PROCEEDING

The 2\textsuperscript{nd} Indonesian Tobacco Control Research Dissemination Conference and Capacity Building Program

Organized by

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In collaboration with

JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

The Union

PROCEEDING

THE 2ND INDONESIA TOBACCO CONTROL CONVERENCE AND CAPACITY BUILDING PROGRAM
SEED RESEARCH GRANT 2015
MUHAMMADIYAH TOBACCO CONTROL CENTER
IN COLLABORATION WITH
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BANGLADESH CENTER OF COMUNICATION PROGRAM
APRIL 19-23 2015
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FOREWORDS

The Institute for Global Tobacco Control (IGTC) at the Johns Hopkins Bloomberg School of Public Health, USA places much emphasis on generating research evidence for effective tobacco control measures. The Research Grant Program on tobacco control issues in Indonesia was initiated to address the demand for information related to tobacco use in the country. This type of program on tobacco control is the first of its kind and the outcomes of those studies are very encouraging. This Dissemination Conference presents the findings of the studies which I believe will contribute toward the evidence base that can be used by the government and non-government sectors and by leaders and activists, to further the progress in eliminating tobacco-caused deaths and diseases in Indonesia.

The health consequences of tobacco use are enormous. Curbing the epidemic is of utmost importance, especially in low and middle income countries where the prevalence is increasing, with serious economic impact. The role of tobacco control research in Indonesia would appear to be especially important because of diversity of culture and current forms of tobacco use. Over the years, Indonesia has had a number research studies conducted on tobacco control issues; however, some of these evidence based studies have not been considered during policy development. I believe Johns Hopkins and MTCC’s initiative to launch this Research Grant program and to develop a community of tobacco researchers under the platform 'Indonesia Tobacco Control Research Network (ITCRN)' will contribute to addressing the gap, elevate the tobacco issue high on the policy agenda and identify strategies that could be uniquely effective in Indonesia context.

Tobacco use has emerged as one of the foremost causes of preventable deaths and diseases today. It poses a great public health challenge in developing countries where tobacco use continues to grow due to steady population growth along with aggressive tobacco industry marketing efforts. This situation cannot be tackled alone. Given the commitment of the Government of Indonesia and the joint efforts of Bloomberg partners, stakeholders, tobacco control leaders and activists using the evidence base being created by the researchers, Indonesia will indeed see a reversal of the tobacco epidemic soon.

I wish all the best for the success of the initiative towards preventing tobacco-caused deaths and disease in Indonesia.

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Bloomberg Professor of Disease Prevention
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ONN TTOOBBAACCOO CCOONNTRROOLLLL (WWHOO FFCTTCC) RRAATTIFIIIICATIONC

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Abstract

Background: Indonesia is a country with rich natural resources. Tobacco is one of the plants that are cultivated in the tropical climate of Indonesia. Unfortunately, the cultivation of tobacco in Indonesia does not produce varied products, instead, many of the tobacco farmers only serve as a supplier of raw materials for the tobacco industry and this position makes the farmers vulnerable and loses their bargaining power against the industry. On the other hand, tobacco products such as cigarettes contribute big revenues from tobacco excise and becomes an obstacle to tobacco control efforts in Indonesia because their contribution in state revenues reached up to IDR 98,62 trillion in 2013. The risk for tobacco farmers to lose their livelihoods and the contribution of the tobacco industry to state revenues are the reasons various parties reject legalization of the WHO FCTC in Indonesia. This research tried to analyze further the Indonesian government's position towards WHO FCTC.

Methods: This research was used qualitative approach and using in-depth interview to collect data from informant. The data was collected to identify the influential factors, key actors and strategy to accelerate the process of ratification of the WHO FCTC. There were informant from the government and non-government organizations (NGOs) selected by purposive sampling to answer the in-depth interview. Analysis was done by filtering method.

Results: The research finding showed there is four factors affecting the ratification that are technical feasibility, economic and financial viability, political viability, and administrative operability. But the most influencing factor is the political viability. There are two party that affect the party who support the government and campaign for public health as a priority of the government, while at the other party of the cigarette industry with a variety of efforts to mobilize support for the regulations that could adversely affect its business can be rejected. Moreover, there are two key players in Indonesia's WHO FCTC accession efforts: the Ministry of Health from the government side as the initiator institutions and Muhammadiyah Organization from the non-government side which have commitment to tobacco control by produce the Muhammadiyah Tobacco Control Framework (MTCF) in beginning of 2015. This key players selection based on the organization followers/members/mass, property owned, discipline, leadership, access and internal cohesion. The last was the strategy which consisted of three approaches, that were social from human resource competitiveness, economic from the national health insurance program and political from the post-2015 agenda.

Conclusions: It could be concluded that the Indonesian government position in the decision-making process of the WHO FCTC ratification most affected by political
viability both the party who pros and cons with this ratification. Then the key players can accelerate the process both Ministry of Health and Muhammadiyah organization. Last but not least, the strategies to accelerate the ratification of the WHO FCTC can be followed through research, and policy advocacy with issues of human resource competitiveness, national health insurance program, and post-2015 agenda.

**Keywords:** Indonesian Government, Decision-making Process, WHO FCTC, Ratification

1. INTRODUCTION

Indonesia is a rich country with plentiful natural resources. This natural resources also establish Indonesia as the Agricultural country that oriented to the development of agriculture. Tobacco is one of the varieties of crops grown in Indonesia. Beginning of this plants brought by the Portuguese/Spanish in the 16th century. If explored further, then this is precisely the origin of tobacco plants from the Americas found when the exploration of Christopher Columbus in 1492.

In some countries, tobacco cannot grown fertile, this is due to the successful cultivation of tobacco is strongly influenced by climatic conditions (rainfall, humidity, lighting and temperature). But in Indonesia, the tropical climate is very favorable for the cultivation of tobacco because tobacco optimal temperature for growth was between 18-27 degrees Celsius, so this plant has been developed by farmers in Indonesia until now.

Unfortunately the cultivation of tobacco in Indonesia does not produce a product that is varied, but many of the tobacco farmers just being a supplier of raw materials for the tobacco industry. This makes the position of the tobacco farmers be lost bargaining position with the tobacco industry, so the potential for fraud is huge in the process of buying and selling. Though the tobacco industry should provide a decent purchase price to the farmers.

In addition, realize that a tobacco product such as cigarettes harmful to health, the government sets the tax regulations for tobacco products to reduce consumption and to control its distribution. However, the amount of state revenue from tobacco excise this would be a claim for the tobacco industry for their contribution to the country.

In Mid-December 2013, the Directorate General of Customs and Excise, Ministry of Finance released a report on customs and excise receipts reached IDR
147,04 trillion. That income comes from import duties Rp 29,65 trillion, excise IDR 102,95 trillion and export duties IDR 14,43 trillion. From the total of excise revenues composition as much as 95,79% comes from tobacco excise products, amounting to 4% comes from beverages excise containing ethyl alcohol, and 0,21% from the ethyl alcohol excise (Investor Daily, 2013).

From the data above it can be concluded that the tobacco excise reached IDR 98,62 trillion from the total of customs and excise amounting to IDR 147,04 trillion. Significance revenues from tobacco excise this is one of the obstacles to the realization of the government commitment to tobacco control. The fate of tobacco farmers who will lose jobs and the contribution of the tobacco industry to the state revenue is the reason various parties that reject the legalization of the WHO FCTC in Indonesia.

While in this case, the Ministry of Health of the Republic of Indonesia became a central actor that encourages commitment to the President of the Republic of Indonesia to give consent to the ratification of the WHO FCTC. Recent developments, Coordination Meeting of the WHO FCTC related accession held on 1 April 2014 in the Office of the Minister of Coordinator for People Welfare. In this meeting, Minister of Health, Nafsiah Mboi expressed his hopes to the President to sign a treaty that would be a legacy before the end of the leadership of President Susilo Bambang Yudhoyono (Suara Pembaruan, 2014). But the response from the Cabinet Secretary, Dipo Alam stated that the President has yet to issue a decree of the President to ratify the WHO FCTC is because there are many considerations, one of which related to the fate of tobacco farmers (Republika, 2014).

Complex considerations in government decision-making process related to the ratification of the WHO FCTC led to differences of opinion. Therefore, a mapping of the actors position in decision-making in government be required. Then related topics with Indonesian government positions in decision-making on the WHO FCTC ratification to be interesting and relevant for further research.

II. METHODS

This research was used qualitative approach and using in-depth interview to collect data from informant. The data was collected to identify the influential factors,
key actors and strategy to accelerate the process of ratification of the WHO FCTC. There were informant from the government and non-government organizations (NGOs) selected by purposive sampling to answer the in-depth interview.

Analysis and presentation of data/information will be done using the filtering method of a variety of information. Furthermore, a comparison with information sourced from various references, such as the advantages and disadvantages when the Indonesian government to be part of the WHO FCTC. The results of the analysis and comparison will be presented descriptively.

III. RESULT AND DISCUSSION

Indonesian Government Influence Factors to Ratify the WHO FCTC

The factors that influence Indonesian Government to ratify the WHO FCTC refers to Mustofadidjaja (2003) there are four things to determine the criteria for the selection of policy alternatives: (1) technical feasibility, (2) economic and financial viability, (3) political viability, and (4) administrative operability.

Technical Feasibility

Technical feasibility interpreted as criteria to measure how far a decision is able to solve the problems that exist in this case is the control of tobacco product (effectiveness of the decision).

The Government of Indonesia through the Coordinating Ministry for People's Welfare (Kemenko Kesra) has held a coordination meeting in 2013 regarding to WHO FCTC. Based on the official release from the meeting, noted that the purpose of the accession treaty are to protect present and future generations to the health problems, social consequences, environmental and economic downturn due to the consumption of tobacco and the production of the tobacco itself.1

The same meeting conducted again in 2014 were re-emphasized that the WHO FCTC provide the concrete measures to reduce tobacco use and to protects people from disability, disease and premature death caused by tobacco generated products. Also, the WHO FCTC Provides a frame of work and collaboration of

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stakeholders to prevent any of tobacco industry interference in the process of developing and implementing tobacco control policy.2

The statement above is supported by informants from Non-Government Organizations (NGOs) LAI said the existing regulations in Indonesia has not been able to address comprehensively the problem of cigarettes, some evidences can be pointed such as increasing number of smokers every year without control. Some of the regulations that have been issued by the government, among others, is PP 109 which is only emphasizes the display of pictorial health warnings on cigarette packs, while regulation is more emphasis on the behavior of smokers in several locations that are prohibited such as “No Smoking Area/Limited Smoking Area”. This regulation has not been able to give a clear guarantee of protection.3

The informants added that the content of addictives in tobacco products (cigarettes) has become an indisputable fact that also affect the human health. Even today the consumption of tobacco products (cigarettes) have create social problems where very addictive smokers tend to be anti social. Surprisingly low income community or poor families become the main consumers of tobacco products, it is a motivating factor retention of poverty. The FCTC is a solution to the complexity of this problem. In addition, ratification is not only intended for the current generation, but also for generations to come.4

Informants from NGOs IISD said tobacco control is an attempt to help control tobacco consumption. It is like that done by Brazil. This effort also inhibits the growth of new smokers are an asset of this nation. In line with the informant of the Youth Movement GMPU said the younger generation is a major target of the tobacco industry today. Our generation wants undermined by the tobacco industry through the products they sell. Campaigns conducted by the tobacco industry through the mass media and direct promotion is how they (the tobacco industry) to attract new smokers from among adolescents.5

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3 Interview with Heri Chariansyah, Director of Lantern Child Indonesia (LAI) in LAI Office, Jakarta 8 Oktober 2014
4 Ibid.
5 Interview ith Nindy Widiastuti, Accession Activist of WHO FCTC, Gerakan Mahasiswa Pita Ungu (GMPU) at Jakarta June, 15, 2014
Based on the above presentation, it can be concluded that the WHO FCTC seeks to answer the main problems caused by the consumption of cigarettes smokers uncontrolled growth, as well as efforts to save young people from the dangers of smoking.

**Economic and Financial Viability**

Economic and financial viability interpreted as the criteria to measure how far the influence to economic decisions, both macro and micro, in this case the WHO FCTC ratification whether giving effect to the state cigarette tax revenues and tobacco trade, and the income of the people who depend on tobacco farming, and employed in the industry cigarettes (efficiency of the decision).

The results of the inter-ministerial coordination meeting initiated by the Coordinating Ministry for People's Welfare in 2013, stressed that the impact of the WHO FCTC not accessed, Indonesia became marketing purposes cigarette industry with the risk of damaging the health of the nation's generation, and factual data and the accession treaty does not harm the tobacco industry and deadly tobacco farming communities.6

The Ministry of Health in a release about the issue of smoking in Indonesia also confirms that the macro level, the economic burden caused by tobacco in 2010 consisted of: public expenditure for the purchase of tobacco (cigarette consumption) reached IDR 138 trillion, then the loss of productive years due to premature death, illness and disability IDR 105.3 trillion, the total cost of hospitalization due to tobacco-related diseases IDR 1.85 trillion and total outpatient costs due to tobacco disease IDR 0.26 trillion. If the accumulated total economic loss due to consumption of cigarettes macro reached IDR 245.41 trillion, which is also 4 times greater than the revenue from tobacco products amounted to IDR 55 trillion in the same year.7

While the micro, the poorest households, the consumption of tobacco and betel occupy the second largest proportion of expenditure is 11.7% after the grain. Recorded during the second period of 4 years of this type of expenditure grain

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consumption and tobacco continued sequential, 19.01% and 11.78% (2003), 19.19% and 11.5% (2004), 20.16% and 12.43% (2005), and 22.10% and 11.89% (2006). The percentage of cigarette expenditures beat nutritional needs 17 times the expenditure for meat, 5 times the expenditure for milk and eggs, as well as 2 times the expenditures for vegetables.  

In addition, the condition of the tobacco farmers explained by informants from NGOs LAI stating that tobacco farmers are often referred to as the affected parties on the WHO FCTC, but farmers do not benefit from it at a price that is not appropriate. Currently more industry to import tobacco due to the qualities required to be in accordance with established standards, in addition to the production of tobacco farmers sometimes do not reach the standard desired by the industry. The chosen way to get tobacco imports corresponding desired quality, if indeed this is what happens of course the argument that the tobacco industry to protect tobacco farmers clearly indisputable.

Many assumptions are circulating that the tobacco industry to contribute to the country through the cigarette tax revenue, if this logic is used also by the government, the same government sold its people to the industry. The presumption is rebutted by the fact sheet Institute of Demography, University of Indonesia (LDFE UI) which states that the tobacco industry is the tax payer forget that the consumer of cigarettes or smokers who have sacrificed a variety of personal and family interests for the sake of the pleasure of nicotine that has entrap and not the tobacco industry.

From the above explanation can be concluded that the WHO FCTC may be a solution to address the problem of tobacco farmers and tobacco industry workers. Cigarette consumption also be the root causes of economic burden of the macro and micro. At the macro level, the revenues from tobacco products actually are worth less when compared with the economic loss incurred. While micro, cigarette

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9 Interview with Heri Chariansyah, Direktur of Lentera Anak Indonesia (LAI) Foundation at LAI office, Jakarta 8 October 2014
10 Wawancara dengan Heri Chariansyah, Direktur Lentera Anak Indonesia di Kantor LAI, Jakarta 8 Oktober 2014
expenditure on the poorest households leads to reduced portion to buy necessities more useful

**Political Viability**

Political viability interpreted as criteria to measure how far the decision is acceptable to all parties. In this case if the elements associated with the government endorsement of the WHO FCTC such as: Ministry of Agriculture, Ministry of Trade, Ministry of Manpower and Transmigration, Ministry of Industry and Ministry of Health may accept the decision that will be signed by the President. In addition, the groups outside of government such as: Tobacco Industry, Tobacco Farmers, the National Commission on Tobacco Control and the Tobacco Control Activists also gives influence to the government decision-making (consensus among the stakeholders and pressure-groups demands).

Informant from the Government, the Ministry of Social Welfare Coordinator said the government has sought to coordinate with each other related to the preparation of accession to the WHO FCTC. Ministerial Coordination Meeting was conducted by The Minister on 6 November 2013 that resulted in an agreement, among others: (1) the realization of a healthy young generation and intelligent and dignified a top priority, (2) prevention of smoking problem remains to be done through the implementation of PP 109 of 2012 on safety materials containing addictive substances such as tobacco products for health in the intensive, (3) the accession treaty basis of factual data and does not harm the cigarette industry and deadly tobacco farming community, (4) should be addressed wisely to implement the treaty of accession is not interfere with the sovereignty of the state, because the accession treaty does not have to approve all of the protocol as adapted to the existing legislation such as the Law 36 of 2009 on Health, PP 109 in 2012. In terms of national level, endorsed the treaty through Law (Article 9, paragraph 2 of Law No. 24 of 2000 on international treaties) or Presidential Decree (Presidential Decree No. 68 of 2005).\(^\text{12}\)

\(^{12}\) Wawancara dengan Ibu Diana, Deputi III Kemenkokesra di Kantor Kemenkokesra 16 Oktober 2014
She continued on April 1, 2014, the government continued Coordination Meeting of Accession treaty initiated by the Ministry of Health as the Ministry of the initiator. In this meeting, the Minister of Health said that the accession treaty in order to actually set the distribution of cigarettes health effects can be reduced. WHO Director-General Margaret Chan in a speech at the coordination meeting also expressed his appreciation for the leadership of President Susilo Bambang Yudhoyono in the UN High Level Panel discussed the post-2015 agenda in New York in May 2013. Indonesian President we expressed willingness to participate in the prevention of non-communicable diseases.13

Informant from the Government, Ministry of State Secretariat stressed the fact that the government's decision-making on an international treaty sought not just "lip service", but also required a more in-depth assessment of the substance. Ministry State Secretariat has administrative role for the ratification of an international treaty. Related to the position of WHO FCTC is still in abeyance due to delay a request letter from Baleg House of Representatives on February 28, 2014 sent to the President through the leadership of the House of Representatives. The WHO FCTC is the continuation of the discussion back to the initiating institution namely the Ministry of Health.14

Support also continued to flow to the government; a number of institutions that focus on children's rights urged President Susilo Bambang Yudhoyono to ratify the WHO FCTC. Such institutions include: Lantern Child Indonesia (LAI), the Indonesian Child Protection Commission (KPAI), as well as two international bodies World Health Organization (WHO) and United Nations Children's Fund (UNICEF). LAI Executive Director stated that the government should be responsible for protecting children from exploitation Indonesian cigarette industry, which has been systematically perform a variety of ways and means to make children as future smokers. Various massive effort they have done, ranging from massive tobacco advertising in all media, became the main sponsor music events and sports that are loved by children and adolescents, as well as program activities directly involving

13 Ibid.
14 Interview with Rini Susantowati, Head of International Agreement Division of State Ministry of State Secretariat (Kemensesneg) at Kemensesneg Office, Jakarta 22 October 2014
children and adolescents as a sponsor activity stage arts and sports schools. And, the estuary of all forms of systematic efforts are made cigarettes as a friend and a true friend to children and adolescents.\textsuperscript{15}

In a separate interview LSI Executive Director reiterated that the government's political will is not there (not weak) to decide WHO FCTC ratification. In this case, President Susilo Bambang Yudhoyono as the head of state to decide whether the firm should maintain current and future generations of the dangers of smoking and smoking is a priority for the government and cannot throw the responsibility to minister to wait for them, agree to a decision that the choice is very clear: to defend people's interests above personal or group interests.\textsuperscript{16}

In addition to the parties that support the ratification of the WHO FCTC, there are also contrast groups that the tobacco industry. They perform a variety of approaches to influence decisions related to tobacco control policies, including the WHO FCTC. In general form of cigarette industry in Indonesia intervention is carried out by three approaches/ways, among others: (1) removal, (2) dilute, and (3) delay. One of the activities of intervention in the delete approach is a case of "lost verse" the Law 36 of 2009 on Health. The verse is paragraph (2) and (3) of Article 113. This paragraph is missing is the affirmation of tobacco as an addictive substance. Furthermore, intervention tobacco companies through a "dilute" done by "weaken" the understanding of the regulations Smoking Area. Giving stickers or standing table for the permissibility of smoking in enclosed spaces is done by one of the associations or communities that have been formed by a tobacco industry. Finally, tobacco companies forming alliances involving various elements of the cigarette industry, ranging from farmers to smokers to delay tobacco control regulations in Indonesia. One of the major events in the approach of the delay is a postponement of PP Tobacco Control from derivative Law 36 of 2009 that should be adopted one year later.\textsuperscript{17}


\textsuperscript{16} Interview with Heri Chariansyah, Director of Lentera Anak Indonesia (LAI) Foundation at LAI office, Jakarta, Oktober, 8, 2014

\textsuperscript{17} Kartono Mohammad dkk. (ed.), \textit{op.cit.}, h. 40.
Based on the exposure to the above it can be concluded that the political viability of the parties related to the WHO FCTC is still in the exploratory stage and not yet entered the stage of decision-making, because there are parties of the government and pressure groups WHO objected to the ratification of the treaty. It is shown that the tobacco industry of mind/do not accept if the WHO FCTC was passed by the Indonesian government. Therefore, the tobacco industry perform a variety of ways to lobby the government to delay ratification of the WHO FCTC is not even. Tobacco industry efforts made on behalf of the tobacco farmers and workers in the cigarette factory will lose their jobs.

**Administrative Operability**

Administrative operability interpreted as criteria to measure how far the decision can be implemented by the technical implementation. In this case, tobacco control policies have been arranged in the form: Government Regulation (PP) and various of local government regulations have been made through the Regional Regulation (Perda) of No Smoking Area.

Document WHO FCTC academic paper of the National Commission on Human Rights provides an example implementation of the FCTC in Thailand. Countries that ratified the treaty on November 8, 2004, Thailand has had previous tobacco control regulations include: Tobacco Product Control Act of 1992, Non-Smokers Health Protection Act 1992, and the Tax Increase for Health since 1993, the Health Promotion Foundation Act 2001.18

When compared with Indonesia, the existing regulations related to tobacco control is still not comprehensive. Regulation which is closely related to the elements of health and tobacco control efforts that Law 36 of 2009 on Health, as well as derivatives such Government Regulation No. 109 of 2012 on "Security Addictive Substances Containing Materials Form of Tobacco Products for Health".

Some substances PP include: provisions on the production of tobacco products: (1) the obligation of nicotine and tar testing, (2) the prohibition of using additional material except that it has not proved harmful to health, (3) at least 20

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cigarettes packs for cigarettes white machine. Furthermore, the provision of information: (1) the inclusion of information on cigarette packs on: (a) the amount of tar and nicotine, (b) a statement that "there is no safe limit" in smoke, (c) contains more than 4000 harmful chemicals and more of 43 cancer-causing substances, (d) prohibited to sell or give cigarettes to children under 18 years of age and pregnant women, and (e) the production code, date-month-year of production, the name and address of the manufacturer. Moreover, it is forbidden to include words that are misleading or promotive, including words: Light, Ultra Light, Mild, Extra Mild, Low Tar and other words that indicate quality, superiority, security, imaging, personality and so forth.¹⁹

This regulation also stipulates provisions regarding the liability of health warnings include health warnings in the form of drawings and writings of 40% front and back of the packaging. Furthermore, the provisions on the control of media advertising, among others: (1) advertising in print media should not be on the cover/front yard, adjacent to the advertising of food/beverage, not as a full page, not on the print media for children, adolescents and women, (2) advertising in the broadcast media advertising on TV and radio should only be aired at 21:30-05:00 which is a respite for children and teenager, (3) advertising in the media should apply the information technology age verification 18+ to restrict access, for example advertising on the website, and (4) outdoor advertising media is not in KTR, not on the main road or protocol should be parallel to the shoulder of the road, a maximum of 72m².²⁰

Based on the above it can be concluded exposure Thailand and Indonesia have in common in terms of regulatory readiness. Thailand has regulatory control of tobacco products which is also owned by Indonesia. Although already set basic things such as tobacco control provisions of the production, circulation restrictions for children and pregnant women, pictorial warnings, promotion/ advertising, and customs. However, the form of laws and regulations of the Government Regulation has not been set up tobacco control efforts as a whole. So the explanation is known that tobacco control efforts in Indonesia there are no administrative barriers

¹⁹ Kartono Mohammad dkk. (ed.), op.cit., h. 34-35.
²⁰ Ibid.
operability. Moreover, the WHO FCTC any clauses respect the law and conform with the laws applicable in the country that can bind to this convention.

The Key of Actors to Accelerate the WHO FCTC Ratification

The step to mapping the key actors that can accelerate the ratification of the WHO FCTC refers to the opinion from Kusumanegara (2010:21) states that the influence of the actors considered by: (1) the number of followers/members/mass organizations; (2) property owned by the organization; (3) the discipline of the organization; (4) the leadership of the organization; (5) access by the organization to decision-makers; and (6) the internal cohesion of the organization.

Government Actors which is directly related to the WHO FCTC substances include: Ministry of Health, Ministry of Finance, Ministry of Industry, Ministry of Agriculture, and the Ministry of Manpower and Transmigration. While administratively by the Ministry of State Secretariat and the Secretariat of the Cabinet.

Ministry of Health, the WHO FCTC is the focal point of the government's key actors whose role is to accelerate the WHO FCTC. It is based on the consideration that this ministry that can provide technical inputs and results of recent studies to the President to decide on ratification of the WHO FCTC. The Ministry is also through the Ministry Coordinator of People's Welfare (now the Ministry Coordinator of Human Development and Culture) can hold coordination meetings with various stakeholders to obtain input.

It should be understood that the position of the Ministry of Health under the leadership of President Susilo Bambang Yudhoyono (SBY) may differ from the leadership of President Joko Widodo (Jokowi). In the era of the President, the Ministry of Health is required to reach an agreement with the four related Ministry before the President decides. While typical President Jokowi more willing to take decisions, when based on through consideration and can be accounted for.

This should be used by the Ministry of Health in order to undertake studies seriously and can assure the President. In this case, the President may decide the right time for Indonesia to ratify the WHO FCTC. Surely it would appear the pros and
cons, but it is already a risk of decisions taken by the President and all related ministries are required to run it.

Non-governments actors (civil society) that has the potential to accelerate the WHO FCTC is Muhammadiyah which is one of the largest humanitarian and faith based organizations in Indonesia who have concerns in tackling the increase in smoking habits were also regarded as a bad habit in a religious viewpoint. Commitment is increasingly emphasized Muhammadiyah in 2010 explicitly issued a fatwa concerning the prohibition of smoking.

Council of Trustees of Public Health (MPKU) be a representation of Muhammadiyah to engage the various stakeholders to encourage the development of effective tobacco control policies and its accession to the treaty. In this target has been achieved several things such as: the development of inter-faith network and the establishment of People's Caucus Against Addictives, field research about the welfare of tobacco farmers conducted by the University of Muhammadiyah Magelang (UMM), the preparation of the Indonesian Tobacco Control Roadmap as a rival of the Tobacco Industry Roadmap as well as other initiatives.  

Specifically, Muhammadiyah effort to break the stagnation in the treaty of accession efforts made by taking the initiative to cooperate with the National Commission on Human Rights (Komnas HAM). In the meeting which was also attended by representatives of the Ministry of Foreign Affairs has agreed that the Indonesian Institute for Social Development (IISD), Muhammadiyah, and the National Human Rights Commission drafted into the team for academic paper bill for the accession treaty. On September 11, 2012, this manuscript has been submitted by the Chairman of the Commission, Iidhal Kasim told the House of Representatives. Initiatives accession treaty with the human rights approach is a breakthrough in advocating the FCTC. But this struggle is just the beginning and the steps that must be taken is still long for the FCTC advocate for tobacco control policies better.

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22 Ibid., h. 11.
Beginning of 2015, Muhammadiyah through Muhammadiyah Tobacco Control Center (MTCC) declares Muhammadiyah Tobacco Control Framework (MTCF). Erwin Santosa, Chairman of MTCC stated that this declaration is one of total campaign of Muhammadiyah as the one of the faith based civil society organizations (Ormas Islam). Erwin confirms Muhammadiyah would always strive smoking through the internal of Muhammadiyah represented by 23 assemblies and autonomous organizations through the declaration of MTCF.23

Based on the above explanation, it can be concluded that the President as the main actor who has the authority to take decisions in accession WHO FCTC. The actor who has the potential to accelerate the decision making is the Ministry of Health as the initiating institution. While parties outside of government such as Muhammadiyah together tobacco control activists and pro-accession to the WHO FCTC have to fight the influence of the tobacco industry and the cons of accession WHO FCTC to influence the decisions that will be taken by the President.

**Strategy to Accelerate the Process of the WHO FCTC Ratification**

Strategies to accelerate the process of ratification of the WHO FCTC compiled refer to the findings obtained from the factors that influence the WHO FCTC ratification and also key actors who can accelerate the WHO FCTC. The approach can be used, among others: (a) social approaches from human resource competitiveness, (b) economic approaches from national health insurance program, and (c) political approaches from post-2015 agenda.

**Social Approaches from Human Resource Competitiveness**

Human resources (HR) is an opportunity and a challenge for Indonesia. Meant opportunities because Indonesia is a country with a large population and consumption. While one of the challenges faced by Indonesia is improving the quality of human resources.

The risk of smoking-related illness is exacerbating poverty, limited economic conditions have shifted expenditure of poor households to food and education

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should actually to buy cigarettes. This condition would adversely affect the fulfillment of child development which, if not addressed, then the condition would threaten the loss of generation.

In addition, as a result of tobacco industry marketing strategy through advertising and promotion of free and massively and systematically addressed to women and young people, the increase in the prevalence of smoking not only occurs in adult male smokers but also on women, children, and adolescents.24

The data described above and the conclusions of the technical feasibility of the WHO FCTC seeks to answer the main problems caused by the consumption of cigarettes smokers uncontrolled growth, as well as efforts to save young people from the dangers of smoking. This further reinforces that the WHO FCTC social approach in an effort to improve the competitiveness of Indonesian human resources can be an alternative for advocacy WHO FCTC.

**Economic Approaches from National Health Insurance Program**

The lack of government policies to control the production and distribution of tobacco not only make Indonesia into a country left behind from 177 countries had ratified the WHO FCTC, but also threatens the sustainability of government programs that the National Health Insurance (JKN) which is part of the National Social Security System (SJSN)/Social Safety Net held by the Social Security Agency (BPJS) on Health.

According to demographic research institutes (LDFE UI), Abdillah Ahsan, cigarette consumption in Indonesia each year is increasing. If the trend of the cigarette consumption continues to rise, the level of Indonesia's health deteriorated. Abdillah noted the percentage of smokers in Indonesia are among the highest in the world. So is the location used as a place to smoke that is in the house. Ironically, 2003-2010 survey results indicate the need for poor families to smoking ranks second only to rice.25

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This is consistent with the results of the identification of economic and financial viability of the finding that the economic burden of tobacco consumption in micro is dependent charged to the family economy resulting in unmet needs more important and urgent. While the macro level, the economic burden borne by smokers are: cigarettes consumed and also the cost of lost productivity due to premature mortality and morbidity-disability.

Seeing this condition it is feared smoking be the cause of declining health that led to the high quality of health care costs for smokers. It is also certainly related to productivity decline because smokers are often sickly. Although smokers are sick is guaranteed by the state through the National Health Insurance (JKN) or Indonesia Health Card (KIS) is still required medical costs for treatment is high.

Abdillah sure the social security system, especially BPJS could go bankrupt if participants are dominated by people who have been exposed to the risk of sick. He therefore hoped that the government does not get too hung up on policies that are curative. Preventive policy it should take precedence. Abdillah asserted if not accompanied by efforts to promote the health of the social security system can be broken.\textsuperscript{26}

Based on the above explanation can be concluded that the economic approach through the National Health Insurance program (JKN) can be a means of advocating for the government to raise awareness of the potential losses that will be experienced by the government, if the program is not supported preventive policies such as acceding to the WHO FCTC. However further research is needed to evaluate the JKN program and relation to tobacco control efforts.

\textit{Political Approaches from Post-2015 Agenda}

Millennium Development Goals (MDGs) is a program that began in 2000 and ended in 2015. The eight MDGs target the priority agenda to be completed within a period of 10 years, among others: (1) eradicate extreme poverty and hunger, (2) achieve universal primary education, (3) promote gender equality and empower women, (4) reduce child mortality, (5) improve maternal health, (6) combat

\textsuperscript{26} Ibid.
HIV/AIDS, malaria and other diseases, (7) ensure environmental sustainability, and (8) global partnership for development. Indonesia has become one part of this global commitment. Indonesia's position further reinforced by the establishment of the President's Special Envoy to the MDGs.

