GOVERNMENT–NGO PARTNERSHIP FOR COMMUNITY-BASED TB CONTROL IN RURAL AREAS OF INDONESIA: A CASE STUDY

by

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September 2014

Thesis Presented to the Higher Degree Committee

of Ritsumeikan Asia Pacific University

in Partial Fulfilment of the Requirement for the Degree of

Master in International Cooperation Policies (Public Health Management)

Acknowledgement

All glory to Jesus who has made everything beautiful in His time.

This research would not be accomplished without the guidance of my *sensei* at APU and Indonesia. To my supervisor Prof. Serik Meirmanov, thank you for your willingness to understand me and lead me back on track when I felt lost throughout the process of this research. To Prof. Nader Ghotbi, though you are not my direct supervisor I am grateful for your continuous support for my study. I thank you for your contribution in shaping this research. I also want to express my gratitude for Prof. Ko Yiu Chung and Prof. Nugroho Abikusno. Despite your busy schedule, you spared your time to read the first draft of my thesis. Your comments had helped me to improve the content of this thesis.

The hospitality that I received from the people at Kayong Utara District Health Office and Alam Sehat Lestari (ASRI) made this study possible. To all the respondents of this study whom I could not name one by one, I express my appreciation for your perceptivity and openness in sharing your information with me. Your passion in your work had motivated me to do my best for this research.

Part of the expanses of this research was assisted by the funding that I received from Ritsumeikan Center for Asia Pacific Studies (RCAPS) Research Fund. I am also a full recipient of Joint Japan/World Bank Graduate Scholarship Program. I want to thank these organizations for the financial support which enable me to pursue my master degree and finished the thesis requirement.

For my family back home, thank you for being there for me. Your love keeps me going on. Thank you for your support to my every decision however unconventional it may seem. Lastly, to Dear, Alif and Piggy, I am glad to meet you here at APU. We have come this far to the end of our school life. Let's keep the friendship grows.

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Abstract

Tuberculosis (TB) is one of the major health problems in Indonesia. Scaling up for Public–Private Mix (PPM) approaches have been initiated with the goal of engaging all health providers for TB control. In rural areas of Indonesia, NGOs support the local government health sectors by providing care to the population. They commonly engage in community-based activities. Despite this collaboration, there are few studies on government–NGO partnership for TB control in Indonesia. This study presents a case of government–NGO partnership for community-based TB program in West Kalimantan, Indonesia.

This study is an original study. Qualitative methodology with a case study approach was utilized to describe and explore the partnership. The study aimed to understand how the partnership contributes to TB control in the area. Data were collected through examination of official documents, participant observations, and in-depth interviews. Using a purposive sampling method, 17 respondents were selected for interview. The respondents came from the government, NGO and the community. This study used template analysis to analyze its data. Coding and network building were performed using Atlas.ti qualitative software.

The study reveals that the partnership resulted in improved TB case finding to approximately 38% from 2009–2013, identification of extra-pulmonary and paediatric TB, increased community awareness and wider TB service area of coverage. It may be suggested that the local government should encourage their staff to enhance and strengthen the partnership. The NGO willingness to adopt the

national TB guideline was crucial in building a mutual understanding between partners. In limited settings, optimizing the existing collaboration is a better option compared to a hasty decision of expanding the activity. The study argues about the importance of better monitoring and supervision of the achievements of community-based activities. The study points to strong leadership as a significant factor that helps sustain the public–private collaboration in the midst of a high turnover of staff at the primary care level.

Chapter 1: Introduction

1.1 Background

According to Global Tuberculosis Report 2013, Indonesia demonstrates the fourth highest incidence of tuberculosis (TB) in the world after India, China and South Africa (WHO, 2013). In 2012 alone, there were approximately 460,000 people diagnosed with TB (WHO, 2013). With its vast geographical variation, Indonesia faces relevant challenges of TB control which raise the need of area specific planning and unique collaboration between actors providing health care. In the eastern part and remote areas of Indonesia, the government capacity is not as strong as in the central—i.e. Java and Bali Islands. Thus, the partnership between local government health offices and non-government organizations (NGOs) in these areas should be considered an opportunity to improve TB control (Basri, Heitkamp & Mehta, 2007). With the nature of its work, NGO usually run its activities in a close proximity with the population it served. It bridges the gap between public health sectors and people in the community. Moreover, NGO is commonly engaged in community-based programs which empower community's participation. There is a general recognition of NGO's role in Indonesia health sector. However, accurate information on the number of NGOs providing health care services—particularly the one engaged in TB-related programs—is unavailable. WHO Country Cooperation Strategy 2007–2011 gave the overall figures range from 8,000 to 13,000 as the approximate number of NGOs working in the health sector in the whole country (WHO, 2008a).

As shown in several researches conducted in Indonesia, public–private mix partnerships for Directly Observed Treatment Short-course (DOTS) implementation have been initiated. The focus of such partnerships is to engage Indonesia National Tuberculosis Programme (NTP) with private sectors. Hospital DOTS Linkage (HDL) was initiated as a program to partner NTP with public and private hospitals mostly in Java and Bali Islands (Irawati et al., 2007; Probandari, Utarini, & Hurtig, 2008). A study to explore the potential of engaging private medical practitioners with NTP for TB control was also conducted in Jogjakarta—a city located in central Java (Mahendradhata, Utarini, Lazuardi, Boelaert, & Stuyft, 2007). The HDL and private medical practitioners' engagement initiatives provide knowledge on the effort to increase private sectors involvement for TB control in Indonesia. However, studies which explore the partnership between government sector and NGO—particularly in rural areas outside Java and Bali Islands—are limited.

1.2 Purpose of Study

Acknowledging the gap of knowledge mentioned above, this research aims to describe and explore a government–NGO partnership for TB control in rural area of Indonesia. Through this case, this research will argue the importance of NGO involvement in TB-related activity in rural area of Indonesia. This research will also add knowledge about community participation on TB-related activity through NGOs' program. In response to the need of strengthening partnership with all the available partners, this study will hopefully make a contribution to the effort of TB control in Indonesia.

1.3 Research Questions

General:

- How does the partnership improve TB control in rural area of Indonesia?

Specific:

- What is government–NGO partnership for community-based TB program?
- Who are involved in community-based TB activities and what are their roles?
- What are the areas of collaboration?
- What are the factors related to the sustainability of the partnership?
- How has the combination of these factors affected TB control in the research area?

1.4 Research Objective

The research objective of this study is to understand the concept of government–NGO partnership for TB control in rural area and identify the factors contributing to its success.

To achieve the objective of this study, qualitative methodology with a case study approach is applied. The study selects a government–NGO partnership for community-based TB program in Kayong Utara District, West Kalimantan as its case.

Chapter 2: Review of Literature

Following HIV, tuberculosis (TB) is the second leading causes of death from infectious diseases worldwide (WHO, 2012a). It remains one of the major global health problems. TB is an infectious disease caused by bacteria—*Mycobacterium tuberculosis.* The common site of TB infection is lungs (pulmonary TB) but it can affect any other organs as well (extra-pulmonary TB). It is also possible for a patient to develop multi-sites TB infection which commonly affects the lung plus another organ. The spreading of the disease is through the air; usually it happens when people with pulmonary TB expel the bacteria—e.g. through coughing or spitting. To diagnose TB, the most widely use method is sputum smear microscopy; however, it is limited to pulmonary TB cases only. From public health point of view, it is deemed important to detect pulmonary TB cases since these are the most infectious form of TB (WHO, 2012a). HIV/AIDS bring a new challenge in the effort to control TB. With their low immunity, people with HIV infection have a higher possibility to get TB. If left untreated TB has high mortality rates. Within sputum smear-positive and HIV negative cases of pulmonary TB, approximately 70% died in the course of 10 years (Tiemersma et al. in WHO, 2012a)

According to the guideline of International Standards for Tuberculosis Care (ISTC), treatment for patients who have never been treated for TB requires the minimum duration of six months period (TBCTA, 2006). During the first two months, the patients have to take at least four regimens of drugs daily (initial phase). It is followed by two regimens of drugs every consecutive day or 3 times a

week for four months (continuation phase). One of the biggest challenges of TB treatment and care is the development of multi-drugs resistance TB (MDR-TB). MDR-TB is developed as a result of suboptimal regimens and treatment disruptions. Thus, it is largely considered man-made. MDR-TB patients need to undergo 18-24 months duration of treatment which consists of at least 6 months therapy of daily injectable agent.

This review of literature is divided into four sections. The first section provides general overview about TB control—TB initiatives and TB targets. Section two discusses the forth component of Stop TB Partnership—to engage all care providers through Public–Private Mix approaches. Section three argues the importance of NGOs contribution for TB control. Lastly, section four explores community participation for TB activities. At the end of each section, additional information about TB situation in Indonesia is added.

2.1 Tuberculosis Control: An Overview

2.1.1 The DOTS Strategy

In 1993, the World Health Organization (WHO) declared TB as a global public health emergency. Since then several initiatives have been made to improve TB care and control at the national and international level. WHO launched the Directly Observed Treatment Short-course Strategy or DOTS Strategy in 1995. This strategy consists of five components: 1) sustained political and financial commitment, 2) diagnosis using sputum-smear microscopy, 3) regular supply of first-line anti-TB drugs, 4) standardized short-course anti TB treatment given under direct and supportive observation (DOT), and 5) standardized system for

recording and reporting the number of cases detected by national TB control programmes (NTPs) and the outcome of treatment (WHO, 2012a). During its implementation from 1995 – 2006, WHO successfully introduced this strategy to almost all countries (WHO, 2012a). In 2005, DOTS strategy has achieved global TB target established for that year; the case detection of 70% of the total estimated sputum smear-positive cases and treatment success of 85% of these cases (Glaziou, 2011; WHO, 2012a).

2.1.2 Stop TB Partnership

In 2006, the Stop TB Strategy was developed as a continuation of the effort to control TB after the term of DOTS Strategy came to an end. The new strategy was established by the Stop TB Partnership—a unique international body which coordinate actors all over the world in fight against TB (Stop TB Partnership, n.d.). The partnership itself was founded in 2001. Currently, around 1100 partners in more than 100 countries contribute in this collective force. The partners include international and technical organization, government programmes, research and funding agencies, civil society organizations (CSOs), NGOs, foundations and private sectors (Stop TB Partnership, n.d.). The goal of the Stop TB Strategy is "to dramatically reduce the global burden of TB by 2015 in line with the Millennium Development Goals (MDGs) and the Stop TB Partnership targets" (WHO, 2012a). The specific targets of the strategy are to reduce the prevalence and deaths due to TB by 50% using 1990 as the baseline by 2015 and to eliminate TB as a public health problem by 2050 (WHO, 2012a). There are 6 components to be addressed to accomplish the targets: 1) pursue high-

quality DOTS expansion and enhancement, 2) address TB/HIV, multi-drugs resistance TB (MDR-TB), and the need of poor and vulnerable populations, 3) health care system strengthening based on primary health care, 4) engage all care providers, 5) empower people with TB, and communicate through partnership, and 6) enable and promote research (WHO, 2012a). According to these components, this study highlighted the engagement of all health provider and community empowerment such as mentioned in component 4 and 5 of the Stop TB Strategy.

2.1.3 TB burden of disease: globally versus Indonesia

Based on the latest WHO report on global tuberculosis, 8.6 million people were estimated to develop TB in 2012 (WHO, 2013). Out of this number, 1.3 million died from the disease. Since the majority of the cases are preventable, the figure is unacceptably large. TB burden of disease is commonly measured by incidence, prevalence and mortality. For about a decade, the TB incidence has been going down globally; the rate of decline is measured 2% per year (WHO, 2013). By the year of 2012, TB prevalence showed 37% reduction compared to the 1990 baseline (WHO, 2013). However, it is predicted that the target of 50% reduction of prevalence will not be achieved by 2015. In the contrary, TB mortality rate has already been reduced to 45% (WHO, 2013). Thus, the target of bringing down the mortality rate is considered within reach.

As mentioned in the introduction, Indonesia ranked number four of the five countries with the largest number of TB incident cases in the world. In 2012, Indonesia TB burden of disease in term of incidence, prevalence and mortality

rates were: 185 per 100,000 population incidence, 297 per 100,000 population prevalence, and 27 per 100,000 population mortality (WHO, 2013). These number are regularly updated every year by WHO. Nevertheless, there are considerable challenges in providing the most accurate data since these data are largely based on the national surveillance system (WHO, 2013). In countries where many health providers provide services, it is important to capture all the cases treated by these providers—apart from only government provider—as to get the actual number of TB cases (WHO, 2013; Lönnroth et al., 2004**)**. Other challenges are associated with patient's reluctance to seek care or seek care but remain undiagnosed (WHO, 2013). Hence, these two indicators—case detection rate and treatment success rate—are useful to project the activities of TB control. Case detection rate is an indicator that calculates the number of new and relapse TB cases that were notified by NTP divided by the incidence of that year. There are categories of definition for treatment outcome of TB which will not be discussed in this section. Nevertheless, the commonest indicator used to project the outcome is treatment success for new smear-positive TB cases. Although nationwide Indonesia has achieved the global target of case detection rate >70% in 2011 and treatment success rate >85% in 2000, it does not mean TB is no longer an issue (WHO, 2013). With a large population disperse in many islands; TB achievements differ between 33 provinces of Indonesia. The next section explores the topic of Public–Private Mix (PPM) as one of the Stop TB Strategy components to engage all care providers for TB control. Through examples from different countries, the discussion aims to compile information about what has been done so far in regard

of PPM approaches in addition to the lessons that can be learnt from the case of PPM in Indonesia.

2.2 To Engage All Care Providers: Public–Private Mix Approaches

2.2.1 PPM rationales

It is acknowledged that in many poor-resources countries with a high TB-burden, varying types of health care providers provide health services. In one setting private commercial sectors such as private hospitals may dominate the services; in others there are NGOs or private providers such as health clinics run by general practitioners or nurses. Many of these providers are unregulated and not linked to NTP's public sectors. The failure to engage these providers may hamper the effort to control TB. It may result in diagnosis delay, inappropriate or incomplete treatment, and most importantly it will increase TB drugs resistance—one of the grave problems of TB treatment (WHO, 2010). From patient's point of view, unregulated TB care may create unnecessary financial burden related to diagnostic examination and treatment costs and various consultations with several providers. These were the backgrounds which initiated PPM approaches. The Stop TB Partnership subgroup on Public–Private Mix was created on 2002. Since then, 73 countries has reported data regarding PPM activities to WHO (WHO, 2013). Project evaluations have shown that PPM approaches could enhance case notification from 10 to 40% of the total notifications. This significant contribution underlines the importance of engaging all care providers to achieve the goal of TB control and eradication.

2.2.2 PPM approaches

The engagement of public and private providers with NTP should be planned based on the health care situation of each country. It is possible that a successful approach in one country may not produce the same result in another country. Based on PPM Toolkit developed by WHO, these steps need to be taken to ensure proper implementation of PPM approaches (WHO, 2010). Before engaging health care providers in such initiative, a national situation assessment is required; it determines the need and possible way of conducting PPM approaches. Next, it is crucial to create a PPM focal point at the central level to coordinate and facilitate the implementation. Operational guidelines need to be put in place to provide clear guidance about roles and responsibilities of each partner. Proper preparation, mapping of provider, advocacy and communication are also needed when the approaches are being implemented locally. Lastly, supervision is important to monitor the progress of such activities.

