THE ROLE OF SOCIOECONOMIC DETERMINANTS ON INDIVIDUAL DECISION TO QUIT SMOKING: EVIDENCE FROM INDONESIA

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ABSTRACT

The Global Adult Tobacco Survey in 2020 shows that Indonesia became the world's third-highest number of smokers. This is due to the excessive consumption of cigarettes by the Indonesian people and the lack of awareness of the effects of smoking. This study aims to investigate the socioeconomics as an indicator that has a high probability of being a determinant of individual decisions in households to quit smoking and uses the latest Indonesia Family Life Survey (IFLS-5). The Probit approach was used to analyze the most identified factors for preventive ways and propose interventions to address those factors. We find some facts, namely (1) The higher the level of education and income of the individual in the household, the higher the probability of the individual's decision to quit smoking; (2) unlike cigarette expenditure, the more significant the increase in cigarette expenditure, the lower the individual's probability of quitting smoking; (3) but, unfortunately, the existence of a non-smoking area does not influence individuals in the household to quit smoking, this also applies to individual smokers who are sick. We also found that several control variables, such as (4) increasing age and marital status (married), had a positive effect on an individual's decision to quit smoking; (5) individuals who were male had a lower probability of quitting smoking than females. In addition, (6) both individuals with marital status (divorced) and occupation do not affect the decision to quit smoking.

Keywords: *Cigarette, Quit Smoking Decision, Individual, Indonesia.*

JEL: A1; O1; P2

Introduction

After China and India, Indonesia has the world's third-highest number of smokers. According to the Global Adult Tobacco Survey, 61.4 million adults in Indonesia currently smoke, with 67.4% of them being men. More than 25% of Indonesians are smokers (GBD 2015 Tobacco Collaborators, 2017), making Indonesia the second-largest global cigarette market (Gibson, 2017). The age-standardized prevalence of daily smoking was 15.2% worldwide (14.7, 15.7). There were 933.1 (901.5, 966.5) million daily tobacco smokers. China [268.3 million (263.3, 273.5)], India [104.2 million (99.2, 109.6)], and Indonesia [53.7 million (49.6, 58.3)] had the

most daily smokers, accounting for 45.7% of the global total (Peacock et al., 2018). Cigarette use has an impact on a variety of factors, including the environment, health, social, and economic. Smoking has become one of the leading causes of death worldwide. Individuals, families, and societies bear a significant burden due to the direct and indirect costs of smoking, which include the utilization of health services for smoking-attributable diseases and the loss of productivity due to smoking-related morbidity and mortality (Goodchild et al., 2018; HHS, 2014). Furthermore, various socioeconomic classes, including people with low incomes, feel the effects of cigarette addiction. This burden is particularly pronounced in low- and middle-income countries, exacerbating poverty and impeding economic growth (WHO, 2015).