However, the implementation of the MDGs hampered by factors that are caused by tobacco consumption which results in the increase of non-communicable diseases and health costs. In line with this argument, the President's Special Envoy to the MDGs, Nila F Moeloek (now she is Minister of Health) states that tobacco consumption is one of the obstacles to the achievement of the MDGs. Indirectly cigarette impoverishes society, where the need is greater cigarette consumption or nearly equal to the revenue. But through this MDG program also can fight the epidemic of smoking community by strengthening the capacity of such a wife in a family environment can be pro-active to give understanding to the family members who smoke to quit smoking and health professionals who emphasized the importance of maintaining health by avoiding things that are harmful to health one cigarette. Even though the MDGs are not directly related to smoking and tobacco control issues, but the things I have mentioned are indirect link between the MDGs with tobacco control.27

Indonesia's commitment to the implementation of the MDGs and also Indonesia's active involvement in the post-2015 agenda of course, can be a means to encourage the government's commitment to the prevention of non-communicable diseases, one of them by accelerating the tobacco control efforts. This is certainly a political approach to the Indonesian government for a commitment that has been shown in the international community, can be realized with the government's commitment in the national scope.

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27 Interview with Nila F Moeloek, President’s Special Envoy to MDGs at Rumah Sakit Mata Aini on October, 24th, 2014
IV. CONCLUSION AND RECOMMENDATION

Conclusion

Based on the explanation from the previous chapter, researcher can take the conclusion based on the research question and purpose of the research, as mentioned below:

1. Factors that influence the government that has not ratified the WHO FCTC when compared between the 4 factors that exist, the most influencing factor is the political viability. There are two party that affect the party who support the government and campaign for public health as a priority of the government, while at the other party of the cigarette industry with a variety of efforts to mobilize support for the regulations that could adversely affect its business can be rejected.

2. The actor that can accelerate the WHO FCTC ratification process of the government is the Ministry of Health as the initiator institutions, while from non-governmental organizations are Muhammadiyah. If the role of these actors can be optimized both the decision-making process can produce an agreement to accede to the WHO FCTC.

3. Strategies that can be done to accelerate the ratification of the WHO FCTC with the following three approaches, namely (a) social approaches from human resource competitiveness, (b) economic approaches from the national health insurance program, and (c) political approaches from the post-2015 agenda.

Recommendation

1. The process of decision making WHO FCTC should be guarded by the various parties to ensure that decisions taken can be passed accession WHO FCTC.
2. Strategies to accelerate the ratification of the WHO FCTC can be followed through research, and policy advocacy.
3. Researchers hope there will be further research to explore and develop this research so that the latest information related to the WHO FCTC ratification process can be continuously updated.
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**Books**


**Internet**


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HARMONIZING THE INTERNATIONAL TRADE POLICIES AND THE RIGHT FOR HEALTH PROTECTION MEASURES: CASE STUDY ON WHO DSB RULING ON US-CLOVE CIGARETTES

By
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Abstract
Indonesia is one of the largest manufacturers of tobacco in the world. One specific tobacco product manufactured in Indonesia is clove cigarette that has been popular locally and also marketed abroad. By enacting Family Smoking Prevention and Tobacco Control Act in 2009, the United States bans the production and sale of clove cigarettes yet does not prohibit the production of menthol cigarettes. From this regulation, in 2011, Indonesia requested the Dispute Settlement Body of World Trade Organization (DSB WTO) to stop the ban on Indonesia clove cigarettes sale in the United States due to the inconsistency of the banning to the national treatment obligation under article 2.1 on Technical Barriers to Trade (TBT) agreement. The WTO Panel’s ruling then upheld by the Appellate Body made their report that the United States regulation that bans clove cigarettes was discriminatory. This ruling is welcomed by Indonesia’s tobacco business but in other side also gains worldwide critics that the right to health shall be taken into consideration to limit the trade on cigarettes for public health concern. This research tried to analyze the legal effect of WTO DSB ruling on US-Clove Cigarettes and the availability of rights based approach to be used during the judicial making process in DSB WTO to harmonize between the international trade policies and the right for health protection measures. Moreover, this paper suggests that both WTO and WHO shall altogether create single international policy that reflects in achieving the goals of FCTC and the fair trade under WTO regime whatsoever states parties on both organization confidently implementing the rule of FCTC.

Keywords: Trade on cigarette, WTO, and the right for health
A. **Introduction**

*Kretek* is an Indonesian origin cigarette that made from a blend of tobacco and cloves. The word “kretek” comes from the sound of ‘keretek-keretek’, the crackling sound of burning cloves. (1) For several millions Indonesian and Javanese, kretek is enjoyable partner, attractive, it offers an atmosphere of relief & peace and its value is nothing compare to the comfort given. (2) Indonesia also becomes one of the world leading producer, consumer, exporter, and importer of cloves (*kretek*). (3) Gilman and Zhou demonstrated how dominant *kretek* industries in Indonesia and how it influence the economic side of the state:

“By the end of the twentieth century, *kretek* commanded roughly 85-90 percent of the entire cigarette market in Indonesia. There are now more than 500 independent *kretek* manufacturers in Indonesia directly employing more than 180,000 people and more than 10 million indirectly. The industry is one of the largest sources of the Indonesian Government’s exercise revenue, and it is one of the only domestic industries to survive the previous financial crisis almost unscathed. It is one of Indonesia’s most well known cultural signifiers with its distinctive scent greeting each visitor – and it all started 100 years ago.” (3)

Despite the fact that *kretek* support the Indonesian economic income, but its existence raised problems in Indonesian society such as: increasing the number of kretek consumption (active smokers, children smokers, and women smokers), emerging various non-communicable diseases from smoking lifestyle increasing state expenses for health recovery for active and passive smokers, and etc. Indonesia achieved third position of the world’s leading tobacco consuming nations in 2011 with 83.931.400 smoker population (4) includes approximately 14.300.000 student’s smoker. (4) Because of Indonesia still not ratify the World Health Organization Framework Convention on Tobacco Control (5), there is no legal protection for passive smokers. (6) Even if there is several regulations concerning tobacco control in Indonesia, but the Government still have no power to implement it. (7) Anywhere they exist, tobacco industry always tries to convince the government that they are not liable for their product. (8)
One recent issue that becoming international concern is in regard with Indonesian effort to challenge the United States ban on clove cigarettes before the World Trade Organization Dispute Settlement Body (WTO DSB). This case was begun when the United States enacted in 2009 the Family Smoking Prevention Tobacco Control Act (‘US Tobacco Control Act’). This law gives the United States Food and Drug Administration authority to regulate the manufacturing, marketing, and sale of tobacco products. Section 907 of this law bans flavored cigarettes (including kretek from Indonesia) to be imported in the United States but still exempted menthol cigarettes which are predominantly produced in the United States, Indonesia argued that this prohibition breaks global trade principles. (8) Indonesia, the world’s largest producer of clove cigarettes, or kretexks, made by companies such as PT. Gudang Garam, has exports valued at $500 million a year, a fifth of which go to the U.S. (9) All these companies suffered damages from the United States policy bans.

The WTO DSB Panel found that the ban breaches the national-treatment obligation under article 2.1. of TBT agreement because it accords clove cigarettes less favorable treatment than that accorded to menthol-flavored cigarettes. (10) The Appellate Body then upheld, although for different reasons, the Panel’s finding that clove cigarettes imported from Indonesia and menthol cigarettes produced in the United States are “like products” within the meaning of Art. 2.1. (11) The Appellate Body also upheld, although for different reasons, the Panel’s finding that, by banning clove cigarettes while exempting menthol cigarettes from the ban, Section 907(a)(1)(A) of the US Tobacco Control Act accords less favorable treatment to imported clove cigarettes than it accords to “like” domestic menthol cigarettes. (11)

Indonesia’s successful alleged on WTO DSB’s report in regard with the United States ban of kretek cigarettes raises worldwide critics though at the same time it welcomes by Indonesian tobacco industry. Both Panel and Appellate Body Report ignored the issue health right. The United States argues that clove cigarettes present a unique risk to young, uninitiated smokers, while menthol cigarettes also have significant impact on adults. (11) Adults smokers seldom use
clove-favored cigarettes and do not perceive them to be like menthol cigarettes. This argument in line with the core of The US Tobacco Control Act that is intended to curb cigarette marketing to minors. (11)

WTO rule provide regulation for public health concerns to be accommodated. International trade measures did by a state and/or breached of WTO ruling may justifiable if it pursued human health objectives. Restriction of import could be justified if this measure done for the purpose to protect human health. This condition is regulated under Article XX (b) (General Exception) of GATT:

“Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party or measures: …. (b) Necessary to protect human, animal or plant life or health….“ (120)

Beside regulated in GATT, protection of human health measures also regulated in other WTO rules such as in TBT Agreement and SPS Agreement. TBT agreement permits nations to impose product and production standards that promote environmental, public safety and other objectives. (13) Although the TBT encourages the use of international standards, nations are permitted to determine their own levels of protection for animal, human and plant life as well as the environment as long as these measures do not create unnecessary obstacles to trade. (13)

This study will analyze core background of US-Clove Cigarettes case and the possibility of harmonizing the right to health standards into international trade policies. The researchers will look for some relevant practices and international rules on the human health priority protection to be justified under the free trade relation measures. This research also will explain the effect of Indonesian successful alleged in the US-Clove Cigarettes.
B. Methodology of Research

To achieve its objective, this study uses doctrinal methodology with two different approaches. First, case-based approach (case approach) by way of detail examination of the main case in correlation with the issue of this research. Researchers will examine the *ratio decidendi* or reason that used by the Panel Report and Appellate Body Report in deciding the case of US-Clove Cigarettes.

Second, to present comprehensive conclusion and recommendation, researchers will use conceptual approach. By this approach, scholars opinion and doctrines will be analyzed to find out the progressive concept in harmonizing the right to health standards into the international trade policies.

C. Result

1. US-Clove Cigarettes Dispute Before WTO DSB

The enactment of the Family Smoking Prevention Tobacco Control Act (14) was triggering the dispute between Indonesia and the United States. In terms of value and volume of exports, Indonesian clove cigarettes is not very significant, but since the United States market is trend setter for consumer goods, then these law could hamper Indonesian *kretek* market in Latin America and Europe. (15)

One of the provisions in the US Tobacco Control Act requires that all types of flavored cigarettes banned in the United States. (14) But still in the same rules, the United States exclude circulation of menthol cigarettes from the ban (14) and found discriminate especially against clove cigarettes from Indonesia. In fact, 99% of clove cigarettes sold in the United States are imported products. (16) As exporter, Indonesian cigarette companies got financial harm and expected to arise as a result of the export ban on clove cigarettes to US $200,000,000 (two hundred million dollars) per year. (17)

The US Tobacco Control Act is addressing the health problems associated by reducing amount of tobacco consumption in young children level. (17) Motivated by the issuance of these regulation, Indonesia as exporting countries objected to the discrimination rules on US Tobacco Control Act. Having failed through the consultation process on July 20, 2010, Indonesia then applied for
settlement of disputes before the WTO DSB. Indonesian government action to bring this issue to the WTO DSB is the last step after various efforts made since the US Tobacco Control Act was in draft and discussed by Congress prior the promulgation for more than four (4) years but no effective outcome.

In its complaint, Indonesia used Technical Barriers to Trade Agreement (hereinafter abbreviated to TBT Agreement) as ground for the lawsuit. Indonesia also claimed that the enactment of the US Tobacco Control Act would threaten export market share of Indonesian clove cigarettes in the United States. Empirical data mentioned that export number of tobacco products to the US in 2008 amounted 298,932,400 rods or US $ 6.662 million and in 2009 (until August 2009) amounted 267,308,800 rods or US $ 6.451 million. (18)

WTO DSB Panel Report found that the ban policy violates the principle of national treatment under Article 2.1. TBT Agreement because cigarettes are not treated the same as menthol-flavored cigarettes. (10) Then the Appellate Body upheld the ruling of the WTO DSB Panel Report where it found that clove cigarettes imported from Indonesia and menthol cigarettes that manufactured in the United States are “similar product” within the meaning of Article 2.1. TBT Agreement. (11) Appellate Body also upheld the Panel ruling that, although for different reasons, with the ban on the import of clove cigarettes by excluding menthol cigarettes can be interpreted that Section 907 (a) (1) (A) in the US Tobacco Control Act provides unequal treatment between imported clove cigarette with the same domestic product (menthol cigarettes). (11) The WTO DSB then adopted report of the Appellate Body on 24 April 2012 and binding to be respected by the United States as the loser party.

The success of Indonesia in the WTO DSB leads to criticism throughout the world. Both the Panel and the Appellate Body Report ignore the health issues that must be accommodated. Obviously, the United States strongly assured that the clove cigarettes are harmful to young people, starting smokers, and also resulting bad effect for adult smokers, (11) Adult smokers sometimes use clove cigarettes and this does not mean that they also like menthol cigarettes as well. This argument is in line with the one of the aims of US Tobacco Control Act to
prevent the promotion of cigarettes to children. (11) In this case, sometimes the import cigarettes are much more interesting and much caused taste perception among potential smokers and current smokers.

2. **Harmonization between the Right to Health Standard with the Right to Trade**

   It has been recognized and regulated in the regime of international human rights law that every state is obliged to ensure that the rights of citizen are well protected. Each state practically is obliged to ensure the existence of health care, workplace safety and health, as well as the fulfillment of the community’s nutrition. Theoretically, there are four elements that must be met, among others:

   (19) 
   a. *Availability*, means that the adequacy of public health care facilities in the form of goods, services, including health programs.
   b. *Accessibility*, means that the existence of health facilities shall be accessible for society as a whole.
   c. *Acceptability*, means that each health facility shall follows the regulations and medical ethics.
   d. *Quality*, means that all of health facilities shall be in a good quality based on medical side.

   The four elements above are essential factor to realize the right to health in daily state practice. Hence, state has three main obligations in fulfilling it, such as: the duty to respect, the duty to protect, and the duty to fulfill. (20) The duty to respect means as the state’s obligation not to intervene the right to health of its citizens. The duty to protect means that the state guarantees third party or non-state actors to participate in protecting public health. The duty to fulfill is the state’s obligation to issue policy that actually can preserve and protect the right to health for citizens such as issuing legal instrument in the health field.

   Currently, the concept of right to health has been adopted and fused in every states constitution in the world. Common perception of the state in assuring the right to health protection is not out far meaning from the number of
international rules that governed them. Associated with the spirit of tobacco control, the ICESCR provides an explanation that disobedience country to protect the right to health as same as a failure to provide restrictions on production, marketing, and consumption of tobacco and also can be categorized as a state violation of its obligations in taking all necessary measure to protect every citizen within its jurisdiction. This is strongly supported by the General Comment No. 14 ICESCR, which reads a follows: (19)

“Violations of the obligation to protect follow from the failure of a state to take all necessary measures to safeguard persons within their jurisdiction from infringements of the right to health by third parties. This category includes such omissions as the failure to regulate the activities of individuals, groups or corporations so as to prevent them from violating the right to health of others; the failure to protect consumers and workers from practices detrimental to health, for example by employers and manufacturers of medicines of food; the failure to discourage production, marketing and consumption of tobacco, narcotics and other harmful substances.”

Hence, in settling trade disputes, WTO shall consider the human rights approach. Though this has been accommodated under Article XX (b) General Exception of GATT but unluckily this rule is not well used and implemented. In these rules, each participating country of WTO is allowed to not comply with the rules and principles of international trade which is set in the GATT if it is done on the basis to protect human health (Article XX (b)). (12) Obviously, some specific trade cases decided based on the economic values of trade rather than giving space for human rights standards to reach the decision. Currently, WTO DSB also handling the case of Australia-Plain Packaging Cigarettes where Australia is being sued by some states because of its policy in the use of the warning picture without the trademark cigarette pack of cigarettes. (21) In this dispute, Australia seems having no full legal support to impose the plain packaging policy. The absence of methods and procedures in harmonizing between the interests of trade and the respection for the right to health will only lead to legal uncertainty in handling trade disputes in the future.
In US-Clove Cigarettes, the WTO DSB Panel more precisely used the economic parameters rather than the existence of an international policy of tobacco control as a manifestation of the protection of the right to health. If there is friction between the trade issue of human rights, the Panel shall consider the human rights norms and this norms will be given priority consideration to base their decision. It is generally accepted, in theory, that the amount of trade intensity will increase the country’s economic welfare but the protection of human rights will ensure the dignity of the individual. However, if there is friction between the two in a case, both Panel and Appellate Body shall use the approach of human rights (rights-based approach) in their decision making process. The use of this human rights approach norms while at the same time they have to maintain the balancing trade relations between countries. It is as revealed by Sandrine Dawar:

(22)

“Such rights-based approach to decision-making in the WTO seems to be warranted by the actions of some non-state actors which have influenced WTO law without consideration for the effect of new agreements on the right to health, as did pharmaceutical companies with the TRIPS Agreement. Indeed, integrating the right to health in WTO law would, at a minimum, ensure that it could not threaten the right to health by, for instance, requiring states to choose between fulfilling their WTO obligations and their human rights ones. It may not be possible to avoid completely such a choice. But the implementation of WTO Agreements in the face of public health crises, and the impact on a state’s capacity to promote and protect the human right to health, has proved problematic, and a balancing test needs to be made between private and social costs/benefits to ensure that the TRIPS Agreement not only promotes intellectual property rights and private benefits but also sustainable economic development in the developing and the least-developed countries through promoting access to medicine and transfer of technology. Whereas the current approach is generally to interpret WTO law in the manner that will have the least negative impact on the right to health, a rights based approach would also give the WTO the responsibility to promote the human right to health.”
Using rights-based approach perspective, the case of US-Clove Cigarettes will favor and support the United States in conducting cigarette import restrictions for the fulfillment of core obligations undertaken in order to protect, promote, and fulfill the right to health of its citizens. The Panel should consider the establishment of the basic philosophy of the US Tobacco Control Act that one of goals is to reduce the number of new smokers in the United States.

The rights-based approach underlies the existence of Article XX (b) GATT, which basically regulates the general exceptions in which every WTO member countries are allowed to violate the provisions of the WTO if it is done to protect public health. (12) By this provision we could analogize that the trade principles can be repulse as long as addressing the rights to health preservation. It can also be interpreted that the protection of the right to health takes higher position than the trade regulations. The Panel should have to consider the existence of FCTC that has been accepted internationally. The import ban of clove cigarettes is actually in accordance with the spirit of tobacco control set out in the Framework Convention on Tobacco Control (FCTC). Although there is no provision about tobacco products import ban, but FCTC emphasizes that each countries could use of tax measure (price measure) and/or another measures (non-price measures) that are effective and important in reducing tobacco consumption. (23) Having no consideration to rely on this rule by the Panel and the Appellate Body in the case of US-Clove Cigarettes even more clear that universal human rights norms still not serve as the basis for interpreting the violation of the principle of international trade.

FCTC should be used as the primary basis of interpretation in scrutinizing whether the import ban cigarettes by the United States has been in line with the principles of trade and tobacco control. This has been clearly stipulated in the 1969 Vienna Convention on Treaties Article 31 (1) that an international treaty shall be interpreted in good faith and with the tre meaning according to context of the agreement and in line with the objectives of the agreement. (24) To fit the context of tobacco control governed by FCTC, WTO DSB should use restrictions under FCTC in handling cases related to tobacco control so that common goals
can be achieved. Moreover, in the case of the European Communities-Approval and Marketing of Biotech Products, Panel argued that although one or more of the parties is not a participant of a Convention does not make the Convention can not be used to explain the meaning and limitations of terminology in the agreement that being interpreted. (25) Although Indonesia and the United States are not a party of the interpretation then the decision is nor contrary to international spirit on tobacco control. Most important, FCTC has also been a part of international customary.

In addition, when examined more detail in the case of US-Clove Cigarettes, the Panel and Appellate Panel Body Report seem to be made very premature and had gave less room for the United States to conduct a comprehensive study on the effect of menthol and clove cigarettes to consumers. (26) Both of the Reports have no respect with the legislative steps that had been held by the US Government. In fact, one of the provisions of the Tobacco Control Act mandates Tobacco Products Scientific Advisory Committee (TPSAC) to conduct further research on the implications of menthol cigarettes to children, African-the United States, Latino race, and racial and other ethnic minorities. (14) The results of this study will illustrate how the future policy in regulating menthol cigarette’s market in the country. This research is important because menthol cigarettes are one of the flavored tobacco products that produced domestically and controls 28%-34% the United States cigarette’s consumer market. (27) This research shows the good faith of the United States as well as a form of prudence effort in formulating policy measures in order not to do frontal harm the domestic industries and consumers of menthol cigarettes. New legislation will be made based Article 907 € of the US Tobacco Control Act and this is part of the government policy as a sovereign state that they to be extra careful to protect public health.

In 2011, the TPSAC had prepared a report related to the effect of menthol cigarettes on public health and gave two principal conclusions in reply to nine research questions: “Menthol cigarettes have an adverse impact on public health in the United States and there are no public health benefits of menthol compared
This research conclusion is a manifestation of the mandate of article 907 that clearly directs that menthol cigarettes have a negative effect on US public health and this report will be the basis for regulating the menthol cigarettes in future. Both panel and Appellate Body of the WTO DSB shall give the UNITED States more time to express their good faith in controlling tobacco products as mandated by US Tobacco Control Act. Thus, their decision will describe how far the United States efforts in implementing tobacco control measure to protect the public health.

By using human rights approach, the WTO DSB are supposed to be able to give a decision that in line with the spirit of the world in tobacco control policies. Essentially, the United Stated had given the view that the Panel failed to conduct a holistic analysis in comparing the taste and behavior of consumers of clove cigarettes and menthol. To be in line with the spirit of tobacco control, the Panel and the Appellate Body must support the spirit of tobacco control rather than focusing the economic measures of policy to the trade relations.

Appellate Body analysis found that both menthol and clove cigarettes are ‘like product’. With reference to the provisions of the FTC and TPSAC’s research reports, the Appellate Body shall expressly provide a recommendation that the United States also shall ban the menthol cigarettes as well. By banning both of the products, the WTO DSB firmly in line with the tobacco control measures as a form of protection of the right to health as well as respecting the provisions of international trade.

The respection of human rights values shall be emphasized in every trade policy-making process so that the existence of article XX GATT is not only as shield to avoid the world trade principles but firmly used as the basis to respect human right especially the right to health.

3. Legal Consequences of WTO DSB Report on the Case of US-Clove Cigarettes to the Future Trade Relations.

There area two legal consequence of WTO DSB Report on the Case of US-Clove Cigarettes: first, it creates legal uncertainty of tobacco control policy enforcement. Denial of the existence of the binding international rules on tobacco
control will directly create legal uncertainty. The concept of tobacco control in the FCTC has been accepted internationally and almost all members of the WTO ratify the FCTC. (28) Legal uncertainty implementation of FCTC in the WTO regime is part of negative response in the protection of global public health. Both the WTO and WHO can initiate working together to prepare the harmonization of rules. This step is more progressive and will establish strong commitment to support the existence of international human rights norms particularly the tobacco control mission without breaching international trade principles.

Second, the WTO DSB decision will leads less valuable justice in the trade relations. The core purpose of the establishment of the WTO DSB as a dispute settlement body is a manifestation to create justice (29) in any trade disputes. Justice seekers (*justiciabellen*) certainly craved if any dispute in the judiciary (as in the WTO DSB) decided by professional judges and have high moral integrity, so that it can create decisions that not only contains aspects of legal certainty (procedural justice), but also legal justice, moral justice and social justice.(30) It’s because of justice is the main goal to be achieved from the dispute resolution process.(30)

Justice is also indispensable in international trade law. According Sylviana Kusuma Lestari (31), basically justice is needed in international trade law at least because of three aspects: first, normatively so avoid conflict and institutional and doctrinal confusion. Second, to restore the circumstances as a result of failures in the implementation of free trade. Third, as strong emphasis that moral obligations must be applied equally to both the rules governing the relations of the domestic and international trade relations governing transactions with foreign trading partners.

When concept of the right to health protection not accommodated within the framework of tobacco control, it would create inequities in the reality of inter-state trade. The sacred duties of the state to protect, promote, and fulfill the right to health for its citizen will be in vain. In fact, there will be legal setbacks where economic interests be absolute without limitations that applies both domestically and internationally.
D. Conclusion

The enactment of US Tobacco Control Act solely to realize the obligation of the state to support, protect, and fulfill the right to public health of its citizen. Indonesian lawsuit against the United States to repeal the regulations governing the import ban on cigarettes was favored by the WTO DSB. Indonesian victory in the case of US-Clove Cigarettes still leaves the problem related to the imbalance of the principles of international trade with the norms of the right to health especially on a global strategy for tobacco control.

In theory, the more intensity of trade activities will increase a country’s economic welfare but most importantly the strong protection of human rights will ensure the protection of individual’s dignity. However, in the case of US-Clove Cigarettes and also in other related cases in WTO DSB clearly show that there is a contradiction between the two areas: the norm of international trade with the norms of the right to health. The conception of the right to health has been universally recognized in the binding international human rights treaties. In addition, the protection of the right to health has been set in the FCTC treaty and now becoming global strategy to reduce tobacco consumption improving the quality of public health. Moreover, the treaty has been ratified by more than two-thirds of the countries in the world and justifies the state to implement tobacco control measures either through pricing and non-pricing measures. For this reason, the interests of trade shall be set aside for the protection of the interests of the right to health. Moreover, the existence of the provisions of Article XX (b) GATT is essentially a form of priority to use non-WTO treaties in interpreting the provisions of the GATT. Hence, the Panel and appellate Body of the DSB WTO need to use the rights-based approach in the decision making process to maintain harmony between the principles of international trade with the protection of the right to health.

The WTO DSB ruling in the case of US-Clove Cigarettes will create legal uncertainty in the application of a global strategy for tobacco control. The more non-compliance with the basic norms of FCTC would lead to increased global public health threat. Moreover, in the area of trade relations between countries, the
case of US-Clove Cigarettes could be as a sign of legal injustice. Legal norms in
the FCTC are solely created to respect and protect the rights of the individual’s
health. This will also lead to human rights violations in a larger scale.

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CONTENT ANALYSIS OF CIGARETTE ADVERTISEMENT 
IN NEWSPAPER ‘KEDAULATAN RAKYAT’ (1990-2013)

by
Dyna Herlina Suwarto
Nurhidayati Kusumaningtyas

Abstract
Cigarette industries are using “Advertisement” as one of their marketing strategies which is a popular strategy to promote a product. Unlike other promotion media, cigarette advertisement not only inform about the product but also create symbol (language and image), values, and message that interpreted by its audience as a part of smoking 'life style' establishment. The research purpose is to understanding how is the information, symbols (language, image), values, message and advertisement strategy that offered by cigarette advertisement to influence audience. Understanding about those factors will contribute to create an effective counter message. This is a textual research using quantitative content analysis by summative data analysis method. The object of the research is cigarette product advertisement that published at newspaper, Kedaulatan Rakyat, during 1990-2013 gathered from Provincial Public library. Research validity will achieve using coding procedure and scheme, enumerator briefing. At the same time, the reliability will accomplish using inter-coder method. The research found that the cigarette advertisements promote some important information: low level of nicotine, the best quality of tobacco and the bestseller cigarette. Moreover, the advertisements were offering symbols that are not related with the product itself. They exhibited images such as animals, vehicles, and household equipments. It is urge to note that the advertisement model dominated by male adult and young. Doing so, it may conclude that the advertisement audience target is male adult and young. Meanwhile the words that publish frequently are popular words, humor, words play, rhyme poems. The manifest values that are delivered related to masculinity, active and happy, special quality of kretek and filter cigarette. The advertisers use message strategy that is set the advertisement to enforce consumer demand by humor and information that are not related to the product itself. Overall the advertisements were developed using transformative approach in order to create brand image and personality product since the product is not has beneficial function for the consumers. So that the research suggests that the health campaign need to involve transformative approach to promote positive feeling among audience about healthy lifestyle without cigarette as the counter message to the cigarette advertisement.

Keywords: cigarette advertisement, content analysis, newspaper

I. INTRODUCTION

Cigarette advertising was suspected to be the cause of the increasing number of smokers, especially in developing countries besides other factors such as lack of
program to control the cigarettes (Saffer and Chaloupka, 2000; Reynolds, 1999). In the Global Youth Tobacco Survey (GYTS) in 2006 showed that 93% of 13-15 year olds in Indonesia see cigarette ads in Billboard, the 83% seen in magazines and newspapers. In Jakarta, 99.7% of teenagers see cigarette ads on television; 86.7% of all teenagers see cigarette advertising in outdoor media space; 76.2% of all teenagers see cigarette ads in newspapers and magazines and 81% of teenagers have attended events sponsored cigarettes.

In a recent study conducted by Mandracchia (2013) also mentions that cigarette advertising in Indonesia is very attractive in persuading customers. Meanwhile, according to Blecher (2008), advertising is one important tool that is often used during the highly competitive marketing. Nowadays, the tobacco companies do not compete on price, but increasing sales through advertising and other marketing techniques. In order to achieve the goal the cigarette industry is using two approaches in their advertisements, which are informational and transformative approach (Fill, 2005: 36).

The research objectives are examining the information, symbols (images and language), values, message strategy and advertisement approach that is used by cigarette advertisement at newspaper, Kedaulatan Rakyat, during 1990-2013. The findings will help Tobacco Control Activists to design and disseminate appropriate Public Service Announcements countering the advertisement approach being used by the tobacco industry in an effective way.

II. Methodology

This is a textual research using quantitative content analysis through summative method. This approach was chosen in order to understanding the information, symbols, values, message strategy and ads approach that exhibit by cigarette advertisement. Meanwhile, the research objects are 234 cigarette product advertisement copies that published in ‘Kedaulatan Rakyat’ newspaper since 1990-2013, which are collected from Province Public Library.

The analysis unit in this research is item, therefore the research team will be examine the whole components of advertisement such as heading, body text, illustration, picture, model, art work and soon. The comprehensive examination is
conducted to find the manifest theme of the advertisement. Each of advertisement will be inspected based on some variables below (Pollay, 1984).

The research validity was achieve through (1) preparation of procedures and coding schemes, and (2) briefings enumerators. While, the reliability was accomplish by inter-coder reliability (Potter and Levine-Donnerstein, 1999). The results of the coding of the interpreter will be compared and analyzed with a standardized reliability (α), which shows how much conformity between interpreters. This test is performed to near the highest suitability value (1.000).

III. Results

1. Information

Questions on the coding sheet was intended to determine what kind of information was provided by cigarette advertising because one of the advertising function was to provide information about the product to consumers.

Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Information Dimension</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990-2013</td>
<td>Other Information</td>
<td>47%</td>
</tr>
<tr>
<td></td>
<td>None</td>
<td>15%</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>15%</td>
</tr>
<tr>
<td>1990-1995</td>
<td>None</td>
<td>33%</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>20%</td>
</tr>
<tr>
<td>1996-2000</td>
<td>Other Information</td>
<td>60%</td>
</tr>
<tr>
<td></td>
<td>Quality</td>
<td>20%</td>
</tr>
<tr>
<td>2001-2005</td>
<td>Other Information</td>
<td>46%</td>
</tr>
<tr>
<td></td>
<td>Packaging Design</td>
<td>23%</td>
</tr>
<tr>
<td>2006-2010</td>
<td>Other Information</td>
<td>73%</td>
</tr>
<tr>
<td></td>
<td>Non product content</td>
<td>7%</td>
</tr>
<tr>
<td>2011-2013</td>
<td>None</td>
<td>32%</td>
</tr>
<tr>
<td></td>
<td>Other Information</td>
<td>25%</td>
</tr>
</tbody>
</table>

Source: Primary Data

Based on the table 2, the type of information that often arise were "other information", "none" and "quality". If it were seen in period of time, the indicators
that often arise were "other information" and "none". Other information has no
related with cigarettes and it appeared with setting of animals, chair, vehicle, scantily
clad women, etc.

One of the information that was emphasized by the advertiser was a quality
of the product that referred to most delicious, low levels of nicotine, number one of
tobacco quality, best selling and so on. In this section, although advertisers
acknowledged the existence of hazardous substances such as nicotine in their
products, but they emphasized on the low composition without reducing taste. This
means that advertiser deliberately 'hide' the negative impact of these harmful
substances (Pollay, 2000: 13).

If the information provided for the product was a very minimal in the ad, so
cigarettes actually be generic or interchangeable as a functional (Pollay, 2000: 13).
However, important information was needed by the consumers such as point of sale,
how to use, nutrient content, safety of products, warranty/after-sales service,
research-based information, user testimonials were never appeared in cigarette
advertising in the period of 1990-2013.

2. Symbol

Symbols are offered by cigarette advertisements were not only known
through the words in the form of information and advertising language but also
primarily by visual picture offered by cigarette advertising. Most cigarette ads in
Kedaulatan Rakyat newspaper during 1990-2013 were dominated by picture combined
with the words of no more than 25 words.

In this study, for about 49% ads are not using model, 45% represented
humans as model. A few cigarette ads that are represent anthropoids and mythical
figures as the model. Meanwhile, the anthropoid models (figure did not represents
humans being, could be animals or other creature with human behavior) were never
used.

