



The Impact of Cigarette Excise Tax Policy on Tobacco Market and Clove Market in Indonesia

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ABSTRACT

Indonesian government has applied tariff tax policy on cigarette that caused consequences not only to cigarette market but also to cigarettes input mainly tobacco and clove. The aim of this research was to analyze the impact of the rise of cigarette excise tax on tobacco market and clove market in Indonesia. This research used the data series of 1990–2016 with simultaneous equation system and estimated using two-staged least squares method. The results show that the rise of the excise tax decreased the production slightly of all kretek cigarettes production. It impact on the decrease on tobacco and clove consumption of clove cigarette industries by 0.06% and 0.05%, respectively. Nevertheless, demand of tobacco and clove still rose even in small number and increased the supply of tobacco but not on clove. Whereas, the price of these commodities precisely declined in farmer’s level which indicated that there were a gap caused by oligopoly market structure of cigarette industries. It showed that there were dependence of farmer on cigarette industries. Cooperation between farmers and cigarette industries and supporting government regulation were needed. The research and development are needed through diversification of tobacco plant and developing clove products to minimize the dependency.

Keywords: Cigarette Excise Tax Policy, Tobacco, Clove

JEL Classification: H2

1. INTRODUCTION

One of the agroindustry that plays an important role in Indonesian economy is the cigarette industry. Cigarettes produced in Indonesia mostly (90.3%) are clove cigarettes (kretek) (Rachmat, 2010). Clove cigarettes (kretek) include hand-rolled clove cigarettes sigaret kretek tangan, (SKT) and machine-rolled clove cigarettes sigaret kretek mesin (SKM) and klobot cigarettes (SKB). Data from the Ministry of Finance (2016) shows the production growth of tobacco products has increased since the last 5 years with production around 345–348 billion cigarettes in the last 3 years.

The structure of tobacco market in Indonesia tends to be oligopolistic. According to Barber et al. (2008), the market share of Indonesian

cigarette production is dominated by four large companies namely Sampoerna, Gudang Garam, Djarum and Bentoel where two of them are acquired with transnational corporations. The acquisition strategy of transnational corporations (Philip Moris and British American Tobacco) was conducted to penetrate its influence on health policy in Indonesia and the westernization strategy of local clove cigarettes (kretek) factories to expand its business (Hurt et al., 2011). Even Indonesia has been already become a target of transnational company as market and main producer of cigarette in the world (Rachmat and Aldilah, 2010). Tempo (2015) stated that Indonesia as the fourth position after China, India, and United States. The future of the tobacco-produced disease epidemic rests in low-and middle-income countries, where cigarette sales are growing as the result of rising incomes, trade liberalization,

liberalization of the treatment of women, and the introduction of Western-style advertising (Warner, 2005).

Cigarette agro-industry has been able to provide jobs, support the regional economy, and support state revenues in the form of cigarette excise tax. Labor absorption reached 6.1 million people, especially in tobacco producing regions, centers production of *kretek* and cigarette (kemenperin.go.id). Data of the Directorate General of Customs and Excise (2017) showed that excise revenue continued to increase, amounted to Rp. 106.690.8 billion in 2013 and increased to Rp. 138,527.07 billion in 2016. From the total planted area of tobacco and cloves in Indonesia is almost entirely cultivated by smallholder. Data from Directorate General of Estate Crops (2014) in 2006–2013 showed that on average 98.2% tobacco while cloves 98% were smallholders.

Apart from the important role of cigarette, cigarette has caused immense debate because it is considered bad for health. According to Nadel and Cooly (2005), the content of tar and nicotine contained in Indonesian clove cigarettes is classified as high compared to white cigarette type (conventional American). Thus, the government implements policies on the tobacco industry in order to reduce cigarette consumption while still considering the economic aspects of the tobacco industry. Policies that apply to cigarettes include policies relating to health and excise tax policies on tobacco products included clove cigarettes or *kretek* cigarettes. The applied of this tax were considered capable to decrease the consumption of tobacco products (Jeremy, 2010), (Jiménez-Ruiz et al., 2008), Chaloupka and Corbett (1998). The increases of tobacco taxes also result increases in tax tobacco tax revenue as government income.

