

Social Assistance and Smoking Behavior in the Sprawling Megapolitan City of Jakarta

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Abstract

As the capital city, Jakarta, with its megapolitan characteristics, has a diverse smoking behavior population with high-income inequality. This study analyses the factors of smoking behaviors and the effect of social assistance from the government in Jakarta. The urgency of this study is to determine the factors that impact increasing smoking behavior. Smoking behavior has a negative impact, not only on the health side but also on the social-economy side. From the health side, based on the data, smoking is the second leading cause of death in the world, affecting around 7 million people a year and rising to 8 million deaths by 2023. The intensity of smoking can adversely affect the health of various organ systems and add the brain to the list of organs. This negative impact affects the next generation, directly or indirectly. On the other socioeconomically side, previous research has shown that smoking is more common in socioeconomically disadvantaged communities. This study uses secondary data from the 2023 National Socioeconomic Survey (SUSENAS), with the methods used being OLS, logit, and probit. The results showed that demographic and economy conditions affect smoking behavior in Jakarta. In addition, social assistance provided by the government also offers a positive influence on smoking behavior because it can encourage cigarette consumption through an income-effect approach.

Keywords: Social Assistance, Smoking Behavior, SUSENAS 2023, Indonesia.

INTRODUCTION

Smoking behavior among the younger generation continues to increase due to pressure internally from individuals and from the surrounding environment. The urgency of this study is to determine the factors that impact increasing smoking behavior from the characteristics of the Sprawling Megapolitan City of Jakarta, Indonesia. From the health side, smoking is the second leading cause of death in the world, affecting around 7 million people a year and rising to 8 million deaths by 2023. The intensity of smoking can adversely affect the health of various organ systems and add the brain to the list of organs. This negative impact affects the next generation, directly or indirectly. On the other socioeconomically side, previous research has shown that smoking is more common in socioeconomically disadvantaged communities. So, this study analyzes the factors that can affect smoking behavior but also the role of the government in protecting society with social assistance.

Smoking behaviour is growing in multigenerational environments, especially among the younger generation. Dijkstra & Tromp (2002), the level of physical dependence on smoking behaviour can be known based on the number of cigarettes consumed per day and the time of the first cigarette consumed in a day. Internal factors and external factors can cause the cause of increased smoking behaviour. In general, a person's reason for smoking is because they fill their free time so that they can manage stress and reduce anxiety. Boredom affects 50%, depression affects 47%, and anxiety affects 44% of a person's initial decision to smoke (Lamin, R., et al., 2014).

In addition to the younger generation, such as teenagers, smoking behaviour is often associated with the condition of less prosperous communities. Indicators to determine the level of well-being in smoking behaviour can be known socially and economically (Pampel, FC. et al., 2010). Factors influencing smoking include personal factors, family environment, socioeconomic status, school environment, and social environment (Shukr et al., 2023). Smoking behaviour is one of the consumption phenomena carried out by individuals in the

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community. Directly or indirectly, economic factors are the leading cause of the consumption of individual smoking behaviour.

Indicators of economic conditions that affect smoking behaviour, including the origin of places or geographical conditions of individuals. Previous research stated that economic conditions can be known through employment status to income level (Pampel et al., 2015). By the theory of demand, the level of income of individuals becomes one of the factors affecting the level of consumption. Li, Wang, Chen, Chai, and Tang (2012) also found that regional differences influence individual health behaviours, including decisions for cigarette consumption. Individuals in poorer areas are likelier to smoke (Diez Roux et al., 2003). Regional indicators of differences can be known from rural and urban areas with different population demographic characteristics.

Smoking habits can negatively affect the health of active smokers and passive smokers around them. The impact caused by smoking is proportional to the intensity of each day. Furthermore, a history of daily smoking is strongly associated with a decrease in brain volume, and a history of heavy smoking can decrease greater brain volume. In addition, smoking is closely related to respiratory infections, abscesses, emphysema, to skin infections (Kjerulff, B., et al., 2023). The long-term impact of smokers on this health condition is inversely proportional to the long-term impact. In general, smokers often feel a feeling of tranquillity that becomes a reason for prolonged smoking (Picot-Ngo, K. et al., 2023; Lamchouri, F. et al., 2023).

