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MASTERS DISSERTATION IN PUBLIC ADMINISTRATION

Cigarette tax: is it an answer for Indonesia's national health insurance deficit?

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ABSTRACT

The Indonesian national health insurance or Jaminan Kesehatan Nasional, known as JKN, has experienced a deficit since the first-year implementation. Consequently, if the deficit is allowed to continue, the Indonesian public health system is likely to collapse. Therefore, in 2018, the Indonesian government promulgated a policy to allocate 37.5% cigarette tax revenue earmarking as one alternative to resolve the deficit. This study aims to perceive the effectiveness of this policy by addressing several queries: why utilise cigarette tax for resolving the deficit? how does it work? and can it support the deficit settlement? The analysis is based on the references from primary and secondary data, documents, and regulations, combined with the review of preliminary studies and other related literature. Finally, this study reveals that the utilisation of a cigarette tax revenue portion is insufficient for covering the deficit, and the government should seek other options to supplement this policy. However, the deficit has a positive impact; the national health insurance membership coverage is broader than in previous years.

Keywords: deficit JKN, cigarette tax, cross-subsidising, central and local governments

CHAPTER 1
INTRODUCTION

1.1. Background

In 2014, Indonesia made a breakthrough in health insurance reform. It was eager to achieve universal health coverage, a national health insurance that covered all Indonesians. The national health insurance, known as Jaminan Kesehatan Nasional (JKN), operated under the Social Security Administered Body for Healthcare, or Badan Penyelenggara Jaminan Sosial Kesehatan or BPJS Kesehatan, and instigated by Act No. 24/2011, to ensure all Indonesians are covered by comprehensive, equal, and fair health insurance services, including the provision of affordable healthcare facilities. It was expected that these services would increase gradually every year and eventually be available to the whole population in 2019. In the long term, some scholars predicted that the JKN would increase life expectancy of Indonesians, concomitant with easier access and affordable health facilities.

However, the insurance scheme failed to reach its target as only 84% of the population was covered at the end of 2019 (BPJS Kesehatan 2019a). Some scholars and practitioners have predicted that this situation could lead to its financial failure in following years. Additionally, this insurance scheme was not only the most extensive universal healthcare program in the world but also the cheapest, for its members were only required to pay IDR25,000 to IDR80,000 per month or equivalent to USD1.69 to USD5.42 (Ahsan 2018b). Problems arose when the contribution from members was below agency spending on hospital claims and other services. The JKN program experienced a deficit when it could not discharge claims on time. Indirectly, the deficit was also attributed to the large number of smokers in Indonesia leading to an increase in catastrophic diseases, thus by August 2018, (BPJS Kesehatan 2019b) reported that the funding for catastrophic diseases had reached 21.7% of total JKN spending. WHO (2018a) declared that in 2018, the number of smokers in Indonesia had reached 61.4 million in 2018. This number is not surprising given that Indonesia is the second largest tobacco market in the world; and consequently, has become one of the main targets of the tobacco industry (*The Global Cigarette Industry* 2018). Furthermore, the price of cigarettes in Indonesia has remained relatively cheap and therefore easily attainable. In 2016, the average cigarette price was IDR19,116.3 per pack, or equivalent to USD1.30 (Zheng et al. 2018).

The tobacco industry is recognised as a most profitable yet deadly business. As reported by World Bank (1999, p. 196), one in ten adults is alleged to have been killed by smoking tobacco. It is estimated that by 2030, that proportion will increase to one in six people, or result in approximately 10 million deaths per year. The most alarming aspect of chronic disease and premature deaths caused by smoking has been its rampant shift from advanced countries to developing nations. Moreover, the World Bank (1999,

p. 196) has also predicted that by 2020, seven of every ten individuals will die from smoking in low and middle-income countries. Many governments seek to solve this problem by imposing taxes on tobacco and its derivative products (Blecher 2010). While this policy can support Government advocacy in its tobacco control campaign, a policy reducing excessive use of tobacco is still a controversial issue among the public.

Commencing in 2018, the Indonesia government ratified a new policy that used an approximate one-third portion (37.5%) of cigarette tax revenue as one strategy to cover the deficit of the JKN. As stated in the Act No. 28/2009 on Local Taxes and Charges, cigarette tax is categorised as a local tax. It is imposed by central government and then allocated to local governments' budgets. Half of cigarette taxation income must be allocated to public health services; law enforcement against illegal cigarettes and the promotion of smoke-free public areas. The practice of allocating a portion of cigarette tax revenue to fund national health insurance is already in place in several countries, such as the Philippines and Romania (Ahsan 2018a), where success in expanding their national health insurance and advancing universal health care coverage is due to the use of earmarked funds, especially from sin taxes (tobacco and alcohol). In Indonesia, this policy is enacted under the umbrella of Presidential Regulation No. 82/2018 on Health Insurance. It is expected that this new policy will be effective and can support the government in resolving deficits in the JKN.

Acknowledging these issues, this study is interested in an in-depth exploration of the policy's background as well as its effectiveness at the implementation stage. As this policy can be classified as a new policy and still evolving, to assess its effectiveness may be unduly premature. Some preliminary studies may have focussed on the causes of the deficit as detected since its year of implementation, but little has been done to examine the efforts undertaken by government to resolve the national health insurance deficit, as mentioned above, apportioning 37.5% of cigarette tax revenues as a contribution to national health insurance. This study will argue that this policy is still ineffective in covering the deficit; thus, the Indonesian government should find other options to supplement the cigarette tax revenue allocation. Through investigating the origin of the deficit and the reason behind using cigarette tax revenue to overcome the deficit, as well as analysing the challenges and implications of the implementation, it is expected that this study will consider innovative ways on how to cover the deficit, such as raising the contribution and using other forms of tobacco charges.

This study is structured into six sections, beginning with the background, the study objectives, the study limitation, and the outline of research methodology. Then, it will provide the literature review on several theories related to the issue, comprising the general concept of cigarette tax and in terms of the Indonesian context, the notion of a national health insurance, and a broad description of its implementation in Indonesia as well as the deficit that is currently faced. The next section will depict

the conceptual framework of the study, showing the causal link between the resources and outcomes expected from the policy. It will be followed by the presentation of findings which will be discussed and analysed further in the fifth section. Eventually, this study will draw a conclusion based on the evidence collected and provide some recommendations for the government to resolve the deficit as well as suggestions for future studies.

1.2. Objectives

The overall objective of this study is to examine whether this new policy could be a solution for the deficit problem faced by the JKN. The likely possible implications of the enactment of this policy will also be scrutinised. Furthermore, the specific objectives are:

1) To develop the basic understanding of the enactment of cigarette tax policy in Indonesia.
2) To develop an understanding of the implementation of the JKN as a form of Indonesian national health insurance to attain universal health coverage for all Indonesians.
3) To explore the deficit financial problem faced by the JKN program.
4) To investigate the antecedent of this new policy formulation.
5) To comprehend the level of compliance of local governments towards the national regulation using examples from this new policy.
6) To examine how the new policy will influence policy making related to local tax and national healthcare systems in Indonesia.
7) To identify the challenges of implementing those lessons in the Indonesian context.

1.3. Limitation

As this study will discuss the Indonesian context, data and information not publicly accessible needs to be collected in Indonesia, however, the author is based in Adelaide, Australia. The distance between the two countries suggests that this study will be costly and complex in terms of a viable timeframe. Nevertheless, using online communication will minimise the risk. Also, given this policy is new and little has been done to explore it more thoroughly, there may be a possible risk of not finding available domestic literature related to this subject. To manage this issue, the author has communicated with several colleagues in Indonesia who are involved in this particular policy development. The author can also examine the related institutions' websites and publications to gather the updated information. Thus, the limited preliminary studies will be complemented by these efforts.

1.4. Methodology

This research project is a qualitative research that employs the qualitative approach of policy analysis to answer the research question by conducting document analysis and reviewing the secondary data. Qualitative research aims to investigate the existing phenomena that affect the individual's or communities' lived reality, particularly in a cultural and social context (Mills & Birks 2014, p. 2).

Moreover, a qualitative approach is a methodology used in research to identify why and how a phenomenon occurs (Denzin & Lincoln 2000; Silverman 2000, cited in Srivastava and Thomson 2009, p. 73), and to acquire a clear picture of the phenomenon by providing in-depth analysis and exploratory tools. The qualitative method is viewed as relevant to the objective of this study that examines the extent to which this new policy, ratified by the Indonesian government, is effective in its implementation. Here, effective means that the budget deficit being faced by the JKN can be resolved by allocating approximately a one-third portion of cigarette tax revenue.

In addition, using the qualitative method is in line with the needs of the study that is seeking to understand the underlying reason of why this policy has been enacted; the relationship between cigarettes and healthcare; the related policies, and the subsequent implications. The exploration of literature was conducted via Google Scholar, Flinders University Library, Springer Link, Taylor & Francis, ProQuest, and Elsevier databases. The author has used the variant search of keywords and queries, for example, 'cigarette tax', 'cigarette taxation earmarking', 'cross-subsidising', 'national health insurance', 'social security system', 'tobacco control', 'regulation', and 'deficit'. The preliminary research projects relating the debate on cigarette tax, cigarette tax policy, the earmarking of cigarette tax revenue, Indonesia national health insurance deficit, and any best practice from other countries are also subjects to be searched.

Furthermore, document analysis of related regulations helped to provide background information about the objectives of this new policy. The copies of those policy documents were obtained from the official website and publications of the related ministry and institutions, such as Ministry of Finance, Ministry of Health, and the Social Security Agency for Healthcare or BPJS Kesehatan as the coordinator agency of Indonesian national health insurance. Besides, other publicly accessible data, including laws, regulations, financial reports and relevant statistics from those websites, were also evaluated to gather a comprehensive understanding of this new policy. Additionally, public opinions and the latest information about public behaviour toward the implementation of this policy were collected through reviewing the national electronic newspaper. Aside from that, the review of national studies is beneficial in exploring various insights from the domestic perspective. (Silverman 2013, p. 33) argues that internet study is rich of 'naturally-occurring' sources. It allows us to scrutinise past events as they are automatically archived and use it for future references. However, the selection of news, mailing lists, or other synchronous media should be appropriate and match the points addressed.

Finally, this study utilises the conceptual framework that was developed to build the causal link between the research question and the outcomes. As Jabareen (2009, p. 51) has defined, 'the conceptual framework is "a network" or "a plane" of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena'. Specifically, the conceptual framework describes the

process as to why this policy was implemented and how it works to achieve the intended objectives. It is a synthesis of interrelated concepts that are linked together to constitute unity of process or activity to attain the ultimate impacts. In this study, the conceptual framework is built from several concepts developed in the literature review section. The concept of cigarette tax and its implementation, cross-subsidising, and the JKN are combined to provide fundamental understanding for examining and analysing the findings and to address the research question. Eventually, this study aims to assess the effectiveness of the policy: allocating 37.5% of cigarette tax revenue for resolving the deficit problem faced by the JKN, through examining the background of policy formulation and its implications. Thus, it is expected that an argument for the implementation of this policy and its link to the deficit settlement can be developed.

CHAPTER 2
LITERATURE REVIEW

Chapter 2 reviews the literature related to the cigarette tax and national health insurance of Indonesia. This section is divided into four sections. The first section introduces the concept of cigarette tax and how it is implemented in terms of public policy. The second section describes the implementation of cigarette tax in Indonesia. The third section presents several perspectives on national health insurance, while the last section depicts the situation faced by Indonesian health insurance which experiences financial difficulties in its operation. This literature review provides the baseline understanding of the problem and addresses the research question: "Can the deficit problem of Indonesia's National Health Insurance be resolved with allocating a one-third portion of cigarette tax revenue?"

2.1. Cigarette tax

2.1.1. The concept of cigarette tax

Government imposes taxes to boost national revenue and formulates policies as the legal umbrella to implement that practice. One of those is the imposition of tax on tobacco and its derivative products, is selected as the demand is inelastic -it will not be affected by the fluctuating price or condition, therefore, making tobacco as an easy-to-gain revenue (Chaloupka et al. 2000). Many countries conduct this practice; they collect tobacco tax otherwise known as cigarette tax, as one of its sources to raise revenue (Warner et al. 1995; Zimring & Nelson 1995); Canada, USA, UK, Australia, Taiwan, China, Indonesia, and Cambodia, to name but a few (Hu, T & Mao 2002; Hu, T-w et al. 2016; Hyland et al. 2006; Lee et al. 2005; Liber et al. 2015). WHO confirms that revenue gained from tobacco taxation can only be significant for some low-income countries where resources seem inadequate (WHO 2012). There are four main reasons to impose cigarette taxes, namely the necessity to increase state revenue; the perception that smokers should carry the health cost of cigarette smoking themselves; protecting future generations from the negative impact of cigarette usage, and the intention to improve public health (Warner et al. 1995). Moreover, imposing a tax on cigarettes may intentionally serve the purposes of 'efficiency' and 'deterrence', where efficiency refers to the price increase of cigarettes to a level that fully reflects the social cost generated by cigarette consumption, and deterrence is associated with the government's effort to induce particular behaviours (Zimring & Nelson 1995, p. S25). Here, the taxation imposed on cigarettes aims to encourage smoking cessation programs, for it endangers human health.

However, the imposition of cigarette tax remains controversial. The rise of cigarette consumption is considered to result in premature death and long-standing illnesses in countries with a low to middle-income demographic. The World Bank has predicted that by 2020, seven out of ten people will die due

to their smoking habit (World Bank 1999, p. 196). While some works of literature correlate taxation on cigarettes with advocacy for tobacco control (Blecher 2010), a study by Jha & Chaloupka (2000) asserts that countries that are highly dependent on tobacco farming, a diminished local demand would have minor impact, while a global fall of tobacco demand would contribute to a decrease in job opportunities. Hu, T and Mao (2002) also state that an increase in cigarette tax will have adverse impacts on cigarette industries' operational revenue and will weaken tobacco farmers' income. Wilson & Thomson (2005, p. 649) add that taxation on tobacco may lead to an 'unjust tax burden', increase financial problems faced by low-income societies and undermine smokers' autonomy. However, some studies find that there is an inverse relationship between the price of the cigarettes and cigarette consumption (Guindon, Tobin & Yach 2002), where increasing the price of cigarettes reduces the consumption. A diminishing demand for cigarettes, therefore, can have a positive impact on reducing health impairment. However, since increasing cigarette tax is deemed as a catalyst in escalating governments' revenue and promoting public health through tobacco control, policy makers are motivated to select this contentious way (Blecher 2010).

In administering cigarette taxation, decisions regarding the tax rate and its structure are assigned to the Ministry of Finance as the institution responsible for national revenue (WHO 2015b). Other countries also earmark or dedicate a portion of revenue from cigarette tax to fund specific purposes (Sassi, Belloni & Capobianco 2013). Australia, Nepal, Thailand and 48 WHO related European territories are among those that implement earmarking policies mostly for tobacco control and public health programs (Jha et al. 2006). For example, Victoria, one of the Australian states, was the first jurisdiction which allocated the revenue portion from tobacco taxes to establish a health promotion agency, and some US states, such as California, Massachusetts, Arizona, and Oregon, apportion tobacco tax revenue for advocating tobacco control activities, tobacco-related education, and counter-tobacco advertising (Chaloupka et al. 2000). The Government of Argentina earmarks tobacco tax revenue to finance programs related to health and social aspects (WHO 2010, 2012). A study by WHO in 2008 provided other examples of cigarette tax earmarking practice in Pakistan and Vietnam, which showed that the revenue from cigarette tax generated by a 50% tax increase, were equal to 31% and 26% of government expenditure in health sector in Pakistan and Vietnam, respectively (WHO 2012, p. 4). It can be seen as unjust when some governments prefer to apportion cigarette tax revenue for general government spending instead of tobacco control reasons. As a consequence, the health costs to smokers who contribute in generating revenue from cigarette taxes are not addressed properly (Goodin 1990), and non-smoking households benefit from general government spending derived from tobacco taxation (Wilson & Thomson 2005).

Enforcing taxation on a 'sin tax' like tobacco will always cause debate. However, most governments decide to stay with this policy not because they are avoiding the health cost caused by cigarette usage, rather they earmark cigarette tax to finance public health-related programs, law enforcement in the

public health sector, and tobacco control. It is expected that this policy can achieve its purpose; improve national income and become a strong advocate of tobacco control.