Cigarette excise taxes are indirect levy collected from consumers who consume excise objects (cigarette). The producer of cigarette has been bailing out the consumers in paying excise taxes to the government when buying customs tapes contained in cigarette packaging. Therefore, the excise tax will decrease the producer revenue of their cigarette production. Rate of cigarette tax is higher on large firm than the small one. According to the Ministry of Finance Decree (PMK) No.118/PMK.04/2006 and No. 04/2000, there are three type of taxes imposed on tobacco products. They are Value added tax (VAT), Ad valorem excise tax and specific tax. VAT is a flat rate tax, excise tax imposed on each stick of cigarette produced and specific tax is a flat rate that imposed on each stick of cigarette and on cigarettes only, non cigarette tobacco products are excluded and the amount of tax imposed varies with the size of the industry.

Cigarette excise taxes rates are changed repeatedly, particularly at the basic rate adjusting to the country's economic changes and following inflation. For the determination of the basic price and excise tariff on tobacco products shall be stipulated by the Minister of Finance Regulation. The development of cigarette excise tariff can be seen in Table 1.

Table 1: The development of cigarette excise tariff in Indonesia in 2010–2015

Discription	2010	2011	2012	2013	2014	2015	2016
Tariff increased	16	6	16.3	8.5	0	8.7	11.3
Average tariff (percent)	41.8	45.3	55.9	50.6	51.4	48.2	44.4
Average tariff (Rp/pieces)	220	240	283	308	318	355	405

Source: Ministry of finance (2016)

The aims of tax policy are to reduce cigarette consumption considering the economic aspects of the tobacco industry. The researched related to tobacco and clove are very important cause the tobacco and clove on average 98% cultivated by smallholders (Ditjenbun, 2016) and almost 80–90% of Indonesian clove absorbed by kretek cigarette industries (Wahyudi, 2012). Therefore the application of this policy will impact not only to cigarettes industries as cigarette producer, but also farmer as producers of raw materials namely tobacco and clove, as supplier of clove cigarette. Hence, this research will analyze the impact of cigarette excise taxes policy on cigarette input market both on tobacco market and clove market. Impact of the decrease of consumption on tobacco production has been happened since the 2000s which tobacco world and also in Indonesia tend to decrease in area and the growth production of tobacco and cigarette (Rachmat and Nuryanti, 2009) dan the cultivation of clove in Inodonesia fluctuated and growth slowly (Suprihanti, 2016).

The impact of excise tax in Indonesia in tobacco and clove market has been done by Irawan (1996), Harini (2001) and Buana (2013). Rianto (2014) also indicated that cigarette tax has influenced the cigarettes production and tax revenue. The effect of tax on cigarette price assumed not valid for addictive products such cigarette that the demand is inelastis. Hasiholan (2004) found that the increase of cigarette tax only caused the change consumption pattern of cigarette. The tariff differences between it types caused the price gap of each cigarette so consumers moved to the cheaper one. There are strong relation between clove cigarette industries and clove cigarettes input market namely clove (Rumagit, 2007), so intensive cooperation between farmer and cigarette industries to keep kretek cigarette exist.

This research was more comprehensive caused it analyzed three markets at a time, there are cigarette market, tobacco market and clove market. Since demand for tobacco and cloves is a derived demand for cigarette, the impact of cigarette excise tax policy is important to be analyzed to observe its impact on tobacco input market namely tobacco market and clove market in Indonesia. In terms of production, the absence of specific policies related to increased tobacco production and clove development research since 1990 have affected the production of tobacco and cloves which tend to fluctuate with slow growth from 1989 to 2014 (Directorate General of Estate Crops, 2014). The purpose of this research was to analyze the impact of cigarette excise taxes policy on supply, demand and prices of tobacco and clove in Indonesia.

