People's Support on Sin Tax to Finance UHC in Indonesia, 2016

Hasbullah Thabrany[1], Zahrina Laborahima[2]
Contact: hasbullah.thabrany@cheps.or.id
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Abstract

Indonesia has the highest prevalence of smokers with 67% of adult males were smokers. Smoking prevalence among all adults increased sharply from 27% in 1995 to 36.3% in 2013. High consumption of cigarettes has been correlated with low price and excise of cigarettes. Experiences from other countries showed that one of the most effective way to reduce cigarette consumption is by increasing cigarette price and excise. Burden of tobacco related diseases has increased. The health burden will increase claims of JKN or Universal Health Coverage which currently has claim ratio of 115% and the quality of care remain low. The difficulties in collecting contribution from non salaried workers are blamed to contribute the deficit. Many countries have earmarked cigarette excise to supplement financing of (UHC) both in tax-funded system or in social health insurance system. The question is do people support? This study explored the possibility the people's support to increase cigarette prices and excise to meet financial shortage of the JKN.

Objectives

This polling conducted to explore cigarette consumption and supports of price increase to finance JKN or UHC.

Methods

This study used telephone polling conducted form December 2015 to January 2016. The sample (n=1,000) was randomly selected using systematic random by the interval of 20,000 of mobile phones numbers. Analysis is focused on how various groups support incrasing cigarette prices and excise. The final analysis is logistic regression to assess any difference in supporting the excise increase.

Results and Discussion

The polling (65.9% males and 3.3% females) showed 41.3% respondents consume 1-2 pack cigarette per day with spending of IDR 450 – 600 thousands per month. In total, 80.3% respondents support increasing cigarette price and exice to supplement health financing of JKN. The proportion of non smokers who supported the earmarking was higher (83.4%) compared to smokers (75.9%), but the difference is not significance in the final model. The proportion of smokers who know that cigarette is harmful reached 96.8% but the large majority of them had difficulties to quit smoking. There are plenty of room to mobilize money through increasing price and excise of cigrettes since more than 72.3% of smokers said that they would stop smoking if the price of cigarette is above IDR 50,000 per pack; far above current prices. If the prices of cigarettes are double and the excise level reaching maximum allowable levels, there is potential to increase revenue up to IDR 70 Trillion that is almost equivalent to estimate all claim of JKN in 2016. In the logistic model, all groups of respondents unanimously support increasing prices and excise of cigarettes to finance JKN.

Conclusion

The prevalence of cigarette smoking is high because of prices of cigarette is relatively cheap and the excise levels have not reduced consumption. This study found that large majority (80%) of non smokers and 76% smokers supported increasing cigarette prices and excise to supplement financing for the JKN. The potential money to supplement JKN is double of the current revenue of JKN.

Key Words :

Cigarette Excise. National Health Insurance. JKN. UHC. Tobacco Control. Health Financing. Sin Tax, Earmarked.

1. Chair, Center for Health Economics and Policy Studies, Universitas Indonesia (CHEPS UI) and Chair of the Indonesian Health Economists Association (InaHEA) 2013-2016.
2. Research assistant at the CHEPS UI

Background

Smoking cigarette is the highest risk factor for non-communicable diseases (NCDs) in Indonesia resulting in 217,400 deaths annually in Indonesia. The Ministry of Health (MoH) reporeted that the prevalence of smoking conutinued to rise in Indonesia from 27% in 1995 to 36.5% in 2013. It is estimated that as many as 70 million males are currently active smokers. The prevalence of smoking among females increased faster from 1.7% in 1995 to an estimate of 6.7% in 2015. More alarmingly, the prevalence of smoking among youths (15-19 years) increased from 7.1% in 1995 to 20.5% in 2013 (MoHa, 2014). The prevalence of youth smoking in Indonesia is the highest in the World reaching 18.3% in 2014 (MoHb, 2014). The World Health Organization (WHO) forcasted that the prevalence of smoking in Indonesia will increase to 45% in 2025 (WHO, 2015) unless significant tobacco control actions are implemented. One of the most signifant factors contributing to high smoking rates is the price of cigarettes is relatively cheap.

