Affordability to Pay a "Silent Killer" for Youth Smoker

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ABSTRACT

Introduction – Indonesia has struggling between adding bonus demography and human capital problem. Smoking prevalence of youth has been increase approximately 3%, which made as a paid off from impact between cigarette selling and decreasing human capital in the future. Smoking behavior is no-benefit behavior for human which stated as "silent killer".

Purpose – the main purpose of this paper is to analyse the affordability to pay cigarettes among youth aged between 15 to 18 years old.

Methodology/Approach – Descriptive quantitative study has been applied to answer the aim of the study, and use primary data through structured interview guideline for youth or students of high school in Yogyakarta city. Sampling using accidental sampling method using Slovin formula, with 90% of level significance and found 100 samples were obtained. Accidental sampling is carried out through this study which took respondent of high school students smoking around the school. The dependent variable is the affordability to pay of the teenagers and independent variables consists of the opinion concerning smoking behavior, knowledge, social capital, number of cigarette buying, smoker in the family and the advertisement of cigarette.

Findings – Validity and reliability have been tested as to ensure the quality of the data to represent questionnaire and passed. The data has also analyse the classical assumption test (normality test, heteroscedasticity test, multicollinearity test) were passed and recognize the data is reliable to process for the further statistical test. Based on the linierity statistical analysis with statistical equation as follows: $Y = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X6$ which X_1 is the opinion of youth smoker, X_2 is the knowledge, X_3 is the social capital, X_4 is the number of usual cigarette buying, X_5 smoker in the family, and X_6 is the advertisement of cigarette. The final result of multiregression analysis is found as : $Y = -0,109 X_1 + 0,185* X_2 + 0,189* X_3 + 0,0169* X_4 + 0,222* X_5 + 0,311** X_6$ (assumption * is significant under .05 and ** is significant under .01). The simultanous F test has been significant .000 which stated that the independent variables has been significantly impacted simultonously to the affordability to pay. The adjusted R^2 found .575 or 57.5% independent variables could be explained through affordability to pay..

Originality/ Value/ Implication – this research is a sensitive issues when youth smokers mostly refuse to be interview due to their bad health behavior. Therefore, this research is rarely carry out because of the difficulties to share the cause of bad health habit of youth smoker.

Keywords: affordability to pay, youth smokers, access, ability, knowledge

INTRODUCTION

Smoking behavior is currently a very natural habit seen by the people of Indonesia. Smoking behavior has never subsided and seems to be a behavior that can still be tolerated by the community. Even now, smoking behavior is still a state problem that has not been resolved. Adolescents with smoking behavior are currently considered a normal behavior in society, the current highest level of smoking prevalence also occurs in adolescents. Smoking behavior is a lifestyle that is detrimental to the health of oneself and others (Durkin and Helmi, 2010). According to the 2011 Global Youth Tobacco Survey (GYTS) data, the prevalence of smokers aged 15 years and over is very high, including male smokers (67.4%) and female (2.7%), while according to data from the World Health Organization (WHO)), in 2012 the prevalence percentage of male smokers, namely, 67%, was much higher than that of female smokers, which was 2.7%. Among these smokers, 56.7% of men and 1.8% of women smoked every day (Center for Health Promotion of the Indonesian Ministry of Health, 2013).

According Riskesdas in 2007, smokers at the age of teenagers were 34.2%, and the results of Riskesdas in 2010 rose to 34.7% while the results of the latest Riskesdas rose to 36.2% (Kemkes, 2013). Based on the 2013 Riskesdas, the highest proportion of smokers occurred in East Nusa Tenggara Province at 55.6%. Data on the number of smokers in South Sulawesi Province is 31.6% of the total population. Data on the number of smokers in Makassar City is 22.1% or ± 287,300 people with an average consumption of 10.6 cigarettes / day or about 3 million cigarettes billowing in the air every day in the metropolitan city. The prevalence of cigarette consumption in Indonesia according to Riskesdas and Sirkenas for several years shows that the prevalence slowed in 2016 in general, but adolescent smoking increased

The adolescent smokers is increasing every year. From 2001 it was 12.7% to 23.1% in 2016. However, for adolescent girls there was a fluctuation, from 2001 it was 0.2%. In 2013 it was 3.1%, then decreased in 2016 to 0.7%. For boys, in 2001 it was 24.2%, it continued to increase until 2010 by 38.4%, then it fell to 37.3% in 2013. And finally it rose quite significantly in 2016 to 54.8%.