2. LITERATURE REVIEW

Most previous researcher analyzed the effectiveness of tobacco control (such as the rise of excise tax and limitation on cigarette advertising) on tobacco consumption such has been done by Jeremy (2010), (Jiménez-Ruiz et al., 2008), Chaloupka and

Corbett (1998). According to Chaulapka and Warner (1998) the decrease of cigarette consumption was caused by the variation of tobacco control program that included health campaign, excise tax, limitation cigarette advertising, smoking ban di public places and workplaces and control supply of tobacco production. Impact of tobacco control on general economic impacts were conducted by Merwe (1998) in South Africa, Hsieh and Lin (1998) in Taiwan, Nikahara and Mochizuki (1998) in Japan, Silva (1998) in Brazil, and Barber et al. (2008) in Indonesia.

More spesific impact of tax policy that the impacts not only on tobacco industry performance but also input market has been done by Irawan (1996) and Buana (2013). Irawan stated that price of tobacco, price of clove, and trend as technology proxy effected price of cigarette prices. Cigarette prices had negative relation with clove demand caused by the *over* production and clove stock in large number on factory. Meanwhile Harini (2001) also searched the impact on supply, demand of cigarette and employment. She found that the increase of cigarette tax decreased cigarette production (SKT and SKM) and supply of clove cigarettes. Buana (2013) revealed that the increased of cigarette excise tax caused the decrease demand and supply of clove cigarette and also tobacco.

3. RESEARCH METHODOLOGY

This study used annual secondary data (time series) for 27 years from 1990 to 2016. The data source was the Ministry of Finance (Directorate General of Customs and Excise), Indonesian Cigarette Manufacturers Association (GAPPRI), United Nations Commodity Trade Statistics Database (UNCOMTRADE), Central Bureau of Statistics, Food and Agricultural Organization, Directorate General of Estate Crops Ministry of Agriculture, Index Mundi, Food and Agriculture Organization Statistics (FAOSTAT), World Bank and other related literature. In-depth interviews were also conducted with the Association of Tobacco and Clove Farmers, GAPPRI, field survey with business actors of clove cigarettes (farmers, middlemen, Graders).

The analytical method uses econometric method which consists of model identification, estimation method, and model validation. The model in this research was built in the form of simultaneous equation system consisting of three blocks namely, tobacco market block, clove market block and clove cigarette market block. In the clove cigarette market subsystem, it was disaggregated into 3 groups: Machine clove cigarettes (SKM), hand-rolled clove cigarettes (SKT), and klobot clove cigarettes (SKB). The model consisted of 63 equations which were 38 structural equations and 25 identity equations.

The result of model identification was over identified. Therefore, this models can be estimated using two stage least square method (Intriligator and Bodkin, 1996). Model validation was done in order to see if the model is sufficiently valid to be used for policy alternatives simulation. The criteria used to validate the estimated value of econometric models using root means squares percent error (RMSPE) and U-Theil. If the RMPSE is smaller, then the model used will be better, while the value of U ranges between 0 and 1 (Sitepu and Sinaga, 2018). Impact simulation is done to see

the response that occurs on endogenous variables due to changes in exogenous variables (e.g., policy instruments. The simulation scenarios include: SKT excise tariff increase policy of 5.8% (S1), SKM excise tariff increase policy of 11.3 % (S2), combinations of 1 and 2 (S3). To calculate the amount of excise tax tariff, the researcher used the average excise tariff for each type of SKM, SKT and SKB for all clove cigarettes industries category thus are limitation of this research.

4. RESULTS AND DISCUSSION

4.1. Model Estimation Results

The simultaneous equation model built has undergone the respecification process. The purpose of the respecification is to obtain an estimate parameter signature corresponding to the hypothesis. The estimation result on the three blocks showed that the direction and the parameter of estimation from the variables used were in line with the expectation. The value of determination coefficient (R^2) of 38 structural equations showed that as many as 35 equations (92%) had determination coefficient between 53% and 99%. This finding showed that most explanatory variables in each equation were able to explain 53–99% variation of each endogenous variable.

