

**Analyzing the effectiveness of decentralization
in improving the health sector with a focus on the Philippines**

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Harvy Joy Liwanag

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Genehmigt von der Philosophisch-Naturwissenschaftlichen Fakultät auf Antrag von

Prof. Dr. Jürg Utzinger

Prof. Dr. Kaspar Wyss

Prof. Dr. Kara Hanson

Basel, den 19 Februar 2019

Prof. Dr. Martin Spiess

Dekan

Dedicated to my beloved father,

Josec (1955-2017)

Faculty representative

Prof. Dr. Jürg Utzinger, PhD

Swiss Tropical and Public Health Institute

Basel, Switzerland

Supervisor

Prof. Dr. Kaspar Wyss, PhD

Swiss Tropical and Public Health Institute

Basel, Switzerland

Co-referee

Prof. Dr. Kara Hanson, PhD

London School of Hygiene and Tropical

Medicine

London, United Kingdom

External expert

Dr. Manuel Dayrit, MD, MSc

Ateneo de Manila University

School of Medicine and Public Health

Metro Manila, Philippines

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Table of contents

List of figures.....	i
List of tables.....	ii
List of supplementary materials.....	iii
List of publications as of 19 February 2019	iv
Additional work performed during the PhD not directly related to this thesis	v
Abbreviations.....	vi
Acknowledgments.....	viii
Executive summary.....	ix
1. Introduction.....	1
1.1. Background.....	1
1.1.1. Decentralization: definitions and forms	1
1.1.2. Motivations behind decentralization.....	3
1.1.3. Approaches to assess decentralization	6
1.1.4. Decision space approach.....	8
1.1.5. Effectiveness of decentralization in improving health system performance.....	12
1.1.6. Health sector devolution in the Philippines	14
1.2. Objectives	17
1.2.1. Specific objectives	17
1.3. Methods.....	18
1.3.1. Systematic review for assessing the effectiveness of decentralization	19
1.3.2. Qualitative research component.....	19
1.3.3. Quantitative research component.....	21
1.3.4. Ethical considerations	22
1.4. Description of thesis chapters	23
2. Assessing decentralisation is a challenging but necessary task if it should continue as a reform strategy: Reflections from the systematic review by Sumah, Baatiema, and Abimbola	25
2.1. Introduction.....	26
2.2. Impact vs. effectiveness	26
2.3. The challenge in assessing a complex intervention	27
2.4. The decision space approach and possible ways forward.....	29
3. What conditions enable decentralization to improve the health system? Qualitative analysis of perspectives on decision space after 25 years of devolution in the Philippines.....	30
3.1. Abstract.....	31
3.2. Introduction.....	32
3.2.1. Decision space approach.....	33
3.2.2. Devolution in the Philippines.....	34

3.3.	Methods.....	36
3.3.1.	Semi-structured questionnaire.....	36
3.3.2.	Participant selection	37
3.3.3.	Data collection	37
3.3.4.	Framework method	38
3.3.5.	Ethics statement	39
3.4.	Results.....	39
3.4.1.	Profiles of the decision-makers	39
3.4.2.	Health sector functions.....	41
3.4.3.	Planning	41
3.4.4.	Financing and budget allocation	42
3.4.5.	Resource management	46
3.4.6.	Program implementation and service delivery.....	50
3.4.7.	Monitoring and data management.....	51
3.5.	Discussion	54
3.6.	Conclusions.....	56
3.7.	Acknowledgments.....	57
3.8.	Supplementary material	58
4.	Optimising decentralisation for the health sector by exploring the synergy of decision space, capacity and accountability: Insights from the Philippines.....	65
4.1.	Abstract.....	66
4.2.	Background	67
4.2.1.	Decision space, capacity, and accountability	69
4.2.2.	Exploring the synergy in the Philippines	71
4.3.	Methods.....	72
4.3.1.	Health sector functions.....	74
4.4.	Results.....	79
4.4.1.	Planning	79
4.4.2.	Financing and budget allocation	82
4.4.3.	Program implementation and service delivery.....	83
4.4.4.	Management of facilities, equipment, and supplies	84
4.4.5.	Health workforce management	88
4.4.6.	Data monitoring and utilization	89
4.5.	Discussion and conclusion	90
4.6.	Acknowledgments.....	93
4.7.	Supplementary material	93
5.	Discontent among local health managers and dependence on central support are driving the desire to re-centralize health services: A pilot survey in a Philippine region	100

5.1.	Abstract.....	101
5.2.	Introduction.....	102
5.2.1.	Setting the context: Central support for financing local health services.....	103
5.2.2.	Who should be making decisions at local levels?.....	105
5.3.	Methods.....	106
5.3.1.	Survey questionnaire.....	106
5.3.2.	Study site and participants.....	108
5.3.3.	Mixed methods approach to data analysis.....	109
5.3.4.	Ethics approval.....	109
5.4.	Results.....	109
5.4.1.	Response rate and characteristics of respondents.....	109
5.4.2.	Perspectives on health sector devolution.....	111
5.4.3.	Current vs. preferred decision-makers for health sector functions.....	112
5.4.4.	Preferred structure of governance.....	116
5.5.	Discussion.....	119
5.6.	Conclusions.....	122
5.7.	Acknowledgments.....	123
5.8.	Author contributions.....	123
5.9.	Disclosure statement.....	123
5.10.	Ethics and consent.....	123
5.11.	Funding information.....	124
5.12.	Paper context.....	124
6.	Decentralised governance of health services for improving health system performance	
(Protocol)	125
6.1.	Abstract.....	126
6.2.	Background.....	126
6.2.1.	Description of the condition.....	127
6.2.2.	Description of the intervention.....	128
6.2.3.	How the intervention might work.....	129
6.2.4.	Logic model.....	131
6.2.5.	Why it is important to do this review.....	133
6.3.	Objectives.....	133
6.4.	Methods.....	134
6.4.1.	Criteria for considering studies for this review.....	134
6.4.2.	Types of studies.....	134
6.4.3.	Types of participants.....	135
6.4.4.	Types of interventions.....	136
6.4.5.	Exclusions.....	136

6.4.6.	Types of outcome measures.....	137
6.4.7.	Search methods for identification of studies.....	138
6.4.8.	Electronic searches.....	138
6.4.9.	Searching other resources	139
6.4.10.	Data collection and analysis.....	140
6.5.	Appendices.....	147
6.6.	Contributions of authors.....	150
6.7.	Declarations of interest	150
7.	Conclusions	151
7.1.	Recap of the three components of the thesis.....	151
7.2.	Summary of findings.....	152
7.2.1.	Decentralization as a continuing feature of public sector reform	155
7.2.2.	Human resources and institutions at the core of decentralization.....	157
7.2.3.	The utility of the synergy of decision space, capacities, and accountability for various settings	158
7.3.	Strengths and limitations.....	159
7.3.1.	Decision space approach.....	159
7.3.2.	Synergy of decision space, capacities, and accountability.....	160
7.3.3.	Mixed methods approach.....	161
7.3.4.	Systematic review	162
7.4.	Opportunities for future research	162
7.5.	Policy recommendations for the Philippines.....	163
8.	References	166
9.	Additional materials	175
9.1.	Ethics approval from the Philippines	175
9.2.	Ethics approval from Switzerland.....	176
9.3.	Systematic review protocol approval from the Cochrane Collaboration	178
9.4.	Informed consent form.....	179

List of figures

Figure 1a.	Objectives, rationale, and controversies of health sector decentralization.....	4
Figure 1b.	Map of decision space as proposed by Bossert.....	9
Figure 1c.	Conceptual framework describing the synergies between decision space, capacity, and accountability.....	11
Figure 1d.	Overview of thesis methodology.....	18
Figure 1e.	Description of health sector functions and the questions to assess decision space.....	20
Figure 3a.	Simplified overview of the administrative structure of government health facilities in the Philippines before and after devolution.....	35
Figure 3b.	Present and previous areas of health-related work of the 27 decision-makers.....	39
Figure 3c.	Durations of government service of the 27 decision-makers, the institutions they worked in, and their levels of decision-making.....	40
Figure 3d.	A conceptual diagram inspired by the image of decentralization and centralization as movements between two opposite poles.....	53
Figure 4a.	The modified three-dimensional pyramid model for visualizing the synergy of decision space, capacity, and accountability in the context of health sector decentralization....	71
Figure 5a.	Per capita allocation in 2015 for local health services divided into three revenue streams in four provinces, eight cities, and 111 municipalities of Northern Luzon.....	105
Figure 5b.	Locations of assignments of survey participants from Northern Luzon.....	111
Figure 5c.	Radar charts for each of the six health sector functions to visualize survey participants' perception on who they would prefer to decide for that function.....	113
Figure 5d.	Number of survey participants who preferred maintaining the current devolved structure of governance and those who preferred options for re-centralization.....	117
Figure 6a.	Logic model which tracks the plausible ways through which decentralisation could result to its desired (or undesired) effects for the health system.....	132
Figure 7a.	The three methodological components of this thesis, including brief indications on how each component informed the conduct of the other.....	152

List of tables

Table 1a.	Simple overview of the devolved Philippine health system.....	15
Table 1b.	Some questions during the in-depth interviews.....	21
Table 3a.	Decision space at central and local levels for the functions of planning and financing and budget allocation.....	44
Table 3b.	Decision space at central and local levels for the functions of resource management, further classified into facilities, equipment, and supplies and human resources.....	48
Table 3c.	Decision space at central and local levels for the functions of program implementation and service delivery and monitoring and data management.....	52
Table 4a.	Summary of characteristics of the decision-makers who were interviewed.....	72
Table 4b.	Outline of the guide questions posed during the interviews to explore decision-making in six functions and be able to assess the overall breadth of decision space.....	77
Table 4c.	Criteria used for assessing decision space for the purpose of qualitative analysis.....	78
Table 4d.	Assessment of decision spaces and the desired adjustments in capacities and accountability mechanisms for planning, financing and budget allocation, and program implementation and service delivery.....	80
Table 4e.	Assessment of decision spaces and the desired adjustments in capacities and accountability mechanisms for management of facilities, equipment, and supplies, health workforce management, and data monitoring and utilization.....	86
Table 5a.	Summary of responses received and characteristics of survey participants.....	110
Table 6a.	Health sector functions that are decentralised and within which decision-makers could exercise varying degrees of decision space.....	147
Table 6b.	Studies to be considered and what information these contribute to the review.....	148
Table 6c.	Subgroup analyses for this review.....	149
Table 7a.	Summary of findings on the conditions that enable decentralization.....	152
Table 7b.	Summary of findings on the preferences for the structure of governance.....	154
Table 7c.	Summary of findings on the effectiveness of decentralization.....	154

List of supplementary materials

3.8.	Key informant interview guide.....	58
4.7.	Selected illustrative quotes extracted from the interviews that were analyzed using the Framework Method and provided basis for assessing decision space for each function.....	94
9.1.	Ethics approval from the Philippines.....	175
9.2.	Ethics approval from Switzerland.....	176
9.3.	Systematic review protocol approval from the Cochrane Collaboration.....	178
9.4.	Informed consent form.....	179

List of publications as of 19 February 2019

Manuscript I

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Abbreviations

AMHOP	Association of Municipal Health Officers of the Philippines
ARMM	Autonomous Region in Muslim Mindanao
BHS	<i>Barangay</i> Health Station
CEO	Chief Executive Officer
CHO	City Health Officer
COREQ	Consolidated Criteria for Reporting Qualitative Research
CT	Computed Tomography
DMO	District Management Officer
DOH	Department of Health
DTTB	Doctor to the <i>Barrio</i>
EMR	Electronic Medical Record
EPI	Expanded Program on Immunization
FHSIS	Field Health Services Information System
GIDA	Geographically Isolated and Disadvantaged Area
GDP	Gross Domestic Product
HFEP	Health Facilities Enhancement Program
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immune Deficiency Syndrome
HRH	Human Resources for Health
ICF	Informed Consent Form
IDI	In-Depth Interview
IPH	Investment Plan for Health
IRA	Internal Revenue Allotment
KII	Key Informant Interview
LGU	Local Government Unit
LHB	Local Health Board
LMIC	Low- and Middle-Income Country

MD	Doctor of Medicine
MDR-TB	Multi-Drug Resistant Tuberculosis
MHO	Municipal Health Officer
MOOE	Maintenance and Operating Expenses
MOH	Ministry of Health
MR-OPV	Measles, Rubella, Oral Polio Vaccine
NCD	Non-Communicable Disease
NDP	Nurse Deployment Program
NGO	Non-Government Organization
OECD	Organisation for Economic Cooperation and Development
PHA	Public Health Associate
PhilHealth	Philippine Health Insurance Corporation
PHO	Provincial Health Officer
PHOAP	Provincial Health Officers Association of the Philippines
PHP	Philippine Peso
RHU	Rural Health Unit
TB	Tuberculosis
TB-DOTS	Tuberculosis - Directly Observed Treatment, Short Course
UHC	Universal Health Coverage
USAID	United States Agency for International Development
USD	United States Dollar
WHO	World Health Organization

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Executive summary

Background

Over the last three decades, many countries like the Philippines have adopted decentralization motivated by the expectation that local level decision-making would, among other benefits, ensure that services match local needs and priorities. The health sector is one of those services where decentralization has been vigorously promoted, and where decentralization's impact to service delivery has been debated. In the Philippines, for example, previous studies have reported on the various challenges that have been encountered when local governments assumed responsibility for health services through devolution. Despite expectations of achieving efficiency and responsiveness, the evidence from the literature is ambiguous on whether decentralization has been effective in achieving its desired benefits, while attempts to systematically assess effectiveness are also limited by the various forms of decentralization implemented across different settings. Nevertheless, existing frameworks, such as the decision space approach, can be useful as a starting point for analyzing effectiveness.

The aim of this thesis was to analyze the effectiveness of decentralization in improving health system performance with an emphasis on devolution of the government health sector in the Philippines.

Methods

The methodology employed the exploratory sequential design of mixed methods approach and, additionally, had a systematic review component. A new protocol for a systematic review was developed that currently examines the global evidence on the effectiveness of decentralization in improving health system performance. Drawing from previous studies in the literature on decision space and health sector functions, an interview guide was developed to explore decision-making and assess decision spaces for the functions of: (a) planning; (b) financing and budget allocation; (c) resource management; (d) health workforce management; (e) program implementation and service delivery; and (f) data monitoring and utilization. In-depth interviews were performed with purposively-selected decision-makers in the Philippines who represented national and local levels of the health system.

Qualitative analysis of the interviews was based on the Framework Method that enabled comparison of emerging themes across different groups of interviewees.

This initial qualitative component was followed by an online survey of local health managers in one region (Northern Luzon) in the Philippines that assessed their preferences between decentralized and centralized arrangements for health sector governance, as well as on who they think should be making decisions for each function at local levels

Results

The systematic reviews protocol that was developed and approved provided a methodology that considers the variety in the forms of decentralization implemented in different settings, expands the inclusion criteria for the study designs to be considered given the complexity of decentralization, and includes health workforce satisfaction as one of the measures for effectiveness.

Twenty-seven decision-makers were interviewed for the qualitative component, or the point when saturation was judged to have been achieved. Decision space at local levels for all functions was assessed as either moderate or narrow, suggesting that local level decision-makers in the Philippines continued to have limitations in making decisions for the health sector despite devolution for the last 25 years. Results from the qualitative analysis further indicate that the limitations in decision space were mostly due to the lack of capacities to perform the health sector functions that have been assumed, and so the central level has continued to support local governments with various forms of augmentation (e.g. training, human resources deployment, supplies, facility upgrades, etc.) in order for them to be able to perform their functions well.

Conditions that enable decentralization to be effective include: for planning, having a multi-stakeholder approach and monitoring implementation; for financing and budget allocation, capacities to raise revenues at local levels and pooling of funds at central level; for resource management, having a central level capable of augmenting resource needs at local levels and a good working relationship between the local health officer and the elected local official; for program implementation and service delivery, promoting innovation at local levels while maintaining fidelity to national objectives; and for

monitoring and data management, a central level capable of ensuring that data collection from local levels is performed in a timely and accurate manner. Findings also suggest that local level decision spaces may be widened and used optimally if the corresponding adjustments in individual and organizational capacities and accountability mechanisms are made.

On the other hand, 24 responses were received for the online quantitative survey, corresponding to a response rate of 4.5%. Despite this limitation, majority of survey responses preferred to re-centralize the Philippine health system primarily because of the perceived politicization in decision-making and the dependence of local governments for central support. It remains to be seen, however, if such a reversion of devolution would provide the solution to the perceived challenges, and whether these preferences also reflect the sentiments in other regions.

Conclusion

Decentralization will likely continue to be pursued by countries to empower localities regardless of its effects on the health sector. This thesis has shown that, in order to ensure that decentralization truly becomes effective in improving the health sector, the grant of decision-making authority to lower levels must be accompanied by, among other conditions, capacity building and strengthening accountability, while at the same time ensuring that the preferences of local health managers who deliver services on the ground are heard and considered. For the Philippines and others with decentralized health systems, improving the health sector will not be achieved by merely changing the governance structure of the health system without considering the various contextual factors that affect successful implementation.

1. Introduction

1.1. Background

1.1.1. Decentralization: definitions and forms

For the last 30 years or so, decentralization has been vigorously promoted and pursued as a way to bring decision-making closer to communities. It has been on the global agenda pushed forward by multi-lateral organizations, including the World Health Organization (WHO) (Local Dev't International LLC, 2013; Mills et al., 1990; Saltman et al., 2007). It is driven by the desire to empower localities to make decisions for themselves in order to meet their own priorities and address their needs more effectively. While it has been implemented for a broad range of services, no where else is its impact probably more significant than in the delivery of health services. Whether or not decentralization improves health system performance in practice has often been a topic of debate among health researchers and policymakers. After decades of decentralization in the health sector of many countries, including the Philippines, has it been effective in enabling localities to address their health needs and, consequently, improve the health sector? This thesis is a contribution to the efforts to address this question.

But first, what does it mean to decentralize? Decentralization, in general terms, is defined as the transfer of decision-making authority or power from higher to lower levels of government (Rondinelli, 1983). Based on this general definition, there are several ways on how it can be implemented. In order to achieve a clearer understanding of what it actually means in practice, decentralization may also be understood in terms of areal decentralization and functional decentralization (Mills, 1994). Areal decentralization simply refers to the transfer of responsibility for a broad range of services. For example, one could understand decentralization by looking at the transfer of broad powers from the federal, or central government, to the states, cantons, counties, or provinces in a particular country, without unpacking which particular services are covered by such a transfer of powers. On the other hand, functional decentralization puts the focus rather on specific functions which are passed on from the central level to the lower levels of the system (Mills, 1994). Identifying which services exactly are transferred from higher to lower levels is part of understanding functional decentralization.

Further expanding on this idea of functional decentralization is a proposed typology (Rondinelli, 1983) of decentralization in the health sector according to four forms: de-concentration, delegation, devolution, and privatization. De-concentration refers to the transfer of some administrative responsibilities to local offices of the central government with the goal of re-organization to improve the delivery of services (Mills, 1994; Mills et al., 1990). In de-concentration, the transfer is more about administrative responsibilities rather than political, and thus the local offices that take on the responsibilities remain mostly accountable to the central government. For example, one could think of the establishment of regional or district offices in multiple localities by the Ministry of Health (MOH) as de-concentration (i.e. the MOH “de-concentrates” by putting up these local offices).

Devolution, on the other hand, is the transfer of power over a defined set of functions to local governments that are substantially independent of the central government. In this form of decentralization, the transfer of responsibilities is both administrative and political. Thus, local governments (e.g. counties, provinces, municipalities) that receive the responsibilities for the functions are mostly empowered to manage their own affairs. Often, these local governments also receive their mandate through the electoral process and thus, the formal line of accountability is to the electorate rather than to the central government (i.e. unlike in de-concentration where local offices remain answerable to the central government). An example of devolution is seen in the Philippines, which is the focus of this thesis, where the responsibility for delivering public health services at local levels was taken on by the local governments (provinces and municipalities), although the central government has continued to provide technical assistance for several functions (Liwanag and Wyss, 2018).

Decentralization as delegation refers to the transfer of managerial responsibility for a defined set of functions to organizations that are outside the central government structure and, thus, enjoy a wide latitude in performing the functions that these organizations have taken on. For example, delegation could be seen in the way that the National Health Service in the United Kingdom commissions (or “delegates”) the delivery of primary care services to certain groups, such as to groups of general practitioners, to provide services to the local population.

Finally, privatization, considered as the most extensive form of decentralization, takes place when a defined set of functions is passed on to the private sector. In this form of decentralization, the idea is to attain more efficiency by allowing the private sector to deliver services and letting market forces drive how consumers choose the health services they desire from an array of competing providers, while the government maintains regulatory oversight to ensure quality.

De-concentration, devolution, delegation, and privatization—these, however, only distinguish decentralization based on the legal standing of the receiver of the functions, but do not give an idea on the degree of autonomy enjoyed by the lower levels. Furthermore, in practice, these forms of decentralization would still present in varying configurations (i.e. devolution in the Philippines is not the same as devolution in Kenya), which indicates the inherent difficulty in comparing decentralization across different contexts and settings. Again, it must be emphasized that decentralization is often implemented as part of a broader public sector reform that includes not only the health sector but also other sectors (e.g. education, infrastructure, agriculture, etc.), and countries undertake it depending on their historical and political contexts (Local Dev't International LLC, 2013; Mills et al., 1990; Saltman et al., 2007). But whatever the form of decentralization adopted by a particular country, what is consistent about it is that it involves changing power relationships and the distribution of tasks between levels of government (Mills, 1994).