Though the term itself suggests collaboration between public and private sectors, PPM approaches may also include collaboration between public and public sectors. Global TB Report (WHO, 2013) and several studies provide information about various way of PPM implementation. It covers a range of public providers such as public and teaching hospitals in Indonesia and India (Probandari, Utarini, & Hurtig, 2008; Ambe et al., 2005); also, private for-profit providers such as private medical practitioners in Vietnam and Pakistan (Quy, Lan, Lönnroth, Buu, Dieu, & Hai, 2003; Ahmed, Ahmed, Laghari, Lohana, Aji, & Fatmi, 2009), allopathic practitioners in India (Murthy, Frieden, Yazdani, &

Hreshikesh, 2001), a mining company in Indonesia (Ardian et al., 2007), and pharmacists in Vietnam (Lönnroth, Karlsson, Lan, Buu, & Dieu, 2003). In countries where drugs are loosely regulated, pharmacists play a significant role in providing medical advices—including treatment for TB (Lönnroth, Karlsson, Lan, Buu, & Dieu, 2003). Some examples of not-for-profit organizations involvement could be found in Bangladesh and South Africa (Ullah, Newell, Ahmed, Hyder, & Islam, 2006; Kironde & Neil, 2004). There were also cases where NGOs played a role as intermediary organizations for PPM implementation. In India, three NGOs worked together with India National TB Programme to develop referral and information system tools, sensitize providers about PPM, conduct trainings and field supervision (Ambe et al., 2005). 'Sun Quality Health' (SQH) is the brand name of social franchise scheme developed by an international NGO in Myanmar (WHO, 2010). It provides quality-controlled and highly subsidized TB diagnosis and treatment through engaging licensed general practitioners (GPs) in the scheme. In return of the services provided by GPs, SQH gives benefits to the partnering GPs such as trainings, leaflets and signboard to be used at GPs' clinics, and access to DOTS branded patient kits which contain TB drugs and supplies (Lönnroth, Aung, Kluge, & Uplekar, 2007). In the case of Timor Leste, after the war had ended a local NGO took the lead to coordinate Timor Leste National TB Programme (Martin, Kelly, Grace, & Zwi, 2006). Cross cutting intervention which addresses TB-associated financial barriers and poverty reduction was introduced in Peru through socio-economic interventions by social security organizations (Rocha et al., 2011).

2.2.3 PPM in Indonesia

According to Global TB Report (WHO, 2013), in 2012, every fourth case of TB in Indonesia was notified by non-NTP providers. This fact underlines the importance of PPM as one of the approach that might effectively support TB control activities in Indonesia.

Indonesia started its first PPM approaches in 2000 through Hospital DOTS Linkage (HDL) project (Kemenkes, 2011; Irawati et al., 2007). This project aimed to increase the implementation of ISTC guideline amongst hospitals. Jogjakarta, a city in Central Java, was selected as a pilot study for this project. However, up to the year of 2011, only 38% of the total hospitals in Indonesia were participating in HDL and providing TB treatment according to ISTC (Kemenkes, 2011a). Based on Kemenkes report on PPM (2011a), approximately 40% of TB patients' respondents chose hospital and private medical practitioners as their first encounter to health providers. Considering this fact, the HDL achievement is perceived to be low. Recommendations were made to scale up hospitals' participation through policy and regulation. Several studies have been conducted to explore the challenges of HDL project. One study revealed the importance of commitment, good system and communication (Probandari, Utarini, & Hurtig, 2008). Further, it explored clinicians' reluctance to follow ISTC regimen; they argued TB treatment should not be standardized between hospital and primary health centre (Probandari, Utarini, & Hurtig, 2008).

Other PPM approaches that have been launched include the engagement of health clinics at government's institutions—e.g. police department, prisons, private

medical practitioners, health facilities run by private companies, NGOs and CSOs (Kemenkes, 2011a). Despite the slow progress and various challenges, some approaches showed better achievement than the other. Furthermore, for areas with adequate health facilities and strong support of NTP, improving diagnostic quality within DOTS services and strengthening the health system is considered more rational than engaging all providers under the umbrella of PPM (Ahmad, Mahendradhata, Utarini, & de Vlas, 2011; Mahendradhata, Utarini, Lazuardi, Boelaert, & Stuyft, 2007). This emphasizes the need to develop the best solution not only for a country as a whole but specifically for different area of services. The next section focuses on NGO involvement for TB control as part of PPM approaches. It discusses the potential role of NGOs in supporting TB activities—especially in rural areas of Indonesia.

2.3 NGOs Involvement for TB Control: Why It Matters?

2.3.1 Roles of NGOs in TB-related activities

In poor-resources and developing countries, NGOs may dominate as the only few available health providers. There are several benefits to partner with NGOs for TB-related activities due to its nature of work. NGOs commonly fill in the gap of health services by providing care in areas which are less covered by government sectors such as remote places (Zachariah, Teck, Harries, & Humblet, 2004), conflict zones (Martin, Kelly, Grace, & Zwi, 2006), refugee camps (Minetti et al., 2010), or slum dwellings (Ambe et al., 2005; Rangan, Ambe, Zallocco, & Porter, 2003). NGOs are noted to have access to marginal communities and vulnerable populations; it works in close proximity with the people it served.

Greater flexibility can also be found in NGOs work; it enables NGOs to create or modify its activities according to the need (WHO, 2010).

Based on NGO's strengths and resources, NGOs roles for TB care and control can be divided into: 1) service delivery, 2) health promotion and information exchange, 3) policy setting, 4) resource mobilization and allocation, and 5) monitoring quality of care and responsiveness (WHO, 2010). Bangladesh presents one of the best examples of extensive collaboration between NTP and NGOs which cover the whole country. In 1995, the Memorandum of Understanding (MOU) between the government and six NGOs was established. As Ullah, Newell, Ahmed, Hyder, & Islam (2006) summarized in their study, the area of collaboration includes policy, program implementation, case finding and case holding, training, drug supply, monitoring and supervision, and behavioural change communication. As a result of this collaboration, since 2002, NGOs and private sectors are responsible for more than half of the entire NTP activities in Bangladesh—both in urban and rural area (Ullah, Newell, Ahmed, Hyder, & Islam, 2006).

2.3.2 Government–NGO partnership for TB achievements

The partnerships between government and NGO produce several achievements. The cases of India, Bangladesh and Timor Leste showed gradual improvements in term of DOTS population coverage, case detection rate of new smear-positive cases and treatment success rate (Ambe et al., 2005; Ullah, Newell, Ahmed, Hyder, & Islam, 2006; Martin, Kelly, Grace, & Zwi, 2006). However, Bangladesh experience also showed that the partnership with NGOs alone may not

be sufficient to improve case detection rate. The partnership managed to increase the case detection rate from 24% to 32% in the span of four years. But, compared with the claimed DOTS population coverage of 95%, the gaps between coverage and case detection revealed problem of access and insufficient coordination with another large health provider—private practitioners (Ullah, Newell, Ahmed, Hyder, & Islam, 2006).

Apart from the 'measured' achievements such as the indicators mentioned above, the collaboration with NGOs produces another accomplishment as well. Increased community awareness and participation for TB control was improved partly because of the work of NGOs within close proximity to the communities (Ullah, Newell, Ahmed, Hyder, & Islam, 2006; Rangan, Ambe, Zallocco, & Porter, 2003; Zachariah, Teck, Harries, & Humblet, 2004). It tackled issues of TB stigma and misconception, provided proper knowledge about TB disease and treatment, and encouraged community member participation to eradicate TB in their areas.

2.3.3 Government–NGO partnership for TB challenges

The above discussion shares several accomplishment of engaging NGOs as one of the actors for PPM approaches. Nevertheless, there are challenges encountered by the partnership. Thus, this sub-section reviews findings from various studies which explored limitations and problems of such activities.

Kironde & Nasolo (2002) explored the barriers to NGO involvement in community-based TB treatment in South Africa. The most prominent issue arose in the study was lack of financial resources. It resulted in inability to sustain the

activities. Although the NGOs received funding from the government, the amount was considered insufficient. NGO's dependency on external funding was also found in a study in Bangladesh (Ullah, Newell, Ahmed, Hyder, & Islam, 2006). Other barriers acknowledged include issue of payment of volunteer, competition, collaboration, and human resource limitations (Kironde & Nasolo, 2002). The study discussed two different perspectives related to issue of collaboration: among different NGOs and between NGO and government health sector. In the case of South Africa or Bangladesh where many NGOs provide services, lack of collaboration often creates duplication of services, increases competition to get the money from funding agencies, and in the end weaken the actual effort to control TB. Lack of collaboration between NGO and government may also result in duplication of activities and lack of mutual trust which in turn hinders the continuity of the partnership (Ullah, Newell, Ahmed, Hyder, & Islam, 2006). Thus, communication is crucial to counter any misunderstandings arise during the process of collaboration. Lack of uniformity to provide TB standard of treatment and quality of care between different NGOs may also counteract NTP's goal to control TB (Ullah, Newell, Ahmed, Hyder, & Islam, 2006). From public health point of view, it is important for a country to adopt the same standard of treatment as to reduce the chance of TB drugs resistance and ensure treatment success (WHO, 2012).

2.3.4 NGO activities in Indonesia

NGOs presence has been rooted in Indonesia since the late 1970s. During those times, NGOs mostly engaged in socioeconomic related projects. After the

fall of President Suharto in 1998, there was an increase in the external funds granted through NGOs. It resulted in the expansion of NGO's works and opened the opportunity for many other NGOs to start its activities in Indonesia (WHO, 2008a). Though NGOs contributions in health sector has been acknowledged, the exact number of NGOs providing health services remains unknown, so is the number of NGOs participating in TB-related activities. WHO Indonesia Country Cooperation Strategy (WHO, 2008a) estimated approximately 8,000 to 13,000 NGOs are officially registered. It roughly divides the NGOs into three broad categories: large international NGO, local grassroots NGOs and NGOs associated with government of Indonesia through its ministries (WHO, 2008a).

According to the Indonesia Ministry of Health report on PPM activities (Kemenkes, 2011a), in 2010 there were 50 partners registered as members of *Gerdunas* (*Gerakan Terpadu Nasional* or National Integrated Movement)—a cross-sector movement to accelerate TB control measure. Out of the 50 partners, only 32 were active. These partners consist of government bodies, educational institutions, professional institutions, foundations, religious organizations and NGOs (Kemenkes, 2011a). Limited information regarding NGOs activities—particularly in the rural areas—create a gap of knowledge of NGOs involvement for TB control in Indonesia which this study tries to fill.

2.4 Community Participation for TB activities

2.4.1 Community involvement for health

People participation for health can be dated back since the Declaration of Alma-Ata in 1978 (WHO, n.d.). Community involvement was recognized as the essential element for primary health care and the work of many public health interventions. Nevertheless, the health reform under Millennium Development Goals focuses more on the technical aspect of health system which resulted in less attention to community participation and social values (WHO, 2008b). The ongoing challenges posed by major epidemics and the role of civil society to tackle some of these issues brings back the awareness of people contribution. It exposes health system limitations in term of inequality of coverage and access to health services. The existence of basic health services in certain administrative area can not be used to justify the availability of health care especially when it is barely accessible. Thus, greater involvement of communities and civil society organizations might contribute to the various function formally held by government health sectors. However, as mentioned in WHO report about community involvement for tuberculosis care and prevention (WHO, 2008b), the 'partnership' or 'participation' should refer to the context of shared responsibilities rather than replacing the roles of government health sectors.

2.4.2 Linking community-based TB activities with the work of NGOs

Previous section discusses the benefits of engaging NGOs in TB activities to provide wider coverage and achieve higher accomplishment. These goals can be achieved particularly because NGOs have the capability to reach remote areas and

marginalized groups. In their works, several NGOs collaborate with local communities. By doing so, they can understand the local contexts better while at the same time empowering the communities they served. Regardless recommendations on community engagement in TB activities through PPM, the implementation of it remains weak. The operational guideline to integrate community-based TB activities into the work of NGOs was developed to support the actors involved in these activities—NTPs, NGOs, and CSOs (WHO, 2012b). The underline concept is to include TB activities into the existing community-based projects run by NGOs or CSOs.

There is a broad range of community-based TB activities that can be found in the literatures—with or without the intermediary support of NGOs or CSOs. Some of these examples include "TB club" in Bangladesh, Ethiopia and Nicaragua (WHO, 2008b; Demissie, Getahun, & Lindtjørn, 2003; Macq, Solis, Martinez, & Martiny, 2008), TB sensitization through religious gatherings in Indonesia and Bangladesh (Amiruddin, Ibnu, & Rahman, 2014; Rifat, Rusen, Mahmud, Nayer, Islam, & Ahmed, 2008), and community involvement in primary health center's activities as community health volunteers—known as *kader* in Indonesia and *barangay* health workers in the Philippines (WHO, 2008b). Community-based TB activities can also be initiated in particular working groups such as shown in South Africa among the farm workers (Clarke, Dick, Zwarenstein, Lombard, & Diwan, 2005).

Similar to the previous discussion on the potential benefits of government–NGO partnership, community engagement may improve TB perception among

community members. It reduced TB stigma and discrimination, increased awareness and behavioural changes, and facilitated TB treatment activities (Demissie, Getahun, & Lindtjørn, 2003; Macq, Solis, Martinez, & Martiny, 2008). Moreover, it helps the identification of TB suspected cases through active case finding (Amiruddin, Ibnu, & Rahman, 2014; Clarke, Dick, Zwarenstein, Lombard, & Diwan, 2005). These activities give community health volunteers a sense of pride as they are able to contribute to the well-being of their family and community (WHO, 2008b). While incentives are provided, it allows volunteers to support their family income (WHO, 2008b).

Chapter 3: Methodology

This study is based on primary data collected through field work. Qualitative methodology with a case study approach was selected to best answer the research questions. The data consist of documents, participant observations, and in-depth interviews. For in-depth interviews, 17 respondents were purposefully selected. The interviews data were transcribed and analysed using a template analysis approach. Qualitative data analysis software, Atlas.ti, was utilized for coding and network development. Triangulation between sources of evidence was performed to ensure the validity of the information received.

3.1 Epistemology

This study is based on a constructionist stance, implying that social reality is constituted by meanings people constructed through social interaction (Thomas, 2004). The understanding can be achieved through interpretation of the reality in its context (Thomas, 2004). Thus, the knowledge generated in this study is the interpretations which arise in the course of the interaction between researcher, respondents and the people observed at the study site.

3.2 Case Study Approach

A case study approach was selected since it provides a method for in-depth exploration of an issue—in this case a partnership—through one or more cases within a bounded system (Stake, 1995). This approach helped to define government–NGO partnership for TB control in the research area, described the actors involved and their roles, and identified factors which contribute to sustainability of the partnership.

Yin (2009, p.47-53) provides rationale for a holistic single-case design. Following this design, this study aims to provide a deep description of a case that represents typical situation where the findings can provide information about the experiences of similar cases (Yin, 2009). Looking from this point of view, type of activities conduct by government–NGO partnerships in Indonesia are generally differs; it largely depends on the type of NGO and its objectives, local government capacity, and location of the partnership. However, the factors contribute to sustainability of partnership may represent similarity and can be induced to other cases of government–NGO partnership in Indonesia. This study could also be seen as a longitudinal case; it provides opportunity to study the case at two different points of time—before and after the partnership. During this interval, certain conditions that might change over time can be observed (Yin, 2009).

3.3 Theoretical Framework

3.3.1 Theory development

Yin (2009) underlined the importance of theory development in case study approach. The theory provides guidance to determine what data to collect and what strategies to use for analysis (Yin 2009). It reminds researchers about the single focus that persuade them to conduct the study (Creswell, 2007). Review of literature provided abundant information about government–NGO partnership and community-based TB activities. Thus, I utilized the information gathered for the development of this study theory and propositions.