2.1.2. Indonesia context: the imposition of cigarette tax

A study conducted by Thabrany and Laborahima (2016) found that smoking cigarettes has been the primary factor for 'non-communicable diseases [NCDs]' resulting in 217,400 deaths annually in Indonesia. Moreover, (WHO 2015a) predicted that the numbers of Indonesians who smoked could increase to 45% in 2025. Lower cigarette prices due to the design of the cigarette excise system retains the tobacco products' affordability (Barber & Ahsan 2009) and is the factor that significantly contributes to the high rate of smoking. To date, Indonesia is still one of nations with the highest proportion of tobacco usage. About sixty-one million Indonesians make up the current 34% of tobacco users, 67% of whom are males - and another significant number are exposed to second-hand smoke. These is also at an increased risk of cardiovascular disease, the highest cause of death in Indonesia which accounts for more than 36% of all deaths, including those who die prematurely (WHO 2018a). A study by (Kaufman et al. 2015) found trends to behavioural change in relation to smoking are emerging within societies. Concern about smoke-free environments and the risks of second-hand smoke have increased, and the study participants that represent the community believe that further visible promotion by using role models, for example, community elders, health practitioners, certain celebrities, and religious leaders, will help the government in advocating tobacco control. Other campaign modelling, such as mini dialogues on radio inviting regular citizens or advertising by the related public office, would also be essential. More support from government and law officers, and the reinvigoration of efforts to promote and enforce smoke-free area policy, may encourage Indonesia to be more confident in protecting non-smokers from the hazardous effect of second-hand smokers. Practical tobacco control actions are urgently needed to resolve this problem. In addition to the tobacco excise, the Indonesian government imposes the cigarette tax in order to enhance public health and reduce illnesses caused by tobacco or tobacco products.

Cigarette tax was introduced in Indonesia in 2014 as a result of the ratification of Act No. 28/2009 on Local Taxes and Charges. Based on this law, the cigarette tax is the charge or levy on cigarette excise managed by the government. The tax is imposed on cigarette consumption, and the rate is set at 10% of cigarette excise. Cigarette tax rate is regulated in law to serve the government's purpose of maintaining the equilibrium between the excise burden carried by the cigarette industry and national and local fiscal needs. The collection of this tax has a point of difference to other taxes, which is the tax officer is a government institution, but the revenue derived from the tax collection will be delivered to the local budget in proportion to the number of citizens. Hence, it becomes the reason for categorising cigarette tax as a local tax and part of the local government revenue. Indeed, this policy is considered in line with local taxing power as an effort to optimise local own-sourced revenue.

From the beginning of the enactment, the cigarette tax levied in Indonesia has faced several challenges, despite the government's desire to reduce tobacco usage but increase national revenue at the same time. Indonesia is a global target for the tobacco industry, given that Indonesia is the second largest tobacco market in the world (*The Global Cigarette Industry* 2018). Indeed, while tobacco industries play a significant role in supporting the national economy, ethical issues which relate to tobacco and its derivative products, their adverse impacts on public health and the environment, also need to be addressed (Rachmat 2016). Inevitably, the state chose to maximise the revenue at the cost of the health of its citizens by a tax on tobacco, classifying it as 'sin taxes - taxes on detrimental products and activities'. A conflict of interest may happen between the health sector's protection of citizens from harmful products, and the economic sector with its need for continuing sales of those products (Haile 2009, p. 1043).

To address these challenges, Act No. 28/2009 has regulated the earmarking of cigarette tax revenue, and assigned the local government to allocate a minimum of 50% of the revenue for funding public health services, for example, maintenance of public health areas, the provision of distinct smoking areas, and advertisements educating people about the risks of smoking. Other earmarked taxes are designed specifically for law enforcement to eradicate the circulation of illegal cigarettes. In addition, the Indonesian government has recently launched a new policy to cover the Indonesian health insurance deficit by using an allocated portion of tobacco excise taxes. The previously described earmarking regelation serves as a legal basis of this new policy.

2.2. Cross-subsidising

2.2.1. Concept of cross-subsidising

Generally, the concept of cross-subsidising refers to the practice where all costs applicable to a particular service are allocated to another service (Fjell 2001, p. 267). Specifically, it is a term used when some portion of revenue is transferred from profit-making services to subsidise the unprofitable one (David 2019). It is a typical financial and economic issue yet debatable. When a tax system enactment is viewed as inefficient, cross-subsidies may be used as a second-best mechanism, as long as the state has the political will and institutional capability to implement it (Laffont & N'Gbo 2000, p. 805). However, economically, cross-subsidising could be the best policy choice under four conditions: first, cross-subsidy can identify higher-ability-to-pay taxpayers better than the conventional income tax system. Second, cross-subsidies may serve as a "beneficial tax", whereby people's willingness-to-pay will increase because they can fill their needs by paying the tax. Third, cross-subsidies may help governments reduce the amount charged to the individual. Fourth, cross-subsidies can stand as a "hidden tax" (Brooks, Galle & Maher 2017, p. 1231), an invisible tax, which raises the price without the taxpayers knowing it, for example, cigarette tax, alcohol tax, and the cost of hotel rooms.

Nevertheless, some economists have claimed an inefficiency of cross-subsidising in the economic context (Brooks, Galle & Maher 2017, p. 1231). These claims are based on two fundamental principles of modern public finance economics. First, governments should impose taxes equally, but cross-subsidies allow for an inequitable tax imposition on individuals. Second, the tax burdens should be equally divided and involve the highest possible number of taxpayers; yet cross-subsidies only look to focus on narrower taxpayer groups. Cross subsidies are integral to various markets and regulatory frameworks, and the best example of the practice is the health insurance market (Brooks, Galle & Maher 2017, p. 1236).

2.2.2. Cross subsidising in public sector: the practice

In the public sector context, cross-subsidising is a part of fiscal policy, and is needed by the governments to stimulate healthy behaviours including health services and health insurance for all citizens. Policy instruments used are taxes and subsidies, and the delivery of free healthcare services or at a subsidised rate, for example, taxes on alcohol and tobacco, and subsidies on particular foods (Knaul & Nugent 2006, p. 211). Government intervention regarding earmarked tax revenue allocated for healthcare services is also discussed by Cashin, Sparkes and Bloom (2017, p. 44), who state that when it comes to tobacco or cigarette taxes, the tax base is the product's users, and the earmarked funds cross-subsidise actions toward anti-smoking initiatives.

In contrast, the tax base of payroll tax might be the salary of all formal workers in a country, and the funding base has political consequences especially when there is a weak relationship between tax revenue and the benefit gained. For instance, the decision to increase the cigarette tax rate will be considerably more politically acceptable compared with increasing the rate of value-added tax or income tax. Additionally, earmarked tax revenue can also be devoted to cross-sector programmes involving institutions beyond the Ministry of Health (Cashin, Sparkes & Bloom 2017, p. 44), for instance, programs to support mothers who have tested HIV-positive might comprise non-governmental organisations or private agencies in providing additional funding, training and education related to health services and interventions.

All health-related purposes are subject to the hypothecated revenues mentioned above and undeniably can boost public and political trust when particular taxes are levied. It also garners support from the public health community, such as NGOs, scholars, and health practitioners which matters as the offset of influence carried by industry interests. However, governments should uphold their initial commitments to earmarking policy when the taxes are implemented. Failure to abide by the policy may provide lobbying opportunities for those controverting the tax and distorting pre-existing public and political support (Wright, Smith & Hellowell 2017, p. 12). Smuggling and illegal markets of sin goods are other key weaknesses that arise from the use of tax for health policies. The frequency of contraband

trade in excise goods such as tobacco and alcohol increase each year (Knaul & Nugent 2006, p. 219). Moreover, even though policy-related taxation earmarking is in place to provide health insurance for the uninsured, it is worth noting that covering a significant number of uninsured individuals will need vast amounts of funding (Gruber & Levitt 2000, p. 85).

Cross-subsidising between different sectors is a typical public policy issue, which aims to synergise all sectors under the government's coordination to achieve its national goals. Using the cigarette tax to fund the national health insurance is one example to describe this cross-subsidising policy. Hence, it can be pointed out that the government can provide guaranteed health insurance benefits through apportioning revenue from general taxes.

2.3. National health insurance

2.3.1. Concept of Social security system for healthcare

The notion of social security refers to an aid, help or support in the form of monetary assistance to the least-advantaged people within one country. Some literature provides a more expansive definition of the social security concept. Van Ginneken (2003) classifies social security into four elements; first, social security ensures the individual's right and entitlement; second, social security stands in the context of public or collective and voluntarily, which underlines not-for-profit arrangements; third, the general objective of social security is protection but which should not be identified with economic and employment policies; and fourth, the focus of social security is not only about the limited scope of possibilities, but also about the reduction of household spending on their primary necessities, for example, housing, food health care, and education. Thus, it can be concluded that the system of social security has been established based on four elements, that is, 'coverage, benefits, financing, and administration'. The similar point of view has been contended by Pieters (2006), who asserts that social security is an arrangement for shaping societal solidarity with people who will experience lack-of-income threats. In addition, he presents the most well-known views of social security. The first is social insurance, which consists of the traditional *Bismarckian* social security system for financing comprehensive healthcare and maternal healthcare while the *Beveridgian* social security system guarantees a basic income for those with insufficient resources for family or individual needs. The second is social assistance which provides income support for vulnerable persons.

In the Indonesian context, the social security system is administered by Indonesia's social security administering body or Badan Penyelenggara Jaminan Sosial/BPJS. It focuses on the healthcare and employment insurance. This independent institution, established in 2014, is based on Act No. 24/2011 on Social Security Administering Body, and is directly accountable to the president.

2.3.2. Concept of national health insurance

Providing the best and affordable healthcare services have been an important role of governments in achieving healthy and prosperous societies. Yet how the services are funded in order to achieve a sufficient healthcare standard still remains a question (Carrin & James 2005). Governments may exempt taxation of medical expenditure or subsidise private insurers; they may also create government insurance programs or so-called national health insurance programs to ensure that the delivery of healthcare services can reach all of population (Immergut 2001). Such programs are tantamount to the universal coverage design, that is, to provide accessible and affordable healthcare services. The universal coverage comprises two elements: 'healthcare coverage [adequate healthcare] and population coverage [healthcare for all]' (Carrin & James 2005, p. 46). However, even though health insurance is common to most countries, how the public of each country obtain that insurance is varied. For instance, most countries treat health insurance as universal coverage, in which everyone is qualified and required to pay for it. In Canada, health insurance is financed through taxation, where the employer is obliged to pay payroll tax which will be utilised by the government to provide health insurance. Other states collaborate with private insurance agencies to provide health insurance for the citizens -individuals or the employer pays a contribution fee to the health insurance companies, which then provide national health insurance (Cutler & Zeckhauser 2000). The government of Ghana utilised a tax funded system in financing its health care program after its independence, providing free health care services to all citizens (Blanchet, Fink & Osei-Akoto 2012).

Research by Carrin and James (2005) offers two alternatives to achieve universal health coverage; first, national health insurance which uses general tax revenue as the main source of financing the health system; second, social health insurance, which is mandatory, in principle, for all citizens whereby they ought to pay contributions to the insurance fund. The form of contributions is varied, such as a portion of workers' salaries for workers and enterprises, and from an estimated income for the self-employed. For those who may not be able to pay the contributions fee, such as the unemployed and low-income workers, governments could provide them with subsidies. Undoubtedly, insurance has a main role in the health care sector (Cutler & Zeckhauser 2000). In the United States, health insurance -either public or private- funds over 80% of health care expenses which greater than in other developed countries. The insurance then provides money to aid the health care system. Professor Hsiao, from the Harvard School of Public Health, developed the concept of a health system that involves five subsystems, namely 'organisation, regulation, financing from taxes which is the most important, payment systems and information, and public or private health insurance' (Rao 2004, p. 3836). Thus, it can be inferred that health care services will not achieve a higher standard without adequate support from the financing sector.

As one of the major schemes in health financing, social health insurance has two main characteristics; first, the contribution is paid regularly and is based on the wage or salary of the insured individual, and second, governments establish 'independent quasi-public bodies' or 'sickness funds' (Normand & Busse 2002). It should be emphasised that the funding for social health insurance is paid based on a combination of willingness to pay and the payment system which incorporates the flow of funds from contributors to the sickness fund. However, although those features are not a pre-eminent model of this insurance, they are considered essential since the position of social health insurance is mandatory in most countries. Feldstein and Liebman (2002) provide another alternative for funding this insurance through taxation, which is the allocated taxes from income tax and other payroll taxes can be used to finance the health care system as well as other government activities. Frenk et al. (2006) determine that in the social security scheme, health insurance is accessible for free delivery, funded from payroll contributions assigned from both employers and employees, with an additional fund allocated by the government from general taxes.

In managing the health insurance system, problems may arise despite being administered on a national scale or implemented at voluntary or community level. Frenk et al. (2006) identify the main issue of health insurance as being the high interest rate inherent in insurance programs, and which does not place all of the financial burden on the shoulders of government but divides the total cost of the insurance among the stakeholders. Additionally, as contributions for insurance may be affected by people's ability to pay, subsidies must be available for low- income citizens and the vulnerable (WHO 2013), impacting on the state's readiness in preparing funds for subsidising the insurance. Another challenge to be faced is that the health care demand is prone to increase while resources are deficient, thereby all countries should maximise efforts to ensure health spending is efficient and effective.

In summary, WHO has determined that national health insurance or universal health coverage in each country should comprise three objectives: provide equity in access for health services for all citizens without exception; ensure sufficient health services quality to improve the health of the beneficiary, and provide protection for all member from financial risk. The last objective aims to ensure that the cost of services is affordable at each level. All countries should prepare the policy properly to ensure that all citizens get the best health care services, albeit that resources are limited.

2.3.3. National health insurance: Indonesia context

The Indonesian social security system for healthcare has been established since Dutch colonialization era. It incorporates several schemes of health insurance and each of them target diverse population groups complemented by different benefit packages (Bi et al. 2014, p. 1). Those programs include:

1. Jaminan Kesehatan Masyarakat (Jamkesmas), or public health insurance: the largest health insurance program provided by the central government which targets 76.4 million poor and near poor.
2. Asuransi Kesehatan (Askes), or specific health insurance: the compulsory insurance-based contribution for public servants, police officers, and the military.
3. Jaminan Sosial Ketenagakerjaan (Jamsostek), or employment social insurance: the insurance-based contribution for private formal workers.
4. Jaminan Kesehatan Daerah (Jamkesda), or regional health insurance: the government-financed scheme insurance provided by 300 local governments varies in benefit and for targeted population.
5. Jaminan Persalinan (Jampersal), or maternal health insurance: this is the non-contributory health insurance scheme financed by central government that provides free services for maternal health, especially for those who are not covered by other insurance.

Undergoing significant changes, in 2014, the Indonesian government launched the largest single-payer scheme of national health insurance, which unified all the insurance programs above. This national health insurance titled Jaminan Kesehatan Nasional or JKN, and managed by Indonesian Social Security Body for healthcare, or Badan Penyelenggara Jaminan Sosial/BPJS Kesehatan and legalised under the enactment of Act No. 24/2011. BPJS Kesehatan assigned tasks as follows: accepting the register application, collecting contributions from members and employers, receiving contribution assistance from the government, managing social security funds in the interest of participants, collecting and managing data of social security participants, paying the benefit and/or funding the health services in accordance to social security program regulations, and providing information regarding social security programs to all participants and societies. BPJS Kesehatan is also mandated to manage two assets, the BPJS assets and social security fund (Dana Jaminan Sosial/DJS Kesehatan), the latter to be utilised as an operational fund for JKN and an investment instrument.

JKN aims to ensure that all Indonesians are provided and protected by comprehensive, fair, and equitable health insurance. Moreover, it intends to elevate the accessibility of health care for all by creating an adaptive and accommodative health system that is appropriate for the diversity of Indonesia, both now and for the future, including minimising the gap and preventing household bankruptcy due to severe illness (Agustina et al. 2019, p. 96). Instead of the tax-funding system, the mechanism of this insurance is employing a solidarity principle, where the burden of financing health care is carried equally by the members (Thabrany & Laborahima 2016). The coverage of JKN is expected to gradually increase every year and will reach all the population by 2019 (Bi et al. 2014, p. 1).

However, since inception, JKN has experienced liquidity problems or deficits in funding (Luthfi 2019; Mansyur 2019). Allegedly, this was due to inconsistencies between expenditure and individual

premium contributions. Expenditure on healthcare was much higher than the funding collected from premium membership, and evident from the low compliance rate of members in paying their obligation. These studies also report that roughly ten to twelve premium members did not pay the monthly contribution. The data from Ministry of Health of Indonesia in 2016 also confirmed that for over two years since it began, JKN has faced a tortuous situation, whereby claims from non-communicable diseases have increased and with most being from tobacco-related diseases. 22% of the total claim of chronic diseases such as cardiovascular, renal failure, cancer, and stroke, are paid for by JKN (Thabrany & Laborahima 2016, p. 2).