1.1.2. Motivations behind decentralization

The motivations behind the desire to decentralize in the health sector are plenty, but these could be attributed to the powerful idea that smaller organizations, when properly structured and steered, are more efficient than larger organizations (Saltman et al., 2007). Efficiency in allocation may be achieved, especially when decisions are matched to local needs and preferences. Other expected benefits may include increasing community participation in decision-making, or promoting innovation by allowing local decision-makers to experiment in service delivery. Some of these objectives and rationales are summarized in Figure 1a.

As indicated in Figure 1a, while the objectives and rationales are well-meant, decentralization is also not immune from issues and controversies, suggesting that its objectives are not always achieved by the transfer of power alone without considering contextual factors that affect its implementation.

Figure 1a. Objectives, rationale, and controversies of health sector decentralization. *Table from Saltman R, Bankauskaite V, Vrangbaek K (eds.), Decentralization in Health Care: Strategies and Outcomes, © Open University Press 2007; Reproduced with the kind permission of Open International Publishing Ltd. All rights reserved.*

<i>Objectives</i>	<i>Rationale</i>	<i>Issues and controversies</i>
To improve technical efficiency	Through fewer levels of bureaucracy and greater cost consciousness at the local level Through separation of purchasers and provider functions in market-type relations	May require certain contextual conditions to achieve it Incentives are needed for managers Market-type relations may lead to some negative outcomes
To increase allocative efficiency	Through better matching of public services to local preferences Through improved patient responsiveness	Increased inequalities among administrative units Tensions between central and local governments and between different local governments
To empower local governments	Through more active local participation Through improved capacities of local administration	Concept of local participation is not completely clear The needs of local governments may still be perceived as local needs
To increase the innovation of service delivery	Through experimentation and adaptation to local conditions Through increased autonomy of local governments and institutions	Increased inequalities
To increase accountability	Through public participation Transformation of the role of the central government	Concept of public participation is not completely clear Accountability needs to be clearly defined in terms of who is accountable for what and to whom
To increase quality of health services	Through integration of health services and improved information systems Through improved access to health care services for vulnerable groups	
To increase equity	Through allocating resources according to local needs Through enabling local organizations to better meet the needs of particular groups Through distribution of resources towards marginalized regions and groups (through cross-subsidy mechanisms)	Reduces local autonomy Decentralization may improve some equity measures but may worsen others

1.1.2.1. Examples of decentralization in selected countries

Decentralization in the health sector may be further understood by looking at some examples of how it came to be in the history of different countries. In some settings, decentralization has long been in place because of how the country was organized during its foundation. The United States, for example, has historically been decentralized in the delivery of public health services primarily because it was founded as a union of independent states. Consequently, the responsibility for promoting health has always belonged to the states, and the development of the overall public health system to steer the independent agencies and services is a responsibility that belongs to the federal government (Leider et al., 2018).

Another example of what has been a historically decentralized health system is Switzerland, which was founded when different independent cantons came together to form a confederation. In fact, there is no Ministry of Health in Switzerland as the responsibility for health at the federal level is shared by different government offices (Saltman et al., 2007). While this highly-decentralized system has promoted better responsiveness to local needs and priorities, health policy formulation and coordination among regional components of the system may be difficult to establish and may even result in regional inequities in the financing of health care (Wyss and Lorenz, 2000). Moreover, the Swiss health care system has also transformed into a very expensive system (now the highest health expenditure in Europe) with considerable variations in spending across cantons (Quentin and Busse, 2018).

On the other hand, in other countries decentralization has been pursued after a long period of centralization. For example, in Italy, devolution of health care to the regions started in the 1970s when the power to govern local health facilities was granted to the regions and municipalities. Similarly, in Spain, there has been a drive towards more decentralization of health services since after the Franco period. While the Spanish central government currently coordinates the health system, it is the autonomous regions that have the power to organize the delivery of services, including how to allocate the funds for health care (Saltman et al., 2007).

In some low- and middle-income countries (LMICs), for example in Asia, the push for decentralization may be attributed to the ideological argument post-colonization that favored community participation and local self-reliance, as well as accountability by bringing decision-making closer to the people (Mills et al., 1990). Such was the case in the Philippines, which was historically centralized during the periods of colonization under Spain and the United States, and then subsequently pursued a series of decentralization initiatives after independence in 1946, eventually leading to the implementation of devolution in 1992 (Langran, 2011). Similarly, in Indonesia, the current structure of governance of the health system has been the outcome of many changes in the last 60 years, culminating in extensive decentralization in 2001 that transferred most powers over health services to the districts and likewise increased central transfers of funds to district governments (Heywood and Choi, 2010).

In Africa, many countries pursued decentralization in favor of more local self-reliance as the countries transitioned to independence post-colonization. For example, in Tanzania, after a series of de-concentration initiatives, decentralization by way of devolution was implemented in the 1990s (Frumence et al., 2013). Much more recently in 2013, Kenya has also experimented with decentralization through devolution that transferred the powers over health services to newly-established counties (Nyikuri et al., 2017).

These examples further indicate that the path towards decentralization in health care of each country is not always the same as it is influenced by the country's historical context. This thesis, however, does not aim to track the process of decentralization *per se* but examines it *a posteriori* by drawing from the experiences of those who implement it in the health sector.

1.1.3. Approaches to assess decentralization

Despite the various ways by which decentralization has been implemented in the health sector of different countries, there have been a number of approaches offered in the literature on how to compare and analyze it. One of these approaches has already been presented above, which analyzes and compares decentralization by categorizing it into de-concentration, devolution, delegation, and privatization

(Mills et al., 1990; Rondinelli, 1983). Otherwise known as the “public administration approach,” this four-fold typology allows an examination of decentralization according to the legal standing of the agencies that take on the responsibilities and the distribution of tasks between the center and local levels. However, as also explained previously, the approach does not provide an idea of the degree of autonomy enjoyed by lower levels as they take on the new responsibilities.

The “local fiscal choice” approach, on the other hand, is an approach developed by economists to analyze the choices made at local levels using the local government’s own resources as well as transfers from other levels of government (Musgrave and Musgrave, 1989). One of the strengths of this approach is that it focuses on local decision-making, particularly in the function of financing, and analyzes the explanations on why local governments make decisions given the amount of local resources and central transfers available to them. However, the local fiscal choice approach is inadequate if one aims to examine non-fiscal functions, such as management of human resources, for example.

Another approach is the “social capital approach,” which was introduced to the literature in an analysis of decentralization in Italy (Putnam et al., 1994). What this approach aims to accomplish is to examine the density of civic organizations in the locality. The assumption is that localities with several established civic organizations, which together comprise the “social capital” and shape the expectations and experiences of the local population for services, have better institutional performance in decentralization compared to other localities with less civic organizations. One weakness of this approach, however, is the lack of concrete policy options that can be recommended for localities that have less involvement of civic organizations (i.e. should these localities then be better centralized?).

Still another fairly recent approach to evaluate organizational arrangements in health sector decentralization is the U-form and M-form framework (Bustamante, 2016). Briefly, what this approach proposes is to view centralization as the “U-form” and decentralization as the “M-form.” By comparing two scenarios of health sector organization using these frameworks (i.e. centralized vs. decentralized), the approach offers an opportunity to determine whether decentralization would be worth its costs. For example, based on this approach, the centralized structure (U-form) is more advantageous if the efficiency gained from economies of scale outweigh the costs of shifting decision-making towards the

regions. On the other hand, the decentralized structure (M-form) may be more beneficial if the benefits of flexibility in decision-making at local levels outweigh the costs of duplicating services in centralization that do not consider regional needs.

1.1.4. Decision space approach

All the approaches presented thus far offer different ways to analyze decentralization in the health sector, but none of these provide an opportunity to examine how decision-makers are able to make use of the power granted to them as a result of decentralization. Decentralization, after all, could be considered effective when the lower levels enjoy a wide degree of decision-making autonomy in practice. It is here where the “decision space approach” emerges as a useful framework.

The aim of the “decision space” approach, which was developed by Bossert (Bossert, 1998), is to define decentralization according to a set of functions or broad categories of tasks that involve decision-making, and the degrees of choice available to decision-makers within these functions because of decentralization (Bossert, 1998). Therefore, the approach provides an opportunity to assess to what extent decision-makers use the choices they have over a function (where more choices means wide decision space). Using this approach, decision-makers could be asked a set of questions about their flexibility in decision-making under each function, and their answers would provide an estimate of the space as narrow, moderate, or wide. An example of how this assessment is made is provided in Figure 1b (Bossert, 1998). A number of studies on decentralization in the health sector have used the decision space approach in their analysis (T. Bossert et al., 2003; Bossert et al., 2015; Bossert and Beauvais, 2002; Bossert and Mitchell, 2011; Mohammed et al., 2015).

Figure 1b. Map of decision space as proposed by Bossert. *Reprinted from Social Science & Medicine* 47(10), Thomas Bossert, “Analyzing the decentralization of health systems in developing countries: Decision space, innovation and performance,” Copyright (1998), with permission from Elsevier. [https://doi.org/10.1016/S0277-9536\(98\)00234-2](https://doi.org/10.1016/S0277-9536(98)00234-2)

Functions	Range of choice		
	narrow	moderate	wide
Finance			
Sources of revenue	→	→	→
Allocation of expenditures	→	→	→
Income from fees and contracts	→	→	→
Service organization			
Hospital autonomy	→	→	→
Insurance plans	→	→	→
Payment mechanisms	→	→	→
Contracts with private providers	→	→	→
Required programs/norms	→	→	→
Human resources			
Salaries	→	→	→
Contracts	→	→	→
Civil service	→	→	→
Access rules			
Targeting	→	→	→
Governance rules			
Facility boards	→	→	→
Health offices	→	→	→
Community participation	→	→	→

One of the first studies on decentralization that used the decision space approach has compared the experience of decentralization in Ghana, Uganda, Zambia, and the Philippines (Bossert and Beauvais, 2002). This analysis has found different types and degrees of decentralization in the four selected countries, with the widest decision space observed in the Philippines where most functions were devolved to the local governments, and the narrowest space observed in Ghana where decentralization was implemented through delegation to an autonomous health service unit. On the other hand, decision spaces in Uganda and Zambia have been described as varying. Consequently, this study has demonstrated that decision spaces would tend to vary in different forms of decentralization and settings, although it did not explore how these variations in decision space relate to health system performance.

Other studies that used the decision space approach have similarly aimed to describe the extent of decision spaces at lower levels in the aftermath of decentralization. For example, a study in Uganda has

examined how district health managers perceived and used their decision space, particularly in the function of human resource management (Alonso-Garbayo et al., 2017). This study has concluded that, in some areas, district managers used their decision space for human resources management beyond the extent of authority granted to them, while managers in other areas did not use their spaces at all.

Another study in India has reported a gap between *de jure* and *de facto* decision spaces for some functions despite decentralization, and has recommended devolving more powers and funds to lower levels of government in order to support local decision-makers to make use of their decision spaces more (Seshadri et al., 2016).

A study of decentralization in Tanzania that examined decision space for managing community funds, supplies, and health workers has likewise concluded that decentralization granted a moderate decision space for these functions, yet health managers in other districts were unaware of the range of choices that they could utilize for these functions (Kigume and Maluka, 2019).

On the other hand, a recent study on decentralization in the small archipelago of Fiji has reported no decision space for the functions of financial resource allocation and human resources management despite having decentralization in policy (Mohammed et al., 2015). Based on this study, Fiji is an example where decentralization transferred only the workload without granting the needed administrative authority to make decisions; in other words, *de jure* decision space was also inconsistent with *de facto* decision space.

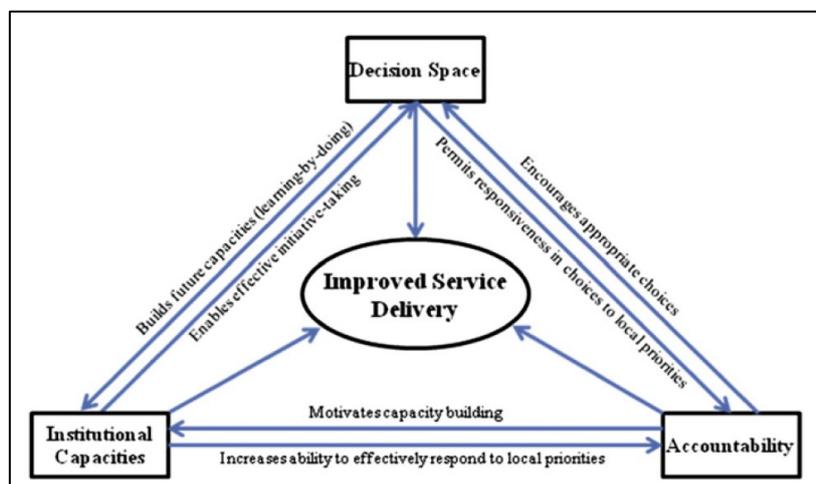
Although these studies have analyzed decentralization from the point of view of decision space, most of these, in general, make two main conclusions: first, that the use of decision spaces varied at local levels; and second, that in many cases the transfer of responsibilities to lower levels was not accompanied by the corresponding but necessary grant of adequate decision-making authority. It is in this context that an analysis that goes beyond the examination of decision space alone is warranted in order to better understand what other dimensions influence the variation in the use of decision space at lower levels after decentralization.

1.1.4.1. Synergy of decision space, capacities, and accountability

In subsequent studies that drew from the decision space (Bossert et al., 2015; Bossert and Mitchell, 2011), it has been argued that strengthening health system performance through decentralization will only be achieved if a wider exercise of the local space is accompanied by improvements in the dimensions of capacity and accountability. Capacity may be defined as “the ability of individuals, organizations, and systems to perform appropriate functions effectively, efficiently, and sustainably” (Bossert et al., 2015), while accountability may be defined as “actively involving local democratic structures and civil society in decision-making” (Bossert et al., 2015). There may, however, be several ways to understand capacity and accountability in the context of health sector decentralization. Working synergistically, the three dimensions potentially complement each other in improving service delivery in decentralization, as summarized in Bossert’s conceptual framework below (Figure 1c). Only a few studies have so far examined this interplay between decision space and the dimensions of capacity and accountability.

Figure 1c. Conceptual framework describing the synergies between decision space, capacity, and accountability. Reprinted from *Social Science & Medicine* 72(1), Thomas J Bossert and Andrew David Mitchell, “Health sector decentralization and local decision-making: Decision space, institutional capacities and accountability in Pakistan,” Copyright (2011), with permission from Elsevier.

<https://doi.org/10.1016/j.socscimed.2010.10.019>



1.1.5. Effectiveness of decentralization in improving health system performance

An equally-relevant task in analyzing decentralization is to examine whether or not it actually achieves its objectives for the health sector and improves health system performance. This question on decentralization's effectiveness and a proposed methodology to be able to pursue it is further elaborated in two chapters of this thesis (see Chapters 2 and 6). In this introduction, however, some of the studies that analyzed the effectiveness of decentralization in relation to selected outcomes are presented.

A few systematic reviews have shown the effectiveness of decentralization when it is in the form of delegation as part of enhancing the delivery of care in disease-specific programs. For example, one systematic review that examined the effectiveness of decentralizing treatment for multi-drug resistant tuberculosis (i.e. when treatment is delegated from central facilities to peripheral facilities) has concluded that treatment success was higher among patients who received care from a decentralized approach (Ho et al., 2017). Another systematic review that assessed the effectiveness of decentralizing the provision of HIV treatment (i.e. initiating treatment in a central facility, which then delegates to a peripheral facility for continuing care) has concluded that loss-to-follow-up was less among patients receiving decentralized treatment (Kredo et al., 2013).

On the contrary, when the scope of the review shifts to the effectiveness of broader forms of decentralization, such as devolution where several functions apart from disease-specific treatment programs are transferred to local levels, the evidence for effectiveness appears to be more mixed than unequivocal. For example, one systematic review that examined the effectiveness of decentralizing the health systems of LMICs based on its effects on the "six building blocks" of health systems has found both positive and negative effects (Cobos Muñoz et al., 2017). On the other hand, another systematic review that analyzed the effectiveness of decentralizing the governance of health care particularly in enhancing or exacerbating measures of health-related equity has also concluded that outcomes are varied and highly-dependent on the context (Sumah et al., 2016). Another systematic review that examined the evidence on the effectiveness of decentralization based on quantitative studies has concluded that there is "little empirical knowledge on the impact of decentralization on health system performance" (Dwicaksono and Fox, 2018).

Nevertheless, a few quantitative studies have demonstrated an association between decentralization and selected indicators of population health. For example, an analysis of panel data from 20 OECD countries over a 30-year period has revealed that measures of fiscal and revenue decentralization were associated with a positive effect on infant mortality rates, but only when a substantial degree of autonomy in the sources of revenues is devolved to local governments. (Jiménez-Rubio, 2011). Furthermore, in this study, the proportion of health expenditure in the country's GDP had a larger contribution to the reduction in infant mortality.

A similar analysis of panel data involving 50 provinces in Spain over a 20-year period has also concluded that infant and neonatal mortality rates improved after decentralizing health services, but the improvements were mostly observed in provinces that belonged to regions with full fiscal and political powers (Jiménez-Rubio and García-Gómez, 2017). On the other hand, a study that analyzed data from 20 regions in Italy over 17 years has concluded that devolving the function of financial management, especially when accompanied by higher autonomy and lower dependency on central transfers, was associated with lower infant mortality rates (Cavaliere and Ferrante, 2016). However, in this study, the marginal benefits of decentralization also varied according to the wealth of the region examined.

Another study from one state in Brazil has concluded that decentralization was associated with improved health system performance, but only in five out of 22 performance indicators (Atkinson and Haran, 2004). In Colombia, another study that analyzed data from 1,080 municipalities over a 10-year period has concluded that fiscal decentralization was associated with decreased infant mortality rates, but the effect was stronger in non-poor municipalities (Soto et al., 2012).

What do these studies on decentralization's effectiveness imply? First, it is important to point out that the evidence on effectiveness appears to vary depending on what particular form of decentralization is being assessed. Second, there appears to be a positive association between decentralization and some population health outcomes, although this association has been suggested to be influenced by factors aside from decentralizing health services itself. Third, based on the limited number of systematic reviews available, the evidence on effectiveness often presents to be mixed, especially when the decentralization of multiple functions is assessed. Thus, effectiveness appears to be dependent not only

on widening the decision space at local levels but also on other contextual factors, and there remains no clear consensus on which indicators have to be examined in order to assess effectiveness.

Drawing from the studies of health sector decentralization in other countries, what then is the global evidence on the effectiveness of decentralization in improving health system performance, taking into consideration: (a) the various forms of decentralization implemented in different countries, including the particular functions that are decentralized; (b) the various study designs that will be able to demonstrate effectiveness given the complexity of decentralization; and (c) the various measures that can be used to assess health system performance. This thesis aims to address this question on effectiveness through a systematic review.

1.1.6. Health sector devolution in the Philippines

The Philippines is a republic in Southeast Asia composed of an archipelago of >7,400 islands. It is divided into 17 administrative regions, one of which has the status of a special autonomous region (the Autonomous Region of Muslim Mindanao or ARMM). Each region is divided into provinces, which are composed of municipalities (towns) and cities. Currently, there are 81 provinces, 1,490 municipalities, and 145 cities in the Philippines.

When the Local Government Code was signed into law and set in motion in 1992, the Philippines introduced devolution to the public sector, including the health sector, as part of a broader reform process to “bring power back to the people” after the restoration of democracy in the country in 1986 (Brillantes, 1996). Under the devolved system adopted for the government health sector in the Philippines, the Department (Ministry) of Health (DOH) retained the function of setting the national health policy and direction and determining the technical guidelines for public health programs. Policy implementation and provision of public health services at local levels became the responsibilities of provinces, municipalities, and cities, each of which are headed by an elected local government official working with an appointed health officer. Table 1a provides a simple overview of the devolved Philippine health system.

Table 1a. Simple overview of the devolved Philippine health system. (Additional details on the distribution of functions between central and local levels are discussed in Chapters 3 and 4.)

Levels	Institution and person responsible	Mandate
National	Department (Ministry) of Health (DOH) headed by the Secretary (Minister) of Health (appointed by the President)	<ul style="list-style-type: none"> • Provides national health policy direction and plans • Sets the national technical standards and overall regulatory mechanisms for health • Provides tertiary healthcare in selected hospitals scattered across the country
	Philippine Health Insurance Corporation (PhilHealth) headed by a President and CEO (appointed by the President)	<ul style="list-style-type: none"> • Administers the national health insurance program
Regional (16)*	Regional Offices of the DOH headed by Regional Directors (appointed by the Secretary of Health)	<ul style="list-style-type: none"> • Provides guidance to the local governments on the implementation of the national health policy • Collects health-related data from the local governments as part of monitoring and evaluation
Local		
<i>Provincial (76)*</i>	Provincial Government headed by the Governor (elected) working with the Provincial Health Officer (appointed by the Governor)	<ul style="list-style-type: none"> • Provides secondary-tertiary hospital care
<i>Municipality (1,377)</i>	Municipal Government headed by the Municipal Mayor (elected) working with the Municipal Health Officer (appointed by the Mayor)	<ul style="list-style-type: none"> • Provides primary health care, including maternal and child care, nutrition services, immunization, disease control programs, etc.
<i>City (143)</i>	City Government headed by the City Mayor (elected) working with the City Health Officer (appointed by the Mayor)	

* - ARMM which has 5 provinces, 113 municipalities, and 2 cities has a special status as an autonomous region and is therefore excluded in this list.