The increase prevalence of smoking has been confirmed with the increase of cigarette production. The Fiscal Agency of the Ministry of Finance reported production of cigarettes has increased from 222.7 billion sticks in 2005 to 348 billion sticks in 2015. Accordingly, the excise revenues increased from IDR 32.6 Trillion in 2005 to IDR 139.6 Trillion (US$ 1 = IDR 13,500 in 2016) (FA MoF. 2016). On average, every Indonesians, including newly born baby, consumed 1,365 sticks of cigarettes in 2015. The total money spent for cigarettes in 2015 was about IDR 330 Trillions or USD 24.5 Billions. While the total government expenditure on health was only IDR 71.1 Trillions or USD 5.3 Billions in 2015 (MoF, 2015). It means that the excise and prices of cigarettes had not effectively controlled cigarette consumption in Indonesia. The fight to control consumption of cigarette becomes piercer when the Minister of Industry launch a roadmap of tobacco industry to increase cigarette production from 348 billions sticks in 2015 to 524 billions sticks by 2020 (MoI, 2015).

While to risks of tobacco related diseases are increasing and the consumption of cigarettes increased significantly, the country launched the first implementation of the National Health Insurance (Jaminan Kesehatan Nasional or JKN) in January 2014. The insurance mechanism, instead of tax funded system, to establish Universal Health Coverage (UHC) in Indonesia is based on the philosophy that everyone should be responsible for financing health care using solidarity principle. The Government has not been viewed as the sole responsible for financing health care in Indonesia. The JKN is financed from 5% payroll tax and the Government subsidies for the low income. The informal sector who do not have monthly salary pay a nominal amount that they can choose one of three premiums depending on the class of hospitalization they choose (Thabrany, 2016). The JKN aims at covering 100% of the population by 2019 (DJSN, 2012). By April 2016, the JKN already covered 166 million people (65% of the population) under a single database (Idris, 2016). It is the largest single payer health care in the World, in term of population coverage.

In the last two years, the JKN experienced increasing claims from Non Communicable Diseases, especially from tobacco related diseases. The JKN paid 22% of the total claim for four chronic diseases (cardiovascular, renal failure, cancer, and stroke) related to cigarette consumption (Moeloek, 2016). In the first two years, the JKN suffered from deficit due to shortage of revenues from contributions. Hidayat (2016) reported that the revised claim ratios of JKN of 111.5% in 2014 and 115.1% in 2015, signaling significant deficits of JKN. The shortfall of the JKN funds were mainly due to unmet adequacy requirement of contributions, as the ideal contribution calculated by the Ministry of Health for low income in 2016 is IDR 36,000 per capita while the Government

allocated only IDR 23,000 per capita per month (Moeloek, 2016). With the shortfall is predicted to continue, the sustainability of JKN is being questioned. One of the viable solution, as it has been practiced in many other countries, is to mobilize fund from cigarette excises and earmarking the revenue to finance universal health coverage (UHC) or JKN.

However, controversies about raising cigarette excises as a dual purpose, to control tobacco uses and to raise fund for the JKN continue in Indonesia. Some politicians, Government officials, and academics strongly recommend the governmant to fill the financial gap of the JKN with rising cigarette taxes while some other Goverment officials and the industries against such notion. Since, the smokers who actually pay excises this study was conducted to explore how far the people and the smokers support raising cigarette prices and excise to finance JKN.

Objectives

The main objective of this study is to obtain information on how far the public, both smokers and non smokers, support raising cigarette excise to fill the financial shortage of the JKN. Other objetives include collection information of the profiles of current smokers by various social and economic variables and the levels of prices of cigarettes that smokers consider to stop smoking to expand fiscal space.