Concept of deficit

The concept of deficit is often associated with a lack of funding due to financial matters. Ishaq and Mohsin (2015) suggest that deficit can be resolved either by increasing revenue from taxes or reducing the spending, which is a popular policy in minimising deficit, although in developing countries bureaucratic bottlenecks of government could be a main challenge. Another option to solve the deficit can be undertaken by government selling off the state's bond to the public, but, since no new money is created by this activity, inflation will not occur. Indeed, the government or organisation must address this deficit problem, for it may lead to the failure of the financial system. In this research, the deficit refers to the failure of JKN in funding health care services for Indonesian. The contributions cannot meet the required financial operational costs which have gradually increased each year. It is vital that the national health insurance has a clearly defined systematic plan for sufficient resources supported by a strong financial base.

At the present time, a new policy paradigm of tobacco taxation has emerged in Indonesia using the cigarette tax revenue for funding the budget deficit of its national health insurance under the management of the Social Security Administering Body for healthcare or BPJS Kesehatan (Ahsan 2018b; Mansyur 2019) despite endless controversy. President Jokowi has promoted the Presidential Regulation No. 82/2018 where one of its articles states that the local governments should mandatorily support the implementation of Universal Health Coverage which would allocate a 37,5% portion of cigarette tax to fund the deficit problem.

Broadly summarised, this literature review provides current knowledge of the cigarette tax policy that will be utilised to find a solution for the deficit problem facing the Indonesian social security agency for healthcare. While evaluating the policy may be somewhat premature considering its position is still controversial between the economy, health, and social actors outside, this will be a unique study as it will focus on a new policy in Indonesia while it is still evolving. However, an evaluation will be needed to ensure that the enactment of this policy is accurate and on target.

CHAPTER 3
CONCEPTUAL FRAMEWORK

This chapter describes a conceptual framework and its efficacy in describing the causal link between variables involved in research and the outcome. Jabareen (2009, p. 51) defines the conceptual framework as 'a network' or 'a plane' that synthesises certain interrelated concepts to achieve a keen understanding of one particular phenomenon or phenomena. Huberman, Miles and Saldana (2014) make a point that either graphically or narratively, the conceptual framework describes critical points included in the research, such as variables, main factors, or constructs, and builds a hypothesis based on it. Ravitch and Riggan (2016, p. 5) have developed their definition of the conceptual framework as 'an argument about why the topic one wishes to study matters, and why the means proposed to study it are appropriate and rigorous'. The term "argument" refers to a logical sequence of the hypothesis to assure readers of the importance of the study; while "appropriate and rigorous" terminology means that the research question, research design, data collection, and the analytical approach match with the study goals and effectively address the study's issues. Smyth (2004, p. 168) states that the conceptual framework is 'the heart of the study', becomes the impetus of the research, consolidates it and keeps the research on track. It shows a clear linkage from the references to the ultimate goals of the research. It also communicates the research design, provides key points for discussing literature, methodology, and data analysis, and most importantly contributes to the trustworthiness of the study.

Joo (2005, p. 475) notes that a conceptual framework is the bedrock in constructing presumptions relevant to fundamental questions applied in some studies and determines 'what the antecedents of positive outcomes are, what the process [is that] leads to positive outcomes, and what outcomes [it] might achieve'. In this research, the conceptual framework provides the foundation to create relevant propositions from three questions: first, what are the precursors to outcomes in apportioning cigarette tax revenue to cover the JKN deficit; second, what are the processes already tried thereby driving this policy to positive outcomes, and third, what outcomes may be achieved by this policy. Furthermore, this conceptual framework is built based on the development of literature in the literature review section, that is, the concept of cigarette taxes, the concept of national health insurance, the theory of cross-subsidising, and each of those concepts' application in the Indonesian context. The design of a conceptual framework in this study will give a holistic picture of how this new policy works to achieve its purpose.

This research employs program logic in describing its conceptual framework. The University of Wisconsin logic model has been chosen as it provides logic sequences that integrate resources and methodology to achieve the ultimate impact. It also provides an opportunity to represent assumptions as well as lists of external factors that should be considered. More specifically, this framework theory

of change adapts elements of *diffusion theory*. Funnell and Rogers (2011, p. 335) state the premise of this theory indicates that change will occur when one novel idea is created, diffused, embraced, or even refused; thus, it will lead to particular consequences. In this study, the phenomenon sought to be addressed is that the Indonesian national health insurance program is experiencing deficit, thereby, it cannot provide comprehensive healthcare protection to its members. The Indonesian government attempts to find solutions to this issue, and one of the solutions chosen is apportioning 37.5% of cigarette tax revenue to cover insufficient funds. These assumptions are being built based on previous experiences and within existing regulations. Local governments, in a field operator role, are mandated to comply with this policy despite all the controversial aspects. Citizens, especially members of the JKN, would be certain to agree with the implementation of this policy. This policy is cross-sectoral and therefore, would involve many organisations from the formulation stage to evaluation.

Despite the preference of using a logic model to represent the conceptual framework, this study also utilises an outcomes hierarchy or outcomes chain model. WK Kellog Foundation (2004, p. 11) notes that this model shows the reciprocal relationship between particular activities and outcomes. The columnar model accentuates the causal linkages thought to exist among its components, while the arrows identify the links of particular activities which contribute to a specific outcome. According to (Rogers 2015), an outcomes hierarchy is defined as an approach that displays all outcomes, from short-term to longer-term, needed to accomplish the eventual goal as a result of the intervention. This approach is appropriate in the circumstances where activities occur at different stages and therefore this study will show that the activities are performed at various times along with the policy implementation. Thus, to gain a better understanding of how the outcomes interact and are interdependent, this approach will be essential to ensure that the timeline to assess progress is measurable. Through this outcome chain model, the stakeholders will also have opportunities to engage with and discuss the policy.

The conceptual framework of this study incorporates the ATM approach in developing the logic model. Renger and Hurley (2006, p. 107) explain that the ATM approach is a process that consists of three steps begins with identifying the root causes of the problem by asking the ‘why’ question. The second step is targeting the addressed antecedent conditions by which the interventions or activities are linked, and the last step is identifying the area of measurement to assess the effect of strategies and targeted antecedent conditions. In this study, the ATM approach will provide a visual representation of the rationale behind this new policy. Users will be able to understand underlying reasons as to why the JKN experiences deficit and why cigarette tax revenue has been chosen as an alternative to support the deficit settlement. In other words, this approach will allow users to comprehend why those activities depicted on program logic are undertaken, why those outcomes listed in program logic are supposed to be achieved, and how those outcomes will be completed successfully.

In brief, this conceptual framework illustrates a causal link, or cause-effect relationships, with all the factors related to cigarette tax and its utilisation in handling the deficit of the JKN. It integrates theory and research from several works of literature, such as cigarette tax, cross-subsidising, national health insurance, and the Indonesian profile related to the issue. In this study, program logic and an outcomes hierarchy model are employed to illustrate the conceptual framework to provide a better understanding of how this study works, and what outcomes result from the preliminary activities. The elements incorporated in this conceptual framework support have become the baseline for the following section.

Figure 1. Program Theory

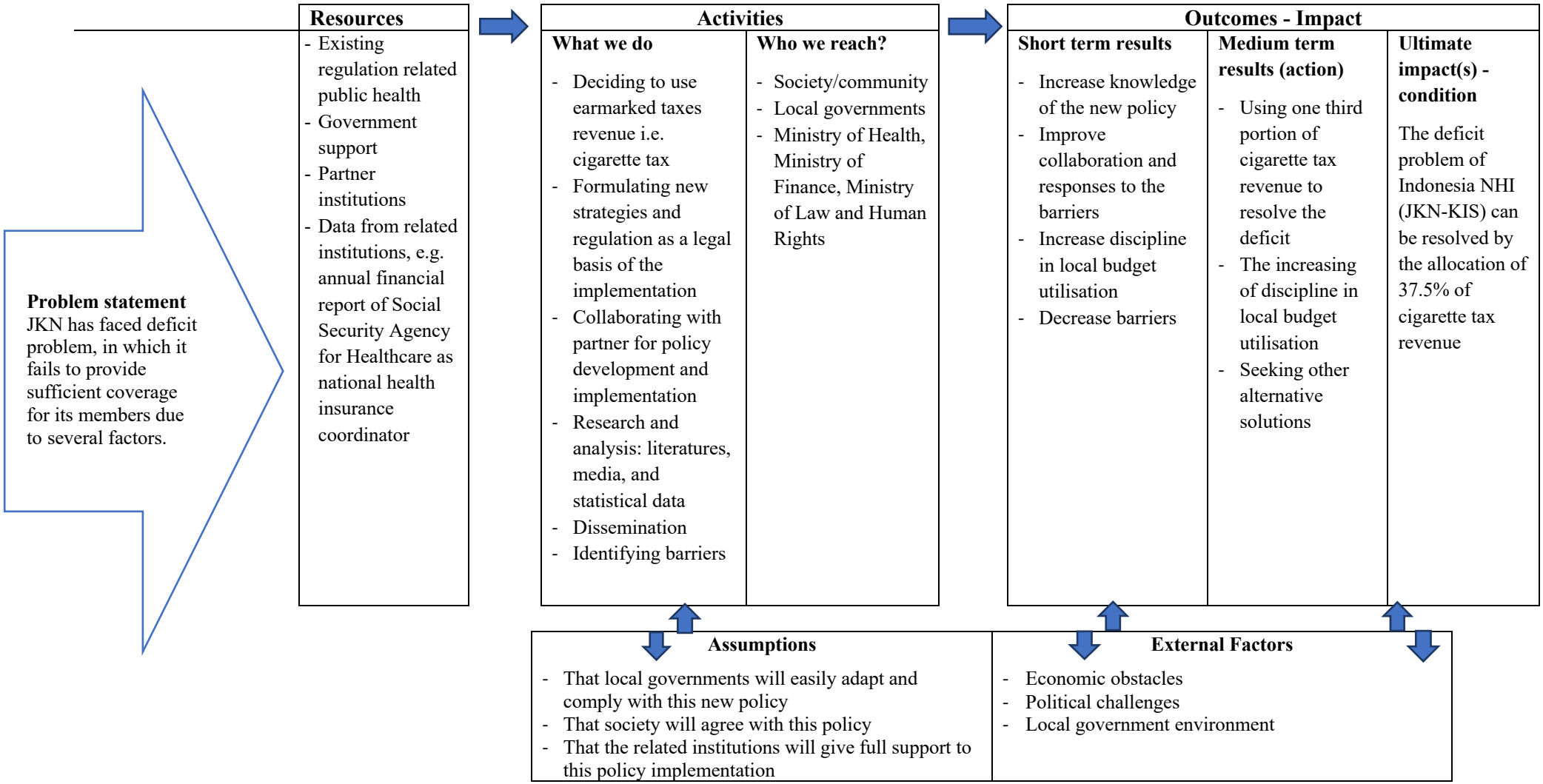


Figure 2. Outcome Chain

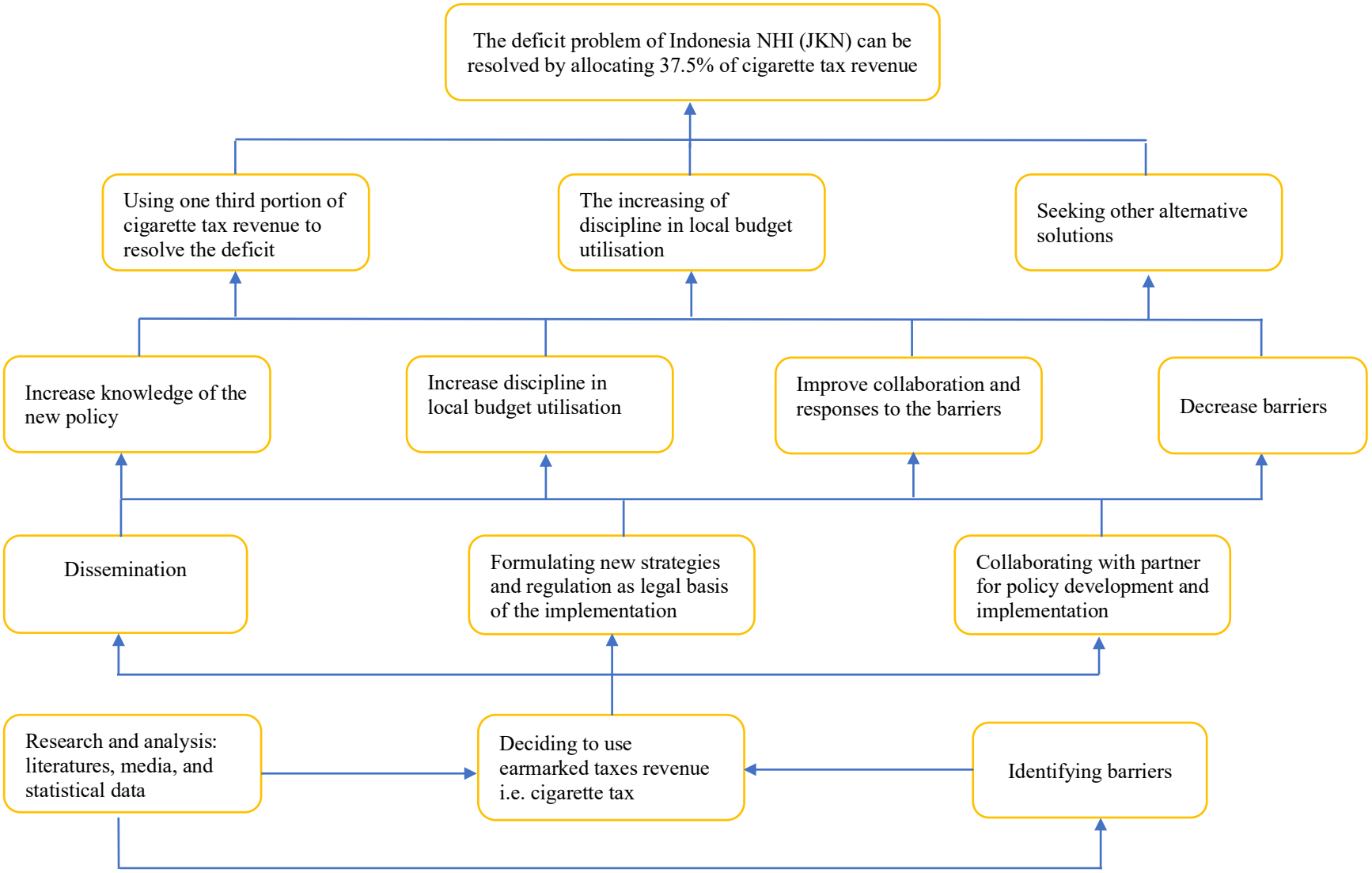
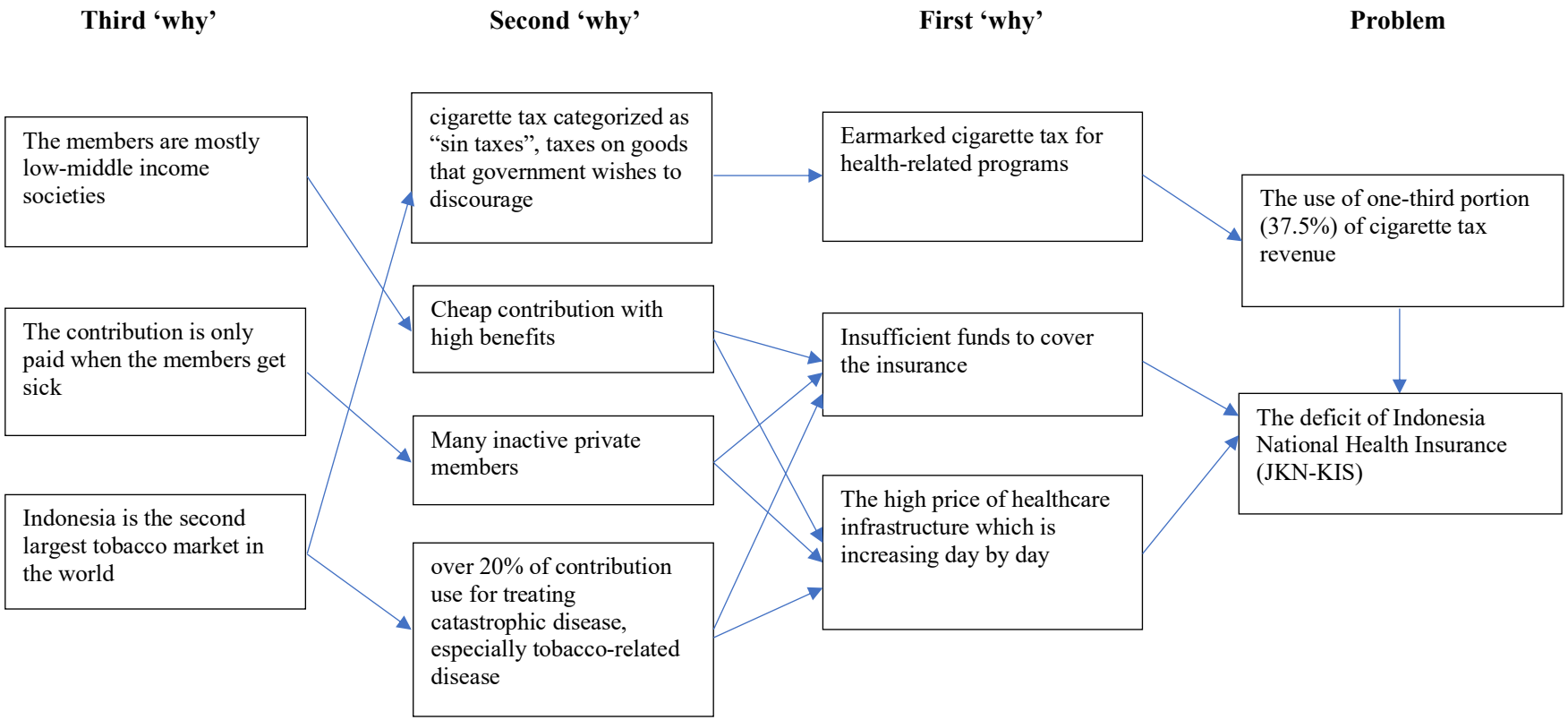