4.2. Model Validation Results

From the validity test obtained RMSPE value of 82.5% of the variable which had a value below 30% and only 9.5% had percentages above 100%. The results showed that during the observation period of 2007–2016, the endogenous variable value of the predicted result was almost all close to the actual value. There were six variables that have RMSPE value above 100% namely Indonesian tobacco imports from United States, tobacco demand, tobacco supply, Indonesian clove import, import price of Indonesian clove, and clove world price. It can be due to the actual data of these variables fluctuated.

Based on the validation indicator of U-theil value, 57 equations (90%) had U-theil value below 0.3, while 6 equations (9.5%) had U-Theil value above 0.3 but still <1 . Based on estimation result, the model was considered good enough to be used for simulation. Policy impact simulation on some endogenous variables further became the objective of the research.

4.3. Policy Simulation Impact Results

The purpose of applying excise cigarette tax is to increase the price of cigarettes thus cigarette consumption reduced but keep existence of clove cigarettes production. The increase in cigarette excise tax is also expected to increase government revenue. In general, the increase in cigarette excise tax will raise the price of cigarettes and leads to the decrease of cigarette consumption. Vice versa, the tax policy will decrease the revenue that earned by cigarette producers that influence the cigarette production. The policy impact simulation result through S1, S2 and S3 simulations in detail can be seen in Table 2.

The impact of the increase of excise tax on SKT (S1) showed that the impacts not only reduced 0.57% the price that was received by producers (PSKTT) but also increased the retail price of SKT

(PSKT) by 0.03%. The impact of PSKTT decrease will drop the quantity of cigarette production of SKT (QSKT) by 0.07%. This result was in line with Harini (2001) that the increase of cigarette tax on SKT decreased cigarette production SKT.

The decrease of QSKT production dropped tobacco consumption of SKT (CTSKT) and clove consumption of SKT (CCSKT) by 0.076%. Input consumption of clove cigarette's industry is strongly influenced by the quantity production of cigarette. Meanwhile the production itself is influenced by the costs of production that are determined by output price, input prices such as tobacco price, clove price and wage of labor also tax. Input price are very important for cigarette industry cause influence the cost of production and their profit. Therefore, to keep the sustainability of their business, cigarette industries push the price input by many

ways. The strong bargaining power of cigarette industries than farmers cause the oligopoly structure of cigarette industries has made the price of input in farmer level decreased and determined by cigarette companies.

Meanwhile, the impact of the rise of cigarette prices caused by the excise tax resulted in reducing consumption of SKT (CSKT) by 0.08%. The rise of PSKT has made consumer of SKT moved to consume SKB that was cheaper than SKT. Therefore, SKB consumption (CSKB) increased by 0.47%. This result was the same with Hasiholan (2004). He stated that tariff difference between them caused the price gap of each cigarette which made consumers moved to the cheaper one. This evidence showed that cigarette is an addictive product, so it consumption made dependence on consuming.

Table 2: The impacts of cigarette excise tax on tobacco market, clove market and clove cigarettes market in Indonesia