Most of models are young middle class Javanese looking male. Moreover, the
ads use properties, clothes and setting that represent middle class life style. Previous
research found that one of the characteristics of tobacco advertising in Indonesia is
the protrusion of the relationship 'natural' lifestyle between the attributes with
specific brand attributes used while referring to the values of middle-class success (Reynolds, 1999: 85). Further, he said that for men Java ability to buy cigarettes outside the household financial fund managed by women is a form of modernity and masculinity (Reynolds, 1999: 86).

3. Manifest Value

The results showed values offered by cigarette ads were male and masculine values (23%), and good quality/special (19%), active/excited (18%) as shown by Table 3 below.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Active/ Happy</td>
<td>25%</td>
<td>8%</td>
<td>23%</td>
<td>14%</td>
<td>27%</td>
<td>18%</td>
</tr>
<tr>
<td>Men and Masculine Value</td>
<td>0%</td>
<td>35%</td>
<td>17%</td>
<td>28%</td>
<td>20%</td>
<td>23%</td>
</tr>
<tr>
<td>Best Quality/ Special</td>
<td>46%</td>
<td>8%</td>
<td>17%</td>
<td>12%</td>
<td>33%</td>
<td>19%</td>
</tr>
</tbody>
</table>

Source: Primary Data

Based on table 3, the most dominant values shown cigarette advertising is male and masculine values are shown explicitly through slogans or implicit in the text and visual advertising. In the Indonesian culture, a woman smoking is something that taboo or unusual therefore cigarette advertising displays or male masculinity. Masculine image is characterized by the appearance of a male model, words and objects associated with men (car, motorcycle, extreme sports, etc.) that represent the values of coarse, strong, brave, bold, manly, composed and controlled.

Another value offered cigarette advertising is active and happy. Value active/happy represented by words in the form of humorous stories, word rhythm poems. In addition to the words, the active/happy can also be concluded through the choice of model views, social activity and a description of the model. This value includes active, athletic, cheerful, happy, vibrant, vitality, love a challenge, active,
courageous, dominant, competitive, fight, and wild, dare to take risks. Property ads used normally support the view model and words such as: sports equipment, vehicles, competitions tools etc.

Another quite dominant value is of good quality or special. This value includes a statement about the best option or a mixture of tobacco, cigarettes specific type or size (extra long, very thin), the quality of the filter, quality control, special packaging/special. Some cigarette ads try to make physical distinguishing cigarette products compared with competitors. Offer this value is usually characterized by: (1) the words of a claim of superiority as the 'best', 'especially', 'low nicotine levels', etc., (2) a detailed description of products such as cigarettes cross section, packaging. Nevertheless some important information such as manufacturing technology, materials, and side effects were never disclosed.

The result is correspondence with the slogan analysis of the ads that shown at table 4 below. Based on the calculation of the word, it revealed the word that often appeared on cigarette slogan row were clove, filter, flavor, your, life, favors and men.

Table. 4
Advertising Slogan

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Frequency</th>
<th>Word</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.86</td>
<td>26</td>
<td>Kretek</td>
</tr>
<tr>
<td>1.79</td>
<td>25</td>
<td>Filter</td>
</tr>
<tr>
<td>1.43</td>
<td>20</td>
<td>Taste</td>
</tr>
<tr>
<td>1.36</td>
<td>19</td>
<td>Your</td>
</tr>
<tr>
<td>1.36</td>
<td>19</td>
<td>Life</td>
</tr>
<tr>
<td>1.21</td>
<td>17</td>
<td>Favor</td>
</tr>
<tr>
<td>0.86</td>
<td>12</td>
<td>Men</td>
</tr>
</tbody>
</table>

Source: Primary Data

Active and happy life values was shown by the presence of the words “Life” meanwhile the good quality or special taste of cigarette are repeated by “Favor”, “Filter” and “Kretek” in the slogan. At the same time, the value of masculinity was highlighted by the word “Man” in the advertising slogan.
4. **Message Strategy**

In a study of rhetoric or the using language to persuade people was known that there were three approaches to convince audiences: (1) ethos, the approach that emphasizes on character persuasion of its products e.g. product quality, (2) the pathos, the approach that emphasizes on emotional persuasion, (3) logos, the approach that emphasizes on the using of logo to convince the audience.

The study found that cigarettes companies consistently used the pathos strategy that emphasizes on the emotional persuasion in all periods. Overall, during 1990-2013, humor was consistently using to build emotional coercion. What was relation between cigarettes and humor? Humor is considered able to attract attention and create brand awareness, especially in well-established brand. Humor has the following functions: (1) attract attention, (2) increase in advertising and brand preferences, (3) reduce the level of irritation/dislike of advertising even able to improve customer retention on the ad. Humor also a strategy to offer a product that has a kind of oriented feeling or experience that can be consumed by a low level of involvement (Shimp, 2009: 311).

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase: product excellence</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>100%</td>
<td>100%</td>
<td>94%</td>
<td>99%</td>
<td>100%</td>
<td>99%</td>
<td></td>
</tr>
<tr>
<td>64%</td>
<td>29%</td>
<td>46%</td>
<td>32%</td>
<td>14%</td>
<td>20%</td>
<td>Benefit</td>
</tr>
<tr>
<td>0%</td>
<td>2%</td>
<td>6%</td>
<td>1%</td>
<td>84%</td>
<td>19%</td>
<td>Comparison</td>
</tr>
<tr>
<td>36%</td>
<td>69%</td>
<td>43%</td>
<td>65%</td>
<td>2%</td>
<td>42%</td>
<td>Humor</td>
</tr>
<tr>
<td>36%</td>
<td>71%</td>
<td>37%</td>
<td>51%</td>
<td>27%</td>
<td>46%</td>
<td>Information that has not related to product</td>
</tr>
<tr>
<td>32%</td>
<td>19%</td>
<td>14%</td>
<td>9%</td>
<td>51%</td>
<td>24%</td>
<td>Information related to product</td>
</tr>
<tr>
<td>32%</td>
<td>10%</td>
<td>49%</td>
<td>35%</td>
<td>22%</td>
<td>29%</td>
<td>Un recognize</td>
</tr>
</tbody>
</table>

Source: Primary Data
The research analysis confirms that the cigarette as a controversial product was "poor" with functions so the cigarettes company used strategy that emphasized on the emotional aspect and the information that has no related with the product. Based on table 5, cigarette advertisement delivery message by using some basic strategies to encourage demand for example using humor and information. The messages are not directly related to the product. Advertisers are using pathos strategy to attract the attention of consumers. With this method, the advertisers are placing themselves as an image or text to be the center of attention of consumers to attract emotional reactions.

In Indonesia, cigarette consumption process can be categorized into low involvement. That is, consumers need a little sacrifice in order to consume tobacco products because the products are easy to come by variations in prices from cheap to expensive. Referring to the concept of FBC Grid submitted by Richard Vaughn (1980 Fill, 2010: 496), cigarette products requiring low involvement of consumers suitable offered by used emotional approach as shown by the chart below. The purpose of advertising messages directed to attract audiences

FBC Grid

Source: Fill, 2010: 496
Based on chart FBC can be understood that cigarette advertisers, trying to attract the attention of consumers through the establishment of brand image and personality then encourage the audience to smoking, feeling the pleasure of smoking and learn that the action is socially acceptable. In accordance with the findings of this study on the structure of the advertising text, the purpose of cigarette advertising is to attract new smokers (starters).

5. Advertisement Approach

Cigarette ads are placed in the background imaginary created through digital manipulation techniques (digital imaging). "Emptiness" social background ad is reinforced with activity models tends to be quiet. The advertising model style/pose are facing the audience without meaningful activities. Most of the models used in cigarette advertising is a group or individual male adolescents and adults. Moreover most of the model are represent ethnic majority to support advertisement transformative approach. The models also an important tool to create brand identity.

The visual image is reinforced with ad copy that is used. Advertising copy is generally quite short, less than 25 words, usually containing the brand and slogan (headline). Shaped main types of declarative sentences/statements submitted the first to highlight the play on words. The language used Indonesian and English. To draw the attention of the audience, the script is written in italics or bold position. Most importantly, in line with the associative technique with the visual depiction, text ads often use personification of human nature on the product.

These data indicate that cigarette advertising in newspapers in this study were not very rich picture of social contextual reinforced with text ads do not reveal the product attributes. Pictures and words the custom cigarette manufacturers and advertisers who seek to create a new image of the cigarette, but not directly related to the products they offer. This technique is commonly referred to as associative or transformative advertising (ad transformative).

Unlike with informative advertising (informational advertising) which is rely on facts, data and information of product that are required by the consumers to make rational decisions, transformative advertising are relying on the psychology experience promised by manufacturers (Puto and Wells, 1984: 639). Advertising
transformative has two important characters: (1) The ad put the experience of the consumption of products to make consumers feel richer, warm, excited and passionate beyond objective benefits of products (2) the advertiser also presents the idea that the experience of consuming the product is closely associated with the experience to understand ad so the consumers cannot remember the brand without calling their memory to the advertising (Shimp, 2009: 275).

By applying this technique, marketers are trying to grab the attention of the public to buy their products without accentuating benefits of their products. Cigarette marketers describe their users as youthful, cool, socially acceptable, sexually attractive, beautiful and handsome, etc. (Fill, 2010: 523). In addition, advertisers embed consuming experience with images of products in advertising so that consumers associate the product with the imagery in advertising.

This technique is used to transform emotions and feelings of the prospective users of the product become more positive. In other words, the advertising gives a positive suggestion to consumers. Smoking is one of the controversial product cigarette advertising may lead to negative feelings and even insults from some people. Because cigarettes regarded as a product of useless and harmful to health the cigarette advertising strictly regulated by the government. Therefore, the advertiser have to show the argument that cigarette is a product that has a positive value that encourage consumers to buy the product then as building an argument, advertising need to combine all the elements of visual and text to complement each other in the process of public persuasion.

The findings in this study are consistent with the findings of previous research conducted by Richard W. Pollay (2000) on cigarette advertising in Canada. Cigarette industries in Canada used transformative approach to build brand image and personality to create an experience (consume) feel richer, warmer, and fun (Pollay, 2000: 4). Similar to the Pollay’s in Canada, this study also revealed that a variant of cigarette ads aired several times. This means that advertisers do repetition on a variant of cigarette advertising, this is not without deliberately. Repeated exposure of advertising make a product or brand is able to establish a strong brand image in the minds of consumers (Pollay, 2000: 6). Furthermore Pollay (2000: 6) explains that the continuity and consistency of a brand build an image and product
personality makes the process of transformation occurs. Negative feelings towards advertising or cigarette products can be replaced with images and certain personality continuously and consistently offered advertisers to audiences.

The results of this study cover four main themes: information, symbols (images and words), values, messages and advertising approach. The findings of the study can be summarized in the following taxonomy.

**Table 6

Content Analysis Taxonomy

Cigarette Advertisement in Kedaulatan Rakyat 1990-2013**

<table>
<thead>
<tr>
<th>Advertisement Approach</th>
<th>Message Strategy</th>
<th>Value</th>
<th>Symbol</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transformative approach</td>
<td>Pathos approach that emphasizes on emotional persuasion</td>
<td>Masculinity to approach the cigarette main market target which is male adult</td>
<td>Popular culture artifacts but Unrelated product property: vehicle, household equipment, animal in order to create product personality</td>
<td>Low level nicotine</td>
</tr>
<tr>
<td></td>
<td>The advertisements are rich of images without social context that are strengthen by ads copy that is not focus on product attribute.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The message strategy is to increase demand by involving the audience to do feel and learn.</td>
<td>Active and happy to influence male young as starters.</td>
<td>Popular words, word play, rhyme poems that are not related with the cigarette products itself. All the appearance of the images and words are used in order to create brand images and personality.</td>
<td>Special (kretek) flavor</td>
</tr>
<tr>
<td></td>
<td>Humor is used in order to attract attention and reduce negative or irritate feeling to the product</td>
<td>Special quality to accentuate the tastiest flavor (kretek) as Indonesian unique cigarette moreover to differentiate the product with filter cigarette that is focus on young consumer.</td>
<td></td>
<td>The best seller</td>
</tr>
<tr>
<td></td>
<td>Repetition to enhance the brand image and personification in consumer mind</td>
<td>The models are depicting as middle class people in order to attract low class consumer that associate cigarette with the successful life.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**IV. Conclusions**

This research is revealed five important research findings. First, the information that exhibited by cigarette advertisements is related to low level of nicotine, the best quality of tobacco and the bestseller cigarettes.
Second, the cigarette advertisement is offering symbols in term of images and words. The most images that often appear are not related with the product information above, such as: animals, vehicles, and household equipments. Meanwhile the words that publish frequently are popular words, humor, wordplay, and rhyme poems that are not related with the cigarette products. The ads also involve male adult and young models that represent as middle class people in order to attract the potential consumer. All the appearance of the images and words are used in order to create brand images and personality.

Third, the manifest values that are delivered cigarette advertisements are: masculinity, active and happy, special quality (of kretek and filter) cigarette. The combination of symbols and values are publicly display to persuade the audience target of cigarette advertisement, which are male adult and youth.

Fourth, the advertisers use message strategy that is set the advertisement to enforce consumer demand by humor and information that are not related to the product itself. Fifth, based on the understanding of advertisement information, symbol, value and message strategy can be concluded that the cigarette advertisers are using transformative approach.

By comprehension the information, symbol, value, message strategy and advertisement approach of cigarette advertisement, it can developed a counter message strategy to reduce smoking habit. The research suggests that the counter message should emphasize on masculinity, active and happy values without cigarette. Moreover, the message also needs to evaluate the cigarette company claim about low level nicotine and filtering cigarette that are considered less dangerous and youthful lifestyle. All the counter messages need to deliver using transformative advertisement strategy as the cigarette advertiser did.

So far the most cigarette counter messages were delivered using informative approach that are publishing the disadvantages fact and loss data that might suffering by smokers. It’s rarely cigarette health warning that choose transformative approach by raising up positive feeling to masculinity, active and happy, qualified life without smoking.

This study has several limitations that just researching tobacco advertising in newspapers scattered when tobacco advertising in various media such as television,
outdoor and the latest in Internet media. Therefore it is necessary for a comprehensive study of the research on tobacco advertising in various media.

During data collection process, it was noticed that cigarette advertisement in the newspaper were dominated by sponsorship advertisement and advertorial however the research only focused on cigarette product advertisement. So it is necessary to research cigarette sponsorship advertisement and advertorial in the future.

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THE ECONOMIC BURDEN OF SMOKING-ATTRIBUTABLE DISEASES TO THE GOVERNMENT HEALTHCARE EXPENDITURES IN TOLITOLI DISTRICT 2014

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Abstract
Background: The economic loss caused by smoking attributable expenditures in Indonesia is six times higher than the income generated by tobacco taxes. A policy that can be used to reduce the economic burden caused by tobacco related diseases might be a prohibition of tobacco advertising in the local jurisdiction that may lead to a decrease in the number of new smokers. However, many local government might be an assumption on the part of the local government that their local revenue will decrease significantly if this policy is implemented. Tolitoli is part on Central Sulawesi Province, which is underdeveloped city with small local revenue, Tolitoli have high smoking prevalence 38.2% is higher than national average and always increase each years.
Methods: This research aimed to assess the health care expenditures incurred by in-patients who were diagnosed with tobacco related diseases and compare it with the local revenue generated by tobacco advertising in Tolitoli district. This research was a cross-sectional research and was conducted by examining and analyzing relevant documents. Prevalence-based approach was used as the method of the study and smoking attributable fraction used for calculating economic burden. The hospital data for this research was collected from Hospital Tolitoli (RSUD) for 1126 patients in 2012 and 769 patients in 2013 that were diagnosed with tobacco related diseases.
Results: Results show that both in 2012 and 2013, the tobacco advertisement tax contributed to just 0.014% out of the total local government revenue. In fact, the government expenditures for patients who were treated for tobacco related diseases in 2012 and 2013 was 2.1 and 1.3 times more than the total income generated by tobacco advertisements. These data showed that the tobacco tax revenue had much negative impact than the benefits.
Conclusions: We therefore, suggest the local government consider prohibiting tobacco advertisements and any kind of promotions undertaken by the tobacco industry through their corporate social responsibility or CSR activities. In addition, consider stopping the issuance of new permits in Tolitoli and not renew? Existing tobacco advertising licenses.

Keyword: Government Local Revenue, Smoking Attributable Expenditures, Smoking attributable disease, Tobacco Advertising

INTRODUCTION

Smoking become a global health problem. In 2010 at least 5 million deaths are caused directly by smoking (1). Indonesia is the fourth biggest tobacco consumer
which contributed 4.8% of total world population (2). The prevalence of smokers in Indonesia in 2013 reach 36.3% adults (3).

The diseases which caused by tobacco consumption are degenerative diseases, cardiovascular disease, and respiratory system (4). In Indonesia, death caused by cardiovascular problem was estimated to reach 31.9%, respiratory disease death cause was 8.9%, and the death caused by degenerative disease had reached 5.7% (3).

In addition to causing death, cigarettes have broad impact on the socio-economy aspect. As the costs of treating smoking issue, the potential loss of income due to sickness, disability, and premature death caused by smoking, as well as the expenses to be incurred for the purchase of cigarettes that should be used for more important needs. Research conducted by Dr. Kosen et al, found economic loss caused by smoking, has reached 338.75 trillion rupiah, or six times bigger than the tobacco taxes which only reached 53.9 trillion rupiah (5).

A policy that can be taken to press the economic burden of smoking-attributable disease, is to restrict or prohibit the tobacco advertising in that area. The National Socioeconomic Survey (SUSENAS) 2004 stated that 80% of Indonesian has started their smoking habit since they were 19 years old, it becomes a tobacco industry strategy to aggressively target the teenager as the main target, directly or not. In Jakarta, 93.5% teenagers see ads on billboard, 88.7% see ads on Tv, and even more (92.4%) see ads during sports and youth event. On the other hand, in conducting the policy prohibit smoking advertisement make worry that local government will have a deficit related to the decreased of the local revenue (PAD). (6)

Tolitoli is one of the districts in the Central Sulawesi province, with a population of 211,296 Lives (7). Tolitoli’s local revenue in 2011 was 572 billion rupiah, they spent 3.7 billion for fund Public Health Assurance (Profil Kesehatan Tolitoli, 2011). In 2012, 64,037 (30.3%) of Tolitoli inhabitant got covered by National insurance (Jamkesmas), and there are 9885 (4.7%) people who have Jamkesda (Local Insurance). Totally, Tolitoli’s inhabitant who have public health insurance has reached 83,305 people or 39.5% of the total population (8).
Smoking rate in Tolitoli is high. In 2007 prevalence of the smoking was 38.2%, and household who has at least one smoker reached 68.8% (9). The average cigarette consumption reached 10-20 cigarettes/day (10).

Incidence of smoking-attributable disease in Tolitoli district was relatively high. Data from Tolitoli District health profile, it showed the prevalence of Acute Respiratory Infections (ARI) has been ranked first out of 10 major diseases that exist in the health care center with 33.91% incidents, and in Inpatient department Hospital Tolitoli which reach 19.82%. Hypertension is ranked at the 3rd place in health care center with 50% prevalence rate and ranked 4th in the Hospital Inpatient Tolitoli with a 11.04 % prevalence rate (8).

From the previous explanation, Tolitoli district with a population that has public health insurance (Jamkesmas and Jamkesda) reaching 40% of the total study population with high rates of diseases associated with cigarette, this will effect the government health spending on treating sick people who have been smoking. An effort in the form of policy to reduce the impact is to stop the growth of new smokers, but this policy is geared to effect on decreasing Tolitoli local revenue which has been relatively small compared to other regions. From the problems a forementioned, this study aims to compare burden of smoking attributable expenditures with the revenue from Tobacco ads taxes that Tolitoli received in 2012-2013.

**Methodology**

**Study Design**

This study will be conducted with across-sectional design. The economic analysis approach that will be used to calculate the burden caused by smoking-related expenditures, is the prevalence-based approach (11).

This study compares the revenue from cigarette industry during 2012-2013 were obtained from the local revenue office, with smoking health care expenditures are obtained by calculating the SAF in patients with health facilities JAMKESDA/SKTM.

Data revenue from advertising, sponsorship and CSR from the tobacco industry was obtained from 9 offices in Tolitoli, the local revenue department, health
department, department of education and sports, agricultural services, industrial services, and tourism bureau in the period 2012 and 2013.

To obtain smoking Attributable-healthcare expenditures (SAE) must be calculated by Smoking Attributable Fraction formula:

$$SAF_i = \frac{Ps(RR_i - 1)}{Ps(RR_i - 1) + 1} \times 100\%$$

Smoking prevalence ($Ps$) Obtained from Basic health research (RISKESDAS) 2007 as 38.8%.

The relative risk of incident ($RR_i$) disease obtained by study of literature on previous research by considering the location and the subject of research. (Table 1).

For diseases related with smoking, using research results dr, Kossen of Smoking Related Disease in Indonesia, then adjusted to the disease recorded in Tolitoli (Tabel 1)

Having obtained the fraction of each disease smoking calculation healthcare expenditures attributable to the formula

$$SAE_i = (SAF_i \times SRD_i)C_i$$

The unit cost of each disease can using tariff from INA-CBGS PT. ASKES (health insurance public company) which in 2012-2013 managing Jamkesda and patients with a Certificate of Disadvantaged. (Table 1)
### Table 1, Smoking Related Disease, SAF value, Unit cost and RR Specific disease in this research

<table>
<thead>
<tr>
<th>Disease</th>
<th>ICD-X</th>
<th>SAF</th>
<th>Unit Cost</th>
<th>RR</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cardiovascular</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>I10</td>
<td>0.23</td>
<td>1,566,642</td>
<td>2.04</td>
<td>Ezzati, et al., 2005</td>
</tr>
<tr>
<td>Stroke NH</td>
<td>I63.9</td>
<td>0.37</td>
<td>2,198,025</td>
<td>2.96</td>
<td>Shultz et al, 1991</td>
</tr>
<tr>
<td>TIA</td>
<td>G45.9</td>
<td>0.37</td>
<td>1,458,732</td>
<td>2.96</td>
<td>Shultz et al, 1991</td>
</tr>
<tr>
<td>CHD</td>
<td>I51.9</td>
<td>0.27</td>
<td>1,713,441</td>
<td>2.24</td>
<td>Zheng Et al, 2014</td>
</tr>
<tr>
<td>CHF</td>
<td>I50.0</td>
<td>0.13</td>
<td>2,839,689</td>
<td>1.5</td>
<td>Jiang et al, 2001</td>
</tr>
<tr>
<td>Respiratory</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lung TB</td>
<td>A16.2</td>
<td>0.33</td>
<td>1,750,479</td>
<td>2.65</td>
<td>Jacon et al, 2009</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>J18.9</td>
<td>0.20</td>
<td>1,458,732</td>
<td>1.85</td>
<td>Gupta, et al. 2005</td>
</tr>
<tr>
<td>ARTI</td>
<td>J06.9</td>
<td>0.23</td>
<td>1,146,478</td>
<td>2</td>
<td>Koch, 2003</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>J45.9</td>
<td>0.37</td>
<td>1,166,989</td>
<td>2.99</td>
<td>sai et al 2004</td>
</tr>
<tr>
<td>COPD</td>
<td>J44.9</td>
<td>0.30</td>
<td>1,821,731</td>
<td>2.43</td>
<td>Zheng Et al, 2014</td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lung cancer</td>
<td>C3 4.9</td>
<td>0.32</td>
<td>1,875,941</td>
<td>2.6</td>
<td>Kelly et al, 2009</td>
</tr>
</tbody>
</table>

**Result**

**Smoking Related Disease.** The number of patients treated at the hospital Tolitoli in 2012 is 1968 patients and in 2013 is 1248 patients. By using reference research by Dr. Kossen about the diseases related with smoking, in this study, 11 types of diseases recorded in 1126 patients in 2012 and 769 in 2013 patients diagnosed with smoking attributable disease (SRD) (Table 3)

**Smoking Attributable Fraction.** SAF formula, can be calculated how many patients were diagnosed SRD caused by cigarettes. With the RR value on every kind of disease obtained from previous studies, then by using the prevalence of smoking in Tolitoli, the obtained number of smoking attributable disease by 321 in 2012 and in 2013 amounted to 216. The number of patients seeking treatment based JAMKESDA facility is at 100 patients in 2012 and 70 patients in 2013 (Table 2)
Table 2. Smoking Attributable Disease based on Health financing scheme in Hospital Tolitoli 2012 and 2013

<table>
<thead>
<tr>
<th>No</th>
<th>Health Financing Scheme</th>
<th>2012 SAD %</th>
<th>2013 SAD %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Askes</td>
<td>57</td>
<td>42</td>
</tr>
<tr>
<td>2</td>
<td>Fee for service</td>
<td>74</td>
<td>47</td>
</tr>
<tr>
<td>3</td>
<td>Jamkesmas</td>
<td>91</td>
<td>54</td>
</tr>
<tr>
<td>4</td>
<td>Jamkesda</td>
<td>100</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>322</td>
<td>216</td>
</tr>
</tbody>
</table>

Table 3. Number of Smoking related disease (SAD) and smoking attributable disease (SRD) in Tolitoli 2012 and 2013

<table>
<thead>
<tr>
<th>Disease</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>SRD</td>
<td>SAD</td>
</tr>
<tr>
<td>Cardiovascular</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hypertension</td>
<td>368</td>
<td>88</td>
</tr>
<tr>
<td>Stroke NH</td>
<td>111</td>
<td>41</td>
</tr>
<tr>
<td>TIA</td>
<td>12</td>
<td>4</td>
</tr>
<tr>
<td>CHD</td>
<td>58</td>
<td>16</td>
</tr>
<tr>
<td>CHF</td>
<td>97</td>
<td>13</td>
</tr>
<tr>
<td>Respiratory</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lung TB</td>
<td>205</td>
<td>68</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>ARTI</td>
<td>14</td>
<td>3</td>
</tr>
<tr>
<td>Bronchitis</td>
<td>176</td>
<td>66</td>
</tr>
<tr>
<td>COPD</td>
<td>42</td>
<td>13</td>
</tr>
<tr>
<td>Cancer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lung cancer</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>1126</td>
<td>321</td>
</tr>
</tbody>
</table>

Smoking Attributable Expenditures.

Smoking Attributable Expenditures on JAMKESDA/ Patient with Certificate incapable (SKTM).

With the incidence of SAD in patients with facilities Jamkesda /certificate incapable a total of 100 patients in 2012 so the cost of local government is for the treatment of these patients is 170,087,993 or 29% of total expenditure SAE all scheme. and in
2013 amounted to 70 patients, thus the cost is 119,228,511 or 28 of total SAE all scheme

Table 4. Smoking Attributable Disease patient all case and Jamkesda in Tolitoli 2012-2013

<table>
<thead>
<tr>
<th>Year</th>
<th>SAE All Scheme</th>
<th>SAE JAMKESDA</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>585,468,129</td>
<td>170,087,993</td>
<td>29</td>
</tr>
<tr>
<td>2013</td>
<td>425,698,384</td>
<td>119,228,511</td>
<td>28</td>
</tr>
<tr>
<td>Total</td>
<td>1,011,166,513</td>
<td>289,316,504</td>
<td>28</td>
</tr>
</tbody>
</table>

Local Income, In this study, Local Income (penerimaan derah) is divided into two source, from cigarette industry with local revenue from non-smoking industry. Local revenue (penerimaan daerah) is part of local income in local financial structure regulation.

Local income from non-tobacco industry sourced from: local revenue (local tax non-tobacco, local Retribution non-tobacco, result from local wealth management); Balance Fund (sharing from the central government budget, allocation of general budget, special budget allocation); legal and other resources (emergency fund, financial assistance for provinces government, and etc.). In 2012 local income from non-tobacco Rp 566,840,318,937, and in 2013 amounted to Rp 664,405,112,971.

From the total revenue, some of which came from advertising other than tobacco products which provide income to Rp 159,768,000 in 2012 and Rp 175,558,000 in 2013 (Table 5).

Local income from tobacco industries come from local revenue cigarette advertisement retributions, corporate social responsibility, and sponsorship from tobacco companies. In 2012 and 2013, the local revenue from the tobacco industry only from cigarette advertisement retribution, amounting to Rp 80,849,500 in 2012, and Rp 90,432,000 in 2013. The local revenue from cigarettes sponsorship and CSR does not exist, it was already in a confirmed by 10 offices in Tolitoli, that none who received the funds (Table 5).
### Table 5 Revenue from Advertisement retribution Smoking and non-smoking in Tolitoli 2012-2013

<table>
<thead>
<tr>
<th>Years</th>
<th>Revenue Adv Tobacco</th>
<th>Revenue Adv Non Tobacco</th>
<th>Comp</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>80,849,500</td>
<td>159,768,000</td>
<td>33.6</td>
</tr>
<tr>
<td>2013</td>
<td>90,432,000</td>
<td>175,558,000</td>
<td>33.9</td>
</tr>
</tbody>
</table>

### ANALYSIS

Comparison of regional income derived from Cigarette Industries and others in year of 2012 and 2013.

Comparison between local revenue derived from cigarette industries form another source of revenue. Cigarette advertising tax only contributed 0.014% from the total revenue in the year of 2012 and 2013. (Table 6)

### Table 6 Comparison Revenue from tobacco industry and non-tobacco industries

<table>
<thead>
<tr>
<th>Revenue Adv Tobacco</th>
<th>Local Income Non Tobacco</th>
<th>Comp</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012 80,849,500</td>
<td>566,840,318,937</td>
<td>0.014 %</td>
</tr>
<tr>
<td>2013 90,432,000</td>
<td>664,405,112,971</td>
<td>0.014 %</td>
</tr>
</tbody>
</table>

Tobacco industries only contributes to the local revenue through cigarettes advertising tax (*direct advertising*) because according to the data gathered from the Local Revenue Department there were no sponsorship or CSR recorded. Contrast to the situation in Java where tobacco industry builds their positive images through sports, musics, film, art and culture sponsorship.

Advertisement tax is one of the local revenue in Tolitoli. Based on Local Regulation No. 11 year 2011 regarding advertisement tax, taxable types of advertising in Tolitoli district are: advertising boards, billboards, videotron, megatron, fabrics billboards, attached billboards/sticker, and walking billboard.

In this study, we divided advertisement into two categories based on its sources, those are tobacco industry advertisement and non-tobacco industry advertisement.
Based on recapitulation of advertisement retribution by Revenue Office in Tolitoli, the total revenue from advertisement retribution of Tolitoli district in 2012 reached 240,617,500 rupiah; 80,849,500 rupiah or 33.6% are advertisement revenue from tobacco industry and a larger proportion upto 159,768,000 rupiah or 66.4% are came from non-tobacco industry advertisement revenue.

In 2013, there’s an increase in advertisement revenue as much as 265,990,000 rupiah with details of 90,432,000 rupiah or 33.9 % from the tobacco industry and 175,558,000 rupiah or 66% from non-cigarette industry. Data of local revenue sourced from advertisement tax are below in Table 7

Table 7. Comparison Revenue advertisement retribution from Tobacco and All source

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue Adv all source</th>
<th>Revenue Adv Tobacco</th>
<th>% Adv Tobacco</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>240,617,500</td>
<td>80,849,500</td>
<td>33.6</td>
</tr>
<tr>
<td>2013</td>
<td>265,990,000</td>
<td>90,432,000</td>
<td>33.9</td>
</tr>
</tbody>
</table>

The largest cigarette advertising revenue in Tolitoli year 2012 and 2013 derived from PT Djarum, Neo Mild (Bentoel Group) and PT Gudang Garam, while in the year 2013 of the largest tobacco advertising revenues obtained from PT Djarum, Class Mild (Nojorono Group) and U-Mild (HM Sampoerna). The domination of advertisement come from 5 largest cigarette company in Indonesia is consistent with the data on cigarette industry dominance which controls 72% market share: Sampoerna (31.1%), Gudang Garam (2.7%), Djarum (2.2%), Bentoel/BAT (8%), and Nojorono (5.8%) (Indonesia Finance Today, 2011)

Other research shows that more than 75% of smokers start smoking under the age of 18 years. Based on the study of child UHAMKA and Commission in 2007, there were 99.7% of children see tobacco advertising on television, 68% positive impression on tobacco advertising, as well as 50% more confident in the advertisements. In the absence of restrictions on cigarette advertising, the number of smokers in Tolitoli will continue to grow. The data we get to prove that high cigarette consumption in the community and reluctance to limit the cigarette advertising has detrimental effect on government(6)
Tobacco advertising proved to increase the number of young smokers which evidently would affect the health condition in an area. In fact, its contribution to the local government revenue was only 0.014%. This shows an imbalance between the benefits and impact to the local government and the community itself.