1.1.6.1. Previous studies on health sector devolution in the Philippines

Most of the studies in the peer-reviewed literature on health sector devolution in the Philippines have examined various aspects of the challenges in its implementation (Bossert and Beauvais, 2002; Brillantes, 1996; Brillantes and Moscare, 2002; Grundy et al., 2003; Langran, 2011; Ramiro et al., 2001), but none has done an analysis using the lens of decision space, capacities, and accountability. For example, one study has provided an extensive historical background on the journey of the

Philippines towards devolution in the context of more democratization, and has argued that the difficulties in achieving the advantages of decentralization could be traced to the weaknesses of Philippine democracy (Langran, 2011).

In the aspect of quality, one study has reported that the quality and coverage of health services has declined after devolution, especially in rural and remote areas (Grundy et al., 2003). To address this quality issue, the central government (through the Department of Health) has initiated a quality assurance program that certifies and recognizes local government-owned primary care centers that comply with a set of quality standards. However, one study has also concluded that the performance of certified facilities in delivering preventive and monitoring programs was no different from that of non-certified facilities (Catacutan, 2006).

In the delivery of specific programs, one study has described how the implementation of the malaria control program at local levels struggled because of weak guidance and coordination coming from the central level because of decentralization (Espino et al., 2004). Another study has reported on how devolution has made it more difficult to effectively deliver reproductive health programs that became susceptible to local pressures because of religious controversies (Lakshminarayanan, 2003).

In the aspect of planning, one study has reported that some municipalities had non-functional local health boards, while those whose local health boards were functional did not really show evidence for enhancing community participation in planning and prioritization (Ramiro et al., 2001). In this context, the central government, despite decentralization, has provided technical assistance to the local governments in planning for health programs (La Vincente et al., 2013), and has likewise trained local officials to build their management skills (Sucaldito et al., 2014).

In the aspect of financing local health services, one study has reported on how poorer local governments, which took on more health facilities than what their resources could provide for, had a tendency to rely on wealthier neighboring local governments in the provision of health services to the local population (Capuno and Solon, 1996). Another study has concluded that the prospect of re-election was the main influencer of funding decisions for local health services by the provincial governors and

municipal mayors (Capuno and Panganiban, 2012). And to sustain financing of local health services despite devolution of responsibilities, the central government has established a national social health insurance program that pays accredited local government health facilities for the delivery of selected services (Obermann et al., 2018).

Based on these studies, health sector devolution in the Philippines has long been implemented in the country yet implementation has not been without challenges, and its objectives for the health sector have not always been achieved. Drawing from the long experience of implementing devolution in the Philippines, what are the conditions that enable decentralization to be more effective in improving the health sector? What can be learned from the Philippine experience about the interplay between decision space, capacities, and accountability in enhancing the implementation of decentralization? Furthermore, what can be learned from the perspectives of decision-makers in the Philippines on what policy adjustments could be considered in order to improve the governance of the health sector in the context of decentralization?

1.2. Objectives

The main objective of this thesis is to analyze the effectiveness of decentralization in improving the health sector with a focus the Philippines.

1.2.1. Specific objectives

Specifically, this thesis aims to:

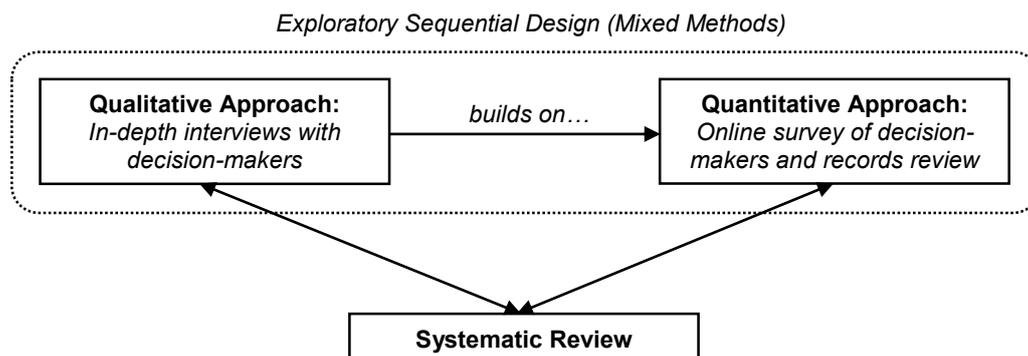
- a. Describe the conditions that enable decentralization to be effective based on the experience of health sector decision-makers in the Philippines;
- b. Assess the extent of how health sector decision-makers in the Philippines exercise their decision space in various functions of the health sector, and analyze its interplay with the dimensions of capacity and accountability;

- c. Analyze the perspectives of health sector decision-makers in the Philippines on the adjustments in governance that can be considered in order to improve service delivery in decentralization;
- d. Review the evidence from the literature on the effectiveness of decentralization in improving health system performance in various settings; and
- e. Propose policy recommendations for the Philippines and similar countries in order to enhance the benefit of decentralization/devolution and improve health system performance.

1.3. Methods

This thesis employed a mixed methods approach that also included a systematic review component. The mixed methods approach was based on the “exploratory sequential design” (Creswell and Creswell, 2017) where initial in-depth interviews with decision-makers informed the conduct of a quantitative survey of decision-makers that followed it. This design was deemed appropriate since it allowed for initially exploring, through qualitative methods, how health sector decision-makers in the Philippines use their decision spaces and perceive capacity and accountability given the dearth of studies about the Philippines on this topic. Findings from both the qualitative and quantitative components then informed the focus and design of the systematic review; on the other hand, findings from the systematic review likewise informed the interpretation and discussion of the results from the mixed methods approach. The overall approach of this thesis is summarized by Figure 1d.

Figure 1d. Overview of thesis methodology



1.3.1. Systematic review for assessing the effectiveness of decentralization

The Cochrane Collaboration defines effectiveness as “the extent to which a specific intervention, when used under ordinary circumstances, does what it is intended to do.” In this context, “effectiveness of decentralization” in the health sector was assessed by exploring the various outcome measures used in previous studies in analyzing decentralization in the health sector. The methodology for the systematic review component is elaborated further in other chapters (see Chapters 2 and 6).

1.3.2. Qualitative research component

A series of in-depth interviews (IDIs) with health sector decision-makers in the Philippines was performed, until the point of saturation in qualitative research was judged to have been achieved. Selection of interviewees was purposive but was also based on maximum variation sampling to ensure diversity in the profiles of interviewees. Broadly, the decision-makers interviewed for this thesis represented the following groups in the Philippines:

- a. National level health sector decision-makers
 - Officials of the Department (Ministry) of Health (DOH) with a long history of work experience and who are familiar with the devolution of government health services
 - Other national level decision-makers who are involved in policymaking for the health sector, such as members of the Philippine Congress (i.e. Parliament) (e.g. Senator or Congressperson)
- b. Local level decision-makers from the DOH (i.e. DOH personnel at regional levels)
- c. Local elected officials
 - Politicians elected to head local governments (e.g. provincial governors, city and municipal mayors)
- d. Local health officers

- Medical doctors in an appointed position who are responsible for managing the health services provided by the local governments (e.g. provincial, city, and municipal health officers)

Figure 1e. below provides an example of questions which provided guidance in the development of the interview guide to assess the breadth of decision space for this thesis.

Figure 1e. Description of health sector functions and the questions for each to assess decision space. Reprinted from *Social Science & Medicine* 72(1), Thomas J Bossert and Andrew David Mitchell, “Health sector decentralization and local decision-making: Decision space, institutional capacities and accountability in Pakistan,” Copyright (2011), with permission from Elsevier. <https://doi.org/10.1016/j.socscimed.2010.10.019>

Function ^a	Description	Example survey questions	Narrow/low	Medium	Wide/high
Strategic and Operational Planning (SOP)	Relates to planning for future activities (e.g., development of annual plans)	■ DS [EDOH/DOH/MS]: In the process of developing PCL, are you able to establish local priorities different from provincial and national priorities?	■ No/never tried	■ Sometimes	■ Yes
		■ CAP [EDOH/DOH]: Do you do a mid- or end-of-year assessment of achievement of District Health Plan activities and objectives?	■ No	■ Only monitor programs and activities	■ Yes
		■ ACC [DCO]: Did the Nazim present a vision for priorities for last year?	■ No		■ Yes
Budgeting (BUD)	Relates to allocation decisions for current activities, including funds disbursed centrally and local sources of revenue.	■ DS [DOH/MS]: Did you propose a change in user charges for different services?	■ No; Yes but proposal not accepted	■ Yes but proposal modified	■ Yes and proposal accepted
		■ CAP [EDOH/DOH/MS]: Do you have sufficient postings for managing accounts?	■ Insufficient postings	■ Sufficient postings but vacancies	■ Sufficient postings and no vacancies
		■ ACC [DCO]: After you presented your budget last year to the District Assembly, what happened?	■ No changes made		■ Changes made
Human Resources (HR)	Relates to personnel functions (e.g., hiring, posting, discipline)	■ DS [DOH/MS]: Have you proposed hiring, promoting, substituting, transferring or disciplinary action for staff above your authority to a higher authority?	■ No; yes but never approved	■ Yes and approved in a few cases	■ Yes and approved in most cases
		■ CAP [EDOH/DOH/MS]: Are you aware of a provincial policy/guidance on contracting?	■ No		■ Yes
		■ ACC [EDOH/DOH/MS]: During the last year, how often have you met with representatives of professional associations about human resources management issues?	■ Never	■ Seldom	■ Regularly
Service Organization/Delivery (SOD)	Relates to implementation of current programs and activities	■ DS [DOH/MS]: During the previous year, did you/your staff initiate any new programs/ways of providing services that were not already in existence or ordered by Provincial Health Department or MOH program managers?	■ No		■ Yes
		■ CAP [EDOH/DOH/MS]: Do you have a District Procurement Committee to procure/purchase your drug and supply needs?	■ No		■ Yes
		■ ACC [EDOH/DOH/MS]: How often do you have meetings (or other contacts) with the Nazim?	■ Less frequently than weekly		■ Weekly or more frequently

T.J. Bossert, A.D. Mitchell / Social Science & Medicine 72 (2011) 39–48

On the other hand, some of the other questions that were posed during the IDIs with the decision-makers are presented in Table 1b.

Table 1b. Some questions during the in-depth interviews. (The complete questionnaire is provided as a Supplementary Material in Chapter 3).

Categories	Questions
Knowledge on devolution	<i>What does devolution mean based on your understanding?</i>
	<i>What do you think are the objectives of devolution?</i>
Perceptions on the context of devolution	<i>What were the motivations in 1991 that led to the shift to devolution?</i>
	<i>Do you think that the present context also supports the need for devolution? Why or why not?</i>
Perceptions on the effectiveness of devolution	<i>Were the objectives of devolution achieved? Why or why not?</i>
	<i>In your opinion, did devolution strengthen or weaken the health sector? Please explain why or why not.</i>
	<i>What do you think are the ways by which the present set-up of devolution could be improved in the Philippines?</i>
Perceptions on decision space	<i>Do you think you are able to decide comfortably well in this health sector function (state function)?</i>
Perceptions on capacity	<i>Do you think you have adequate capacity to decide on this function (state function)?</i>
Perceptions on accountability	<i>Do you think you are able to make decisions that are accountable to the needs of the people with respect to this function (state function)?</i>

Data from the IDIs were transcribed and analyzed following the Framework Method (Gale et al., 2013). The Framework Method was chosen because it allows thematic analysis of textual data, as well as comparison of emerging themes across different groups of decision-makers (see Chapters 3 and 4).

1.3.3. Quantitative research component

Drawing from the results of the qualitative research component, a structured questionnaire was subsequently developed to inquire about decision-making at local levels for the functions of: (a) planning; (b) health financing; (c) resource management; (d) management of human resources for health; (d) health service delivery; and (e) data management and monitoring. For the purpose of this thesis, the survey was delivered in online manner to facilitate collection of responses (see Chapter 5).

1.3.3.1. Survey participants and analysis

The online survey focused on one region in the Philippines, specifically Northern Luzon region. Three groups of local level decision-makers in this region were targeted: (a) DOH staff deployed to provide assistance to the local governments; (b) local government politicians; and (c) local government health officers. Survey participants were contacted based on a list of email addresses provided by the DOH Regional Office in Northern Luzon. Survey participants were asked about their opinions on the benefits and disadvantages of devolution to the delivery of health services, their preferred local decision-makers in six selected functions, and their preferred structure of governance for the health sector (i.e. whether they wish to maintain the current devolved system or would rather consider reverting to some forms of centralization). Analysis of results was performed through visualization of survey responses in radar and bar charts. Analysis of survey responses was further enriched by triangulating it with the themes that have emerged from the qualitative component of this thesis (see Chapter 5).

1.3.3.2. Records review

To put the results of the survey in context, data specifically on revenue streams for financing local health services in Northern Luzon were also analyzed. Specifically, these revenue streams consisted of the budget allocated by the local government for health services, the amount of payments received by the local government from the Philippine Health Insurance Corporation (PhilHealth), and the amount of budget allocated by the DOH to assist the local governments in building new or upgrading existing health facilities.

1.3.4. Ethical considerations

The study protocol for this thesis was reviewed and approved by the National Ethics Committee (NEC) of the Philippines (2016-013) and the Ethikkommission Nordwest- und Zentralschweiz (EKNZ) in Switzerland (2016-00738). The qualitative surveys and quantitative interviews did not involve any

procedures that put study participants at-risk for harm. Written informed consent was secured prior to study participation. Since all respondents are health sector decision-makers with good educational background, the informed consent forms and questionnaires were in English, which is widely spoken in the Philippines. Participant confidentiality was maintained by replacing identifiers with codes during data encoding and analysis. The transcripts, including the audio recordings of the interviews, as well as the data from the survey is stored in a restricted folder in a secure work laptop. The files would be maintained securely for a maximum of five (5) years from the time of data collection, after which these will be deleted.

1.4. Description of thesis chapters

The chapters that follow present the findings from this work and are organized as follows:

Chapter 2 is a commentary published in *Health Policy* that further expounds on the issues related to examining the evidence on the effectiveness of decentralization and proposes some ways forward for further research.

Chapter 3 is a research article published in *PLoS One* that reports on the findings of the qualitative research component of this thesis and describes the conditions that enable decentralization to improve the health system based on the perspectives of decision-makers in the Philippines.

Chapter 4 is a research article published in *Health Research Policy and Systems* that builds on the qualitative research component and explores how decision-making could be optimized from the lens of the synergy of decision space, capacities, and accountability.

Chapter 5 is a manuscript to be submitted to *Global Health Action* that brings in the quantitative research component and reports on decision-makers' preferences in one Philippine region on who should be making the decisions at local levels and on what structure of governance would be better for the health sector (i.e. whether they preferred centralized to decentralized arrangements).

Chapter 6, which is a systematic review protocol approved by the *Cochrane Collaboration Effective Practice and Organisation of Care* editorial group, presents the methodology which is examining the global evidence on the effectiveness of decentralization in improving health system performance.

Finally, Chapter 7 synthesizes the findings of this thesis and provides recommendations for enhancing health policy as well as suggestions for future research.

2. Assessing decentralisation is a challenging but necessary task if it should continue as a reform strategy: Reflections from the systematic review by Sumah, Baatiema, and Abimbola

Harvy Joy Liwanag^{a,b,c} and Kaspar Wyss^{a,b}

^a Swiss Tropical and Public Health Institute, Basel, Switzerland

^b University of Basel, Basel, Switzerland

^c Ateneo School of Medicine and Public Health, Ateneo de Manila University, Metro Manila, Philippines

Correspondence:

Swiss Tropical and Public Health Institute, Socinstrasse 57, P.O. Box CH-4002, Basel, Switzerland

Tel. no.: +41 61 284 81 40

E-mail addresses:

(HJ Liwanag) harvy.liwanag@unibas.ch

(K Wyss) kaspar.wyss@unibas.ch

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2.1. Introduction

We read with interest a recent publication in *Health Policy* where Sumah, Baatiema, and Abimbola (Sumah et al., 2016) conducted a systematic review of the “impacts” of decentralisation on health-related equity. This is as a highly-welcomed contribution to better understand how health systems across the world have strengthened (or weakened) after implementing various forms of decentralisation in the health sector. In the peer-reviewed literature, we are aware of only two other recent systematic reviews on health sector decentralisation. The Cochrane Collaboration’s Effective Practice and Organisation of Care Group (EPOC) Group has published a review protocol that aims to assess the effectiveness of decentralisation in improving access to health care, utilisation of health services, population health, and other outcomes of interest (Sreeramareddy and Sathyanarayana, 2013), although its final report has not been published as of this writing. A systematic review in another peer-reviewed journal has examined the impacts of decentralisation in low and middle income countries using the “six building blocks of health systems” framework of the World Health Organization and finds both positive and negative effects in the six building blocks and, therefore, mixed results (Cobos Muñoz et al., 2017).

Building on Sumah’s work, this letter expands on selected aspects emerging from the review, namely: (a) What does impact in the context of decentralisation mean?; (b) How should we assess a complex intervention?; and (c) What are the possible ways forward for studies on decentralisation?

2.2. Impact vs. effectiveness

Impact may be defined as “any effect of the service (or of an event or initiative) on an individual or group” (Markless and Streatfield, 2009), suggesting therefore that it can be either positive or negative. On the other hand, effectiveness has been defined as “the extent to which a specific intervention, when used under ordinary circumstances, does what it is intended to do” (The Cochrane Collaboration, 2017). A systematic review of effectiveness will have to identify what primary aims were attributed to decentralising health services and must also examine implementation issues and the context within which decentralisation is placed as these are inextricably linked to why a complex intervention may

succeed or fail (Waters et al., 2011). On the other hand, a systematic review on impacts will have to identify a broader set of outcomes, and possibly even consider non-health-related outcomes, which can inform policymakers of consequences, both intended and non-intended, of decentralisation as well as allow a comprehensive assessment of its system-wide effects. We need systematic reviews on questions of both impact and effectiveness as each may generate different but equally meaningful lessons for policymakers. Indeed, Sumah's review on the impacts of decentralisation to health-related equity is a re-affirmation that decentralisation itself is complex and "could either lead to equity gains or exacerbate inequalities" depending on context (Sumah et al., 2016), that is, the prevailing political circumstances, socioeconomic developments, people's values and priorities, among other interlinking components and processes.

2.3. The challenge in assessing a complex intervention

Sumah's review points to the limitations in the study designs and "the general challenge of most studies in establishing causal relationships" (Sumah et al., 2016). The Cochrane EPOC Group, for instance, limits systematic reviews to only four study designs with the lowest risk of bias: randomised and non-randomised controlled trials, controlled before-after studies, and interrupted time series or repeated measures studies (Cochrane Effective Practice and Organisation of Care (EPOC), 2017). It is, however, difficult to imagine how a community randomised trial, for example, comparing decentralised districts (experimental group) with centralised districts (control group) can be feasible when decentralisation is often implemented as part of a public sector reform process in a country. On the other hand, is there an added value in including other study designs, such as cross-sectional studies, when the Cochrane EPOC Group itself states that "it is difficult, if not impossible to attribute causation from such studies" (Cochrane Effective Practice and Organisation of Care (EPOC), 2017)? Reviewers who wish to assess either the impact or the effectiveness of decentralisation are therefore in a situation where they must strike a balance between minimizing the risk of bias on the one hand, and what studies are realistically available on the other hand.

We wish to offer two considerations to address this issue. First, systematic reviews on the impacts or effectiveness of decentralisation cannot be performed in isolation from the system where it is implemented. In the words of Sumah *et al.*, decentralisation represents “many complex and interconnected set of processes. . . that should therefore be implemented and evaluated as a complex intervention for which outcomes are neither straightforward nor predictable” (Sumah et al., 2016). Within such a complex and dynamic system, systematic reviews on decentralisation should therefore recognize “a priori” that the impacts or effectiveness of decentralisation are typically context-specific (de Savigny and Adam, 2009), although the dynamic interactions that contribute to such impact or effectiveness may be structured through the development of logic models (Anderson et al., 2011; Waters et al., 2011), something which Sumah *et al.* could have used to better guide their review process. Secondly, study designs such as cross-sectional studies and qualitative studies do carry a high risk of bias. Nevertheless, we believe that such study designs must be considered rather than excluded outright because of the useful information they can provide to help explain why decentralisation succeeds or fails in achieving what it was intended for (effectiveness), or why outcomes are positive in some settings and negative in others (impacts). In other words, the purpose of including these “other” study designs is not to demonstrate the causality behind the impact or the effectiveness, but to complement the interpretation of the results of analysing the “more rigorous” study designs by trying to describe the context and to capture the evidence-based relationships that can shed light on why the observed impacts or effectiveness were so. Unfortunately, Sumah *et al.* have not included specific study designs in their search strategy and eligibility criteria, leading us to wonder on the variety of study designs detected during the search process. Moreover, the differences in the study design of each of the nine eligible papers included in their review could have been analysed further to help explain the observed variations in health-related equity.