The long-term negative impact of smoking behaviour encourages the government to provide programs to reduce the number of smokers. One of the government programs is social assistance, especially for people in economic conditions below the poverty line. The purpose of providing social assistance is two different sides. First, social assistance can encourage people to increase their income, which affects their consumption level. The negative impact of increasing consumption is the fulfilment of people's needs and welfare. On the other hand, the provision of social assistance can encourage these less prosperous people to consume more cigarettes. Therefore, government protection is needed not only from the side of the community as consumers but also policies for producers to distributors.

The phenomenon of smoking behaviour continues to occur in every country, especially developing countries such as Indonesia. Smoking behaviour tends to differ between conditions in developed and developing countries. Fichtenberg and Glantz (2002), smoking behaviour in developed countries tends to decrease because active smokers continue to try to quit. In contrast, developing countries tend not to succeed in quitting smoking (Yang et al., 2011). The tendency to smoke in developing countries such as Indonesia is also supported by product diversification, such as the existence of electronic cigarettes so that smokers have the choice not only to smoke tobacco.

The problem related to smoking behaviour in Indonesia is the increase in active smokers from the younger generation, but policies to control smoking rates tend to be ineffective. The increase in the number of smokers is also caused by prices that tend to be affordable (Prasetyo et al., 2019). There are indications of other problems manufacturers carry, such as free riders. Although until now the government continues to strive to control the number of active smokers in Indonesia in urban and rural areas, the policy results have not shown significant results. One of the reasons is that the allocation of aid the community receives is not used correctly for the consumption and fulfilment of basic daily needs (Dartanto et al., 2021).

This study is essential to analyze the factors that influence individuals to smoke and the impact of social assistance on smoking behaviour. The scope of this study is in urban areas with diverse demographic conditions with unequal income levels. This study is different from other studies because it analyzes every social assistance allocated by the government to the public in general and active smokers in particular. Therefore, variables in the study include (i) demographic conditions, such as marital status, sex, and age; (ii) types of social assistance, such as social security, prosperous family cards, family hope, wage subsidy assistance, and other types of social assistance for individuals.

LITERATURE REVIEW

Smoking behaviour can be influenced by social cohesion. Previous research shows three mechanisms of the relationship between social cohesion and smoking behaviour (Himmelfarb, 2013):

High environmental and social support can decrease the tendency to smoke and increase motivation to quit.

The level of social cohesion can increase each individual's awareness of the need to comply with applicable norms and respect the rights of others.

High social cohesion can reduce stress tendencies in each individual to reduce the causes of smoking behaviour.

External factors that can affect smoking behaviour include environmental conditions outside the home and a significant influence from family factors.

Social learning theory explains the behaviour of family members related to the choice to smoke. Children from families with smoking habits have a higher tendency to smoke than children who come from non-smoking families (Simons-Morton et al., 2023). Individuals tend to imitate the behaviour of those around them, predominantly adults, without regard to health risks and consequences. Furthermore, in experimental study theory, well-being refers to satisfaction, positive emotions, a sense of meaning, and good mental health, affecting activities and behaviour. The greater the feeling of health and happiness the individual possesses, the better his behavioural choices and activities will be, including the tendency not to smoke (Diener et al., 2017). In this case, well-being can hurt behaviour or the choice to smoke.

The fulfilment of individual welfare is obtained from not only the economic activities carried out but also from the role of the government. In order to improve public welfare, the government plays a role in spending on social programs. In this case, several roles of the Indonesian government in improving people's welfare are shown through several programs, such as Social Security, Prosperous Family Card (KKS), Family Hope Program (PKH), Elderly Attention Program, Wage Subsidy Assistance (BSU), Food Assistance, Covid-19 Assistance, Micro Business Assistance and Routine Assistance. Government assistance is needed to reduce the intensity and impact of smoking behaviour, as several previous studies state that the tendency of smokers is dominated by individuals who are not socially and economically prosperous.