The Comparison Between Local Government Revenue of Tobacco Industry and Local Government smoking attributable Expenditures

*Smoking Attributable Expenditure*, is a direct expenditure to finance smoking related disease. In this research, we want to see the comparison between tobacco revenue and the community’s expenditure for smoking related diseases. It also looks for the comparison between tobacco advertising tax revenue and the health burden expenditure of the local government caused by smoking related disease

### Table 8. Proportion SAE Jamkesda with Revenue from Adv Smoking

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue (a)</th>
<th>SAE Jam (b)</th>
<th>Proportion (b):(a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>80,849,500</td>
<td>170,087,993</td>
<td>2.1</td>
</tr>
<tr>
<td>2013</td>
<td>90,432,000</td>
<td>119,228,511</td>
<td>1.3</td>
</tr>
</tbody>
</table>

In 2012, the total expenditure of smoking related disease has reached Rp 170,087,993 or 2.1 times the revenue, furthermore in 2013, the burden paid by the local government for smoking related disease was Rp 119,228,511, or 1.3 times higher. Albeit, in 2013 was less but still higher on its expenditure ratio compared with the revenue.

### Table 9. Proportion SAE All Scheme with Revenue from Adv Smoking

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue (a)</th>
<th>SAE (b)</th>
<th>Ratio (b) : (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>80,849,500</td>
<td>534,871,042</td>
<td>6.6</td>
</tr>
<tr>
<td>2013</td>
<td>90,432,000</td>
<td>345,716,682</td>
<td>3.8</td>
</tr>
<tr>
<td></td>
<td>171,281,500</td>
<td>880,587,724</td>
<td>5.1</td>
</tr>
</tbody>
</table>
From the revenue and expenditure trend for the past 2 years, it shown the same pattern that the expenditure of tobacco related issue will always be higher than the received revenue coming from the tobacco tax. The expenditure ratio for tobacco related issue has been 5.1 higher than the last 2 years revenue coming from tobacco tax. Moreover, the burden ratio to finance the sick citizens caused by tobacco through Jamkesda is 1.7 times higher than the tobacco advertising revenue.

At this comparison, we can see the disparity between the direct benefits the government getting from the tobacco advertising tax and the negative impact that the government had to spend for the treatment the citizens got for smoking related diseases. In 2012-2013, Jamkesda program was conducted in collaboration between Tolitoli health department and PT. ASKES, which budget taken from Tolitoli local government budget (APBD). The expenditure to treat those diseases is actually an avoidable cost, since smoking related diseases are diseases that can be avoided through many tobacco control efforts.

The revenue of tobacco tax in Tolitoli district, which is only around 0.014% every year, cannot give much impact to the citizens, since the amount is very small for development even for the cost of smoking related disease treatment will not cover that up.

If we count the average cost per capita that had been spent for the treatment of smoking related disease, basically it can be counted with the assumption that in 2012 there were 322 cases caused by tobacco and the spending cost was Rp 534,871,042, so the average cost per capita will reach Rp 1,661,090, and if we look at the tobacco advertising revenue in 2012 was Rp 80,849,500, the cost will only enough to cover 48 sick patients, while the other 274 patients have to cover their own cost or be covered by the government. Whereas the government budget can be better used for other development sector since tobacco is actually avoidable.

In 2013, from 213 patients who suffered, from tobacco related disease, the expenditure was Rp 345,716,682, so that the per capita cost of those diseases was Rp 1,623,083, while the tobacco advertising tax revenue was Rp 90,432,000, which only enough to treat 55 patients in 2013. While the other 158 patients have to fund themselves or got covered by the government through the program of Jamkesda, Jamkesmas, and ASKES. The data shows there are 33.9% smokers who have a weak
economic level, when they got sick, they will definitely put more financial burden on their family and will put the smoker deeper into poverty.

That direct burden has not yet compared with the other social problem which caused by tobacco. The scientific proof shows smoking has caused a vicious poverty cycle in Indonesia. It shows in average a household with a smoker spends 11.5% from the total household income, while the expenditure of fish, meat, eggs, and milk is just only 11%. A smoker in an impoverished family would spend 22% out of their weekly income for cigarettes. Several research has proved that smoking has affected health and education in low to middle class family, for instance malnutrition case of infants, school dropout because the lack of money, and so forth.

Conclusion
Tobacco advertising, either being exposed in a big media promotion in the Tolitoli town center, or exposed in shops on every village’s corner, has been responsible for the high rates of smoking in Tolitoli district and causing the health expenditure burden increased for the local government through Jamkesda program. It also caused the burden to the central government from jamkesmas program and be a burden to every individual for all the out of pocket expenditure as well. While the tobacco advertising tax revenue contributes a little and does not have a significant impact in the development in Tolitoli.

Limitation
This research uses the data of medical record book to note all the patients with smoking related diseases. The using of this recap book is meant to simplify the way we trace all the abundant numbers of patients for the past 2 years. We limited the searching to only recap book because of the resources limitation. This causes there might some missing unwritten data in the medical record book. Albeit, with the total data, we succeed to collect and to picture whether the tobacco advertising did not give a big and significant contribution to the local government revenue of Tolitoli district. Moreover, the impact of the tobacco danger has made a clearer economic burden to the community and the Tolitoli local government.
This research does not look at the treatment cost of inpatient unit in RSUD Tolitoli, even though the unit has served the Jamkesda patient as well. This happens because of the incomplete medical record in the inpatient unit. Thus, it can affect the validity of the collected data. Besides, the indirect cost such as transportation and family living cost were not counted in this research. Considering the transportation cost in Tolitoli is 30-40% more expensive than in Jakarta, for example the distance between the farthest sub district with the RSUD can cost you RP 50,000 per person for the transportation in 2013 by Public Transportation.

**Recommendation**

From the findings we got through the research, there are at least 2 main points that we want to highlight, first, the tobacco advertising tax revenue only contributed 0.014% out of all the local government revenue in both 2012 and 2013 years. Second, the government expenditure for the treatment of patients suffered from smoking related disease during 2012 and 2013 was always bigger (2.1 and 1.3 times higher) out of all the total tobacco tax revenue. Both points show that the tobacco tax revenue had bigger negative impact than the benefits, therefore we suggest to ban the tobacco advertising and any kind of tobacco promotion, CSR fund and sponsorship in Tolitoli district by stopping the new permit printing and to not extend the published tobacco advertising. Than, the empty space of the previous tobacco advertising can be filled by the other product to replace the decreased revenue because of the tobacco advertising ban.

Tolitoli government has to do the efforts to decrease the number of smoking prevalence in Tolitoli district by capitalizing the Profit-sharing tobacco tax (DBHCT) fund for health promotion program, the authorizing of No Smoking Area, and the local rules strengthening.

The tobacco advertising ban on all of the media can be monitored and the local government regulation is one of the effective strategy just like the one recommended by WHO to ban all the tobacco promotion to reduce the number of smokers in a country.
Acknowledgement

Thanks to all those who have helped this study. Especially to those of The Johns Hopkins School of Public Health, Muhammadiyah Tobacco Control Center (MTCC) Muhammadiyah University Yogakarta to trust us to get the Seed Grant Research 2014. Then the Center for Indonesia's Strategic Development Initiatives (CISDI) for initiation at program Pencerah Nusantara, head section of department of revenue, the department of health, Director of regional general hospital Tolitoli and Head BPJS/PT.ASKES Tolitoli on assistance provided data on this research.

References

Abstract
Background: tobacco smoking prevalence among children in Indonesia has reached alarming level. Almost all of existing data showed major increment of smoking prevalence among children in all age groups. Children are also vulnerable to passive smoking in which they are exposed to cigarette smoke both at public places and home. Actually, Indonesian constitution are guaranteed safekeeping the children from any threats to life, growth, and development. Therefore, the government is responsible for protecting children from tobacco addiction and exposure to second hand smoke. This paper is going to delineate legal guarantee and certainty of child protection aspect within smoke free area (sfa) policies in provincial and city level.
Methods: this study is normative legal (juridical normative) research. A total of 113 smoke free area policies from all over Indonesia were analyzed by legislation and conceptual approach.
Results: data revealed that 57 of sfa policies had strong legal guarantee because of in local regulation format, and also accordance with the law no. 36 year 2009 on health. 112 policies which shaped as local regulation, governor/mayor regulation, and governor/mayor decree were recognized in the legal system. Another one policies in governor/mayor circulation format that might not provide legal guarantee for child protection. In general, the local sfa policies were widely different between region that could be reflected from variation of smoke free area definition, scope, sanction, and person in charge for implementation. Among 113 sfa policies, 99.11% include health facilities in sfa coverage, 98.23% for education facilities, and 95.5% of childcare facilities. Moreover, 98% of policies clearly regulated person in charge for implementation, 62.83% provided both criminal and administrative sanction.
Conclusion: in summary, most of smoke free area policies in local level were able to provide legal guarantee for child protection. Presistent all support from all stake holder are urgently needed so those policies are not only strong in paper but also well implemented.

Keywords: local regulation, child's rights, rule of law, cigarette addiction

INTRODUCTION

Children are a gift and trust from God Almighty, which by itself are born with dignity and worth as human beings. Children are also the generation who are
the potential successor to the ideals of national struggle which guarantees the continued existence of the nation and the State in the future.\footnote{Untuk Undang Undang Republik Indonesia No. 36 Tahun 2009 tentang Kesehatan Pasal 113 ayat (2)}

Rights of the Child to be able to grow and develop is the constitutional right of the child as stipulated in the 1945 Constitution Article 28B paragraph (2). So that the State and the government are responsible to create and provide the widest possible opportunity for children to grow and develop optimally.

One of the threats to the survival and development of the child is the danger of addictive substance in cigarettes that the social life has considered as normal and ordinary. So that the smoker can smoke anywhere, even around children and places where children often visit such as public transport, schools, playgrounds and other public areas.

Currently, the problem of smoking in children has reached the level which is very alarming. 70% of smokers start smoking in adolescence before reaching the age of 19 years (Susenas 2004). In detail Susenas and Riskesdas in less than 10 years of ten gives an overview of trends novice adolescent smokers aged 10-14 rose nearly \textbf{2X that in 2001} the prevalence of smokers aged 10-14 years as much as 9.5% increase to 17.5% in 2010.

In addition to being passive smokers, the number-children who are exposed to cigarette smoke both in public and in homes is also increasing. According Global Youth tobacco Survey 2006, 81% of adolescents aged 13-15 years exposed to smoke in public places and 64% in the home.

whereas smoking is addictive\footnote{WHO Report on The Global Tobacco Epidemic, “M-Power Package”, 2008, hal 15} that contains 7,000 chemicals, 70 of which are carcinogenic (Surgeon General, USA.2010) and smoking is a major cause of death for 7 of the 8 causes of death in the world.\footnote{Undang Undang Republik Indonesia No. 36 Tahun 2009 tentang Kesehatan Pasal 113 ayat (2)}

Law of the Republic of Indonesia No. 36 Year 2009 on Health Article 113 paragraph (2) explicitly states that the tobacco product solid, liquid and gas is addictive. Even the decision of the Constitutional Court in the case of 19/PUU-VIII/2010, part of the Court’s opinion (3:15:10) state:

“even if the phrase ”addictive substance” in Article 113 of Act eliminated, Thus it will not change the fact that tobacco does in fact contain addictive substances.”
So it cannot be denied, and it is certain that the cigarettes as tobacco processed products are addictive.

In addition, Act 39 of 2007 on the Amendment of Act No. 11 of 1995 on Excise in Article 2 paragraph (1) states that the goods are subject to excise with the nature or characteristics: a) consumption should be controlled; b) circulation need to be monitored; c) use a negative impact on society or the environment and d) its use need to be charging fees for fairness and balance state”.

Therefore, pursuant to Law 39 of 2007, although cigarette is one of the legal tobacco products, cigarettes cannot be considered as normal consumer goods for distribution and consumption that can be equated with other consumer products because it is subject to excise duty.

In fact Law No. 23 of 2002 on Protection of Children Article 59 and Article 67 clearly states that children who are victims of addictive substances are categorized as being in need of special protection, the State and the government shall be responsible by providing special protection through the efforts of surveillance, prevention, treatment and rehabilitation of children who are victims of addiction. This provision, assures the protection of children from addictive substances of cigarettes.

In an effort to exercise control over the use of cigarette addictive substances and as part of efforts to protect children, many provincial and local government districts of the city has made a smoke-free area policy.

But the problem is, whether the policy of smoke-free area that was made by the local government with all sorts of social and political problems of the region can provide and guarantee legal certainty for the protection of children from the dangers of smoking.

**METODOLOGY**

1. **Approach**

This research is a form of normative juridical (legis Positivists), i.e. testing and reviewing data related to the issue under consideration and compare it with the legal norms that govern them. Normative legal research is also called legal research literature is: "Legal Research conducted by examining the literature or sheer secondary data".
The data obtained will be analyzed using qualitative data analysis method where all the data will be analyzed according to the researcher's perspective. So that the form of this research is an analytical perspective that gives advice or a solution to setting Smoking Area in an effort to protect children from cigarettes and addictive substances.

2. Variables
2. Legal Certainty Level: Setting Smoke Free Area in the region Smoke Free Area policy

3. Operational Definition
1. The children is, each person under 18 (eighteen) years, including babies in the womb;\textsuperscript{30}
2. Protection of children from addictive substances is all activities and efforts to protect children from the of exposure to addictive substances and to ensure and protect the rights of children to live, grow and develop optimally;
3. Addictive substances are substances that are contained in cigarettes that can cause addiction or dependency that endangers health;\textsuperscript{31}
4. Cigarettes are tobacco products with or without additives, which are intended to be burned and smoked, and/or inhaled the smoke, including but not limited to cigarettes, white cigarette (filters), cigars which smoke contains nicotine and tar;\textsuperscript{32}

\textsuperscript{30}Indonesia. Undang - Undang Republik Indonesia Nomor 23 Tahun 2002 tentang Perlindungan Anak, Pasal 1 angka (1).
\textsuperscript{31}Baca Republik Indonesia, Peraturan Pemerintah Republik Indonesia Nomor 109 Tahun 2012 Tentang Pengamanan Bahan Yang Mengandung Zat Adiktif Berupa Produk TembakauBagi Kesehatan, Pasal 1 Angka (1).
\textsuperscript{32}Baca Republik Indonesia, Peraturan Pemerintah Republik Indonesia Nomor 109 Tahun 2012 Tentang Pengamanan Bahan Yang Mengandung Zat Adiktif Berupa Produk TembakauBagi Kesehatan, Pasal 1 Angka (3).
5. Smoke Free Area is a room or area that is declared for no smoking activities, activities of producing, selling, and/or promoting cigarettes,33
6. Rule of Law is the status hierarchy of Laws Invitation Smoking Area policies in provincial and district/city;
7. Level of assurance Law is setting non-smoking area in article by article on regional policy without cigarettes.

4. Data Collection Techniques

In a normative legal research, the main source of data derived from secondary data, data obtained from the literature or literature. Secondary data is legal materials obtained by collecting an inventory of legal materials that have a relationship with the object of research that includes:

a. Primary that is Regulation Legislation
b. Secondary materials sourced from theory, research and scientific opinion, literature books relating to the research topic.
c. Tertiary are dictionaries related to the topic of study such as Indonesian Dictionary and Dictionary of Law.

5. Data Analysis Techniques

The data obtained will be analyzed using qualitative data analysis method where all the data that has been obtained will be systematically compiled and analyzed from the perspective of researchers and then pulled towards a conclusion using deductive way of thinking. So that the form of this research is an analytical perspective.

RESULT AND ANALYSIS

I. Smoke Free Area In Safeguarding Children from the addictive substances of Cigarettes

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The prevalence of current child smokers continues to increase and the number of children who become passive smokers also increases.

Law of the Republic of Indonesia No. 36 Year 2009 on Health Article 113 paragraph (2) explicitly states that the tobacco products solid, liquid and gas is addictive. Even the decision of the Constitutional Court in the case of 19/PUU-VIII/2010, part of the Court's opinion (3:15:10) state:

“even if the phrase "addictive substance" in Article 113 of Act eliminated, thus it will not change the fact that tobacco does in fact contain addictive substances.

Thus, it cannot be denied, and it is certain that the cigarettes as processed tobacco products which are addictive, when consumed by living organisms can cause biological/chemical reactions and effects that leads to dependence or addiction that are difficult to break and causes immense exhaustion and pain when quit upon.34

Based on the above, it can be called that cigarette is a product that threatens the rights of children to live, grow and thrive. So that the child should be protected from exposure to cigarettes (children who become smokers) and exposure to second hand smoke.

Rights of the Child to be able to grow and develop are constitutional rights of the child as stipulated in Constitution 1945, Article 28B paragraph (2) which states that:

“Every child has the right to live, grow and develop, and is entitled to protection from violence and discrimination”

So that the State and the Government is obliged and responsible to provide protection and compliant in efforts by creating and providing the widest possible opportunity for children to live, grow and develop optimally.

Law No. 23 of 2002 on Child Protection in Article 59 Jo Article 67 clearly states that children who are victims of addictive substances are categorized as being in need of special protection, the State and the government shall be responsible provide special protection through the efforts of surveillance, prevention, treatment and rehabilitation to children who are victims of addiction.

One of the government's efforts to carry out protection and prevention of children from exposure to cigarette smoke and exposure to second hand smoke has given birth to Smoke Free Area (KTR) policy as stipulated in Law No. 23 of 1992 on Health which was later changed into Law No. 36 of 2009 on Health.

Changes in Health Law from the Law No. 23 of 1992 on Health into Law No. 36 of 2009 have an impact on changes in the technical regulations, in which at first, the Smoke Free Policy is technically governed by the Indonesian Government Regulation No. 19 of 2003 on Securing Cigarettes from Health (PP 19/2003) turned into a Government Regulation No. 109 of 2012 on Securing Substances Containing Addictive Materials of Tobacco Products for Health (Regulation 109/2012).

But the setting of Smoke Free Regulation did not change significantly. Both the PP in the PP 19/2003 and 109/2012. Smoke Free Area remains set into a room or area that is otherwise prohibited from smoking activities, manufactures and cigarette sale, advertising or promotion of tobacco and local governments shall establish Smoke Free Areas on: health care facilities; Educational Facilities; Playgrounds; Places of Worship; Public transportation; Workplace; and public place.

Changes in the legal basis Smoking Area is also an impact on the development of norms regarding the intent and purpose of setting Smoking Area. In PP 109/2012 Article 49 stated that:

“In respect of securing material containing addictive substances such as tobacco products from health, the Government and the Local Government is responsible to realize Smoke Free Areas”

Based on the principle of lex posteriori derogat legi priori as reflected in the provisions of Regulation 109/2012 cover Article 64 which states that at the time of Regulation 109/2012 applies the PP 19/2003 revoked and declared invalid.

Thus, the technical arrangements that the legal basis for the implementation of non-smoking area that is currently in effect is PP 109/2012 whose purpose is to protect the health of individuals, families (including children), the public and the environment from the dangers of smoking.
II. Security level Child Protection Law In 113 Smoke Free Area Policy

At the level of formation of legislation known as the theory of law degree (Stufentheory) proposed by Hans Kelsen. In the theory of Hans Kelsen argued that legal norms were tiered and layered in a hierarchy (arrangements) in the sense of a higher applicable norm, sourced and based on the norms of another one higher, and so on until one norms that cannot be traced further and hypothetical and fictional, are Basic norms (Grundnorm).

Indonesia as a state of law in the system of laws embraced the theory of legal level, known as the hierarchy Regulation Legislation. This can be seen in the Law No. 11 Year 2012 on the Establishment Regulation Legislation (Law 11/12 on PPP), which states that Regulation Legislation hierarchy consists of:

a. Constitution of the Republic of Indonesia Year 1945;
b. Statutes People's Consultative Assembly;
c. Law/Government Regulation in Lieu of Act;
d. Government Regulations;
e. Presidential Decree;
f. Provincial Regulation; the and
g. Regency/City Regulation.

The legal force of legislation is in accordance with the hierarchy or level of the laws and the regulations.35

In addition to Laws and Regulations as mentioned above, there are also rules that can be recognized as part of the Legislation, as to which is regulated in Law No. 11 Year 2012 on the Establishment Regulation Legislation Article 8:

1. Type of legislation other than those referred to in Article 7 paragraph (1) includes the regulations set by the People's Consultative Assembly, House of Representatives, Regional Representatives Council, the Supreme Court, Constitutional Court, Supreme Audit Board, the Judicial Commission, Bank Indonesia, Minister, body, agency, or commission level formed by Law or Government at the behest of the Act, the Provincial House of Representatives, Governor, House of Representatives District/Town, Regent/Mayor, Village Head or equivalent.

35Undang Undang Republik Indonesia Nomor 11 Tahun 2012 tentang Pembentukan Peraturan Perundang-undangan, Pasal 7
2. Legislation referred to in paragraph (1) shall be acknowledged and have binding legal force throughout ordered by Legislation higher or established pursuant to the authority.

In terms of regional regulations are recognized in the hierarchy Regulation Legislation based on Law No. 11 of 2012 on the Establishment of the Laws and Regulation Act and Provincial District/City Regulations.

While the Governor Regulation and Regent/Mayor Regulation can be recognized and have binding legal force throughout ordered by Legislation higher or established pursuant to the authority. What is meant by "discretion" is a specific implementation of government affairs in accordance with the provisions of Laws and Regulations.36

Therefore, it can be called down if the Governor Regulation and Regulation Regent/Mayor issued no orders on the basis of legislation that is higher or not based on authority, it's regulations are not recognized in the hierarchy of legislation and does not have binding legal force.

So that if a rule of law does not have binding force, the legal system cannot provide legal guarantees to the impact of the destination rule.

Based on data from 113 (one hundred and thirteen) Free Smoking Area policies that have been sorted by the hierarchy, it can be seen that:

<table>
<thead>
<tr>
<th>No</th>
<th>Hierarchy Policy</th>
<th>Province</th>
<th>Regency/City</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regional Regulation</td>
<td>8</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>Governor Regulation</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Regulation Regent/Mayor</td>
<td></td>
<td>45</td>
</tr>
<tr>
<td>4</td>
<td>Decision Letter</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>5</td>
<td>Circulations</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Total of the Policy</td>
<td>16</td>
<td>97</td>
</tr>
</tbody>
</table>

From these data it can be seen that not all of the 113 (one hundred and thirteen) policy Smoke Free Area Regulations studied are shaped from both provincial and district/city. If presented of 113 (one hundred and thirteen) policy Free Smoking Area, 49.5% in the form of local regulation, 47% in the form of

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36 Republik Indonesia, Undang Undang Republik Indonesia Nomor 11 Tahun 2012 tentang Pembentukan Peraturan Perundang-undangan, Penjelasan Pasal 8 Ayat (2)
Governor Rule or Regulation Regent/Mayor, 2.6% in the form of decree Regent/Mayor, and 0.9% shaped decree Regent/Mayor.

Though the Indonesian Government Regulation No. 109 of 2012 on Securing Materials Containing addictive substances Tobacco Products from Health (PP109/2012) of Article 52 expressly states that the Local Government shall establish Smoke Free Area in the Territory by the Regional Regulation.

So it can be called that policy Smoking Area 57 (8 Provincial Policy + 49 Regency/City Policy) is not in accordance with Regulation 109/2012 which ordered that Smoke Free Area policy in the form of local regulation.

But the Law of the Republic of Indonesia Number 23 Year 2014 About Local Government, Regional Head (Governor or Regent/Mayor) in carrying out its duties authorized to determine Regional Head Rule (Rule or Regulation Governor Regent/Mayor) and Decision of the Regional Head (Decision of the Governor or Regent Decision/Mayor).37

So based on this rule, 112 (one hundred and twelve) Smoke Free Area policy that are being studied can be recognized in the Legislation system and have binding force and can provide legal guarantees to the impact of the purpose of these rules are to protect children from addictive substances of cigarettes.

And there is only one (1) policy that cannot be acknowledged in the Legislation and the system does not have binding legal force due to Regent/Mayor Circulations and therefore cannot provide legal guarantees to the impact of the purpose of these rules that are to protect children from addictive substance of cigarette.

Since the Circulation letter as the official script contains notices, explanations and/or instructions on how to carry out certain things that are considered important and urgent. Given the contents of Circulation letter only a notification, then the charge is not the material itself is legal in the norms of a regulation legislation.38

37 Republik Indonesia, Undang Undang Republik Indonesia Nomor 23 Tahun 2014 Tentang Pemerintahan Daerah, Pasal 65

38 Fitri, Kedudukan Surat Edaran Ditinjau dari Sudut Pandang Tata Hukum Indonesia, http://www.kopertis12.or.id/2012/02/04/kedudukan-surat-edaran-ditinjau-dari-sudut-pandang-tata-hukum-indonesia.html#sthash.gGdMCnRK.dpuf; Diakses pada Tanggal 4 Desember 2014
But if the terms of the policy-making mechanism of the policy shaped Smoking Area Regional Regulation has a stronger legal guarantees and fixed. This is because the mechanism of preparation and discussion involving the Local Regulation of the Regional Representatives Council (DPRD), so changes must also involve the Parliament as well. In this case the Regional Head cannot make decisions alone.

Unlike the Governor Rule or Regent/Mayor Regulation, Decision Letter and Circulation letter, wherein the preparation is only by political will or "desire" of the Regional Head only, changes are not enough with the “political will” or "desire" of the head of the region without having to involve other parties.

This condition becomes vulnerable in the event of change of the Regent. If the newly elected Regent does not agree with the policy of the previous Regent, the Regent is authorized by law to replace the policy with ease.

**Level of Legal Certainty of Child Protection In 113 Smoke Free Area Policy**

Law written especially for the rule of law should reflect the three (3) things: justice, expediency and legal certainty. These three things are also interrelated, because the justice and expediency law depends heavily on the rule of law itself.

Certainty is a characteristic that cannot be separated from the law. Law without the certainty value will lose meaning because it can no longer be used as a code of conduct for everyone. Certainty itself is referred to as one of the goals of the law.

In theory the legal system Lawrence M. Friedman mentions the success or failure of a system of law enforcement law (Legislation) depends on three elements namely:

a. Substance Law are norms (rules, decision) the results of legal products.

b. Legal structure created by the legal system may be to provide services and law enforcement.

c. Legal culture are an idea, behavior, desires, opinions and values relating to the law (positive/negative).

The word system in simple terms can be interpreted as an arrangement, the unity of the parts are interdependent. According to R. Subekti, system is an orderly
arrangement or records, a whole composed of parts related to one another are arranged according to a plan or pattern resulting from an idea to a certain goal.

Thus, normative legal certainty can be measured on the substance of the law contained in the law if the product clearly and logically. Obviously in the sense not to cause doubts (multi-interpretation) and logical in the sense that it becomes a system of norms with other norms that do not clash or conflict with other norms.

For that, in assessing the child protection legal certainty of addictive substances in the 113 Smoke Free Area Policy studied can be seen from the substance of the law contained in the development policy.

In the perspective of the needs of child protection, legal substance that became the norm in the Smoke Free Area policy system that has to be seen is setting in places where children gather such as the Health Care Facilities, Educational and Children’s Playground and the arrangement of the parties responsible for the implementation policy and regulatory sanctions to ensure legal implementation of Smoke Free Area policies.

Of the 113 surveyed Smoke Free Area policies contained 99.11% Smoke Free Area policy governing the Health Facilities, 98.23% at the place of learning and 95.5% set KTR the children's playground.

In addition, 98% of the studied Smoke Free Area policies governing party/institution responsible for policy implementation of Smoke Free Area and 62.83% regulate both criminal and administrative sanctions for violations of Smoke Free Area policies.

Thus, based on the above analysis, it can be seen, although still very diverse in terms of substance Smoke Free Area Policy settings, but in general Smoke Free Area policy both at provincial and district level/cities can be considered to provide legal certainty to the protection of children from addictive substances of cigarettes.

CONCLUSION

Based on the theoretical study, data collection through processing and analysis of data, conclusions can ultimately be built as a result of normative juridical research on Level Assurance and Security Legal Protection of Children from
addictive substances of Cigarettes in 113 Smoke Free Area policy in Indonesia such as:

1. One of the government's efforts to make the protection of children from smoking and prevention of addictive substances that children are not exposed to smoking and exposure to secondhand smoke is to enact Smoke Free Area policies. It can be seen from goal setting security Implementation of the use of materials containing addictive substances such as tobacco products to health set out in Regulation 109/2012 (based on the principle of lex posteriori derogat legi priori) which in general is to protect the health of individuals, families, communities, productive age population, children, adolescents, and pregnant women and the environment from the hazards of materials that contain carcinogens and addictive substances in tobacco products that can cause illness, death and reduce the quality of life.

2. The level of legal guarantees Smoke Free Area Policy for the protection of children from cigarettes and addictive substances is determined by the form of its Policy, because the shape of the policy will determine the level of legal force of a regulation. Of the 113 Smoke Free Area Policy both at provincial and district level/City studied, 112 policies have binding legal assurance level because it has binding legal force, and only 1 (one) policies that can be considered not have binding legal force because the form circulation letter of Regency/City. Since the circulation letter is the official script contains notices, explanations and/or guidance and is not a legal norm as the norm of a regulatory legislation Invitation.

3. Legal Certainty Level Smoke Free Area Policy for the protection of children from cigarettes addictive substances determined is based on law contained in the policy. Based on the analysis of all four of these, although still very diverse in the context of the substance of the settings, but in general policy Smoking Area both at provincial and district level/cities can be considered to provide legal certainty to the protection of children from addictive substances of cigarettes.
Thus, based on the analysis and conclusions in this study and in accordance with the existing legal developments both the Child Protection law of addictive substances and legal developments Cigarette Smoking Area, and as part of the results of research that Smoke Free Area policy can provide and guarantee legal certainty in efforts to protect children from addictive substances, this study recommends:

1. The Smoke Free Area policy should be formed as Regional Smoke Free Area Regulation (Government) both at the Provincial or District/City;
2. Smoke Free Area policy both at provincial and district/city should substantially be in accordance with Regulation 109/2012.
ANALYSING CIGARETTE CONTROL POLICY INITIATION THROUGH SURVEY ON PUBLIC OPINION
CASE STUDY IN MALANG AND BATU CITIES

Hevi Kurnia Hardini

Abstract
Background: the current existing policy on tobacco control in the province of east java is the governor's official letter (surat edaran gubernur jawa timur nomor 440/1333/031/2005) which calls for the implementation of smoke free areas. Therefore, it does not have the legal imperative to be obeyed by the community at large and to be implemented by the lower levels of the government such as cities and regencies in east java as malang and batu.

Methods: this research used both quantitative and qualitative data collection methods including a survey questionnaire, observations, in-depth interviews and documentation review to explore the depth of the community's understanding regarding the benefits of tobacco control policy. The survey was conducted among smokers (heavy, moderate and non smokers) from represented villages (400 people) in the two cities. While for the qualitative data collection, in-depth interviews were conducted with several representatives of the local governments.

Results: in malang, although the public survey indicated positive results, the issue of tobacco control policies has not been prioritized in the local government regulation. The respondents were closely divided in their opinions. When asked about the need for raising the price of cigarette as a health protection measure (52% mentioned need, 48% said do not need), On the need for running a campaign for a more stringent local tobacco control policy (55 % need, 45% do not need) and the need for raising the tax to reduce the number of cigarette industries (56% need, 44% do not need). Compared to this, batu city which has stepped forward in terms of tobacco control policy by issuing mayor's regulation of batu city (number 11 year 2011) which lead to the establishment of the smoke free area in the centrally located batu city park and the directive also states this area be free of street vendors including those selling tobacco products. Interestingly, the public survey conducted in batu shows a positive result in all indicators with a few exceptions. When asked about raising the price of cigarette to protect health (57% need, 43% do not need), running a campaign towards a more stringent tobacco control policy (57 % need, 43% do not need) and raising the tax for reducing the number of cigarette industries (58% need, 42% do not need).

In regard to tobacco control issues, this research aimed to map out several value conflicts during the initiation process of policy by applying bozeman's public-value grid which identified the intersection between public value and market efficiency. This analysis was important because the debate was about health and economic values. Thacher and rein's model of managing value conflict were then applied to
determine the strategies implemented by the government of Malang and Batu in managing value conflict during the initiation of tobacco control policy.

Conclusions: regardless of its initial economic motive that Batu City which is an attractive tourism site which emphasizes on comfort, the issuance of mayor’s regulation has proven that Batu government is at least concerned about tobacco control policy. Nevertheless, there is no binding policy in the regional regulations regarding tobacco control and smoke free areas in either city in spite of the side-effects on health which are ultimately more expensive than taxing the industries. This is of major concern and would need to be addressed by concerned regional authorities for the health and well being of the citizens of Malang and Batu as well as others in East Java.

Keywords: tobacco, value conflict and public policy

I. INTRODUCTION

Tobacco control policy is a controversial issue in Indonesia, especially with regard to cigarettes. On one hand, the cigarette industry is an economically important sector which contributed to the national revenue approximately Rp100.7 trillion in 2013, which is equivalent to 9.4% from the total contribution of the national revenue from tax sector (the Finance Note of the National Budget of Indonesia 2013). On the other hand, there are the numbers of non-communicable diseases such as cancer, high blood pressure, heart problems and diabetes which cause Indonesia to lose the human resources due to the negative effects of cigarette. Moreover, it has been reported that the affordability of buying cigarettes is increasing in Indonesia, since the rise in individual incomes. Besides it also has been worsened by the low taxation on cigarette which is merely 46% tax on the retail price of cigarettes compared to that of Thailand which is 70%, Singapore 69%, Brunei 67%, and the Philippines 53% (The Jakarta Post, 11/06/2013).