Zafar Ullah, Lubben, & Newell (2004) in their study produced a generic model for partnership in TB control. The model links essential service components

which are needed to deliver quality care and the partners involve in the collaboration or partnership. The study identified 16 key service components for TB programmes. These components are:

1. Provision of policy guidelines
2. Provision of quality diagnostic services
3. Provision of laboratory facilities
4. A referral mechanism
5. Provision of DOT
6. Late patient tracing
7. Decisions on levels of fee for services
8. Provision of supplies and logistics
9. Recording and reporting of treatment outcomes
10. Monitoring and supervision of service activities
11. Coordination
12. Training
13. Health education
14. Community mobilization
15. Quality assessment of diagnosis
16. Feedback

3.3.2 Study propositions

Based on the prior knowledge, this case study will identify service components available in the existing partnership and develop a model of partnership in the study area. Further, the case study will explore the factors which

support and hinder the partnership. The findings of these factors will lead to the question of how the partnership affects TB control in the area. As shown in the study in Bangladesh (Ullah, Newell, Ahmed, Hyder, & Islam, 2006), India (Ambe et al., 2005) and Indonesia (Ardian et al., 2007), this case study expects to discover improvement in TB national target achievements as the result of partnership. In addition, the study anticipates finding increased community awareness and participation as the result of community-based TB activities which were initiated by the NGO.

3.4 Defining the Case

As an instrumental case study, the selection of the case has to focus on how much insight and understanding would be gained to answer the research questions (Stake, 1995). However, Stake (1995) also suggests researchers to consider field work limitation such as time and access. In response to this, he recommends researchers to pick a case which is easy to get and where the people involve show openness to the idea of study (Stake, 1995). Following these strategies government–NGO partnership for TB control at Kayong Utara District was selected as a case. The case location at rural area in West Kalimantan corresponded well to the objective of the study—to understand the concept of government–NGO partnership for TB control in rural area and the factors related to its success. The partnership at Kayong Utara District also offered an interesting case of partnership with the involvement of community-based TB activities in a relatively small scope context. It was doable for a small scale research considering the limitation of time, access and funding. Lastly, during preliminary visit the

district government and NGO expressed positive responses toward the proposal to conduct this study in their respective area.

3.5 Description of the Setting

The study was conducted in Kayong Utara District, West Kalimantan Province. As part of the government administrative proliferation, Kayong Utara was detached from the originally Ketapang District and established as a new district in 2007 (Badan Pusat Statistik, 2013). It comprises of approximately 4,568.26 km^2 landmass—including 103 islets located at Karimata Strait in the west part of the district. According to Badan Pusat Statistik (2013), the total population of Kayong Utara District in 2012 was 99,495 inhabitants with the population density approximately 22 persons/km^2. The district is divided into 6 sub-districts: Sukadana, Simpang Hilir, Teluk Batang, Seponti, Maya Island and Karimata Islets. The sub-districts are further divided into 43 villages (Badan Pusat Statistik, 2013).The population average income is approximately 76 USD per month (Badan Pusat Statistik, 2009). Water transportation is the commonest transportation use by the majority of population; it connects Kayong Utara District with other villages, districts and Pontianak City—the capital city of West Kalimantan Province. The land infrastructure connects Kayong Utara with other districts in West Kalimantan; however, many are not in a good condition.

3.6 Field Work

I spent two and a half years (2006–2009) fulfilling my government mandatory service as a general practitioner in one of the hospitals in West Kalimantan. During those times, I heard about Alam Sehat Lestari's (ASRI) work

and got acquainted with ASRI's cofounder. In 2009, I got a chance to visit the area and went for trekking at Gunung Palung National Park (GPNP). I briefly stopped by at ASRI clinic and saw its activity.

According to Creswell (2007, p.125), it is beneficial to identify a "gatekeeper"—an insider in a cultural group—when starting a case study. Hence, when designing this study, the connection with ASRI's cofounder was re-established and additional information about ASRI's programs were gathered. When the proposal to conduct a preliminary visit was offered, the contact agreed to take me to Kayong Utara District Health Office and introduce me with the associate officers.

3.6.1 Preliminary visit

Preliminary visit was conducted on 2–15 March 2013. During this period, I built rapports with Kayong Utara district health officers and ASRI staff. I introduced myself to the head of DHO, *Kepala Seksi P2M* (Communicable Diseases Center Section Officer), and *Wasor* TB (District Tuberculosis Officer) at Kayong Utara DHO and explained my plan to conduct a research in the area. The request for permission to conduct the research was submitted to DHO and ASRI and granted. I also spent my time to understand ASRI programs by attending daily morning meeting and talked with ASRI staff. Specifically, I allocated time to gain more knowledge about ASRI DOTS Program by observing the activity of TB doctor, DOTS coordinator and DOTS workers. I followed ASRI doctors during TB patients' consultation, observed DOTS coordinator managing TB data, and accompanied a DOTS worker during her home visits. I took time to understand

how TB data is collected at government sector and ASRI. Issues related to TB data input were acknowledged and discussed extensively with district TB officer at DHO and DOTS coordinator at ASRI. I also gained the access to related documents to the partnership such as Memorandum of Understanding (MOU) and referral letters. The preliminary visit was coincided with several research related meetings such as TB monitoring and evaluation meeting at DHO and DOTS workers monthly meeting at ASRI. I took this opportunity to participate as a non-participant observer.

All of these observations, formal and informal discussions, and meetings with the actors involve in TB control at the study area had provided valuable insight into the context of partnership; it served as a backbone for theoretical framework development and refined research questions. Apart from that, the second visit—from the last visit in 2009—had helped me to see the changes that took place in the district within the last four years. Despite remaining challenges, the growth of Kayong Utara as a new district has brought improvements in term of infrastructures, official buildings and medical personnel.

3.6.2 Data collection in the field

After a consultation with DHO and ASRI staff, it was decided that the research to be conducted after Idul Fitri Holiday—the biggest Muslim celebration following Ramadan—which fall in the middle of August that year. I went back to the field and spent the time for data collection from 18 August–22 September 2013. During these five weeks, I rented a room at one of the ASRI's houses for staff at Sukadana—the capital town of Kayong Utara District. I was fully aware

about the context of the research which would require a fair amount of information from both government and NGO sector. Thus, since the start of data collection I was careful not to be associated with ASRI and repeatedly explained that I am an independent researcher from a university. I avoided using ASRI's car to go to government offices (DHO office and *Puskesmas*/community health centre). The DHO office, ASRI clinic and Sukadana *Puskesmas* are located within close proximity to each other, to visit these places I preferred to go by myself using a bicycle. I also hired local community member as my private motorcycle driver to take me around for visits to *Puskesmas* outside Sukadana. The data collected during this period consist of documents, participant observations and in-depth interviews. The interview's records were transcribed within 48 hours to enable me explored emerging themes and double checked queries information.

3.7 Ethical Consideration

3.7.1 Informed consent process

I prepared the informed consent draft by following the example given by Creswell (2007, p.124). This draft was reviewed by my research supervisor. Upon approval, I translated the draft to Indonesian language. Second opinion from an Indonesian friend was requested to ensure proper translation and correct usage of words. Following recruitment of respondents, I explained verbally the purpose of the research, the right of the respondents not to answer particular questions without being questioned, and research confidentiality. The respondent's participation was based on voluntarily basis means no compensation or incentive were provided. These were the items mentioned on the written informed consent

form. After the explanation, I asked respondents' willingness to participate in the study by signing the form.

3.7.2 Confidentiality

Having the experience of work in a similar context in Indonesia, I understand one of the biggest challenges of conducting this study was how to get the trust of the respondents so to speak freely. Since the study aimed to explore the partnership, it was important for respondents to share their point of views without being afraid to be exposed and create 'problems' for their workplace in future. This issue was especially crucial since the area of study is relatively small—a place where people know their neighbours well. The issue of confidentiality was discussed thoroughly during verbal informed consent. I underlined my intention not to use any name to indicate respondents' relation to particular comments or discussions. As a result, I tried my best to carefully present the findings so the connection between the respondent who provided the information will remain anonymous. Any 'out of the record' information shared during the interviews was not recorded and mentioned in this study.

3.8 Selection of Respondents

The selection of respondents for this study was based on theoretical sampling (Rice & Ezzy, 1999, p.48). The field knowledge gathered during preliminary visit combined with the theoretical framework provided guidance in the selection process. From this point of thinking, I tried to ensure the complexity of the partnership was being represented.

The partnership in this study was comprised of government sector, NGO and DOTS Program. The respondents were purposefully selected based on their role, knowledge and length of involvement in the partnership. A total number of 17 respondents were interviewed in this study. Table 3.1 provides respondents' information based on their place of work and position.

Table 3.1: List of respondents

Government	DHO	– *Kepala Seksi P2M* (Communicable Diseases Center Section Officer) – *Wasor* TB (District Tuberculosis Officer)
	Puskesmas	– Head of *Puskesmas* (2) – TB coordinator – Laboratory technician
NGO	ASRI clinic	– ASRI founder – ASRI director – Head of clinic – TB doctor – Laboratory technician
	DOTS Program	– DOTS coordinator – Non medical background DOTS workers (3 respondents) – Medical background DOTS workers (2 respondents)

As described in detail on findings, DOTS Program is a program run by ASRI. However, as the key element of partnership, I felt the need to explore the program by including a fair amount of respondents in the interview. One medical background DOTS worker respondent worked at government sector as a nurse. However, during the study she was classified as a DOTS worker for her role in the partnership.

3.9 Data Collection

Case study could explore broad range of issues and give voices to emergent topics on real life situation (Flyvbjerg, 2011). To achieve this goal, Yin (2009) emphasized the importance of multiple data collection which could enhance the validity and reliability of a case study. He further concluded by not doing so "the invaluable advantage of the case study strategy will have been lost" (Yin, 2009).

Critic has been raised to the notion of case study as a methodology which contains bias toward verification due to researcher's pre-conceived point of views (Flyvbjerg, 2011). Elaborate data collection as multiple sources of evidence will serve the ground for the development of 'converging line of inquiry'—a process of triangulation and corroboration (Yin, 2009). This 'safeguard' will help researchers reduce the bias which might arise during the study. Furthermore, Flyvbjerg (2011) noted researchers who have conducted a case study generally report after data collection phase they realized that their pre-conceived views were wrong. It led them to revise their hypothesis on essential points (Flyvbjerg, 2011). This information implied the nature of a good case study; the finding should be derived from triangulation of multiple sources of evidence rather than pre-conceived ideas of the researcher. It also showed, when conducted properly, case study is a sound methodology with its own strength to be used in research.

Based on the understanding described above, this study collected data from documents, observations and interviews as its sources of evidence.

3.9.1 Document

There were two types of documents collected for this study: documents related to the context of partnership and archival records. Memorandum of Understanding (MOU), referral letters, invitation letters and DOTS worker's contract are documents which were significant to the context of partnership. Archival records were subtracted from DHO and ASRI TB patients' register. All of this information was mostly gathered during preliminary visit. From it, I obtained valuable information about the initial concept of the partnership and TB status in the study area. TB patients' register provided insight about TB situation in the district before and after the partnership. Demographic information, TB patient's characteristics and TB treatment categories were some of the information which was retrieved from TB patients' register and gave description about TB status and TB control activities in this district.

As noted by Yin (2009), documents are useful to corroborate and augment evidence from other sources. However, there will be times when documents produce contradicting information rather than corroborating. In this situation, Yin (2009) suggested researchers to pursue the problem and make further inquiry into the topic. As mentioned earlier, during preliminary visit, I realized there were several problems related to archival records. I discovered DHO and ASRI had different standard of recording TB patients' data, ASRI TB patients' data were not properly inputted into DHO data, and there was possibility of discrepancy between DHO and *Puskesmas* data. These problems made me aware of the level of accuracy of the archive. Though the archival records could be highly relevant, it is

important to ascertain how the records were produced and its accuracy (Yin, 2009). I discussed this matter thoroughly with person in charge of data recording at DHO and ASRI. I tried my best to clean up the data by converging ASRI's register into DHO's and removing duplicate calculation. Upon arrival in Japan, I notified my research supervisor about this issue. The quantitative data presented in this paper was the result of consultations and has been agreed by the supervisor.

3.9.2 Participant observation

Observation is one of the basic sources of information which closely relate to field study. Depending on the study, researcher may choose to be perceived as outsider or insider—or somewhere in between (Ulin, Robinson, & Tolley, 2005; Yin, 2009). In participant observation, researchers make effort to get closer by performing variety of roles during the process of observation (Yin, 2009). This attempt hopefully will result in acknowledgement and trust from the people in the study area which is crucial to understand the different layers of the case. This was the stance that I took during preliminary visit and data collection period. I was engaged in several activities—some were not research related— at DHO and ASRI. I visited DHO office several times to introduce myself and got acquainted with DHO staff particularly under Communicable Disease Centre office. This introduction has helped to create comfortable atmosphere especially at government office where bureaucracy is usually strong. At ASRI, I was participating at regular morning meetings where I could hear day to day updates and challenges. I also offered my help as a volunteer at ASRI's other programs—

aside from DOTS Program—on my free time. I visited 3 *Puskesmas*, joined DOTS workers' meeting, and accompanied a DOTS worker during her house visits.

I started to feel the acceptance of the people at the study site when they included me at their out of work activities such as an open house ceremony at district TB officer, a wedding celebration or an invitation to spend after work hours with ASRI's team. It was also apparent that after some time people did not hesitate to speak freely in front of me concerning their work related problems. Nevertheless, I was aware about the pitfall of participant observation. Yin (2009) warned against the potential bias produced by this activity. It can limit researchers flexibility to work as external observer and may at times creates conflicting interest when researchers have to assume certain position or advocacy role at the study area (Yin, 2009). The participant observer may also has the tendency to become supporter of the group or organization being studied (Ulin, Robinson, & Tolley, 2005; Yin, 2009). This issue was particularly true since this study involved two organizations. It was important for me to keep my neutrality for both side of the partners—government and ASRI. Thus, as suggested by Creswell (2007), I developed a habit of jotted down reflective notes during the observation and transferred it into word files after the observation finished. Most of the observation word files were produced on the same day of the activity to maintain as much information as possible and keep the nuances of the situation observed. While writing these files, I had the opportunity to reflect on the observations in relation with my research questions and double check the information gathered with other sources of evidence. During DOTS workers' meeting and DOTS

worker house visits, I tried to limit my participation in the discussion when it was deemed unnecessary. One of the house visits that I followed was at Seponti sub-district. Due to access difficulty to reach this area, I had to spend the night at the DOTS worker's house. I seized the opportunity to visit Seponti *Puskesmas,* conducted interview with the head of *Puskesmas* and the DOTS worker and observe the challenges of health service at remote area of Kayong Utara District.

3.9.3 In-depth interview

Through in-depth interview, I got the opportunity to explore people knowledge and understanding about the partnership. Ulin, Robinson, & Tolley (2005, p. 81-89) provided practical guidance toward in-depth interview such as tips how to frame qualitative questions and stages of interview. Yin (2009) also underlined the need to follow researchers' line of inquiry according to their case study protocol. However, the unbiased manner needs to be carried out when the actual questions are being asked (Yin, 2009). The interview protocol was developed before I went to the field study following the example given by Creswell (2007, p.136). It served as a reminder for me to follow the line of inquiry while at the same time allowed me to frame the questions in different forms depending on the respondent (Crabtree & Miller, 1999). The flexibility of in-depth interview protocol also gave me chances to explore new themes which are not covered in the guideline (Matthews & Kostelis, 2011; Thomas, 2004).