Method

This study uses survey method of telephone polling to adult Indonesians. The data collection was conducted in December 2015 through January 2016. The initial sample was drawn from a random mobile telephone number and then the subsquent number was called with the interval of 20,000 (systematic random sampling). If the respondent was not eligible and refuse to participate, then the interviewer dialed the subsquent numbers until 1,000 respondents were interviewed. The interviewers were trained to conduct telephone interviews using a set of questionnaires specially developed to meet the stated objectives. Respondents were asked to choose an answer of 2-5 choices for each variable, depending on variable of interests. A pre-test of the questionnares was conducted to ensure that the interview would not last more than 10 minuers and the respondents understood the questiones clearly. The inclusion criteria were age above 12 years (to ensure understanding of the questions) and agreed to participate. Data collected then entered into a statistical database and analyzed to examine the effect of JKN membership, smoking status, age, gender, eduation, and monthly income on the preference or support the raising cigarette excises to supplement financing of the JKN. A logistic regression was finally conducted to examine various correlation on the support of raising cigarette excises.

Results and Discussions

Characteristics of smokers and JKN members

We polled 1,000 respondents via telephone systematically consisting of 610 males and 390 females age 14-78 years. The average age was 32.9 years (SD 11.75 years). The respondents came from 34 provinces. The majority of respondents (50.7%) graduated high school and 24.3% had at least one year university education. The majority of respondents (38.8%) reported earning IDR 1-3 millions per month followed by earning of IDR 3-10 millions (35.5%). Only 2% respondents reported earning above IDR 20 millions per month. The majority of respondents were privately

employed (26.2%), 21% self-employed, and 6.8% government employees. Although in total 59% of respondents were members of the National Health Insurance (JKN); only 13.2% were recipients of the Government subsidies (low income or Penerima Bantuan Iuran (PBI). So, the PBI members are underrepresented in this poll. The majority of the JKN members responded of this poll was of the self-employed group (PBPU members) which is blamed as the main contributors of the current deficit. About two-third of self employed register to JKN when they were suffering from diseases and higher proportion of them are active smokers (CHEPS, 2016). In addition, this PBPU group who has problems in paying contribution routinely. Therefore, this finding has more signifant finding to mobile fund through sin tax (cigarette excise) to finance the JKN. Instead of paying additional contribution for their higher risks to coventional channels, directly pay to BPJS Kesehatan or via ATM, the smokers pay additional contribution through a sin tax.

Overall, 41.3% of respondent were smokers with 20.3% of respondents smoked 1-2 packs per day. Relatively lower frequency of JKN members smoked every day, but the difference was not significant. The prevalence of smokers among PBI members of JKN was a slightly lower (36.4%) compared to the other two groups with more than 41% are smokers. The prevalence of smokers were relative higher among respondents age 31-50 years with 24.8% of respondents smoked 1-2 packs daily. The highest prevalence of smoking 1-2 packs daily (29.4%) was among elder people age 61 years and above, doubling their health risks. Middle education (6-12 years) seemed to correlate higher prevalence (21.9%) of smoking 1-2 packs per day compared to low and high educated respondents. The low income respondents (with monthly income of less than IDR 1 million per month) seemed less likely to smoke 1-2 packs daily, but they smoked less than one pack daily.

Among JKN members, only 38.6% of them perceived that current cigarette prices is expensive signaling that the current JKN members are relatively having high income. But, the proportion of PBI members who perceived prices of cigarettes were expensive was the high (61.2%) confirming they were low income individuals. The majority of employees perceived cigarette prices were not expensive, rather there were moderate expensive. Ages were correlate negatively with perception of cigarette prices. The higher the age, the lower the proportion of respondents who perceived cigarette prices were expensive. Similar correlations were also found with education and income. The higher the education and the higher the income the lower the proportion of smokers who perceived cigarette prices were expensive. Thus, the increasing smoking rates could be attributed to higher income and therefore this study confirm many other studies signaling that the price cigarette in Indonesia decreasing as the income increase (WHO, 2016).