According to the chairman of the Indonesian Association of Public Health Experts' Tobacco Control Special Agency, 12.7% of smokers died as a result of the influence of smoking behavior. In Indonesia, 80.4% of total tobacco production is consumed as Kretek cigarettes, while 19.6% is consumed in other forms (Wlodarcyk et al., 2013) gender, level of education and place of residence. The objective of this paper is to describe the occurrence of daily tobacco use in urban and rural populations in Poland. Materials and Method: The data was collected between 2009-2010 as part of the International Global Adult Tobacco Survey project. The study was conducted based on population of age 15 and older. 7,840 full individual interviews were conducted (51.2% in rural and 48.8% in urban areas. The tobacco epidemic in Indonesia remains one of the world's most severe. Based on the 2019 National Socio-Economic Survey, the prevalence of adult ever-smoking in 2019 was 32.8%, with 64.5% of adult males in Indonesia reporting ever-smoking. Also increasing is the prevalence of ever-smoking among children (BPS, 2019). The prevalence of smoking among 10–18-year-old children increased from 7.2% in 2013 to 9.0% in 2018 (BAPPENAS, 2015); about 51.3% of all adults and 66.2% of youth aged 13–15 are regularly exposed to secondhand smoke (GYTS, 2019). Furthermore, the habit of high consumption of cigarettes affects the distribution of expenditure on basic needs in the family. Some even prioritize smoking consumption over other important needs, such as food. This is supported by data on spending on basic needs by the Indonesian Statistics Center as follows:
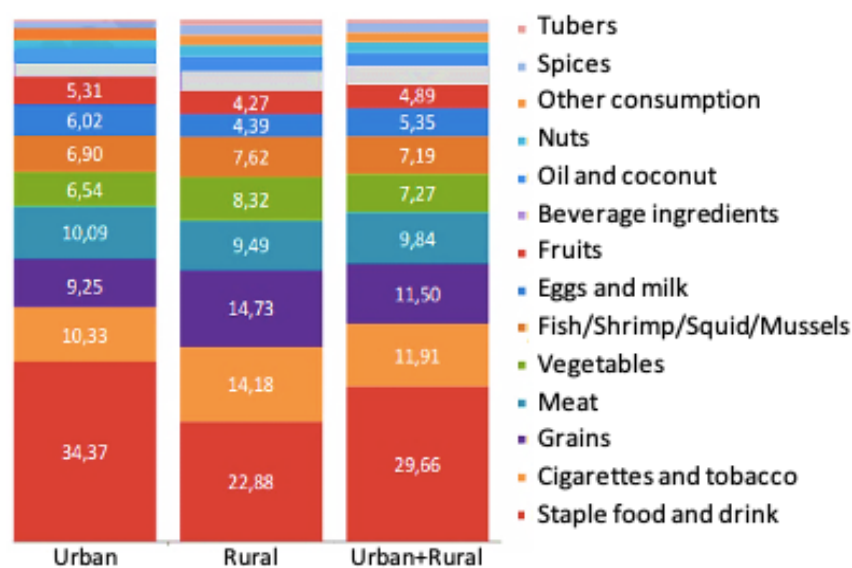

Figure 1: Percentage of Average Monthly Expenditure by Food Group and Area of Residence

Source: BPS (2016)

Figure 1 shows that in 2016, the Indonesian Central Bureau of Statistics (BPS) identified food groups that significantly dominate individual spending, especially for people experiencing poverty living in cities and rural areas, namely, food and beverages, kretek cigarettes, grains, and so on. Kretek cigarettes are consistently ranked second to rice regarding food commodities for those below the poverty line (Suhartini & Hakiki, 2016). This fact demonstrates that, in addition to buying rice, the majority of the income of the poor people in urban and rural areas is spent on cigarettes. Cigarettes are consumed by members of the household for a variety of reasons, such as smoking influenced by income, the price of the good itself, tastes, the environment, and other reasons. Individuals select goods that maximize their satisfaction. Individuals have a well-defined set of preferences, and when presented with a set of options, they select the one that maximizes their satisfaction or utility (Rabin, 1998).

Several previous studies have linked smoking behavior with several individual socioeconomic indicators in the household. Research conducted by Nguyen et al. (2021) found that a one percent increase in the price of cigarettes decreased households' per capita expenditure on tobacco consumption by 0.43 percent. This finding suggests that increasing tobacco levies and prices is a viable strategy for reducing tobacco use. Cigarette expenditure also tends to be more generous in households with low socio-economic status. High cigarette consumption results in high expenses, financial strain, and insufficient funds for household food requirements (Siahpush et al., 2018). Individuals with lower socio-economic status are likelier to smoke (Kusumawardani et al., 2018; Nketiah-Amponsah et al., 2018). In most high-income countries (e.g., the USA, Canada, Japan, and Korea), the prevalence of smoking was inversely related to social position (Schaap & Kunst, 2009).

In contrast, a positive association between SES and tobacco use was found in some developing countries, such as India, Thailand, and Malaysia (Barik et al., 2016). More specifically, Wang et al. (2018) also say that income was insignificantly related to cigarette consumption and also explained that compared with the unemployed, managers and professionals consumed more cigarettes in urban and rural areas, respectively. The study by John et al. (2012) explains how education influences cigarette consumption patterns. Individuals who have received or are currently receiving education have access to information about the dangers and health effects of smoking. Aziizah et al. (2019) stated that there is a relationship between the level of knowledge and the motivation to quit smoking, where the higher the level of knowledge, the higher the motivation to quit smoking.

