

# Economic Burden Analysis for Smoker and Non Smoker Farmers in Medan, Sumatera Utara

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**Abstract:** Farmer is a job with low to middle economic income. Limited income in farmers will be an economic burden if they consume cigarettes. Family needs that should be prioritized will be neglected due to choosing cigarettes as a priority, especially for smokers who have been addicted. The purpose of this study was to analyze the economic burden of farmer, and then compare it between smokers and non-smokers. This study also looked at the priority of household expenditure for smokers. This research is a survey with independent T test and Multiple Regression Linear test. Respondents in this study were 50 smokers and 250 non-smokers of farmers in Medan Marelan. The result shows that average aged of respondents 36-45 years and junior high school education (SMP) education. The t test result shows a significant difference between the economic burden of smokers and non-smokers farmer. Based on independent T test, there is a significant difference between productivity, outcome, and losses in smokers and non-smoker with  $p < 0.05$ , and there is no difference of income between smokers and non-smokers with  $p > 0.05$ . The average income of farmer is Rp 2.427.850 The percentage of outcome for cigarette consumption was 30% or Rp 730.000 from total income monthly. Spending on cigarette consumption was ranked second after basic needs. Spending on cigarette consumption will lead to poverty, as limited sources of family income are spent on tobacco consumption by ignoring costs for other needs. It is recommended that governments be more serious in implementing policies of tobacco so that poverty circles at the individual, household, and country levels of cigarettes can be reduced.

## 1 INTRODUCTION

The smokers basically realize that tobacco is one of the potential sources of diseases that interfere with health. Riskesdas 2013 revealed that 64.9% of men and 2.1% of women aged over from 15 years were smokers. Every year there are an estimated 217,400 deaths caused by tobacco-related diseases. (Ministry of Health Republic Indonesia, 2013).

Besides disturbing health, cigarette consumption has also become an economic burden for household expenditure of smokers, especially for farmers as have middle to low income community. Worker as a farmer are having limited income, and stopping for daily need. Spending on cigarettes will be a an economic burden and neglect the other needs such as basic needs, health and education. Family needs that

should be preferred will overlooked caused by an addicted smoker. (Kosen, S. 2007)

The health costs that incurred by Indonesia for tobacco-related illness reached 18.1 billion USD or 5.1 times the state revenue from tobacco taxes in the same year. This is an bad impact because cigarette only gave a bad condition for farmer individual like health and economic.

Farmers build an image that cigarette consumption can provide calm, relaxation, refreshing, and more work skills, without thinking about the long-term effects of health, and the economy of their family. Based on data of

Demography Institute of University of Indonesia in Economics Faculty of the Poorest Households Caught on Consumption of Cigarettes, there are 68% or (7 of 10) households in Indonesia who have basic outcome to buy cigarettes.

In 2010, the state's economic burden of cigarettes reached Rp 231.27 trillion. In fact, state revenues from tobacco taxes in that year only Rp 55 trillion. In 2015, BPJS-Health should spend Rp 6.6 trillion just for heart and blood vessel disease. Cigarettes also cause Indonesians to lose productivity due to morbidity, disability and early mortality. The productive time lost by cigarettes is estimated at 8.5 million by 2015. The length of the lost productive time is equivalent to a loss of Rp374 trillion annually.

Medan is the capital city of Sumatera Utara Province does not yet have a effort or good policies to protect people from smoking, cigarette consumption especially in farmers and as have low to middle income that will be an individual, households, and country economic burden.

## 2 MATERIAL AND METHOD

This research was a survey with independent T test. The data used in this research was primary data, obtained direct interviews with questionnaires to respondents. Respondents were 50 smoker and 50 non smoker farmers in Medan Marelan (as agricultural area in Medan). The collected data was processed by t test to see the difference of economic burden of smoker and non smoker farmers, income, outcome, and loss. Priority of outcome in smokers was done by using descriptive statistic analysis with SPSS 16. The research time was conducted from July to August 2017.

## 3 RESULT

Marelan was one of the agricultural area in Medan City, Marelan was an area of Dutch-owned tobacco plantations in last, the majority of people were looking for farmers, although lately the housing development in Marelan was high, there were still many area for farmers to work such as rice and vegetables. Medan Marelan Subdistrict borders with Deli Serdang in west, borders with Medan Labuhan in east, borders with Medan Helvetia and Medan Belawan in north.

Respondents in this study were smoker and non smoker farmers, with the following characteristics are:

Table 1: Characteristic of Respondends .

Characteristics	Respondents			
	Smoker		Non Smoker	
	n	%	n	%
1. Aged				
a. <25	3	6	1	2
b. 26-35	4	8	6	12
c. 36-45	29	58	23	46
d. 46-55	12	24	15	30
e. >55	2	4	5	10
2. Education				
a. SD	4	8	5	10
b. SMP	32	64	22	42
c. SMA	11	22	21	44
d. PT	3	6	2	4

Table 2: Independent t test of smokers and non smokers farmers.