The most smoked cigarettes were of Sampoerna brand with almost half (45.5%) smokers mentioned the brand. The second most smoked cigarettes were of Gudang Garam brand (20.2%) followed by Djarum (11.8%). Marlboro, the most common compared prices were smoked by 8.4%, while other international brand (Dunhill) were smoked by 3.8% of smokers. Only 1.9% of smokers reported smoked various brands interchangeably. The distribution of the most smoked brands is in accordance with the market report such as Sampoerna (owned by Philip Morris International) received highest sales of IDR 80.1 Trillion in 2014 (Sampoerna, 2015), offsetting cigarette lowere sales in Asia (PMI, 2015). Compared to the MoH budget, the sales of only Sampoerna in 2014 was almost double of the MoH budget.

We explored the characteristics of smokers to be able to understand their behavior in consuming cigarettes and we found overall 49.1% of smokers, smoked 1-2 packs a day with the mode of spending between IDR 450,000 – IDR 600,000 per month. This amount of money spent for

cigarette could cover contribution for 5-7 persons of JKN of non salaried workers. It is highly potential to mobilize this money to finance JKN by increasing prices and excise and earmarking for JKN (sin tax). When coupled with their perception of "cigarette is harmful" and "difficulties to quit", the increasing prices could help both the smokers to quit and the JKN to improve financial gaps and the quality of services. As high as 96.8% smokers know that cigarette is harmful and 62% confessed that they had difficulties to quit smoking, indicating that they are addicted. What we need is to convince legal and policy makers to provide strong regulation, revising current excise law to increase excise rates on cigarettes and to include earmarking excise for JKN. However, further studies are needed to know the level of supports by legal and policy makers. If the legal and policy makers support the notion, then the deficit of JKN can be solved.

When we dig deeper, there were slightly higher proportion of JKN members who smoked 1-2 packs daily and spent up to IDR 600,000 per month. More interestingly, more than half of PBPU (peserta bukan penerima upah) members (50.4%) who are not employed and having difficulties to pay contribution spent up to IDR 600,000 per month for cigarettes. On the other hand, a study of PBPU reported that members of JKN who are smokers had higher probability to lapse membership by more than 6 months (CHEPSUI, 2016). The proportion of elderly (60 years and older) who smoked 1-2 packs a day was the highest (71.4%) and 100% of them were aware that smoking is harmful. The elderlies have much higher risks of NCD and higher consumption of health care. Instead of blaming the PBPU members and the elderlies of consuming more health care, because they are relatively sickers, it is legitimate to indirectly push them to pay more.

Earmarking Revenues for JKN

Paying more contribution indirectly, by raising cigarette prices and exice, and earmarking or dedicating the excise revenues for health care under JKN is plausible. Charging higher contribution directly for smokers, such as has been practiced in commercial insurance, is almost impossible since in the social health insurance (JKN), such underwriting is not appropriate. But, the idea to partially punish smokers (poor health behavior) with higher contribution is valid. Many groups of people already voiced such notion. Even, the cigarette industries have been using "special insurance for smokers, 'asuransi perokok" by charging higher prices and then established special insurance for the smokers to influence policy makers. But, their move is motivated foolish the public by camouglaging their "good behavior of insuring smokers". In the end, they will use this insuring smokers to convince people to smoke more. Certaintly, establishing special insurance for smokers by charging higher prices contradicts with the current BPJS law. It is not good idea and may not be implemented.