2.4. The decision space approach and possible ways forward

We need to build on the systematic review by Sumah *et al.* and others not to determine the best form of decentralisation applicable for all settings because a standard recipe for it does not exist, but rather to understand what makes decentralisation positively impactful or effective for the health sector in some contexts and not in others. Sumah’s review is limited to only six countries (Spain, Canada, China, Switzerland, Chile, and Colombia), suggesting that we lack good studies on decentralisation in many other countries in the peer-reviewed literature. We cannot make valuable recommendations for improving decentralisation based on what we still do not know. Consequently, we need further studies that can be made more meaningful by using a framework able to capture the actual scope of decision-making in health sector functions made available to lower levels of authority after decentralisation. For this purpose, we consider Bossert’s “decision space approach” (Bossert, 1998) as a useful framework that can guide individual country studies as well as systematic reviews that embed it in their logic models. Interestingly, Sumah *et al.* cite four articles by Bossert but never mention the concept of decision space in the main text. Two studies in Pakistan (Bossert et al., 2015; Bossert and Mitchell, 2011) that used the decision space approach have explored its complementary mechanisms with the dimensions of capacity and accountability among decision-makers. Is this synergy among decision space, capacity, and accountability the “gestalt” that can potentially explain why decentralisation succeeds or fails in improving health system performance as well as equity and other health-related outcomes? As long as research methods would enable us to measure these dimensions, it would be interesting to see if the proposed synergy holds true across countries with varying contexts. Assessing decentralisation is indeed a challenging task, but study it—or even debate about it—we must if it should continue as a reform strategy for the health sector and beyond.

3. What conditions enable decentralization to improve the health system?

Qualitative analysis of perspectives on decision space after 25 years of devolution in the Philippines

Harvy Joy Liwanag^{1,2,3*} and Kaspar Wyss^{1,2}

¹ Swiss Tropical and Public Health Institute, Basel, Switzerland

² University of Basel, Basel, Switzerland

³ Ateneo School of Medicine and Public Health, Ateneo de Manila University, Metro Manila,
Philippines

* Corresponding author

E-mail: harvy.liwanag@swisstph.ch (HJL)

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3.1. Abstract

Background: Decentralization is promoted as a strategy to improve health system performance by bringing decision-making closer to service delivery. Some studies have investigated if decentralization actually improves the health system. However, few have explored the conditions that enable it to be effective. To determine these conditions, we have analyzed the perspectives of decision-makers in the Philippines where devolution, one form of decentralization, was introduced 25 years ago.

Methods: Drawing from the “decision space” approach, we interviewed 27 decision-makers with an average of 23.6 years of working across different levels of the Philippine government health sector and representing various local settings. Qualitative analysis followed the “Framework Method.” Conditions that either enable or hinder the effectiveness of decentralization were identified by exploring decision-making in five health sector functions.

Results: These conditions include: for planning, having a multi-stakeholder approach and monitoring implementation; for financing and budget allocation, capacities to raise revenues at local levels and pooling of funds at central level; for resource management, having a central level capable of augmenting resource needs at local levels and a good working relationship between the local health officer and the elected local official; for program implementation and service delivery, promoting innovation at local levels while maintaining fidelity to national objectives; and for monitoring and data management, a central level capable of ensuring that data collection from local levels is performed in a timely and accurate manner.

Conclusions: The Philippine experience suggests that decentralization is a long and complex journey and not an automatic solution for enhancing service delivery. The role of the central decision-maker (e.g. Ministry of Health) remains important to assist local levels unable to perform their functions well. It is policy-relevant to analyze the conditions that make decentralization work and the optimal combination of decentralized and centralized functions that enhance the health system.

3.2. Introduction

Decentralization is a complex process, but it can be described as the transfer of power or authority over decision-making from higher (e.g. central, federal, or national) to lower levels (e.g. state, regional, cantonal, district, provincial, municipal, or local) of administration (Mills, 1994; Mills et al., 1990; Regmi, 2013). It has been emphasized in many countries typically with an overall aim to improve health system performance. De-concentration, devolution, delegation, and privatization are attempts for a typology of decentralization (Mills, 1994; Mills et al., 1990), although in practice their boundaries overlap rather than clearly distinguish these from one another. This paper focuses on devolution, a type of decentralization where decision-making authority for health services is transferred to lower political levels, often local governments that are largely independent from the higher level of government (Mills, 1994; Mills et al., 1990; Regmi, 2013; Saltman et al., 2007).

The arguments in favor of more decentralization in the health sector include: empowerment of local authorities to make decisions on their own; reducing levels of bureaucracy to achieve efficiency; better matching of health services with local priorities; promoting innovations in service delivery that address local needs; and enhancing stakeholder participation in decision-making (Faguet and Pöschl, 2015; Regmi, 2013; Saltman et al., 2007). On the basis of these expected benefits, decentralization has been vigorously promoted in many countries in the last three decades (Faguet and Pöschl, 2015).

Has decentralization been effective in achieving the desired reforms? The answer depends on the context, the specific form of decentralization implemented, the health sector functions decentralized, and the outcomes measured. Unlike a concrete intervention, decentralization is rather a process where a standard form does not exist. Given such heterogeneity and a lack of consensus on outcomes for measuring success, any assessment of its effectiveness in improving the health system is challenging. Nevertheless, we have previously argued that these limitations should not be an excuse to abandon the need to assess its effectiveness, given that decentralization continues to be viewed as a strategy for health sector reform (Liwanag and Wyss, 2017).

Some of the broader systematic reviews on decentralization of governance of health services have explored: its effects in low and middle-income countries (LMICs) (Cobos Muñoz et al., 2017) based on the framework of the six building blocks of health systems (WHO, 2007); the achievements, challenges, and issues related to implementing it in Sub-Saharan African countries (Zon et al., 2017); and its impacts on health-related equity (Sumah et al., 2016). These reviews report both positive and negative outcomes and suggest the consideration of other factors required for successful implementation, such as adequate skills for the local levels taking on the functions (Cobos Muñoz et al., 2017), political will in the central level to implement changes (Zon et al., 2017), and the pre-existing socio-economic context within which decentralization is placed (Sumah et al., 2016). On the other hand, other systematic reviews have examined the effectiveness of decentralizing health service delivery, such as in treatment of MDR-TB patients where treatment success was higher (Ho et al., 2017), or in providing anti-retroviral therapy for HIV patients where loss to follow-up was less (Kredo et al., 2013). Both papers however recommend further studies to explore the effectiveness of decentralizing treatment in a range of other settings.

3.2.1. Decision space approach

One framework for analyzing decentralization is the “decision space” approach (Bossert, 1998), which enables analysis of the amount of choice (i.e. wide, moderate, or narrow) transferred from higher to lower levels, the decisions made at local levels within this granted “space,” and the effects that these decisions have on the health system. Previously, decision space has been reported as mostly wide in the Philippines (Bossert and Beauvais, 2002), mostly narrow in Ghana (Bossert and Beauvais, 2002) and India (Seshadri et al., 2016), almost none in Fiji (Mohammed et al., 2015), and moderate or varying in Zambia (Bossert and Beauvais, 2002), Uganda (Alonso-Garbayo et al., 2017; Bossert and Beauvais, 2002), and Pakistan (Bossert et al., 2015; Bossert and Mitchell, 2011). The studies in Pakistan have suggested that a wide decision space at local levels may not be enough to improve service delivery unless it is accompanied by building the capacity of decision-makers who assume the new tasks and by ensuring accountability for the decisions they make. It is therefore useful for policy to explore

effectiveness given multiple configurations of decision space with these dimensions of capacity and accountability (Bossert, 2016). We will contribute to this endeavor by an examination of health sector devolution in the Philippines.

3.2.2. Devolution in the Philippines

The Philippines is a republic in Southeast Asia comprising >7,600 islands and with a population of 101 million (Philippine Statistics Authority, 2016a). Government was historically highly-centralized through successive occupations by Spain, the United States, and Japan, followed by independence in 1946, and the dictatorship of Ferdinand Marcos that ended after a peaceful revolution in 1986. Since the 1950s, various waves of decentralization have taken place to disperse the concentration of power in Manila (Atienza, 2004; Langran, 2011). The largest wave culminated in the Local Government Code of 1991 (“Local Government Code of 1991,” 1991) which introduced devolution to the entire archipelago in 1992, at that time considered as the most extensive decentralization in Asia (Ramiro et al., 2001). With assistance from multi-lateral development organizations such as the World Bank, WHO, and USAID (Langran, 2011), the national government transferred the responsibility for government health services and other non-health services (e.g. agriculture) to Local Government Units (LGUs) across the archipelago (Atienza, 2004; Capuno and Solon, 1996; Espino et al., 2004; Grundy et al., 2003; Langran, 2011; “Local Government Code of 1991,” 1991; Obermann et al., 2008; Ramiro et al., 2001; Sucaldito et al., 2014). Currently, the Philippines is organized into 17 regions for the purpose of coordination, although real political power at local levels lies with the LGUs that number into 81 provinces, and the 1,490 municipalities and 145 cities that are geographically within these provinces. Provincial governments maintain some oversight over municipalities and less-urbanized cities, while highly-urbanized cities are completely independent. Devolution disrupted the administrative structure of government health services from what used to be a service under a singular national ministry called the Department of Health (DOH), which previously managed an intact district health system at local levels, into a fragmented service under the control of individual LGUs: provinces responsible for hospitals; municipalities responsible for primary care facilities called Rural Health Units

(RHUs); and cities responsible for both levels of care (Figure 3a). Concepts such as “Interlocal Health Zones” (Atienza, 2004) and “Service Delivery Networks” have been introduced by the national government to restore interlinking by fostering a network of health facilities and providers in contiguous areas, despite these facilities being under different LGUs, to offer a package of health services in an integrated and coordinated manner.

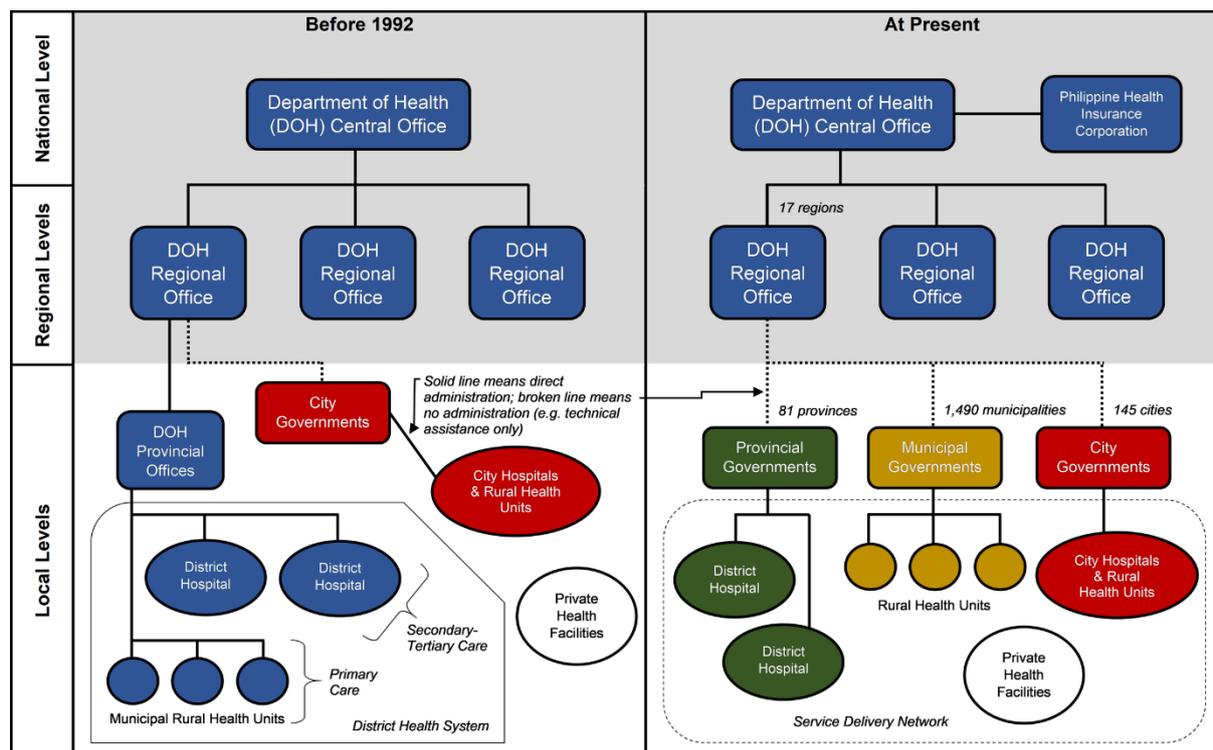


Figure 3a. Simplified overview of the administrative structure of government health facilities in the Philippines before and after devolution.

In the peer-reviewed literature, studies reported how devolution in the Philippines failed to enhance community participation in some municipalities (Ramiro et al., 2001) and sustained corruption when politicians became the center of decision-making (Langran, 2011) due to what has been described as “elite capture” (Casey, 2018) wherein existing power structures persist despite decentralization, compounded by a lack of accountability measures. In some provinces, inefficiency emerged as a problem when these took on more hospitals than what provincial resources could handle (Capuno and

Solon, 1996; Grundy et al., 2003; Langran, 2011). In some municipalities, patients learned to cross borders in search for better care (Capuno and Solon, 1996), while a quality assurance program launched by the national government in 1998 failed to improve quality in primary care centers owned by the municipalities (Catacutan, 2006). In the aspect of financing, municipalities, unlike the wealthier cities, continued to rely on the income from the national government for health spending (Capuno and Solon, 1996). Moreover, the lack of readiness at local levels prompted the national government to provide a training program in management for local decision-makers (Sucaldito et al., 2014), and to deploy centrally-hired health professionals to municipalities that have no resources to hire them (Leonardia et al., 2012). One paper on the malaria control program described poor implementation at local levels due to dysfunctional linking with the national level (Espino et al., 2004).

Consequently, we should then ask: What conditions enable decentralization to produce well-functioning health systems? (Liwanag and Wyss, 2017). We have explored this question by analyzing the perspectives of decision-makers at different levels of the Philippine health system. This is timely not only because of the 25 years of experience of implementing devolution in the Philippines, but also because of current initiatives in the country to change the structure of government from a republican into a federal state (Romero, 2017), indeed a step even further than devolution that will significantly alter how health services will be governed in the country. Lessons from the Philippines can offer policy-relevant insights (Obermann et al., 2008) for countries that have decentralized or are contemplating to adopt some form of decentralization for their health systems.

3.3. Methods

3.3.1. Semi-structured questionnaire

A semi-structured questionnaire (S1 File) was developed by drawing from the decision space approach and the concept of health sector functions (Bossert, 1998), as well as from two studies in Pakistan that analyzed the synergies between decision space, capacity, and accountability (Bossert et al., 2015; Bossert and Mitchell, 2011). The questionnaire provided latitude in exploring participants'

insights and probed their perspectives on and personal experiences in implementing devolution. We examined their flexibility in making decisions within selected health sector functions. These functions were broad categories of tasks where decision-makers make choices for the health sector as previously reported in the studies by Bossert (Bossert, 1998; Bossert et al., 2015; Bossert and Beauvais, 2002; Bossert and Mitchell, 2011). Drawing from these studies, we initially identified these functions as: 1) planning; 2) health budgeting and financing; 3) human resources for health management; and 4) service delivery.

3.3.2. Participant selection

We purposively-selected and contacted (via phone calls and emails) decision-makers who were serving the government health sector in positions of authority. Broadly, they represented three groups of decision-makers: 1) ministers and directors from the DOH who served at national and regional levels; 2) provincial, city, and municipal health officers, or those who served as career health officers at local levels; and 3) provincial governors, city mayors, and municipal mayors, or politicians who were elected to head the LGUs at local levels.

3.3.3. Data collection

The questionnaire was pilot-tested with two potential participants to check for clarity of the questions prior to use. One of the authors (HJL) with training in qualitative research conducted interviews face-to-face with each participant in his/her preferred venue in the Philippines between January and April 2017. HJL is also a Filipino citizen who is familiar with the country's health system mostly through his work as an academic researcher and who was not employed in the government health service sector. Each interview was audio-recorded and manually transcribed in English. Transcripts were reviewed at least twice to ensure accuracy and subsequently loaded into MAXQDA Standard 12 (VERBI GmbH Berlin, 1995-2017) for coding and analysis.

3.3.4. Framework method

Analysis was based on the “Framework Method” as previously described in three papers (Gale et al., 2013; Heath et al., 2012; Jansen et al., 2017). It is considered a systematic approach to thematic analysis that compares and contrasts perspectives. Our approach to analysis combined both deductive and inductive approaches and is summarized as follows: 1) constant familiarization with the data through repeated listening to the audio-recordings while simultaneously reading the transcripts; 2) open coding of the transcripts that identified a preliminary set of categories based on the decision space and the health sector functions; 3) development of an initial analytical framework comprised of these codes and categories being identified from the transcripts; 4) coding of the rest of the transcripts using this analytical framework with continuing iteration whenever new categories were identified; and 5) analysis through comparison of emerging themes across categories, individual interviews, and groups of decision-makers with the use of tables.

Final thematic analysis focused on interpreting: 1) how decision space was exercised by the decision-makers in various health sector functions; 2) whether decision space was seen as wide, moderate, or narrow within each health sector function; and 3) the conditions that make decentralization effective for the health sector in the performance of these functions. We defined a condition as any factor or process (including any potential interaction between these) that has an enabling role in achieving a well-functioning decentralized or devolved health system. Similarly, we also identified those conditions that work in the opposite (i.e. hindering condition). We then summarized these enabling and hindering conditions in a table organized according to health sector functions, together with the decision space within these functions (using blue color coding) across groups of decision-makers. Finally, through an iterative process we synthesized the content of this table into a conceptual diagram, which was inspired by the image of decentralization and centralization previously described in the literature as movements between two opposite poles (Mills et al., 1990).

3.3.5. Ethics statement

Written informed consent was obtained from all participants prior to the conduct of the interviews. The study protocol was reviewed and approved in Switzerland by the Ethikkommission Nordwest- und Zentralschweiz (no. 2016-00738) and in the Philippines by the National Ethics Committee (no. 2016-013). Drafting of this paper was guided by the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Tong et al., 2007).

3.4. Results

3.4.1. Profiles of the decision-makers

We contacted 33 potential participants and interviewed up to 29 decision-makers when saturation was assessed to have already been achieved (Creswell and Creswell, 2017). The audio files of two interviews were corrupted and subsequently excluded, which nevertheless did not change our judgment of saturation, resulting in a total of 27 interviews transcribed. Each interview lasted an average of one hour and four minutes. The 27 decision-makers worked in a wide range of local settings in the Philippines (Figure 3b).

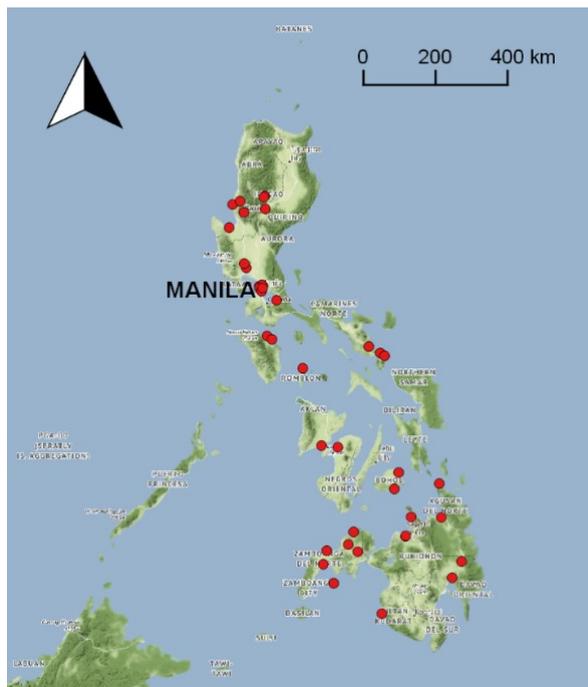


Figure 3b. Present and previous areas of health sector-related work of the 27 decision-makers. Locations indicate assignments that were ≥ 3 years. (Map tiles by Stamen Design, under CC BY 3.0. Data by OpenStreetMap, under ODbL.)

There were 17 (63%) males and 10 (37%) females, with an average of 23.6 years of working in the Philippine government sector. At the time of the interviews, 10 (37%) were serving at national and regional levels, 11 (41%) were career health officers at local levels, and six (22%) were elected local officials. Many of them crossed different levels of government during the span of their careers. For instance, nine served in the DOH in various capacities, three of whom were once the Philippine Secretary of Health (i.e. Minister of Health). Among career health officers at local levels were four provincial health officers, three city health officers, and eight municipal health officers, four of whom were heads of their respective national associations of health officers. Among elected officials were three provincial governors, four municipal mayors, one city mayor, two congressmen, and one senator. We further characterized the length of service of each of the 27 decision-makers in Figure 3c.