Prior to the arrival at the field site, I kept in contact with some potential respondents through emails and phone messages. I expressed my interest to interview them. On the first week of the field study, I formulated list of interview

schedule based on the availability of respondents. Most of the interviews were conducted in the offices at DHO, ASRI clinic or *Puskesmas*. Two interviews were conducted at respondent's houses. Approximately each interview lasted for 45 minutes. All interviews were conducted in Indonesia language. Several respondents used local dialect but I did not have difficulty to understand the context of discussions. All interviews were recorded; verbatim transcription was produced on the same day of the interview or under certain circumstances in less than 48 hours after the interview. The short gap between an interview and data transcription allowed me to double check unclear comments and do triangulation with other respondents or other sources of evidence. The files were labelled according to the initial name of respondent, place of work, date of interview and number of interview (Creswell, 2007). Further, a special code label was created to keep the anonymity of respondents.

3.10 Data Analysis

3.10.1 Data management

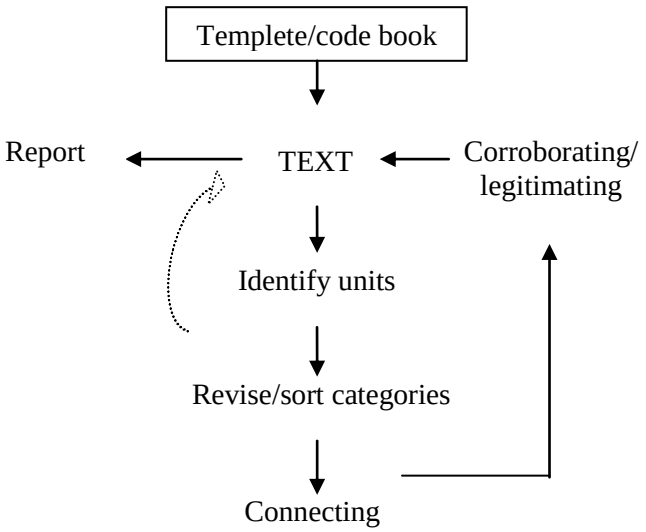
Data analysis is an iterative process which started as soon as data collection begins (Creswell, 2007; Stake, 1995; Ulin, Robinson & Tolley, 2005). Creswell (2007) described it as a spiral image where researchers are expected to move into an analytic circles rather than fixed linear approach. In qualitative study, data analysis usually starts with data management. In this early phase, researchers organized their data by writing field notes, transcribing interviews records, labelling and storing (Creswell, 2007). This study was conducted by a sole researcher; acknowledging the challenges of data management, I attempted to

allocate proper amount of time for data organization (Miles & Huberman, 1994). The maximum number of interview conducted in one day, length of interview, and interval between interviews were put into consideration to provide sufficient time for me to develop field notes and simultaneously start data analysis.

3.10.2 Data analysis strategy: template analysis

As soon as the field notes and interview transcriptions were developed, I followed continuum of analysis strategies—template analysis—by Crabtree & Miller (1999). In this analysis strategy, the researcher needs to define predetermined categories or 'set of codes' or template which will later be used to identify units from text (Crabtree & Miller, 1999; Miles & Huberman, 1994). Template analysis provides flexibility by allowing researcher to revise—by subtracting or adding up—the codes and resume the iterative process of analysis. The process of template analysis is projected by the figure below.

Figure 3.1: Template analysis process



(Source: Crabtree & Miller, 1999, p.22)

Critics for template analysis are mainly focused on prior development of codes before data collection (Creswell, 2007). Concern was expressed for less 'grounded' analysis; this situation might arise when researchers focus too strictly to the template and lose the opportunities to see different set of patterns and concepts (Creswell, 2007). This is a sound argument. I was aware that the validity of this study can be easily questioned when I fails to see this potential pitfall in my analysis. However, there are advantages of template analysis that could benefit this study. As stated by Crabtree & Miller (1999), template analysis: 1) helps researcher to focus on the research questions and conceptual framework of the study, 2) is time efficient, and 3) is helpful to be used in research with good prior knowledge about the topic. Considering my experience as a novice researcher, these advantages accommodate me to keep track of my analysis process.

The template for this study was formulated from conceptual framework, research questions, literature reviews, and preliminary observation at the research area. It consists of general categories and individual codes derive from it (Miles & Huberman, 1994; Friese, 2012). Similarly, Crewell (2007) also suggested researchers to start from a short list of categories and expand it along the iterative process of analysis. I operated Atlas.ti version 7—a qualitative data analysis software—to work on the coding and network building. After all interview transcriptions were loaded in the software, I started to code the first five documents with the existing template codes. Soon, I revised the limitation of my template codes to accommodate the emerging themes found in the texts. Following the advice given by Friese (2012), I revised my list of codes and

developed descriptive and conceptual categories and sub-categories of codes. This process of revising took place several times until I felt the list of codes is sufficient to help me proceed in the next step of analysis. The final list of codes is available in table 3.2.

During the coding and analysis process, I utilized Atlas.ti comment and memo functions. In the comment fields I noted downs each code description, while the memo function was applied to generate more elaborate writings such as research diary and research questions memo (Friese, 2012). In the research diary, I kept record of all the activities performed in Atlas.ti. This habit has helped me to remember the on going review process that took place inside Atlas.ti. I made use of research questions memo as the place to produce my first draft of research report. There, I wrote down my interpretation of data by using query tools and network creation.

Table 3.2: List of codes

Categories	Sub-categories
TB Program	• Background • Activity • Initiatives • Patient care
Partnership	• Definition • Background • Achievement • Challenge • Suggestion
TB Status	• Respondent observation • Paediatric TB • Extra-pulmonary TB • MDR • Death case
Organization	• Government • ASRI • Private
Actor	• Health providers at partner's institutions (GPs, nurses) • Coordinator and decision maker • Community health volunteer • Private (private practitioners, traditional healer) • Specialists
Collaboration	• Case finding • Case holding • Documents • Supplies • Training • Supervision
DOTS Program activities	• Case finding • Case holding • Challenges • Initiatives • Work motivation
Supporting factors	• Budget • Incentive • Communication • Trust • Motivation
Opposing factors	• Access • Staff turn over • Health worker's stigma • Lack of priority • Lack of communication • Treatment discrepancy • Workload • Coordination
Community	• Community education • Community stigma
TB patient	• Treatment complaints • Perception about disease
Result	• Increased case finding • Reduced default • Increased coverage • Community awareness

3.10.3 Data triangulation

The objective of this study is to understand how the partnership between government and NGO could improve TB control in rural area of Indonesia. Through exploration of supporting and opposing factors related to the partnership, I aimed to comprehend how these factors affect TB control achievement in the study area. Therefore, in this research, archival records played an important role as to show the outcome of such activity. Yin (2009) described the use of both quantitative and qualitative data to treat the evidence fairly and to rule out any alternative interpretations. Quantitative data may project the 'outcome' of TB control such as number of TB cases identified, number of drop out and number of cases successfully finished the treatment. In this situation, qualitative data was critical to explain the contrasting findings and test the case study propositions. At the end of interview sessions with coordinator-level respondents, I invited the respondents to discuss quantitative findings. I prepared several graphs which were created from archival records and asked respondents' point of view about the projection of the number. If the quantitative findings revealed contradictory information with the one shared by a respondent during the interview, I used the opportunity to clarify the facts and explore respondent's rationales. I also cross checked the information gathered from interviews between respondents from the same organization and the opposite partners. By doing so, I tried to ensure the reliability of the information shared and developed list of factors which mostly affect the partnership. Participant observation and my prior knowledge of the context of the study further contributed in the triangulation process of the data.

Chapter 4: Findings

The chapter of findings starts with the description of health care services in the study area. In this section, I provide information about government health structures, ASRI medical activities and other health service providers in the area. As the newest district in West Kalimantan, Kayong Utara is still lacking behind compared to other districts in the area. Unavailability of a referral hospital put the burden to *Puskesmas* and ASRI clinic to provide services that sometimes are beyond their capacity. Section two describes government–NGO partnership for a community-based TB program. It explains the definition of a community-based TB program in the context of the case and the backgrounds which initiated the partnership. The description of actors involved in the partnership is explored in section three. The focus is particularly given to DOTS workers roles and responsibilities and their incentive system. Section four and five consecutively explores partnership area of collaboration and factors related to the sustainability of the partnership. Human resources and access were frequently mentioned as opposing factors. On the other hand, strong leadership, good coordination, incentive schemes and availability of budget were perceived as supporting factors. Lastly, section six analyzes the outcome of the partnership for TB control in the study area. It shows how the partnership has improved the identification of TB cases—including extra-pulmonary and paediatric TB cases. Community engagement in DOTS program has increased people awareness about TB disease. The partnership also widens health service coverage by providing DOTS workers that live among the communities.

4.1 Health Care Services in the Study Area

The District Health Office (DHO) of Kayong Utara is administratively in charge of 8 *Puskesmas*, 24 *Pustu*, and 109 *Polindes/Puskesdes* (Kemenkes, 2013). *Puskesmas* or community health centre is located at sub-district, thus a *Puskesmas* is responsible to provide health service in the respected area of coverage. The primary programs of *Puskesmas* consist of health promotion, environmental health, maternal and child health including family planning, nutrition, eradication of communicable diseases and medical consultation. The medical consultation is provided through emergency services and out-patient department. In-patient department with the approximate number of 10 beds capacity is available in 5 *Puskesmas*. A *Puskesmas* is usually headed by a general practitioner (GP). However, in the case of unavailability of a GP, a nurse may step in to take this position. Under *Puskesmas,* a *Pustu*—supporting community health centre—provides health services at the village level. Each *Pustu* is run by a nurse who usually stays and lives in the health centre building. *Polindes* (village delivery centre) and *Poskesdes* (village health post) are health structures which were built by the government with communities' participation. Midwives or nurses are usually in charge of these health posts. Lack of human resources is resulted in some of the posts left unattended.

Apart from government institutions, Alam Sehat Lestari (ASRI) is the only NGO providing health services at Kayong Utara District since 2007. As stated in its webpage, ASRI believes "the key to global health is to protect the connection between human health and environmental health—at the local level" (ASRI, n.d.).

Thus, to achieve its mandate, ASRI focuses its activity in and around Gunung Palung National Park (GPNP)—an extensive 90,000 hectares conservation forest which covers the area of Kayong Utara and Ketapang District (TNGP, 2013). ASRI provides health services for the communities living around GPNP through ASRI clinic which is based in Sukadana sub-district and mobile clinics. The medical activities run by 3 GPs, 1 dentist and 5 nurses. The clinic is supported by basic laboratory and pharmacy. Services offer at the clinic include free birth control, free immunization for children, general medicine and dental care. Through its medical and reforestation activities, ASRI aims to educate the communities about the importance of forest conservation for their health and future generation. The fees for medical consultations and pharmacies can be paid in cash or bartering items that are useful for the conservation projects such as seedling or manure. Further, patient's family member participation in the reforestation work can also be considered as a way of payment.

Other health care providers in the district are private clinics run by GPs, nurses or midwives. Hospital and specialist services are only available at Ketapang District. From Sukadana, it takes approximately 3 hours journey by road to reach Ketapang City. Although ambulance services are available at ASRI and *Puskesmas*, there are reasons that may prevent a patient to be referred. These include patient's unstable condition, financial problem and limited option of advance medical care in Ketapang District—e.g. brain surgery or orthopaedic surgery. Traditional healers are accounted for non-medical health care providers. The number of traditional healers in the district is unknown.

4.2 Government–NGO Partnership for a Community-based TB Program

4.2.1 Community-based TB program: an overview

This research referred to community-based TB program as a program which was initiated by ASRI. From this point on, the community-based TB Program will be mentioned as 'DOTS Program'.

Soon after ASRI started its health clinic in 2007, ASRI received several cases which they suspected as TB cases. According to a respondent, one of the first cases diagnosed by ASRI was an abdominal TB with ascites (fluid in the stomach cavity). The patient had a strong history of contracting TB from her husband who had been treated as a pulmonary TB patient by *Puskesmas*. Since *Puskesmas* rarely treats extra-pulmonary TB, she ended up at ASRI clinic to seek medical treatments. ASRI decided to treat this patient and educated her husband as a treatment supporter. He had to ensure the patient takes her medications according to the schedule and provide psychological support. The patient was cured. However, the result was different for ASRI's majority of patients treated as TB—they dropped out from the treatment schedule before completion. This experience made ASRI realized the difficulty of employing family member to follow up patient's treatment. ASRI believes the success of TB treatment lie in the continuous support to the patient. The provision of someone to monitor and motivate TB patients during their course of treatment has been valued in many literatures (Clarke, Dick, Zwarenstein, Lombard, & Diwan, 2005; Macq, Solis, Martinez, & Martiny, 2008). Nevertheless, the close relationship between patients

and their relatives could hinder the accomplishment of the therapy. It is especially true when the patient is older than the person assigned for this role.

The DOTS Program was then created on December 2007 as a way to tackle this issue. By empowering local community members, ASRI aims to provide TB patients with someone who were known and respected by the community. These community members—hereafter will be referred as DOTS workers—assist TB patients complete their treatment by observing the drugs are taken according to the schedule. They provide encouragement through their presence and support during the treatment course. In addition, by providing proper trainings to the workers, ASRI hopes the workers could acknowledge symptoms of TB among their neighbourhood and persuade the suspected cases to be screened. These workers also raise communities' awareness on TB disease. By doing so, they counter the stigma of TB as inherited disease or a spell cast on someone—the common perception of TB in this area. Moreover, basic health knowledge acquired by DOTS workers through ASRI trainings equips them to conduct health promotion activities at their communities.

DOTS workers are selected through a recruitment process. The first batch of DOTS workers consisted of 18 people from the surrounding areas bordering GPNP. These workers received trainings on the cause of TB, mode of disease's transmission, symptoms and signs, treatment course and TB drugs' side effects. They were explained about the importance of completing the therapy and the danger of default cases in increasing TB drugs resistance. Thus, the role of DOTS workers were introduced as TB patient's treatment supporter.

4.2.2 The partnership background

The partnership was initiated by ASRI shortly after the creation of DOTS Program. At that time, ASRI realized the provision of DOTS workers could also benefit TB patients which were treated by *Puskesmas.* ASRI sufficient fund to run the program made it possible for ASRI to offer DOTS workers' services to several *Puskesmas* in charge of the areas surrounding GPNP.

On June 2008, ASRI sent a letter of collaboration to three *Puskesmas*. In this letter, ASRI provided a brief description about DOTS Program and invited these *Puskesmas* to make use of the program. *Puskesmas* could inform ASRI when they need DOTS workers' assistance to follow up their TB cases. No fees were implied for the services. Later, ASRI offered MOU to these *Puskesmas* to be signed as an agreement for the partnership. Only one *Puskesmas* agreed to sign, the other two were unresponsive.

In the same year, ASRI notified DHO about its DOTS program and requested the provision of free TB drugs which were provided by Indonesia Ministry of Health. Apart from TB drugs, TB patients usually need additional medicines to reduce their TB-related complains. This cost added with the transportation cost put a heavy burden on the patients. Thus, the availability of free TB drugs greatly benefited ASRI TB patients. DHO also supplied ASRI laboratory by providing TB reagents and microscopic slides.

In 2012, ASRI decided to expand DOTS Program's area of coverage. It resulted in two additional *Puskesmas* participated in the program. Another

progress of the partnership came by the end of December 2012, marked by the signing of MOU between ASRI and DHO.

4.3 The Description of Actors Involved in the Partnership

The study recognized several actors involved in the partnership. These are DOTS workers, coordinators and health providers.