Other studies also link socio-economic factors with smoking behavior. Surjono & Handayani (2013) discussed the relationship between age and cigarette consumption in their study: the more likely a person is to buy cigarettes at a low price, indicating a decrease in cigarette consumption expenditure with increasing age. As revealed in the study of Sugiharti et al. (2015), sex (gender) affects cigarette consumption, with female smokers consuming fewer cigarettes than males. Men are more likely to smoke cigarettes because of the social effect; they are more confident, they want recognition in groups, and smoking is associated with customs and habits in some places (Leppan et al., 2014). Furthermore, in a research conducted by Sembiring (2017), He explained the relationship between loneliness and smoking behavior in women at The Cube Club Hotel Danau Toba International Medan, where he discovered a significant positive relationship between loneliness, such as single adults, death of loved ones, divorce, and relocation, and smoking behavior in women. There was a significant correlation between marital status and smoking habits among women in East Indonesia (Lestari et al., 2017).

Widati (2013) discovered that informants knew the dangers of cigarettes from messages wrapped in cigarettes. Despite knowing that the majority of the informants could not completely and correctly recall the contents of the health message on cigarette packs. The message about the dangers of cigarettes wrapped in cigarettes did not increase the informant's knowledge about the substance of cigarettes, the dangers of smoking to oneself, the dangers of smoking to others, or the impact of smoking on health. When the majority of the informants read the contents of health messages on cigarette packs, they felt normal. This is in line with the statement of Setiawan (2019) that active smokers are excessively fond of smoking behavior. Other research states that policies that support the implementation of non-smoking areas can reduce the proportion of smoking behavior (Rahajeng, 2016). With the policy of implementing non-smoking areas and signs prohibiting smoking, smokers experience discomfort (Ulfah et al., 2018).

Various studies using IFLS-5 have actually been carried out. Some of these studies focus more on the impact of smoking behavior on health conditions (Mahardhika et al., 2020). Another example is regarding the impact of smoking behavior on respiratory diseases (Harahap, & Mutahar, 2017), Health of pregnant women (Simamora & Ronoatmodjo, 2020). On the other hand, various studies have focused more on expressing socio-economic indicators such as education level, marital status, age, sex, and occupation (Hapsari et al., 2022; Nugroho & Atmanti, 2020; Pratiwi, 2022; Salsabila et al., 2022). These investigations focus primarily on the variables that influence individual smoking. In contrast, the focus of this study is more on individual decisions to quit smoking, and unlike most other studies, it also employs indicators of total cigarette expenditures and smoking when sick.

Taking into account the negative effects of smoking, both on the health front and on the economic front, this research is extremely important because it can provide information about the close socioeconomic relationship between cigarette consumption and the community as a whole. In addition, the findings can serve as a foundation for future research regarding smoking behavior. Consequently, this research aims to investigate in greater depth which socioeconomic indicators have a relationship with and influence a person's decision to quit smoking.

Literature Review

Since the late 1800s, hand-rolled kreteks have been produced in Indonesia. Midway through the 1970s, machine-rolled kreteks were introduced to the market, displacing white cigarettes as the most popular tobacco product in the country. The market for machine-made kreteks is dominated (to 63 percent) by Category I cigarette manufacturers who produce over 3 billion sticks annually. After cigarettes are marketed, they are readily available at a variety of prices. This causes an increase in cigarette consumption in Indonesia, particularly among men (Zheng et al., 2018). Indonesian consumers can still purchase cigarettes at a lower price than consumers in the majority of other middle- and high-income nations. The price of a pack of cigarettes is as low as US$ 0.45, which is among the lowest in the globe (WHO, 2017). In Indonesia, the sale of individual cigarette sticks continues to be commonplace, making cigarettes even more affordable. This purchasing method may particularly encourage adolescents to experiment with smoke.