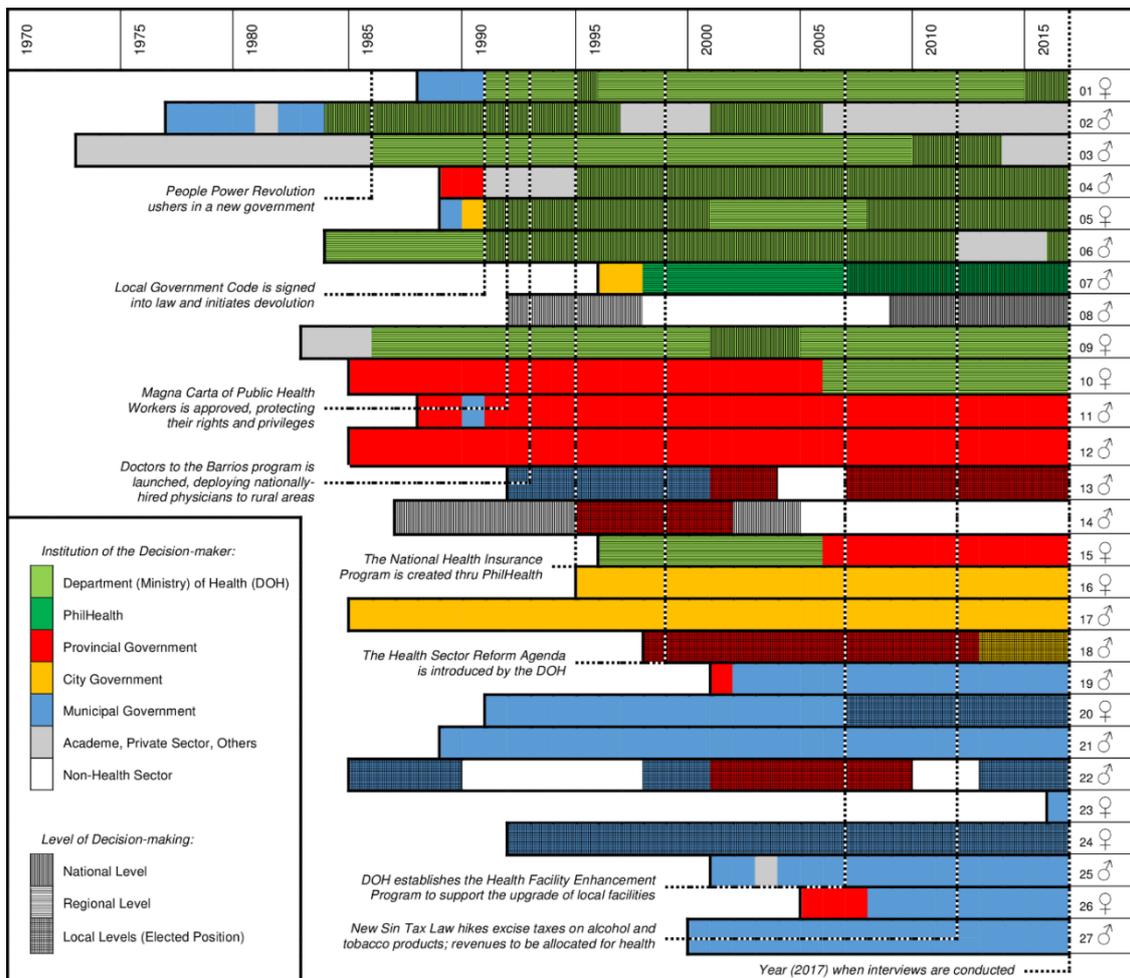


Figure 3c. Durations of government service of the 27 decision-makers, the institutions they worked in, and their levels of decision-making. Selected events in the Philippine health sector are also indicated.

3.4.2. Health sector functions

The various decision-making activities described by the participants during the interviews led to an expansion of the initial list of health sector functions into five categories, namely: 1) planning; 2) financing and budget allocation; 3) resource management (further divided into “facilities, equipment, and supplies” and “human resources for health” or HRH); 4) program implementation and service delivery; and 5) monitoring and data management.

3.4.3. Planning

Devolution empowered LGUs to create the Local Health Board (LHB), a multi-stakeholder board chaired by the governor (in provinces) or mayor (in municipalities and cities) that serves as a venue for discussing local health concerns (Ramiro et al., 2001). To what extent the LHB contributes to planning depends on whether it actually meets regularly, as the governor/mayor may choose not to convene it at all, and the ability of members to advocate for the concerns of the sectors they represent. After about 10 years since the introduction of devolution, the DOH instituted the annual “Investment Plan for Health” (IPH) (La Vincente et al., 2013) to assist the LGUs in planning and to restore some form of standard planning process. The IPH enables the DOH, through its regional offices, to train the LGUs to develop their annual plans for health, which specify local health needs and the resources from local and central levels to support these needs. Thus, the DOH has become actively involved in planning for local health services and is seen to have a wide (dark blue) decision space in this function compared to local decision-makers whose space may be described as moderate (blue) (Table 3a). Conditions that enable decentralization in planning to be more effective for the health system include a functional LHB that feeds into the planning process, as well as opportunities for key decision-makers from central and local levels to meet, negotiate, set priorities, and co-create the local plans together. On the other hand, hindering conditions include a weak mechanism to monitor faithful execution of these plans, and the lack of sustainability for these plans given the reality of elections in the Philippines where local elected officials may change every three years.

The following quote illustrates how planning has provided an opportunity for negotiation between the central and local levels and why it needs to be more strategic:

“Parts of the plans will be funded by the national government. We work with governors and mayors because the plans emerge from municipal and city levels and integrated at provincial level. The governor presents the consolidated plan and have it approved by the DOH regional office. That’s better because he’s the head of the province and will have ownership of the plan. But sometimes the plan is a wish list, for example, requesting the DOH to finance the fencing of their hospital [laughs]. Planning should be strategic to address real needs and improve their health system.” (Director in the DOH central office, 28 years in government)

3.4.4. Financing and budget allocation

Most financing for health remained within the control of the national government, which pools tax collection and allocates the revenue share of LGUs based on a formula that considers local population and land area. It was the consensus among decision-makers that the inadequate share received by the LGUs led to the chronic underfunding and deterioration of many local health facilities especially in resource-poor provinces and municipalities that have little capacity for locally-generated income. Local health services often competed with other non-health services in budget allocation, which relied on the approval of the governor or mayor. In 1995, the Philippines created the Philippine Health Insurance Corporation (PhilHealth) (Obermann et al., 2006), a DOH-attached agency that manages the national social health insurance program which is financed through premium contributions from enrolled members, most of whom come from the formal sector. Through PhilHealth’s reimbursements for services rendered, many local health facilities received additional financing to sustain operations. In financing and budget allocation, decision space is therefore seen as wide (dark blue) for the central level, and also wide (dark blue) for the local elected official who makes the decision on budget allocations, but moderate (blue) for the local health officer who, in most cases, needs the approval of the elected official when it comes to the local health budget. Enabling conditions include the

institutional capacity of LGUs to raise revenues on their own, a well-funded central agency able to augment the lack of financial resources at local levels, and effective collaboration between the local elected official and health officer to be able to agree on allocating a substantial portion of the local budget in favor of health services. Hindering conditions include the concentration of financial resources at central levels despite devolution, and budget utilization that is driven mostly by political motivations (Capuno and Panganiban, 2012) instead of genuine health needs.

The following quote illustrates an example of how central support helps the LGUs meet their needs in terms of financing and budget allocation:

“I kept talking to the municipalities to fix their RHUs. Of course, they have their allotment from taxes collected by the national government. But the important thing is for LGUs to understand that their operations are sustainable. How? They spend PHP100,000 (USD2,000) from their own budget to upgrade the RHU and have it accredited by PhilHealth as a maternal delivery unit. PhilHealth will pay PHP8,000 (USD160) for every delivery. How many deliveries, 30 per month? They get back PHP240,000 (USD4,800) per month. And that’s just for maternal health. The RHUs do many other things that PhilHealth will pay for.” (Former Philippine secretary of health or “minister of health”)

Table 3a. Decision space at central and local levels for the functions of planning and financing and budget allocation (dark blue: wide decision space; blue: moderate; light blue: narrow). Enabling and hindering conditions are described.

Health sector functions	Decision space		Conditions	
Selected questions: <i>Are you able to...</i>	Central/Regional decision-makers	Local decision-makers	Enabling	Hindering
<p>Planning</p> <ul style="list-style-type: none"> • <i>Develop your own annual plans for health services at local levels?</i> • <i>Involve stakeholders in the planning process?</i> • <i>Implement what has been stated in these plans?</i> 	<p>The DOH sets the national objectives for health, provides the templates for the annual plans and organizes workshops to train the LGUs in preparing their “Investment Plan for Health” (IPH), which will indicate the: 1) local needs to be prioritized; and 2) resources (from central, local, or other sources) to support these needs. Although not legally-bound to submit an IPH, LGUs often participate in the IPH to benefit from the process.</p>	<p><u>Health officer:</u></p> <p>He/She prepares the IPH by relying on technical assistance from the DOH. Ideally, the content of the IPH should reflect the articulations of the “Local Health Board” (LHB), composed of stakeholder representatives who meet regularly to discuss health concerns in the locality.</p> <p><u>Elected official:</u></p> <p>The provincial governor or municipal/city mayor has the authority to convene the LHB and to approve the final version of the IPH. His/her support is essential for the LHB to be functional and for most of the IPH to be implemented.</p>	<ul style="list-style-type: none"> • A functional LHB that meets regularly, and where stakeholders actively advocate on behalf of the sectors they represent • 1) DOH staff at regional levels who are capable of influencing the LGUs to plan well; 2) local health officer who is skilled in strategic planning and able to work well with his/her elected official; 3) governor/mayor who is supportive of the plans; and 4) an opportunity for these decision-makers to meet, perform priority setting together, and co-create the plans 	<ul style="list-style-type: none"> • Weak monitoring of the implementation of plans • Lack of an accountability mechanism to incentivize execution of plans and penalize failure of implementation • Lack of sustainability of plans as local elected officials may change every three years when local elections are held (i.e. the new governor/mayor who wins may not support continuation of previous plans)

<p>Financing and budget allocation</p> <ul style="list-style-type: none"> • <i>Allocate the budget needed to support health services at local levels?</i> • <i>Create additional sources of financing to support these health services?</i> • <i>Spend the budget according to what it was intended for?</i> 	<p>Most taxes are collected by the central government, which then allocates the budget at national and local levels. Despite devolution, the DOH share in the government budget has increased substantially in recent years. The allotment that LGUs receive from the central government is often inadequate to support local health services, but the creation of PhilHealth, which administers the national social health insurance program, provided an additional financing mechanism to sustain local health services through reimbursements of services rendered.</p>	<p><u>Health officer:</u></p> <p>He/she proposes the annual budget for hospitals or primary care centers which may or may not be approved by the governor/mayor depending on availability of funds. The health officer may also decide on how to spend the additional income from PhilHealth reimbursements, but subject to the guidelines set by PhilHealth.</p>	<ul style="list-style-type: none"> • A high-income LGU (mostly the cities) with several sources of alternative financing (e.g. taxes from local businesses) that are adequate to support local health services • A health officer and elected official who are able to work well together and agree on allocating a substantial portion of the local budget for health services • A well-funded DOH and PhilHealth that is able to augment the financial inadequacy of low-income LGUs 	<ul style="list-style-type: none"> • A governor/mayor (or his/her other subordinates) who interferes in the work of his/her health officer in allocating and spending the budget for local health services, often because of political motivations • Concentration of the government budget at central and regional levels without substantially increasing the allotment at local levels, where most government health services have already been devolved
		<p><u>Elected Official:</u></p> <p>The governor/mayor has the final decision on how much to allocate in the local budget for health services, which may or may not be increased depending on current resources and priorities. He/she may also interfere in the work of his/her health officer and in the utilization of the additional income from PhilHealth reimbursements.</p>		

3.4.5. Resource management

Despite devolution, the DOH continued to purchase the supplies needed for most public health programs, and these supplies are given to the LGUs as augmentation for their health facilities. In 2007, the DOH also initiated the “Health Facilities Enhancement Program” (HFEP) which provided a mechanism for LGUs to request assistance in the construction or upgrade of health facilities through funds from the national government. The DOH also established a national rural physician deployment program called “Doctors to the Barrios” (Leonardia et al., 2012) one year after the introduction of devolution which enabled the national government to hire physicians who are then deployed as local health officers in resource-poor municipalities that lack them. Deployment has since expanded to include nurses, midwives, medical technologists, and dentists. Under this program, deployed HRH receive their salaries from the national government but perform their duties as local HRH serving the LGUs. In some LGUs that have adequate resources to hire their own HRH, the governor or mayor has the supervisory authority over local HRH. Therefore, decision space for resource management overall is seen as wide (dark blue) for the central level, while at local levels it is moderate (blue) in terms of managing facilities, equipment, and supplies. However, for HRH management at local levels, decision space is seen as narrow (light blue) for the local health officer but wide (dark blue) for the local elected official who, in practice, is in full control of the hiring and firing process (Table 3b).

The following quote illustrates an example of how the devolution of HRH management led to inadequate compensation for local HRH especially in resource-poor LGUs:

“Public health workers are at the mercy of the LGUs in terms of salaries and benefits. The compensation enacted by the national government should also be given to local health workers. But the implementation of the standard salary rates is not the same across the country because the LGUs always say that they are autonomous from the national government. So the health workers in municipalities, cities, and provinces where the benefits are being given are lucky. But the others who don’t get these benefits still need to lobby for their rights.” (Municipal health officer in a low-income island, 16 years in government)

On the other hand, the following quote illustrates the continuing significant intervention of the central government in providing for the various resources needed by the LGUs for better service delivery at local levels:

“There is creeping re-centralization in infrastructure, equipment, and human resource. The DOH also procures all commodities for most of the major public health programs. TB drugs and vaccines are entirely procured by the DOH and given to the LGUs, and the LGUs no longer need to buy anything. What else is devolved there? If you would look at the Philippine national health accounts, LGU expenditures for health are going down while the budget of the DOH is getting higher.” (Philippine undersecretary of health or “deputy minister,” 28 years in government)

Some of the enabling conditions include: a governor or mayor who considers local health services as an important component of his/her administration and is supportive of the needs of local HRH; a local health officer who has good management skills, refrains from partisan politics, and is actively involved in the association of health officers who are able to use their influence as a group to assert their rights and privileges; and a DOH and PhilHealth with adequate resources to augment resource needs at local levels. On the other hand, one hindering condition, particularly in areas that host deployed HRH as augmentation for their lack of staff, is the potential tension between the local mayor, who is the head of the LGU, and the deployed HRH, who is technically an employee of the DOH. In such a situation, conflict sometimes arises because of the ambivalence in the lines of authority when the agency responsible for managing the decentralized service is different from the agency providing the salary of the staff tasked to deliver that service. Other hindering conditions include: weakened leverage in negotiating prices of supplies and equipment when devolution obliged LGUs to negotiate individually with suppliers in procuring what is needed at local levels; weak accountability for LGUs when these do not provide the full range of salaries and benefits that local HRH legally deserve; and the lack of a stepladder for local health officers to pursue their career aspirations as the devolved structure limits their opportunities for promotion within the LGU where they are employed.

Table 3b. Decision space at central and local levels for the functions of resource management, further classified into facilities, equipment, and supplies and human resources for health (dark blue: wide decision space; blue: moderate; light blue: narrow). Enabling and hindering conditions are described.

Health sector functions	Decision space		Conditions	
Selected questions: <i>Are you able to...</i>	Central/Regional decision-makers	Local decision-makers	Enabling	Hindering
Resource management				
Facilities, equipment, and supplies <ul style="list-style-type: none"> • <i>Put up the appropriate types of health facilities in the areas where these are needed?</i> • <i>Maintain and upgrade these facilities?</i> • <i>Provide adequate equipment and supplies, including medicines, for these facilities to meet the needs of the population you serve?</i> 	<p>The DOH maintains tertiary care hospitals in every region and highly-specialized hospitals in the capital where patients from local health facilities can be referred for further management. The DOH and PhilHealth also have the regulatory power of licensing and accreditation, respectively, which ensures quality in health facilities. In 2007, the DOH established the “Health Facilities Enhancement Program” (HFEP) where resources from central levels are channeled towards the construction or upgrade of local health facilities (including equipment) owned by the LGUs. The DOH also continues to purchase supplies for many public health programs (e.g. vaccines, TB drugs, iron supplements for pregnant women, contraceptives, etc.). PhilHealth has also provided guidelines instructing LGUs to spend their PhilHealth income only for health-related expenses.</p>	<p><u>Health officer:</u></p> <p>He/She manages the hospitals (in provinces and cities) or the RHUs (in municipalities and cities). However, his/her success in maintaining these facilities relies largely on the budget approved by the governor/mayor. The HFEP provides an opportunity to address this gap.</p> <p><u>Elected official:</u></p> <p>The quality of local health facilities often reflects how much the governor/mayor prioritizes health. For example, the governor may view provincial and district hospitals as an unnecessary burden that provincial resources could not maintain and thus should be returned to the management of the DOH.</p>	<ul style="list-style-type: none"> • A health officer (a physician as prescribed by the law) who has adequate skills for effectively managing health facilities and programs and is innovative in finding ways to improve service provision (e.g. public-private partnerships for service delivery) • A governor/mayor who sees the hospital or RHU as an important component of his/her term of office that affects his/her chances of re-election • A well-funded DOH and PhilHealth able to augment the needs for facilities, equipment, and supplies by the LGUs, as well as the additional compensation needed for local HRH 	<ul style="list-style-type: none"> • Loss of leverage in bulk procurement as LGUs have to negotiate individually with suppliers to procure equipment and supplies potentially at higher prices • Less autonomy for some local hospitals after these were transferred to LGUs, and hospital administrative matters combined with other non-health services which all go through the bureaucracy in provincial governments (leading to reduced efficiency) • In some cases, poor coordination between the DOH and the LGUs in the provision of augmentation that may result in construction of incomplete health facilities, or facilities that have a faulty design, or equipment/medicines delivered to LGUs that do not match what is actually needed

<p>Human resources for health (HRH)</p> <ul style="list-style-type: none"> • <i>Hire (or fire) the appropriate types and number of HRH which your local population requires?</i> • <i>Compensate HRH commensurate to their workload and according to national standard rates?</i> • <i>Build the capacity of these personnel and support their career development?</i> 	<p>The DOH established deployment programs where the national government hires physicians, nurses, midwives, dentists, and medical technologists who are deployed to serve in local health facilities owned by LGUs that lack the capacity to hire them. The DOH is also a major capacity building provider for local health officers who are invited to participate in regular training activities for implementing public health programs. PhilHealth has also required that a portion of its reimbursements to LGUs be used as additional compensation for local HRH.</p>	<p><u>Health officer:</u></p> <p>Despite a law that standardized the salaries and benefits for HRH, some local health officers receive a lower compensation compared to others due to the lack of funds available for salaries especially in resource-poor LGUs. The differences in compensation has been identified as a cause of low morale among affected health officers. In some cases, health officers may also be unjustly sidelined or placed on probation by a newly-elected governor/mayor who wishes to place somebody else in the position.</p>	<ul style="list-style-type: none"> • Local health officers who are non-partisan during local elections and, thus, insulate themselves from possible political harassment whenever there is a change in the governor/mayor • Strongly-united associations of local health officers that have the leverage to engage the DOH, PhilHealth, and elected local officials to assert their rights and privileges • A governor/mayor who values the important role played by HRH and thus promotes their rights and privileges • Adequate capacities at central level to hire additional HRH to be deployed to meet the needs at local levels, and also to augment the compensation of local HRH already hired by LGUs unable to provide their full salaries 	<ul style="list-style-type: none"> • Inclusion of local health services, which is labor-intensive, into auditing regulations that limit hiring of personnel • Weak accountability for LGUs that do not provide the full compensation and benefits that local HRH legally deserve • Lack of a seamless career stepladder for local health officers whose careers are mostly confined within the LGUs that hire them (unlike in a centralized system where they may be seamlessly promoted to positions at regional or national levels) • In some cases, tension between the DOH and the LGUs for control over health officers who are invited to participate in capacity building initiatives provided by the DOH but who are administratively under the LGUs that control their ability to participate
		<p><u>Elected official:</u></p> <p>The governor/mayor makes the decision in hiring and firing. In some cases, hiring is based not on qualifications but on political patronage. Moreover, hiring of additional HRH to meet the demands of an increasing population is not always possible because of a limit imposed by the government's auditing body on the proportion of the local budget that can be used for salaries. This cap has resulted in the hiring of many contractual HRH without security of tenure.</p>		

3.4.6. Program implementation and service delivery

Devolution provided opportunities for LGUs to develop and implement local health programs that address their own unique needs, especially in settings with a culturally-sensitive context or where access to care is geographically-challenging. However, most LGUs still continued to rely on the DOH for technical assistance in the implementation of many public health programs (e.g. Expanded Program on Immunization, Family Planning Program, TB Control Program, Environmental Health Program, etc.), which are determined and planned at the national or central level and cascaded down through the DOH regional offices for implementation by the LGUs at local levels. Moreover, health facilities located in the same area may have limited means of effective cooperation between one another when these facilities are owned by different LGUs and only artificially linked through informal networks. In this context, decision space is viewed as wide (dark blue) for the central level and moderate (blue) at local levels for both the health officer and the elected official (Table 3c).