Figure 3. Program theory development - ATM model



CHAPTER 4
FINDINGS: THE INDONESIAN NATIONAL HEALTH INSURANCE DEFICIT AND CIGARETTE TAX REVENUE ALLOCATION

This study has discovered three main findings: the first is related to the causes of Indonesian national health insurance deficit, the second reveals the impacts of the deficit, and the third presents the strategies undertaken by the Indonesian government including using taxation on cigarettes to support reduction of the deficit.

4.1. The Deficit of Indonesia National Health Insurance (Jaminan Kesehatan Nasional/JKN)

Indonesia is on its way to achieve universal health coverage. It launched JKN, an Indonesian national health insurance program, to improve the public health services delivery. As Indonesia is a decentralised country consisting of 542 subnational governments who are authorised to carry out functions to support the policies, the subnational governments are then mandated to provide healthcare facilities and develop the social insurance system in their territories based on Act No. 23/2014 on Local Governance. Their obligations have been implemented by ensuring the availability of standardised health facilities, partaking in subsidising JKN contribution, overseeing JKN implementation within their territories, and strengthening public support towards the JKN (Putri 2014, p. 15). Additionally, both the central government and local governments could also increase private participation in improving health services delivery.

4.1.1. The beneficial impact of JKN implementation

In 2016, the Institute of Economic and Social Research of University of Indonesia (LPEM UI) authorised a study regarding JKN implementation and its impacts on Indonesian economic development (BPJS Kesehatan 2016). The study revealed that even in a short-term period, JKN could increase national development by increasing the performances of other sectors. Then, in 2019, when all Indonesians would be covered by JKN, or universal health coverage had achieved, this program would contribute as much as around IDR269 trillion or USD17.5 billion to the national economy and create job opportunities for 2.3 million Indonesians. The multiplier effect stimulates all sectors, especially gas, electricity and water supply. Moreover, the study showed that the long-term impact of JKN program could increase the life expectancy of Indonesians, as the access to public service becomes easier and affordable. Additionally, based on the Indonesian Public Health Review 2018, JKN implementation has had crucial implications, demonstrating that between 2015-2018, the number of healthcare facilities both public and private in partnership with BPJS Kesehatan increased by 23%. It is also reported that in terms of the provision of basic facilities, drugs and medical equipment, the public sector healthcare facilities are viewed more positively than the private sector (Gani & Budiharsana 2019), suggesting that

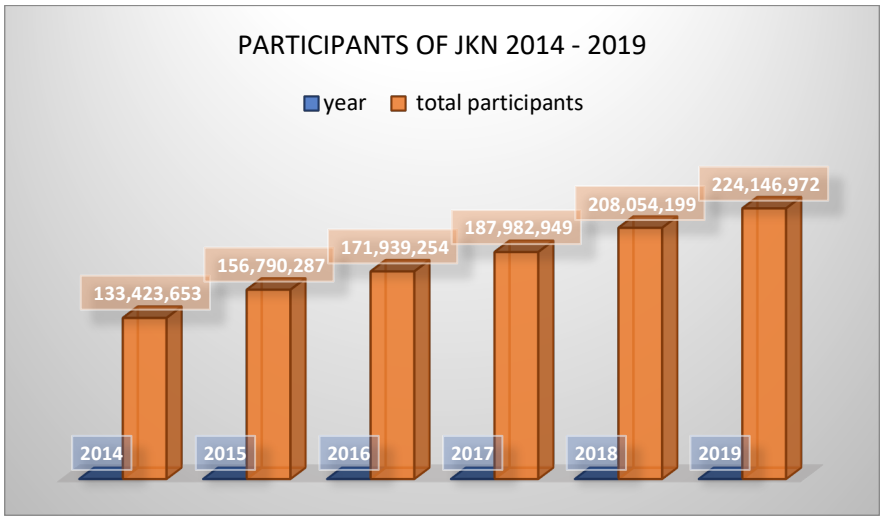
public health facilities can compete with private sector in delivering more affordable health provision for societies. In this context, the existing JKN program has supported Indonesians in terms of health and well-being.

The increasing number of JKN participants is directly proportional to the increase of healthcare facilities usage: from 92.3 million cases in 2014 to 233.9 million cases in 2018 (BPJS Kesehatan 2018). This situation may indicate that healthcare facilities have become more accessible, and there is increased public awareness of healthcare facilities (Luthfi 2019, p. 144). Thus, it could be inferred that public trust in JKN is high and public expectation is that JKN will be ongoing and sustainable, as the cost of healthcare rises annually. The affordable price of healthcare facilities to JKN members will mainly benefit Indonesian low-middle income classes.

4.1.2. The participants of JKN program

It is compulsory for all Indonesians and foreigners working in Indonesia for a minimum stay of six months to have JKN membership. According to the 2019 Service Guidance E-book for JKN Participants, there are three key reasons why this insurance program should be mandatory: first, for protection, as JKN ensures that each participant receives health insurance in order to maximise their productivity for prosperity. Second, for sharing, referring to the notion of "gotong royong", one deeply rooted in Indonesian culture, and which means helping each other or collaborating, in order to achieve one specific objective. In the context of JKN, this principle can be analogised with cross-subsidies between the healthy and sick, or the rich and the poor. Third, for compliance, requiring every Indonesian to abide by existing regulations to enrol themselves and their family in the JKN program and follow the assigned health services procedures. The membership of JKN was expected to grow yearly until it reached coverage of the entire population in 2019. However, up to December 2019, the participants of JKN had only reached 224 million of the population. Figure 4 shows the growth of participants from 2014 – 2019.

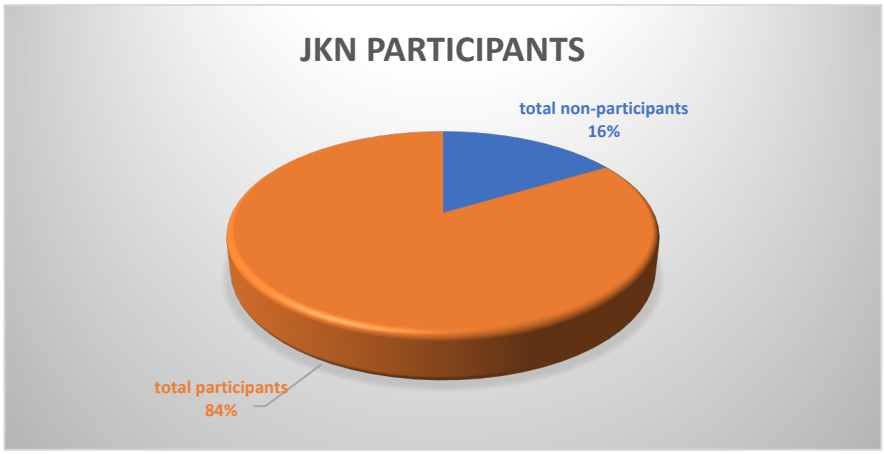
Figure 4. Participants of JKN 2014-2019



Source: BPJS Kesehatan

In 2019, Statistics Indonesia reported that the population of Indonesia had reached 268.074.600. When compared with the total population, JKN membership of all Indonesian as at 1 January 2019, had only reached approximately 84%, which was under expectation. The comparation of this phenomenon has been depicted by pie chart in Figure 5. The pie chart circle represents the total population of Indonesian.

Figure 5. JKN participants compared to all population



Source: BPJS Kesehatan, Statistics Indonesia 2019.

As JKN failed to achieve its targeted membership, some studies were undertaken to identify the rationale behind it. BPJS Watch -the state insurance watchdog of Indonesia, PATTIRO -a non-governmental advocacy and research organisation that focuses on decentralisation and public services delivery issues in Indonesia, and BPJS Kesehatan itself state offer reasons for the failure (Retnaningsih 2018). BPJS Watch, via its advocacy coordinator, Timboel Siregar, outlines four factors that caused a failure to achieve the targeted number of JKN participants, including insufficient socialisation and

education, public complaints toward JKN services, low level of law enforcement against entities not registering their employees as JKN members, and the lack of coordination between BPJS Kesehatan, local governments, and other related institutions.

Rokhmad Munir, a public service specialist from PATTIRO, claims that there are four challenges faced by BPJS Kesehatan in achieving the targeted memberships, namely insufficient JKN-related information received by its partners and citizens; the poor standard of BPJS Kesehatan service; the passive behaviour of BPJS Kesehatan staff and the minimal use of ICT in delivering the service, and the lack of health facilities provided by BPJS Kesehatan. Andayani Budi Lestari, Director of Expansion and Participant Services of BPJS Kesehatan, has concerns about law enforcement related to the local governments' obligations to underpin JKN program. Variable commitment by local governments and lack of strict sanctions in the existing regulation result in a poor rate of uptake. It can be seen from Presidential Instruction No. 8/2017 on the Optimisation of JKN Program Implementation merely regulate the administrative sanction for local governments that do not in charge in this program.

The failure to achieve the expected number of participants will certainly affect the continuity of JKN, particularly from the financial aspect handled by DJS. The liquidity of JKN will be disrupted and could lead to a higher financial problem in the increasing year.

4.1.3. The deficit of JKN

Despite JKN's achievement and the potential positive impact on Indonesian economic development, there has been a significant challenge inherent in JKN since it first began operating in 2014. In the first year of implementation, public enthusiasm toward JKN flourished. Many Indonesians wished to register to be JKN members especially as independent registrants, but as most were in bad health, it could lead to 'adverse selection' (Luthfi 2019, p. 144). According to Cutler and Zeckhauser (1998, p. 2), adverse selection is a phenomenon when individuals who look for the high quality of healthcare will prefer the more lavish and expensive insurance plan, while others choose a moderate plan and pay the lower cost. In these circumstances the sick and high-risk people are more willing to buy the premium health insurance plan, while the healthier decide not to buy it. Consequently, the paid benefit-cost is higher than the paid contribution and the insurance company may suffer a loss. The Presidential Regulation No. 82/2018 on National Health Insurance have categorised the monthly contributions as follows:

- IDR23.000, - or around USD1.54 for the poor and least-advantaged members, or other members registered by local governments. These members are subsidised by the government.
- IDR25,500, - or around USD1.78 for the private members with benefit: inpatient services in class 3 ward (the lowest class)
- IDR51,000, - or around USD3.56 for the private members with benefit: inpatient services in class 2 ward (the medium class)

- IDR80,000, - or around USD5.6 for the private members with benefit: inpatient services in class 1 ward (the highest class).

Some studies found that the policy regarding JKN contribution is inappropriate. The decision to determine the contribution fee under the actuarial calculation could disrupt JKN financial sustainability. Ahsan (2018a, p. 1) states that there is a mismatch between contributions and expenditure where the total income from members' contributions is below the total number of hospital claims paid by JKN. It was inevitable that the mismatch occurred, as the contribution calculation determined by government due to economic and political considerations was below the actuarial calculation. Consequently, JKN funding is in deficit. Hidayat (2016, p. 65) even asserts that deficit is a chronic disease innate in JKN. Indications of deficit were obvious even from the initial year of implementation, as the claim ratio percentage remained at or more than 100% in 2014 and 2015. The ratio percentage is the yield of the distribution of claim cost or health cost by the contribution fee. Firdaus and Wondabio (2019, p. 156) also note similar findings that the benefit cost paid annually is higher than the contribution fee and indeed the highest level of government expenditure is allocated for health cost.

BPJS Kesehatan as the JKN manager was aware of the situation in 2016 as disclosed in its 2016 Management and Financial JKN Report. It identified that despite the benefits of relatively cheap expenses for healthcare, there was a fundamental problem whereby the members' premium did not match the actuarial calculation normally performed before deciding the cost of contributions in such programs. This situation leads to the 'underfunded program', a context where the insurance benefit provided by the government is higher than the contribution paid, potentially impeding JKN sustainability. Moreover, such circumstances are exacerbated by adverse selection, weak regulation in controlling the rate of update, and potential fraud.

The reasons for JKN deficit have also been analysed by professionals. According to Fachmi Idris, President Director of BPJS Kesehatan makes two key points as reasons for the deficit (BPJS Kesehatan 2019b). At a meeting with the Commission XI House of Representative on 17/9/2019, he said:

> Actually, the point of the problem lies in the amount of the current contribution which is not yet in accordance with the actuarial calculation. Although the JKN program contribution rate is currently under-priced, there will be resistance from some people if the contribution is adjusted. Another problem is the change of Indonesian morbidity rate, in which the number of people suffer from particular disease increase, and mostly of them use JKN to minimise health cost.

Quoted from The Wall Street Journal:

> Just over a year ago, Indonesia created what has quickly become, at least for now, the world's largest national health insurance system. it aimed to give its 250 million citizens a safety net that would encourage them to spend more freely instead a saving for rainy-day medical emergencies, boosting the economy. But like nascent health-care system in some other developing countries, Indonesia's program is struggling to live up to its own ambitions. As more patients sign up to pay nominal premiums ranging from USD 1.70 to USD 4.10 a month for broad medical coverage, deficit is mounting quickly. In the second year, this program has tended to attract new enrolees with serious and often long unaddressed medical problems that require expensive surgeries/long-term treatments, such as heart conditions, cancer, and diabetes (Rachman 2015).

Some backgrounds explanation of JKN deficit is revealed by the Indonesian Minister of Finance, Sri Mulyani (Fitra 2019) who suggests that:

> There are four key reasons that cause the JKN claim ratio to be high and lead to an iterative deficit. First, the low contribution fee, under-priced, or below the ideal calculation to cover the health cost. Second, the undisciplined JKN members. Some private members are only willing to register when they are sick and stop paying the contribution after getting better and after obtaining healthcare services. Third, the enthusiasm level of individuals in paying the contribution is low and is only around 54%. It means that the rest of them are in arrears of paying the contribution. In 2016-2018, the amount of obligations of private members reached IDR15 trillion or equivalent to USD1.02 billion; meanwhile, the utilisation of JKN insurance was high; the claim ratio was 313%. Fourth, the cost for treating catastrophic disease that should be covered by JKN is high. Catastrophic diseases such as cancer, heart/cardiac disease, and chronic kidney disease result in costly, intensive and special treatment.

