. (2) Don't change schools. (3)Do not have a package C diploma.(4) Not because of temporary absence caused by punishment or illness. The model used in this study is the logit model, which is a non linear regression model that produces an equation where the independent variable data is categorized. The equation used can be written as follows:

$$Li = \ln P_i / (1 - P_i) = \beta_1 + \beta_2 \text{ Individual} + \beta_3 \text{ Family} + \beta_4 \text{ School} + \beta_5 \text{ Accessibility} + \beta_6 \text{ Policy} + U_i.$$

Information:

Di = 1 if dropping out of school and 0 if not dropping out of school (dependent variable)

$B_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$ = The parameter coefficient to be estimated

Individual = individual characteristic variables

Family = Variable family \ characteristics

School = Variable characteristics of the school

Accessibility = accessibility characteristics variable.

Policy = Variable education policy

This method is processed using the STATA 14 program as software that helps in analyzing variables. The statistical tests used include: (1) testing the entire model is done to test the overall significance of the model after getting the output logit results. (2) Goodness-of-fit (GOF) test is a method used to assess whether the predictions obtained by the model accurately reflect the values observed in the data (Hosmer, Taber and Lemeshow, 1991). The forms of GOF testing are as follows: Mc Fadden R2, Hosmer-Lemeshow (HL), Table Classification, Receiver Operating Characteristic, Linktest. The interpretation of the logit regression results uses the average marginal effect.

RESULTS AND DISCUSSION

Based on the results of regression calculations, it can be seen that the factors that influence dropout decisions include perceptions of school, number of siblings, time spent helping parents, problems with friends, school penalties related to deviant behavior, and financial assistance. Based on statistical tests, it can be seen that the model has extraordinary discrimination and is able to classify 86%.

In general, it can be stated that the main factor supporting the development process is the level of community education (Subroto, 2014).This is also in line with the national development goals stated in the law, namely to educate the life of the nation. Human capital theory believes that investment in education is an investment in order to increase productivity. Increasing human resources will make people, have more choices, so that there will be an increase in welfare. The problem of dropping out of school will hamper efforts to increase human resources. Dropouts experienced by vocational students lead to the goal of creating an educated and skilled workforce that is hampered. Education is a way to progress social and economic prosperity, while failure to build education such as dropping out of school will produce various problems such as unemployment and social welfare problems.

Table 4 shows the logit model coefficients. The research variable from individual factors in the form of gender, repeating and negative perceptions about education.

Table 4. Regression Equations

	Parameter coefficient		
	Coefficient	Stand. Err.	P>	Z	
Individual factors			
Gender	0.023	0.997	0.981
Repeat	1,072	0.866	0.216
Perception	3,359	1,128	0.003 *
Family factor			
Number of siblings	1,544	0.457	0.001 *
Helping parents	2,503	0.999	0.012 *
Mother's education	1,006	0.808	0.213
Father's education	0.630	0.753	0.403
School factor			
Friend problem	2,932	1,485	0.048 *
Participate in counseling	-0,335	1,482	0.821
Punishment	2,470	1,271	0.052 *
Accessibility factor			
Distance	0.012	0.485	0.979
Factor of government policy			
Help	-2,970	1,115	0,008 *
Constants	-7,769	2,510	0.002 *
Likelihood Ratio (LR)		72.88	
Wald X ^{2}		36.86	
McFadden's R ^{2}		0.5965	
Pearson chi2 (82)		62.93 (p-value = 0.9418)	
Hosmer-Lemeshow chi2 (8)		7.43 (p-value = 0.4905)	
Classification table		86	
ROC curve		0.9543	
Linktest			
What	0.9937	0.2472	0,000
_hatsq	-0,0052	0.0801	0.947

Source: Stata output results

*) Influentia significant to probability break school

But in this study there was not enough evidence that gender and repetition influenced the decision to drop out of school. Negative perceptions about education have a positive and statistically significant effect on dropout decisions.

This means that the higher the presumption of children that school is just a waste of time, the higher the chances of children dropping out of school. As Becker said about the demand for education, the demand for education is driven by the perceptions of students and parents about education (Sequeira, Spinnewijn and Xu, 2016). This result also supports the study of Setyadharma (2017) who said that students' perceptions of schools had an effect on dropping out.

family actors include, number of siblings, time to help parents and parental education. According to the theory of social capital, student achievement is not only influenced by human resources, but also by the environment as social beings, especially families. The number of siblings shows a positive relationship which means that the number of siblings or family members is increasing, it will increase the probability or possibility of dropping out of school. The more the number of family members, the greater the family's dependency. According to Todaro and Smith (2006) the number of family members is one of the non-economic factors that influence the demand for schools. This is also in accordance with the study of Asmara and Sukadana (2016) which said that dropping out of

school was influenced by the large number of family members.