The quote below illustrates an example from one province on how devolution has allowed the LGU to deliver health services that are suitable to the local context:

“We are indigenous peoples, and we have practices that are culturally-appropriate but may be frowned upon at the national level. While we advocate for facility-based deliveries, in geographically-isolated areas, mothers deliver in the house. When I was mayor, we provided training for the husbands because, in our culture, the person who delivers, aside from the midwife, is the traditional village birth attendant or the husband. So at least there is basic training for the husbands. That was our innovation. We also designed our local hospitals so that there are areas where the patient’s family can stay to have an atmosphere like home.” (Former provincial governor and municipal mayor, 26 years in government)

Enabling conditions for decentralization to be effective include opportunities for innovation for local decision-makers to improve service delivery, as well as strong leadership on the part of central decision-makers to provide continuing technical guidance to the local levels for program implementation. Hindering conditions include a weak mechanism to ensure fidelity of program implementation at local levels (Espino et al., 2004), and weak interlinking between local health facilities

owned by different LGUs but nevertheless located in the same catchment area, which has reduced opportunities for resource-sharing and a seamless patient referral scheme.

3.4.7. Monitoring and data management

The Field Health Services Information System (FHSIS) (Robey, 1990), which is managed by the DOH, contains the official health data of the Philippine government. With devolution, the seamless flow of data from local levels to regional and central levels to complete the FHSIS has become more challenging, especially with the loss of direct administration by the DOH over data reporting by LGUs. Nevertheless, efforts have been initiated to help facilitate data management by promoting the use of different electronic tools for data transmission from local levels. Thus, decision space for monitoring and data management for the central level is seen as moderate (blue), while decision space is wide (dark blue) for the health officer who controls data collection at local levels and narrow (light blue) for the elected official who has little involvement in performing this function.

The following quote is an illustration of how devolution has made it more difficult to harmonize the collection and pooling of health-related data at the national/central level:

“We try to publish the FHSIS final report every year. We are having a bit of difficulty, especially in some areas, in collecting the data. But with all the support that we are providing to the LGUs, it is easier to make them obey and submit their reports to us. Previously, we tried e-FHSIS and we gave computers to the LGUs, but they were not able to encode the data, and there were problems with connectivity. The final FHSIS report is usually 2-3 years delayed because it takes a long time to collect the data from all these LGUs.” (DOH regional director, 34 years in government)

Table 3c. Decision space at central and local levels for the functions of program implementation and service delivery and monitoring and data management (dark blue: wide decision space; blue: moderate; light blue: narrow). Enabling and hindering conditions are described.

Health sector functions	Decision space		Conditions	
	Central/Regional decision-makers	Local decision-makers	Enabling	Hindering
<p>Selected questions: <i>Are you able to...</i></p>				
<p>Program implementation and service delivery</p> <ul style="list-style-type: none"> • <i>Implement health programs that are mandated by the national government?</i> • <i>Provide your own unique health programs or services that address local priorities and consider the local context?</i> • <i>Provide local health services that meet the standards for quality?</i> 	<p>The DOH sets the national policies, technical guidelines, and standards for service delivery. For example, the overall strategic plans for many disease control programs (e.g. TB, malaria, non-communicable diseases, etc.) are determined by the DOH at the central level and cascaded down to the LGUs through its regional offices. Most of the health programs implemented at local levels are DOH-determined programs.</p>	<p><u>Health officer:</u> Depending on his/her capacity for innovation, the health officer may conceptualize and implement unique programs that address local health needs.</p> <p><u>Elected official:</u> Depending on his/her interest in health, the governor/mayor may or may not be actively-involved in the implementation of health programs. Nevertheless, his/her support is critical for successful implementation of any program.</p>	<ul style="list-style-type: none"> • Opportunities for innovation in service delivery that consider, for instance, the cultural sensitivities of particular communities, or the challenging landscape that affects access to care • Strong leadership by the DOH to provide technical assistance to the LGUs for implementing national public health programs and in dealing with health issues that are beyond the capacity of these LGUs (e.g. protocols during outbreaks or health emergencies, guidelines for introducing a new vaccine, etc.) 	<ul style="list-style-type: none"> • Weak mechanism for ensuring that program implementation at local levels is faithful to the standards set at the central level • Weak interlinking for resource-sharing and seamless patient referrals between local health facilities owned by different LGUs but located in the same catchment area
<p>Monitoring and data management</p> <ul style="list-style-type: none"> • <i>Choose the indicators for monitoring the performance of the health system at local levels?</i> • <i>Collect these indicators in an accurate and timely manner?</i> • <i>Perform data management efficiently and electronically?</i> 	<p>The DOH monitors a list of indicators through the “Field Health Service Information System” (FHSIS) which is published annually, although often 2-3 years delayed due to the difficulty of completing the data coming from local levels. Efforts have been initiated at central levels to make data management more efficient by making LGUs adopt electronic tools for data collection and submission to the DOH.</p>	<p><u>Health officer:</u> He/she is responsible for ensuring that all relevant health indicators requested by the DOH are collected by his/her staff and submitted to the DOH, which compiles the data. There is, however, no strict penalty for late submission of reports, or for submission of inaccurate data.</p> <p><u>Elected official:</u> The governor/mayor is often not involved in monitoring and data management and fully delegates this function to his/her health officer.</p>	<ul style="list-style-type: none"> • Standardization at central levels of a list of relevant health indicators for strict collection at local levels • Availability of electronic tools for performing monitoring and data management more efficiently 	<ul style="list-style-type: none"> • Fragmented data monitoring and management system with weak central control for timely collection of accurate data at local levels • Use of multiple electronic tools for data collection by different LGUs, resulting in lack of harmonization of data transmission for consolidation at the central level

The conditions that either enable or hinder decentralization to improve the health system are several, and our exploration of decision-making within the five health sector functions provided a more organized way of capturing these conditions. Using the image of decentralization and centralization as a movement between two opposite poles (Mills et al., 1990), we have further synthesized these conditions in a conceptual diagram that mapped where these conditions should be considered in terms of performing the functions, and in terms of decision-making at central and at local levels (Figure 3d). In this figure, we have also included some of the conditions in the broader context where decentralization is placed based on the experience in the Philippines. Some of these contextual conditions include an enabling political environment and a law that makes decentralization difficult to reverse, the supporting role played by multi-lateral/bilateral development organizations that provide technical assistance in implementing devolution, and the increasing population which, particularly in the Philippines, calls for a more efficient delivery of health care at local levels.

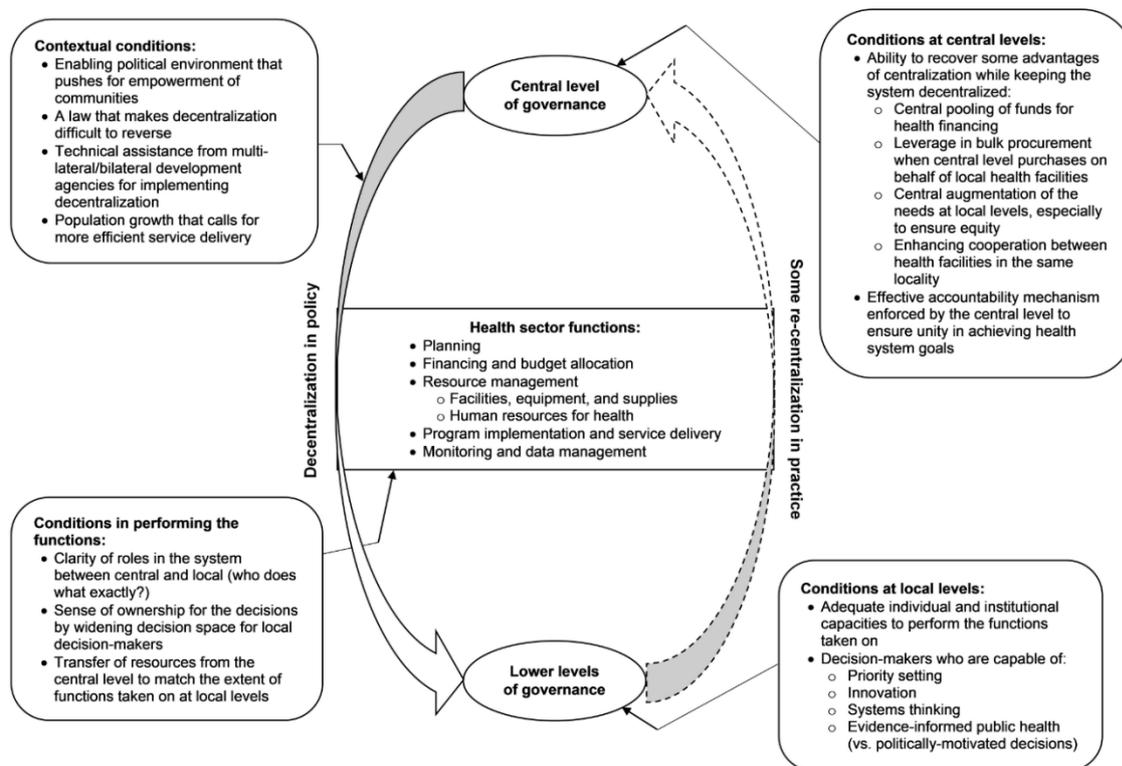


Figure 3d. A conceptual diagram inspired by the image of decentralization and centralization as movements between two opposite poles. Various conditions to be considered for decentralization to be effective in improving the health system are proposed.

Conditions related to the performance of the decentralized functions include clarity of roles for the various decision-makers in the system, a sense of ownership for the decisions they make, and the transfer of sufficient resources to support performance of these functions at local levels. Conditions at local levels include adequate capacities which, at the individual level, should include priority setting, innovation, systems thinking, and evidence-informed public health. Lastly, conditions at central levels include the ability to enforce an effective accountability mechanism, and to recover some of the advantages of centralization, such as in pooling of funds for more efficient financing, gaining leverage through bulk procurement of supplies on behalf of local health facilities nationwide, central augmentation of the needs at local levels especially to ensure equity, and enhancing cooperation between local health facilities in the same locality. The experience of health sector devolution in the Philippines suggests that decentralization can be implemented in policy but, in practice, some forms of re-centralization take place to make up for the inadequacies at local levels that took on the functions. Thus, one of the challenges in devolving the health sector is identifying the right combination of decentralized and centralized functions, even as the health system remains broadly decentralized, in order to achieve optimal health system performance.

3.5. Discussion

This paper aimed to determine the conditions that potentially make decentralization effective in improving the health system by analyzing the experience of devolving government health services in the Philippines. Our analysis of qualitative data has allowed us to explore the variety of factors and processes in the system, which we have called conditions, that play a role in enabling (or hindering) the effectiveness of decentralization. Rather than quantify these conditions through the calculation of composite indices, we have instead shown the feasibility of obtaining a more nuanced and contextualized understanding of decision-making when these conditions play out in particular situations, which also provides specific opportunities for policy interventions. For example, rather than make a general statement that accountability is weak in the health sector function of planning, the

qualitative approach has allowed us to explore practical ways to improve decision-making in this function. One concrete policy intervention for the Philippines is the monitoring of the execution of these plans when the central level provides incentives to LGUs for satisfactory accomplishment and imposes penalties for failure in implementation.

The experience of devolution in the Philippines is consistent with the idea that decision space is closely linked to the concept of control. Widening decision space in practice means that control over health services is granted to one group of decision-makers over another. At local levels, decision-making in most functions is concentrated with the elected local official, a politician who may or may not be supportive of public health goals, rather than the local health officer (almost always a physician) who holds the technical and administrative competence for health services. The politicization of health has been blamed by all decision-makers in this study as a hindering condition commonly experienced across most health sector functions, often in the function of managing HRH. How to address an issue as serious as this in the Philippines is not easy as politics is unavoidable in healthcare, although some approaches have been described by the decision-makers themselves that include, for example: building the capacity of the local elected official to understand that health must be a priority; ensuring that the local health officer refrains from partisan local politics; and making the national government (i.e. DOH and PhilHealth) use its leverage over LGUs to promote the rights and privileges of local HRH.

Furthermore, granting the decision space in favor of decision-makers at local levels through decentralization or devolution does not necessarily imply that it is best for the central level to relinquish entirely its control over decision-making. The goal, rather, is to identify the optimal combination of decentralized and centralized functions. Some of the recent studies, such as the one on Fiji (Mohammed et al., 2015), have argued that the failure to reap the full benefits of decentralization for the health sector was in part due to the lack of a completely wide decision space at local levels in spite of decentralization in policy. Similar observations on this lack of decision space at local levels despite decentralization has been noted in the management of county health facilities in Kenya (Barasa et al., 2017; Tsofa et al., 2017b), or the control over HRH by district health managers in Uganda (Alonso-Garbayo et al., 2017), or most of the health sector functions in selected districts in India (Seshadri et al., 2016). In the case of

the Philippines where local decision-makers are ill-prepared or lack the capacity to fulfill their health sector functions well, having some wide decision space for the central decision-maker may actually be a sign that the central level is intervening in ways that assist the local levels. Our analysis indicates that, with the exception of high-income LGUs (e.g. in highly-urbanized cities), many health sector functions in the Philippines are performed by local decision-makers with significant augmentation from the central level, without which the health system would most likely have been in a worse situation. Thus, contemplating decentralization for the health sector in any setting should seriously consider the readiness of the lower levels of administration to assume the new functions, as well as analyze the evolving role that the central level (e.g. Ministry of Health, or DOH and PhilHealth in the Philippines) has to play as it learns to implement decentralization and shepherds the health system as a whole. Certainly, some form of coordination must be maintained at the central level no matter how extensive the form of decentralization (Wyss and Lorenz, 2000), and some tradeoffs must be negotiated for clarity of roles among decision-makers at different levels of the health system (Tsofa et al., 2017a). The Philippines is an example of how the central level could use its regulatory power and the augmentation it provides as leverage to build capacities at local levels and also make them accountable for their decisions.

3.6. Conclusions

In summary, several conditions that enable or hinder the effectiveness of decentralization for the health sector have been described in this paper by analyzing the perspectives on decision-making in five functions. For planning, these conditions include a multi-stakeholder approach, being strategic, and monitoring execution. For financing and budget allocation, these include capacities to raise revenues for health services at local levels, more evidence-informed and less politically-motivated funding decisions, and effective central pooling of funds for augmenting financing needs at local levels. For resource management, these include having a central level capable of providing resource needs at local levels by using the leverage in bulk procurement and deploying the HRH needed in areas that lack them,

as well as having a good working relationship between the local health officer and the elected official. For program implementation and service delivery, these include promoting innovation at local levels while the central level ensures fidelity to national objectives and likewise promotes cooperation among local health facilities. Finally, for monitoring and data management, these include the central level being capable of ensuring that data collection from local levels is performed in a timely and accurate manner despite the system remaining devolved. One important condition is the role maintained by the central decision-maker especially in assisting local levels unable to perform their functions well. It will be useful for policy to explore the optimal balance of decentralized and centralized functions, even as the system remains decentralized overall, and focus on the conditions that have to be in place in order for decentralization to be effective in improving the health system.

The experience of devolution in the Philippines highlights the reality that decentralization is a long and complex journey and not an automatic solution for enhancing health system performance. Particularly for the Philippines, this means that current initiatives to expand decentralization even further by changing the structure of government from a republican into a federal form must be very carefully re-examined, especially in terms of how such a change would, once again, impact the effectiveness of health service delivery at local levels. Our findings also provide an opportunity for comparison with the experience in other countries that have adopted decentralization and assess similarities (or differences) in lessons learned. Any country that contemplates whatever form of decentralization for its health sector must recognize that the presumed benefits do not happen overnight, and that expectations must be tempered by the challenges of implementing it on the ground.

3.7. Acknowledgments

We thank the decision-makers who participated in this study and the Ateneo de Zamboanga University School of Medicine (AdZU-SOM) for providing logistical assistance during some of the fieldwork in the island of Mindanao.

3.8. Supplementary material

Analyzing the Effectiveness of Decentralization in Improving the Health Sector with a Focus on the Philippines. Key Informant Interview (KII) Guide. (PDF)

Key Informant Interview (KII) Guide

Introduction		
<ul style="list-style-type: none"> • Introduce yourself • Say thank you for his/her availability for the interview • Provide an overview of the research • Go through the informed consent form (ICF) • Have the ICF signed; one copy goes to the informant • Ask the interviewer if he/she has any other questions • Begin audio recording • Start the interview 		
Date Today:	Time started:	Interviewer: Harvy Liwanag
Informant's profile		Informant's code:
Name:	Sex:	Age:
Institution:	Address:	No. of years working in the public health sector:
Level of involvement in decision-making in the public health sector:		
<input type="checkbox"/> National level <input type="checkbox"/> <i>Department of Health</i> <input type="checkbox"/> <i>Other:</i>		
<input type="checkbox"/> Regional level <input type="checkbox"/> <i>Department of Health</i> <input type="checkbox"/> <i>Other:</i>		
<input type="checkbox"/> Provincial level <input type="checkbox"/> <i>Governor</i> <input type="checkbox"/> <i>Health officer</i> <input type="checkbox"/> <i>Other:</i>		
<input type="checkbox"/> Municipal level <input type="checkbox"/> City level <input type="checkbox"/> <i>Mayor</i> <input type="checkbox"/> <i>Health Officer</i> <input type="checkbox"/> <i>Other:</i>		
<input type="checkbox"/> <i>Other:</i>		

Knowledge on devolution
<p>1. Would you consider the implementation of devolution of health services as one of the major challenges of the Philippine health sector?</p> <p><input type="checkbox"/> Yes → Please explain why.</p> <p><input type="checkbox"/> No → Please explain why not, and tell me what you consider instead as a major challenge for the health sector.</p>
<p>2. What does devolution mean to you?</p> <p><i>Prompt: After an answer has been given, provide a general definition of devolution (refer to Bossert 2011).</i></p>
<p>3. In your opinion, what do you think was the rationale behind the decision to implement devolution of health services in the Philippines in 1991?</p>
Personal experience with devolution (if applicable)
<p>4. Could you please tell me more about any personal experience during the shift of the governance of health services from a centralized to a devolved arrangement in the early 1990s?</p>
Perceptions on the impact of devolution
<p>5. Based on your experience working in the health sector, what were the <u>positive effects</u> of devolution of health services to the Philippine health sector?</p>
<p>6. Based on your experience working in the health sector, what were the <u>negative effects</u> of devolution of health services to the Philippine health sector?</p>
<p>7. In your opinion, <u>overall</u>, did devolution strengthen or weaken the Philippine health system? Please explain why.</p>
Opinion on the future of devolution
<p>8. In your opinion, should the current set-up of devolved governance of health services be maintained?</p> <p><input type="checkbox"/> Yes → Please explain why.</p> <p><input type="checkbox"/> No → Please explain why not and tell me what changes you would recommend.</p> <p><input type="checkbox"/> Don't know → Please tell me why.</p>
<p><i>Now, let me ask questions related to how you make decisions in your work in the public health sector. . .</i></p>
Strategic and operational planning
<p><i>Decision Space</i></p>

9. Strategic and operational planning refers to, as the term suggests, future planning for health services at local levels. In your current (or previous) work, could you please tell me more about examples of decisions that you are making within the scope of strategic and operational planning?

Probe: Are you able to

- *Prepare a local plan for health services?*
- *Perform priority setting (e.g. determine local priorities that may be different from national priorities?)*
- *Undertake monitoring and evaluation that may include indicators different from those set by the national government?*
- *Others?*

10. In each of the examples that you described, would you say that you are able to make decisions comfortably well? Or are you having difficulties in making such decisions and in executing those decisions? Please explain further.

Probe: Ask informant to classify his/her decision space for this function into none, narrow, moderate, or wide.

Probe: What changes in decision space are necessary for this function?

Accountability

11. Could you please tell me what accountability means for you?

Prompt: After an answer is given, provide a general definition of accountability (refer to Bossert 2011).

12. In your opinion, do you think that the decisions you are making related to strategic and operational planning are considered accountable? Please explain further.

Probe: If not accountable, ask informant to elaborate on how to make decision-making more accountable.

13. Could you please tell me what transparency means for you?

Prompt: After an answer is given, provide a general definition of transparency.

14. In your opinion, do you think that the decisions you are making related to strategic and operational planning are considered transparent? Please explain further.

Probe: Can the public easily access information related to strategic and operational planning?

Probe: If not transparent, ask informant to elaborate on how to make decision-making more transparent.

15. Are you able to ensure an inclusive approach to decision-making? How are stakeholders able to participate in strategic and operational planning?

Probe: If an inclusive approach is not adequate, ask the informant to elaborate on how to make it adequate.

16. In your opinion, who are the (3) three most important actors or stakeholders who should be making decisions regarding strategic and operational planning for health services at local levels? Please explain why.

Probe: Which institution should take the lead in coordinating such decision-making?

Capacity

17. Could you please tell me what capacity means for you?

Prompt: After an answer has been given, provide a general definition of capacity (refer to Bossert 2011).

18. In your personal assessment, would you say that you have an adequate capacity for making decisions related to strategic and operational planning? Please explain further.

19. What do you think could be strategies to build capacity for decision-making in strategic an operational planning for health services in the Philippines?

Probe: Who or which agency should be implementing the capacity building strategies suggested?

Health budgeting or financing

Decision Space

20. Health budgeting or financing refers to decisions on resources to be allocated for health services at local levels, including which funds should come from central sources and which funds should come from local sources. In your current (or previous) work, could you please tell me more about examples of decisions that you are making within the scope of health budgeting or financing?