No	Name of variable	Unit	Base value	Change (%)		
				S1	S2	S3
1	ATI (tobacco area)	ha	204185.82	0.002	0.0029	0.002
2	QPTI (domestic tobacco production)	ton	181036.12	0.0017	0.0025	0.0017
3	CTSKT (consumption Tobacco SKT)	ton	88549.208	-0.0766	0.0946	-0.0756
4	CTSKM (consumption Tobacco SKM)	ton	178148.43	-0.0547	-0.0785	-0.0576
5	CTSKB (consumption Tobacco SKB)	ton	607.9132	-0.0141	-0.0309	-0.0139
6	CTSKI (consumption Tobacco SK)	ton	267305.55	-0.0618	-0.021	-0.0635
7	QMTI (tobacco import)	ton	77284.725	-0.0449	0.0146	-0.0473
8	QSTT (stocks of tobacco)	ton	2929566.2	0.0089	0.023	0.0077
9	QXTI (export of Tobacco)	ton	12964.154	-0.0671	-0.2373	-0.0562
10	DTI (demand of tobacco)	ton	3228567	0.0027	0.0182	0.0015
11	STI (supply of tobacco)	ton	2994920.2	0.0133	0.0259	0.0121
12	PFTI (price of tobacco in farmer level)	Rp/kg	25423.735	-0.0074	-0.0049	-0.0072
13	PTI (price of tobacco in industry level)	Rp/kg	27083.044	0.009	0.0529	0.0089
14	PMTI (price of imported tobacco)	US\$/kg	5.342356	0.0002	0.0007	0.0002
15	PTW (price world of tobacco)	US\$/kg	5.605799	0.0011	0.0024	0.001
16	ACI (clove area)	ha	453096.81	-0.0155	-0.007	-0.0158
17	QPCI (domestic clove production)	ton	91393.522	-0.0057	-0.0026	-0.0058
18	CCSKT (consumption clove SKT)	ton	56671.493	-0.0766	0.0946	-0.0756
19	CCSKM (consumption clove SKM)	ton	66909.18	-0.0274	-0.0508	-0.0303
20	CCSKB (consumption clove SKB)	ton	534.9634	-0.0141	-0.0309	-0.0139
21	CCSKI (consumption clove SKT)	ton	124115.64	-0.0498	0.0157	-0.0509
22	QXCI (export of clove)	ton	8564.949	-0.1335	-0.173	-0.1332
23	QMCI (import of clove)	ton	3998.087	-1.5653	-0.3922	-1.5859
24	QSTC (stock of clove)	ton	422283.89	0.1436	0.1797	0.1429
25	DCI (demand of clove)	ton	556811.48	0.0958	0.1371	0.0950
26	SCI (supply of clove)	ton	490479.87	-0.0055	0.0304	-0.0063
27	PFCI (price of clove in farmer level)	Rp/kg	47454.95	-0.0037	0.1508	-0.0068
28	PCI (price of clove in industry level)	Rp/kg	73926.878	0.4778	0.6175	0.475
29	PCW (clove price world)	US\$/kg	6.407202	0.0199	0.0886	0.0184
30	QSKT (production of SKT)	million bar	88549.208	-0.0766	0.0946	-0.0756
31	QSKM (production of SKM)	million bar	197942.7	-0.0547	-0.0785	-0.0576
32	QSKB (production of SKB)	million bar	607.9132	-0.0141	-0.0309	-0.0139
33	QPSKI (production of clove cigarette)	million bar	287099.82	-0.0614	-0.0250	-0.0631
34	QXSKM (export of SKM)	million bar	43588.613	-0.0153	-0.0346	-0.0178
35	SSKI (supply of clove cigarette)	million bar	243511.2	-0.0696	-0.0232	-0.0712
36	CSKT (consumption of SKT)	million bar	182616.54	-0.0812	0.0021	-0.0812
37	CSKM (consumption of SKM)	million bar	344082.89	0.0164	-0.1217	-0.1184
38	CSKB (consumption of SKB)	million bar	12263.564	0.4454	-0.0251	0.4454
39	CSKI (consumption of SK)	million bar	538962.99	-0.0069	-0.0776	-0.093
40	PSKT (price of SKT)	Rp/bar	821.0883	0.3144	-0.0042	0.3144
41	PSKTT (price of SKT-SKT tax)	Rp/bar	707.3059	-0.5681	-0.0049	-0.5681
42	PSKM (price of SKM)	Rp/bar	769.8238	-0.0632	0.8007	0.7777
43	PSKMT (price of SKM - SKM tax)	Rp/bar	517.5236	-0.0939	-4.3179	-4.3521
44	PSKB (price of SKB)	Rp/bar	170.8333	-0.0153	-0.0208	-0.0156
45	PSKBT (price of SKB - SKB tax)	Rp/bar	152.2275	-0.0171	-0.0234	0.0177