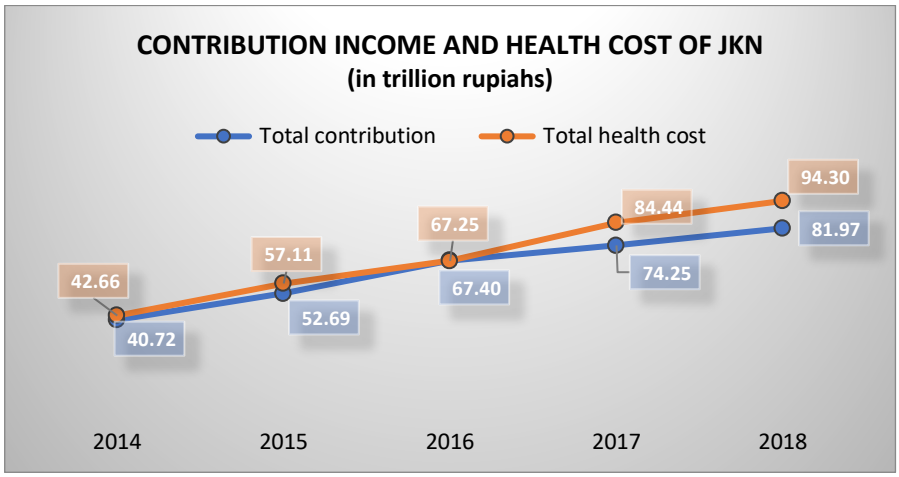
Moreover, in terms of budgeting, the JKN program employs a 'balanced budget' approach where in principle, income and expenditure at the end of the fiscal year will be the same. However, when member contributions are considerably less than insurance claims, the deficit rises year by year. Additionally, the morbidity rate in Indonesia is dominated by non-communicable diseases and it was reported that as of August 2018, the cost of such diseases reached IDR12 trillion, equivalent to USD816.67 million or approximately around 21.07% of the total health care cost. Thus, it can be concluded that the hefty burden carried by JKN is another cause of the deficit.

Table 1. The comparison between the JKN contribution and actuarial calculation per month (in rupiahs)

Participants	Actuarial calculation	Real contribution	Difference
Poor and least advantaged	36,000	23,000	13,000
Private members:			
Subclass 1	80,000	80,000	-
Subclass II	63,000	51,000	12,000
Subclass III	53,000	25,500	27,500

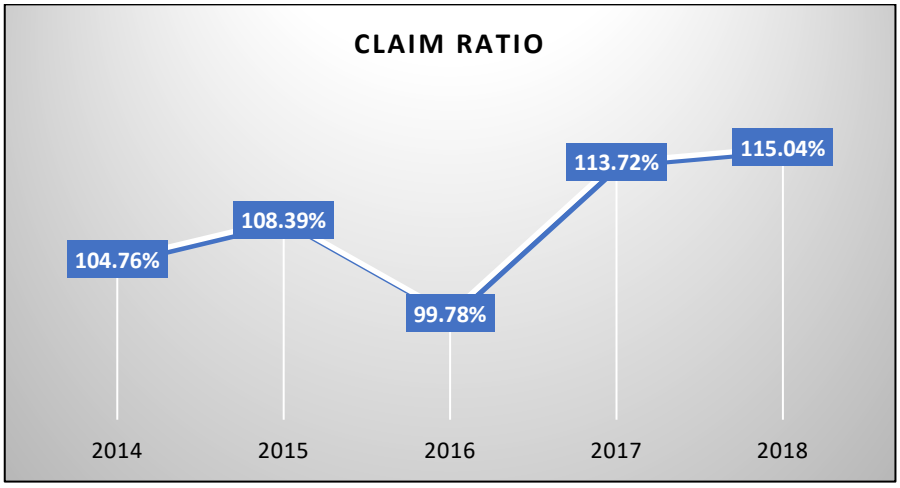
Sources: BPJS Kesehatan

Figure 6. The comparison between contribution income and total contribution



Source: BPJS Kesehatan

Figure 7. Claim ratio 2014-2018



Source: BPJS Kesehatan

It can be seen from Figure 6 and 7 above, that the deficit problem of JKN had already surfaced even from the first year of implementation and the claim ratio was always over 100%. In 2016, according to figure 6, the claim ratio decreased to 99.78%, but then rose in the following two years. Thus, the deficit increased in 2017 and 2018, as did the gap between health cost and contributions. These figures suggest that, contribution income could only be allocated for health costs, instead of including it for operational costs and allowances.

4.1.4. How much the deficit?

Table 2. Financial report of JKN Fund 2014 – 2018 (in rupiahs)

Description	2014	2015	2016	2017	2018
INCOME					
Contribution income	40,719,862,345,220	52,778,121,327,260	67,404,010,657,972	74,246,640,901,629	81,975,180,303,390
Support from BPJS Kesehatan	-	1,071,069,934,548	-	-	-
Government funding	-	-	-	3,600,000,000,000	10,256,466,000,000
Grant from BPJS Kesehatan	-	1,540,000,000,000	6,827,891,000,000	135,271,239,468	-
Income from cigarette tax	-	-		-	682,387,212,561
Other income	793,958,449,779	262,034,985,861	176,494,839,053	371,177,489,122	286,986,782,177
Total income	**41,513,820,794,999**	**55,651,226,247,669**	**74,408,396,497,025**	**78,353,089,630,219**	**93,201,020,298,128**
EXPENSES					
Health insurance cost	42,658,702,022,638	57,083,272,722,427	67,247,884,479,608	84,444,863,518,206	94,296,844,759,351
Operational cost	2,476,992,353,231	2,554,286,762	3,625,661,751,855	3,809,232,867,293	3,768,829,000,000
Other expenses	(312,729,143,938)	4,325,470,585,138	3,026,416,025,803	4,563,463,395,497	6,822,908,972,382
Total expenses	**44,822,965,231,931**	**61,411,297,594,327**	**73,899,962,257,266**	**92,817,559,780,996**	**104,888,582,731,733**
Surplus (deficit) net asset	**(3,309,144,436,932)**	**(5,760,071,346,658)**	**508,434,239,759**	**(14,464,470,150,777)**	**(11,687,562,433,605)**
Net asset in the beginning of period	-	**(3,309,144,436,932)**	**(9,069,215,783,590)**	**(8,560,781,543,831)**	**(23,025,251,694,608)**
Net asset in the end of period	**(3,309,144,436,932)**	**(9,069,215,783,590)**	**(8,560,781,543,831)**	**(23,025,251,694,608)**	**(34,712,814,128,213)**

Source: BPJS Kesehatan, Firdaus and Wondabio (2019), the author compilation

Table 2 displays the amount of JKN deficit from 2014-2018. Moreover, this table shows that the net asset deficit of JKN fund has increased annually and reached IDR34,7 trillion or equivalent to USD2.36 billion at the end of 2018. Fortunately, the government is mandated by the law to support the JKN funding, even though, thus far, this assistance is still unable to cover the deficit experienced by the JKN program.

4.1.5. The impacts of JKN deficit

Other than interfering with the cash flow of the JKN program, the deficit also affects operation of health care facilities, as well as the health personnel's well-being and JKN participants themselves (Djamhari et al. 2020, p. 71). The delay in cost reimbursement puts a hefty burden on the hospitals participating in this program, as they need funding for operational activities and monthly employee compensation. When hospitals' cash flow is interrupted, it affects the quality of the health services and may result in the late payments to pharmaceutical companies. It limits the fiscal space of the firms, and eventually, many of them discontinue the partnership with their associated hospitals impacting on health insurance participants at grass root level. The decrease in the quality of healthcare facilities is commensurate with the decrease of public trust towards JKN program and its sustainability.

Researchers from the Indonesian Centre of Law and Policy Studies claim that the JKN program deficit will create many losses for health industries (Sholikin 2019). They suggest it will reduce the quality of services and restrict appropriate medical treatments due to budget limitation. Additionally, efforts to

develop health services and innovation will be curtailed. Hospitals will prioritise spending on funding operational activities rather than pharmaceutical and other services' expenditure. Moreover, at the beginning of May 2019, the association of pharmaceutical entrepreneurs voiced a complaint about the JKN program liabilities to their companies. Pending claims have reached IDR3.5 trillion or USD246.63 million, and the current arrears for pharmacy has reached IDR8 trillion or USD563.73 million.

In a study conducted by Asyrofi and Ariutama (2019), an interviewee from the Indonesian Ministry of Health disclosed that the deficit of the JKN program was viewed as systemically impacting the health services. The hospital reimbursement claims to BPJS Kesehatan typically need months to be realised, which has a profound influence on hospital cash flow. Another interviewee from DJSN suggested that as the cash flow does not function properly, hospitals are not able to submit claims to BPJS Kesehatan at the assigned time. The claim submission usually exceeds the time limit, therefore, reducing benefits and increasing waiting times to acquire services.

Jusuf Kalla (JK), the ex-vice president of Indonesia, who currently leads the Indonesian Red Cross Society (PMI), added to the ramifications of the deficit of JKN program (Junita 2019). JK claimed it can lead to the late payments of health services provided by BPJS Kesehatan partners, such as hospitals, clinics, pharmacy companies, and medical workers. JK also said, if the deficit is not immediately resolved, the Indonesian health system will collapse; if the hospital claims cannot be paid, the hospitals cannot operate properly; if the salary of medical workers and pharmacy companies are not paid on time, they will also experience financial difficulty. Another adverse impact is related to the PMI functions where arrears reached almost IDR200 billion or around USD14 million. As a consequence of late payments, PMI functions in providing blood donors services can be disrupted.

4.2. The government strategies to tackle the deficit

According to Indonesian Social Security Law, the government is commissioned to finance any deficit occurring in the JKN program to ensure its sustainability (Agustina et al. 2019, p. 96). In addition, article 43 Act No. 24/2011 on BPJS Kesehatan states that there are opportunities to acquire other resources for funding the JKN. Therefore, scholars and practitioners have been asked to provide recommendations to the government to resolve the deficit.

4.2.1. Scholars and practitioners' recommendations

Ahsan (2018a, p. 3) outlines two ways to prevent the mismatch between total contribution and total health cost in the future. First, the members' contribution cost is at least equal with actuarial calculation; thereby, the contribution cost must be increased. Second, expecting from the return of investment result. However, both of those solutions are difficult to be accomplished. Asking for an increase in public contributions may result in refusals to pay, as it creates a greater financial burden and members do not

see the expected infrastructure for their additional funds, and not going hand in hand with the refinement of health facilities. Thereby, expecting the return from investment will be more difficult, as the non-mismatch is hard to be achieved.

BPJS Kesehatan as a leading organisation of JKN program had also published several research briefs related to the handling of deficit including a scheme to add a levy on cigarettes to fund the JKN deficit. Those policy briefs mostly proposed to apportion tax revenue from cigarettes to support government's handling of the deficit (Ahsan 2018a). This notion was based on the fact that in 2014-2016, JKN had experienced surge claims from four noncommunicable diseases related to tobacco use, namely cardiovascular, cancer, stroke and renal failure, reaching 22% of the total claim (Moeloek 2016, as cited in Thabrany & Laborahima 2016). Noncommunicable diseases also known as chronic diseases, require long durations of health treatment; are costly and occur as the result of genetic, environmental, lifestyle, and physiological factors. WHO (2018b) states that tobacco use is one of the leading causes of noncommunicative disease, together with physical inactivity and unhealthy diets.

Several researchers from The Prakarsa, an independent research and knowledge production institution concerned with capacity development and advocacy of policies related to society wellbeing, also highlight the earmarking of cigarette taxation to resolve JKN deficit (Chrisnahutama et al. 2019). This recommendation emerges to address the utilisation of the biggest portion of JKN fund that is allocated for the catastrophic diseases' treatment related to tobacco consumption. As cigarette tax is categorised as local tax, the central government must encourage local governments to manage and organise its earmarking to support the funding of the deficit.

A study by Thabrany & Laborahima (2016) surveyed people's perspective on a government policy to apportion revenue from cigarette taxation to fund the JKN deficit. It was undertaken in early 2016 and involved 1000 respondents, 59% of whom were JKN members. All respondents unanimously agreed to the thought to raise the price of cigarette tax to finance the deficit. A further study was undertaken by Purnamasari et al. (2019), aimed at gauging public perspective on the increase of cigarette prices to cover the JKN deficit and then identify the rationales behind the perception. From a sample of 1000 respondents, 86.2% of them agreed to raise cigarette prices in order to cover the deficit.

These recommendations are based on the idea that cigarette is classified under 'sin tax', where taxing a high-risk product harmful to people's health, such as alcohol and cigarettes, is allowed. To reach an adequate amount of tobacco taxation revenue to cover the deficit, the government has proposed to raise excise rates and the price of cigarettes. The proposition to increase the price of cigarettes indirectly punishes people who smoke. Some find this action plausible, for it establishes that smokers will be charged a higher JKN contribution than others who do not smoke. In 2016, it was estimated that if the

price of cigarettes was raised twofold, and the excise rate increased until s its maximum permissible level is reached, the potential revenue from cigarette tax could be up to IDR70 trillion or USD493.26 million, which is almost equivalent with the number of predicted claims on the JKN.

4.2.2. Best practice from Philippines and Romania regarding cigarette tax for financing health insurance

Other countries that have also implemented the use of earmarking revenue from tobacco taxation to finance national health insurance include the Philippines and Romania. These countries have demonstrated that it is possible to use an array of earmarking instruments, specifically from sin taxes to supplement a national health insurance and advance universal health coverage. Both countries are considered to be successful models in implementing the policy.

4.2.2.1. Philippines

Cashin, Sparkes and Bloom (2017) provide an insight into the direction taken by Philippines as one example. In 2012, the Philippines began to earmark revenues generated from tobacco and alcohol taxes to support the health sector. Precisely 100% of alcohol taxes revenue and 85% of cigarette taxes revenue were apportioned to health and divided as follows: 80% for national health insurance program including subsidising insurance for the poor, health awareness programs, and support for the country's millennium development goals; 20% is allocated for medical assistance and health facilities enhancement programs. Between 2012-2016, this additional earmarked funding had increased the budget of the Department of Health to triple in size, and then allocations made to PhilHealth (Philippine Health Insurance Corporation), the semiautonomous body under Ministry of Health responsible for national health insurance coverage. The earmarked revenues provide coverage for the impoverished, compulsory coverage for all Filipinos over 60 years old who are non-sponsored members and for others with no qualifying contributions. The Philippines tax reform legislation enforces earmarked revenues must be assigned to programs related to health, which resulted in an increase of PhilHealth coverage from 75% in 2012 to 88% by the end of 2015. The number of families covered also increased, from 5.2 million indigenous families in 2013 to become 14.7 million in 2014. By 2018 and acting on numerous citations and independent surveys, PhilHealth has continued to be the most credible institution across the country suggesting that services provided by PhilHealth have reached its intended population, where members feel confident to use PhilHealth as their health insurance provider.

4.2.2.2. Romania

Another example of best practice is drawn from Romania (Ahsan 2018a, p. 54), with its 'tax in vice', applied on tobacco and alcohol as a contribution to finance thee health sector. s. In 2005, Romania began a reform of its health regulations, with one of the objectives being to combat the abuse of tobacco

and alcohol while enhancing the health budget. The Romanian financial health sector consists of the Ministry of Health budget and a national health insurance fund, which is generated from the state budget, special allocation from tobacco and alcohol taxation, and contributions for health insurance paid by individuals and legal entities. All revenues from tobacco taxation are directly distributed to the Ministry of Health's budget with the intention that revenue can be secured from other areas. This revenue is used for modernising and enhancing the health system, financing innovation programs (for example, providing papillomavirus vaccine for young-adults and screening for cervical cancer), and a social program that covers 90% of the medical expenses for the population sector with an income below the minimum national salary. However, there was resistance from tobacco importers supported by mass media campaign. They spread false information that illegal trading and smuggling would increase, and national revenue decrease, if smokers are encouraged to quit. The Romanian government's response was uncompromising to tobacco importers and the mass media attack, claiming: "smokers must pay more to the public health system because they use medical services more often than non-smokers", the government view based on international data showing the beneficial impact of raising cigarette prices.