Consequently, the rising prevalence of smoking must be curbed. The United Nations has called for global action to reduce tobacco use (United Nations, 2015). Indonesia has made little progress in reducing cigarette consumption over the past decade, whereas many other nations have implemented strict tobacco controls, such as tax and price measures. In contrast,

Indonesian smokers nearly tripled between 1980 and 2015, from 25 million to an estimated 73.6 million (World Bank, 2017). Tobacco kills approximately half of its long-term consumers, on average, more than a decade prematurely (Jha & Peto, 2014). With 145.9 deaths per 100,000 in East Asia, including Indonesia, the tobacco-attributable mortality rate is the second highest in the world, surpassed only by Oceania (Papua New Guinea, Kiribati, Federated States of Micronesia, and the Solomon Islands, excluding Australia and New Zealand) with 269.3 deaths per 100,000 (Peacock et al., 2018).

In addition to its adverse health effects, as Global evidence demonstrates that tobacco use contributes to the global tuberculosis epidemic and exacerbates problems (Drope et al., 2018; U.S. NCI & WHO, 2016; WHO, 2017), tobacco use imposes a significant economic burden, particularly on Indonesia's poor. The economic burden of smoking falls most heavily on low-income smokers, who risk income loss, decreased labor productivity, and impoverishment as a result of out-of-pocket payments for the treatment of tobacco-related diseases. While people experiencing poverty suffer the most, the entire Indonesian population is impacted. The costs associated with tobacco use include illness, disability, premature death, and foregone consumption and investment. The annual health expenditures in Indonesia attributable to tobacco use are estimated to be approximately $1.2 billion (Goodchild et al., 2018). In 2015, the indirect morbidity, disability, and premature death costs associated with tobacco in Indonesia were estimated to have reached US$ 28.78 billion (IDR 374.06 trillion), or 3.3% of Indonesia's GDP (Kosen et al., 2017).

Based on the facts and data examined by previous researchers, it is possible to conclude that smoking behavior not only negatively affects health, but also the social and economic life of the family. Not only are the adverse effects of smoking behavior detrimental to smokers, but they can also have a cumulative influence on the costs incurred by a country to combat the effects of smoking. This allows us to observe and investigate socioeconomic factors that can be used strategically to combat the increase in Indonesian smokers. Furthermore, to conduct this research, the Indonesia Family Life Survey (IFLS) wave five survey data will be more appropriate for researching people's tobacco and cigarette consumption behaviors. The IFLS data can provide an overview of the relationship between social and economic status and smoking behavior (RAND, 2021).

Data and Research Methods

The Indonesian Family Life Survey, obtained by Survey Meter Indonesia and RAND, served as the primary data source for this study. IFLS is a large-scale longitudinal survey in Indonesia with publicly available data (Strauss et al., 2016). This survey is a panel study of households, individuals, and communities RAND Corporation has conducted in 13 of Indonesia's 27 provinces in five waves since 1993. The fifth batch survey (IFLS-5) was conducted at the end of 2014 with 15,900 households and 709 communities.

First, the researcher obtained all relevant data from the Indonesia Family Life Survey (IFLS) by directly recording longitudinal data on the 2014 IFLS-5 data using the data collection method. The books containing data and information relevant to the research topic were chosen from the IFLS's various survey books. Book 3B and Book K Final of IFLS Wave-5 become additional sources of information. Each book contains a collection of questionnaires, the topic of which is critical in determining data processing. Furthermore, the type of book chosen serves as a guideline for determining which variables to study, dependent and independent. The dependent variable in this study was the decision to quit smoking, which is in dummy form. An individual on tribe variable determined 1 = if quit smoking and 0 = if keep smoking.

The independent variables cover: 1) cigarette expenditure, 2) non-smoking area, 3) smoking when sick, 4) education level, 5) income, 6) occupation, 7) sex, 8) age, 9) married, 10) divorce. The variable descriptions are presented in Table 1.