The next variable is helping parents who show a positive relationship means that if students spend a lot of time to help the work of parents, it can increase the probability or possibility of dropping out of school. The more time spent helping parents work, the higher the chance for dropping out of school because the time to focus on the school will decrease. This supports the Herawati (2015) study, which said that one of the main contributing factors for dropping out of school is having to help parents make a living. Among disadvantaged families, involving children to help with the work of parents is a natural thing. These activities become activities carried out between the schools. Field findings also showed that some students chose to drop out of school to work because they had helped their parents' work since childhood.

This study does not get sufficient evidence that the education variable is people both father and mother have significant influence on the decision to drop out of school. According to the theory of social capital, this occurs because children do not consider the existence of parents as important, or the relationship between parents and children who are not close.

According to Coleman (1998) social interactions not only occur in families but also in communities. This means that the factors from the school which are social capital can also influence the demand for education related to the decision to continue or quit school. Factors from school include problems with friends, counseling and punishment. Based on the theory of pushout and pullout, problems with friends and deviant behavior will cause students to be expelled from school because of school policies. The withdrawal of students from school is initiated by students not by schools, but also does not consider the importance of investment education. Variable problems with friends have a positive and significant effect on dropping out. This means that if students have problems with their friends the chances of dropping out are higher. Friendships at school will affect the interest to study at school. Some of those who

drop out have bad friendships. This supports the findings of Tas, Borac, Selvitopub and Demirkarya (2013) who say that relationships with bad friends will make students leave the classroom.

The next variable is punishment that shows a positive effect, meaning that if students have been punished, it can increase the probability of dropping out. According to the pushout theory, punishment is one of the encouragement for students to leave school. Penalties that are maximized by this study , related to deviant behavior carried out by an individual so that they get punishment from school, the school usually will give a warning in the form of reprimand before students are finally expelled from school. This supports Mhpale's (2014) study which says that 99.75% of the total number of respondents who drop out of school occurs because of indications of deviant behavior such as alcoholic beverages and illegal drugs.

The next variable is counseling which means students follow counseling or not related to problems outside of academic. But in this study no evidence was found that counseling significantly affected the dropout decision. This happens because most counseling is done only from the school. This means that students rarely counsel when there is a problem . So the school cannot detect the possibility of students dropping out earlier.

F accessibility actors namely Distance. Distance variables do not have a statistically significant effect on dropout decisions. This result is consistent with the Arizona study (2014) which states that distance does not have a significant impact due to the selection of schools that are not fixed on distance and adequate transportation. Based on observations it is known that the distance between vocational schools is close together and adequate transportation makes it easier for people to access education.

Finally, the education policy factor is financial assistance . Education policy is related to the provision of schools by the government as an education offer. As a national policy, education policy has been strategically

positioned as a national development priority. This is indicated by the amount of education budget stipulated by Law Number 20 of 2003 by 20 percent. Bindang education government policies aim to succeed in developing human resources, one of which is manifested in the form of assistance, as well as scholarships. The educational policy factor in this study is in the form of financial assistance which has a negative effect, meaning that if students get help, it can increase the probability of not dropping out of school. This supports the findings of Asmara dan Sukadana (2016) who said that in overcoming school dropouts can be done by optimizing budget allocations in the form of scholarships and other school assistance.

CONCLUSION

Based on the results of the analysis using logit regression and discussion of individual factors , family factors, school factors, accessibility factors and educational policies on the decision to drop out of vocational school in Pekalongan City, it can be concluded as follows:

Individual factors that significantly increase the decision to drop out of school are perceptions of school, namely the view that schools are a waste of time. While gender and repetition did not prove to have a significant effect on school dropout decisions.

Family factors that significantly influence the decision to drop out of school are the number of siblings and time to help parents. Both of these variables have been shown to increase the probability of dropping out of school.Meanwhile, mother and father education did not have a significant effect on school dropout decisions.