4.3. The Indonesian government policies

In Indonesia, stakeholders held lengthy discussions to find the best solution for funding the deficit in Indonesia. The Coordinating Ministry for Human Development and Cultural Affairs, Ministry of Health, Ministry of Finance, BPJS Kesehatan, and other related parties, formulated a combination of six policies to present to both the government and BPJS Kesehatan (Luthfi 2019), as follows:

1. Increasing the role of local governments through the mandatory policy implementation: the utilisation of cigarette tax and general allocation fund intercept to cover the JKN contribution cost in arrears.
2. Issuing the Minister of Finance Regulation No. 29/2017 on The Amount of Operational Fund Percentage to encourage JKN operations to use funds effectively.
3. Improving the efficiency and effectiveness of health services through ratification of Presidential Regulation No. 82/2018 on Health Security. This regulation comprises several features, such as the upgrading of the health facilities claims management system, the improvement of the patient referral system, and the implementation of purchasing strategies
4. Improving synergy with other institutions in the social security field, such as Social Security Body for Employment, PT Jasa Raharja (social insurance state-owned enterprise), PT Taspen (one of the state-owned enterprises that provides a pension insurance program for civil servants, and PT Asabri (state-owned enterprise that provides life-insurance services for soldiers, police and civil servants in the defence force).
5. Accelerating the fund disbursement in providing healthcare facilities and covering the health cost for the poor and least-disadvantaged members through issuing the Minister of Finance Regulation

No. 10/2018 on the Administration of Providing, Withdrawing, and Accounting the Contribution Fund of Healthcare for the Poor and Least-advantaged.

6. Issuing the Minister of Finance Regulation No. 113/2018 on the Administration of Providing, Withdrawing, and Accounting of JKN Program Reserved Fund as a legal umbrella to proceed with the government support and funding for handling the JKN fund deficit problem.

4.4. Cigarette tax for deficit national health insurance: strengthening the role of local governments

Since 2014, a tax on cigarettes has been implemented in Indonesia aligned with Act No. 28/2009 on Local Taxes and Charges. Cigarette producers, cigarette companies, and cigarette importers are the mandatory cigarette taxpayer. The cigarette tax rate is set at 10% of tobacco excise. It is collected by the central government then distributed to local governments proportionally based on the total population in their territory. It is also stated in Local Taxes and Charges law that cigarette tax revenue must be earmarked at a minimum of 50% for health services and law enforcement financing. For health services financing, the earmarking will be allocated for the construction and maintenance of health infrastructure, the provision of public smoke free areas, and an anti-tobacco campaign focusing on information concerning the risks of smoking. In terms of law enforcement, local governments may collaborate with external institutions to eradicate the circulation of illegal cigarettes and to establish regulations regarding smoking bans.

In order to guide local governments on how to use cigarette tax income within the health sector, the government through the Ministry of Health issued Minister of Health Regulation No. 53/2017. This regulation outlines health activities whose funding has been earmarked from cigarette tax, such as:

- Decreasing the risk of infectious and non-communicable diseases including vaccination,
- Increasing health promotion,
- Increasing family well-being and nutrition,
- Increasing healthy environments,
- Improving the government's control over tobacco and its derivative products,
- Establishing and improving health facilities at regional level.

In addition, this regulation administers the use of cigarette tax revenue to fund the national health insurance scheme and is assigned 75% of total earmarking. Therefore, the portion of cigarette tax revenue required to fund the deficit is 37.5% (50% earmarking multiplied by 75%).

With these regulations in place, the ways are open for government to use cigarette tax revenue as one option for financing the deficit of JKN (Luthfi 2019), reinforced in the Act No. 24/2011 which states that JKN may be supported by other financial resources other than contribution, investment, and asset

shifting from the previous social insurance. The central government also ratified regulations to underpin the implementation of this policy, such as:

1. Presidential Regulation No. 82/2018 concerning Health Insurance.
   One of key points included in this regulation is the maximation amount of cigarette tax earmarking as a local governments' contribution in underpinning JKN program. This regulation also asserts the that the amount of contribution is 75% of 50% cigarette tax revenue earmarking, that will automatically be debited from cigarette tax account in local budgets and credited to the JKN fund account.
2. Minister of Finance Regulation No. 128/PMK.07/2018 concerning Mechanism of Apportioning Cigarette Tax as Contribution to Support National Health Insurance Program.
   This regulation insists that local governments are obliged to, apportion 37.5% of its cigarette tax revenue as its contribution for JKN implementation. It is compulsory for regional governments to plan and assign the contribution in their local budgets and ensure previous regional health insurance is integrated with the national health insurance.

Overall, the decision to choose cigarette tax revenue apportioning as one option to resolve the deficit of the JKN has undergone many debates and long discourses, given that in formulating one policy, all aspects need to be considered. Furthermore, the next question that needs to be answered is whether the 37.5% of cigarette tax revenue collected can provide any help to the settle the deficit. Hence, the in-depth analysis is essential to address the enquiry based on the previously discussed findings. Moreover, barriers to policy implementation need to be examined. In time, the impact of policy implementation other than supporting the settlement of the deficit will also be presented, which will be beneficial for the future policy learning. A balanced analysis will be provided in the data analysis and discussion section.

CHAPTER 5
DATA ANALYSIS AND DISCUSSION

This chapter provides an analysis and discussion of the findings which address the research question on how effective a policy allocating 37.5% cigarette tax revenue is in resolving the deficit of Indonesia national health insurance. The analysis begins with a presentation of the author's investigation into the causes of the deficit. Thereafter, it explores how this policy works and identifies any challenges in the its implementation. Finally, it examines the policy's implications to discover any impacts on the central government, local governments, and the citizens.

5.1. Examining the causes of JKN deficit

5.1.1. Impact of JKN implementation

Achieving universal health coverage has been a dream of most countries, whereby society well-being is the bedrock of national development. For the Indonesian government, the launch of a national health insurance program in 2014 was one step forward to reach universal health coverage and unified all previous schemes of social and health insurance, such as Jamkesmas, Askes, Jamsostek, Jamkesda, and Jampersal, into one platform called Jaminan Kesehatan Nasional or JKN. It was expected that this program would cover the entire population by 2019. Scholars from the University of Indonesia predicted that if the initial plan to reach all of the population by 2019 succeeded, JKN's contribution to the national economy would reach USD 17.5 billion. It would also create job opportunities for 2.3 million Indonesians, even in its initial stages of implementation (BPJS Kesehatan 2016). Thus, when JKN is fully implemented, the demand for health services will increase, especially from the low-middle income population not able to afford services, lifting the fiscal burden. However, the increase of the fiscal burden will be balanced with the population's productivity that impacts the macro-economy (Janis 2014). OECD (n.d.) notes that productivity is commonly viewed as a primary source of economic development and competitiveness. Hence, if productivity increases, economic growth will improve. As the economy surges, job opportunities will expand. In the long-term, the JKN program can increase the life expectancy of Indonesians, as health services will become more accessible and affordable.

5.1.2. JKN participants

Unfortunately, the JKN has not been able to meet the target participant rate as identified in the initial plan, with only 84% membership at the end of 2019. Both economists and healthcare practitioners have warned that the failure to reach the number of intended participants will result in financial problems for the JKN. Table 3 shows several reasons behind the failure.

Table 3. Summary of critical factors contributing to the failure in achieving UHC

Practitioner's institution	Critical factors
BPJS Watch	1. Lack of information about JKN program 2. Standard of JKN services are still below public expectation 3. Law enforcement 4. Lack of coordination between BPJS Kesehatan, local governments, and other related organisations
PATTIRO	1. Lack of information received by citizens about JKN program 2. The low standard of JKN services 3. The staff passive attitude and the minimal use of ICT in delivering the services 4. The lack of health facilities provided by BPJS
BPJS Kesehatan	Law enforcement – no strict sanctions for local governments that do not support this program

Source: The author's compilation.

It can be seen from Table 3 that law enforcement effectiveness related to local government compliance and insufficient information about the JKN program are the major problems faced by the Indonesian government in reaching universal health coverage. People tend to flout the law as sanctions are unclear, and trust in government officials is low, as they perceive that the severity of the punishment should be proportionate to the severity of the crime. Thus, Indonesian law enforcement is still viewed as weak by its citizens. Furthermore, information sharing from government to citizens faces many challenges, one of which is the Indonesian geographic landscape. As an archipelago nation-state with citizens scattered across the islands, time and space matter, and have escalated the cost of reaching the targeted locations. Additionally, the public still assumes that the health facilities provided by JKN are below standard, due to the differences between medical treatments available for members and non-members. The services received by non-members, who undoubtedly pay more than JKN members are more comprehensive.

5.1.3. JKN experiences deficit

Unfortunately, behind the positive outcomes of JKN implementation, JKN is now experiencing a deficit in which it has failed to pay claims associated with using health facilities provided by its partners. The deficit reached IDR34,7 trillion rupiahs or USD2.36 billion by the end of 2018. Several underlying reasons emerge as the causes of the deficit.

1. A fundamental reason is the mismatch between income from contributions and the total cost of medical claims, as member contribution fees are determined by actuarial calculations and reflect political and economic factors. Put simply, the funding capability of the JKN program cannot outpace the medical claims payout because contributions are calculated inappropriately. Hence, membership insurance premiums are far below the medical or claim cost and not adjusted for

health and facilities' costs, with the financial gap widening every year. Consequently, claims for hospital, pharmaceutical, and medical salaries are increasingly in arrears.

2. The deficit is also caused by the JKN's failure to achieve the number of anticipated memberships. It was expected that by 2019, JKN would be able to provide coverage for all Indonesian, but only 84% of the population had joined by the end of 2019. Inadequate information regarding the JKN program, a low level of law enforcement, and public distrust towards the system in providing qualified health services are the top three reasons why the number of targeted memberships were not reached. Indeed, the JKN sustainability will be severely disrupted by lack of regular and ongoing funding.

3. Moreover, the level of compliance in paying JKN contributions in a timely manner is still low. The rate of regular payments only reached 54% at the end of 2018. Not recognising the importance of contributing is a critical factor that threatens the continuity of the JKN program. Some people still think that they do not have to pay the contribution as they are healthy and disease- free. They will choose to pay if they need to utilise health services, for example when they need in-depth medical treatment or are facing surgery. Once recovered, they will stop paying the contribution. Hence rates of contribution are in arrears, while health costs rise exponentially. Eventually, JKN funds will be exhausted and the system will not be able to cover the claims. The Indonesian government could encourage community awareness through face-to-face meetings or canvassing households, social media campaigns, other mass media advertisements, setting reminders by messages, SMS Blast or email, and providing user-friendly payment platforms. An advocacy approach will appeal to all of the population; hence, active participation from local governments is needed to support the program's sustainability.

4. Furthermore, the deficit is exacerbated by an increasing number of JKN members who suffer from catastrophic diseases which need prolonged and complex medical treatment at a huge cost. By August 2018, JKN spending to finance catastrophic disease reached IDR12 trillion, equivalent to USD816.7 billion, or 21.07% of the total health cost (BPJS Kesehatan 2019b). The JKN program provides comprehensive medical benefits, including services related to catastrophic disease.
   BPJS Kesehatan has noted that Indonesia is experiencing a rise in the morbidity rate due to the prevalence of the growing number of life-style diseases within the population and without adequate means or education to control it (BPJS Kesehatan 2019b). Moreover, the Indonesian Health Sector Review of 2018 acknowledges that the consequence of such demographic and epidemiological transition is shifting the burden from communicable diseases, for example, HIV/AIDS, TB, and malaria, to noncommunicable diseases (NCDs), such as, strokes, most heart diseases, most cancers, and diabetes. The NCDs have increased remarkably and have become the leading cause of death

in Indonesia (Gani & Budiharsana 2019). However, efforts are still required to reduce the pervasiveness of communicable diseases. NCDs are derived from unhealthy lifestyles, poor diets and sedentary behaviours, smoking, and exposure to pollutants. Hence, tobacco control and mitigating the impacts of pollution need to be encouraged.

As the second-largest tobacco market in the world, with almost 65 million smokers, Indonesia is one of the main targets of the tobacco industry (*The Global Cigarette Industry* 2018; WHO 2018). Tobacco use in Indonesia for smoking consumption is immense and is the rationale behind a proposal to earmark a portion of cigarette tax revenue to restore the deficit.

5.1.4. The deficit impacts

The JKN deficit has a detrimental impact on the Indonesian health system and loses the public trust of the government. Hospitals, pharmaceutical companies, and medical workers are among those affected by the deficit. As the deficit mounts, many claims cannot be accomplished in a timely manner; hence, the cash flow of both hospitals and pharmaceutical companies are disrupted, and their operational activities impeded. Moreover, one humanitarian organisation largely impacted by the deficit is the Indonesian Red Cross Society (Palang Merah Indonesia or PMI). When JKN is not been able to provide payment to PMI, the operational activities of this non-government organisation are diminished, and the blood collection provision for healthcare is hampered.

5.2. Cigarette tax revenue as the cure of deficit

Based on Social Security Law, the Indonesian government is mandated to ensure the sustainability of national health insurance; therefore, the government is also responsible to in settling the deficit. Scholars and health practitioners have provided the government with number of recommendations related to handling the JKN deficit, such as increasing the rates of contribution levels so that they are at least equal to the actuarial calculations, and the concept of earmarking cigarette tax revenue.

5.2.1. Raising the contribution

Given the economic and individual characteristics of Indonesia, it is difficult to choose the first option, that is, increasing the contribution for each level, especially for subclass II and III. Here, the different interests between government and communities intersect; while the government views that the contribution is inadequate when compared to the cost of health services, some people feel satisfied with an amount of contribution, believing it to be affordable for low middle-income societies. Hence, it is understandable that members are reluctant to agree to the government's proposal to raise the JKN contribution levy. Reasons for resisting the idea are as follows: 1) raising contribution rates will decrease community uptake, due to the diverse range of minimum wage rates in each province, 2) BPJS Kesehatan, the coordinator organisation of JKN, is a public entity; hence, if it experiences loss, the government should take responsibility, and 3) the burden on society will increase due JKN contribution

increases, especially for low and middle-income citizens (Iqbal 2019). Those reasons are in line with the mandate of Act No. 40/2004 on National Social Security System, as according to law, the government is responsible for providing guaranteed and sustainable healthcare. The government should ensure that citizens understand and accept how healthcare is funded, particularly those in the poor to middle-income group in order to reduce turmoil within society.

5.2.2. Apportioning the cigarette taxes revenue for JKN deficit settlement

Apportioning around one-third of cigarette tax revenue could provide an alternative to refine the cash flow liquidity of JKN funds. The government can lift the tax rate to collect more funds to increase the amount of earmarking. Thereby, the tobacco producer will have no other choice than to increase the price of cigarettes. Making smokers pay the higher contribution directly is unlikely, thus, increasing the tax rate can be one solution. Support for this suggestion surged as the public agreed to 'punish' smokers who are categorised as people at risk and exposed to catastrophic diseases, by paying a higher contribution than non-smokers. Act No. 28/2009 on Local Taxes and Charges states that 50% of cigarette tax revenue must be allocated for health services and law enforcement related to smoking cessation.

Act No. 24/2011 on Social Security Agency for Healthcare states that the funding for JKN should come from other financial resources. Based on those regulations, the government issued a range of technical regulations as a guide on how to implement the policy, namely the Presidential Regulation No. 82/2018 on Health Insurance, Minister of Health Regulation No. 53/2017 on Technical Guidance in using Cigarette Tax for Funding the Public Health Services, and Minister of Finance Regulation No. 128/PMK.07/2018 on Mechanism of Apportioning Cigarette Tax as Contribution to Support National Health Insurance Program. These three regulations establish that 75% of 50% cigarette tax earmarking must be allocated as a contribution to the JKN program.

5.2.3. Best practice from other countries: Philippines and Romania

The best practices from other countries can be used as a lesson for Indonesian national health insurance problems. The findings have shown that the Philippines and Romania, have achieved success with their national health insurance through a sin tax earmarking policy.

Philippines

The Philippines has had a long journey to reach universal health coverage. Beginning in 1995, it reformed the tobacco excise policy, through restructuring the tobacco excise rate from multi tiers to a single tier during the period 2013 to 2017. 15% of additional income as a result of tobacco excise tariff restructuration is allocated for tobacco farming, while 85% of the income is managed by the government. For the 85% income, 80% is allotted to the national health insurance program (PhilHealth),

Millennium Development Goals endeavour, and public awareness campaigns related to the health program, while the rest of 20% is allocated to general medical assistance and health facilities improvement. The benefits of this reform are: first, the national health budget of Philippines skyrocketed 57% from 2013 to 2014, and secondly, still in the same years, the number of indigenous households covered by PhilHealth increased almost three-fold (Ahsan 2018, p. 33). Moreover, according to the Report on Tobacco Industry Interference Index of Philippines, the tobacco industry remains to contribute and expand the influence in the development and implementation of a tobacco control policy (Reyes 2018). Additionally, in 2019, the Philippine government ratified a new law to increase cigarette taxes to ₱45 or USD 0.9 in 2020, with an additional increase to ₱60 or USD 1.20 in 2023, and 5% indexation rate from 2024 onward (WHO 2019). The WHO has congratulated the Philippines government for this achievement, as this legislation has a direct public health impact and helps to raise funds for supporting the Philippines universal health coverage.