In general, two regression models can be used in statistics if the dependent variable is in dummy form, namely the logit and probit models. These models examine the relationships between qualitative and quantitative (dependent and independent) variables. The equation below defines logistic regression with one predictor. Because the regression equation is applied to dichotomous (sorted) output data, it is translated into a probability (P), which stands for P=1 (probability of receiving a score of 1).

$$P = \frac{\exp(\beta_0 + \beta_1 X)}{1 + \exp(\beta_0 + \beta_1 X)} \ or \ \ln\left(\frac{p}{1-p}\right) = \beta_0 + \beta_1 X \qquad (1)$$

Meanwhile, probit regression is a logistic regression modification in which the logit regression equation is modified to follow the normal distribution. Using probit regression, 0+1X is seen as a standard Z score with a normal distribution, yielding:

$$P = \frac{\exp(z)}{1 + \exp(z)} \ or \ \ln\left(\frac{p}{1-p}\right) = z \qquad (2)$$

Therefore, taking the characteristics of the data into account, the probit model is used in this study. Febriawan et al. (2012) explain probit regression using the Normal Cumulative Distribution Function (CDF) to explain the equation's function. The model was chosen because it is particularly well suited to experimental data and is useful when you have a dichotomous output that is thought to be influenced or caused by levels of some independent variable(s). This procedure will allow the researcher to calculate the stimulus strength required to elicit a specific proportion of responses, such as the median effective dose (SPSS Statistic, 2021). In addition, most studies used discrete models, such as the probit and hazard models, to study the influence of various socioeconomic factors on a decision on smoking status (Nugroho & Atmanti, 2020). The model in this research is presented as follows:

$$quitsmoking = \beta_0 + \beta_1 cig_{expe} + \beta_2 nonsmoking_{area} + \beta_3 smoking_{sick} + \beta_4 educ +$$
$$\beta_5 inc + \beta_6 occ + \beta_7 sex + \beta_8 age + \beta_9 marriage + \beta_{10} divorce \qquad (3)$$

Finding and Discussion

Probit regression is used in this study to determine the likelihood of an individual's decision to quit smoking in IFLS households in 2014. The dependent variable in this study is the status of the decision to quit smoking. The dependent variable was derived from IFLS-5 questionnaire questions about household members who smoke cigarettes, pipe tobacco, or chew tobacco.

General statistical data

Table 1 shows the general statistical description of the variables used in the study. The dependent variable in this study is the status of the decision to quit smoking. The average cigarette expenditure for active smokers is Rp. 72,000, 59.03% of current smokers quit smoking in non-smoking areas, 68.13% of active smokers quit smoking when they are sick, active smokers have an average education level of 8 years, which is equivalent to grade 2

junior high school, active smokers have an average income of Rp. 21,765,000, 79.68% of active smokers work, 86.28% of active smokers are males, active smokers have an average age of 39 years, 72.73% of active smokers are married, and 1.62% of active smokers are divorced.

Table 1: Variable Descriptions

Variables	Description	Mean	Std. Dev	Min	Max
Quit smoking	1 if quit smoking; 0 if others	0.115	0.319	0	1
Cigarette expenditure	Total purchase in a month (thousand IDR)	71985	59083	0	999
Non-smoking area	1 if non-smoking area; 0 if others	0.761	0.469	0	1
Smoking when sick	1 if having disease; 0 if others	0.774	0.417	0	1
Education level	Years	8.503	4.240	0	22
Income	Monthly earning (million IDR)	21765	37813	0.05	1000
Occupation	1 if having a job; 0 if others	0.899	0.300	0	1
Sex	1 if male; 0 if female	0.970	0.169	0	1
Age	Years	39.65	13.12	15	101
Married	1 if married; 0 if others	0.830	0.375	0	1
divorce	1 if divorce; 0 if others	0.017	0.132	0	1

Source: IFLS-5, data processed.

Regression Results

The independent variable was statistically tested to see if it had a significant relationship with the dependent variable. The t and F tests help determine the importance of each control variable in explaining the model's dependent variable. STATA 13 was also used to analyze Probit regression.