The above mentioned contradictory facts show that every policy has value conflicts which are promoted and defended by different stakeholders. In the case of cigarette control policy, the health and economic values contradict each other. For example, when the Health Ministry of Indonesia proposed a Bill to restrict clove cigarettes thereby reducing the consumption level of eugenol, this was strongly protested by the local cigarette manufacturers and tobacco growers associations, who provide and

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39 There was a significant increase in cigarette contribution to the national tax from Rp 36 trillion in 2006 to Rp 55 trillion in 2009. Sourced from (Faizal, The Jakarta Post, 2011)
produce almost 93 percent of local clove cigarettes. This is reasonable since Indonesian smokers prefer smoking clove cigarettes to white cigarettes\textsuperscript{40} (Faizal, The Jakarta Post, 2011).

In East Java Province, the implementation of cigarette control policy is merely imposed on an official letter of Governor (\textit{the Surat Edaran Gubernur Jawa Timur Nomor} 440/1333/031/2005) which instruct to the implementation of Non-Smoking Area. Unfortunately, this official letter does not have legal imperative to be obeyed by the people and to be implemented by the lower level of governments such as cities and regencies in East Java. There are only Surabaya city and Tulungagung regency from out of 9 cities and 29 regencies in this province that have local regulations for the implementation of non-smoking areas. Surabaya imposes the implementation of non-smoking Areas in Local Act No. 5 Year 2008 and Tulungagung stipulates this policy in Local Act No. 9 Year 2010.

On the contrary, in the selected-studied cities such as Malang City did not put the cigarette control policies in a priority in 2010 (TV One, 10 April 2010), Therefore, it takes effect that there are no regulations regarding cigarette control and non-smoking zones currently. The reason is that some government stakeholders still believe that cigarette industries have considerable contributions in terms of tax compensation for health funding. In the case of Batu city, tobacco taxation contributed to the Batu Government as general for amount of Rp 325.525 million Rupiah in 2014 (The Batu Government Budget 2013). This is in line with the Malang Government which get the revenue for amount of Rp 12.5 billons from Tobacco Taxes in 2014 (The Revised Version of Malang Budget 2014). It means that the negative effects on smoking are not put in consideration by both Malang and Batu governments, even tough the side-effects on health are more expensive than the tobacco taxation itself. It is more worsened that the tobacco taxation is usually allocated in many other budget for financing general needs of government. Moreover the budget proposition for health caused by cigarette is often allocated in small percentage.

\textsuperscript{40} White cigarettes or regular cigarettes are non clove cigarettes which contain a small amount of eugenol. Usually these cigarettes are produced by foreign cigarette companies (Faizal, The Jakarta Post, 2011).
Even tough, the Government Regulation No 109 year 2012 regarding The Control of Tobacco Products as Addictive Substances for The Health (Peraturan Pemerintah tentang Pengamanan Bahan yang Mengandung Zat Adiktif Berupa Produk Tembakau Bagi Kesehatan) (article 6) clearly stipulates the responsibility of both the national and local governments to control the tobacco products and to provide well-information regarding the detrimental effects that caused by those products, It seems that the both governments (Malang and Batu) are not willing to have the cigarette control policies, and even these matters have not yet been arranged into local legislative program plans, so that they are still far from bills discussion into local parliaments.

Therefore, on this research the initiation of cigarette control policy will be supported by conducting public survey. It is purposed to promote the important issues regarding the cigarette control policy to the people. Then, the survey result will be addressed to the people. Furthermore, this result survey will also be informed to the Malang and Batu Governments as the interview topics and as an advice for the policies. The reason is that the cigarette control policy issues are often being neglected by both the government and people. Since there are many stakeholders do not receive the information regarding the positive value of imposing policy for reducing the negative impact of Cigarette Control Policies for health.

With regard to Cigarette Control Issues, this research aims to map out several value conflicts during the initiation process of policy by applying Bozeman’s Public-Value Grid, which looks at the intersection between public value and market efficiency. This analysis is important because the debate is about health and economic values. After that, Thacher and Rein’s model of managing value conflict will be applied to determine the Malang and Batu government’s strategies in managing value conflict during the initiation of cigarette control policy.

The main argument of this research is that the Malang and Batu do not put Cigarette issues into a priority policy agenda. Moreover, the governments have double standards in managing value conflict about controlling cigarettes for health protection. The reason is that, the governments obviously gain profit from cigarette industry, even though the negative effect from smoking is a health hazard for the population. In addition, the there are no existing cigarette control regulations except
the policies which are imposed by the national government. Hence, it is very hard in reducing the number of smokers in both selected cities. Moreover, this is also worsened by the relative low level of cigarette taxes, the laxity towards cigarette advertisements, health warnings and zone restrictions. This suggests that, the Indonesian government in general and Malang and Batu governments in more specific seem to be controlled or dictated to by market and foreign interests, because several major tobacco companies in Indonesia are owned by foreign companies.  

This provides for us an interesting case study as to how the governments are being challenged in managing those value conflicts during the initiation, enactment until implementation of the laws in order to pursue good policies. In fact, often the policies are postponed indefinitely because the government is not able to manage the value conflicts when dealing with big interests.

II. METHODOLOGY

A quantitative-qualitative research approach is used in order to gain comprehensive result of analysis about cigarette control policy initiation trough survey on public opinion in Malang and Batu Cities. There are two stages of research methods that will be applied as follows:

2.1 Quantitative Research Method

The first stage of this research will apply this method in order to conduct public survey regarding cigarette control policies in Malang and Batu Cities.

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41 Indonesian cigarette companies which are majority owned by foreign companies are estimated to reach one third of the national cigarette market in 2011, according to various sources compiled by the IFT Research Department.

- PT Hanjaya Mandala Sampoerna Tbk (HMSP), in which 97.95 percent of its shares are owned by Philip Morris International since 2005.
- PT Bentoel Internasional Investama Tbk (RMBA), in which 99.14 percent of its shares are controlled by British American Tobacco since 2009.
- PT Trisakti Purwosari Makmur, a local cigarette manufacturer, in which 60 percent of its shares are controlled by KT&F Corporation, the largest cigarette manufacturer in South Korea. (Indonesia Finance Today, 22 July 2011)
a. Population, Sample and Sampling Technique
General population in this study is the whole society of Malang and Batu. The targeted population is the community with the category of smokers and non-smokers in all regions of Malang and Batu.

b. Definition of Sample and Sample Size
Definition of the sample in this study is the public of Batu and Malang which are both men and women from the age of 18 years old and above, with the purpose of obtaining comprehensive information from a variety of gender (men and women) perspectives which are related to cigarette control policy, as defined by the following categories: (1) non-smokers, (2) light-smokers, (3) moderate smokers, (4) heavy smokers. Hence, the sample size was determined by using Slovin Formula. The total number of population in Malang is 753,422 people, while the total number of population in Batu is 182,392 people (Buku Induk Kode Data Wilayah 2013). Thus in order to get the number of sample size, that will be used in this survey is calculated by the following formula:
\[ n = \frac{N}{1+N \cdot e^2} \]
\[ n = \text{Sample Size} \]
\[ N = \text{Total Population Number of Malang (753,422) + Total Population Number of Batu (182,392) = 935,814 people} \]
\[ e = \text{Margin of Error (0,05)} \]
\[ n = \frac{935814}{1 + 935814 \times 0,05^2} \]
\[ n = 399,8291 \approx 400 \text{ (Total Sample of Malang and Batu)} \]

c. Sampling Formulation and Technique
The sample selection techniques is applied by stratified random sampling. This technique is set to randomly select respondents based on residence zones which are determined according to the stratification levels of government.

d. Variables
There are two main variables of this research, those are the public values and economic values.
e. Data Collection Techniques and Instruments
The survey is conducted in this research which is for public in Malang and Batu by using a structured questionnaire of research instrument, in order to collect data which are generated in the Guttman scale. The questionnaire contained 11 questions with the highest number of respondents 1 (one) and the lowest number 0 (zero).

f. Data Analysis Techniques
This study will be analyzed by using quantitative statistical descriptive method. Then the frequency table will be used to analyze the research variables.

2.2 Qualitative Research Method
Qualitative descriptive method is used to analyze the initiation process of cigarette control policy by using Bozeman & Thacher-Rein theoretical framework in managing value conflict. They are economic values and public values in Malang and Batu.

a. Population, Sample and Sampling Techniques
The population in this study is the local government of Malang and Batu, the sample of this study is that government agencies which are associated with the public policy process regarding controlling cigarette for health. The samples were determined by using purposive sampling technique.

b. Variables
There are two main variables in this study, they are public values and economic values related to cigarette control policies.

c. Data Collection Techniques and Instruments
The data will be collected by using observation, in-depth interview and study literature

d. Data Analysis Techniques, the qualitative analysis is used in this research. There are three main analytical steps will be applied as follows: (1) Reducing Data (2) Displaying Data (3) Drawing and Verifying conclusion
III. RESULT

3.1 Quantitative Data Analysis

3.1.1 Public Opinion Toward Cigarette Control Policy of Malang City

According to survey result, this can be concluded that most of the Malang residents already have awareness regarding the important of cigarette control policy and they are willing to be ruled by the government regarding the smoking regulation in order to minimize the negative health effect for the people. This survey result has opened up opportunity of the Malang government and the Malang House of Representative impose the local regulation regarding smoking control. This is reasonable since the Malang city does not have any the legal-normative local regulation regarding cigarette control policy. So that there is no reasonable concern will get resistance from the public.

Figure 1. Research Survey Report on Cigarette Control Policy Initiation of Malang

1. People knowledge about cigarette control policy
2. People awareness about negative health effect of cigarette
3. The need of government rise cigarette tax for health protection
4. The need of government impose the policy for designated smoking area
5. The need of government provide the policy for free smoking area
6. The need of government ban smoking in the public facilities and enclosed area
7. The need of government ban smoking around the kids and expecting mothers
8. The need of government run for the campaign toward cigarette control policy
9. The need of government ban smoking for children under 18 year old
10. The need of government ban smoking trade for children under 18 year old & expecting mother
11. The need of government rise excise tax tax for reducing the number of cigarette industry
3.1.2. Public Opinion Toward Cigarette Control Policy of Batu City

Conclusions from figure 2 states that the people of Batu has positive willing for the presence of cigarette control policy which is imposed by the government, this public response is supposed to be used as an opportunity for passing smoking control policies, especially the Batu government did not receive cigarette excise revenue sharing from the central government in large numbers. In addition, cigarette industry and tobacco products in the Batu city can be said that those sectors are not as major potential of industrial sectors.

Figure 2. Research Survey Report on Cigarette Control Policy Initiation of Batu

1. People knowledge about cigarette control policy
2. People awareness about negative health effect of cigarette
3. The need of government rise cigarette tax for health protection
4. The need of government impose the policy for designated smoking area
5. The need of government provide the policy for free smoking area
6. The need of government ban smoking in the public facilities and enclosed area
7. The need of government ban smoking around the kids and expecting mothers
8. The need of government run for the campaign toward cigarette control policy
9. The need of government ban smoking for children under 18 year old
10. The need of government ban smoking trade for children under 18 year old& expecting mother
11. The need of government rise excise tax for reducing the number of cigarette industry
3.2. Qualitative Data Analysis

3.2.1. The Dynamics of Value Conflict Management between Public and Economic Values during the Initiation process of Cigarette Control Policy In Malang

Malang received Tobacco Excise from the central government for amount of Rp 21,736,118,848 in 2014. In addition Malang also has the prospective potential for cigarette industries. This is indicated by the number of the Tobacco Industries that is being operated in Malang, there were 40 factories in the year 2013 and dropped to 30 factories in 2014 with contributed to the local government tax of Rp 12.5 billion in 2014.

In terms of the implementation of smoking control policies, the model of conflict management of those mentioned values in Malang, the government puts more emphasis on economic values over the public values. It is indicated from the absence of any written regulations related to cigarette control policy. While, the highest form of regulation at the local level that have legal imperative is in the form of local regulation which are set by the legislative and executive bodies at the local level.

The interesting reason of the slow progress of cigarette control policy initiation is the (DBHCHT) Allocations of Tobacco Excise from the central government cannot be absorbed fully by the regions, in this case is that at the Local Government Unit (SKPD). This is because the terms of using this budget are so details and tight. Therefore, there are many SKPDs refuse to accept this budget and eventually the DBHCHT budget is entered in the budget financing surplus funds (Silpa), since this budget cannot be utilized. The Legal Division Secretariat of Malang claimed that have received a DBHCHT fund and it is confirmed for amount of 50 million per year, but it cannot be absorbed due to the difficult activities that meet with the tight requirements and it must comply with the budget.

i. Public Values of Malang

a. Health Cost Expenses Caused by the Negative Effects on Smoking

All the SKPDs or the Local Government Units declared that the negative impacts of smoking for health is much more expensive than the central government revenue from the tax excise on tobacco products, as well as local government revenue in the form of DBHCHT funds or Allocations of Tobacco Excise from the Central
Government. Malang Health Department stated that this office received DBHCHT funding for amount of approximately Rp30 billion to be allocated to the development of Heart and Lung Hospital at Bumiayu, District of Kedungkandang. However, it was clarified that the funds were not well absorbed due to legal and technical constraints. In addition, it is also shown by the Local Government Budget of Malang, there are Rp 34.55 billion, - which is allocated to the Malang Health Office in 2014.

Interestingly, another fact which is found from the Local Government Budget in 2014 showed that the fund is likely to be transferred to some other programs that is managed by the Regional Development Planning Agency (BAPPEDA), the Agency for Family Planning and Community Empowerment (BKBPM), Department of Manpower and Transmigration (DISNAKERTRANS) and the Department of Industry and trade (DISPERINDAG) of Malang. There are 32 programs that is showed in the budget that uses the DBHCHT funds and it is distributed in 4 sectors in the city of Malang. As can be seen from the description of the program activities that use the DBHCHT funds, majority are training and community economic development for people who live around the tobacco industries (IHT). The Implementation of activities that use the DBHCHT funds cannot be defined as an anticipation of health expenses due to the negative impact of cigarettes.

b Designated Smoking Areas

The availability of Smoking Zones during this research, especially in places of public services (Government Offices/terminals and parks/outdoor areas) can be reported is still very small in number. According to the interview with Legal Affairs department stated that there is no smoking zones provided exclusively even in the mayor's office. Similarly, there are some other Local Government Units, for example, the Department of Transportation, Department of Education, Department of Health, Department of Industry, Department of Cleanliness & Landscaping, and the Malang Legislative Council Office are not equipped with smoking zones.

According to information from DISPERINDAG officers stated that in the year 2013 there were allocated DBHCHT funds for building several smoking zones. However, there are only 3 smoking zones out of the 8 planned smoking zones that were
built in the block office. This is due to the technical problem with a third party. After that the remaining funds are not well absorbed by the DISPERINDAG then it is transferred into the Rest of Direct Budget Financing (Silpa).

c Designated Free Smoking Area/Non Smoking Area

According to the Department of Health confirmed non-smoking zones also applies in all locations at hospitals and clinics in the city of Malang. Even for violators will be warned. Even though there are no written rules/regulations, but the Health Office believed that smoking should be banned completely because it is clearly detrimental to public health. In addition, the Department of Education states that the entire schools in Malang are non-smoking zones, even the serious warning for prohibiting smoking in the schools are applied at all levels of education. Interestingly, The financial support of this program is not taken from DBHCHT budget, but it comes from the DAU (General Sharing Income) and PAD (revenue of Local Government) budgets.

While the Department of Cleanliness and Landscaping (DKP) which is in charge of maintaining the public space and city parks has not have clear regulation yet in providing non smoking zones There are merely putting a suggestion for smoking outside the garden fence. Other description from the Malang Legal Department Officers said that non-smoking zone exists only in the mosque (prayer room). However, the implementation of providing the non-smoking zone was difficult to impose in the Department of Transportation and the Department of Industry and Trade of Malang.

d. Cigarette Campaign for Stop Smoking

Cigarette campaign for stop smoking should be begun and guided from the government as the main stakeholders in Malang. However, the absence of policy on cigarette control leads the cigarette campaign seem that less massive. In addition, there are some negative opinions about cigarette campaign for stop smoking, in which it would increase the number of unemployment due to layoffs of cigarette industries. On the contrary, the number of the DBHCHT funds is increasing from year to year, this is based on the confirmation of the legislator of DPRD Malang who indicates that the presence of the tobacco industry is still one of the economic pillars activity in Malang.
ii. Economic Values of Malang

a. Cigarette Tax Revenue

According to the Local Budget Revenue of Malang shows that the Cigarette Tax revenue in 2014 was Rp 12.5 billion. While the DBHCHT Funds reached Rp 21,736,118,848. This value is large enough to reflect the magnitude of the tobacco industries in Malang. According to data from the Malang DIPSERINDAG, the cigarette production during the year 2013 reached 2,148,321,825,264 sticks. The big size of cigarette production would increase the cigarette tax by 10% which would be allocated to the local governments whose cigarette production areas. This great economic value, according to the DISPERINDAG also affected the growth of the community's economy in Malang.

The reason for the DIPERINDAG to protect the Tobacco Industries (IHT) is that sustaining the cigarette production, then the revenue from the cigarette tax for local governments can be increased. It can be seen from the 2014 local budget the cigarette tax is one of the local income tax forms. As confirmed by the DISPERINDAG, the local cigarette tax is no longer be managed by the Local Governments, but is transferred by the Custom Office Authority under the Director General of Customs and Excise, Ministry of Finance. The current Delivery mechanism of the local cigarette tax is transferred to the local governments together with the Transfer of the DBHCHT funds.

b. Cigarette Industries for Jobs

Cigarette or tobacco industries have already been existed long ago together with the growth of society. This can be proved from the increasing number of labors in cigarette factories. It means that the demand for cigarettes is increasing. According to the data from the Department of Industry and Trade of Malang shows that the labors for hand-rolled cigarettes are 6,460 people, in 2013 that are employed in 40 the number of cigarette companies in Malang. The data does not include other types of employees in these companies. The magnitude of job opportunities for tobacco industries in Malang leads the local government give attention to forge the industries for getting bigger.

The economic interests related to the industry as presented by the speakers of parliament and the Disperindag of Malang not only related to the internal factors of the cigarette industry, but also related to tobacco farmers and
communities around the cigarette factory. Therefore, in order to maintain the existence of the cigarette industries in terms of economic welfare improvement, it is important to be done by the government. Cigarette industries are not only as the economic value of employments but also as an economical source for some people.

In the case of managing cigarette control policy in the scheme of Malang government, according Thacher, D and Rein, M 2004 this can be defined as implementing strategy of Firewalls, which is a form in which the government of Malang (executive) keeps managing both economic and health values in terms of selling cigarette at the same time through different departments at the Malang government. Although at the stage of implementation, the Malang government tends to act in the pro-economic value action than in the pro-health value action. This value conflict about this cigarette issues is being reflected as the protection towards the cigarette industry, in which by postponing the imposition of local law regulation regarding cigarette control policies. At the same time the value orientation of health hazards which is caused by smoking is being promoted by the Heath Department and Education Department. Therefore, this can be said that Malang government is promoting several different values conflicts in several departments in order to ensure that "every value has a great victory" (Thacher, D and Rein, M, 2004, p. 463-4).

3.2.2 The Dynamics of Value Conflict Management between Public and Economic Values during the Initiation process of Cigarette Control Policy in Batu

According to data from the local government budget of Batu it seems that the Batu government does not receive the DBHCHT funds and the local cigarette tax in 2013, but it is only identified as the budget line with the amount of Rp 225 800 000 that is allocated to the development of a leisure park including for development and maintenance of smoking areas in the park square in Batu.\textsuperscript{42} Then there is also a budget with the amount of Rp 99.728 million were allocated for a feasibility study of

\textsuperscript{42} The interview was conducted at the the Parks and Public Roads Public Works Department of Human Settlements and Spatial Planning on 29 October 2014
the Heart Hospital in 2013. In addition, the Batu city is not identified having good potential for the tobacco industries, but based on the confirmation interview with the Head of the Industry Department of Batu\textsuperscript{43}, stated that Batu city has about 3 cigarette industries which is categorized as hand-rolled Clove Cigarettes, these industries only operate in accordance with the order. The research is based on the field observations and information from the community, there is Siti Geneng tobacco industriy which is already closed. In Contract, according to data from the Department of Industry and Trade of East Java Province, Batu is identified having only one cigarette factory, but it does not mention the name of the cigarette company in 2014.

Therefore, in terms of the cigarette control policy implementation, the Batu City emphasizes management measures on the economic values over the public values. In this case, the Batu government can be said to be one step ahead compared to the Malang Government, since Batu has already had rules and regulations in the form of Mayor Regulation (Perwali) of Batu No. 17 of 2011 on the Batu city park square as smoking free area and hawkers free area. Although the Mayor Regulation of Batu does not have legal imperative, but the manifestation of that mentioned Mayor Regulation of Batu Government is a form of commitment in order to enhance the comfortness of public space. Moreover, it is confirmed that there is no planning yet for purposing cigarette control issues to the Local Drafted Bills to the Batu Parliament, because the government of Batu is still concerned to economic development of the tourism sectors\textsuperscript{44}.

The implementation of Perwali/Mayor Regulation No. 17 of 2011, the Legal Department said that law enforcement is at the Municipal Police Units (SATPOL-PP), they control visitors who smoke in the non-smoking zones. Due to the Perwali only focus on the Batu Park Square, therefore the SATPOL-PP cannot curb smoking control in other areas, since the Perwali does not focused on controlling tobacco use, but it focus more on the comfortness of the Batu Park Square as a popular destination for tourist.

\textsuperscript{43} The interview was conducted at the Departmen of Koperasi, Small-Middle Enterprises and Industry on 7 November 2014
\textsuperscript{44} The interview was conducted by phone with the Legal Department of Batu Government on 16 October 2014
i. Public Values of Batu

a. Health Cost Expenses Caused by the Negative Effects on Smoking

According to the Batu Health Department said that the Government obtained the DBHCHT funds in 2013 ranged from Rp 28.5 billion to Rp 30 billion a year. Ironically, the usage of these funds is not only allocated to the Department of Health, but also for other fields such as economics, social welfare, and other aspects. Due to the technical realization of the DBHCHT funds usage was very complicated, then this year the Department of Health does not absorb these funds.

However, according to the posture of the Local Government Budget in 2013, there was an allocation of funds for health with the amount of Rp 23,801,866,437, and there was a budget of the health sector revenue with the amount of Rp 520,737,000. Therefore, it can be said that the compensation DBHCHT funds to health in the context of Batu is difficult to answer, since the source of health financing comes from the general budget revenues. Then there is also the budget with the amount of Rp 99,728 million were allocated for a feasibility study the Heart Hospital in 2013 by the Regional Development Planning Board (BAPPEDA). Interestingly, there is also the Lung Hospital which belongs to the East Java Provincial Government.

b. Designated Smoking Area

The provision for smoking zone is part of the Government Regulation No. 109 of 2012 mandate. As it was confirmation by the Batu Health Department said that the Office had built the smoking areas in previous years. Those smoking areas are located at the Batu Terminal, the Terrace of Batu Mayor Office and several other places at government offices. However, this year the Department of Health has difficulty to add facilities and infrastructures, since the DBHCHT fund is not allowed for the construction of a special smoking area. Therefore, the construction of smoking areas as at the Batu Park Square was taken from Batu local funds. In addition, it was confirmed more about the contribution of the private sectors which is the cigarette industries to the development of the smoking areas, it is mentioned that there is no such contribution, because there is no cigarette factory in Batu.

However, the observation results indicate that the ineffective factors regarding the usage of smoking zone, due to the unstrategic location which is at the back of the terminal.
The confirmation from the Transportation Department regarding that unstrategic location of smoking zone, the department representative stated that that place is the only available space left. This suggests that the designation of smoking areas is still in the form of formality, and more over it was not well prepared, the government did not consider the effectiveness of the smoking zones will be used by smokers.

c. Designated Free Smoking Area

According to field observation result at the government institutions of Batu, the all key informans answered that workspace cannot be free from cigarette smoke. The based reason is that the Batu government does not have local regulation related to the mentioned provisions. Therefore, there is merely limited appeal of Non-Smoking in each department. In fact, there are so many employees smoke indoors during working time, even though there other non-smokers shared in the same working space.

d. Cigarette Campaign for Stop Smoking

Although the anti-smoking campaign is expected by the Batu people, but the implementation of anti-smoking campaign is conducted by the Department of Health and the Department of Human Settlements, Public Works and Spatial. However, the campaigns that are conducted by both departments are not in the method of active campaigns.

The Non-Smoking Campaigns that are conducted by the Department of Health are always in the package with other health programs. So that the emphasis is more on medical health campaign and it is not specifically Anti-Cigarette Campaign. The same was done by the Department of Public Works and Human Settlement Spatial, the campaigns are more focused on the model of passive smoking bans namely, sticking pictures and determining the layout of smoking rooms and non-smoking rooms.

ii. Economic Values of Batu

a. Cigarette Tax Revenue

The economic value that is derived from the DBHCHT funds and the local cigarette taxes are small in Batu, since there is no large cigarette factory. According to
information from the Department of Koperasi, Small-Middle Enterprises and Industry, stated that there are 3 cigarette companies that hold the Identification Number of Entrepreneur for Excisable Goods (NPPBKC) in Batu. Although those cigarette companies are small, even the production merely are based on order. Therefore, it can be concluded that the economic value from the cigarette tax revenues and the DBHCHT funds are and very small.

- **Cigarette Industries for Jobs**

Industrial development in Batu is dominated by the agricultural industry, tourism, household domestic products and creative industries. In fact the labor absorption from the tobacco industry is not so significant because of the small numbers. Moreover, those companies are merely order based productions. Thus the economic value of the cigarette factory employments is minimal as well as Batu is not the center of the tobacco industries.

Meanwhile, in contrast to Malang, analyzing the case of cigarette control policy in Batu by applying Thacher, D and Rein, M, 2004, the Batu government is categorized implementing the second strategy of Casuistry. Although the Government is more focused on economic value, but the Batu city also continue to manage public value at the same time, which is associated with preventing the negative effects of healf from smoking. This is reflected from the imposition of the Mayor Regulation/Perwali No. 17 Year 2011 regarding the prohibition of smoking at City Park/Alun Alun Batu.

In this case the Batu government attempts to get out from the pros and cons dichotomy in the way of managing cigarette industry from both economy and health perspectives. This is because the sector of tobacco industry is not considered as the dominat income sector. So that the Batu government more focuses on resolving values conflicts are case by case. It is reasonable, since this has been reflected from the government's vision which would like to maintain the slogan of the Shining Batu in which put the priority on tourism, processed household goods, agricultural and creative industries. Therefore, the Mayor Regulation/Perwali No. 17 Year 2011 has been passed based on the convenience for tourists in the Batu city park/Alun-Alun. Hence, the government merely sets the cigarette control regulation only for the tourists in the city square. Moreover, the government does not insist to propose the cigarette control policy
bill to the Batu parliament which requires extra energy, since that is not easy getting political support from the legislators.

IV. CONCLUSION

The public opinion survey was conducted in the Malang city and Batu city that quantitatively demonstrate valid and reliable choices of the public for both smokers and non-smokers. In this study public prefers to public values (namely, health and protection for children and expecting mothers) as a choice to support cigarette control policies. The public awareness has changed in line with people's understanding for the health and environment free from cigarette smoke.

The management of the cigarette control in the schemes of Malang Government is categorized as the Firewalls strategy, where the government Malang (executive) continue to manage the economic value (cigarette sales) and the public value (health) at the same time through the different departments. This can be seen from the implementation of government programs that are more pros on the economic values than pros on the public values. The value conflicts that are associated with the cigarette is reflected as the commitment for protecting of cigarette industries by postponing the determination of Local Regulation on Cigarette Control Policy. At the same time the public value orientation which is health hazards that is caused by smoking is being promoted by the Department of Health and Department of Education. It cannot be denied that Malang government is promoting several different values conflict in several departments in order to ensure that "every value has a great victory".

In contrast to Malang, the Batu city government, in the case of managing cigarette control policy is implementing strategy for managing value conflict as Casuistry. Although it is more focused on economic value, but the City of Batu also continues to manage public values which are associated to the negative effects of smoking for health. This is reflected in the form of imposing the Mayor Regulation/Perwali No. 17 of 2011 on the prohibition of smoking in Batu Park Square. The Batu Government tries to get out of the dichotomy of the pros and cons on managing the tobacco industry of economic perspective and health on public perspective. Therefore, since the tobacco industries are not as dominant income sector, so that the Batu government focuses more on the value of conflict resolution in case by case. This can be seen from the government's vision of Batu that willing to
maintain the slogan of the Shining Batu along with all these potency namely tourism industry, processed household products, agricultural and creative industries. It can be concluded that the Mayor Regulation/Perwali No. 17 of 2011 is based on improving the convenience of tourists in Batu Park Square. This can be said that the Batu government merely set the cigarette control policy only at the certain location which is at the Batu Park Square. Moreover, the government does not insist to propose the cigarette control bill to the Batu parliament, since it requires an extra energy that is also not easy for gathering political support from legislators.

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Monitoring Evaluation for Implementation Regional Regulation No 5 Year 2008 Above Smoke-Free Area (SFA) and Smoke-Restricted Area (SRA) to Public Place in Surabaya

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Abstract
Background: Regional regulations regarding Smoke Free Areas (SFA) and Smoke Restricted Areas (SRA) have been implemented in Surabaya since 2009. SFA is an area where individuals who is prohibited to conduct activities related smoking like as: producing or making cigarettes; sell cigarettes; organized cigarette advertising; promoting cigarettes and cigarette use; and SRA is an area where individuals are permitted to smoke in limited areas. The management must provide a designated smoking room and put “No smoking” signage in other areas. After 5 years, it seems that implementation of the policy is still weak. Previous study showed 75.4 % facilities in SFA and SRA have yet to install no-smoking signage in accordance with Regional Regulation No. 5 Surabaya year 2008 (Santi, 2011). The results of the survey of Smoking-Restricted Areas (SRA) in 2012 showed that people are still found to be smoking inside the building, Ashtray, cigarettes and cigarette sellers were found in the smoking area (DKK, 2013). The aim of the study was to monitor and evaluate implementation of the Regional Regulation No. 5 of 2008 Surabaya on SRAand SFA in public and work places (malls, parks, hotel, restaurant and transport). Methods: This was a cross-sectional study and used both quantitative and qualitative approaches. A survey of 200 work and public places that were categorized as Smoking Restricted Areas and Smoking Free Areas under the Regulation were conducted. Cluster Random Sampling was used based on different areas of Surabaya (East, West, Center, North, and South). Data collection was done by an observation check list and semi-structured interview with open-ended questionnaire was used with management authority and consumers at these public places. Results: The overall implementation of the Surabaya City Regional Regulation No. 5 of 2008 is still very weak due to many violations in almost all observed indicators. Most violations were despite the presence of signage that indicated SFA and SRA at public places, there were smoking rooms provided that is not in accordance with the Regional Regulation No. 5 of 2008. The others observed indicator was Founded smoker, the smell cigarette smoke, Astrays and lighter.
Conclusions: To increase the effectiveness of the implementation, the Regulation needs to be disseminated regularly and continuously among local government officials and managers of public facilities and efforts made to build public awareness and more stringent enforcement practices.

Keywords: SFA, SRA, Implementation, Monitoring, Evaluation.

INTRODUCTION

Smoking population in the world is increasing every year. Approximately 20% of the population smoked in the world is 800 million men and 200 million women. The current women smokers often found with the prevalence of smoking in women < 10% in more than half the countries in the world. Approximately 600 thousand passive smokers died and 75% of them are women and children.¹

In 2011, cigarette use has resulted in the death of nearly 6 million people with its 80% of deaths occur in countries with low and middle incomes.¹ Smoking is a major risk of heart attack, stroke, lung disease, and cancer. Around the world, smoking causes about 80% of lung cancers in men and about 50% in women. Smoking increases the risk of tuberculosis and 40 million estimated smokers with tuberculosis died in the year 2010 to 2050. While in 2030 8 million people will die from tobacco use.¹

Tobacco consumption in Indonesia increased at 65 million smokers, or 28% of the population or 65 million smokers to consume as much as 225 billion cigarettes a year in which the number of Indonesian smokers continue to increase with growth of 0.9% per year in 2000-2008, up 18.6% on years 2003 - 2008.² In Indonesia in the last ten years increased smoking prevalence is three out of ten people are smokers. Health Research Data of 2010 smokers aged over 15 years was 26.6%. The prevalence of smoking in males - males increased from 65.6% (in 2007) to 65.9% (in 2010). In 2007, the number of smokers increased by five times compared to 2001, especially in women.³

Cigarette smoke is a mixture of gases and other particles. Cigarette smoke contains 4000 chemicals are lethal, including the paint thinners (acetone), toilet cleaning agents (ammonia), rat poison (cyanide), insecticides (DDT) and fumes (carbon monoxide). At least 50 types of chemicals can cause cancer and other serious illnesses. Cigarette smoke also contains fine particles called particulate matter.
(PM2.5). This fine particle inhalation will go directly to the lungs. Although there are other sources of PM2.5, a major source of inhalation of these particles coming from the lighted cigarette smoke in the room.