Romania

In Romania, the taxation on tobacco and its derivative products is well-known for its flexibility. The health regulation reform began in 2005 in order to support the tobacco control policy. The income from such taxation has been used to modernise and expand the health system across the country. Tobacco taxation revenue also includes 90% earmarking for financing the below-national-salary citizens and the low middle-income health cost. Romania is one of number of countries that has applied an elevated tax rate for tobacco products. In 2016, there was a high rate of tobacco use in Romania; almost 5 million adults, or about 27% of the population were smokers, and the smoking prevalence for men was more than twice as much as for women (Szabo et al. 2016). Hence, the Romanian government increased the price of cigarettes, banned smoking in all indoor public places which resulted in the decline of second-hand smoke exposure by 90% in restaurants and 70% in indoor workplaces between 2011 – 2018 (Abrams 2019).

In an analysis of Philippines and Romanian experiences, it can be inferred that income from tobacco tax has contributed considerably to both countries' national incomes and has improved their public health systems through earmarking processes. The Indonesian government may adopt the Philippines and Romania methods of raising income from tobacco taxation to finance its national health insurance. However, to follow the apportioning of tobacco tax revenue approaches of those countries may be problematic, for cigarette tax in Indonesia is classified as a local tax. Thereby, the utilisation of revenue from cigarette tax must be authorised by the head of the region. One policy applied to both countries that might be suitable for the Indonesian context is to increase the rate of tobacco excise. Both the Philippines and Romania have placed a higher price on tobacco products. By doing so, not only is there a higher national income, but tobacco control activities can also be increased. Thus, the Indonesian

government can promulgate more robust regulations and law enforcement to support this policy implementation.

5.3. A policy: cigarette tax allocation as a contribution to support national health insurance

5.3.1. Cigarette tax policy

Since 2014, Indonesia has implemented a tax on cigarettes in addition to tobacco excise. This policy is enacted in Act No. 28/2009 on Local Taxes and Charges. According to this law, the rate of the cigarette tax is set as much as 10% of tobacco excise. The cigarette tax is imposed by the government and conducted simultaneously with tobacco excise. It is then deposited into provincial governments' budgets and 70% of it will be allocated to city/municipalities. According to Act No. 28/2009, the cigarette tax is categorised as a local tax. About 50% of cigarette tax revenue is earmarked for supporting the health sector, including law enforcement-related health activities. The earmarking could be an additional income supplement for healthcare funds in local budgets which means that this income will not reduce the allocation for the health sector. Moreover, the imposition of the cigarette tax is one method used by the Indonesian government to enforce tobacco control. The rise in revenue from tobacco excise and cigarette tax is caused by the increase of tobacco excise rate, not caused by government's attempts to suppress the production and consumption of cigarette. This situation has an impact on the growth of the illicit cigarette industry impeding efforts to achieve the expected income from tobacco product excise and cigarette tax; hence, law enforcement is urgently needed. Appropriate tobacco control will reduce to the incidence of catastrophic diseases, which in turn will decrease the burden carried by JKN.

The use of cigarette tax earmarking for the health sector can be categorised as the practice of cross-subsidising. This practise is common in some countries and involves allocating funding from one sector to support others. In this case, revenue from taxes is utilised for financing the health sector; the earmarking revenue of cigarette tax is used for enhancing health services, including national health insurance and the provision of law enforcement related to tobacco control.

5.3.2. Cigarette tax as a contribution for JKN

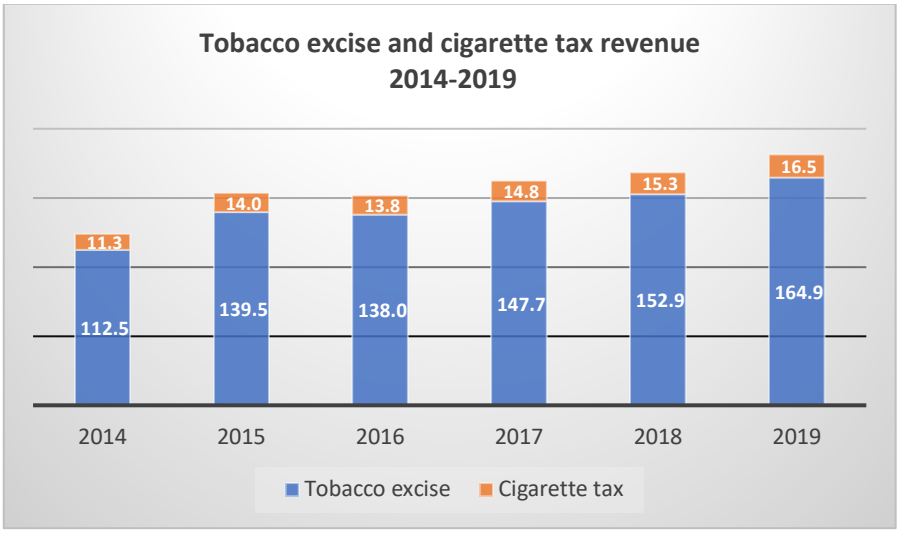
The revenue from tobacco product excise is far greater than the revenue of other excisable goods. The average national income from tobacco excise for the last six years has reached 96%.

Table 4. Income from tobacco excise 2014-2019 (in trillion rupiahs)

Year	2014	2015	2016	2017	2018	2019
Tobacco excise	112.5	139.5	138.0	147.7	152.9	164.9
Cigarette tax (10% of tobacco excise)	11.3	14.0	13.8	14.8	15.3	16.5

Sources: (Luthfi 2019), (Jayani 2019), Ministry of Finance

Figure 8. Trend of tobacco excise and cigarette tax revenue 2014-2019 (in trillion rupiahs)



Sources: (Luthfi 2019), (Jayani 2019), Ministry of Finance

It can be seen from Table 4 and depicted in Figure 8, that the trend of tobacco excise revenue shows a yearly increase. Ministry of Finance (MoF RI 2020) reports that the revenue from tobacco excise occupies the biggest portion of the entire income from excise; it reached IDR164.87 trillion or equivalent to USD11.22 billion by the end of December 2019 and increased 7.8% from 2018. The revenue growth was driven by relaxing the policy regarding the repayments of cigarette excise tape and the rise of production, in the 1st quarter of 2019, impacting on the illegal cigarette eradication program. Strategic decision making resulted in a consolidation of six policies to reconcile the JKN deficit. The government predicted that this newly created policy -using cigarette tax earmarking for supporting JKN- would result in substantial 'fresh money' (Luthfi 2019, p. 155). It is stated in related technical regulations -President Regulation No. 82/2018, Minister of Health Regulation No. 53/2017, and Minister of Finance Regulation No. 128/PMK.07/2018- that 75% of 50% cigarette tax revenue earmarking that is utilised to finance public health service will be allocated to support the JKN implementation and its continuity. Thus, the initial estimation rose; in 2018, cigarette tax revenue allotted to JKN was 37.5% x IDR15.3 trillion = IDR5.74 trillion or equal to USD390.69 million. Compared with the deficit JKN fund that reached IDR34.71 trillion or equal to USD2.36 billion, this number is viewed as significant, in that the 2018 cigarette tax will contribute as much as 16.53% to

JKN reducing the deficit in the following year. Following this trend, the government was optimistic that the deficit could be reduced, and the liquidity of cash flow could be managed.

5.3.3. The mechanism of cigarette tax allocation for JKN program

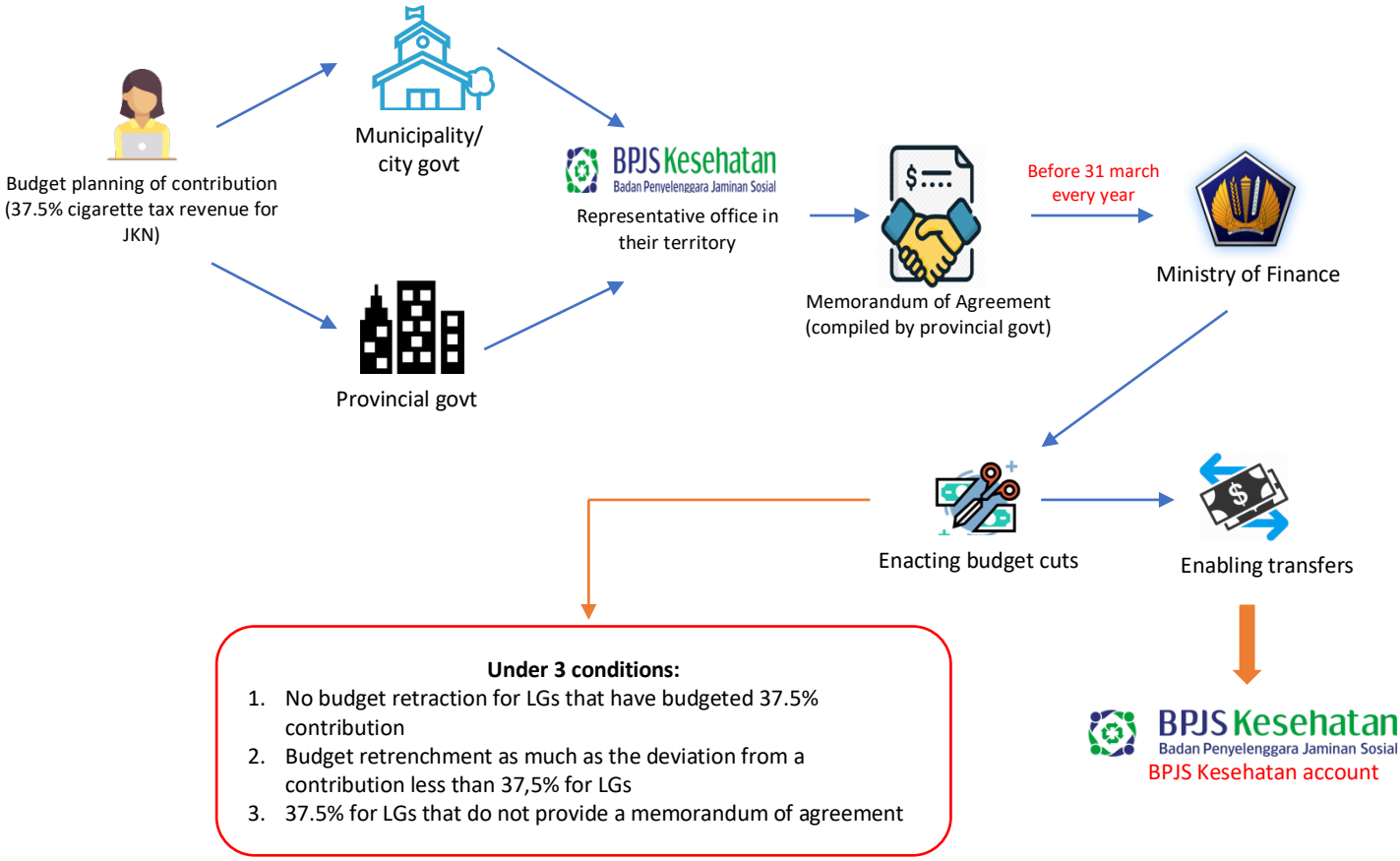
As cigarette tax is categorised as a local tax, the policy requires a collaboration between provincial and municipality/city governments. According to the Minister of Finance Regulation No. 128/PMK.07/2018, the implementation of 37.5% of cigarette tax earmarked for the JKN deficit is regulated as follows:

1. Local governments plan and budget the contribution 75% of 50% cigarette tax revenue to support the JKN program in coordination with BPJS Kesehatan. The amount of contribution should incorporate the local health insurance (Jaminan Kesehatan Daerah/Jamkesda) to be integrated into JKN.
2. The plan and the contribution budget of each municipality/city is outlined in a memorandum of agreement between local governments and BPJS Kesehatan and includes an estimation of cigarette tax revenue and the amount of Jamkesda that will be integrated into JKN. The head of the region and the BPJS Kesehatan representative office then authorises the memorandum of agreement.
3. Memorandums of agreements will be collected by provincial governments to be compiled and delivered to the Minister of Finance no later than 31 March every year.

The Minister of Finance has regulated procedures for retracting cigarette tax revenue and depositing the contribution into the BPJS Kesehatan account dependent on:

1. No budget retrenchment, if local governments abide by the rules and contribute as much as 37.5% or more of cigarette tax revenue to the JKN budget as per the memorandum of agreement.
2. A pro rata budget retrenchment if the contribution is less than 37.5% as per the memorandum of agreement.
3. A 37.5% retrenchment, if local governments do not provide the memorandum of agreement.

Figure 9. The procedure of depositing contributions into BPJS Kesehatan account



Source: Minister of Finance Regulation No. 128/PMK.07/2018

Figure 8 describes how the synergy between the central government, represented by the Ministry of Finance, and local governments are appointed to resolve the funding deficit of the national health insurance. The local governments' role is to underpin the central government program, especially in public health management in line with the Presidential Instruction No. 8/2017 on the Optimisation of the National Health Insurance Program. This instruction mandates local governments to support the JKN program by allocating specific budgets for its implementation and ensuring that all citizens in their region are registered as JKN members. It is also compulsory for the local governments to provide resources (facilities, infrastructure, and human resources) related to health that are qualified and standardised, ensure all locally-owned enterprises have registered and completed data associated with their employees and families into the JKN program, and sanctioned employers who do not comply with the regulations.

5.3.4. How much of the deficit can be recovered by 2019?

The budget retrenchment mechanisms relating to the 37.5% earmarked cigarette tax contribution as detailed in Minister of Finance Regulation No. 128/PMK.07/2018, were to be implemented in the 3rd quarter of 2018. However, as a new scheme, the local health insurance or Jamkesda failed to be integrated with JKN until December 2018. Moreover, where local governments set a contribution rate of less than 37.5% of revenue, the shortfall accumulated in the 4th quarter failed to meet requirements of the memorandum of agreement sent to the Ministry of Finance at the end of November. However, as there was no authority to impose sanctions on local governments who neglected to meet their proper contribution obligation, the expected earmarked revenue from cigarette tax was delayed. Nevertheless, all provinces had put in place, the memorandum of agreement as required by the Minister of Finance Regulation No. 128/PMK.07/2018 for the period July – November 2018.

Table 5. Mapping gaps cigarette tax revenues and Jamkesda July – Nov 2018 (in rupiahs)

Currency	Jamkesda contribution	Cigarette tax (July – Nov 2018)	Gap	Cigarette tax revenue 3rd quarter 2018	Surplus (minus)
IDR	3,717,813,335,096	2,248,573,223,502	- 629,002,289,088	1,364,492,541,934	715,470,252,847
USD	253,050,183.73	153,047,454	-42,812,570	92,873,164	48,697,948

Source: Luthfi (2019), BPJS Kesehatan

According to Table 5 above, the fifth column shows the amount of cigarette tax revenue that had been portioned by the Ministry of Finance in the 3rd quarter of 2018, and reached IDR1,364.5 billion, or USD92,9 million. However, this amount of money must be reconciled first with the local governments to obtain the total obligation of 37.5% of cigarette tax revenue apart from Jamkesda that had been integrated with JKN in one fiscal year. In total, the gap between the 37.5% portion of cigarette tax revenue and Jamkesda's contribution incorporated into JKN, is presented in the fourth column as IDR629 billion or around USD42 million. It means that there is a surplus of IDR715.47 billion or USD49.7 million that can be expended on increasing the number of JKN participants registered by local governments, compensating the contribution for the 4th quarter, providing assistance or grants for local governments, or on it being returned to the local governments. The financial statement of BPJS Kesehatan 2018 (Table 2), reported that the contribution from cigarette tax revenue allocation reached IDR682.38 billion or USD46 million.

The 2018 contribution is significantly different from the initial estimation made by the government, which was IDR5.74 trillion or equal to USD390.69 million as its allocation from cigarette tax in 2018, or around 15.35% of deficit that can be covered by the 37.5% allocation of cigarette tax revenue. Luthfi (2019) notes that this condition was triggered by related technical regulations -Presidential Regulation No. 82/2018 and Minister of Finance Regulation No. 128/2018- that were just assigned in the 2nd quarter of the implementation year.