4.3.1 DOTS workers

4.3.1.1 Roles and responsibilities

In the study area, DOTS workers are the main actors of the community-based TB program. As stated in the work contract, the responsibilities of DOTS workers include, first to ensure TB patients take their medicines according to the prescription. In order to fulfil this responsibility, DOTS workers keep patients' medicines and conduct home visits 3 times a week. During these visits, the workers bring the medicines and ask the patient to directly take the medicines in front of the worker. When the patient is still under initial phase—where he/she has to take TB drugs daily—DOTS workers assign one of the family members to keep one or two days supply of medicine and be in charge of this role in his/her absence. Second, DOTS workers provide TB education to patients and their families. A patient's willingness to take TB medicines is influenced by his/her understanding about the disease. Though most patients have received explanation about their sickness from medical staff, this information is most of the times insufficient. In this situation, the presence of a DOTS worker is important as they repeatedly provide health education in a language and terms known by the locals. Third, DOTS workers act as the person in between the health providers, ASRI or

Puskesmas, and the TB patient. DOTS workers have to report their home visit activity to the DOTS coordinator and communicate the problems they face such as drugs' side effects or patients' refusal to continue the treatment. It is also a DOTS worker's responsibility to bring the patient to health clinics on the expected date for repeated sputum examination. Forth, in order to fulfil the responsibilities mentioned above DOTS workers need to nurture a good relationship with TB patient. DOTS workers presence and continuous support would hopefully motivate TB patients to finish their treatment. Fifth, on their first visit, DOTS workers have to check on patient's living condition—type of house, ventilation system, and number of family members living in the same house—and provide possible advises to improve air circulation in the house. They also need to find out whether there are any family members presented with symptoms of TB, such as prolonged cough, bloody cough, reduce weight, and so on.

Other responsibilities of DOTS workers are the obligation to attend monthly meeting where they could share their cases, participate in training and collect patient's drugs for one month course. DOTS workers have to inform DOTS coordinator immediately if they are unable to go for home visits or in the case of changing mobile phone number—a usual practice in Indonesia since the prepaid SIM cards are relatively cheap. The violation of the rules which will result in immediate termination of the contract includes false report and unjustified absent without communication with DOTS coordinator. These conducts will lead to the disruption of patient's treatment. The termination will also be given to workers who does not attend monthly meeting for the total of 4 times in a year.

4.3.1.2 Incentive system

Since all of the workers have to own and be able to drive a motorcycle, the incentive system was created based on this type of transportation. The amount of lump sum per house visit is divided according to the condition of the road whether it is normal (asphalt road, good condition) or bad (non-asphalt or asphalt with many holes). Each worker receives lump sum for gasoline which is calculated based on the kilometres a DOTS worker needs to take for his/her service. One litre of gasoline is equivalent to 30 kilometres services. Lump sum is provided to cover the cost of transportation needed for the workers to come to the clinic for monthly meeting. Additional monthly lump sum is available for motorcycle maintenance. DOTS workers get the benefits of free medical consultation and laboratory examinations at ASRI clinic. They are also benefitted for 20% discount at ASRI's pharmacy. These benefits apply to the workers and their nuclear families. To balance the workload and ensure the quality of services, one DOTS worker could follow up the maximum number of ten patients. During times when DOTS workers have no patient to be followed, they would receive monthly incentive equivalent to 5 USD. In general, a DOTS worker could earn approximately 11–13 USD per patient per month depending on the road condition.

4.3.1.3 DOTS workers' background

During the time of data collection, there were 14 DOTS workers at ASRI. The majority of workers are women—12 out of 14. According to a respondent, when ASRI started this program, it was ASRI's founder idea to empower women for this work. She reasoned women have more patience dealing with day to day

task of motivating TB patients and listening to patients' complains. In addition, this part time work is well suited for women since they could do the work after finishing their tasks at home. It provides additional income for the worker's family on top of their primary income which usually earned by the husband. Since the program aims to empower local communities, educational requirement for a DOTS worker is not set too high. ASRI expects the workers to be able to read and write, but apart from that the requirements are focused more on criteria such as originated from local communities, demonstrated good attitudes, and showed willingness to help people in need. 10 workers (70%) were graduated from junior high school, one from college and three from nursing school. One worker professes as a teacher, three workers as nurses and the rest are housewives.

An interesting fact worth to be mentioned is the engagement of the workers in government health sectors outside DOTS Program. Two of the nurses are civil servants works at *Pustu*. The other nurse runs a private clinic while his wife works as a part-time nurse at *Puskesmas*. The rest of the workers are actively participated as *kader* (community health volunteer) for health promotion activities at *Puskesmas*.

4.3.2 Coordinators

4.3.2.1 Coordination at government sector

At government sector, the actors involve in coordination and decision making process for TB Program are, from top down, *Kepala Bidang* (Head of Section), *Kepala Seksi P2M* (Communicable Diseases Centre Section Officer), and *Wasor* TB (District TB Officer). These officials work at the District Health

Office level. At *Puskesmas,* when TB cases are confirmed, the responsibility to follow up patients' TB treatment fell under *Puskesmas* TB coordinator. TB coordinator assigns patient's family member as a treatment supporter. The coordinator reports to head of *Puskesmas* and district TB officer at DHO. Regularly, district TB officer monitors the work of TB coordinators and collects TB patient's data from all *Puskesmas* in the district. District TB officer is responsible to enter the district TB data in the national TB software.

4.3.2.2 Coordination at ASRI

In DOTS Program, DOTS workers work under direct supervision of DOTS coordinator and ASRI general practitioner—referred as 'TB doctor'. DOTS coordinator responsibilities include monitoring and supervision of DOTS workers activities, manage complains and conflicts, and prepare the incentives. DOTS coordinator also accommodates communication between TB doctor and DOTS workers. TB doctor works hand in hand with TB coordinator and is responsible for the medical aspect of the program. As for TB doctor, one GP at ASRI clinic is assigned for this position. The decision of who should be in this position is discussed openly among the doctors. The role of TB doctor is focused more at supporting DOTS coordinator work from clinical side. It is also their responsibility to schedule and carry out trainings for DOTS workers. However, it is not solely the responsibility of TB doctor to treat TB patients. All GPs at the clinic share this responsibility. From the observations at ASRI clinic, it is a common practice among doctors to discuss and make decision together for

patient's diagnosis and treatment—including TB. DOTS coordinator and TB doctor are directly report to ASRI head of clinic.

4.3.2.3 Coordination between government sectors and ASRI

At district level, coordination between government and ASRI are mostly conducted by district TB officer and DOTS coordinator. Through district TB officer, TB supplies such as TB drugs and laboratory equipments are distributed to *Puskesmas* and ASRI. In return, every three months DOTS coordinator has to provide updates on the status of TB cases treated by ASRI. Whenever possible, district TB officer also includes ASRI staff in any government trainings or seminars. At primary care level, coordination is usually carried out among *Puskesmas* GPs and TB doctor through official visits, referral letter or informal communication.

4.3.3 Health providers: government, ASRI, private providers and specialists

4.3.3.1 Government and ASRI

At *Puskesmas*, in addition to GPs, nurses and paramedics conduct medical consultations. These health providers are likely to encounter suspected cases of TB. At *Pustu* or *Polindes*, nurses or midwives are the front line health providers who might acknowledge suspected TB cases among their patients. However, unavailability of laboratory services make the suspected patients have to travel to the nearest *Puskesmas* for sputum examination. Lack of access and telecommunication coverage also hinders *Pustu* or *Polindes* staff to get second opinions on medical consultations. It makes them frequently have to rely on their own knowledge to treat the patients. On the other hand, at ASRI, all medical

consultations are conducted by GPs. Thus, there is limited involvement of nurses in TB diagnosis and treatment.

4.3.3.2 Private health providers

Private health providers in the research area could be classified as medical and non-medical background. For the medical background, private health providers include GPs, nurses, midwives and paramedics. Under ASRI's contract, a doctor is not allowed to work outside ASRI. Thus, none of ASRI GPs work as private practitioners. This rule does not apply to government sectors. Some of the government respondents shared their involvement as private health providers outside their working hours at government posts. Interviews with these respondents revealed the participation of private providers in recognising TB cases at their private practices.

Non-medical background private health providers consist of various types of traditional healers. The research did not directly get in touch with these providers. However, their practices were acknowledged by some respondents during the interviews.

4.3.3.3 Specialists

Two medical specialisation—pulmonologist and paediatrician—are closely link to TB Program in Kayong Utara District. This field of services are only available at Ketapang District. One pulmonologist was acknowledged by respondents. However, the information about the number of paediatricians was unclear. These specialists provide second line medical services and receive referral cases from GPs. Most of adult TB patients had their consultation with the

pulmonologist upon referral from *Puskesmas* or ASRI. However, most paediatric TB patients went directly to paediatrician without any referral.

4.4 Partnership Area of Collaboration

This section describes the area of collaboration between government sector and ASRI. It will also explore problems that government and ASRI were dealing with before the partnership—including their initiatives to tackle the issues. Through collaborations, some of the problems could be resolved but some persisted. The area of collaboration is divided into: case finding activities, case holding activities, documents, supplies, trainings and supervision.

4.4.1 Case finding activities

Indonesia national TB target requires the minimum of 70% achievement of case detection rate in each province (Kemenkes, 2011b). By the end of 2012, Kayong Utara District case detection rate was far below at 42.5% (unpublished data from a district health officer). One of the strategies to improve case detection rate is through enhancing case finding activities. From the interviews, several attempts have been done by government sectors to improve the achievement of case detection.

In 2012, DHO launched training for *Pustu* and *Polindes* staff. It aimed to equip nurses, midwives, and paramedics on the knowledge of how to fixate and examine sputum slide under the microscope. The laboratory technicians at *Puskesmas* were in charged to double check the slides produced by the staff. When the result is smear-positive, TB treatment should be started immediately at *Pustu* level. The rationale behind this activity was to empower *Pustu* and *Polindes*

staff in doing active case finding. They were expected to screen the community they serve for suspected TB cases. The activity was intended to bring the health service closer. It acknowledged barriers for cases to be screened and get early treatment at *Puskesmas* due to various reasons such as lack of infrastructure access, monetary means, stigma, and so on. The activity was replicated by one of the *Puskesmas* with the goal of enhancing *Pustu* and *Polindes* staff participation for TB program in their respected area. Both DHO and the *Puskesmas* reported ineffectiveness of such training even though basic laboratory supplies were distributed to the participated *Pustu* and *Polindes*. When asked about incentives, the respondents explained incentive is provided for the staff that discovered smear-positive sputum. However, the cost of transportation from *Pustu* to *Puskesmas* was bore by the staff. The respondents also shared *Pustu* and *Polindes* staff reluctance to deal with sputum due to disgust or fear of contracting the disease since *Pustu* and *Polindes* structures are usually served both as a clinic and a home for the staff and their family.

> *"In my opinion, it depends on the will of the staff. If the staff share the same commitment to eradicate TB in their working area...whatever the ways they will send (the sputum slide) to Puskesmas...maybe they are disgusted with the sputum...I told them, if you feel disgusted with sputum, at least send the patients to Puskesmas."*

> *"After the training, none of the Pustu sent their slides. The reasons were various...because most Pustu structures are also house for the staff...so it is not possible for them to allocate one room for sputum examination...where he/she lives with their children...they also examine patients at the same place...it is not suitable."*

Another active case finding activity initiated by DHO was contact tracing activity. During contact tracing activity, DHO with the help of *Puskesmas* staff visited the houses of confirm TB cases. They systematically screened the neighbourhood and identified people with symptoms of TB. The sputum samples were collected on the site from any suspected cases whenever possible. Later, the samples were examined at *Puskesmas* in the area. According to the respondents, DHO has conducted this activity since 2012. The goal is to do contact tracing for 50 confirm cases per year. However, when asked about the number of smear-positive samples among the entire samples collected, the respondents could not provide clear answer. Similar activity has been put into plan of action at least in one of the *Puskesmas* but the plan was postponed due to budget constrain and lack of human resource.

Obstacle mentioned during interview regarding passive case finding at *Puskesmas* was related to lack of human resource. Respondents from one of the *Puskesmas* shared the difficulties to confirm the diagnosis of TB because the laboratory technician was currently on maternity leave without anyone assigned to replace her work. Other mentioned about the reluctance of the suspected TB cases to go to *Puskesmas* for TB screening. One doctor also shared his difficulty in persuading patient to come back to the clinic for the second or third sputum examination.

> *"If (sputum) is positive usually we directly (give TB drugs) because according to our experiences even though theoretically we have to check the sputum for 2-3 times...but it is difficult when the patient come from Maya Island or other remote area. If we ask them to come again, they will*

not come. Difficult...If they have to come for the second sputum exam, they will think about it...most likely in the end they will not come."

The collaboration between ASRI and government sector on case finding was mostly apparent in the work of DOTS workers who at the same time work as nurses at *Pustu*. These two workers did active case finding in their area of work; they collected the sputum sample of suspected TB cases and brought the samples to *Puskesmas* for TB screening. When the result was positive, they asked *Puskesmas* to provide TB drugs. Later, they would notify ASRI and follow up the cases as DOTS workers.

4.4.2 Case holding activities

As discussed earlier, one of the reasons ASRI started its DOTS Program was related to the issue of case holding. From the information gathered, reasons for TB patient to drop out were related to motivational supports, fear of drugs' side effects, lack of continuous education about TB for patients and their family, and fee for TB drugs. Part of these reasons had been answered through the creation of DOTS Program. By providing DOTS workers who were part of the community, ASRI successfully tackle several important issues such as TB stigma, TB disease misconceptions, and health services accessibility. Such program was resulted in the reduced drop out rate at ASRI clinic.

"Another challenge is the family member. Some DOTS workers almost gave up when the patient complained of side effect. The family member used to be angry with the DOTS workers...then the patient insisted to stop the treatment...in the end the DOTS workers contacted DOTS coordinator. The coordinator goes to patient's house and educates the patient again. If it is failed then the coordinator will come back again with the doctor. If the doctor also failed...so we can not do anything...it is patient's decision to continue or not. But so far we are succeeded in re-educating the patients."

After the partnership, DHO provided free TB drugs to patients treated at ASRI clinic. This decision helped the patients to stay in the treatment program. One DOTS worker mentioned the amount of tablets needs to be taken by patients is affecting patient's compliance to the treatment. He compared the situation before and after the partnership.

> *"The problem is taking the tablets. Before (the partnership) clinic used their own supply...It was difficult to take the tablets...it was more than 10 tablets per day. It discouraged patients...but after kombi drugs (combination drugs/TB drugs from government) they see only 2 to 3 tablets...It is easier for patients even though the ingredients must be plenty. So now, their complaints are less, for these drugs there is almost no complaints."*

From *Puskesmas* respondents perspective, when asked what were the reasons for patients to drop out from treatments, some related to the complain of side effects, long treatment duration—especially in remote area when the transportation cost hindered patients to come regularly to get TB drugs, and lack of monitoring and motivational support from health providers to the patients. When asked further about the lack of monitoring and motivational support, respondents reasoned the role of family member as patient's observer might not be sufficient. At the same time, with *Puskesmas'* workload and lack of human resources they can not provide adequate services for TB Program. They recognized some of these challenges might be tackled by improving the partnership with ASRI. However, a respondent argued the number of DOTS workers available in their area of work was limited, thus the service was not fully utilized.

Despite unrelenting problems, the interviews also captured positive information—most of *Puskesmas* cases observed by DOTS workers were successfully treated. DOTS workers also helped bridging the gap between *Puskesmas* staff and TB patients such as in the case of treatment misunderstanding.