Variabl e	Normalitas Test	T Independent	CI 95%
Productiv ity	P=0,552	0,003	(1,591-3,290)
Outc ome	P=0,359	0,021	(0,094-0,906)
Loss	P=0,542	0,028	(0,072-1,248)

Table 3: Income Comparison of Smoker and Non Smoker Farmers.

Farmer	N	Mean
Non Smoker	50	241,69
Smoker	50	243,88

Table 4: Outcome Comparison of Smoker and Non Smoker Farmers.

	Farmer			
	Smoker		Non Smoker	
	Rp	%	Rp	%
Basic Need	880000	36,1	920000	38,2
Cigarette	730000		0	0
Child Education	640000	26,3	779000	32,4
Health	53000	2,2	168000	7
Entertainment	42000	0,17	263000	0,10
Others	93000	3,8	276000	11,5

Table 5: Health Complaints of Smoker and Non Smoker Farmers.

Farmers	N	%
Smoker	11	22
Non Smoker	0	0

## 4 DISCUSSION

Marelan is one of the agricultural area in Medan City, Marelan was an area of Dutch-owned tobacco plantations in last, the majority of people were looking for farmers, although lately the housing development in Marelan was high, there are still many area for farmers to work such as rice and vegetables. Medan Marelan Subdistrict borders with Deli Serdang in west, borders with Medan Labuhan in east, borders with Medan Helvetia and Medan Belawan in north.

From the result in table 1 shows that the average age of smoker and non smoker farmers is in the range of 36-45 years, 58% for smokers and 46% for non-smokers, according to WHO age classification > 18-40 years old can be classified as adult age, and based on the age classification according to Prof. Koesoemanto age > 20-60 years can be classified as adult age, based on this study the average age of farmers is in the middle to late adult age, this is due to work farmers need a lot of energy and activity, although they require a lot of energy and activities for work, farmers are not supported by good education, because the average education of smoker and non smoker farmers are only junior high school (SMP), 32% for smoker farmers and 22% for non-smoker farmers.

From the above data in table 2, we can be seen that there is a significant influence between productivity, outcome, and losses between smokers and non smokers of farmers with  $p < 0.05$ . Productivity for farmers are not smoking is better than smokers, this is because the capital used by farmers non-smokers can be replaced with income monthly from work, but for smoker farmers, capital for work will not return because it has used for smoking, whereas smoking is something that can damage health, increase the economic burden of individuals, households, and also the state. Moreover outcome on cigarettes, will neglect the costs for other truly more important, like children education, health, entertainment, and others. This is accordance with (Susanas) 2015 that outcome for cigarette has defeat outcome for rice . This cigarette consumption

is equivalent or even beat total consumption for meat, milk, eggs, fish, education, and health.

From the result in table 3 shows The income of smokers and non-smokers is almost same, the average income of non- smokers is Rp. 2,416,900 and the smokers are Rp.2,438,800 per month , the income of smokers is more than that of non-smokers with a difference of Rp. 21,900, but this income actually not in line with Medan's minimum regional income Rp . 2,528 . 815 , whereas most farmers make farming the only main occupation of farmers, which can also be affected by weather and season conditions. Indeed with the income still below regional minimum income, and outcome for cigarettes that actually only give temporary sensation for smoker farmers, and consumption of cigarettes is true will become an economic burden for individual, household, and state.

From the result in table 4 shows The outcome priorities of smoker and non smoker farmers. For smoker farmers otcome priority for basic needs such as rice, fruit and vegetables is Rp. 880000 or 36.1%, cigarettes Rp. 7,30000 or 30% , children's education, such as fees and money snacks are Rp. 640000 or 26.3% , health Rp. 53,000 or 2.2%, entertainment Rp 42,000 or 0.17%, and other needs Rp 93,000 or 3.8%, and priority needs of non-smoker farmers are Rp 920000 or 38.2%, children's education Rp. 779,000 or 32.4%, health Rp. 168,000 or 7%, entertainment Rp.263,000 or 0.11% , and other needs Rp. 276,000 or 11.5% . Based on this research can be seen that need basic as food or rice only have 2.1% difference with outcome for cigarette consumption for farmers with the average consumption of cigarette for farmers are 3 packs per day.

Many farmers did not can work well without consuming cigarettes, smoker farmers say that cigarettes provide peace to farmers, so that farmers build *images* that cigarettes can be a necessity that must continue to be available for as long as work, this is evidenced in table 5 that only 22% of farmers consider it that cigarettes can interfere with their health, such as headaches are 4%, asthmas are 6%, weight losses are 4%, and caughs are 8%.

## 5 CONCLUSIONS

Spending on cigarettes is very harmful for farmers as worker with low to middle income, because cigarettes were actually just provide temporary sensation for smokers, and cigarette consumption for

a certain period of time will become an economic burden for individuals, households, and countries. Consumption of cigarettes for farmers should be the government's attention, this was because cigarette consumption has ranked second after the basic need, this neglect other more actual needs important like child education and health.

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