However, at the end of 2018, there were differences in the data showing total contribution of cigarette tax revenue between the Ministry of Finance and BPJS Kesehatan. BPJS Kesehatan claimed that the total contribution was IDR682.38 billion or USD46 million while the Ministry of Finance noted that the contribution was considerably less at IDR415.03 billion or USD28.24 million. The details of the contribution can be seen in Table 6. The investigation had been done to resolve data differences. While 2018 was the first year of implementation, the cigarette tax revenue retrenchment process only began in the 3rd quarter. In order to gather initial data of how much income would be gained, the government cut all local governments' cigarette tax revenue. This situation led to double payment for those local governments that had discharged their obligation, that is, settled their contribution in arrears. The Ministry of Finance and BPJS Kesehatan had handled this problem; at the beginning of 2019, they conducted the reconciliation process to synchronise the calculation of contribution. Hence, it is expected that there will be no differences in calculating the contribution from 2019 onward. Table 7 shows the total contribution that was deposited into BPJS Kesehatan's account to support resolving the deficit of the JKN program by the end of 2019.

Table 6. Contribution for BPJS Kesehatan December 2018 (in rupiahs)

NO	PROVINCES	CONTRIBUTION FOR BPJS KESEHATAN
1	Aceh	-
2	North Sumatera	10,107,045,240
3	West Sumatera	145,791,150
4	Riau	5,849,993,070
5	Riau Islands	1,730,853,434
6	Jami	1,040,919,780
7	South Sumatera	41,650,325,463
8	Bangka Beitung	-
9	Bengkulu	95,326,564
10	Lampung	10,949,951,675
11	Special Capital Region of Jakarta	-
12	West Java	19,429,867,128
13	Banten	3,366,319,060
14	Central Java	9,372,300,443
15	Special Region of Yogyakarta	410,468,994
16	East Java	203,720,894,671
17	West Kalimantan	27,408,982,428
18	Central Kalimantan	2,936,891,988
19	South Kalimantan	20,079,199,152
20	East Kalimantan	17,732,341,011
21	North Kalimantan	214,777,259
22	North Sulawesi	1,168,429,565
23	Gorontalo	-
24	Central Sulawesi	14,712,065,452
25	South Sulawesi	-
26	West Sulawesi	-
27	South East Sulawesi	13,137,813,725
28	Bali	658,472,276
29	West Nusa Tenggara	1,204,673,373
30	East Nusa Tenggara	1,638,935,853
31	Maluku	917,230,595
32	North Maluku	-
33	Papua	5,355,122,768
34	West Papua	-
	Total	**415,034,992,117**

Source: Ministry of Finance

It can be seen in Table 7 that the contribution of cigarette tax for JKN was IDR1.12 trillion or equivalent to USD76.44 million. If compared to the deficit of JKN that reached IDR34 trillion in 2018 and had been estimated around IDR32 trillion in 2019, recovery is only at 3.44%, which is still insignificant when contrasted with the initial calculation. Thus, it can be concluded that this policy is ineffective. The standard is set based on the initial estimation, in which 37.5% portion of cigarette tax revenue will cover approximately 15% of the deficit. However, the total contribution from 2018 to 2019 only covered 3.22% of the deficit, which is still far below its estimation. Given these conditions, the Indonesian government should provide other resources to support the deficit settlement.

Table 7. Total contribution of cigarette tax revenue for JKN up to 2019

NO	PROVINCES	DECEMBER 2018	QUARTER I 2019	QUARTER II 2019	QUARTER III 2019	QUARTER IV 2019	TOTAL
1	Aceh						
2	North Sumatera	10,107,045,240	13,370,511,372	24,057,834,152	9,825,878,638	2,150,478,114	59,511,747,516
3	West Sumatera	145,791,150	893,733,806	302,069,308			1,341,594,264
4	Riau	5,849,993,070	7,030,488,137	12,610,130,805	7,129,782,718	2,846,685,842	35,467,080,572
5	Riau Islands	1,730,853,434	1,608,641,471	3,584,570,768	2,739,502,000	1,556,777,354	11,220,345,027
6	Jami	1,040,919,780	3,659,197,245	908,616,340			5,608,733,365
7	South Sumatera	41,650,325,463	22,924,305,203	17,305,794,931			81,880,425,597
8	Bangka Beitung						-
9	Bengkulu	95,326,564	3,070,698,491	5,915,619,546	3,911,066,187	1,708,095,257	14,700,806,045
10	Lampung	10,949,951,675	5,949,469,999	10,357,346,750	5,775,094,858	2,916,283,144	35,948,146,426
11	Special Capital Region of Jakarta						-
12	West Java	19,429,867,128	21,827,005,264	37,894,043,630	19,882,279,115		99,033,195,137
13	Banten	3,366,319,060	15,051,157,092	18,692,579,007	4,801,248,859		41,911,304,018
14	Central Java	9,372,300,443	37,705,494,640	37,091,112,952	11,003,193,638	4,132,034,275	99,304,135,948
15	Special Region of Yogyakarta	410,468,994	3,041,397,096	6,777,211,283	5,179,471,982	2,943,339,589	18,351,888,944
16	East Java	203,720,894,671	112,965,460,138	9,635,522,814	1,770,161,269		328,092,038,892
17	West Kalimantan	27,408,982,428	15,149,339,259	5,992,339,468	380,636,275		48,931,297,430
18	Central Kalimantan	2,936,891,988	1,385,562,621	611,092,779	467,026,597	265,397,299	5,665,971,284
19	South Kalimantan	20,079,199,152	11,231,001,701	10,079,467,296	6,488,344,314	306,013,244	48,184,025,707
20	East Kalimantan	17,732,341,011	9,910,636,175	2,082,439,225			29,725,416,411
21	North Kalimantan	214,777,259					214,777,259
22	North Sulawesi	1,168,429,565	975,568,981	1,060,988,734	810,858,802	281,558,417	4,297,404,499
23	Gorontalo						-
24	Central Sulawesi	14,712,065,452	8,241,980,764	5,509,735,486	4,210,805,800	1,594,847,445	34,269,434,947
25	South Sulawesi						-
26	West Sulawesi						-
27	South East Sulawesi	13,137,813,725	7,339,936,330	378,762,545			20,856,512,600
28	Bali	658,472,276					658,472,276
29	West Nusa Tenggara	1,204,673,373	2,794,183,934	4,795,692,383	155,356,000		8,949,905,690
30	East Nusa Tenggara	1,638,935,853	6,922,751,433	14,718,855,568	8,343,684,383	870,714,674	32,494,941,911
31	Maluku	917,230,595	3,057,240,910	6,494,588,158	3,076,666,847		13,545,726,510
32	North Maluku		1,219,692,765	2,437,489,766	1,862,847,330	1,058,600,629	6,578,630,490
33	Papua	5,355,122,768	5,810,298,911	12,028,429,064	7,385,341,071	3,657,360,634	34,236,552,448
34	West Papua		555,925,129	748,263,539	526,379,535	198,462,385	2,029,030,588
	Total	**415,034,992,117**	**323,691,678,867**	**252,070,596,297**	**105,725,626,218**	**26,486,648,302**	**1,123,009,541,801**

Source: Ministry of Finance

5.4. Challenges and impacts of the policy implementation

No regulation can please all parties. Hence, several challenges appear as the result of the government's decision to enact this policy as well as the impacts due to this policy implementation.

5.4.1. Challenges of the policy implementation

A study by Thabrany and Laborahima (2016, p. 9) found that 96.8% respondents (from 1000 samples) involved in their research have similar perceptions of smoking risks to their health. Additionally, more than 72.3% of the smoker participants stated that they would quit smoking if the cigarette price increased by more than IDR50,000 or about USD3.4, a rise far beyond recent prices. The notion of using cigarette tax revenue to finance the JKN deficit, as directed by Regulation No. 82/2018, has had to withstand misconceptions and misleading information not only from promotional advertising but in the belief that smoking activity helps JKN fund its claims in arrears (BPJS Kesehatan 2019a). Another challenge had also been identified by Ahsan (2018, p. 44). As cigarette tax is a local tax, authorisation to use the revenue is designated to local governments. While earmarked cigarette tax revenue contributes to JKN funds, communities may feel there is a lack of opportunity to fund other crucial services or infrastructure. To address this issue, regional budgets must be well-managed without denying their obligations to support the central government programs.

5.4.2. Other impacts of the use of cigarette tax for supporting JKN program

Even though apportioning cigarette tax does not cover the entire deficit of the JKN program, the focus group discussion between Ministry of Finance and BPJS Kesehatan as the coordinator of JKN program held on November 28, 2018, had several outcomes that can be highlighted as follows (Luthfi 2019):

1. The local government will be more compliant in paying contributions of their local health insurance; hence, the contribution in arrears can be reduced.
2. The participants from the poor and least advantaged, and those who are registered by local government are projected to increase. For example, the number of participants for Jamkesda, reached 48% growth from 2017 to 2018. This growth is relatively high when compared to previous years of 32%. Some local governments are known to integrate Jamkesda into JKN due to the 37.5% retrenchment of cigarette tax revenue.

These impacts are expected to result in positive outcomes for the national health insurance program—the more participants, the more contribution, and the greater the deficit that can be recovered. Additionally, the impact could underpin government efforts to achieve universal health coverage for all Indonesians.

CHAPTER 6
CONCLUSION AND RECOMMENDATION

6.1. Conclusion

Indonesia is on its way to achieving universal health coverage for its population of over 260 million through the enactment in 2014 of a national health insurance program known as Jaminan Kesehatan Nasional (JKN). JKN encompasses all previous schemes of social and health insurance in Indonesia, such as Jamkesmas, Askes, Jamsostek, Jamkesda, and Jampersal. It is the most ambitious and one of the largest schemes of single-payer healthcare in the world. Its implementation is based on Act No. 40/2004 on Social-National Health System under the coordination of BPJS Kesehatan, the Indonesian Social Security Agency for Healthcare. JKN aims to cover all Indonesians into one national health insurance system by 2019, thereby, fulfilling the population's basic healthcare needs. Some scholars assert that in the long term, a properly implemented JKN program will increase life expectancy of Indonesians, as healthcare facilities become more accessible and affordable. Since Indonesia is a decentralised country, its local governments are mandated to support the JKN program, by providing first class health facilities and ensuring all citizens in their region are registered into JKN program.

However, this program failed to reach the number of participants proposed in the initial plan. In 2019, the JKN members numbered only 84% of the total population. Allegedly, this failure was the result of poor communication with the public, weak law enforcement for sanctioning local governments who did not support the program, and an assumption that health facilities provided by the JKN for the members were below standard. As a consequence, practitioners with invested interest warned the JKN about the potential for financial disruption.

Indeed, the JKN program has encountered deficit because it cannot discharge the health claims spent by its social health partners. While the deficit reached IDR34,7 trillion or USD2.36 billion at the end of 2018, the amount was expected to decrease to IDR32 trillion or USD2.16 billion. This study has found four main reasons as causes for the shortfall. First, a mismatch between the contribution paid by participants and the benefits provided, due to the assigned contribution that comes in below the actuarial calculation. The contribution of JKN is set at USD1.5 to USD5.6 monthly, or about USD18 to USD67.2 annually, which is low cost when compared to the healthcare expenditure that rises every year. Second, the failure of JKN program to achieve the number of expected participants has resulted in a financial problem, whereby contributions do not cover the cost of the benefit. Third, the participants do not pay their contribution on time, or they only commit to paying when they fall ill. Fourth, around 22% of JKN funds are used to finance catastrophic diseases, which are high cost prolonged medical treatments. These catastrophic diseases are mainly triggered by tobacco consumption. If the deficit is allowed to continue, the Indonesian health system will collapse and subsequently affect other sectors.

Thus, the Indonesian government is determined to resolve the deficit. One of the alternatives chosen by the government is the use of cigarette tax earmarking to support the deficit settlement rather than the option of raising the contribution to be at least equivalent to the actuarial calculation. The latter alternative was disregarded due to the economic environment and public attitude. People often reject policies which target an increase in public goods. As a possible solution to settle the deficit, about 37.5% of the total earmarked funding was allocated to ease the cash flow liquidity of the JKN. This type of cross-subsidising practice is common in some countries, whereby they finance one sector using the income obtained from another, for example, cigarette tax revenue that represents income from the economic sector is used for financing national health insurance or the health sector.

The interesting aspect of this funding model is that cigarette tax is a local tax but imposed by the central government simultaneously with tobacco excise. The rate of cigarette tax is set as 10% of the excise, and then allocated to local governments. The central government has involved local governments in trying to find a solution to the deficit problem by encouraging them to join and support the sustainability of JKN. The Indonesian government has circulated several regulations, such as Presidential Instruction No. 7/2018, Presidential Regulation No. 82/2018, Minister of Health Regulation No. 53/2017, and Minister of Finance Regulation No. 128/2018 which administer tasks for each related institution including the role of local governments in resolving the JKN deficit. The last of these regulations proposes a mechanism of earmarking 37.5% of cigarette tax revenue from local budgets to the BPJS Kesehatan account. The policy of using cigarette tax revenue to finance the JKN deficit has been implemented since the 3rd quarter of 2018.

In the initial plan, the cigarette tax revenue portion for supporting the JKN settlement was estimated to be IDR5.74 trillion or equal to USD390.69 million in 2018, covering 15% of the deficit. However, the actual amount differed substantially from the estimation. As the allocation was started in 3rd quarter of 2018 but based on the results of reconciliations in local government budgets and the BPJS Kesehatan, the Ministry of Finances noted that the contribution from cigarette tax only reached IDR415.03 billion or USD28.24 million. When compared with the deficit of IDR34,7 trillion in 2018, it only covered 7.2%. In 2019, the deficit was estimated at around IDR32 trillion, the precise contribution is IDR1.12 trillion, or 3.44%, which is insignificant in reducing the deficit.

This study has sought to explore the way the Indonesian government is attempting to resolve its national health insurance deficit caused by inappropriately set contribution levies. One of its strategy is to earmark 37.5% of cigarette tax revenue to support the deficit settlement. However, an analysis of the findings suggest that this policy is ineffective. The accumulated contribution from 2018 to 2019 only covered approximately 3% of the deficit and is viewed insignificant when compared with the initial estimate of 15% to be covered by cigarette tax revenue. If the deficit remains unchecked, the Indonesian

health system is likely to collapse; affordable and standardised health services, and other sectors will also be affected. Challenges identified in the process of policy implementation included; first, that smoking is misconstrued as a valuable activity which raises the funding of the JKN. Second, as cigarette tax is categorised as a local tax, apportioning part of its revenue will reduce this allocation for other crucial spending. The latter challenge should be addressed carefully as the head of regions must support the central government as well as considering community well-being. Nevertheless, while this policy presents some positive impacts, such as elevating the compliance level of local governments, and more people encouraged to register, the Indonesian government needs to find other alternatives to resolve the deficit apart from using the revenue from cigarette tax.

6.2. Recommendation

This study still recommends the Indonesia government to raise the cost of contribution levels of JKN membership despite opposition and public rejection. Indeed, ensuring the public is well informed about the policy is an appropriate approach. Strategies include providing community advice on the benefits of increasing contributions via online and print media; disseminating information of how the middle-low class of JKN members will be subsidised by the government; and the government's responsibility for the deficit. BPJS Kesehatan as the head institution of the JKN program could also provide education and training for staff, to develop their skills and knowledge related to the stakeholder engagement. Moreover, to achieve this purpose, collaboration between related institutions should be strengthened, and the government should promote the solid regulation that administers this matter.

Furthermore, if the government still expects income from tobacco to fund tobacco control measures, a proposal could be made to the government to use the Revenue Sharing Fund of Tobacco Products Excise (Luthfi 2019). This allocation is a fund imposed by the Indonesian government on tobacco and its derivative products, other than cigarette tax and excise. This fund has also been distributed to particular local governments. Moreover, it has been stated in the Minister of Finance Regulation No. 222/2017 on The Utilisation, Monitoring, and Evaluation of Revenue Sharing Fund of Tobacco Products Excise that this fund could be said to support the JKN program. However, further analysis is required to examine the amount of potential contribution, outline procedures and establish a legally solid framework. As Moore (1995) has said, sound policy is the result of leadership, the ability of public institutions to translate alternatives into implementation, and most importantly have strong support from all elements of the society.

All things considered, future studies may consider conducting interviews with the related institutions, such as BPJS Kesehatan, Ministry of Finance, Ministry of Health, local governments, and participants, in order to get a holistic understanding and information about this issue. Moreover, as this study has only used data from 2018 and 2019, and the policy is still new, only operating for 18 months, the data

collected may be insufficient to capture the effectiveness of the cigarette tax as a panacea for the JKN deficit problem. Thus, subsequent studies could seize the opportunity of a broader timeframe to examine whether this policy could reach its ultimate objective to reduce the deficit of the Indonesian national health insurance scheme.

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