Earmarking excise and tax revenues from harmful consumption is well-known as "sin taxes". Sin tax has been practiced in many countries for long time. The World Health Organization (2016) just recently published a report providing various model of earmarked sin tax of tobacco in nine countries. In the WHO report, the highest ecxise as percent of retail prices is charged by Egypt with 73.3% of cigarette price goes to tax, followed by Thailand (66.59%) and the Philippine (63.55%). The World Bank (2016) also encourages Indonesia to raise and to simplify cigarette excise. In Indonesia, exices vary in 12 tier prices with an average only 35.1% and the highest was 46.3% in 2015. In addition to excise, since 2014, Indonesia has earmarked sin tax taken 10% of excise revenue for local government, known as cigarette tax with the requirement to allocate at least 50% of the tax must is allocated for health (MoFRI). Jeremias Paul (2016) reported that since 2012, the Philippine has implemented sin tax with 80% of incremental revenue goes to the Na-

tional Health Insurance Program (PhilHealth), MDGs, and Health Awareness program, while the remaining 20% goes for medical assistance and health facility enhancement program. This good and latest example of the Philippine sin tax reform may be good lessons for Indonesia as Indonesia also followed the Philippine in the single payer NHI system.

Raising Cigarette Prices and Excise to Finance JKN

The ideas of mobilizing and using excise revenues to finance fully or partially from excise has been on the public table for quite some times. However, debates continues whether rasing excise (and therefore prices) of cigarette is the viable option? Even a member of the House of Representative (DPR), Misbakhun, against increasing excise arguing that high excise will increase unemployment (Medansatu, 2016). Such argument is naive, since the demand for cigarette is inelastic (Hidayat, 2011; USAID, 2013).

In this study, we explore how far the smokers will stop smoking if the price increase. Although our current Excise law of 2007 limit excise rates to 57% and we not reached such level, the price of cigarettes can be increased so that the revenues from excise can be double. Overall, 72.3% of all smokers said they woud stop buying cigarettes if the prices of cigarettes are above IDR 50,000. Only 14.5% smokers would stop smoking if the prices of cigarettes are greater than IDR 25,000 while 13.3% of smokers said they would stop smoking if the prices of cigarettes are more than IDR 35,000.

Table 1. Willingness to STOP Smoking by Prices of Cigarettes, 2016

	> IDR 25,000 per pack	> IDR 35,000 per pack	>IDR 50,000 per pack
All Smokers	14.5	13.3	72.3
JKN Membership			
Non members	16.6	15.5	67.9
Members	12.7	11.4	75.9
Types of JKN members			
PBI	16.3	14.3	69.4
PPU	11.8	14.1	74.1
PBPU	14.9	12.8	72.2
Age			
<30 years	18.1	13.8	68.1
30 – 40 years	9.6	13.0	77.4
41 – 50 years	16.7	12.5	70.8
51 – 60 years	10.0	13.3	76.7
> 60 years	28.6	14.3	57.1
Education			
< 6 years	15.4	7.7	76.9
6 -12 years	16.6	14.5	68.9
> 12 years	7.5	10.8	81.7
Monthly Income (IDR)			
<1 millions	21.3	8.2	70.5
1 – 3 millions	17.1	15.3	67.6
3 – 10 millions	11.8	13.2	75.0
> 10 millions	0	12.5	87.5

Considering current (2016) cigarettes prices range from IDR 12,000 – 20,000; we have plenty of rooms to increase prices and excise. The willingness to stop smoking due to prices is in line with economic theory of price and income elasticities. Unanimously, findings from economic studies everywhere in the world show that demand for cigarette is price inelastic (Hidayat, 2011; USAID, 2013; World Bank, 2016)). Most economists, policy makers, and health professionals agree that the inelastic demand for cigarettes, with respect to the prices and incomes, was due to additictive natures of nicotine. Hidayat and Thabrany (2010) proved the addictive behavior using econometric modelling that the demand for cigarettes.