Table 2: Results of Individual Smoking Status Probit Regression

Variable	Coefficient	Standard error
Total cigarette expenditure	- 0.0026322*	0.0003355
Non-Smoking Area	- 0.0060673	0.0424231
Smoking when sick	0.0553667	0.0485204
Educational level	0.045251*	0.0047903
Income	0.0014349*	0.0004282
Occupation	- 0.0184249	0.0639381
Sex	- 0.4954567*	0.0936598
Age	0.0180341*	0.0015209
Married	0.2488971*	0.0629209
Divorce	- 0.0336136	0.1643975

Pseudo R2 0.0639

Prob LR Statistic 0.0000

Source: IFLS Wave 5, data processed.
* Significant at α=5%

The regression results indicate that at the 5% confidence level, the relationship between variables explains why total cigarette spending significantly and negatively affects an individual's likelihood of quitting smoking. The coefficient value of total cigarette spending

is -0.002, which means that if there is an increase in total cigarette spending of Rp. 1000/ week while other variables remain, the decision to quit smoking will decrease by an average of 0.2%. This demonstrates that the more significant the increase in cigarette spending, the lower the individual's likelihood of quitting smoking. Salawati and Amalia (2010) explained that the consumption of cigarettes is associated with a lower standard of living among poor households in Indonesia. There is a difference in total household expenditure per capita between households with smoking and non-smoking household heads.

The level of education has a positive influence on the decision to quit smoking. The education level coefficient value is 0.045, which means that if the level of education increases while other variables remain constant, the decision to quit smoking increases by an average of 4.5%. This demonstrates that education influences people's attitudes toward cigarette consumption, one of which is the negative consequences of smoking. The greater the individual's level of education, the greater the individual's desire to quit smoking. This is supported by previous research Aziizah et al. (2019); Hastono, (1996), which shows that the greater the formal education, the greater the health knowledge. Individuals with good health knowledge can reduce their cigarette consumption. In contrast to previous studies, which found a negative relationship between education level and the decision to quit smoking (Nugroho & Atmanti, 2020; Widyaningrum & Yu, 2018), highly educated individuals are likely to be more independent in deciding to smoke or not smoke than in the high school group, which is more determined by the peer group.

One's income influences the decision to quit smoking. The income coefficient has a value of 0.001, which means that if income increases by Rp. 1,000,000/month while other variables remain constant, the decision to quit smoking will increase by an average of 0.1%. Individual living requirements in households differ. In addition to cigarette consumption, individuals require a significant portion of their income to meet other primary household needs; therefore, this aligns with Sari et al. (2017). This is in contrast to the finding that the higher the income and consumption expenditure level, the greater the chance of a person becoming a smoker (Sugiharti et al., 2015). Hu et al. (2005) also stated that low-income households buy significantly fewer cigarettes than high-income households in China and vice versa.

Sex (gender) influences the decision to quit smoking negatively, with men having a lower probability than women. The coefficient is -0.495, which means that if the individual is male, the decision to quit smoking will be reduced by 49.5% on average. This result reinforces the findings of previous studies (Kostova et al., 2011; Kusumawardani et al., 2018; Nargis et al., 2014; Wang et al., 2018)

The decision to quit smoking is influenced positively by age. The age coefficient value is 0.018, which means that if the age increases by one year while all other variables remain constant, the decision to quit smoking increases by 1.8% on average. This demonstrates that the mindset of a smoker changes as they age. One of the reasons people quit smoking is for health reasons; the older a person gets, the lower the body's resistance. To reduce the risk of health injury, quitting smoking can be a step toward better health. This reinforces the previous finding by Surjono & Handayani (2013) but in contrast to the other Sugiharti et al., (2015).

Married has a significant and positive effect on the probability of individuals quitting smoking, with married individuals having a higher probability of quitting smoking. The married coefficient value is 0.248, which means that if the individual is married while other variables remain constant, the decision to quit smoking will increase by an average of 24.8%.

Unmarried individuals have no more life dependents than those who are married. As a result, if the individual is married, the likelihood of quitting smoking increases. This is supported by John et al. (2012), who used marital status as a variable in their research model.

The decision to quit smoking is unaffected by smoking when sick. Widati (2013) discovered that informants knew the dangers of cigarettes from messages wrapped in cigarettes in his research. Despite knowing that the majority of the informants could not completely and correctly recall the contents of the health message on cigarette packs. The message about the dangers of cigarettes wrapped in cigarettes did not increase the informant's knowledge about the substance of cigarettes, the dangers of smoking to oneself, the dangers of smoking to others, or the impact of smoking on health. When most informants read the contents of health messages on cigarette packs, they felt normal.