Description: S1=SKT excise tax increased by 5.8%, S2=SKM excise tax increased by 11.3%, S3=S1 and S2

The same impact if excise tax on SKM rised (S2). The impacts showed that the price received by producer (PSKMT) reduced by 4.3% and it rose the retail price of SKT (PSKM) by 0.8%. The impact of the decrease of PSKMT decreased the quantity of cigarette production of SKM (QSKM) by 0.07%. This result also was the same with Harini (2001) that revealed the increase of cigarette tax on SKM decreased cigarette production of SKM. The decrease of QSKM influenced the decrease of tobacco consumption of SKM (CTSKM) and clove consumption of SKM (CCSKM) by 0.08% and 0.06%, respectively.

The rise of PSKM caused the tax also reduced consumption of SKM (CSKM) by 0.12%. This result was the same result with Buana (2013) that found that the rise of cigarette price caused tax rising made demand of cigarette decreased. Chauopka and Corbett (1998) also found that in 1974–1992, consumption of cigarette in United States and other developed countries (Canada, United Kingdom and Japan) decreased trough tobacco control policy included the rise of excise tax.

The impact of the combination of the increase of excise tax on SKT and on SKM (S3) showed that both of cigarette retail price of SKT (PSKT) and retail price of SKM (PSKM) rose by 0.3% and 0.8%, respectively. As a result of taxation, PSKTT and PSKMT go down by 0.6% and 4.4%, respectively. Although producer of SKM received the lowest price after tax, the production of SKM only decreased 0,05%. The impact of the decrease of PSKTT and PSKMT has been declined the quantity of cigarette production of all type kretek cigarettes though in small amount. Production of SKT (QSKT) down by 0.07%, production of SKM (QSKM) by 0.05% and also SKB production (QSKB) by 0.02%. The decreased of all type of clove cigarettes influenced the tobacco consumption of raw materials of clove cigarettes. Clove consumption (CTSKI) and cigarette consumption (CCSKI) decreased by 0.06% and 0.05%, respectively.

The impact of the increase of retail price both SKT and SKM showed that consumption of SKT (CSKT) and consumption SKM (CSKM) declined by 0,08% and 0.12%, respectively. Meanwhile, consumption SKB (CSKB) rose by 0.4% has made the SKT consumers moved to its cigarette. This result was in line with Buana (2013) and Harini (2001). Buana found that the excise tax caused the decrease of demand and supply of cigarette and tobacco, meanwhile Harini (2001) revealed that cigarette tax declined cigarette production (SKT and SKM) and also supply of clove cigarette. Although production of SKT and SKM declined in small amount, supply of tobacco still rising even in small number, but not on supply of clove. Supply of clove decreased caused the decrease of clove import and the production dropped as effect of climate change.

The difference of these research with previous research are this reasearch revealed the production and consumption of tobacco and clove of each type of cigarette. The production of SKM and consumption of tobacco of SKM only reduced 0.05% even the raise tax of SKM almost twice SKT. Meanwhile, the production of SKT and consumption of the tobacco down 0.07% even the tax is only a half of SKM taxes. This fact indicated that the rise of tariff

on cigarette is more sensitive on SKT production than on SKM. Therefore, the rise of cigarette tax on SKT especially on small scale has to beware in order to the sustainability of their business. The small scale cigarette industry usually use local tobacco meanwhile the large scale cigarette industries usually combine local tobacco with imported tobacco for mild type cigarette production.