METHOD

This study uses data from the 2023 National Socioeconomic Survey (Susenas). Susenas is a collection of data from individuals on several indicators such as demographics, education, social and the role of government. This survey is conducted annually by the Central Statistics Agency (BPS) and is one of the primary media that can be used to monitor the socioeconomic dynamics of the population. The number of observations in this study was 10,829 respondents, people who smoked in Jakarta Province. The empirical model in this study is based on the argument that there are factors that cause individuals to decide to choose tobacco or electronic smoking. The factors in question include demographic factors to the role of the government in providing social protection so that it becomes a direct or indirect cause for individuals to decide to smoke. Thus, the following equations are used in this study, namely.

$$\text{[[Tobacco]]}_i = \gamma_0 + \gamma_1 \text{ [[Age]]}_i + \gamma_2 \text{ Marr} + \gamma_3 \text{ [[Gender]]}_i + \gamma_4 \text{ [[Education]]}_i + \gamma_5 \text{ [[Government]]}_i + \epsilon_i \dots \dots \dots (1)$$

$$\text{[[Elektric]]}_i = \alpha_0 + \alpha_1 \text{ [[Age]]}_i + \alpha_2 \text{ Marr} + \alpha_3 \text{ [[Gender]]}_i + \alpha_4 \text{ [[Education]]}_i + \alpha_5 \text{ [[Government]]}_i + \mu_i \dots \dots \dots (2)$$

Based on equations (1) and (2), it can be seen that the tobacco and electric variables are dummy variables. If the individual smokes using tobacco cigarettes, it is worth 1, and if not smoking at all is worth 0. If the same thing happens to individuals who use e-cigarettes, the value is 1. Furthermore, both equations were estimated using logistic regression analysis. As a comparison, the equation in this study was also estimated using multiple

linear regression and probit regression analysis. Furthermore, the definition of variables used in this study is as follows.

Table 1. Description of Independent Variables

Variable Classification	Variable	Description
Tobacco Cigarettes	Tobacco	1 = Smoking Tobacco 0 = No Smoking Tobacco
E-cigarettes	Electric	1 = Electric Smoking 0 = No Electric Smoking
Demographic Conditions	Age	1 = Productive Age 0 = Not Productive Age
	Marriage	1 = Married 0 = Unmarried
	Gender	1 = Female 0 = Male
	Education	0 = Did not finish elementary school 1 = SD 2 = SMP 3 = SMA 4 = College
Government Assistance	Government	1 = Getting Government Aid 0 = Not Getting Government Aid

Source: Author, 2024

RESULT AND DISCUSSION

The estimation in this study was carried out through Ordinary Least Square (OLS), logistic regression analysis, and probit regression analysis. These three methods are used to determine the factors that determine the decision of each individual to choose tobacco and electric smoking. Based on the estimated results, the three methods, both OLS, logistic regression analysis, and probit regression analysis, show the same tendency of results in the model used. However, until now the use of Ordinary Least Square (OLS) regression still has various weaknesses, one of which cannot accommodate the heterogeneity of the data owned. Meanwhile, the weakness of probit regression analysis is that it cannot estimate variables with two categories. Therefore, this study tends to use the results of logistic regression analysis.

The equation in this study aims to analyze the factors that influence individuals to smoke and the impact of social assistance on smoking behaviour. The estimation results show that different factors influence individual decisions to smoke tobacco with e-smoking. Factors influencing individuals to smoke tobacco are (i) marital status, (ii) gender, and (iii) level of education. Meanwhile, factors that predispose individuals to e-smoking are influenced by (i) age, (ii) marital status, and (iii) gender. However, the government's role in providing social protection affects smoking behaviour for tobacco smokers and e-smokers. In more detail, the estimated results related to factors that influence individuals to smoke and the impact of social assistance can be known in Table 2, as follows.

Every individual's decision to smoke tobacco tends to be influenced by demographic factors and the role of government through social protection programs. Male individuals who have mated status and have a low level of education have a higher tendency to smoke tobacco. Education level tends to correlate positively with an

individual's economic status. Individuals with low education have a higher vulnerability to economic shocks and the threat of poverty. The characteristics of individuals who smoke tobacco are in line with research by Kong et al. (2020); the main target of cigarette companies is socially and economically vulnerable community groups, one of which is characterized by low-income levels.