Furthermore, working people contradict the findings of Surjono and Handayani (2013). People who are divorced make no difference in their decision to quit smoking. This is consistent with Sembiring (2017). Last but not least, the non-smoking area has no bearing on the decision to quit smoking. This is in line with the statement of Setiawan (2019) that active smokers are excessively fond of smoking behavior.

Marginal Effect

The term "marginal effect" refers to the magnitude of the effect of changes in a predictor variable on the response variable when all other variables are held constant. The marginal effect is helpful in this study for interpreting how much influence each independent variable has on an individual's decision to quit smoking.

Table 3: Marginal Effect

Variable	Marginal Effect dy/dx	
	Coefficient	Standard error
Total cigarette expenditure	- 0.0004804*	0.0000615
Non-Smoking Area	- 0.0011074	0.0077432
Smoking when sick	0.0101056	0.0088557
Educational level	0.0082593*	0.0008751
Income	0.0002619*	0.0000781
Occupation	- 0.003363	0.0116702
Sex	- 0.0904317*	0.0170463
Age	0.0032916*	0.0002766
Married	0.0454292*	0.0114971
Divorce	- 0.0061352	0.0300053

Source: IFLS 2014, data processed.

* Significant at α=5%

Table 3 describes the marginal effect of Probit regression on the decision to quit smoking. Every unit increase in the independent variable influences the individual's decision to stop smoking. When total cigarette spending rises by Rp. 1000/week, the likelihood of quitting smoking falls by 0.048%. For one year, increasing the level of education of individuals in the household increases the likelihood of quitting smoking by 0.82%. An increase in individual household income of Rp. 1,000,000/month increases the likelihood of quitting smoking by 0.02%. The gender variable has a negative effect on the probability of quitting smoking decisions, with a significance level of 5%. Men are 9% less likely than women to quit

smoking. With each year of age, an individual's chances of quitting smoking increase by 0.3%. The married variable has a positive effect on the probability of quitting smoking decisions with a 5% level of significance. Married people are 4.5% more likely than unmarried people to quit smoking.

Conclusion

The problem of smoking behavior in Indonesia is still high when compared to other developing countries. Socioeconomic factors can be used to predict this type of smoking behavior. This study found factors affecting an individual's decision to quit smoking. There are six out of ten independent variables, namely total cigarette spending, education level, income, sex (gender), age, and occupation, that have a significant impact on the dependent variable. In the non-smoking area, smoking when sick, occupation, or divorced does not affect the dependent variable. Education is proven to influence a person's mindset to be wiser and understand the dangers of smoking behavior.

Meanwhile, non-smoking areas have not been able to persuade people to quit smoking. It is hoped that the affirmation of the smoking ban in certain areas will continue to be encouraged because smoking pollutes areas where smoking is prohibited, such as places for teaching and learning, places for children to play, places of worship, public transportation, workplaces, public places, hospital areas, and other areas. Therefore, adult smokers are expected to follow smoking regulations, particularly in non-smoking areas or public places. Furthermore, smoking while sick had no positive effect on the decision to quit smoking. Smokers' awareness of the importance of protecting their health from the dangers of smoking is still low, and the government must continue to socialize the negative effects of smoking behavior.

Declaration

In this part, the authors would like to address some important declarations, such as Conflict of Interest, Availability of Data and Materials, Authors' Contribution, Funding Source, and Acknowledgment.

Conflict of Interest

The authors declare that no significant financial, professional, or personal conflicts of interest may have influenced the conduct of the research or its outcomes. In other words, we affirm that no specific factors or interests could cast doubt on the integrity or objectivity of our research, whether in terms of finances, professionalism, or personal interests.

Availability of Data and Materials

This study obtained data from the Indonesian Family Life Survey (IFLS) Wave-5 in 2014. The data analysis process was conducted using the STATA application.

Authors' Contribution

The first author is responsible for conducting the research, drafting the manuscript, reviewing previous research, processing data, and interpreting the research results. Meanwhile, the second researcher assists in all research-related needs and requirements.

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