The World Health Organization (WHO) in 2009 has introduced six actions that have been proven to reduce tobacco use and the impact of his death is called the MPOWER. Component of MPOWER as follows: (1) Monitoring tobacco use and prevention are used for the benefit of policy-making. (2) Protection against cigarette smoke by creating a No Smoking Area. (3) Optimize support to quit smoking by providing consulting assistance or medication. (4) Warning the dangers of tobacco to include health warnings in the form of an image (pictorial health warnings) on cigarette packs. (5) Elimination of advertising, promotion and sponsorship of tobacco in the form of prohibitions related to the sale of tobacco products. (6) Raise tobacco tax.⁴

Only 5% of people in the world are protected by laws regarding smoking area. More than half the countries in the world allow smoking in government offices, workplaces, and in the other building. Article 8 on the FCTC (Framework Convention on Tobacco Control) has been set on the provision of non-smoking areas as a safeguard against exposure to cigarette smoke. Provision of the smoking area within the building workplace and public places and public transport.

Therefore, as an effort to protect public health from tobacco smoke Surabaya City Government since 2008 has had regulations regarding smoking area through Regulation No. 5 of 2008 about Smoke-Free Area (SFA) And Smoke-Restricted Area (SRA). The Smoke-Free Area (SFA) is the area referred to in regulation is a means of child's play, learning tools, health facilities, places of worship and public transport. While limited smoking area means that the activity of smoking must be done in the space provided and is a limited area of the workplace and smoking are public places just as malls, restaurants, hotels, sports venues, terminals, stations. Other study at France show Free smoking Regulation significantly influence decreasing smoker at public place.⁵

Having passed in 2008, the law was implemented in 2009. After 5 years of implementation of regulations regarding SFA and SRA showed that implementation is still weak. This can be seen in a previous study that showed 75.4% facilities in the
area SFA and SRA have not put up no-smoking signs in accordance with Local Rule No. 5 Surabaya Peraturan Walikota Year 2008 and number 25 in 2009. The results of the survey in the region Smoking- Restricted Area (SRA) in 2012 showed that people still found smoking inside the building. they found an ashtray. cigarettes and putung still selling cigarette in the smoking area. While the report related to the monitoring and evaluation SFA and SRA in public places has not been obtained. One of the efforts is to conduct monitoring and evaluation of public facilities for the enforcement of these regulations.

Based on these descriptions, The aims of this study is How the monitoring and evaluation of the implementation of the Regional Regulation No. 5 of 2008 Surabaya About SFA and SRA in public facilities (malls, parks, hotel, restaurant) at 2014. The specified objective consist of (1) To get description of the local regulation implementation at work and public places (2) To identify obstacles and supporting factors in regarding to implement the local regulation (3) To get input for implementation the local regulation optimally.

**Methods**

The method is used cross – sectional study with quantitative approach. The population in this study was categorized as a Public Facilities at Smoke- Free area (SFA) and Smoke- Restricted Area (SRA). Samples were taken from the population as a cluster random sampling by dividing into 5 subdistrict Surabaya region, based on area at Surabaya (East, West, Center, North, and South) In the selected districts of each specified number of means, both for facilities classified as Smoke- Free area (SFA) and smoke- Restricted Area (SRA). The sample size of the proposition are 196 facilities surveyed, figures have been based on population and the number of existing facilities in Surabaya. For the calculation of each district and means, here is the calculation:

Under Regulation No. 5 Surabaya in 2008, which means including KTR is 5 (five) means, namely: health facilities, educational facilities, children's play facilities, places of worship and public transport. As for the means that there are two means of including SRA, namely: public facilities and offices. However, in this study the means
in question is SFA: children's play facilities. As for the SFA are: hotels, shopping malls, restaurants, parks.8,9

Sampling for this study used Cluster Random Sampling based on area at Surabaya (East, West, Center, North, and South)

Our study use a confidence level of 95 percent (giving a margin error of 0.05). Sample size is 196 facilities.10

There are variable consist of the percentage of people smoking outside the smoking room. the percentage of room smelled cigarette smoke. the percentage ashtray outside smoking room. the percentage of cigarette butts found outside the smoking room and smoking room the Percentage of smoking room that is not accordance with the regulations for quantitative approach. And supporting and obstacles factors the implementation of the Regional Regulation No. 5 Surabaya in 2008 for qualitative approach.

Data Collection Techniques will be used include: Observation to obtain a description of the implementation of the Regional Regulation No. 5 of 2008 Surabaya (list attached check list of questions). The resulting indicators include: The percentage of people smoking outside the smoking room. the percentage of room smelled cigarette smoke. the percentage ashtray outside smoking room. the percentage of cigarette butts found outside the smoking room and smoking room the Percentage of smoking room that is not accordance with the regulations. (b) Interview to the leadership/management and customer of a public facility or office to identify the factors supporting and obstacles the implementation of the Regional Regulation No. 5 Surabaya in 2008. as well as obtaining feedback to optimize the implementation of the regulation.

The instrument used in this study is the observation guide (check list) that has standard to evaluate policy implementation SFA containing questions about the implementation of the regulation means including SFA and SRA for quantitative analysis and open questions used questionnaire for the semi-structured interview guide.

Data Analysis Techniques consist of descriptive analysis for variable have observer include of the percentage of people smoking outside the smoking room. the percentage of room smelled cigarette smoke, the percentage ashtray outside smoking
room. The percentage of cigarette butts found outside the smoking room and smoking room the Percentage of smoking room that is not accordance with the regulations. Qualitative analysis will be done to identify supporting and obstacles factors from leadership/management and customer of a public facility or office about implementation that regulations.

The investigator team must explain the study to the subject verbally, providing information (purpose, procedures, risks, benefits, alternatives to participation, etc.), and must give opportunity the subject to ask questions. The subject will have “time" to read information above and have time to think about whether or not to follow this study. If there any question from subject, the investigator team must answer it.

The investigator team gives a written informed consent to be used as a guide for the verbal explanation of the study. The informed consent process involves giving a subject any information about the study, providing opportunity for the subject to consider all options, responding to the subject's questions, ensuring that the subject has comprehended this information, obtaining the subject's voluntary agreement to participate and, continuing to provide information as the subject or situation requires. The subject can ask question directly to investigator team. If the subject has clear about the study and willing to participate, the subject should sign and date the consent form. The investigator team also has to sign and date the consent form.

**Result and Discussion**

Data collection was conducted through observation study on 200 public facilities in five regions in Surabaya include western, eastern, central, northern and southern. Distribution public facilities contained in Table 5.1. Data were collected by observation and interviews to the management of public facilities. Observations performed twice: at the weekend and weekday.
<table>
<thead>
<tr>
<th>Type of Institution</th>
<th>Surabaya's Area</th>
<th>Category</th>
<th>Sum</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>South</td>
<td>North</td>
<td>East</td>
</tr>
<tr>
<td>Hotel</td>
<td>Count</td>
<td>14</td>
<td>15</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>7.0%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Restaurant</td>
<td>Count</td>
<td>23</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>11.5%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Mall</td>
<td>Count</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>3.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Park</td>
<td>Count</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>1.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Transport</td>
<td>Count</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>0.5%</td>
<td>0.5%</td>
</tr>
<tr>
<td>Market</td>
<td>Count</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>2.5%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Total</td>
<td>Count</td>
<td>51</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>% of Total</td>
<td>25.5%</td>
<td>15.0%</td>
</tr>
</tbody>
</table>

Most public facilities located in center of Surabaya because the number of public facilities are available too much. While based on the type of Institution mostly at the hotel.

1. Overview Implementation Regional Regulation Surabaya No. 5 of 2008 above Smoke Free Area and Smoke- Restricted Area.

1.1 According Sign Banning Smoking in All Doors

Installation of signs banning smoking is one of the duties to be performed by the management of public facilities based on Regional Regulation Surabaya No. 5 of 2008 above Smoke Free Area and Smoke- Restricted Area. Based on observations obtained only one mall about (0.5 %) who had put up no smoking signs in accordance regulations at all the entrances.
Table 2. Public Place Get Signing Accordance Regulation for all the`entrances.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hotel</th>
<th>Resto</th>
<th>Mall</th>
<th>Park</th>
<th>Transport</th>
<th>Market</th>
<th>Frequency n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get Signing Accordance Regulation</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Get Signing Not Accordance Regulation</td>
<td>4</td>
<td>7</td>
<td>6</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>17</td>
<td>8.5</td>
</tr>
<tr>
<td>Not Get Signing for all door entry</td>
<td>62</td>
<td>46</td>
<td>12</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>120</td>
<td>60</td>
</tr>
<tr>
<td>Outdoor</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>15</td>
<td>5</td>
<td>42</td>
<td>62</td>
</tr>
<tr>
<td>Total</td>
<td>66</td>
<td>53</td>
<td>19</td>
<td>15</td>
<td>5</td>
<td>42</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Table 3. Percentage Public Place Get Signing Accordance Regulation at Surabaya based on type of facilities

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hotel</th>
<th>Resto</th>
<th>Mall</th>
<th>Taman</th>
<th>Transport</th>
<th>Pasar</th>
<th>Frequency n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Get Signing Accordance Regulation</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Get Signing Not Accordance Regulation</td>
<td>34</td>
<td>31</td>
<td>13</td>
<td>1</td>
<td>4</td>
<td>1</td>
<td>84</td>
<td>42</td>
</tr>
<tr>
<td>Not Get Signing</td>
<td>32</td>
<td>22</td>
<td>4</td>
<td>14</td>
<td>1</td>
<td>41</td>
<td>114</td>
<td>57</td>
</tr>
<tr>
<td>Sum</td>
<td>66</td>
<td>53</td>
<td>19</td>
<td>15</td>
<td>5</td>
<td>42</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

This study showed that most of the facilities (57 %) have not put up warning signs and only 1 % of public facilities has been sign ban smoking accordance with Regional Regulation Surabaya No. 5 of 2008. Installation of sign ban smoking and provide smooking room have been explained at Mayor outlined Regulations (Perwali) number 25 of 2009. It is said that the signing no smoking and smoking rooms are a minimum of 20 x 30 cm with certain characteristics. Most public facilities are not yet the installation are market’s. We saw from 42 markets only one who put up warning signs. This shows the implementation of the regulation about Smoke Free Area (SFA) and Smoke Restricted Area (SRA) is still very weak.

1.2. According Found Smoking people in The Public Facilities

In this research, the observation of people who smoke in public facilities showed that the facilities surveyed still found people smoking in public facilities as much as 57.5 %. Most public facilities (59 of 62 places) outdoor founded people smoking on weekdays. Similarly occur on weekend also contained 56 % found
people who smoke. Based on the obtained statistical significant difference between Indoor and Outdoor category. People who are in outdoor more disposed smoking compared to those located in the Indoor.

Table 4. Percentage public place where founded Smoking people at Surabaya

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category of Place</th>
<th>Sum</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Founded Smoking People weekday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Indoor</td>
<td>56</td>
<td>28</td>
</tr>
<tr>
<td>No</td>
<td>Outdoor</td>
<td>82</td>
<td>41</td>
</tr>
<tr>
<td>Founded Smoking People weekend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Indoor</td>
<td>56</td>
<td>28</td>
</tr>
<tr>
<td>No</td>
<td>Outdoor</td>
<td>82</td>
<td>41</td>
</tr>
</tbody>
</table>

Among Public facilities that founded smoking people are most numerous in public facilities into the category of outdoor like as parks, transport and market. While the least was found was in the restaurant.

1.3 Based on founded smoking room at public place

In observations about the provision of smoking room in accordance with local regulations and public feedback only 1% are already providing smoking room appropriate regulations. While public facilities have not provide smoking room was 72.5%. In this study, all public facilities that were observed included Smoke Restricted Area (SRA). One of the obligations that must be performed by a manager is to provide smoking room in accordance regulation.

Table 5. the Percentage of founded smoking room at public place at Surabaya.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Hotel</th>
<th>Resto</th>
<th>Mall</th>
<th>Park</th>
<th>Transport</th>
<th>Market</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Sum</td>
</tr>
<tr>
<td>Public place founded smoking room</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outside Building Accordace Regulation</td>
<td>-</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>1</td>
<td>-</td>
<td>2</td>
</tr>
<tr>
<td>Outside Building Not Accordace Regulation</td>
<td>6</td>
<td>5</td>
<td>2</td>
<td>-</td>
<td>4</td>
<td>-</td>
<td>17</td>
</tr>
<tr>
<td>Inside Building</td>
<td>7</td>
<td>14</td>
<td>10</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>31</td>
</tr>
<tr>
<td>Outside Building Not Accordace Regulation and Inside Building</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
<td>Do Not have smoking room</td>
<td>51</td>
<td>32</td>
<td>5</td>
<td>15</td>
<td>-</td>
<td>42</td>
<td>145</td>
</tr>
<tr>
<td>Sum</td>
<td>66</td>
<td>53</td>
<td>19</td>
<td>15</td>
<td>5</td>
<td>42</td>
<td>200</td>
</tr>
</tbody>
</table>
In this survey on the provision of smoking room in the public area, only two public facilities have already providing smoking room is a mall and one terminal. Many public facilities are not yet clearly know about the SFA and SRA regulations. It is apparent from the provision of limited space smoking is still not in accordance with the regulations that as much as 26.5%. Mistakes made for example a smoking room which is still inside the building and the lack of ventilation flow that public facility.

Although the provision of smoking room have been existing, but when it is not in accordance with the requirements as described in the regulations this remains a violation of Regional Regulation Surabaya No. 5 of 2008. Thus, the socialization of Regional Regulation Surabaya No. 5 of 2008 must still be done continuously. These activities can be carried out while monitoring by Monitoring team SFA and SRA which has been formed by the Health Office of Surabaya city.

1.4 According Found the smell Cigarette Smoke

In this study, the observation of the smell of cigarette smoke in public facilities showed that the facilities surveyed still got the smell of cigarette smoke in public facilities as much as 50.5%. Similarly occur on weekend also contained 50% found the smell of cigarette smoke in public facilities smoking. Based on the obtained statistical significant difference between Indoor and Outdoor category (p <0.05). Public Facilities where are in outdoor more disposed found the smell of cigarette smoke compared to those located in the Indoor.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Place Category</th>
<th>Sum</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indoor</td>
<td>Outdoor</td>
<td>N</td>
</tr>
<tr>
<td>Smelled cigarette smoke weekday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>53</td>
<td>48</td>
<td>101</td>
</tr>
<tr>
<td>No</td>
<td>85</td>
<td>14</td>
<td>99</td>
</tr>
<tr>
<td>Smelled cigarette smoke weekend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>54</td>
<td>46</td>
<td>100</td>
</tr>
<tr>
<td>No</td>
<td>84</td>
<td>16</td>
<td>100</td>
</tr>
</tbody>
</table>
Among public facilities have obtained the smell of cigarette smoke are most numerous in public facilities that transport and market. While the least was found was in the restaurant.

1.5 According Found Ashtray and Lighter In public facilities

In this study, the observation of found Ashtray/lighter in public facilities showed that the facilities surveyed still found people smoking in public facilities as much as 62.5%. Similarly happens on the weekend there is also a 62% found Ashtray/lighter in public facilities. Based on the obtained statistical significant difference between Indoor and Outdoor category (p <0.05). Public Facilities where are in outdoor more of found Ashtray/lighter compared to those located in the Indoor.

Table 7. The percentage obtained Ashtray/lighter in the public facilities in the city of Surabaya

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Frequency</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indoor</td>
<td>Outdoor</td>
<td>N</td>
</tr>
<tr>
<td>found Ashtray/lighter in public facilities weekday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>99</td>
<td>26</td>
<td>125</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>13</td>
<td>75</td>
</tr>
<tr>
<td>found Ashtray/lighter in public facilities weekend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>100</td>
<td>24</td>
<td>124</td>
</tr>
<tr>
<td>No</td>
<td>38</td>
<td>19</td>
<td>76</td>
</tr>
</tbody>
</table>

Among the facilities are found Ashtray/lighters are most numerous in public facilities, including hotels. In their opinion provide Ashtray/lighter is one form of the provision of facilities/or tool provided from management to consumers. While the least was found is in the park. Because the park is an outdoor venue, the users free to doing activities include smoking. So it does not provide a public facility management ashtray/lighter because users tend to bring their own match and discard immediately butts everyplace.

the existence of ashtrays and lighters in the area public facilities can be used as an indicator of the right comprehension of the purpose of Regional Regulation Surabaya No. 5 of 2008. It is mean that if the head of management understand about the
intent and purpose of the implementation of regulation about Smoke Free Area (SFA) and Smoke Restricted Area (SRA), these facilities should be no provide ashtrays and lighters. The existence of an ashtray or lighter is located outside the smoking room in nearly 62% of all public facilities. This indicates that the Implementation of Regional Regulation Surabaya No. 5 of 2008 about Smoke Free Area (SFA) and Smoke Restricted Area (SRA) has not been going on accordance with the regulation.

1.6 According Found Cigarette Butts in The Area Public Facilities
In this study, the observation of the presence of cigarette butts in public facilities was found in 72.5% in the weekday and 73.5% on weekends. Based on the obtained statistical significant difference between Indoor and Outdoor category. Public Facilities where are in outdoor more disposed found cigarette butts compared to those located in the Indoor. (p <0.05) Public facilities that found cigarette butts in public facilities are found in all public facilities into the category of outdoor like parks, transport and market. And also at the hotel also found cigarette butts. While the least was found was in the restaurant.

Table 8. The percentage presence of cigarette butts in the public facilities in the city of Surabaya

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Total</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indoor</td>
<td>Outdoor</td>
<td></td>
</tr>
<tr>
<td>Cigarette butts weekday</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Yes</td>
<td>83</td>
<td>41.5</td>
<td>62</td>
</tr>
<tr>
<td>No</td>
<td>55</td>
<td>27.5</td>
<td>0</td>
</tr>
<tr>
<td>Cigarette butts weekend</td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Yes</td>
<td>86</td>
<td>43</td>
<td>61</td>
</tr>
<tr>
<td>No</td>
<td>52</td>
<td>26</td>
<td>1</td>
</tr>
</tbody>
</table>

1.7 According Presence cooperation with the tobacco industry such as sponsorship, promotion and advertising of cigarettes
In this study, the observation of cooperation with the tobacco industry such as sponsorship, promotion and advertising of cigarettes obtained 32.5% on weekdays and 33.5% at the weekend.
Based on the obtained statistical significant difference between Indoor and Outdoor category. (p <0.05). Public Facilities where are in outdoor more disposed found the of cooperation with the tobacco industry such as sponsorship, promotion and advertising of cigarettes compared to those located in the Indoor.

**Table 9. The percentage cooperation with the tobacco industry such as sponsorship, promotion and advertising of cigarettes in the public facilities in the city of Surabaya**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Total</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indoor</td>
<td>Outdoor</td>
<td></td>
</tr>
<tr>
<td>cooperation with the tobacco industry weekday</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40</td>
<td>20</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>98</td>
<td>49</td>
<td>37</td>
</tr>
<tr>
<td>Cooperation with the tobacco industry Weekend</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>41</td>
<td>20.5</td>
<td>25</td>
</tr>
<tr>
<td>No</td>
<td>97</td>
<td>48.5</td>
<td>37</td>
</tr>
</tbody>
</table>

Among the facilities found dg Industrial Cooperation in public facilities are most numerous in public facilities, namely the market (52.4%). While the least was found was at the hotel.

**1.8 According Found Cigarette Sales in The Area Public Facilities**

In this study, observation of Cigarette Sales in Area Public Facilities obtained 52% on weekdays and 51% at the weekend. Based on the obtained statistical significant difference between Indoor and Outdoor category. (p <0.05) Public Facilities where are in outdoor more disposed found Cigarette Sales compared to those located in the Indoor.
Table 10. The percentage obtained Cigarette Sales in the public facilities in the city of Surabaya

<table>
<thead>
<tr>
<th>Variable</th>
<th>Category</th>
<th>Total</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Indoor</td>
<td>Outdoor</td>
<td></td>
</tr>
<tr>
<td>Cigarette Sales in area public facilities Weekday</td>
<td>59 29.5  45 22.5</td>
<td>104 52</td>
<td>0.000</td>
</tr>
<tr>
<td>Yes</td>
<td>79 39.5  17 8.5</td>
<td>96 48</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cigarette Sales in area public facilities Weekend</td>
<td>59 29.5  43 21.5</td>
<td>102 51</td>
<td>0.001</td>
</tr>
<tr>
<td>Yes</td>
<td>79 39.5  19 9.5</td>
<td>98 49</td>
<td></td>
</tr>
<tr>
<td>No</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

the facilities Cigarette Sales are most numerous in public facilities, namely transport, markets and malls. While the least was found was in the restaurant. Every indicator that our observation twice time, first observation for weekday and other for weekend. When comparing the variable showed P more than 0.05 which means that there is no difference in the weekday or weekend.

2. Supporting and Obstacles Factor for Implementation Regional Regulation Surabaya No. 5 of 2008 about Smoke Free Area (SFA) and Smoke Restricted Area (SRA)

Constraints by managers of public facilities for implementing regulations about SFA and SRA is mostly (64.5%) did not know about the regulation SFA in Surabaya which ban smoking in the area public facility. Facilities have done implement these regulations were still 52.5%. Although public facilities have been implementing regulations, but still a little (30%) already provides for sanctions include verbal warning. Only 12% of public facilities are already recorded every sanctions already given.

Constraints in the implementation of the regulations also caused because managers do not aware that if they do not implement the regulation of SFA and SRA cause managers public facilities get sanction from the local government. It is apparent from the results of interviews with managers public facilities shows just 24%.
3. Feedback for Optimization Implementation Regional Regulation Surabaya No. 5 of 2008 on Regions Without cigarettes and Limited Smoking Area

In this study, beside observations in public facilities also conducted structured interviews to the managers public facilities. Based on the results obtained 64.5% public facilities understand about the regulation SFA in surabaya., 24% do not know, while 11.5% refused to do interviews. Although some of them do not know, but 86% of managers and public support of the existence of this SFA regulations. Based on the results of interviews conducted by the manager of public facilities, The most opinion (25%) is the need for socialization by managers as an effort to implement this regulation. Besides the need for socialization or education provided by outside are also a lot of input is given as many as 21.5%. As many as 15% of managers public facilities expressed sanctions and rewards need to be done in order to optimize the implementation of regulations SFA and SRA. In addition, many public facilities managers provide input related regulations optimization efforts SFA and SRA example: the establishment of a monitoring team in public facilities, Signing No smoking, provide a smoking room, the existence of a direct warning, the factory closed, Rising poster or other media, Changing conditions can be applied SFA, Increasing the price of cigarettes, Establishment of rules simultaneously in all public facilities, Following the rules of government, Law enforcement and punishment should be clear from the government.
Table 11. Input that give management public facilities for implementation the local regulation optimally.

<table>
<thead>
<tr>
<th>Input that give management public facilities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socialization or education conducted by public facilities management</td>
<td>50</td>
</tr>
<tr>
<td>Give Punishment or Reward</td>
<td>30</td>
</tr>
<tr>
<td>Socialization or education from outsider</td>
<td>43</td>
</tr>
<tr>
<td>Establishment of a monitoring team at public facilities</td>
<td>7</td>
</tr>
<tr>
<td>Signing No smoking</td>
<td>12</td>
</tr>
<tr>
<td>There is a smoking area/special place</td>
<td>19</td>
</tr>
<tr>
<td>There are direct warning</td>
<td>4</td>
</tr>
<tr>
<td>The factory closed</td>
<td>3</td>
</tr>
<tr>
<td>Rising poster or other media</td>
<td>2</td>
</tr>
<tr>
<td>Changing conditions can be applied SFA</td>
<td>2</td>
</tr>
<tr>
<td>Increasing the price of cigarettes</td>
<td>1</td>
</tr>
<tr>
<td>Establishment of rules simultaneously in all public facilities</td>
<td>1</td>
</tr>
<tr>
<td>Following the rules of government</td>
<td>1</td>
</tr>
<tr>
<td>There is no solution that can be given</td>
<td>1</td>
</tr>
<tr>
<td>Law enforcement and punishment should be clear from the government</td>
<td>1</td>
</tr>
<tr>
<td>Rejected</td>
<td>23</td>
</tr>
<tr>
<td>Total</td>
<td>200</td>
</tr>
</tbody>
</table>

CONCLUSION

Based on research conducted in the city of Surabaya on the implementation of Regulation No. 5 of 2008 on SFA and SRA summarized as follows:

1. An overview of the implementation of the Regional Regulation of Surabaya No. 5 of 2008 is still very weak because there are many violation in almost all indicators observed.

2. The most violation is installation signing no smoking and providing smoking room that is not in accordance with the Regional Regulation No. 5 tahun 2008 of Surabaya City.

3. Constraints met by managers of public facilities in the implementing regulations SFA and SRA is the manager did not know about the regulation SFA and SRA in Surabaya which bans smoking in the building/the public facility.

4. The Most Suggestion for Optimization of implementation regulations are socialization given both the manager of a public facility or outside.
Recommendation

1. To improve the effectiveness of the implementation of Regulation No. 5 of 2008 about SFA and SRA, socialization of these regulations should be done regularly and continuously.

2. Installation of no-smoking signs in accordance Perwali no. 25 of 2009 and its implementation should be monitored by the Monitoring Team SFA and SRA at City level.

3. For the implementation of this Regulation SFA and SRA optimally, then sanctions for violations should be upheld both for smokers who violate the regulations and management public facilities.

References

THE EFFECT OF HOME CIGARETTE SMOKE EXPOSURE TO THE RESPIRATORY DISEASES AMONG UNDERFIVES IN DENPASAR

I Made Kerta Duana
Udayana University

Abstract
Background: Basic Health Survey in Denpasar in 2010 found smoking behavior at home was high (68 %). The prevalence of respiratory disease always listed on the top at Primary Health Care (Puskesmas) report in Denpasar. Hence, we aimed to determine the effect of cigarette smoke exposure to the prevalence of respiratory diseases among children under age fives in Denpasar.

Methods: The study is a case control study; cases were mothers who have under-fives suffering from respiratory disease and who received treatment at Puskesmas or community health clinics in Denpasar. While controls were mothers who have under-fives not suffering from respiratory disease and also treated during the same period as the cases at the clinics. Sample size was 140 and selected using cluster sampling. Data was collected using structured questionnaire and analyzed using statistical test Chi Square and logistic regression.

Results: For the case group, it was 60% male; 14.3% had uncompleted immunization history, and 60% suffered from respiratory disease 60% which is higher than in the control group. Exposure from secondhand smoke from the father or other family members were the independent factor of respiratory diseases among under-fives. The odds ratio (OR) of 1-hour exposure a day is 2.6 (95%CI: 1.1-6.4; p value = 0.033). The OR increased to 5.7 (95%CI: 1.2-25.3; p value 0.021) if the duration of exposure was 2 hours or more. Moreover, based on urine cotinine examination it was found that 4 of 140 of the participants tested positive. All the positive tests were found in case group and all of them were exposed to second hand smoke for a duration of ≥ 2 hours by either their father or another family member.

Conclusions: It is recommended relevant health care authorities undertake effort to increase health promotion activities on the harms of smoking including exposure to second hand smoke; integration of mother and child health components in smoking cessation resources. In addition, smoke free home initiative may be considered to prevent exposure to second hand smoke particularly among children.

Keywords: Cigarette Smoke, Under-fives, Respiratory Diseases

Background
Recently, communicable diseases remain the most health problem in Indonesia, which also determine the level of community health because of the high of morbidity and mortality rate. Upper respiratory tract infection (URTI) is always
the highest in term of the prevalence of disease in community. URTI among children often trigger more serious problem even death. Many risk factors become predictor of this disease such as lack of air quality, oral and nasal hygiene, immune status, and allergic to cigarette smoke exposure (MOH RI, 2010)

World Health Organization (WHO) estimated mortality due to upper respiratory tract infection in developing countries is very high (13 million children per year). In Indonesia respiratory diseases is ranks first cause of death infants and underfives group. Moreover, URTI also n the list of 10 top diseases at primary care centers and hospitals. Mortality survey conducted by Subdit ISPA in 2005 found URTI and pneumonia as the main cause of infant mortality in Indonesia (22.30 %). It is estimated that in developing countries, 30% of infant mortality because of Respiratory Diseases (RD). RD usually suffered repeatedly by children, estimated episode in Indonesia is three to six times per year and if not addressed, potential complications occurred then lead to other more serious diseases. (MOH RI, 2010). In addition, RD is one of the diseases with the huge number of treatment visits in various health providers with a range of 40% -60% of the total visits at primary health care (Puskesmas) and 15-30% at hospital.

Factors triggering respiratory disease among children grouped into environmental factors, individual factors of children and behavioral factors. Environmental factors such as the level of air pollution at home (dust, smoke, cold weather and the availability of ventilation). Individual factors including characteristics: gender, age, birth weight, nutritional status, and immunization status, whereas behavioral factors including personal hygiene behavior. Environmental factors particularly air pollution becomes major trigger. Air pollution consists of outdoors and indoors. The outdoor air pollution such as fumes, industrial/factory differ from indoor air pollution which is very specific and depends on the house such as insect repellent smoke, the smoke from cooking, and the most important is exposure to cigarette smoke indoor (Prabu, 2009).

Exposure to cigarette smoke is one of the behaviors that are close related to respiratory disease, due to direct smoking behavior and smoke produced can directly irritate the respiratory mucosa. The risk are not only among smokers but also to non-smokers around them which known as second hand smokers. Groups at risk which
become passive smokers such as workers, public places visitors, and family members with smokers in it. Moreover, children are more vulnerable to the exposure due to lack of awareness and knowledge regarding the harm of smoking and cigarette smoke.

The Basic Health Research (Risksdas RI) in 2007 shows 69% of households have at least one person who smoked, and 85% of whom smoke in the house along with other family members. Other study shows that 94% of fathers smoking at home and 79% smoke near their children. The high risk of children becoming secondhand smoker contributes to the incidence of respiratory disease among children (WHO, 2007).

Children among smoker parents are more likely to suffer from respiratory diseases such as influenza, asthma, bronchitis, pneumonia and other respiratory diseases. Harmful substances in tobacco smoke irritate the respiratory mucous and trigger excessive reaction of the mucosa to produce mucus, which allow germs growing. The risk to become secondhand smoker and smoke exposure among children tends to occur at home, which is usually indoor and occurs continuously. This can lead to respiratory diseases among children that often recurrent then eventually can lead to more serious diseases. (Komnas PA, 2011).

Based on those conditions, various efforts have been implemented by the government, which one of it is the implementation of Smoke-free law for certain Area (KTR). This law aims to protect the public from the harm of cigarette smoke exposure. Protection given by making public places became KTR area, and prohibits people to smoke in seven areas that have been ruled such as education facilities; health services facilities, public transport, places of worship, children's playground, workplaces and other public places.

One of the provinces in Indonesia that concern regarding the harm of smoking is Bali province, which since 2011 has issued local smoke-free law (Perda KTR No. 10 Tahun 2011). This law becomes the first provincial smoke-free law in Indonesian. This law then followed by other districts and city in Bali and issued smoke-free law at district level. One of the districts/cities that seriously concern the harm of smoking behavior is Denpasar which currently has also local smoke-free law(Perda KTR No. 7 of 2013). This concerns triggered by the high number of
smokers in Denpasar based on data in Denpasar Health Office. Smoking behavior among adolescents in Denpasar is 34 %, which mostly male and started smoking since junior high school. Basically, the policy aims to dismiss the smoke exposure in public places, however the risk of exposure in the house that makes children and mothers become secondhand smoker has not received serious attention. Moreover, the data of PHBS in Denpasar in 2010 shows the behavior of smoke in the house in Denpasar at 68 %, and the prevalence of respiratory disease always listed on the top at Health Office report (Denpasar Health Office, 2011)

**Problem Statement**

Based on the background, the problem stated as "How does the effect of home cigarette smoke exposure to the respiratory disease among underfives in Denpasar"

**Research Objectives**

1. General Objective
   
   To find out the effect of home cigarette smoke exposure to the respiratory diseases among underfives in Denpasar.

2. Specific Objectives
   
   a. To find out the prevalence of respiratory disease among underfives in Denpasar.
   
   b. To determine the cigarette smoke exposure at home among underfives suffered respiratory disease in Denpasar.
   
   c. To determine the cigarette smoke exposure at home by examining cotinine levels in underfives’s urine that suffered respiratory disease in Denpasar.