Tabel 2. Results

Variables	OLS	Logit	Probit
Variabel Dependen: Tobacco			
	Koef	Koef	Koef
C	-0.2341173	-1.150992	-0.7060768
Age	-0.000015	-0.0000726	-0.0001758
Marriage	0.015151*	0.1102766*	0.0664327*
Gender	-0.0505447**	-0.350734**	-0.1980235**
Education	-0.0061785**	-0.0477303**	-0.0264095**
Government	-0.0033997	-0.022864*	-0.0133668**
Variabel Dependen: Electric			
	Koef	Koef	Koef
C	-0.0304967	-3.35531	-1.837005
Age	-0.0001277*	-0.0088235*	-0.0033839*
Marriage	0.0049088	0.3378015*	0.1329897*
Gender	-0.0040758*	-0.2523412*	-0.1003305*
Education	-0.003849	-0.0234273	-0.0109799
Government	-0.0023928	-0.1225548*	-0.0488506*

Source: Author, 2024

In contrast to the characteristics of e-cigarettes, individuals of non-productive age, marital status, and male sex tend to choose to smoke non-tobacco. Education level factors showed no influence on individuals' decisions to smoke e-cigarettes. In women, smoking will harm burial (Bakaloudi D. et al., 2023). Smoking rates among women are meagre for socio-cultural reasons; in this case, smoking habits for women are considered taboo and can damage the reputation and image of female smokers (Lamchouri F. et al., 2023). The prevalence of smoking among men is higher than among women every year (Roche A. et al., 2021).

In general, smoking can also be influenced by external factors, such as the surrounding environment and the role of the government in providing social protection. Schuck et al. (2012), social networks can influence individual behaviour, including in terms of smoking, both tobacco cigarettes and e-cigarettes. The social network in question can occur in the family and surrounding environments. For the family environment, children born to smoking parents tend to have a higher likelihood of smoking when compared to children born to non-smoking parents. In addition, in the surrounding environment, acceptance between individuals can influence a person to follow the habits around him. That is, individuals who grow up in an environment with smoking habits tend to have the possibility to smoke. Thus, parents, friends and relatives who smoke become one of the initiations of someone smoking (Lamchouri, F. et al., 2023).

Previous research on the environment and smoking has consistently linked living in poorer areas socioeconomically with an increased risk of smoking. Meanwhile, on the other hand, smoking is one form of individual habit that can be at risk of death. Juan et al. (2022), tobacco smoking is one of the main risk factors for premature death and several comorbidities. Therefore, until now, the government continues to strive to reduce the number of smokers to overcome the adverse effects of smoking behaviour through social protection programs.

This study proves that individuals who do not get government assistance in terms of social protection programs have a higher tendency to smoke both tobacco cigarettes and e-cigarettes. Unlike previous research conducted by Dartanto et al. (2021), recipients of social assistance programs consume more cigarettes per capita per week than non-recipients. In addition, our study proves that smokers will have lower socioeconomic indicators than non-smokers. Therefore, based on the results of this study, the government should start focusing on implementing social protection programs in terms of prevention and targeting active smokers.

The government not only plays a role in regulating the price level and distribution of cigarettes but also must be proactive in providing social protection programs for the target. The government can provide social protection to two levels of society: individuals who are not yet of productive age and those with low education. For non-productive ages, it aims to prevent smoking habits, both tobacco cigarettes and electronic cigarettes. Meanwhile, for people with low education, it aims to divert these negative habits to positive and productive things. Thus, smoking habits that can negatively affect each individual can be minimized.

CONCLUSION

Different factors influence an individual's decision to smoke tobacco with e-smoking. Factors influencing individuals to smoke tobacco are (i) marital status, (ii) gender, and (iii) level of education. That is, male individuals who have married status and have a low level of education have a higher tendency to smoke tobacco. Meanwhile, factors that predispose individuals to e-smoking are influenced by (i) age, (ii) marital status, and (iii) gender. That is, individuals with non-productive age, marital status, and male sex tend to choose to smoke non-tobacco. In addition, the role of the government in providing social protection affects smoking behaviour for tobacco smokers and electric smokers. Individuals who do not receive social protection programs are more likely to decide to smoke when compared to individuals who receive social protection program assistance.

Based on the results of this study, the government should begin to focus on implementing social protection programs not only in terms of prevention, but also focus on targeting active smokers. The government not only plays a role in regulating the price level and distribution of cigarettes, but also must be proactive in providing social protection programs by the target. The government can provide social protection to two levels of society: individuals who are not yet of productive age and those with low education. For non-productive ages, it aims to prevent smoking habits, both tobacco cigarettes and electronic cigarettes. Meanwhile, for people with low education, it aims to divert these negative habits to positive and productive things.

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