According to Melda (2017) argues several factors influence adolescents to smoke. The personality factor is one of the things that can cause teenagers to smoke because it is motivated by a great curiosity about the taste of

cigarettes that makes cigarettes taste good. Environmental factors of peers or playmates can influence adolescent smoking because of the invitation and a very strong influence in encouraging the emergence of smoking behavior towards adolescents who do not smoke. Lastly, the advertising media factor is also one of the things that affect teenagers smoking because of the advertising media, both mass media such as print media, electronic media and social media are able to provide information about cigarette advertisements that can encourage teenagers to smoke.

In developing countries, the Affordability of Cigarette is a problem. According to Corné and Evan, (2008) policy making should focus more on the affordability of cigarettes and less on the real price in income isolation. Price-based policies may not be enough to reduce the affordability of cigarettes in fast-growing countries. Affordability-based policies should be adapted so that cigarettes become less affordable, more common and perhaps more useful as a tobacco control target, especially in rapidly developing countries.

Affordability analysis is especially important for Indonesia, as the government has accelerated tobacco control measures, notably by increasing the country's cigarette excise tax six times between 2011 and 2017. Affordability is key to understanding the successes and drawbacks of these measures, and to honing strategies future that can build on the momentum achieved. Zheng, Marquez, Ahsan, Wang, and Hu (2018) write about Cigarette Affordability in Indonesia: 2002-2017. Recent progress has been made to begin reducing the affordability of tobacco in Indonesia. The Indonesian tobacco epidemic continues to threaten the country's future. Cigarettes in Indonesia are still too cheap. To fully benefit from cost reductions, Indonesia's tobacco excise system must be simplified. Understanding these inconsistencies provides an opportunity to address non-price factors.

In general, Special Region of Yogyakarta Province has the highest prevalence (39.3%) of the population for the youth initiation smoking or chewing tobacco was at the age of 15-19 years. Most of the population in all districts/cities in DI Yogyakarta first smoked/chewed tobacco at that age (15-19 years) and the highest was in the city of Yogyakarta (48.5%) (Riskesdas DIY 2017). A study suggests that one in two smokers who smoked as a teenager and continue to smoke for life will eventually die of a smoking-related disease. Smokers who continue to smoke in the long term will face three times higher probability of death than non-smokers (Nasution, 2007). Smoking is a problem that has not been solved until now. The enactment of strict policies and regulations on smoking should reduce smoking behavior among teenagers, but this is not the case and tends to be the other way around. In fact, the latest Riskesdas results prove the higher the number of cigarette use. Smoking has hit various groups of people in Indonesia, from children to the elderly, both men and women (Center for Health Promotion of the Indonesian Ministry of Health, 2013).

The reasons for smoking in adolescents are remarkably diverse. However, according to the 2014 Global Youth Tobacco Survey (GYTS), there are several things that cause teenagers to smoke, such as: Smoking because a family member smokes; can buy cigarettes easily in shops or stalls; see interesting cigarette advertisements; the price of cigarettes is very cheap. Various negative effects caused by smoking directly and indirectly have been proven to interfere with the development and growth of adolescents. This is realized by the government, thus increasing the efforts made by the government to prevent the circulation of cigarettes in adolescents. One of the efforts to limit smoking among adolescents is listed in the 2010 Riskesdas target, namely reducing the prevalence of smokers and increasing a healthy smoking-free environment in schools, workplaces and public places (Ministry of Health, 2010). In addition to being listed in the Resdikdas targets, many local governments have started to pioneer local regulations regarding Non-Smoking Areas (KTR) in their regions, one of which is the Yogyakarta city government. The enactment of strict policies and regulations on cigarettes should make smoking behavior among teenagers, in this case, junior and senior high school students decrease, but this is not the case and tends to be the other way around. The fact is that in the field there are still many students who smoke outside and in the school environment who are still wearing uniforms.

Based on the previous research that has been described above, in general the researchers found several things that affect the affordability to pay of cigarettes among teenagers. The first thing is what factors affect the affordability to pay of cigarettes among teenagers, because there is no way to calculate the affordability to pay correctly, so we must know what are the factors that affect the affordability to pay of cigarettes among teenagers. The second thing is the opinion of teenagers on smoking. This is important because we can get their perspective on cigarettes. The next thing is the knowledge of adolescents about smoking behavior, whether they already have enough knowledge about the dangers of smoking. The fourth thing is the social factor. This factor is quite crucial because every teenager must have a circle of friends, and they always want to be included in that environment. Smoking is one way. The fifth thing is the purchase of cigarettes. Easy, very easy access is the most common reason. This is the reason for the lack of regulation. The next thing is the family factor of adolescent smokers. Family is an important thing in a teenager's life, because they are there to imitate all the activities of their parents and close relatives. The last thing is cigarette advertising. It is a very crucial thing and affects smokers, because they instill that smoking is cool and mature.