**Research Benefits**

1. Theoretical
   
   This study could increase information and knowledge regarding health, especially health related cigarette smoke exposure at home and the prevalence of respiratory disease among underfives.

2. Practical
a) As an input to the government, especially the community regarding the effects of smoking behavior at home to the prevalence of respiratory disease among their underfives.

b) As important information to the family regarding the effects of smoking behavior at home to the prevalence of respiratory disease among their underfives.

c) As a source of information for the community regarding the harm of smoking.

d) As a basic policy to integrate program of MCH and nutrition with smoking cessation by increasing the usage of smoking cessation clinics, especially the smoker husband of the pregnant mother.

**Research Innovation**

Research regarding the impact of smoking behavior and cigarette smoke exposure to the prevalence of various diseases has been done quite a lot, as well as research related to the effects of cigarette smoke exposure to the prevalence of respiratory tract diseases. However, usually the studies only use data from interviews that seems subjective. This research tries to give clearer picture regarding the exposure to passive smoker through urinary cotinine test, that can be assured that the presence or absence of nicotine exposure from cigarette smoke among passive smokers who in this case underfives suffering respiratory disease.

The results of this study will also strengthen the awareness and knowledge regarding the harm of passive smoking, especially among children that can be used as the basis of policy by the government as well as procedures for the handling of respiratory diseases in primary health care especially viewing the risk factor of cigarette smoke exposure at home.

The respiratory disease among underfives can be affected by smoking behavior at home and illustrated with urinary cotinine. Several factors that confounders are characteristics (age, gender, nutritional status, immunization status and history of the disease); mother characteristics; and environmental conditions.
Variables and Definitions

1. Dependent Variable

Respiratory tract diseases are the diagnosis of respiratory diseases specified in the medical records of patients after examined by doctors at Puskesmas in Denpasar, which include respiratory infections, asthma, bronchitis, pneumonia, and Tonsil pharyngitis.

2. Independent Variables

a. Cigarette smoke exposure at home is a situation in which smoke particles spreading that occurred as a result of smoking behavior by husbands or family members with the presence of their underfives. Cigarette smoke exposure assessment used urinary cotinine test; positive result means that underfives exposed to cigarette smoke. While negative result means that underfives not exposed.

b. Environment is the home environment of underfives who informed subjectively by their mothers, which include situation of the house, source of air pollution, and population density.

c. Characteristics of the underfives include age, sex, nutritional status, immunization status and history of respiratory disease.

Methods

Research Design

This research is an observational analytic study using case control design. Research subjects divided into 2 groups: Cases group that are underfives suffering respiratory diseases; control group that are underfives not suffering respiratory diseases. Both groups then traced retrospectively the history of cigarette smoke exposure at home.

Locations and Research Schedule

This study was conducted over five months started from the preparation stage in June 2014 through the reporting phase in October 2014 in Denpasar and located at Puskesmas in all over Denpasar that are West Denpasar, East Denpasar, South Denpasar, and North Denpasar.
Population and Sample

The population is the underfives who treated at Puskesmas in Denpasar during the research period. The population is divided into: population of cases and population of controls. The population of the cases is underfives suffering from respiratory diseases and affordable population cases are underfives who visited Puskesmas in Denpasar from April to September 2014 and suffered from respiratory tract diseases. Population control is underfives without respiratory diseases and affordable population control is underfives who visited the Puskesmas in Denpasar in the same period with the cases but not suffering from respiratory diseases.

Sample and Sample Selection Method

The sample divided into two samples: sample for case group and sample for control group. Samples selected at all Puskesmas in Denpasar (11 Puskesmas). The sample of case group is part of the population of cases that selected using systematic random sampling from the list of cases recorded in the period of study. The sample of control group is part of control population selected using systematic random sampling from the control list recorded in the period of study (the same Puskesmas with cases group). Exclusion criteria were the mother who refused to be interviewed and the urine of underfives cannot be collected.

Sample Size

The number of samples is calculated using the formula of SK Lwanga and S.Lameshow (1997) to estimate the difference of two proportions with 2 sides hypothesis. Based on the calculation of the sample using the above formula obtained minimum sample size for one group are 70, so that the total number of minimum samples required are 140 underfives.

Instrument and Data Collection Method

Data were collected using structured questionnaire containing questions to measure the variables. However, especially for measuring smoke exposure variables used urinary cotinine examination by dipping a test pack into urine underfives that had previously collected.
Data Processing

Stages in processing the data:

1. Editing
   Re-check the completeness of the answers on each sheet of the questionnaire that completed by respondents.

2. Coding
   Coding for each answer to each question according to the coding instructions. Encoding is changing data in the form of letters into numbers. After the questionnaire data entry then given a code on each item in the column to processing of data easier. Code 1 for yes answer and 0 for no answer. Another question with a different code will be determined later.

3. Data Entry
   The process of entering data, after coding the data entered into the computer program Epidata Entry by researchers.

4. Cleaning Data
   Rechecking the data that has been entered into a computer program. Data reviewed to ensure that the data is clean of errors after entry.

Data Analysis

The data collected will be analyzed in three stages: in univariate, bivariate and multivariate analyzes.

1. Univariate analysis, aims to describe the characteristics of the subjects (underfives) by providing frequency distribution table.

2. Bivariate analysis is an analysis to assess the influence of one independent variable to the dependent variable. In this study aims to find out the effect of cigarette smoke exposure at home to respiratory diseases among underfives. The results of the bi variate analysis are shown in the table with a row percentage 2x2. The association determined using crude odds ratio (COR) and used the statistical test Chi -square with confident interval at the level of 95% (95% CI).

3. Multivariate analysis was conducted to determine the effect of each independent variable to the dependent variables by controlling the presence
of other independent variables. The statistical test used is logistic regression and the size of the association will be provided in adjusted odds ratio (AOR) and 95% CI accompanied by determining p value. To get the best model, the technique used is the enter method. This technique is entering all independent variables to be analyzed together into a model with p < 0.25 then identify the value of the AOR, 95% CI and p value.

RESULT

Overview Research Location

Study was conducted in Denpasar. Denpasar located at the position 08°35'31" until 08°44'49" south latitude and 115°00'23 " until 115°16'27" East Longitude. Denpasar is an area with a height of 500 meters above sea level. The width of Denpasar is 127.78 km² or 2.18% of the total area of Bali Province. Denpasar administratively divided into 4 (four) districts: West Denpasar, East Denpasar, South Denpasar, and North Denpasar consisting of 43 villages with 209 villages or hamlets. South Denpasar has the largest area around 49.99 km² and East Denpasar is the smallest district with an area of 22.31 km² (Denpasar Health Office, 2012).

Bali Statistic Office in 2011 stated that the population of Denpasar as many as 788,589 inhabitants with a load dependency ratio (the ratio between the number of people who are not productive to the number of productive age) amounted to 35.34%. This figure shows every 100 people who are still productive will bear 35 people who are no longer productive. While the sex ratio is 103%, means between 103 male populations there are 100 female populations. Denpasar population growth rate reached 4.28%. The population density is 5,410/km². While the life expectancy Denpasar in 2010 reached 73.01 years of age.

The number of underfives in Denpasar is estimated at 78,859 underfives. To protect the maternal and child health, Denpasar government implements many innovative programs such as Denpasar declared to be the city for children, underfives healthy competition and one of the important efforts is protection from tobacco smoke exposure, especially among the mother and children through Smoke-free law of Denpasar and smoke free home initiative. To support these programs, Denpasar have 11 primary health cares spreaded evenly according to the size and
number of residents in each district and completed with several government hospitals (1 Type A Hospital, 1 Type B Hospital, 2 Type C hospitals) and 5 private hospitals.

Subject Characteristics

Characteristics of the subjects consisted of the characteristics of under five’s mothers and underfives characteristics. Characteristics of the subjects described based on two research groups: control and case group. The characteristic of the mother such as the median age of mothers was 30 years in both groups with inter-quartile range is not so differ. Most mothers have education levels greater than or equal to senior high school, 68.6% among the control group and 74.3% among the case group. The proportion of mothers who do not work more than working mothers that is in the control group by 57.1% and 54.3% of case group. Based on parity, most mothers have 1 to 2 underfives, round 75.7% in the control group and 74.3% in the case group. There was no significant difference in the distribution of the subject based on the sub-district between cases and controls. Moreover, the characteristics of the mothers in the control group compared with the characteristics of the mother in the case group there was no significant difference or already comparable. This can be demonstrated by test results reflected comparability of the value of the variable p maternal characteristics that are all above 0.05 even above 0.25 so that none of the variables maternal characteristics potentially confounding.

Characteristics of underfives as the subject of this study also divided into two groups, the control and cases group. Underfives age measured in months and based on the analysis found that the median age of underfives in control group was 30 months with inter quartile range 18 - 45 months while in the cases group was 31 months with inter-quartile range 20-48 months. Based on sex, there is difference in the proportion, whereas in the control group around 48.6% of male, while in the case group around 60% male. Nevertheless, these differences were not statistically significant with p value of 0.175.

Distribution of underfives with low birth weights only a small fraction from whole subject. In the control group around 7.1% while in the cases group only 10%, although it is difference but it was not statistically significant. Immunization status
among the subject of this study is largely complete, 92.9% in the control group and 85.7% in the cases group. Additionally seen also characteristic of nutritional status using Z scores weight for age (W/A). Nutritional status divided into two groups: the good nutritional status if the Z score of W/A greater than or equal to -2 and malnutrition status when the Z score of W/A less than -2. Based on the results of analysis reveals only small part underfives with less nutritional status and distributed equally between the control and the case group of 11.4% respectively. Different results obtained by analyzing the history of the previously suffering respiratory tract diseases. In the control group around 20% while in the cases group around 60%. There are huge differences in the proportions of respiratory disease between the two groups and statistically significant with p <0.001.

Overall it can be seen that the characteristics of underfives between the groups are comparable except variable history of previous respiratory tract disease. This variable is potentially become confounder in identifying the effect of cigarette smoke exposure to the prevalence of respiratory tract disease among underfives, hence it is important to control in the multivariate analysis. In addition there are two variables that are potentially confounding because have p-value less than 0.25, which that are sex and immunization status. Both of these variables must be included in the multivariate analysis.

The Effect of Cigarette Smoke Exposure to the Prevalence of Respiratory Disease among Underfives

Bivariate Analysis

The effect of exposure assessed using the 12 questions that consists of 6 questions about cigarette smoke exposure from the mother and 6 questions about cigarette smoke exposure from the father and other family members. Results obtained t none of the mothers are smoker in both groups. Hence, 5 more questions about cigarette smoke exposure from the mother cannot be continued.

Assessments of cigarette smoke exposure then assessed from the father and other family members who lived at same house. Found that most of the father or family members are smoker, around 65.7% in the control group and more in the cases group by 70%. This difference shown with OR of 1.2, which means underfives
who live among smoking families are 1.2 risk of respiratory disease than those who do not, however not statistically significant. Next question whether they smoked everyday; around 57.1% in the control group and 62.9% in the cases group has family members smoke every day. The difference in these proportions produces OR of 1.3 which means that underfives who live in smoking families every day 1.3 risk of respiratory disease than those who did not, however also not statistically significant.

To assess stronger exposure also asked whether they smoked inside the house. Found that around 24.3% in the control group and 33.1% in the cases group. The difference produces OR of 1.3 which means that underfives who live in smoking families 1.3 risk of respiratory disease than those who did not, however not statistically significant. Then the question followed by the number of cigarettes smoked per day. Obtained around 24.3% in the control group and 33.1 in the case group who consume more than or equal to 10 cigarettes per day. The difference produces OR of 1.5, which means underfives who live in families whose members smoked more than or equal to 10 cigarettes per day 1.3 risk of respiratory disease than less, however also not statistically significant.

To assess the stronger degree of exposure, it is asked also whether they smoke during the presence of underfives. It is found that 25.7% in the control group and 45.7% in the case group had a family with current smoking habits along with the presence of their children. The difference produces OR of 2.4, which mean that children who live in families whose members smoke while with them 2.4 times the risk of respiratory disease than those, who do not have. These results are statistically significant with a 95% CI of 1.1 to 5.3 and the value of p = 0.014. In addition, to see the different degrees of exposure of cigarette smoke based on the duration (the average length of time in hours), it is also asked how long the children were alongside them during smoking.

It is found that 21.4% in the control group and 31.4% in cases group (together with underfives while smoking for approximately 1 hour in a day). The difference in these proportions produces OR of 2.0 which mean that toddler who live in families whose father or family members smoke while underfives’s presence about 1 hour in a day 2 times the risk of respiratory disease than those who do not have. These results were statistically significant (moderate significant) with 95% CI of
0.9 to 4.4 and the value of $p = 0.079$. Also obtained 4.3% in the control group and 14.3% in the cases group (together with family when smoked for more than or equal to 2 hours in a day). The difference in these proportions produces OR of 4.6 which means that toddler who live in families whose father or family members smoke while underfives’s presence more than or equal to 2 hours a day to 4.6 times the risk of respiratory disease than those who do not have. These results are statistically significant with a 95% CI of 1.2 to 17.7 and the value of $p = 0.028$.

Generally, the results of the bivariate analyze: the effect of cigarette smoke exposure at home proved could increase the risk of the prevalence of respiratory disease among underfives. Exposure can occur from any one of the family members who smoke and live in the same house. The risk of respiratory disease found more severe if the higher degree of exposure. The degree of cigarette smoke exposure can be seen from the place of exposure, especially inside the house, the intensity of smoking especially during the underfives’s presence and the length of exposure. The higher the degree of exposure proved to be followed by increasing the risk of respiratory disease. The results of the bivariate analysis can be seen more detail in Table 1.
Table 1. The Result of Bivariate Analysis Regarding the Effect of Cigarette Smoke Exposure at Home to the Prevalence of Respiratory Diseases among Underfives in Denpasar 2014

<table>
<thead>
<tr>
<th>Cigarette Smoke Exposure</th>
<th>Group</th>
<th>OR</th>
<th>95% CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control n=70</td>
<td>Case n=70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mothers are smoker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not</td>
<td>70 (100)</td>
<td>70 (100)</td>
<td>Uncountable</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Father or family members are smoker</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not</td>
<td>24 (34,3)</td>
<td>21 (30,0)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>46 (65,7)</td>
<td>49 (70,0)</td>
<td>1.2</td>
<td>0.6-2.6</td>
</tr>
<tr>
<td>Smoking everyday</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not</td>
<td>30 (42,9)</td>
<td>26 (37,1)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40 (57,1)</td>
<td>44 (62,9)</td>
<td>1.3</td>
<td>0.6-2.6</td>
</tr>
<tr>
<td>Smoking inside</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not</td>
<td>47 (67,1)</td>
<td>43 (61,4)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>23 (32,9)</td>
<td>27 (38,6)</td>
<td>1.3</td>
<td>0.6-2.7</td>
</tr>
<tr>
<td>Number of cigarettes consumed per day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;10</td>
<td>53 (75,7)</td>
<td>47 (67,1)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>≥ 10</td>
<td>17 (24,3)</td>
<td>23 (33,1)</td>
<td>1.5</td>
<td>0.7-3.4</td>
</tr>
<tr>
<td>Smoking during underfives’s presence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Not</td>
<td>52 (74,3)</td>
<td>38 (54,3)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>18 (25,7)</td>
<td>32 (45,7)</td>
<td>2.4</td>
<td>1.1-5.3</td>
</tr>
<tr>
<td>Duration of smoking during underfives’s presence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 hours</td>
<td>52 (74,3)</td>
<td>38 (54,3)</td>
<td>ref</td>
<td></td>
</tr>
<tr>
<td>1 hour</td>
<td>15 (21,4)</td>
<td>22 (31,4)</td>
<td>2.0</td>
<td>0.9-4.4</td>
</tr>
<tr>
<td>≥ 2 hours</td>
<td>3 (4,3)</td>
<td>10 (14,3)</td>
<td>4.6</td>
<td>1.2-17.7</td>
</tr>
</tbody>
</table>

Multivariate Analysis

Multivariate analyzes were performed to determine the effect of pure (independent) cigarette smoke exposure at home to the prevalence of respiratory disease among underfives. Variables were analyzed together to obtain adjusted odds ratio (AOR) cigarette smoke exposure are sex, immunization status and history of previous respiratory disease. Multivariate analysis can be seen in Table 2.
Table 2. The Result of Multivariate Analysis Regarding the Independent Effect of Cigarette Smoke Exposure at Home to the Prevalence of Respiratory Diseases among Underfives in Denpasar 2014

<table>
<thead>
<tr>
<th>Variables</th>
<th>AOR (Adjusted Odds Ratio)</th>
<th>95% Confident Interval</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cigarettes smoke exposed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In average 1 hour/day</td>
<td>2.6</td>
<td>1.1-6.4</td>
<td>0.033</td>
</tr>
<tr>
<td>In average ≥ 2 hours/day</td>
<td>5.7</td>
<td>1.2-25.3</td>
<td>0.021</td>
</tr>
<tr>
<td>Male</td>
<td>1.4</td>
<td>0.6-2.9</td>
<td>0.382</td>
</tr>
<tr>
<td>Completed immunization status</td>
<td>0.5</td>
<td>0.1-1.7</td>
<td>0.236</td>
</tr>
<tr>
<td>History of Respiratory diseases</td>
<td>7.6</td>
<td>3.3-17.2</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

Multivariate analysis prove there is independent effect of cigarette smoke exposure at home from the underfives’s father or other family members who smoke along side with underfives’s presence to the prevalence of respiratory disease among underfives. The magnitude of independent effect assessed using the AOR, AOR underfives exposed to smoke in average of 1 hour a day at 2.6 after controlling the effect of gender, immunization status and a history of respiratory disease. The AOR value means the risk of a underfives who lived among family whose father or family members smoke along side with them for 1 hour in a day 2.6 times the risk of respiratory disease than those who do not. These results are statistically significant with a 95% CI of 1.1 to 6.4 and the value of p = 0.033.

In addition, also found that the longer the average of cigarette smoke exposure in a day, the risk of respiratory tract diseases also higher. It is been proved that the value AOR of longer smoke exposure >2 hours per day is 5.7, which means underfives who live among family whose members smoke during underfives’s presence> 2 hours a day 5.7 times the risk of respiratory disease than those who do not. These results are statistically significant with a 95% CI of 1.2 to 25.3 and the value of p = 0.021.

Smoke Exposure Based on Cotinine Urine Examination

Assessing cigarette smoke exposure among underfives was not only conducted through interviews but also through the examination of urine cotinine levels. This examination is very important to prove that cigarette smoke exposure...
more objective, although remain no certain sensitivity and specificity when performed among underfives. The weakness of this test among underfives because it is difficult to obtain urine samples from underfives and the result was tent to false negative. Positive test results if the cigarette smoke exposure was very intense and frequent. Nevertheless, this examination remain performed since it harmless because it is not invasive, and positive results in a small proportion of underfives will indicate how intense and frequent the exposure among underfives and prove that cigarette smoke exposure are very worrying. Based on the test, obtained 4 underfives having a positive urine cotinine test in the cases group. Furthermore the four underfives with positive test had father or family member with current smoking habits during the underfives’s presence more than or equal to 2 hours a day. More detail from the test can be seen in Table 3.

Table 3. The Result of Cotinine Urine Test to Prove Cigarette Smoke Exposure at Home among Toddlers in Denpasar 2014

<table>
<thead>
<tr>
<th>Cotinine Urine Test Result</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Negative</td>
<td>Positive</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>70 (51,5)</td>
<td>0 (0,0)</td>
</tr>
<tr>
<td>Case</td>
<td>66 (48,5)</td>
<td>4 (100,0)</td>
</tr>
</tbody>
</table>

Average time of Father or Family Members smoking during underfives’s presence

<table>
<thead>
<tr>
<th>Average time</th>
<th>Cotinine Urine Test Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 hour</td>
<td>90 (66,2) 0 (0,0)</td>
</tr>
<tr>
<td>1 hour</td>
<td>37 (27,2) 0 (0,0)</td>
</tr>
<tr>
<td>≥ 2 hours</td>
<td>9 (6,6) 4 (100,0)</td>
</tr>
</tbody>
</table>

DISCUSSION

The discussion focused on especially in proving the causality (cause and effect) between cigarette smoke exposures at home to the prevalence of respiratory disease among underfives. The criteria used to prove the causal relationship is 9 criteria of causality from AB Hill. Moreover, it is also discussed the results of urine cotinine test, and the implications of the research to the improvement of health programs, especially mother and child health program.
The Effect of Cigarette Smoke Exposure at Home to The Prevalence of Respiratory Disease among Underfives

In proving this effect can be seen the strong relationship from the AOR of underfives (2.6) who are exposed to cigarette smoke in average of 1 hour a day and also the value of the AOR of underfives (5.7) who exposed to cigarette smoke in average of more than or equal to 2 hours a day. Proving the strength of this association was the fulfillment of the first criteria of AB Hill.

The same results are also found by other studies that stated cigarette smoke exposure as risk factor for respiratory diseases both among children and adults. Moreover, regarding the specificity, cigarette smoke exposure is also a risk factor of at least 25 dangerous diseases including respiratory diseases. It means cigarette smoke exposure is a specific risk factor. The burning cigarette contains 4000 chemical substances and 200 of them are very dangerous the proved causing various respiratory tract disease. Each hazardous substance has specific effect so that it can be concluded that the specificity criteria are fulfilled.

The temporality is one of the important criteria to prove that exposure occurs before effect (disease) in a consistent period of time. Thus in terms of research design, it is able to prove that cigarette smoke exposure occurs first and then followed by respiratory diseases. Another important criterion is the biological gradient, or dose-response that stated the difference in the degree of exposure will affect the difference in the risk for disease. The results of study show more severe degree of cigarette smoke exposure, the higher of the association.

Several theories explain the mechanism of cigarette smoke exposure causes various respiratory diseases through the harmful ingredients such as tar, carbon monoxide, hydrogen cyanide and heavy metals. It causes not only among active smokers but also among passive smokers. Moreover, if inhaled by underfives whose cell body remain young and very vulnerable, then become more susceptible to respiratory diseases. Those theories meet the plausibility criteria (eligibility) Biological and the research results appropriate (coherent) with existing theories then fulfill the criteria 6th and 7th of AB Hill.
Cigarette smoke exposure at home expressed as a major cause if it can be proved in the interventions study such as community trial in order to control cigarette smoke exposure at home. If the study intervention followed by decreasing in the prevalence of respiratory disease in the community then this may be evidence to meet the eighth criteria experimentation of AB Hill. However, this study not yet proved these criteria but this study results important to be delivered with recommendations for controlling cigarette smoke exposure among underfives then evaluated the prevalence rate before and after the program.

The last (ninth) criteria of AB Hill are analogy. The analogy is proving correlation that also applies to a state of health or similar events. In this study, cigarette smoke exposure at home has been proven as one of the risk factors of respiratory disease. Based on analogy principal, cigarette smoke exposure also becomes a factor to other respiratory diseases such as pneumonia, bronchitis, tonsilofaringitis, and including chronic respiratory disorders.

**Urine Cotinine Test Results**

The test got only 4 positive of 140 tested. All underfives thatgot positive test belong to the cases group and all of them exposed by cigarette smoke more than or equal to 2 hours a day. This result shows positive result can only be obtained if the individual has been intense and frequent exposed to cigarette smoke. Examination of urine cotinine is generally performed to determine whether a person has the habit of smoking or not. Urine cotinine test among adults also used to determine intense smoke exposure to adult who do not smoke.

Cotinine urine test among underfives still not common because cigarette smokes exposure among underfives is not as strong and as often among adults. The application of his test in this study just intended to demonstrate the magnitude of the problem of cigarette smoke exposure among underfives. The positive of 4 underfives reflect the level of exposure among underfives has been very strong and continuous as among adults. This is very worrying because it affects the health, growth and development of underfives in the future, therefore need serious and urgent follow-up.
Implications of Study

The results of this study have important implications for maternal and child health programs, especially in the prevention of respiratory disease. The results demonstrate that cigarette smoke exposure at home is one of the major causes of the respiratory diseases. This study also shows that in the prevention of respiratory tract disease among underfives cannot be just focus on the treatment but it is very important to the prevention to causal factors such as cigarette smoke exposure.

It is important to prevent cigarette smoke exposure in the family. If there is smokers for example the father or other family members, it is very important reason to make them stop smoking. Hence, the integration of maternal and child health programs, Primary Health Care with smoking cessation clinics that already exist in several Puskesmas in Denpasar. Mother, father or family who seek treatment to a health facility and have respiratory diseases problem then it is very important to ask about their history regarding cigarette smoke exposure. Doctors and other health workers should be in the habit of asking cigarette smoke exposure to their patients. They also should always available to inform regarding the harm of cigarette smoke either to smokers or people around him. By integrating the maternal and child health programs with cessation clinic, then if there is a mother, father or other family members who smoke can be referred to visit the clinic then convince themselves to quit smoking. This integration gives benefit to both programs, either for maternal and child health programs or smoking cessation clinic.

CONCLUSIONS AND RECOMMENDATIONS

Conclusions

1. The prevalence of respiratory disease among underfives is more common among male, with incomplete immunization status and had a history of previous respiratory diseases.

2. The risk of respiratory disease among underfives whose father or family members smoke during their presence for 1 hour in a day is 2.6 times greater than those who do not have.
3. The risk of respiratory diseases among underfives whose father or family members smoke during their presence for more than or equal to 2 hours a day is 5.7 times greater than those who do not have

4. The 4 positive urine cotinine test that found in cases group, have families who smoke during their presence for ≥2 hours and it shows the level of cigarette smoke exposure were very intense and continuous as found in adults. Absolutely, need awareness since it affects the health, growth and development of underfives.

Recommendations

1. Doctors and other health workers should always provide information regarding the harm of smoking either to smokers or non-smokers who visit health facilities, particularly those who suffered smoking-related diseases especially respiratory diseases.

2. Integrating the maternal and child health programs, treatment program, and other Puskesmas programs through quit smoking cessation clinic is very important because gives benefits to all program then provide comprehensive health services to patients.

3. Smoke-free home initiative is essential to be implemented through different approach such as Puskesmas approach, cadres, even through students who become anti-smoking ambassador.

4. The treatment for underfives who had positive urine cotinine test and exposed to cigarette smoke should be treat well to prevent further adverse effects.

References


Tobacco Control Support Centre (TCSC) Indonesia, 2010, Buku Kendali Tembakau Tani, Jakarta.


WHO (World Health Organization), 2012, WHO Global Report: Mortality Attributable to Tobacco
MONITORING AND EVALUATION OF PICTORIAL HEALTH WARNINGSS ON CIGARETTES' ADVERTISEMENTS BASED ON INDONESIA GOVERNMENT REGULATION PP NO. 109/ 2012

Sri Widati, Santi Martini
Public Health Faculty of Airlangga University

Abstract

Background: The Government Regulation PP No. 109/2012 in Indonesia establishes that tobacco products contain addictive substances that are harmful for health. It is mentioned that pictorial health warnings (PHW) should be used on every cigarette package and on any advertisement. In Surabaya, every tobacco company has been implementing this rule on cigarette billboard advertisements since January 2014. The purpose of this study is to explore public opinion about PHW based on PP 109/2012.

Methods: This study was a descriptive research using questionnaires and in-depth interviews to collect data. The data was collected to assess the knowledge, attitude, action of the smokers, and respondents’ perception after viewing the pictorial health warnings on the billboards. There were 500 participants selected by multistage random sampling to answer the questionnaires. In-depth interviews were conducted with 20 participants selected by purposive random sampling in public places such as public transportation, hotels, restaurants and malls. This study was conducted over two months in five areas of Surabaya city (center, south, north, west, and east). Analysis was done by crosstabulation.

Results: The results showed that PHW number 1-5 encouraged people to quit smoking if they were smokers and not to start smoking if they were non-smokers. Moreover, people believed the accuracy of the PHW messages especially for image number 2 (image 2 is of a skeleton/ghost looking over at the smoker) which is being used on billboards advertising cigarettes in Surabaya, and does not seem to alarm or cause people distress. From in-depth interviews it can be concluded that pictorial health warning number 4, which is a smoker with a baby, could not warn people about cigarettes' impact. Instead, people thought it was funny, more of a joke.

Conclusions: It could be concluded that PHW numbers 1-5, with the exception of image number 2 and 4, were effectively used to warn the people of Surabaya both smokers and non-smokers about the negative health impacts of smoking.

Keywords: Cigarettes, Pictorial Health Warnings, Surabaya, PHW
1. BACKGROUND

PP No. 109/2012 is Government rule about tobacco product as addictive substances for health. Chapter 15 of PP No. 109/2012 mention that pictorial health warnings (PHW) should be used on every cigarettes packaging and advertising. Text health warnings before mention that “Cigarettes causing cancer, hypertension, heart attack, impotence, harms baby and pregnancy”. Nowadays, this text health warnings must be replaced by pictorial health warnings. These are the PHW based on PP No. 109/2012.

![Pictorial Health Warnings Based on PP 109/2012](image)

Tobacco industries must choose one and use it on their cigarettes packaging and advertising. In Surabaya, they choose picture number 2 for their billboard cigarettes advertising. The picture shows a man smoking.

What’s people opinion about Pictorial Health Warnings (PHW) on the cigarettes’ billboard advertising in Indonesia? Can PHW encourage to neglect smoking prevalence in Indonesia? How about the implementation? How about the
effectiveness? To answer this questions, researcher done research about PHW in cigarettes advertising in Surabaya City.

2. METHODOLOGY

PHW about Cigarettes’ impact based on PP 109/2012 will give fear effect, believeness, and power to encourage smoking quit. Characteristic respondents’ (age, education, job) has effect to their opinion. That are all effectiveness indicators. This study is descriptive research which using questioner to identify respondents’ characteristic and respondent opinion then this study used indepth interview to identify the reason why smoker do not stop smoking after watching pictorial health warnings and what they think when they look pictorial health warnings.

The population of this study is people in Surabaya City whose spreading in 44 district area in 5 part that are center, south, north, west, east of Surabaya. There were 500 participants that selected by multistage random sampling to answer quisionaires. There were 20 participants that selected by purposive random sampling in public place to be interviewed. The data of this study was be analyzed through editing, coding, tabulating, and entry data. Editing was be done by correction of quesionnaires answering. Coding was be done based on measurement look like in table 1. Coding was be done after data collecting. The Result has been showed by chart and table. Data Analysis technique has been done by descritive and cross tabulation.

Before data collecting, the proposal has been tested by ethical clearance committee in Public Health Faculty of Airlangga University. Participant has been explained about this study and what would done to them. They have sign up inform consent before. Participant received incentive/souvenir for their participation.

3. RESULT AND ANALYSIS

This research using quesionaires and structural interviewed for data collecting in 5 part of Surabaya. Quesionaires was gived to 500 responden in public place area. Structural interviewed was done to 20 responden in the same place. Quesionaires was used to know respondent opinion about PHW. Structure interviewed was done to explore public preception about PHW. Amount 5 smoker man, 5 non smoker man, 5
smoker woman and 5 non smoker woman was interviewed in this research. Responden repeated the answer of the interviewed. Almost all of respondents know the PHW. They know from cigarettes packaging and cigarettes’ billboard advertising. The most respondent is in the middle of Surabaya, because of the most people stay in the middle of Surabaya and the most of public place is in the middle of Surabaya. The middle of Surabaya is center of Surabaya’s goverment office and East Java’s goverment office. West Surabaya is the place which least people who stay there and the least public place there. Goverment is doing developing area in the west Surabaya now. Amount 50% respondent are smoker (250 respondents). Respondents was required to explore the perception of pictorial health warnings (PHW). In this research man are more many than woman. This research is more representatif of man. But it can be describe about smoker perception bacause of smoker are more many man. Half of respondents are employee. Only 24 percent are jobless. That’s means they have money and can buy cigarettes. Most of reposdents’ eduction is senior hight school. Amount 1,4 % respondents did’nt pass from elementery school. That’s means respondent could to descript their persepsion and opinion about PHW. They could answered the quionairess properly. Most of respondents are 14-56 years old. Its means they are all in a productive periode. They are decisona maker in society. So it is important to know what their opinion about PHW.

### Table 1. Respondent's Knowledge

<table>
<thead>
<tr>
<th>Knowledge Value</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Worst (&lt;6)</td>
<td>97</td>
<td>19,4</td>
</tr>
<tr>
<td>Medium (6-7)</td>
<td>144</td>
<td>28,8</td>
</tr>
<tr>
<td>Good (&gt;7)</td>
<td>259</td>
<td>51,8</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100</td>
</tr>
</tbody>
</table>

More than half of respondents have good knowledge about cigarettes’ impact. That’s means respondents had been known about cigarettes’ impact but they are still smoke cigarettes. In the other side, respondent’s attitude show that they have medium attitude. Value of attitude is 14 until 40. This range is divided to 3 classes, high (>34), medium (25-34), low (<25).
Table 2. Respondent’s Attitude

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High (&gt;34)</td>
<td>158</td>
<td>31.6</td>
</tr>
<tr>
<td>Medium (25-34)</td>
<td>305</td>
<td>61</td>
</tr>
<tr>
<td>Low (&lt;25)</td>
<td>37</td>
<td>7.4</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>500</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Table shows that respondents’ attitude about cigarettess impact is medium and low. That can be raised up to change their behavior. Based on PP No. 109/2012 there are 5 pictures to warn society about cigarettess’ impact. This pictures (PHW) must be used on cigarettess’ packaging and advertising. Almost all respondents known the PHW. Only 5.8% did not know the PHW. These are result of PHW respondent’s evaluation.