> *"At Puskesmas, sometimes they give one month treatment to be taken home. The patients are ordinary people, they need to be explained many times...After the partnership, one of our DOTS worker who follow up Puskesmas' patient called me...this patient's body weight is 39 kg, he/she should take 3 tablets but why he/she only takes one? So I told the DOTS worker, he/she needs to confirm with the Puskesmas. After the confirmation apparently it was the patient's mistake...he/she needs to take 3 tablets instead of 1. So the presence of DOTS worker is helping the patient."*

4.4.3 Documents

There were two types of MOU mentioned during interviews. One was MOU between *Puskesmas* and ASRI; the other was MOU between DHO and ASRI. As mentioned before, ASRI initiated the partnership by contacting the surrounding *Puskesmas* in their areas of work. After initial introduction about ASRI and their DOTS Program, ASRI offered MOU to be signed by both parties. However, some *Puskesmas* were unresponsive. Most *Puskesmas* in rural area of Indonesia are headed by GPs—the majority are fresh graduate doctor fulfilling their governmental obligation service in a rural area. Thus, stepping up into the managerial position is considered a new experience for many. This background possibly played a role for the hesitancy of head of *Puskesmas* to engage in the partnership with ASRI. Another reason might relate to the perception that DHO is the higher authority above *Puskesmas*. Hence, all partnerships involving

Puskesmas should be notified by DHO. ASRI's first approach of contacting the *Puskesmas* directly might create confusion at *Puskesmas* level—especially when *Puskesmas* was unsure about DHO response toward the proposal. Therefore, the creation of MOU between ASRI and DHO by the end of 2012 was perceived by some respondents as a positive movement toward better partnership.

> *"Yes, I think (the partnership) is getting better, because it seems like there is support from higher (authority). So the Puskesmas are more willing to collaborate. Now it is not depend on who is the (government obligatory service) doctor. The other staffs are also supportive. It becomes a routine."*

> *"At the beginning of this year (TB doctor) told me that ASRI clinic provides DOTS worker service... (He said) Puskesmas only need to inform the case but the treatment is under Puskesmas responsibility...they only provide the DOTS workers. We don't need to give any incentives. I told him, try to inform DHO. I am grateful he responded...so now, we have the MOU with DHO. We, Puskesmas, can use the service."*

The interviews also discovered DOTS workers involvement in easing the way for collaboration with government sector. Through their position as local residents in the community or nurses at *Puskesmas*, they were building the trust of *Puskesmas* toward ASRI works.

4.4.4 Supplies

The supplies provided by DHO to ASRI include laboratory supplies such as microscopic slides, reagents and sputum container and TB drugs. All respondents at ASRI agreed there were no significant problem related to the availability of supply. Furthermore, the respondents gave appreciation to DHO which they considered are very supportive.

"In term of the lab supply (the partnership) is good. Furthermore, if DOTS coordinator asked (for TB drugs) they will provide according to our need...When we asked for reagent, they will prepare it. I just called; I said I need this...I already prepare the letter... (They replied) I will inform the logistic department to prepare it...When I come to DHO, it is ready...I think for this program there is no difficulty."

4.4.5 Trainings

In 2012, DHO invited ASRI's laboratory technician to participate on TB quality assurance training at provincial level. The training lasted for 7 days. During those days, the participants learnt how to collect good sputum sample, prepare TB slide, and recognize TB bacteria under a microscope. All participants—apart from ASRI—were government staff from various districts in West Kalimantan. At district level, DHO also conducted training on how to input TB data in national TB forms which was attended by DOTS coordinator.

4.4.6 Supervision

District TB officer requests ASRI to provide TB report every three months. The report is compiled from ASRI laboratory's data and TB patients' data. ASRI laboratory has to provide number of suspected cases screened for sputum-positive TB. Some of the smear-positive and smear-negative slides were sent to DHO which collectively sent it to the provincial level for quality assurance feedback. DOTS Program activities were recorded in national TB forms. District TB officer worked together with DOTS coordinator to ensure proper filling of the data and update the outcome of the patients. ASRI was also participated in the TB monitoring and evaluation meeting which was conducted every 6 month. The meeting was led by Communicable Diseases Centre section officer at the DHO.

4.5 Factors Related to the Sustainability of the Partnership

The sustainability of the partnership relies on the interaction between opposing and supporting factors. This section presents these two categories of factors which were subtracted from respondents' interviews. It is important to remember that apart from the partnership both government and ASRI have their own TB activities, thus it is difficult to draw a clear line between factors which affect government/ASRI TB activities or the partnership. Some factors might relate to both situations. Acknowledging this possibility, the findings provide below try to focus on factors which are likely to affect the partnership.

4.5.1 Opposing factors

Human resources and access were the most common themes mentioned by the respondents as opposing factors to the sustainability of partnership. Apart from the insufficient number of staff at primary health care level—*Puskesmas* and *Pustu*—the theme of human resources was closely related to staff turn over. Respondents from government and ASRI shared similar concern regarding this issue. Respondents from government provided example such as the difficulty to maintain communication because ASRI DOTS coordinator was replaced every 1-2 years. It affected the rapport which has been built so far. Additionally, it created the need for additional training of the new staff. High staff turn over was also found in GPs position. Most of the GPs come from urban area; they are stationed in rural areas to fulfil their government mandatory services as fresh graduate doctors. Thus, usually these GPs will stay for limited amount of years, approximately 1-2 years, though some might extend the contract or decide to

apply for civil servant position in the area. GPs turn over might hinder the partnership when the new replacement is not aware of the existing partnership and the benefit of maintaining it. Occasional activities at DHO such as medical outreach or social gathering become the meeting grounds for all the GPs from *Puskesmas* and ASRI to meet. However, several GPs managed to build communication to other GPs working at different institutions on individual basis. ASRI respondents remarked unavailability of a doctor/nurse at *Puskesmas* or *Pustu* resulted in ASRI TB referral cases left untreated. Since ASRI decided not to treat TB patients when DOTS workers are not available in the area, ASRI would refer the patients to the nearest government health posts from the patients' residence. Factor of access was related to the challenge of monitoring and supervision of DOTS Program. It hindered further expansion of the activity since some of the areas are barely accessible.

Another opposing factors mentioned by the respondents was lack of communication. It created misunderstanding and distrust between government and ASRI. However, several respondents gave positive comments toward improving communication. Past experiences showed misunderstanding took place because there were no clear written documents as means of communication between GPs at ASRI and *Puskesmas*. One respondent also stated the willingness to cross check the information received through patients is important. Out of patient's ignorance the information about the treatment received at partner's institutions could create friction between ASRI and *Puskesmas*.

"So the most important thing is the openness between NGO and government. In the past, we were more closed, maybe even seen as unfriendly. So the openness is important, such as when there is questionable information from the patients...we can cross check with DHO or respected Puskesmas. Sometimes the patients can play one against another...so when I checked apparently it was not the case. The same thing happened...ASRI's patient went to Puskesmas, Puskesmas doctor then asked us the history..."

The importance of building communication as part of 'eastern' culture was discussed by one respondent from ASRI. According to him it is important to build rapport between person in charge of DOTS Program and *Puskesmas'* coordinators through visits and informal communication. By then, the trust can be constructed and any misunderstanding can be discussed more openly. The respondent admitted in reality this is a difficult task since he has to prioritize his duty at the clinic. However, occasionally he managed to allocate his time.

Another factor which corresponds as an opposing factor was the priority of TB eradication program in between other programs. This issue was more apparent at government sector where there were several template programs which should be run by each *Puskesmas*. When the number of programs did not match the number of human resources, it resulted in one staff responsible for multiple programs. Therefore, it was difficult to maintain the commitment of the staff for TB case finding, left alone the partnership. Added to this, one respondent also shared her point of views. According to her, since *Puskesmas* staff does not receive any incentives from the partnership, there is no other means of encouragement apart from the appreciation of doing their best for the patients.

"It's hard to...there isn't much incentive for the government clinic to want to work with us except to do the best for the patient. We don't give them monetary incentive right and nor the government right...So, I think just as it becomes more routine...it is expected to be done and it gets easier...but in the beginning it's hard to get people to change to something new when there is no incentive for them. It doesn't necessarily just money incentive right...but no encouragement..."

The majority of respondents related treatment discrepancy as one of the crucial factor which hindered the partnership in the past. Though the consensus had been reached, this factor is discussed as a lesson learnt. When ASRI started its TB program, ASRI did not implement the nationwide WHO guideline and adopted different TB standard of guideline. The problem emerged when ASRI received free TB drugs from DHO. The DHO encountered difficulty in reporting the usage of the drugs to the central government since it did not follow standard practices. Discussions between DHO and ASRI added with internal meetings among ASRI medical team were conducted following this issue. The issue resolved by the willingness of ASRI to update its TB guideline to better suit the national guideline.

4.5.2 Supporting factors

Supporting factors to the partnership mentioned by respondents include strong leadership, good coordination, incentive schemes and availability of budget. A respondent from ASRI reasoned strong leadership at DHO level is important to facilitate coordination with *Puskesmas*. The fact that ASRI has been working in the area for several years and collaborated with the government in various programs has also helped building the trust between them.

"I think we have all what we need. The longer the partnership...the better...I mean...it becomes a habit...there is enough trust, there is enough experience...oh this is really works and this is helpful."

Further, as explained by this respondent, the commitment to work together resulted in good coordination and acknowledgement of each other works.

"The positive thing that I see is the synergism (between ASRI and DHO). When they have trainings, they will invite us...they inform. And when we have a (difficult) case, they will come...we collaborate."

The provision of incentive played a role in maintaining the DOTS Program. However, financial incentive was not seen as the only reason to keep the workers committed to the work. Other mean of encouragement were considered important as well such as supportive working atmosphere and continuous trainings. One DOTS worker particularly commented on the working atmosphere where she, as a 'common' people, feels comfortable dealing with doctors which she considered is above her.

"What make me happy here is because every month the doctors give us training. They teach us about diseases, not only TB but other diseases as well. It is the reason that makes me stay. We can not find this thing in other places...doctors usually are not generous to share their knowledge. I am sorry to say this...but here, the doctors share...My friends, they have patients, so of course they receive incentive. As for me, (currently) I don't have patients. That's what I am looking for...the experience...the knowledge..."

As a non-government organization, ASRI maintains its activity through funding from grants and private donors. The main source of funding for DOTS Program came from private donors who provide ASRI the flexibility to modify and adapt the program according to the need. The ongoing support from the

donors from the beginning of the program to the time of research has helped ensuring the stability of the program—and the partnership.

4.6 The Partnership's Outcomes for TB Control in Kayong Utara District

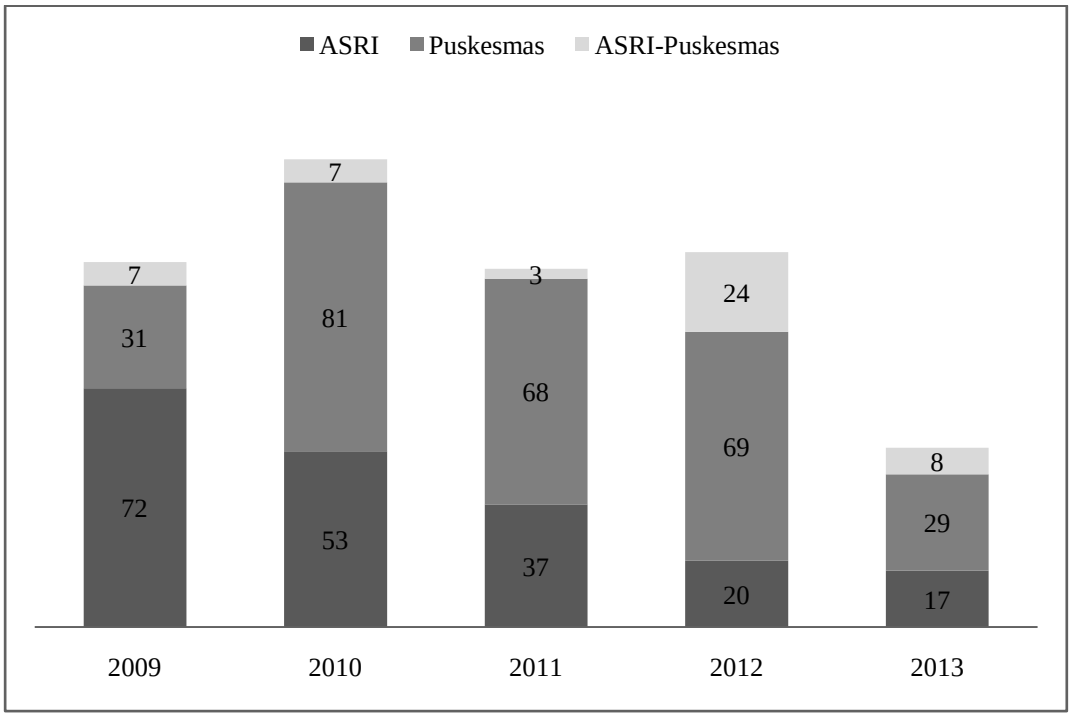
This section describes the outcomes of the partnership which were analyzed through triangulation of archival record, observation and interview sources. The government–NGO partnership in Kayong Utara is resulted in improved case finding, identification of extra-pulmonary and paediatric TB cases, increased community awareness and wider TB service area of coverage.

4.6.1 Improved case finding

The partnership between government and NGO in Kayong Utara District has significantly improved identification of TB cases in the area. From the 2009 to 2013, ASRI had contributed to approximately 38% of the total number of TB cases. Figure 4.1 shows the distribution of TB cases based on health provider. In this figure, the partnership is indicated by 'ASRI–*Puskesmas*' legend. It means the cases were diagnosed by *Puskesmas* and the follow up was done by DOTS workers. As the figure shows, before 2012, DOTS Program was barely utilized by the government sector. Several reasons for low enrolment of *Puskesmas* in the partnership were discussed in the previous sections such as ASRI different standard of treatment, lack of coordination, misunderstanding and low level of trust. In 2012, ASRI expanded its area of coverage outside GPNP and recruited two *Pustu* nurses as DOTS workers. 87.5% of all the partnership cases identified in 2012 were coming from the newly established area. In the same year, through

the influence of ASRI head of clinic, the decision to review ASRI TB guideline was made.

Figure 4.1: Number of all new TB cases based on health providers at Kayong Utara District, 2009–2013*



**the number of TB cases in 2013 was compiled from the month of January–June*

One ASRI respondent stated the decreasing number of TB cases diagnosed at ASRI clinic throughout the years might portray ASRI achievement in tackling TB issue in the area surrounding GPNP where ASRI has been working since 2007. Another respondent added ASRI decision in 2011 not to treat TB cases if the DOTS workers are not available in the area where the patients' live might also contributed to the trend. Interestingly, one respondent argued the reduce number of TB cases possibly due to stricter TB guideline that ASRI is applying now.

Similar question about the trend of TB cases identification at *Puskesmas* was raised to government respondents. According to respondent from DHO, after the detachment of Kayong Utara from Ketapang District, the DHO underwent a transition period. District TB officer position was left empty until 2009. During this time health data were compiled together with Ketapang DHO. It might create data discrepancy which resulted in the sharp increased of TB cases from the year of 2009 to 2010. Further, Kayong Utara TB indicators' achievement that are still below the national target made DHO officers eager to remind *Puskesmas* to improve their case finding activities.

4.6.2 Identification of extra-pulmonary and paediatric TB cases

Table 4.1 projects the distribution of paediatric and extra-pulmonary TB cases based on health providers at Kayong Utara District. The table shows that ASRI contributed to most paediatric TB cases and all extra-pulmonary TB cases identified in Kayong Utara.