Probe: Are you able to

- *Determine the local budget for health?*
- *Monitor how the local budget for health is being spent?*
- *Raise local taxes to fund local health services?*
- *Charge fees for the use of health services?*
- *Introduce new and innovative ways for local revenue generation?*
- *Decide how to spend the funds coming from the central government (e.g. PhilHealth, DOH)?*
- *Others?*

21. In each of the examples that you described, would you say that you are able to make these decisions comfortably well? Or are you having difficulties in making such decisions and in executing those decisions? Please explain further.

Probe: Ask informant to classify his/her decision space for this function into none, narrow, moderate, or wide.

Probe: What changes in decision space, if any, are necessary for this function?

Accountability

22. In your opinion, do you think that the decisions you are making related to health budgeting or financing are considered accountable? Please explain further.

Probe: If not accountable, ask informant to elaborate on how to make decision-making more accountable.

23. In your opinion, do you think that the decisions you are making related to health budgeting or financing are considered transparent? Please explain further.

Probe: Can the public easily access information related to health budgeting or financing?

Probe: If not transparent, ask informant to elaborate on how to make decision-making more transparent.

24. Are you able to ensure an inclusive approach to decision-making? How are stakeholders able to participate in health budgeting or financing?

Probe: If an inclusive approach is not adequate, ask the informant to elaborate on how to make it adequate.

25. In your opinion, who are the (3) three most important actors or stakeholders who should be making decisions regarding health budgeting or financing at local levels? Please explain why.

Probe: Which institution should take the lead in coordinating such decision-making?

Capacity

26. In your personal assessment, would you say that you have an adequate capacity for making decisions related to health budgeting or financing? Please explain further.

27. What do you think could be strategies to build capacity for decision-making in health budgeting or financing in the Philippines?

Probe: Who or which agency should be implementing the capacity building strategies suggested?

Human resources for health (HRH) management

Decision Space

28. This health sector function refers to decisions related to the management of human resources for health at local levels, including hiring and firing of personnel, among others. In your current (or previous) work, could you please tell me more about examples of decisions that you are making within the scope of human resources for health management?

Probe: Are you able to

- *Change the number and types of HRH needed to be hired at the local level?*
- *Create new job positions to meet the needs for HRH at the local level?*
- *Recruit or hire the person you want for the HRH position?*
- *Supervise or have authority over your local HRH?*
- *Evaluate the performance of your local HRH?*
- *Promote, discipline, transfer, replace, or fire (and the like) the local HRH when necessary?*
- *Provide incentives to recognize good work of local HRH?*
- *Others?*

29. In each of the examples that you described, would you say that you are able to make these decisions comfortably well? Or are you having difficulties in making such decisions and in executing those decisions? Please explain further.

Probe: Ask informant to classify his/her decision space for this function into none, narrow, moderate, or wide.

Probe: What changes in decision space, if any, are necessary for this function?

Accountability

30. In your opinion, do you think that the decisions you are making related to HRH management are considered accountable? Please explain further.

Probe: If not accountable, ask informant to elaborate on how to make decision-making more accountable.

31. In your opinion, do you think that the decisions related to HRH management are considered transparent? Please explain further.

Probe: Can the public easily access information related to HRH management?

Probe: If not transparent, ask informant to elaborate on how to make decision-making more transparent.

32. Are you able to ensure an inclusive approach to decision-making? How are stakeholders able to participate in HRH management?

Probe: If an inclusive approach is not adequate, ask the informant to elaborate on how to make it adequate.

<p>33. In your opinion, who are the <u>(3) three most important actors or stakeholders</u> who should be making decisions regarding HRH management at local levels? Please explain why. <i>Probe: Which institution should take the lead in coordinating such decision-making?</i></p>
<p><i>Capacity</i></p>
<p>34. In your personal assessment, would you say that you have an adequate capacity for making decisions related to HRH management? Please explain further.</p>
<p>35. What do you think could be strategies to build capacity for decision-making in HRH management in the Philippines? <i>Probe: Who or which agency should be implementing the capacity building strategies suggested?</i></p>
<p>Service organization or delivery</p>
<p><i>Decision Space</i></p>
<p>36. Simply put, service organization or delivery refers to decisions related to the implementation of health programs and services at local levels. In your current (or previous) work, could you please tell me more about examples of decisions that you are making within the scope of service organization or delivery? <i>Probe: Are you able to</i></p> <ul style="list-style-type: none"> • <i>Provide local health programs or public health measures that are new or different from those already being provided or those recommended by the national government?</i> • <i>Decide which types of health facilities are needed in the locality? And when to build, renovate, or close (and the like) local health facilities?</i> • <i>Decide which supplies (e.g. drugs, equipment, etc.) to buy, at which quantities, and by which mechanism to buy these?</i> • <i>Engage the private sector in the delivery of some local health services?</i> • <i>Others?</i>
<p>37. In each of the examples that you described, would you say that you are able to make these decisions comfortably well? Or are you having difficulties in making such decisions <u>and</u> in executing those decisions? Please explain further. <i>Probe: Ask informant to classify his/her decision space for this function into none, narrow, moderate, or wide.</i> <i>Probe: What changes in decision space, if any, are necessary for this function?</i></p>
<p><i>Accountability</i></p>
<p>38. In your opinion, do you think that the decisions you are making related to service organization and delivery are considered <u>accountable</u>? Please explain further. <i>Probe: If not accountable, ask informant to elaborate on how to make decision-making more accountable.</i></p>
<p>39. In your opinion, do you think that the decisions related to service organization and delivery are considered <u>transparent</u>? Please explain further. <i>Probe: Can the public easily access information related to service organization and delivery?</i> <i>Probe: If not transparent, ask informant to elaborate on how to make decision-making more transparent.</i></p>
<p>40. Are you able to ensure <u>an inclusive approach</u> to decision-making? How are <u>stakeholders able to participate</u> in service organization and delivery? <i>Probe: If an inclusive approach is not adequate, ask the informant to elaborate on how to make it adequate.</i></p>

41. In your opinion, who are the (3) three most important actors or stakeholders who should be making decisions regarding service organization and delivery at local levels? Please explain why.
Probe: Which institution should take the lead in coordinating such decision-making?

Capacity

42. In your personal assessment, would you say that you have an adequate capacity for making decisions related to service organization and delivery? Please explain further.

43. What do you think could be strategies to build capacity for decision-making in HRH management in the Philippines?
Probe: Who or which agency should be implementing the capacity building strategies suggested?

Other dimensions that help improve the implementation of devolution

44. In your opinion, aside from decision-making, accountability, and capacity, what else must be considered, if any, to improve health system performance in the context of devolution?

45. *Is there anything more that you would like to add or do you have any other comments about devolution in the Philippines which we have not yet discussed?*

Time finished:

Closing

- Stop the audio recording
- Describe next steps
- Say thank you
- Give a token of appreciation

4. Optimising decentralisation for the health sector by exploring the synergy of decision space, capacity and accountability: Insights from the Philippines

Harvy Joy Liwanag^{1,2,3*} and Kaspar Wyss^{1,2}

¹ Swiss Tropical and Public Health Institute, Basel, Switzerland

² University of Basel, Basel, Switzerland

³ Ateneo de Manila University School of Medicine and Public Health, Metro Manila, Philippines

* Corresponding author at:

harvy.liwanag@swisstph.ch

Swiss Tropical and Public Health Institute, Socinstrasse 57, P.O. Box CH-4002 Basel, Switzerland

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4.1. Abstract

Background

Several studies on decentralization have used the “decision space” approach to assess the breadth of space made available to decision-makers at lower levels of the health system. However, in order to better understand how decentralization becomes effective for the health sector, analysis should go beyond assessing decision space and include the dimensions of capacity and accountability. Building on Bossert’s earlier work on the synergy of these dimensions, we analyzed decision-making in the Philippines where governmental health services have been devolved to local governments since 1992.

Methods

Using a qualitative research design, we interviewed 27 key decision-makers at different levels of the Philippine health system and who represent various local settings. We explored their perspectives on decision space, capacities, and accountability in the health sector functions of planning, financing and budget allocation, program implementation and service delivery, management of facilities, equipment and supplies, health workforce management, and data monitoring and utilization. Analysis followed the Framework Method.

Results

Across all functions, decision space for local decision-makers was assessed to be moderate or narrow despite 25 years of devolution. To improve decision-making in these functions, adjustments in local capacities should include, at individual levels, skills for strategic planning, management, priority setting, evidence-informed policymaking, and innovation in service delivery. At institutional levels, these desired capacities should include having a multi-stakeholder approach, generating revenues from local sources, partnering with the private sector, and facilitating cooperation between local health facilities. On the other hand, adjustments in accountability should focus on the various mechanisms that can be enforced by the central level, not only to build the desired capacities and augment the inadequacies at local levels, but also to incentivize success and regulate failure by the local governments in performing the functions transferred to them.

Conclusion

To optimize decentralization for the health sector, widening decision spaces for local decision-makers must be accompanied by the corresponding adjustments in capacities and accountability for promoting good decision-making at lower levels in the decentralized functions. Analyzing the health system through the lens of this synergy is useful for exploring concrete policy adjustments in the Philippines and also in other settings.

4.2. Background

Decentralization could be defined as the transfer of decision-making authority from higher to lower levels of administration (Mills et al., 1990; Saltman et al., 2007). In the Philippines, one major motivation for pursuing decentralization, not only of local health services but also of other services (e.g. agriculture, infrastructure, social welfare, tourism, etc.), was to empower communities to address their own needs by bringing decision-making closer to them (Atienza, 2004). The Philippines decentralized government health services in 1992 through devolution with the implementation of the Local Government Code (“Local Government Code of 1991,” 1991). At that time, the Philippine Department of Health (DOH), the ministry primarily responsible for the government health sector nationwide, split the administration of health services into the autonomous local governments across the archipelago, currently numbering into 81 provinces, with 1,490 municipalities and 145 cities within these provinces. Under devolution, the national government through the DOH continues to set the national objectives and policies for the health system while implementation and delivery of health services at local levels is the responsibility of the local governments. More specifically, the provinces assumed responsibility for provincial and district hospitals that provide secondary-tertiary care, while municipalities within these provinces became responsible for the Rural Health Units (RHUs) that deliver primary care services. Cities, on the other hand, may own both hospitals and RHUs and provide both levels of care. After 25 years of devolution, opinions about its impact to local health services continue to vary (Atienza, 2004; Capuno and Solon, 1996; Grundy et al., 2003; Langran, 2011; Obermann et al., 2008), and there

have been attempts by various political groups to amend the law in order to, on the one hand, reverse devolution and re-centralize health services once more (Baquero, 2018; Shimomura, 2004) or, on the other hand, expand decentralization even further by changing the current structure of government from a unitary republic into a federal form (Calibo, 2018).

This ambivalence in the Philippines on whether or not to decentralize is not unique, and even recent systematic reviews that examined decentralization in several countries have concluded that the evidence for its effectiveness in improving health system performance is mixed (Casey, 2018; Cobos Muñoz et al., 2017; Dwicaksono and Fox, 2018; Sumah et al., 2016; Zon et al., 2017). The dearth in the evidence is partly due to the difficulty in measuring health sector decentralization itself, indeed a complex process which presents in various shapes and sizes, such as devolution, deconcentration, or delegation (Mills, 1994; Mills et al., 1990; Rondinelli, 1983), the boundaries of which may not always be clear in any given context. It is therefore not easy to compare decentralization of health services between different countries or settings without first considering what health sector functions exactly are decentralized, who are the decision-makers transferring and assuming such functions, and at which levels of the health system is decision-making made. Nevertheless, we have previously argued that the complexity of decentralization is not an excuse to leave it unexamined, especially when it continues to be viewed as a strategy for health sector reform (Liwanağ and Wyss, 2017). The tool that has emerged as useful for analysis is the “decision space” approach developed by Bossert (Bossert, 1998), which examines the breadth of space (i.e. “wide,” “moderate,” or “narrow”) within which decision-makers are able to make decisions for the functions they have taken on because of decentralization. Decision space has been used to analyze health sector decentralization in several countries (Roman et al., 2017), such as in Ghana and Zambia (Bossert and Beauvais, 2002), Colombia and Chile (T. J. Bossert et al., 2003), Pakistan (Bossert et al., 2015; Bossert and Mitchell, 2011), Fiji (Mohammed et al., 2015), India (Seshadri et al., 2016), Uganda (Alonso-Garbayo et al., 2017; Bossert and Beauvais, 2002), Kenya (Barasa et al., 2017; McCollum et al., 2018c; Tsofa et al., 2017b, 2017a), Tanzania (Kigume et al., 2018), and the Philippines (Bossert and Beauvais, 2002). We have also previously reported on the conditions that make

decentralization effective in improving the health system in the Philippines based on the decision space approach (Liwanao and Wyss, 2018).

4.2.1. Decision space, capacity, and accountability

Many studies that draw from the decision space approach mostly focus on assessing the difference between *de jure* and *de facto* decision spaces, and often reach the conclusion that *de facto* decision space at lower levels remained narrow or moderate despite decentralization in policy (*de jure*), which should have granted a wider space. Thus, many studies make the recommendation to widen *de facto* decision space further in order to truly empower decision-makers at lower levels of the system. However, two papers on Pakistan (Bossert et al., 2015; Bossert and Mitchell, 2011) stand out because these went beyond decision space and explored its synergy with the dimensions of capacity and accountability. Bossert *et al.* have proposed to visualize the synergy of these dimensions like three corners of a triangular model whose complementary interactions lead to improved service delivery (Bossert and Mitchell, 2011), and have provided a statistical justification for this synergy by assessing improvements in outcomes of the maternal and child health program after building the capacities of local decision-makers in several districts in Pakistan (Bossert et al., 2015).

Indeed, capacity building is a favorite catchphrase in health systems strengthening. Previous studies have already shown a positive link between health system performance and individual (Pappaioanou et al., 2003) and institutional capacities (Scutchfield et al., 2004). Capacity building can also be an overused term that means no more than mere training, unless it is accompanied by a serious attempt to map the capacity components to assess any impact to capacity enhancement (LaFond et al., 2002). It may also be viewed to include not only the capacitation of individuals and organizations but also the enabling environment that nurtures it (Lansang and Dennis, 2004). Thus, beyond individual and organizational capacities, the concept of systemic capacity building has been promoted to put in place structures and processes that support optimal decision-making through time despite changes in personnel or interference from the outside (Potter and Brough, 2004).

Like capacity building, accountability is also a buzzword in health systems, albeit even less tangible a concept than the former. It may be understood to have two general elements: first, providing an account (i.e. information about the situation); and secondly, holding into account (i.e. a system of rewards and sanctions for performance) (Smith et al., 2009). But the more important questions are: who is accountable to who, and how is this accountability enforced? Understanding accountability therefore necessitates identifying the linkages between system actors and organizations where, on the one hand, too few connections between decision-makers suggest less control that can enable problems like corruption. On the other hand, too many connections may suggest confusion on who should be held responsible (Brinkerhoff, 2004). A recent study has also proposed that interpersonal positive interactions are a key to strengthening accountability in health systems when they complement bureaucratic or audit-style accountability mechanisms (Nxumalo et al., 2018). Accountability may also be viewed in (although not limited to) the broad categories of: financial accountability, which tracks budget allocation and its correct utilization; performance accountability, which monitors successful attainment of targets that were previously agreed upon; or political accountability, which compels elected governments to fulfill electoral promises, or those appointed to leadership positions to exert a serious effort to address the needs of the people they serve (Brinkerhoff, 2004).

Taking into consideration that a synergy means that the interactions of components produce an effect greater than the sum of individual components, we modified Bossert's earlier model for the synergy into a three-dimensional figure of a pyramid that visualizes the three dimensions as a more dynamic and integrated whole (Figure 4a). This modified pyramid model enables better appreciation of the mutually-reinforcing interactions between the dimensions, such that the expansion of one contributes to the enhancement of the others. For example, we postulate that as decision space is widened at local levels through decentralization, the capacities of local decision-makers would likewise need to be expanded as they perform their new functions and "learn by doing," which would also give them a sense of ownership for their decisions and, thus, a better recognition of their accountability. Similarly, building the capacity of decision-makers would result in a better use of their decision spaces, as well as a better appreciation of their responsibilities which hold them accountable for the choices

they make. Finally, strengthening accountability mechanisms would influence how decision space is used, and would also motivate the need to build the capacities of decision-makers at lower levels of the system.

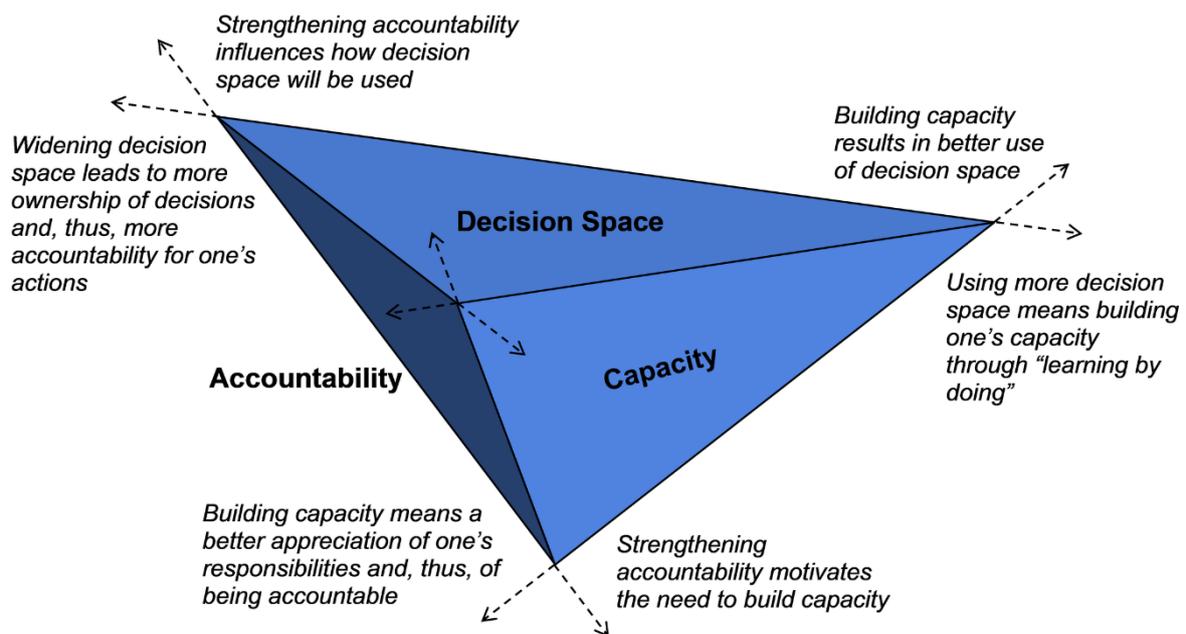


Figure 4a. The modified three-dimensional pyramid model for visualizing the synergy of decision space, capacity, and accountability in the context of health sector decentralization.

4.2.2. Exploring the synergy in the Philippines

Using this synergy as a lens, we aimed to analyze how to optimize decentralization for the health sector in the Philippines by describing the functions that have been decentralized, examining the decision space available at lower levels for these functions, identifying the capacities of local decision-makers that have to be expanded to carry out these functions well, and exploring the accountability mechanisms that the central level could enforce to ensure good decision-making in these functions. We then recommend a number of policy adjustments based on this analysis to optimize the performance of functions at local levels in the devolved Philippine health system.

4.3. Methods

Following a qualitative research design, we developed an interview guide for exploring the activities or tasks where decision-making for the health sector is performed at local levels in the Philippines. Using the first author's (HJL) personal and professional connections in the Philippines, we then purposively-selected and contacted decision-makers who serve (or previously served) in the government health sector and who represent a wide range of local settings. HJL is also a citizen of the Philippines who has been familiar with the country's health system through his work as an academic researcher. Between January-April 2017, 27 decision-makers were interviewed, or the point when we judged that saturation had been achieved (Creswell and Creswell, 2017). The interviews lasted one hour and four minutes on average and were all performed face-to-face. Among interview participants were 17 (63%) males and 10 (37%) females who worked in the Philippine government sector for an average of 23.6 years. While the methods of qualitative research did not allow us to obtain a statistically-representative sample of informants for this study, purposive selection of participants was undertaken with the aim of maximizing the variation in their profiles in terms of current roles and organizational affiliations, levels of decision-making, and geographic locations. A summary of the characteristics of these decision-makers is provided in Table 4a.

Table 4a. Summary of characteristics of the decision-makers who were interviewed for this study. Additional details on their career history and locations of work assignments have been published elsewhere (Liwanag and Wyss, 2018).