A respondents, woman smoker (AW, 22 years old), said that pictorial 1 and 3 are the most scared pictorial. “The picture is sacred and discasted.” Most of respondents believe the truth of message Pictorial 1. While they saw Pictorial 1, respondents have perception that cigarettess can be caused mouth cancer.

![Persuasive Power of PHW 1 to Encourage Respondent to Stop Smoking/Not To Smoke](image)

Figure 2. Persuasive Power of PHW 1 to Encourage Respondent to Stop Smoking/Not To Smoke

Half of respondents who smoke very want to quit smoking after sawn Pictorial 1. And half of respondents who not smoke said that very want to no smoking after they saw Pictorial 1. Pictorial No. 2. Based on PP 109/2012 descript someone who smoking with skull as the background.
Respondents, who does not smoke (AM, 33 years old), has perception that pictorial No.2. is picture which cannot make them scared because of skull. A respondent teen woman not smoking (RA, 20 year old) has perception that picture number 2 is common thing and not make scaring people. More than half of respondents (64.4%) have perception that pictorial number 2 is not scared. Smoker and not smoker not scared while they saw pictorial number 2. There is respondents think this is funny and ugly. The other respondents think this picture is cool, this is the quotation:

“........if pictorial number 2 is cool . (AN, 17 years old).

Although pictorial number 2 is not scared people but 61.2% respondent believe about the truth of the pictorial number 2 message. The messaga of pictorial number 2 that is cigarettess causes dead through skull and word “kill you”. But most of respondents justify that the pictorial is ambigue and not clear.

“The picture cannot make me scared and ambigue.” (MH, 22 years old).

The other respondents have perception that pictorial number 2 isn’t informatif and not explain the danger of cigarettess. Respondents said pictorial number 2 is not conected.

“...In the picture, there is people smoking and skull so it is not conected. “ (EN, 29 tahun).

Teen respondents (EY,23 years old) said that picture number 2 only intimidation but not meaningful. But There is respondents who said that pictorial number 2 good picture although the picture is not exactly. For teenager BD (21 tahun), pictorial number 2 is fullfy not scared. This is the quotation: “ It’s not scared me.”
Most of respondents said that they want to quit smoking after saw the picture number 2. Respondents who not smoke said that they don’t want to smoke when see the pictorial number 2. Almost all of respondents said that pictorial number 3 make them very scared. Amount 77% respondents believe the thruth of number 3 message about cigarettess causes throat cancer.
Amount 75,8% respondents want to quit smoking after look at the picture. Respondents who not smoking do not want to smoke after look at the picture.

Amount 61% respondents felt scare to pictorial number 4. Child in this picture make them scared of this impact. Even though there is respondents who said that pictorial number 4 not make them scared because there is no impact inside.

“.....Pictorial number 4 do not make me scared because of no impact of the cegarettes. Only common picture.” (RM, 17 years old)

A teenager (AN, 17 years old) said that pictorial number 4 is funny. That’s why the smoker do not want to quit smoking and has no intention to stop smoking, look like what he said, “ Picture number 4 is funny...” (AN, 17 years old). Most of respondents believe of the truth of message pictorial number 4 that cegarettes is danger for children.

![Persuasive Power of PHW 4 to Encourage Respondent to Stop Smoking/ Not To Smoke](image)

Figure 5. Persuasive Power of PHW 4 to Encourage Respondent to Stop Smoking/ Not To Smoke

After look at pictorial number 4 almost 75% respondents want to stop smoking for smoker and do not want to smoke for no smoker. From 20 respondents whom interviewed only 1 women not smoker (IS, 40 years old) who said that she do not want to quit smoking while see pictorial number 4 which child near smoker.

“Pictorial number 4 make me do not want to quit smoking because of the baby.” (IS, 40 years old).

The other respondents, a man smoker descrit that pictorial number 4 encourage him to stop smoking because impact for others.
“...number 4 is danger for children and others.” (HY, 33 years old). Although number 4 encourage him to has intention stop smoking but, he siad that when smoking he forget with children around him.

Almost respondents (88.6%) felt scaring when look at Pictorial number 5. Amount 88.4% respondents believe of the message pictorial number 5 that cigarettess can be caused lung cancer and bronchitis cronic.

**Persuasive Power of PHW 5 to Encourage Respondent to Stop Smoking/ Not To Smoke**

![Figure 6. Persuasive Power of PHW 5 to Encourage Respondent to Stop Smoking/ Not To Smoke](image)

Most of respondents want to stop smoking after look at pictorial number 5.

On the cigarettess advertisitising billboard in Surabaya only shows pictorial number 2.

![Figure 7. PHW on Billboard](image)
Table 3. Respondents’ Opinion About PHW on the Billboard

<table>
<thead>
<tr>
<th>Feeling</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scared/ hated/ disturbed/ cruel</td>
<td>131</td>
<td>26.2</td>
</tr>
<tr>
<td>Common</td>
<td>346</td>
<td>69.2</td>
</tr>
<tr>
<td>Thanks because the warnings</td>
<td>3</td>
<td>0.6</td>
</tr>
<tr>
<td>Funny</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Happy because know the impact</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Want to quit smoking</td>
<td>6</td>
<td>1.2</td>
</tr>
<tr>
<td>Poorly</td>
<td>3</td>
<td>0.6</td>
</tr>
<tr>
<td>Interesting</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Shock</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Freak</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>100</td>
</tr>
</tbody>
</table>

More than 50% respondents asumse pictorial on the billboard is the common thing and cannot give scaring effect. Most of respondents cannot descript the cigarette impact from pictorial number 2. They said did not know and tought that no cigarette impact in pictorial number 2.

“....from the picture number 2, i don’t know what the meaning is.” (RM, 22 years old)

All of respondents asumse that pictorial number 2 isn’t effective to warn cigarette impact. Respondents said that the picture do not educate and ugly because more cigarette sense than the impact, look like respondents said:

“I feel that picture is ugly. Because there is picture head skeleton and smoker who enjoy it.” (IS, 40 years old)

Women smoker (AW, 22 years old) said,” .................Picture number 2is funny...look like educate people to smoke.” Another woman said picture number 2 is common thing and do not scared people.”

“....no scaring. Only picture people and head skeleton. So why? (FP, 21 years old).

Other respondents said that message on picture number 2 do not tranfered. Respondent asumse that picture allow people to smoke. Allmost all respondents have
opinion to delete the picture number 2 and number 4 because they assume that is not educational thing.

“Picture number 2 and 4 must be deleted because that picture do not educate people.” RW (49 tahun)

In the other side, all of respondents assume that pictorial number 1,3,5 are scared pictorial. From the three picture, number 5 is assumed as picture most scared.

“I Scare number 5 because of the cigarettes’ impact direct to lung cancer and make fleg.” RW (49 tahun).
Respondents advice pictorial number 1,3,5 to use for changing society knowledge and behavior. Woman smoker (AW, 22 years old) said, “The pictorial is very scared and discating.” Some respondents assume that pictorial number 5 is very scared because of the black lung.

“....Scared see the black lung.” (FP, 21 tahun)
Respondents perceive pictorial number 3 is scared too. They scared because of the old throat and acute bump pictorial. All respondents perceive that PHW more scared than text health warnings. They said that picture more clear than text and has scared effect because of impact visualisation.

“............text only readable but cannot be understood, if picture can direct inform about cigarettes impact (IR, 22 years old).
Picture make people think more while people will smoke cigarettes. They will scare of the picture.

“I Scared to become look like the picture.” (RM, 17 years old)
Picture make peole believe the fact of cigarettes impact. “Because there is testimony and fact.” (IS, 40 years old)
Woman smoker (AW, 22 years old) said that scared picture make people fear to smoke,” The picture is so cruel so i scare to smoke.
Smoker woman (EY, 23 years old) said that picture make her discasting. The other responden perceive that pictorial more effective to transfer message than text. Picture visualized cigarettes imapct.

“Text is complicated but picture to the point.” (FP, 21 years old).
“Visualization explain more.” (MH, 22 years old)
On the other side, smoker man said that active smoker still smoke whatever advertising. He said that whatever the warnings, active smoker will still smoke because of their addiction.

“...active smoker will still smoke whatever advertising.” (FS, 24 years old).

The other smoker (SM, 23 years old) said that picture cannot persuade him. He said, “If in the office alone, i smoke because cigarettess is my friend.”

PHW on the cigarettess packaging encourage respondents to change the packaging with packaging from tobacco industries which they bought from minimarket.

![Cigarettes packaging image](image)

Figure 8. Cigarettes packaging from

There are respondents who tear PHW on the cigarettess packaging whic they buy. Smoker woman (EY, 23 years old) very scare of pictorial number 1 because of discasting. If buy cigarettess and get the picture, she teared the packaging. This is the compilation of the result

Tabel 4. Evaluation of 5 PHW

<table>
<thead>
<tr>
<th></th>
<th>Number 1</th>
<th>Number 2</th>
<th>Number 3</th>
<th>Number 4</th>
<th>Number 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believability</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Scary</td>
<td>x</td>
<td>0</td>
<td>x</td>
<td>0</td>
<td>x</td>
</tr>
<tr>
<td>Persuasive</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Participants believe the message of PHW No. 1-5. All of PHW can persuade participants to stop smoking for smoker and to not start smoking for non smoker. But PHW No. 2 cannot scare participants, as this picture show:
From indepth interview can be concluded that participants did not believe messages of PHW no.2, look like this quotation: “..........if pictorial number 2 is cool . (AN, 17 years old) . “The picture (no.2) cannot make me scared and ambigue,” (MH, 22 years old) This figure below encourages the conclusion.
Figure 10. Believability of Smoker and non smoker to PHW 1-5

From indepth interview can be concluded that PHW no. 4 cannot persuade people to stop smoking, look like this quot: “.....Pictorial number 4 do not make me scared because of no impact of the cigarettes. Only common picture.” (RM, 17 years old ). “Pictorial number 4 make me do not want to quit smoking because of the baby.” (IS, 40 years old).

PHW No. 2 has the least effect of scareness as the table showed:
Participants recommend that Better if PHW no. 2 and 4 were deleted or get down from PHW. They said, “Picture number 2 and 4 must be deleted because that picture do not educate people.” RW (49 tahun). They also said that pictorial is better than text health warnings. “Text is complicated but picture to the point.” (FP, 21 years old). “Visualization explain more.” (MH, 22 years old)

4. CONCLUSION AND RECOMMENDATION

The conclusion are: Almost all of respondents aware about PHW on the billboard cigarette advertising in Surabaya City. They know about PHW on cigarette packages. PHW number 1,3,5 have scaring effect to respondents and encourage people to quit smoking for smoker and to not smoking for non smoker. PHW number 2, which on cigarette advertising billboard in Surabaya, have not fear effect for smoker or non smoker. They tend to perceive that the picture is funny, ugly, and cool. PHW number 4 although most of respondents feel fear because of the child but respondents perceive common thing because there is no cigarette impact. All of message in PHW 1-5 can encourage people to quit smoking for smoker and to not
smoke for non smoker. Recommendation of this research is get down/delete PHW No. 2 and 4 because it doesn’t effective to warn people about cigarettes impact

References
THE ECONOMIC IMPACT OF SMOKING AMONG INDONESIAN POPULATION: PREMATURE MORTALITY COSTS AND YEARS OF POTENTIAL LIFE LOST (YPLL) STUDY

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Email address: susikristina@yahoo.com

Abstract

Background: As smoking is the leading preventable cause of multiple diseases and premature death, estimating the burden of disease attributable to smoking has become the standard in documenting the impact of the tobacco epidemic across the world. In Indonesia, there is a dearth of studies assessing the economic costs of smoking. This study aimed to estimate indirect mortality costs of premature deaths and years of potential life lost attributable to smoking among the Indonesian population.

Methods: A prevalence based method was employed. Using national data, we estimated smoking-attributable mortality in 2013. Premature mortality costs and years of potential life lost (YPLL) were estimated by calculating number of deaths, life expectancy, annual income, and workforce participation rate. Human capital approach was used to calculate the present value of lifetime earnings (PVLE). Discount rate of 3% was applied.

Results: The study estimated that smoking attributable mortality was 156,079 (7.23% of all deaths), comprised of 95% death in men and 5% in women. Smoking was responsible for 2.6 million years of potential life lost. Premature mortality costs caused by smoking accounted for IDR 31 trillion (USD 2.7 billion) in 2013.

Conclusions: Smoking brings an enormous economic burden to Indonesia. Therefore, tobacco control efforts need to be prioritized in order to prevent more losses to the nation. The data of this study is important for advocating national tobacco control policy.

Keywords: smoking, YPLL, premature mortality cost, Indonesia
INTRODUCTION

Smoking is considered to be an important cause of premature mortality and disability. The World Health Organization (WHO) estimated that annually smoking caused about four million deaths worldwide, where more than 80% of these deaths occurred in low-income and middle-income countries. It was projected that, in 2015, 41 million people will die from chronic diseases without concerted prevention and control action(1). The US Centers for Disease Control and Prevention also reported that annually smoking caused approximately 443,000 premature deaths and productivity losses USD 96.8 billion in the USA between 2000 and 2004(2).

Because of economic interests and several reasons, Indonesia currently is not ratify WHO FCTC(3) and there is no restrict legislations to protect nonsmokers. To raise awareness of the dangers of smoking and to advocate government in implementing national tobacco control initiatives, it is important to transform the data on the health effects of smoking into monetary values of financial losses to the society.

In Indonesia, at first time, economic cost study has been conducted in 2008, resulted 602,350 deaths due to diseases attributed to tobacco or almost one third of the estimated total deaths in the same year, and DALY’s loss of 13,066,230 or 25.5% of total disability adjusted life years loss in the same year and at the macro level, the DALY’s loss caused economic loss of 18.5 billion USD(4). These previous study provide a clear picture of how smoking affects health and the economic consequences in terms of health care expenditures and DALY’s. In our study, a first attempt for Indonesia setting, an analysis of the smoking attributable mortality costs employed an updated epidemiological data and national monetary national data will be undertaken. This study aimed to estimate the indirect mortality costs attributable to smoking and years potential life lost among Indonesian population in 2013.

Material and methods

In the present study, the prevalence-based, disease-specific approach was applied to estimate the mortality attributable to smoking, premature mortality costs of smoking-related diseases, and years of potential life losts from human capital
perspective. The 20 diseases related to smoking were considered to be included and the SAF was used to estimate the number of death attributable to smoking.

Data Sources

*Smoking prevalence:* the smoking prevalence was obtained from secondary data of Basic Health Survey 2013 that has been collected from 33 provinces and 497 districts/municipalities. Respondents were consisted of 300,000 household samples. Data were collected via household interview during Mei-June 2013.

*Relative risks:* The relative risks of target diseases for smokers were obtained from published studies (Table 1)

*Number of deaths for each disease:* since country information on level of adult mortality not available then the data was predicted from NIHRD (National Institute of Health and Research Development) were used. The number of deaths by disease and sex were derived from the study that has been conducted in five public general hospitals namely Dharma is Cancer Hospital Jakarta, Persahabatan Hospital Jakarta, Soetomo Provincial Hospital Surabaya, Sardjito Provincial Hospital Yogyakarta, and Sanglah General Hospital Denpasar.

*Sex and age-specific smoking attributable mortality (SAM):* SAM were calculated by multiplying the total number of deaths for 20 disease categories (Table 3) by estimates the smoking attributable fraction (SAF) of preventable deaths.

*Smoking attributable fraction (SAF %):* the attributable fractions provides estimates of the public health burden of each risk factor and relative importance of risk factor for multifactorial diseases. The disease specific SAF were derived using sex-specific relative risk (RR) estimated from published studies. SAF formula is as follow(5):

\[
\text{SAFi} (\%) = 100 * \left( \frac{p(RR_i - 1)}{1 + p(RR_i - 1)} \right)
\]

Where “p” denotes the smoking prevalence rate and “RR” denotes the relative risk of the disease of interest.

*Smoking attributable YPLLs and premature mortality costs:* were estimated by multiplying sex-and age-specific SAM by remaining life expectancy (6) and lifetime earnings data (7).
In addition, demographic data was based on population census 2010 conducted by National Statistics Bureau and its projection for 2013 was used to calculate % of workforce participation as a factor to derives lifetime earnings data.

The study was approved by Medical and Health Research Ethics Committee (MHREC) on July 2014 at the University of Gadjah Mada with approval number KE/FK/808/EC.

Results

The disease-specific relative risks and smoking-attributable fractions (SAF) are shown in Table 1. Based on the relative risk for diseases and the prevalence of smoking, lung cancer showed the greatest SAF (85.21% and 12.14% for male and female respectively), followed by bronchitis/emphysema (75.38% and 4.87% for male and female respectively) and larynx cancer (69.54% and 11.16% for male and female respectively).

Table 1. The disease-specific relative risks and smoking-attributable fractions (SAF) of selected diseases.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Relative Risk</th>
<th>SAF (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td><strong>Cancers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth and oropharynx cancer</td>
<td>3.52</td>
<td>3.80</td>
</tr>
<tr>
<td>Oesophagus cancer</td>
<td>2.52</td>
<td>2.28</td>
</tr>
<tr>
<td>stomach cancer</td>
<td>1.74</td>
<td>1.45</td>
</tr>
<tr>
<td>Kidney cancer</td>
<td>1.59</td>
<td>1.35</td>
</tr>
<tr>
<td>Liver Cancer</td>
<td>1.85</td>
<td>1.49</td>
</tr>
<tr>
<td>Pancreas Cancer</td>
<td>1.63</td>
<td>1.73</td>
</tr>
<tr>
<td>Lung cancer*</td>
<td>9.87</td>
<td>7.58</td>
</tr>
<tr>
<td>Larynx cancer</td>
<td>6.98</td>
<td>6.98*</td>
</tr>
<tr>
<td>Cervix uteri cancer</td>
<td>-</td>
<td>1.83</td>
</tr>
<tr>
<td>Bladder cancer</td>
<td>2.80</td>
<td>2.73</td>
</tr>
<tr>
<td>Myeloid monocyticleucaemia</td>
<td>1.09</td>
<td>1.09*</td>
</tr>
<tr>
<td><strong>Cardiovascular diseases</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>1.75</td>
<td>1.75</td>
</tr>
<tr>
<td>Hypertensive disease</td>
<td>1.85</td>
<td>1.95</td>
</tr>
<tr>
<td>Cerebrovascular disease/stroke</td>
<td>1.43</td>
<td>1.72</td>
</tr>
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<td>Atherosclerosis</td>
<td>4.06</td>
<td>3.00</td>
</tr>
<tr>
<td>Other arterial disease</td>
<td>4.06</td>
<td>3.00</td>
</tr>
<tr>
<td><strong>Respiratory Diseases and other</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>2.69</td>
<td>2.16</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>2.87</td>
<td>2.22</td>
</tr>
<tr>
<td>Bronchitis, emphysema</td>
<td>5.71</td>
<td>3.44</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>-</td>
<td>1.80</td>
</tr>
</tbody>
</table>

*Lung Cancer includes bronchus, trachea, and lung cancers
The estimated numbers of deaths attributable to smoking are summarized in Table 2. During 2013, an estimated 153,696 persons in Indonesia died prematurely as a result of smoking, accounted for 7.23% of national total deaths. The proportion of adult deaths attributable to smoking was 95% for men and 5% for women respectively. Among adults aged ≥ 35 years, 72,047 (46.88%) smoking attributable deaths were caused by cancers, 52,726 (34.31%) by respiratory diseases and 28,440 (18.50%) by cardiovascular diseases (excluding deaths from secondhand smoking). This figure is lower than another country such as US (443,000 deaths in 2004)(2) and China (552,280 deaths in 2008)(8). The data delineated three leading specific causes of smoking-attributable death were pneumonia accounted for the largest number of deaths attributable to smoking (45,352 deaths; 29.51% of all smoking-attributable deaths, followed by lung cancer (34,788 deaths) and mouth and oropharynk cancer (12,280 deaths).

The different pattern in the variety of death was captured if compared with other countries. For example US study found that lung cancer, IHD, and COPD were the leading causes of deaths due to smoking (2). The differences occur because the shape and maturity of the smoking epidemic is highly affected by region-specific socioeconomic and cultural determinants of smoking, as well as because background mortality varies across populations.
Table 2. Number of deaths and Years of potential life losts (YPLLs) related to smoking in Indonesia 2013.

<table>
<thead>
<tr>
<th>Disease category</th>
<th>SAM</th>
<th>YPLL (Years)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Cancers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth and oropharynx cancer</td>
<td>11,312</td>
<td>966</td>
</tr>
<tr>
<td>Oesophagus cancer stomach cancer</td>
<td>3,417</td>
<td>124</td>
</tr>
<tr>
<td>Kidney cancer</td>
<td>4,670</td>
<td>228</td>
</tr>
<tr>
<td>Liver Cancer</td>
<td>10,466</td>
<td>248</td>
</tr>
<tr>
<td>Pancreas Cancer</td>
<td>33,453</td>
<td>1,333</td>
</tr>
<tr>
<td>Cervix uteri cancer</td>
<td>3,120</td>
<td>80</td>
</tr>
<tr>
<td>Bladder cancer</td>
<td>4,267</td>
<td>56</td>
</tr>
<tr>
<td>Myeloid monocytic leukaemia</td>
<td>306</td>
<td>16</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>3,081</td>
<td>95</td>
</tr>
<tr>
<td>Hypertensive disease</td>
<td>4,112</td>
<td>244</td>
</tr>
<tr>
<td>Cerebrovascular disease/stroke</td>
<td>9,669</td>
<td>597</td>
</tr>
<tr>
<td>Atherosclerosis</td>
<td>8,815</td>
<td>506</td>
</tr>
<tr>
<td>Other arterial disease</td>
<td>1,247</td>
<td>73</td>
</tr>
<tr>
<td>Respiratory diseases and other</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>5,835</td>
<td>148</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>43,416</td>
<td>1,935</td>
</tr>
<tr>
<td>Bronchitis, emphysema</td>
<td>1,324</td>
<td>64</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>0</td>
<td>479</td>
</tr>
<tr>
<td>Total</td>
<td>148,561.5</td>
<td>7,517.4</td>
</tr>
</tbody>
</table>

As shown in Table 2, all YPLL due to eleven types of cancers amounted to 2,412,296 for males and 138,938 for females, and accounted for 95% and 5% of YPLL for males and females, respectively. Both for males and females, the YPLL due to lung and mouth neoplasm were the two highest. Because of the high mortality rate in the 15-59 age group, it is reasonable to see that this age group had the highest YPLL. Therefore, we need to pay more attention to the prevention of deaths from smoking related diseases for males in this age group, because their productivity will be lost. When examined closely, we found that about 80% of the YPLL in this subgroup among male was due to three types of diseases, namely mouth cancer, liver
cancer, and lung cancer. We also found that about 77% of YPLL among female was due to mouth, lung, and cervix uteri cancer.

Table 3 shows smoking attributable mortality costs in 2013. Estimates for year 2013 smoking-attributable premature mortality costs were approximately IDR 31,268 billion (USD 2.7 billion), as amount as 65% lifetime productivity loss. It is consisted of IDR 30,497 billion (USD 2.692 billion) for males and IDR 771 billion (USD 0.68 million) for females. For both males and females, age group 15–59 years ranked the highest. Because of higher YPLL and higher labor force participation rates, it is not surprising that the male group accounted for much of the cost. Although we neglected the income from the underground economy and opportunity cost of housekeeping would underestimate the cost of premature death for females, it is not a major problem in this study because most of the SAFs for females are zero or trivial.
Table 3. Premature mortality costs attributable to smoking in Indonesia 2013

<table>
<thead>
<tr>
<th>Disease category</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cancers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouth and oropharynx cancer</td>
<td>2,335,258</td>
<td>95,652</td>
<td>2,430,911</td>
</tr>
<tr>
<td>Oesophagus cancer</td>
<td>705,357</td>
<td>12,295</td>
<td>717,653</td>
</tr>
<tr>
<td>stomach cancer</td>
<td>964,041</td>
<td>22,611</td>
<td>986,652</td>
</tr>
<tr>
<td>Kidney cancer</td>
<td>11,204</td>
<td>0</td>
<td>11,204</td>
</tr>
<tr>
<td>Liver Cancer</td>
<td>2,160,682</td>
<td>24,503</td>
<td>2,185,186</td>
</tr>
<tr>
<td>Pancreas Cancer</td>
<td>0</td>
<td>3,154</td>
<td>3,154</td>
</tr>
<tr>
<td>Lung cancer*</td>
<td>6,905,778</td>
<td>131,958</td>
<td>7,037,736</td>
</tr>
<tr>
<td>Larynx cancer</td>
<td>472,906</td>
<td>7,932</td>
<td>480,839</td>
</tr>
<tr>
<td>Cervix uteri cancer</td>
<td>0</td>
<td>28,956</td>
<td>28,956</td>
</tr>
<tr>
<td>Bladder cancer</td>
<td>880,883</td>
<td>5,565</td>
<td>886,449</td>
</tr>
<tr>
<td>Myeloid monocyticleucaemia</td>
<td>63,154</td>
<td>1,537</td>
<td>64,692</td>
</tr>
<tr>
<td><strong>Cardiovascular diseases</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ischemic Heart Disease</td>
<td>635,962</td>
<td>9,377</td>
<td>645,339</td>
</tr>
<tr>
<td>Hypertensive disease</td>
<td>847,941</td>
<td>24,143</td>
<td>872,084</td>
</tr>
<tr>
<td>Cerebrovascular disease/stroke</td>
<td>1,996,892</td>
<td>59,135</td>
<td>2,056,027</td>
</tr>
<tr>
<td>Atherosclerosis</td>
<td>1,819,234</td>
<td>50,080</td>
<td>1,869,315</td>
</tr>
<tr>
<td>Other arterial disease</td>
<td>257,592</td>
<td>7,183</td>
<td>264,776</td>
</tr>
<tr>
<td><strong>Respiratory diseases and others</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COPD</td>
<td>1,204,553</td>
<td>14,675</td>
<td>1,219,229</td>
</tr>
<tr>
<td>Pneumonia</td>
<td>8,962,727</td>
<td>191,526</td>
<td>9,154,254</td>
</tr>
<tr>
<td>Bronchitis, emphysema</td>
<td>273,368</td>
<td>33,630</td>
<td>306,998</td>
</tr>
<tr>
<td>Low birth weight</td>
<td>0</td>
<td>47,422</td>
<td>47,422</td>
</tr>
<tr>
<td><strong>Total ( million IDR)</strong></td>
<td>30,497,540</td>
<td>771,344</td>
<td>31,268,885</td>
</tr>
<tr>
<td><strong>Total (million USD)</strong></td>
<td>2,692</td>
<td>0.68</td>
<td>2,761</td>
</tr>
</tbody>
</table>

US$ 1 = IDR 11,325 as per average exchange rate for the year 2013 as per world bank. Available at [http://data.worldbank.org/indicator/PA.NUS.PPP.05](http://data.worldbank.org/indicator/PA.NUS.PPP.05)

The premature mortality cost for pneumonia was the highest, amounting to IDR 9,154,254 million, followed by lung cancer (IDR 7,037,736 million), and mouth and oropharynx cancer (IDR 2,430,911 million).

**Sensitivity analysis**

Table 4 shows that if the prevalence rates of smoking in 2013 had increased 10%, the SAFs would have been greater by 0.02 point for male and 0.01 point for female. Additional 6,094 deaths and 2,507 deaths for male and female respectively would be occurred. If the prevalence rates of smoking were at 1% decreasing of the
2013 prevalence, there would have no significant reduction in number of deaths attributable to smoking both for male and female.

Table 4. Sensitivity analysis of smoking prevalence and SAF and number of deaths attributable to smoking and premature mortality costs

<table>
<thead>
<tr>
<th>Analysis and variable</th>
<th>Prevalence</th>
<th>SAF</th>
<th>Number of deaths attributable to smoking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Analysis</td>
<td>64.90%</td>
<td>2.10%</td>
<td>0.48</td>
</tr>
<tr>
<td>Sensitivity analysis:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prevalence increase</td>
<td>71.50%</td>
<td>2.31%</td>
<td>0.50</td>
</tr>
<tr>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15%</td>
<td>74.75%</td>
<td>2.41%</td>
<td>0.51</td>
</tr>
<tr>
<td>20%</td>
<td>78%</td>
<td>2.52%</td>
<td>0.52</td>
</tr>
<tr>
<td>25%</td>
<td>81.25%</td>
<td>2.62%</td>
<td>0.53</td>
</tr>
<tr>
<td>Prevalence decrease</td>
<td>58.50%</td>
<td>1.89%</td>
<td>0.48</td>
</tr>
</tbody>
</table>

DISCUSSION

This study was the first attempt in estimating mortality attributable to smoking in Indonesia. Smoking is currently a very important determinant of mortality among Indonesian, accounted for 7.23% of national total deaths(9). However, the proportion of deaths caused by smoking exhibited large variations among different sex (for men 95% of total mortality and female 5 % of total mortality). In addition, the number of smoking attributable deaths varies according to trend in the number of deaths from diseases.

It predicts that the number of smoking-attributable deaths will remain high and relatively unchanged, primarily because of increases in population size (particularly among older age groups). At present, cohort of smokers with highest peak prevalence still not reached the ages with highest incidence of smoking attributable diseases especially in cardiovascular diseases, therefore the highest prevalence of these deaths will be occur in the next 20-30 years. Currently, non-communicable diseases (NCDs) account for 63% of total deaths in Indonesia(9). In
the case of Indonesia, cancers and cardiovascular diseases have the largest contribution to NCDs mortality. Hence, the country is still clearly grappling with a double burden of disease. Given that health spending in Indonesia is a mere 1.3% of GDP (10).

The findings were similar to Chinese’s study that found the Chronic obstructive pulmonary disease and lung cancer make up a much larger proportion of total smoking-attributable deaths (11). However, it should be acknowledged that regional differences in nutritional, behavioral, and environmental factors and medical care, makes different in the trend of diseases’ risk factors. Parallel to changes in these risk factors, smoking increased substantially in most developing countries over the last quarter of the twentieth century, with an estimated 930 million of the world’s 1.1 billion smokers currently living in the developing world(1).

Compared to the earlier estimations on SAFs in Indonesia (4), this study represents a major improvement in two ways. First, the RR of current smokers versus non-smokers was provided by recent published articles that provided comprehensive smoking exposure and mortality data. Second, the prevalence rate of smoking among male and female came from the current Basic Health Survey database. These data represented the 95% of the total population. Therefore the current estimation of SAFs was more precise. Smoking attributable fractions are higher for lung cancers and bronchitis/emphysema than pneumonia; however, because of the absolute number of deaths is highest for pneumonia, it contributes a large number of smoking-attributable deaths.

The results of the present study show that cigarette smoking cost the Indonesia economy an estimated IDR31,268,885 million (USD 2,761 million) in 2013. This confirms that the highest prevalence of smoking in Indonesia among ASEAN countries imposes a substantial economic burden as well as a considerable public health impact.

Productivity lost presented by years of potential life lost show that YPLL total accounted for an estimated 2.6 million in total YPLL. Most smoking attributable YPLL were related to pneumonia, lung cancer, and mouth and oropharynx cancer. A huge number of Indonesian YPLL captures substantial potential lost productivity due to disease mortality attributable to smoking.
The findings in this report are subject to limitations. First, the estimates understate deaths attributable to tobacco use because did not take into account former smokers. Estimates of deaths attributable to pipe smoking and smokeless tobacco use were also unavailable. Second, RRs were based on published studies in developed world which was might have had different smoking histories such as age of initiation and duration of smoking before quitting, rather than current or former smokers. Third, this report used mortality data from 5 hospitals only, therefore mortality of attributable to smoking might be underestimate. Uncertainty nonetheless remains, especially in Indonesia where both complete mortality records and detailed studies of disease risk factors are less common. Therefore, comparing the results from previous studies that used similar approaches to quantify the economic impacts of smoking is needed. Moreover, premature mortality costs understate the total costs of smoking because costs associated with smoking-related disability, health care expenditure related to smoking were not included.

CONCLUSION

Cigarette smoking continues to impose substantial health and financial costs on the society. The prevalence based, disease-specific analysis described here shows clearly that the health and economic impact of smoking in Indonesia are very dramatic, and should be reduced by implementing smoking cessation and related tobacco control policies in order to reducing the high prevalence of smoking in Indonesia.

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References