Table 4.1: Distribution of extra-pulmonary and paediatric TB cases based on health providers at Kayong Utara District, 2009-2013*

Year	Total Patients	Puskesmas			ASRI		
		Pulmonary TB (%)	Extra-pulmonary TB	Paediatric TB (%)	Pulmonary TB (%)	Extra-pulmonary TB (%)	Paediatric TB (%)
2009	110	36 (32.7)	0	2 (1.8)	49 (44.5)	2 (1.8)	21 (19.1)
2010	141	86 (61)	0	2 (1.4)	34 (24.1)	4 (2.8)	15 (10.6)
2011	108	70 (64.8)	0	1 (0.9)	26 (24.1)	3 (2.8)	8 (7.4)
2012	113	92 (81.4)	0	1 (0.9)	18 (15.9)	0	2 (1.8)
2013	54	36 (66.7)	0	1 (1.9)	9 (16.7)	0	8 (14.8)

** The number of TB cases in 2013 was compiled from the month of January–June*

The detection and notification of smear-positive pulmonary TB cases has been the highlight of countries' TB program including Indonesia. Though the

focus is needed to reduce the spread of the disease, extra-pulmonary and paediatric TB cases also contribute to the total burden of TB disease. It is noted that for many years paediatric TB detection, diagnosis and treatment has been largely neglected (WHO, 2012a). The under estimated number of these cases might hinder the goal of TB control and eradication. In the study area, limited way of diagnostic tools and medical consultations prevents GPs to diagnose cases such as extra-pulmonary or paediatric TB. However, the findings showed that ASRI is more active in identifying this type of cases. The observations at the study site revealed the different atmosphere of learning between GPs at ASRI and *Puskesmas*. At ASRI, GPs were easily discussed with each other about the cases they encountered. Regularly, they conducted medical lectures one or two times a week. In these lectures, each GP took turn presenting a case or topic to be discussed with their colleges. Frequent visits of medical volunteers from Indonesia and abroad to ASRI clinic also provided GPs with chances to discuss their knowledge and challenges. Some of these medical volunteers are specialists with longer experiences in the medical field. On the contrary, most of GPs at *Puskesmas* worked alone in their designated area. Occasionally, DHO conducted trainings or meetings but it did not seem sufficient to improve the motivation of GPs to update their knowledge. This difference might result in the confidence of GPs at ASRI to diagnose and treat extra-pulmonary and paediatric TB cases compare to their colleges at *Puskesmas*. When this subject was asked to DHO respondents, they provided similar answer of lack of training for GPs at *Puskesmas* to diagnose such cases. The respondents were also acknowledged

ASRI contribution to identify extra-pulmonary and paediatric TB cases in Kayong Utara District.

As mentioned earlier, the specialists at Ketapang District were considered one of the actors involved in TB control at Kayong Utara District. Though their roles were not directly linked to the partnership, however, their expertise was important to support GPs when dealing with the issue of complicated TB cases. The respondents from ASRI and government shared the same impression about the pulmonologist in Ketapang. They mentioned the openness and good communication as factors which encouraged them to consult whenever they encountered problems. Most of the referred TB patients whose has been diagnosed by the pulmonologist were returned and treated at *Puskesmas*. However, the *Puskesmas* data does not represent these cases. The reason could be a case where a patient developed TB in two different sites of organs. In this type of case, the patient is counted as a pulmonary TB case. Another reason might possibly due to data input error.

On the other hand, there was no existing relationship between GPs at Kayong Utara with paediatricians at Ketapang. Almost all of the referred cases will not return to *Puskesmas.* Information regarding paediatric TB cases was also shared by a DOTS worker respondent. According to her, in the community parents usually feel ashamed if their children contracted TB. The parents prefer to take their children to Ketapang District so they can seek treatment without their neighbour's knowledge.

4.6.3 Increased community awareness as part of the achievement of community participation

As ASRI envisioned, DOTS Program benefited the community in the longer run not only to tackle problems of TB but more importantly to increase community awareness about health in general. The engagement of community members as community health volunteers—*kader* in Indonesia language—has been utilized by *Puskesmas* for their health promotion activities as well. While *Puskesmas* activities for community health volunteers were conducted occasionally depending on the budget, ASRI managed to create a kind of part time work opportunity. The availability of incentives for the work combined with regular trainings and good communication successfully maintained the motivation of the workers.

> *"So the program coordinators here (Puskesmas) are working together with the community health volunteers...So, the small budget has to be divided evenly. Sometimes that is the challenge when we want to involve the community. We, at Puskesmas only supervise, but the volunteers are the one dealing with the people directly. It will be difficult to find suspect cases without their help. But we feel bad if we ask their help without providing incentive..."*

On the other hand, the involvement of DOTS workers at *Puskesmas'* health promotion activities has helped the workers to be acquainted with *Puskesmas* staff. At some *Puskesmas*, the workers found it easy to check on the new TB cases treated by *Puskesmas* and offer their service.

"The number is less...the disease can not be found anymore...I said it is good. I still go to Puskesmas from time to time to ask. Doctor, is there any cases? No cases, only usual cough he said. Before I ran out of patients, I know a lot of people (at Puskesmas). I am community health volunteer too...so if there are activities, I go to Puskesmas."

One respondent also shared her initiative to combine both of her activities as a DOTS worker and a community health volunteer. The availability of free TB drugs through the partnership also helped the workers to provide the same message as the one seen by the communities on television and posters from health ministry. She further concluded community perceptiveness about TB is improving. It is shown through their willingness to seek medical help.

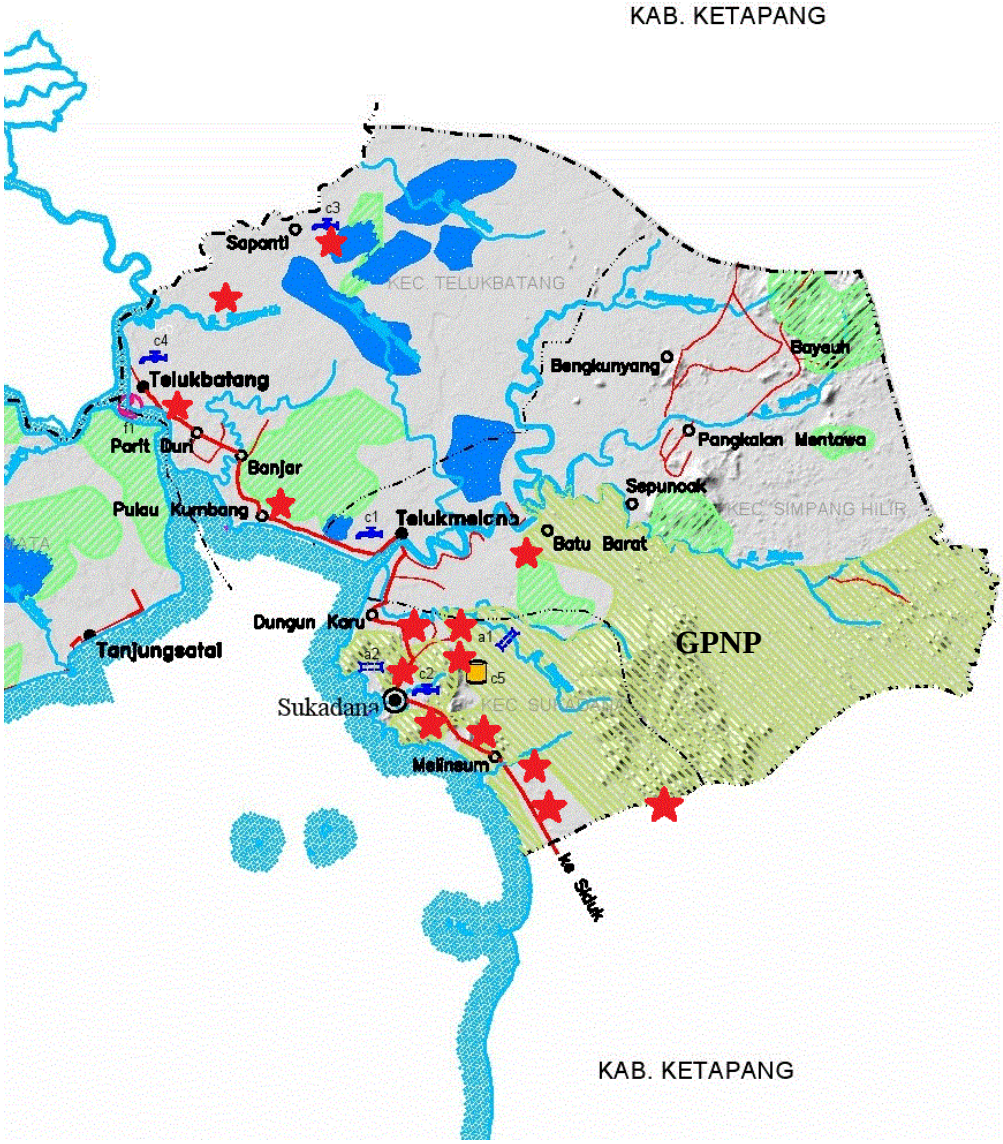
"I am community health volunteer for mother and child care. So after the immunization, I asked the mothers to stay...I give them counselling...for example about diarrhoea...or if I receive knowledge from here (ASRI) for example about febrile seizure...I will share it too..."

"In the past, when you tell people they have TB, they didn't want to accept...they are scared...but now people talk to each other, they know about the free drugs...(I told the patient) free drugs at ASRI does not mean it is cheap...but if you want to pay with money maybe it will cost you a lot. Sometimes the people here are like that, (they said) if it is free, it is not good drugs...Now, they have initiative to come when they feel they have the symptoms"

4.6.4 Area of coverage

Figure 4.2 projects the area of coverage of DOTS Program; each star represents one DOTS worker.

Figure 4.2: DOTS Program area of coverage



The partnership has open up a new possibility of bridging the gap of access and health service coverage through providing DOTS workers in the patient's neighbourhood. However, the number of DOTS workers was considered not

enough. Several respondents from government sector expressed their hope that ASRI will increase the number of workers as to cover more villages at remote areas. When this issue was brought up to ASRI respondents, they explained several limitations which hinder ASRI from increasing the number of DOTS workers. The main problem is related to monitoring and supervision of the activity. As one respondent mentioned, DOTS worker's responsibilities is challenging. Thus, ASRI has to ensure its workers work according to their expectation. Every month TB coordinator conducts inspection without prior notice to several villages. She visits TB patients at their houses and check the worker's performance by asking questions such as number of visits per week, number of medications taken each day, and how the patient's feel about the support given from the worker. Thus, when ASRI considers adding the number of DOTS workers, it needs to consider the capacity of TB coordinator to do her work. The respondent further argued it is also hard for the workers to get patients' drugs and attend monthly meeting if they live too far from the clinic. It takes approximately three to four hours by motorcycle to reach the farthest location of current DOTS Program coverage from ASRI clinic during dry season—it can be impassable during rainy season. Another respondent added, the difficulty to find committed workers who are able to do the service is also part of the challenges which prevent ASRI from expanding its program.

Chapter 5: Discussion

The model of partnership was developed to project government–NGO partnership for community-based TB program at Kayong Utara District. Three key elements of partnership—coordination, quality assurance activity and feedback—were not clearly defined and thus it will be discussed thoroughly in section one. Analytical generalization of the study is provided in section two. It consists of thematic discussions on government sector, NGO, community health volunteers and the partnership mechanism. A discussion is also raised on the topic of "Engage TB", particularly on the implementation of community-based TB activities' indicators. Lastly, this chapter will also discuss limitations of the study.

5.1 Community-based TB Program: A Case of Government–NGO Partnership in Rural Area of Indonesia

5.1.1 The partnership model: what have been put in place?

This model is created based on the work of Zafar Ullah, Lubben, &Newell (2004). Table 5.1 lists key service components that might be identified in TB control programs. As described in the previous chapter, the actors involved in this partnership are: DHO as the coordination body; ASRI as the NGO; *Puskesmas*, private practitioners, and specialists as health service providers; DOTS workers as community's representative for TB activities; and TB patients as health recipients.

Table 5.1: Key service components in TB control program

Key service components	
1. Provision of policy and guidelines	10. Monitoring and supervision of service activities
2. Provision of quality diagnostic services	11. Coordination
3. Provision of laboratory facilities	12. Training
4. A referral mechanism	13. Health education
5. Provision of DOT/treatment supporter	14. Community mobilization
6. Late patient tracing	15. Quality assessment of diagnosis
7. Decisions on level of fees for services	16. Feedback
8. Provision of supplies and logistics	
9. Recording and reporting of treatment Outcomes	

Figure 5.1: Government–NGO partnership model at Kayong Utara District

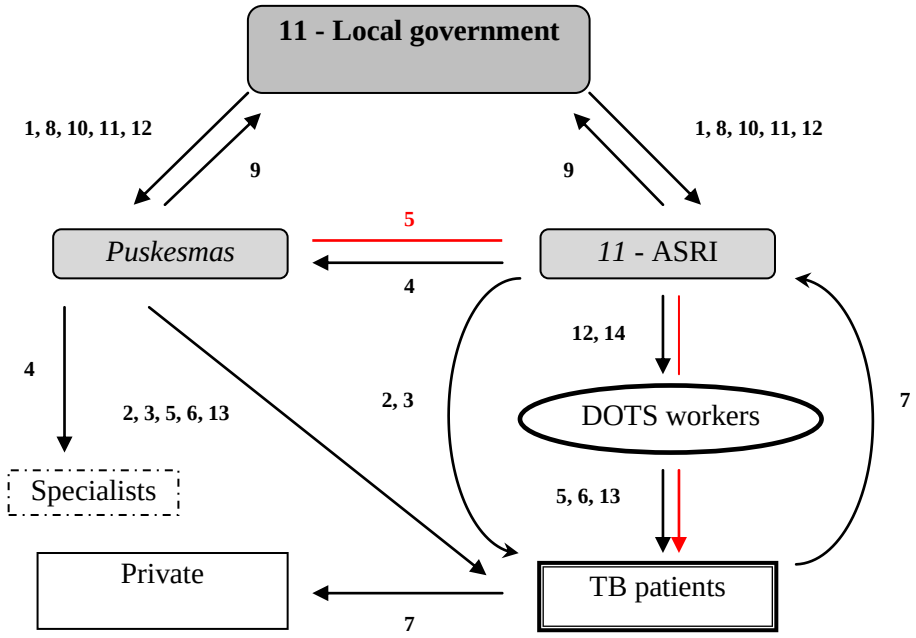


Figure 5.1 projects the partnership between government and NGO in Kayong Utara District. In the beginning, ASRI acted as an initiator by introducing the proposal of partnership to *Puskesmas* and DHO. Since 'initiator' was not included in Zafar Ullah, Lubben, &Newell (2004) key service components, I decided to put it under the coordination role in italic (*11).* Later, DHO took the role of coordination and coordinates TB activities both in *Puskesmas* and ASRI.

DHO provides TB treatment guidelines, supplies and logistics, and trainings (1, 8, 12). DHO also monitors and supervises TB-related activities in the area (10). In return, ASRI and *Puskesmas* are responsible to record their activity and regularly report it to the DHO (9). TB patients receive quality diagnostic services and laboratory examination from either ASRI clinic or *Puskesmas* (2, 3). ASRI relies on community members' participation as DOTS workers to support TB patients, trace drop out cases, and provide health education (5, 6, 13). At *Puskesmas* all of these activities suppose to be conducted by TB coordinator. *Puskesmas* also empowers family member as a treatment supporter (5). Although TB drugs are provided for free, ASRI charges fee for medical consultation, laboratory examination, and additional medicines excluding TB drugs (7). No fee is implied for health services provided by *Puskesmas.* The red line projects the collaboration between ASRI and *Puskesmas* for community-based TB activities through DOTS Program. The referral mechanism flows from ASRI to *Puskesmas* and from *Puskesmas* to specialists (4). Two key components were not clearly defined in the context of partnership; these are quality assessment of diagnosis and feedback (15, 16).