We explore more on this correlation of would stop smoking due to higher prices of cigarettes by analyzing various independent variables. Boths smokers and non smokers agreed that certain level of high prices will eventually pushed to smokers to reduce or stop smoking. Therefore, the prices of cigarettes in Singapore, Malaysia, and Timor Leste are set high by the government to increase the government revenues, to reduce smoking prevalences especially among low income and teenagers, and the cigarette industries continue to enjoy profits. We found all groups, JKN members and non members, across the types of JKN members, across age groups, across education groups, and across income groups, unanimously (more than 70%) agreed that the price of a pack of cigarette above IDR 50,000 could stop smoking (Table 1). That level of price is about three time more than the current average price.

The economic theory suggests that if consumers are willing to pay a certain prices, setting price below that level will cause welfare loss. The industries and the government can set double the current prices, say to be IDR 30,000 on average—100% increase, using the known price elasticities of -.39 (WHO, 2011), the cigarettes sales will reduce 39%. If current volume of cigarette consumptions (it was 341 billion sticks in 2015) than the total consumption will reduce to 208 billions sticks. But, the total volume of business of cigarette will increase. For a simple aritmatic modeling, if the current price of cigarette per stick is IDR 1,000; the total volume of bussines is IDR 341 Trillion (341 billion sticks x IDR 1,000). If the price is increased double to IDR 2,000 per stick, consumption will reduce to 208 billion sticks. But, the total business will increase to 208 B x IDR 2,000 = IDR 416 Trillion. If the excise rates are increased to an average of 50% (from current 43%), then the government revenue from excise increase from IDR 139.8 in 2015 to IDR 208 Trillion. The industries will enjoy higher gross revenues (total volume minus excise) of IDR 208 Trillion. This is a win-win solution in tobacco control that the FCTC urges member countries to adopt raising cigarette excise. The only loosers are the smokers. But, that is the idea of tobacco control and the principle of responsibilities. The smokers increase their health risks then they should pay more to handle their risks, as JKN members. As mentioned earlier, almost all smoker (more than 96%) knows that smoking is harmful for health. If they know that their behavior is harmful, and they are willing to pay more by rasing cigarette prices, then the government policy should simply use it to finance the deficits of JKN. Please note that the current deficit of JKN is actually for low quality of JKN (Thabrany, 2016).

To continue exploring public support to pay higher prices of cigarettes to suplement the JKN fund, as has been practiced in many countries, we asked the respondents (smokers and non smokers) of their agreement on rasing cigarette prices and earmarking.

Table 2 Proportion (%) of Respondent Who Aggreed and Disgreed on Raising Prices and Excise of Cigarettes to Financing of the National Health Insurance, 2016

	Disagreed (%)	Agreed (%)	p
Smoking			
Non smokers	16.5	83.5	0.005
Smokers	24.0	76.0	
JKN membership			
Non member	20.7	79.3	0.989
Member	18.9	81.1	
Types of JKN Membership			
PBI	18.3	81.7	
Employed (PPU)	17.9	82.1	0.797
Self-employed (PBPU)	20.5	79.5	0.793
Age			
<30 years	15.1	84.9	
30 – 40 years	22.9	77.1	0.012
41 – 50 years	24.8	75.2	0.013
51 – 60 years	23.4	76.6	0.120
> 60 years	23.5	76.5	0.423
Education			
< 6 years	15.2	84.8	
6 -12 years	19.4	80.6	0.193
> 12 years	21.3	78.7	0.167
Reported monthly inome (IDR)			
<1 millions	20.8	79.2	
1 – 3 millions	18.2	81.8	0.272
3 – 10 millions	19.1	80.9	0.345
> 10 millions	25.9	74.1	0.579

As shown in Table 2, the vast majority (above 80%) of respondents in various groups agreed to raise cigarette prices and exice to meet financial gap of JKN. Higher proportion (83.5%) of non smokers significantly agreed to raise cigarette prices compared to smokers (76%), p=0.005. Even that, 76% of smokers agreed to raise cigarette prices. This finding is a diamond for public policy in improving our health care while reducing poor health behavior. The people support the government to improve their health and to assist them to reduce their poor health behavior. This a win-win policy of health promotion and health prevention while increasing fund for health care of the people. In addition, there is the third win, which is the government will get high reputation from the public to improve the access and quality of health care from the money mobilized through higher excise on tobacco.