The purpose of this study was to determine how the influence of opinion variables, knowledge variables, social factor variables, cigarette purchase variables, family factors and cigarette advertising variables on the affordability to pay of cigarettes among adolescents. Researchers make the city of youth in the city of Yogyakarta as the object of research because the majority of teenagers are first smokers aged 15-18 years.

RESEARCH METHODS

The research method used in this study is exploratory research using a qualitative and quantitative

descriptive approach. The type of data used in this research is primary data in the form of questionnaires and interviews. The object of this research is the city of Yogyakarta. The subjects of this study were adolescents aged 15-18 years. The sampling technique used in this research uses accidental sampling technique or the researcher determines the sampling by determining special characteristics that are in accordance with the research objectives so that it is expected to be able to answer research problems.

The population in this study were teenagers or high school students in the city of Yogyakarta who were male and consumed cigarettes. According to data, the number of male teenagers or high school students in the city of Yogyakarta is 10,086 people (Jogja Population, 2018). To determine the sample using the Solvin formula. Based on the number of male adolescent population in the city of Yogyakarta, the number of samples that will be used as respondents by researchers calculated using the Solvin method with a significance level of 90% is 100 respondents. Since smoking behavior is sensitive issue for youth which this research is also include students below 17 years old, therefore finding the respondents were challenging.

RESULT AND DISCUSSION
Validity and reliability analysis have been carried out. There were valid to all of the variables and the cronbach alpha shown as 0.896 which is realiable for all variables. Based on Basuki and Prawoto (2016), when the Cronbach alpha is more than 0.70, the research instruments are not caused double meaning and the data consistents. These are implemented for variables of knowledge, promotion, location and also sapidity. Furthermore, the classical analysis which consists of normality, heteroscedasticity and multicollinearity, are significantly meet the requirement. Based on the Kolmogrov-Smirnov analysis, the normality test has significancy 0.855 and defined as normality distributed when the significancy value is more than 0.05 (Sulistyanto, 2011). The heteroscedasticity utilized to see whether the sample has been done based on the proper population (Basuki and Prawoto, 2016). Based on the measurement, all of the variables are significant which stated the value are more than the alpha (0.05). The multicollinearity has been seen to check whether any correlation between variables. It is measured through the Variance Inflation Factor (VIF) and need to be resulted less than 10 and strengthen the tolerance more than 0.01 (Sulistyanto, 2011). The assessment for multicollinearity has meet the requirements and all of the variables are not having correlation.

Table 1. Hypothesis test Simultaneously

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	11.900	6	1.983	23.337	.000
Residual	7.904	93	.085		
Total	19.804	99			

Sources: primary data analyzed, 2022

Simultaneous hypothesis testing is used to determine the effect of the variables of opinion, knowledge, social factors, cigarette purchases, family factors and cigarette advertising on the affordability to pay of cigarettes among adolescents aged 15-18 years by looking at the F-count value. This partial hypothesis test was conducted to see the effect of the variables of opinion, knowledge, social factors, cigarette purchases, family factors and cigarette advertising on the affordability to pay variable. Based on the results of the t-test using SPSS, the following results were obtained:

Table 2
Hypothesis test Partially

Variabel	Standardized Coefficients	T	Significance
Opinion (X1)	-.109	-1.526	.130
Knowledge (X2)	.185	2.209	.030
Social (X3)	.189	2.024	.046
Cig purchase (X4)	.169	2.028	.045
Family (X5)	.222	3.064	.003
Cig Advertisement (X6)	.311	3.281	.001

Source: primary data analyzed, 2022

Based on the results of the t-test above, it can be concluded that the variables of knowledge, social factors, cigarette purchases, family factors and cigarette advertising have a significant effect on affordability to pay. However, the opinion variable has no significant effect on affordability to pay. Furthermore, it can also be seen that the results of the multiple linear regression equation from the research model tested are as follows:

$$Y = -0{,}109\ X1 + 0{,}185\ X2 + 0{,}189\ X3 + 0{,}0169\ X4 + 0{,}222\ X5 + 0{,}311\ X6$$

The opinion variable has a significance value of 0.130 and the Standardized Coefficients B value is -0.109. From these results, it can be concluded that the opinion variable has a negative and insignificant effect, so it does not affect the afordability of buying cigarettes among teenagers by 0.109, so H1 is rejected and H0 is accepted. Knowledge variable has a significance value of 0.030 and the Unstandardized Coefficients B value is 0.185. Knowledge variable has a significant effect and affects the afordability of buying cigarettes by 0.185, so H0 is rejected and H1 is accepted. Because knowledge has a positive and significant effect when the higher the adolescent's knowledge about the affordability of buying cigarettes, the higher the afordability of the youth to buy cigarettes will be. So it can be concluded that knowledge affects the affordability to pay of cigarettes among adolescents in the city of Yogyakarta.
Social factors have a significance value of 0.046 and the standardized Coefficients B value is 0.189. From these results, it can be concluded that the social factor variable

has a significant effect on the affordability of buying cigarettes by 0.189, so H0 is rejected and H1 is accepted. Because the value is positive, the higher the social factors of adolescents, the higher the afordability of adolescents to buy cigarettes.