Quantity production of cigarette is influenced by price of output and cost of production included input prices (tobacco and clove) also wage of labour and tax. In this research found that the quantity production of SKT (QSKT) was influenced by input prices and wage of labour significantly, clove price and price of SKM export (PXS KM) influenced the quantity production of SKM, and price of tobacco and the wage of labor production influenced quantity production of SKB (QSKB). Therefore the rise of raw materials became sensitive factors on cigarette production. The smoked ban policy only significant on SKT and but not for SKM and SKB consumption. Table 2 showed that although demand of tobacco and clove slight rising, the price of these commodity in farmer's level precisely down. It indicated that there were a gap caused the tax. The oligopoly market structure of cigarette industries has made the cost of production diverted from the producer through the decrease of input price (price in farmer's level) and also the consumer trough the rise of cigarette price (Irawan, 1996).

The impact of policy should be beneficial for all the stakeholder. Therefore, cooperation between farmers and cigarette industries and government regulation were needed to keep existency of tobacco and clove and also clove cigarettes. The policy must take into account the farmer concerning tobacco and clove price for the sustainability of these commodities in Indonesia. This fact also showed that there are dependency of tobacco and clove farmer on cigarette industries. To overcome this problem, the effort to find other crops besides tobacco has to be more intense while keeping the production on centre production of tobacco. The research and development for diversification of tobacco and clove products such as clove for essensial oil, preservatives and others must be more intensive so the dependency of farmer on cigarettes industries can be minimized. The effort to decline tobacco production can be done only if the price of tobacco's substitute such as horticulture beneficial for the farmer (Maravanyika, 1998). It is caused by mostly tobacco in few countries has become their main crop for a long time and the profit margin of tobacco was bigger than horticulture. So, the price guarantee still became important thing for the farmer (Suprihanti, 2016). The effort to find other beneficial crops beside tobacco was needed if Indonesian government want to reduce tobacco production.

Over all the consumption of clove cigarette (CSKI) only decreased 0.09%. The rise of SKT prices had made cigarette consumer move to the cheapest one namely SKB or even smuggled cigarettes. Consequency of the rise tax was the number of smuggled cigarettes raised. Taxation on cigarette can generate illicit market for tobacco market included smuggling (Ashe et al., 2002) and it can reduce the efficacy of policies intended to improve public health (Kulick et al., 2015). This fact showed that the impact of the rise of tax on consumption has not effective yet to drop cigarette consumption in Indonesia significantly. The low taxation and the weaknesses

of Indonesian regulation on cigarettes still become interesting business in Indonesia. The increase number of cases on illicit market of tobacco market need decisive action in order to this policy reaching the target. The rise of tax in Indonesia can be increased especially for SKM cigarette although it stimulated protest from many stakeholders of tobacco and cigarettes (Suprihanti, 2016). The high consumption was caused by cigarette prices in Indonesia was still lower than other ASEAN countries (SEATCA, 2008). The high price and the high demand of cigarettes also made illicit market of cigarette market in Indonesia still growing. From the finding of this research show that tariff still can be raised especially for SKM. The rise of tax and other regulation especially the ban for smoking in public places or working place can be continued and decisive action of illicit trade on cigarette in order to this policy reaching the target.

5. CONCLUSION

The rise of cigarette tax on Indonesia impacted on the decreased production of all type kretek cigarettes though in small amount. Consumption of tobacco and clove of clove cigarette industries also decreased by 0.06 percent and 0.05 percent, respectively. As a result, demand and supply of tobacco and clove also decreased slightly. The price of these commodities still increased in industry's level and farmer's level even in small number. It indicated that tobacco and clove consumption of clove cigarettes industries still high although the tax increased. Therefore, it became incentive for the farmer to keep grow tobacco. It showed that there was interdependence between farmers and cigarette industries.

6. RECOMMENDATIONS

The research and development through diversification of tobacco plant and developing clove products such as clove for essential oil and others are need to be encouraged to anticipate the decrease of cigarette production in the future. Meanwhile, the raised of tax especially for SKM can be continued until it decrease the production significantly while do decisive action on illicit trade of cigarettes. Cooperation between farmers and cigarette industries and government regulation were needed to keep existency of tobacco and clove production and also clove cigarettes.

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