School factors that significantly increase the number of dropouts are problems with friends, and punishments from school. Meanwhile, guidance and counseling services proved to be insignificant towards school dropout decisions. Accessibility factors proved to have no significant effect on the decision to drop out of school.

The factor of education policy in the form of financial assistance is proven to be the only variable that can reduce the number of dropouts.

REFERENCES

Alivernini, F and Lucidi, F. (2011). Relationship between social context, self-efficacy, motivation, academic achievement, and intention to drop out of high school: A longitudinal study. The journal of Educational Research, 104 (4), 241-252.

Arizona, Mauludea Mega (2013). Study on School Drop Out at the High School / Vocational Level in Gresik Regency. Unesa Journal, Vol.2, No.3, 151-158.

Asmara, Yusufa Ramanda Indra., And Sukadana, I Wayan. (2016). Why Children Drop Out of High School (Case Study of Buleleng Regency, Bali). E-Journal of Development Economics, 1347-183.

Pekalongan City Central Statistics Agency. (2017). Pekalongan City in Figures 2017. Pekalongan: Central Statistics Agency of Pekalongan City.

Checchi, D. (2006). The economics of education: Human capital, family background and inquality. Cambridge, United Kingdom: Cambridge University Press.

Coleman, J. S. (1988). Social capital in the creation of human capital. American Journal of Sociological Science, 11 (6), 212-216.

Herawati, Yessy. (2015). Factors Affecting School Drop Outs (Study: in Tenayan Raya District, Pekanbaru City). Jom Fisip, Vol.2, No.1, 1-12.

Ministry of Education and Culture . (2016). Overview of 2015/2016 Education data. Jakarta: Ministry of Education and Culture.

Ministry of National Development Planning / National Development Planning Agency. (2017). Structuring the Education Budget in Planning and Budgeting. Jakarta: Bappenas.

Ministry of Education and Culture . (2015). Overview of 2014/2015 Education Data. Jakarta: Ministry of Education and Culture.

Ministry of Education and Culture. (2017). Educational Data Overview. Jakarta.

Ministry of Education and Culture. (2017). Educational Data Highlights for 2016/2017. Jakarta: Ministry of Education and Culture.

Mphale, Luke Moloko. (2014). Prevalent Dropout: A Challenge on the Roles of School Management Teams to Enhance Student Retention in Botswana Junior Secondary Schools.

International Journal of Business and Social Science, Vol.5, No. 11, 178-188.

Neolaka, Amos. (2016). Research Methods and Statistics. Bandung: PT REMAJA ROSDAKARYA Bandung

Now, Uma. (2009). Research Methodology for Business. Jakarta: Salemba Empat.

Now, Uma and Bougie, Roger. (2017). Research Methods For Business. Jakarta: Salemba Empat.

Setyadharma, Andryan. (2017). Upper Secondary School Dropout: Lessons From Central Java Province, Indonesia. Dissertation . New Zealand: Collage of Science, Massey University.

Sequire, S., Spinnewijn, J., and Xu, G. (2016). Rewarding schooling success and perceived returns to education: Evidence from India. Journal of Economic Behavior & Organization, 131,373-392

Slamet. (2016). Policy Contribution of Increasing Vocational Students. Educational Horizon, No.3, 301-311.

Smith, M. H., Beaulieu, L. J., & Israel, G. D. (1992). Effects of human capital and social capital on dropping out of high school in the south. Journal of Research in Rural Education, 8 (1), 75-87.

Subroto, Gatot. (2014). Relationship of Education and Economics: Theoretical and Empirical Perspectives. Journal of Education and Culture, Vol. 20, No.3, 390-400.

Tarma. (2016). Corporate Vocational School: Anticipatory Strategies in Facing Unemployment of SMK Graduates in the Demographic Bonus Perspective. Journal of Educational Management Dynamics, 1-6.

Tas, Ali., Borac, Veysel., Selvitopub, Abdullah and Demirkaya, Yusuf. (2013). Reasons for Dropout for Vocational High School. Educational Sciences: Theory & Practice, 1561-1665.

Teachman, J. D., Paasch, K., and Carver, K. (1997). Social capital and the genartion of human capital. Social Forces, 75 (4), 1343-1359.

Todaro, Michael and Smith, Stephen. (2006). Economic Development. Jakarta: Erlangga.

Wahyudin, Agus. (2015). Business and Education Research Methodology. Semarang: Unnes Press.

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