In the bivariate analysis, we found differences in the level of supports in raising cigarette exices to finance JKN between smokers and non smokers and between the middle ages (30-50 years) with other ages. However, across income and education levels, we found no significant difference. This is a very good news for the government, for the legal makers (DPR), and for the

tobacco control activists. This finding is line with studies everywhere in the world and suggest that the Government should not worry and should not concern with the voice of industries in signing or accessing FCTC.

In the final model, the logistic regression, we applied the probability of supporting higher cigarette prices and exice across various groups. As shown in Table 3, we found no diferrent at all among all groups. This finding, again, gives strong evidence that the President pledge of raising 200% excise revenues by 2019 (Nawa Cita, 2014) is fully supported by the public.

Table 3 Logistic Regression Model on the Agreement to Raise Cigarette Prices and Excise to Finance JKN, 2016

	B	S.E.	Sig.	Exp(B)	95% C.I.for EXP(B)	
					Lower	Upper
Smoking						
Smokers (ref: non smokers)	-.451	.166	.006	.637	.460	.881
JKN Members (ref: non members)	.003	.207	.989	1.003	.668	1.506
Types of membership (ref: PBI)						
PPU	.077	.300	.797	1.080	.600	1.946
PBPU	-.075	.285	.793	.928	.531	1.621
Age (ref: <30 years)						
30 – 40 years	-.490	.195	.012	.612	.418	.897
41 – 50 years	-.578	.234	.013	.561	.355	.887
51 – 60 years	-.519	.333	.120	.595	.310	1.144
> 60 years	-.476	.595	.423	.621	.194	1.993
Education (ref: < 6 years)						
6-12 years	-.565	.434	.193	.568	.243	1.330
> 12 years	-.640	.463	.167	.527	.213	1.307
Income (ref: IDR < 1 millions)						
1 – 3 Million	.263	.240	.272	1.301	.813	2.083
3 – 10 Million	.236	.250	.345	1.266	.775	2.068
> 10 Million	-.182	.329	.579	.833	.438	1.587
Constant	2.345	.537	.000	10.432		

Conclusions and Recommendations

A poll of Indonesian was taken early in 2016 comprising of 1,000 adults 59% members of JKN. The polling showed 41.3% respondents consume 1-2 pack of cigarettes per day wasting up to IDR 600 thousands per month per smokers. Almost all smokers (96.8%) know that ciagarette is harmful for their health. More than 72.3% of smokers said that they would stop smoking if the price of cigarette is above IDR 50,000 per pack; far above current prices. If the prices of cigarettes are doubled and the excise level reacing maximum allowable levels, there is potential to increase additional revenue up to IDR 70 Trillion that is almost equivalent to the estimated claim of JKN in 2016. In the logistic model, all groups of respondents unanimously support increasing price and excise of cigarettes to finance JKN. All findings are consistent with the major studies elsewhere in

the world and provide evidences for earmaking (developing sin tax) to finance UHC in Indonesia. This sin tax has quadruple win for the Government to increse revenue, for the current ruling parties to obtain good reputations, to improve the JKN quality, and for the industries (including labors, tabacco farmers, and clove farmers) to sustain their income.

The authors recommend that further study to know how the legal and policy makers support developing and implementing sin tax to finance JKN. Concurently, the Ministry of Finance should start revising current Excise Law that is 10 years old to accommodate earmarking for the JKN. In addition to finance the JKN, portions of the excise revenues should also be earmarked or dedicated to improve income of tobacco and clove farmers, low skill workers in cigarette industries to switch to higher salaried jobs, to finance sports and art activities of youths, and to promote healthy behaviors.

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