5.1.2 The gaps of partnership and potential improvements

The model described above projects gaps in the partnership activities. Gaps were found in coordination, quality assessment activities and feedback components. Each of these components will be explored and the potential improvements will be discussed based on the research findings and review of literature.

The findings showed that coordination activity was carried out by DHO. As the head institution in the study area, DHO had a role to ensure proper link of coordination between DHO and primary health providers and also in between the primary health providers—*Puskesmas* and ASRI. The field study revealed strong coordination between DHO and ASRI; there was a mutual understanding and communication put in place. However, DHO's role to bridge the collaboration between ASRI and *Puskesmas* was not apparent. The partnership was known by *Puskesmas* through efforts that ASRI was made. For some *Puskesmas* it might not be sufficient. DHO is responsible to ensure *Puskesmas* interest in collaborating with ASRI—especially the ones with high TB cases and low involvement of DOTS workers. As mentioned in other literatures, lack of local government power to influence primary health facilities might pose a barrier to the partnership (Hurtig, Pande, Baral, Newell, Porter, & Bam, 2002). The interview sessions also uncovered intra-organizational problems between *Puskesmas* and DHO for TB program such as interpersonal conflict and distrust. Though indirectly related, if unresolved it might hinder *Puskesmas* involvement in the partnership.

A quality assessment for sputum-smear was available in the study area. Provincial level NTP organized the activity through DHO. However, until the time of data collection, the feedback had not been received. From PPM experiences in Hyderabad (India) and Timika (Indonesia), hospitals and a research centre had been responsible to conduct quality assessment activity (Murthy, Frieden, Yazdani, & Hreshikesh, 2001; Ardian et al., 2007). Both *Puskesmas* and ASRI provided primary health care services at the community level. Thus, there is a

need to link TB activities at Kayong Utara District with higher institutions if the quality assessment activity wants to be carried out. The mutual relationship with the pulmonologist at Ketapang District might open possibility of further involvement. Periodic TB meetings attend by all GPs at Kayong Utara District can be organized where the pulmonologist is invited to share his/her expertise. The attempt to build connection with other specialists—e.g. internal medicine specialist and paediatrician—might also be considered. Apart from ensuring the quality of services, this activity might also increase *Puskesmas* identification of extra-pulmonary and paediatric TB cases in the area.

DOTS workers provide feedbacks on the patients they follow up to *Puskesmas* and ASRI. However, feedbacks are also needed for referral cases sent from ASRI to *Puskesmas* and *Puskesmas* to *Puskesmas*. The field study discovered although referral activities were carried out, the referral system was unclear. Feedbacks regarding referrals are important to ensure the referred cases were not lost (Ambe et al., 2005; Ullah, Newell, Ahmed, Hyder, & Islam, 2006). There is a need to develop a simple referral system so not to put additional burden on the existing paperwork (Hurtig, Pande, Baral, Newell, Porter, & Bam, 2002). With a good relationship and commitment showed by district TB officer and DOTS coordinator, the referral system could be discussed thoroughly between them. They might develop a suitable system which will work in the context of the area. However, the implementation process to all *Puskesmas* might be challenging due to the previous discussion on coordination issue. During interviews, several government respondents also shared their interest to be involved in DOTS

meetings. They were interested to know DOTS workers' experiences with TB patients and their challenges with government clinics. This proposal was never conveyed to ASRI. There are certain bureaucracy barriers that reduce the flexibility of the government sector to be more involved at ASRI's activity such as unavailability of letter of assignments from higher officer in charge. This information showed increase interest and support from government sectors to ASRI's work. If DHO and ASRI could overcome the barrier of bureaucracy, more involvement of government officers in DOTS program activities might improve communication and provide pragmatic solutions to the problem of feedback.

5.2 Lessons from Government–NGO Partnership in Kayong Utara District

The findings describe a case of public–private partnership in a community-based TB program in rural area of Indonesia. It provides context-dependent knowledge about what it is, what it does and how in the end it affects TB control in the study area (Flyvbjerg, 2011; Stake, 1995). Apart from that, there is analytical generalization that can be derived from the study which adds insights to the existing knowledge of public–private partnership for TB control in different contexts.

5.2.1 The government sector: building staff's interest for the partnership

The opposing factors explored in the Findings chapter are commonly found in any government sector in rural areas of Indonesia. The themes related to human resources, lack of priority, and limited budget had also been explored in many literatures. High staffs' turnover and workloads resulted in lack of interest to

be involved in the partnership (Hurtig, Pande, Baral, Newell, Porter, & Bam, 2002). The condition where staff at *Puskesmas* is responsible for more than one programs is commonly found in other parts of Indonesia. It was mentioned as one of the obstacles of TB case detection and treatment at public facilities (Basri, Bergström, Walton, Surya, Voskens, & Metha, 2009; Wahyuni et al., 2007; Watkin, Rouse, & Plant, 2004). In this situation, the leading institution such as DHO needs to put more effort in explaining the benefits of the partnership. There is a tendency for staff to look at the partnership as a burden that creates additional workload. Thus, it is important to balance staff's perception between the pros and cons of the partnership by considering their role and responsibilities in the activity. On the other hand, it is also important to remember that NGO does not replace government sector's responsibility to provide health to the population. It provides complimentary support to strengthen local government capacity (Ullah, Newell, Ahmed, Hyder, & Islam, 2006).

Information about the partnership should be included in the briefing session for new GPs posted in *Puskesmas*. Since most of GPs stay only for a short period of time in rural areas, it is beneficial to increase other medical personnel—nurses, midwives or laboratory technicians—involvement in the partnership. Apart from GPs and some DHO officers, other medical personnel in rural areas of Indonesia are usually local resident or originated from neighbouring areas of the same island. As mentioned, these personnel are commonly engaged in private medical practices after their working hours at government facilities. While it might be difficult to gain staff's interest to do active case findings and sputum

examination, their knowledge on TB disease can be improved so they can identify the suspected cases in their private practices and refer them to the appointed institutions (Ahmad, Mahendradhata, Utarini, & de Vlas, 2011; Wahyuni et al., 2007). The desire to eradicate TB from the neighbourhood and protect their families from TB might serve as a strong motivation to the staff that encourages them to participate in the partnership.

5.2.2 The NGO: optimizing the existing collaboration

As shown by the case, NGO willingness to adjust its TB protocol and follow the national guideline was one of the catalysts that enhance the partnership. It improved the relation with DHO and enabled the TB drugs supplies to be recorded according to the usual standard of usage. Clinicians' reluctance to follow national TB guideline was also discovered in a study in Java Island (Probandari, Utarini, & Hurtig, 2008). It is beyond the scope of this study to argue whether Indonesia national TB guideline which is based on WHO guideline is the best practice to treat TB. However, it is clear that to control TB the commitment of every health providers to follow the same standard of practice is crucial (Ambe et al., 2005). Several studies showed some NGOs were faced with problems of budget constraint which might halt the continuity of the program (Kironde & Nasolo, 2002; Ullah, Newell, Ahmed, Hyder, & Islam, 2006). While the NGO in the study area had sufficient funding for its DOTS Program, there are other obstacles that prevent the NGO from expanding their program's coverage. These obstacles are related to access and supervision activity. In the area where access hinders the expansion of the program, shifting the effort to optimize the existing

activity might be worth to try. Taking the example of the partnership at Kayong Utara District, out of 6 sub-districts which were covered by DOTS Program, only 2 *Puskesmas* from 2 sub-districts were actively sending their TB cases. The rest of *Puskesmas* had limited engagement in the partnership and barely sent their cases to be followed by DOTS workers although the number of cases was high.

5.2.3 The community health volunteers: there are other things than incentives

The case study had provided a unique example of community participation in TB activity through DOTS Program. The provision of incentives was found in other community-based TB activities in Indonesia and other countries (Kironde & Nasolo, 2002; WHO, 2008b). Yet, the difference might be in the detailed incentive scheme created by the NGO in the study area. Kironde & Nasolo (2002) argued about the issue of remuneration of volunteers in their study. On one hand, incentive can be perceived as unsustainable. Thus, it should not be attempted. On the other hand, in the poor-resources setting, asking community's participation as treatment supporters without mean of incentives can be seen as unreasonable—even exploitative. The case showed a successful story of community engagement in TB activities. The NGO was able to maintain the commitment of its DOTS workers. The incentive scheme might be difficult to replicate in other partnerships—especially in a larger scope of work. Nevertheless, other factors that motivate community volunteers to stay committed to their work apart from the incentives were also explored in the study. These motivations include the volunteers desire to eradicate TB from their neighbourhood, good working atmosphere, and continuous trainings on TB disease and basic health care

provided by the NGO. When other partnerships could develop such motivations, it may sustain community volunteers' commitment to participate in the activity.

5.2.4 The partnership: strong leadership

The partnership at Kayong Utara has the benefit of strong commitment from leaders at government sector and the NGO. Though there was rapid turn over of staff at the primary health level, the leaders at DHO and ASRI remained in their position for a longer period of time. It helps to create stability and continuation of the partnership. The need for strong leadership was mentioned in the study about linking public–private sectors in Nepal (Hurtig, Pande, Baral, Newell, Porter, & Bam, 2002). However, the study in Nepal revealed rapid turnover among the appointed leaders. As a result the partnership suffered from lack of human resources who are capable to interact with the partners.

Periodically there are staffs at primary health level that are more committed in the partnership and willing to allocate their time to build better relation with their opposite partners. When this kind of opportunity arise it is crucial to take the initiative to rebuild any loose connections between partners. In the case study, the examples could be seen through the involvement of ASRI head of clinic to persuade the modification of ASRI TB guidelines. A *Puskesmas* doctor also suggested the creation of MOU between ASRI and DHO to tackle issues of *Puskesmas*' reluctance to join the partnership.

5.2.5 The monitoring system: when do we need to measure community-based TB activities achievements?

In 2012, WHO guideline on "Engage TB" was launched. It introduced two indicators that can be used to measure community's participation for TB activities (WHO, 2012b). The indicator helps to assess community's role in increasing TB notification. It also measures treatment outcome of the patients followed by the community health volunteers. These measurements were not present in the case study partnership. By implementing these indicators, there are several benefits that might be gained by the collaborating partners. The indicators may show the program's achievements and support the NGO's report to donor funding agencies. It indicates the effectiveness of referral system from community health volunteers to primary health structures. It also projects patient's acceptability to treatment support activities which were provided by the volunteers. However, as commonly found in any program implementation, there are many indicators and measurements that need to be collected and reported. For staff working in the field level, it is recognized as an additional burden of paperwork to the existing workload of providing health services (Watkin, Rouse, & Plant, 2004). When the indicators are deemed necessary, it is important for the coordinators to develop reporting tools—e.g. paper forms, excel chart—that is easy to follow and does not overlap with the existing data collection procedures. High staff turn over also create the need for additional training and monitoring, thus the balance between maintaining services' quality and proper data collection have to be considered.

5.3 Limitation of the Study

In the Methodology chapter, I shared the difficulty to verify the accuracy of archival records. Thus, general TB indicators such as case detection rate and treatment success rate can not be calculated and presented in the findings. Lack of quantitative measurements creates certain limitations as to explain how the partnership affects TB control in the area. Also, the interviews were conducted in a problem solving manner. The questions were phrased to focus on what are the problems with the partnership and what are the possible solutions. I created assumptions that there are problems to be identified and solved. In the contrary, appreciative inquiry approach provides a way to understand the context from a different point of view. It helps both researchers and respondents to focus on what is good and how to do more of it (Hammond, 1998). By doing so, the study might encourage respondents to envision the kind of partnership they want to pursue and raise discussions on what should be done to achieve that vision.

Chapter 6: Conclusion

In the study area, the case of government–NGO partnership for community based TB program can be described as a collaboration between local government health office—including community health centres under it—with an NGO to support NGO's DOTS Program. The actors involved in the partnership were divided into DOTS workers, coordinators, and health providers. Apart from government health posts and NGO clinic, private practitioners and specialists were also identified as health providers in the area. The area of collaboration covered case finding and case holding activities, provision of documents, TB drugs and laboratory supplies, trainings and supervision. The study acknowledged lack of human resources and access, inadequate communication, and less priority for TB program as the opposing factors. On the contrary, the study revealed strong leadership, good coordination between the local government office and the NGO, incentive scheme and budget availability as the supporting factors for the partnership.

As a result, the partnership was found to improve case finding activities, increase area of coverage for TB control, and enhance extra-pulmonary and paediatric TB cases identification. It also increased the community's awareness through community volunteers' participation in the NGO program. A model of government–NGO partnership which was developed from these findings further explored three key elements of partnership which are lacking in the context of the case. These are coordination, quality assurance activities and feedback. Intra-organizational problem was mentioned as one of the challenges that need to be

tackled by government sectors to improve the coordination. The potential to include specialists—i.e. pulmonologist, paediatrician, internal medicine specialists—involvement in the partnership was discussed as a way to enhance quality assurance activities.

From this partnership we learn that a strong leadership at local government office and NGO is not only needed but crucial to maintain the continuation of the activity. It is especially true in the context of rapid staff turnover at the primary care level. Further, the length of engagement also plays a role in strengthening the partnership. Time is needed to allow the actors to adjust with their roles, build trust, and develop recognition to partners. Constant supply of TB drugs and laboratory equipment is perceived as government's commitment to support NGO TB program. Different standard of TB treatment which was discussed in the findings once served as the major block which hindered the partnership. However, the NGO's willingness to adapt to national TB guidelines and continuous dialogues between actors on this issue had resulted in a good outcome for the partnership.

In rural areas where lack of access and human resources—in terms of quantity and quality—will always create barriers, it might be reasonable to ensure the exiting partnership are perform optimally before increasing the scope of the work. Government health posts are notably providing several programs other than TB program, thus the advantages of the partnership should be sensitized to the staff. There is a need to increase government staffs' interest to collaborate with the NGO. However, it is also important to remember that the collaboration is meant to

complement government roles and responsibilities. It provides support when government capacity is not enough to reach the population living in difficult areas. In this sense, the partnership should not be seen as a replacement to government's function.

The case also demonstrated a unique example of community participation in TB-related activities through a program designed by the NGO. It is interesting to learn the detailed incentive scheme as a means of compensation to community health volunteers' work as treatment supporters. Despite the incentive scheme, the study explored several factors that kept the volunteers committed to their work. These motivations include the hope to eradicate TB from their community, good working atmosphere and general health knowledge received from trainings provided by the NGO.

The study raised question on the need to implement the community-based TB activities indicators as mentioned in WHO guideline of Engage TB. There are benefits to be gained by implementing the indicators. However, a balance between maintaining a program's quality and comprehensive data collection has to be considered.

Qualitative approach used in this research had helped to achieve the purpose of study; to explore NGO involvement in TB-related activity in rural area of Indonesia and community participation in such activity. The study gives contribution by adding knowledge on TB control in Indonesia. It provides deeper understanding of NGO's roles particularly in rural area.

The methodology rigor had ensured me, as a novice researcher, to keep on track. It enhanced the quality and trustworthiness of my data. However, the study was limited to the scope of Master degree research. The budget, time and human resources constraints that I faced in the field had also taught me how to prioritize to get the best possible outcome.

Lack of accurate quantitative data was mentioned as one of the limitation of the study. A quantitative study which compares the outcome of TB control achievement before and after the partnership will provide comprehensive knowledge on how government–NGO partnership contributes to TB control in the area.

As stated in the Introduction chapter, this study supports the proposition of strengthening the partnership with NGOs and CSOs to improve TB control in rural areas of Indonesia. The specific context of each area poses challenges to the partnership development. There remains a lot to be done to achieve the goal of reducing TB burden of disease in Indonesia. However, the commitment to eradicate TB which was shown by the people contributed in this study is possibly found in other areas as well. It served as the catalyst to continue the effort of making the partnership work.

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