The cigarette purchase variable has a significance value of 0.045 and the standardized Coefficients B value is 0.169. From these results it can be concluded that the cigarette purchase variable has a positive and significant effect on the afordability of buying youth cigarettes by 0.169, so H0 is rejected and H1 is accepted. The higher the respondent's cigarette purchase, the higher the youth's afordability to buy cigarettes.

The family factor variable has a significance value of 0.003 and the standardized Coefficients B value is 0.222. From these results it can be concluded that the family variable has a significant effect and affects the afordability of buying youth cigarettes by 0.222, so H0 is rejected and H1 is accepted. Because the value is positive, the higher the family factor towards the respondent, the higher the youth to buy cigarettes. In the other way, the cigarette advertisement variable has a significance value of 0.001 and the standardized Coefficients B value is 0.311. From these results it can be concluded that cigarette advertising has a significant effect on the affordability of buying cigarettes, and the variable of cigarette advertising affects the afordability of adolescents to buy cigarettes among adolescents by 0.311, so H0 is rejected and H1 is accepted. Because the value is positive, the higher the cigarette advertising factor to the respondent, the higher the youth's afordability to buy cigarettes. The R-square test or the coefficient of determination above, because this test model is a multiple linear regression, it can be seen that the Adjusted R Square value is 0.868. With an Adjusted R Square value of 0.575, it means that the independent variables (opinion variables, knowledge, social factors, cigarette purchases, family factors and cigarette advertising) can explain the dependent variable (affordability to pay for cigarettes among adolescents aged 15-18 years) of 57.5 percent, while the remaining 42.5 percent is explained by other variables not included in the model

DISCUSSION

This research had been result that opinion or perspective of the respondent's concerning smoking as the culture's of recent society is not significantly impact to the affordability to pay of youth smoker. Guindo, Tobin, Yach (2002) which define the increase in the price of tobacco products will indeed reduce consumption temporarily, but also increase government revenues. Reducing tobacco consumption will not only reduce the global burden of disease, but also, among other things, improve the well-being of individuals around us (health). Therefore, the policy implications inherent in the pricing of tobacco products take on an important role, it's not based on the society's opinion. Social factor is one of the external factors that can be influenced by various things such as friends, environment and the role of one's status. Social factors have a positive and significant effect on the Affordability to Pay for

cigarettes among adolescents. It is in line to Dian and Alvin (2000), adolescent smoking behavior and peer environment are quite good predictors of adolescent smoking behavior. This is also supported by research by Rizky (2017) and Melda (2017) that the environmental factor of peers or playmates can influence adolescents to smoke because of an invitation and a very strong influence in encouraging the emergence of smoking behavior in adolescents who do not smoke. The purchasing of cigarettes has a positive and significant effect on the ability to buy cigarettes among adolescents. In this study, most of the respondents used pocket money to buy cigarettes, keeping in mind that the respondents in this study were male teenagers aged 15-18 years who were still students and did not have their own income so they divided their pocket money to buy cigarettes and food or other necessities. Although there were some respondents who claimed to be given cigarettes by their parents when interviewing researchers. There are even some respondents who admit that they are willing to ignore consumption or eating and school needs, the important thing is that they can smoke, this proves that buying cigarettes with pocket money has a significant effect according to the results of the study.

Family factors had a significant positive effect which tend to follow the smoking behavior of the parents. Rizky (2017) describe the adolescent smoking behavior caused by the influence of parents who indirectly introduce cigarettes to teenagers in the very early age. Unconsciously, teenagers who are in the family environment every day will be stimulated by the smoking behavior of their parents. This statement is also supported by Dian and Alvin (2000) that environmental factors, namely the family environment, make a significant contribution to adolescent smoking behavior. The cigarette advertising factor had a significant positive effect affect the interest of teenagers to try it, such as the slogans found in advertisements and the famous brands offered. This is in line with research by Agus and Nopianto (2017), male students who are interested in cigarette advertisements have a greater risk of smoking behavior than male students who are not interested in cigarette advertisements. Melda (2017), confirms this that advertising is also one of the things that affect youth smoking because of advertising media, both mass media such as print media, electronic media and social media are able to provide information about cigarette advertisements that can encourage teenagers to smoke.

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