No. of interviewees	27
<i>Males</i>	17
<i>Females</i>	10
Highest educational attainment	
<i>Doctor of Medicine (MD) plus Master's degree</i>	17
<i>MD</i>	5
<i>Law degree</i>	3
<i>Master's degree</i>	1
<i>Bachelor's degree</i>	1
Average duration of service in the public sector (years)	23.6
Average duration of the interviews (min.)	64

Category of current roles	
<i>Career health officers (provincial, municipal, and city health officers)</i>	10
<i>Department of Health (DOH) directors (national and regional directors)</i>	6
<i>Local politicians</i>	6
<i>Executive of the Philippine Health Insurance Corporation (PhilHealth)</i>	1
<i>“Doctor to the Barrio” (i.e. DOH-hired physician deployed to serve under a local government)</i>	1
<i>Medical school administrator</i>	1
<i>Government hospital administrator</i>	1
<i>Head of a non-government organization (NGO)</i>	1
Organizational affiliation at the time of the interview	
<i>Local governments</i>	15
<i>DOH</i>	6
<i>NGOs</i>	2
<i>PhilHealth</i>	1
<i>Government hospital</i>	1
<i>Philippine Congress</i>	1
<i>Academe</i>	1
Level of decision-making at the time of the interview	
<i>National level</i>	7
<i>Regional level</i>	3
<i>Provincial level</i>	4
<i>City level</i>	3
<i>Municipal level</i>	9
<i>Not applicable</i>	1
Geographic focus of role at the time of the interview	
<i>Nationwide</i>	6
<i>Luzon</i>	13
<i>Visayas</i>	1
<i>Mindanao</i>	7

The proposal for this study was approved in the Philippines by the National Ethics Committee (no. 2016-013) and in Switzerland by the Ethikkommission Nordwest- und Zentralschweiz (no. 2016-00738). This article was written using the guidance provided by the “Criteria for Reporting Qualitative Research” (COREQ) (Tong et al., 2007). All study participants read and signed an informed consent form before the interviews, which were audio-recorded and manually transcribed in Microsoft Word 2016. Information on personal identities were replaced with codes in the transcripts, accessible only to

the authors to maintain confidentiality. Each transcript was reviewed at least twice while listening to the audio recording to ensure accuracy of transcription and to improve familiarity with the data. Transcripts were loaded into MAXQDA Standard 12 (VERBI GmbH Berlin 2018) for coding and analysis.

Data analysis was based on the “Framework Method” as previously described in the literature (Gale et al., 2013; Heath et al., 2012; Jansen et al., 2017). Building on our previous analysis (Liwanag and Wyss, 2018), we combined deductive and inductive approaches in the sense that we began coding using the trio of decision space, capacity, and accountability as the initial thematic framework, which was later populated with categories in an iterative fashion as the coding was performed.

4.3.1. Health sector functions

As gathered from our interviews, we identified six health sector functions, which we defined as broad categories of activities or tasks within which decision-making is performed. The definitions used for these health sector functions were based on definitions used in previous studies on decision space, which we subsequently modified according to the experience in the Philippines. While the boundaries of these functions would overlap in some situations, we nevertheless organized these decentralized functions according to the following:

- a. *Planning* – development of plans for local health services in a regular manner, involvement of stakeholders in the planning process, and/or implementation of what has been indicated in these plans;
- b. *Financing and Budget Allocation* – allocation of budget (either from national/central or local sources) to support local health services, creation of additional sources of income to finance local health needs, and/or utilization of the local budget according to what it was intended for;
- c. *Program Implementation and Service Delivery* – implementation of health programs at local levels following national guidelines, implementation of locally-designed services that meet

local needs and are suitable to the local context, and/or provision of services that satisfy the standards of quality;

- d. *Management of Facilities, Equipment, and Supplies* – building the types and quantity of local health facilities in areas where these are needed, maintenance and upgrade of these facilities, and/or providing the equipment and *supplies* (e.g. *medicines*) required to make these facilities fully functional;
- e. *Health Workforce Management* – hiring (and firing) the cadres and number of health workers required to meet the needs of the local population, providing adequate salaries and benefits for these health workers according to the national standard rates, and/or supporting their training needs and career aspirations;
- f. *Data Monitoring and Utilization* – choosing the indicators for monitoring the performance of local health services, collecting these indicators in an accurate and timely manner, performing data management efficiently, and/or using the collected data to inform decisions at local levels.

Assessment of decision space drew from the information obtained during the in-depth interviews using a list of guide questions that provided flexibility in assessing the decision spaces available to decision-makers in the performance of these functions as wide, moderate, or narrow, as well as their desired capacities and accountability mechanisms that influence their decision-making in these functions. An outline of these guide questions is presented in Table 4b, while an example of the full interview guide is available as a supporting information file in another article (Liwanag and Wyss, 2018). However, unlike a quantitative approach that enables assessment of decision space based on scores, our application of a qualitative approach meant that our assessment relied on the various and common themes that emerged as the transcripts were analyzed following the Framework Method. To complement Table 4b and adapting from Bossert's earlier criteria for assessing decision space (Bossert, 1998), we further provide Table 4c below as a specific criteria for judging the space for each of the health sector functions as wide, moderate, or narrow. The Supplementary Material to this article also provides a selection of illustrative quotes for each function together with an explanation on how decision space was finally assessed overall (see Supplementary Material). Briefly, we assessed decision space

for each function as wide if decision-makers at lower levels are able to make decisions with wide latitude, narrow if mostly unable to make decisions, and moderate if somewhere in between. For functions where decision space was assessed as moderate yet a number of interviews suggested that the space was narrow in certain situations, an assessment of moderate-narrow was made. Given the outcome of decision space assessment, we then analyzed the desired capacities for local decision-makers, organized into institutional and individual capacities, to be able to perform each function well, and the accountability mechanisms, organized as current and proposed, that can be enforced by the central level to promote good decision-making in each function.

Table 4b. Outline of the guide questions posed during the interviews to explore decision-making in six functions and be able to assess the overall breadth of decision space as wide, moderate, or narrow. Follow-up questions related to capacities and accountability are likewise included. An example of the full interview guide from which these questions were taken is available as Supplementary Material in Chapter 3.

<p><i>At local levels, is decision-making for this function made with sufficient latitude?</i></p>	<p>a. Planning</p> <p><i>Probe further: Are local decision-makers able to...</i></p> <ul style="list-style-type: none"> • Develop their own annual plans for health services? • Determine their priorities, which may differ from priorities set at the national level? • Involve stakeholders in their planning process? • Implement what they have stated in their plans? 	<p><i>What is the overall assessment of <u>decision space</u> for this function based on themes that have emerged from the Framework Method?</i></p>	<p>Wide?</p> <p>Moderate?</p> <p>Narrow?</p>	<p><i>Follow-up: Do local decision-makers...</i></p> <ul style="list-style-type: none"> • Have adequate capacities to make decisions in this function? If not, what <u>capacities</u> are desired? • Make decisions that are accountable? If not, what <u>accountability</u> mechanisms can be put in place?
	<p>b. Financing and Budget Allocation</p> <ul style="list-style-type: none"> • Allocate from their own budget how much is needed to support health services? • Create additional sources of financing to support these health services? • Spend the budget according to what it was intended for? 			
	<p>c. Program Implementation and Service Delivery</p> <ul style="list-style-type: none"> • Implement health programs that are mandated by the national government? • Create and deliver their own unique health programs or services that address local priorities and consider the local context? • Provide local health services that are of good quality and faithful to the national standards? 			
	<p>d. Management of Facilities, Equipment, and Supplies</p> <ul style="list-style-type: none"> • Put up the appropriate types and number of health facilities in the areas where these are needed? • Maintain and upgrade these facilities? • Provide adequate equipment and supplies, including medicines, for these facilities to be fully-functional? 			
	<p>e. Health Workforce Management</p> <ul style="list-style-type: none"> • Hire (and fire) the cadres and number of health workforce which their local population requires? • Compensate the health workforce commensurate to their workload and according to national standard rates? • Supervise and build the capacity of the local health workforce and support their professional development? 			
	<p>f. Data Monitoring and Utilization</p> <ul style="list-style-type: none"> • Choose the indicators for monitoring the performance of the health system at local levels? • Collect these indicators in an accurate and timely manner? • Perform monitoring and data management efficiently and electronically? • Use the data they possess to guide their actions at local levels? 			

Table 4c. Criteria used for assessing decision space at local levels for the purpose of qualitative analysis

[adapted from (Bossert, 1998)].

Health sector function	Indicator	Decision Space		
		Narrow	Moderate	Wide
a. Planning	Local decision-makers prioritize and develop their own health plans	Local planning possible only if with assistance from the central level	Local planning already taking place, but only optimal if with significant assistance from the central level	Local planning optimal despite minimal involvement of the central level
	Local decision-makers implement the plans that they developed	Implementation possible only with central level support	Implementation being done but only completed if with central level support	Full implementation possible even without central level support
b. Financing and Budget Allocation	Local decision-makers have their own sources of income to finance health services	Financing mostly dependent on central sources of funds	Mixed financing, such that local sources of financing are augmented with central sources	Financing mostly provided by local sources of funds
	Local decision-makers spend the budget allocated for health services	Spending mostly restricted by guidelines imposed by the central level	Some of the budget controlled by the local level, and some regulated by the central level	Spending mostly follows how local decision-makers desire to use the budget
c. Program Implementation and Service Delivery	Local decision-makers implement their own health programs and services	Local programs and services mostly follow only what is promulgated from the central level	Local programs and services follow nationally-mandated programs but also include locally-initiated and innovative programs that address local needs	A good number of innovative programs and services implemented at local levels with little supervision from the central level
	Local decision-makers deliver health services with good quality	Local programs and services implemented with poor quality	Local programs and services implemented with good quality when central level provides additional support and training	Local programs and services implemented with good quality despite minimal central level involvement
d. Management of Facilities, Equipment, and Supplies	Local decision-makers put up the number and type of health facilities needed in their areas	Local facilities built and upgraded mostly through central support	Some facilities built and upgraded by the local level but still a large number of constructions or renovations provided by the central level	Local facilities built and upgraded mostly through the local level's own efforts and resources
	Local decision-makers ensure functionality of these facilities with adequate equipment and supplies	Local facilities mostly rely on central support for equipment and supplies	Mixed, such that equipment and supplies are provided by both the local and central levels	Local facilities adequately equipped and supplied from the local level's own efforts and resources
e. Health Workforce Management	Local decision-makers hire (and fire) the health workforce needed by the local population	Local levels unable to hire the workforce needed	Local levels able to hire some of the workforce required, but central level augments many vacancies through deployment of its own staff	Local levels able to hire most of the workforce on their own
	Local decision-makers support the career development of the health workforce	Few opportunities at local levels to support the career development of their workforce	While local levels can support the career development of their workforce, a big chunk of training is still provided by the central level	Training and support for the career development of the workforce sufficiently provided by local levels
f. Data Monitoring and Utilization	Local decision-makers collect the relevant indicators	Data collection delayed and poorly-validated, unless the central level requires and enforces it	Local levels collect the data in a timely and accurate manner when assistance is provided by the central level	Timely and accurate data collection despite minimal intervention from the central level
	Local decision-makers use the data to inform actions	Utilization of the collected data for actions at local levels not practiced	Local levels collect the data, but central level provides guidance on how to use the data	Data clearly used for actions by the local levels themselves

4.4. Results

4.4.1. Planning

In the Philippines where local governments (provincial, municipal, and city governments) have assumed the ownership of health facilities and management of public health programs at local levels, decision space in planning for local decision-makers was assessed as moderate. While local governments, which are headed by elected politicians, have long been granted the authority to plan on their own, various experiences in the Philippines suggest that successful planning relies on the local government's ability to plan well and on the local politician's (provincial governor or city/municipal mayor) regular convening of the multi-sectoral "Local Health Board" (LHB) which may or may not meet depending on the politician's prioritization of health concerns during his/her term of office. This is consistent with one previous study which concluded that there were more public health initiatives, community consultations, and spending for health in local governments with functional LHBs compared to those whose LHBs didn't meet regularly (Ramiro et al., 2001). To assist local governments in planning, the DOH, through its regional offices, have also been sponsoring and conducting the annual "Investment Planning for Health" (IPH), a mechanism through which local government health personnel are given technical assistance (La Vincente et al., 2013) and trained by the DOH on how to prepare their health plans, identify needs, and request for additional support from the national government for the full implementation of these plans. Given this moderate decision space, decision-making in planning may be enhanced when local decision-makers have adequate capacities for performing strategic planning in a regular and timely manner and for involving multiple stakeholders in the planning process. On the other hand, some of the accountability mechanisms to promote good decision-making in planning include requiring the functionality of the LHB as a condition for local governments to receive additional support from the national/central government, reviewing and approving these plans at central/regional levels to ensure alignment with national objectives, and strict monitoring of the implementation of these plans to ensure satisfactory completion before further support from the national government to these local governments could be provided in the future (Table 4d).

Table 4d. Assessment of decision spaces and the desired adjustments in capacities and accountability mechanisms for the health sector functions of: (a) Planning; (b) Financing and Budget Allocation; and (c) Program Implementation and Service Delivery.

Health sector functions <i>i.e. activities or tasks that involve decision-making</i>	Illustrative quotes*	What is the decision space at local levels?	What capacities of local decision-makers are desired?	What accountability mechanisms can be put in place by the national/central level?
Planning	<p>Mayor of a low-income municipality who is also a medical doctor, 26 years in government: <i>“National government wants LHBs to be functional, but it’s up to us to make it functional. We meet for the municipal health action planning, which flows from the barangay health action planning. So the municipal plan is a consolidation of the various barangay plans. The DOH has a representative in the LHB, and that is very good because the mayor doesn’t know everything. It’s a coincidence that the mayor here is a doctor, but how about those areas whose mayor is not a doctor? We need help from the DOH for the technical aspects, for example, in the family planning program, immunization, etc. We also review our shortcomings. But, you know, it varies from one municipality to another [laughs]. That is the disadvantage of devolution, right? The way things are is not uniform and depends on municipal leadership.”</i></p>	moderate	<p><i>Institutional:</i></p> <ul style="list-style-type: none"> • Institutional commitment to perform the planning process regularly • Openness to the participation of multiple stakeholders in the planning process <p><i>Individual:</i></p> <ul style="list-style-type: none"> • Strategic planning skills 	<p><i>Currently in place but may be enhanced:</i></p> <ul style="list-style-type: none"> • Technical assistance to local governments for performing planning effectively • Local plans reviewed and approved at central/regional levels to ensure alignment with national objectives • Monitoring by the central/regional levels of local plan implementation <p><i>Potential policy consideration:</i></p> <ul style="list-style-type: none"> • Continuing augmentation for local health services conditional on local government’s regular conduct of planning and satisfactory implementation of previous plans
Financing and Budget Allocation	<p>Provincial Health Officer (PHO) of a high-income province, 21 years in government: <i>“About 25-27% of our Internal Revenue Allotment (IRA) is allocated for our hospitals, and about 5-7% for preventive services. I have an income recovery scheme here. The province provides the budget for maintenance and other operating expenses of hospitals, but I tell the hospitals to recover at least 90% of that and return the funds to the province. The hospitals are able to recover it through their PhilHealth income, and also through income from services not covered by PhilHealth but outpatients pay for, such as ultrasound or CT scan. So majority of our local budget is used for hospital operations, and that’s curative, right? That means we spend so little for preventive services, which should have a bigger investment. This is what I want to ask from DOH, to provide additional funding to enhance our delivery of public health programs.”</i></p>	moderate-narrow	<p><i>Institutional:</i></p> <ul style="list-style-type: none"> • Ability to create alternative income sources (except user fees which may reduce access) that are earmarked for local health services <p><i>Individual:</i></p> <ul style="list-style-type: none"> • Skills for priority-setting, with an emphasis for primary/preventive care • Capacity for evidence-informed, rather than politically-motivated, funding decisions 	<p><i>Currently in place but may be enhanced:</i></p> <ul style="list-style-type: none"> • Strict implementation of PhilHealth guidelines that limit local governments to use their PhilHealth income exclusively for health-related needs <p><i>Potential policy consideration:</i></p> <ul style="list-style-type: none"> • Accreditation of local health facilities to be eligible for reimbursements from PhilHealth may include a requirement for local governments to provide a minimum allocation (depending on income class) from its own local budget as counterpart to finance local health services

<p>Program Implementation and Service Delivery</p>	<p>High-level official of the DOH Central Office, 28 years in government: <i>“As the devolution process evolved, and as local governments become more capable to handle their health services, there were circulars issued by the DOH programs in the central office to ensure quality, for example, on how to package the tuberculosis control program for their locality. Some of these guidelines sought to remedy the negative aspects of devolution, and so the concept of interlocal health zones or service delivery networks to group local governments together emerged to encourage different local governments serving the same catchment area to deliver health services in a harmonized manner.”</i></p>	<p>moderate</p>	<p><i>Institutional:</i></p> <ul style="list-style-type: none"> • Willingness to cooperate with neighboring local governments for a functional service delivery network for sharing of resources and inter-facility patient referrals <p><i>Individual:</i></p> <ul style="list-style-type: none"> • Innovation in the delivery of local health programs (while maintaining fidelity to national objectives) that address unique health needs and are suitable to the local context 	<p><i>Currently in place but may be enhanced:</i></p> <ul style="list-style-type: none"> • Development of technical guidelines that maintain fidelity in the delivery of nationally-mandated programs at local levels • Training of local government staff in implementing these programs • Strengthening of service delivery networks by strategically grouping local governments together and facilitating their interlinking with one another <p><i>Potential policy consideration:</i></p> <ul style="list-style-type: none"> • Wider recognition and promotion of models of innovative service delivery programs by local governments
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**Only a few illustrative quotes could be presented here due to space limitations. Please refer to the Supplementary Material for a more selection of illustrative quotes which form the basis of the assessment of decision space and the recommendations for capacity and accountability.*

4.4.2. Financing and budget allocation

Decision space for financing and budget allocation was assessed to be moderate-to-narrow because the flexibility in making local funding decisions in the Philippines largely depends on the income classification of the local government. For instance, local governments in highly-urbanized cities get a bigger share (and, thus, more choices for budgeting) of their “Internal Revenue Allotment” (IRA) from the national government, which is responsible for pooling tax collection across the country and redistributing the revenue to the various local governments based on a formula that considers local population and land area. Consequently, local governments in smaller provinces or rural municipalities get a smaller share of their IRA, which is often insufficient to support labor-intensive health services. As a result, most local government have relied significantly on payments from the Philippine Health Insurance Corporation (PhilHealth) (Obermann et al., 2018, 2006), which administers the national social health insurance program, to sustain the operations of their health facilities. These observations gathered from the interviews also complement previous studies on the Philippines that noted dampened spending for health by the local governments across the years, especially in provinces (Capuno and Solon, 1996), as well as the dominance of narrow electoral objectives in influencing financing decisions for health (Capuno and Panganiban, 2012). Decision-making in financing and budget allocation may then be optimized when local decision-makers have adequate capacities for performing priority-setting (Wong et al., 2017) (including an emphasis for primary/preventive care services) and evidence-informed (rather than politically-motivated) funding decisions, as well as for creating alternative sources of income (except user fees that may reduce access) that are earmarked for financing local health services. Accountability mechanisms may include requiring local government-owned health facilities to meet the minimum standards of quality before these are accredited by PhilHealth to become eligible for receiving payments for services provided. PhilHealth accreditation may also include a requirement for the local government to provide a minimum allocation from its own budget as counterpart for financing local health services. Moreover, existing national guidelines on the utilization of PhilHealth income by local governments should be strictly enforced in order to push local governments to spend the fund exclusively for health-related expenses alone, with future

reimbursements from PhilHealth conditional on the local government's compliance with these guidelines.

4.4.3. Program implementation and service delivery

Decision space for program implementation and service delivery was assessed as moderate considering that local governments in the Philippines are already able to develop and implement their own health programs, but at the same time mostly relying on the health programs being promulgated by the DOH from national/regional levels for implementation at local levels. However, the devolved structure of governance may also result in weak implementation of programs, such as what was noted for the malaria control program in a previous study (Espino et al., 2004) where ineffective linking between central and local levels resulted in inconsistent implementation by local governments that failed to adhere to the national objectives of the program. Thus, decision space may be better used when local decision-makers have the capacity for innovation in the delivery of health programs (while maintaining fidelity to national objectives) that address specific local needs, more appropriate to the culture, and thus more effectively implemented at local levels. Local governments may also be better equipped to perform this function if they have the capacity to cooperate with other neighboring local governments (Grundy et al., 2003), despite each being distinct political units as a result of devolution, to constitute a functional service delivery network that facilitates coordination of patient referrals, or resource sharing for more efficient delivery of care (e.g. sharing medicines when the health facility of another local government has stockouts, or allowing health professionals to assist temporarily in a neighboring health facility owned by a different local government that lacks staff). Accountability in this function may be strengthened when national/central decision-makers maintain its responsibility for developing and enforcing the technical guidelines to be complied with by the local governments in the delivery of nationally-mandated health programs (e.g. expanded program on immunization, tuberculosis control program, or non-communicable diseases control program, etc.), including the training of local government health staff who will carry out these programs at local levels. The national/central level may also strengthen accountability by using, as an incentive, the recognition and

promotion of innovative health programs developed by some local governments that can be emulated by other local governments, and also by facilitating the grouping of adjacent local governments to constitute functional service delivery networks.

4.4.4. Management of facilities, equipment, and supplies

Decision space for the management of facilities, equipment, and supplies was assessed as moderate because local governments already have full management control over health facilities that they own, but nevertheless also continue to depend on continuing assistance from the DOH for the upgrade of their facilities, including the provision of equipment and supplies (e.g. medicines, vaccines, contraceptives, laboratory diagnostic kits, etc.) for use in these facilities. Decision space for this function may be optimized when local decision-makers are equipped with the adequate management skills needed for running health facilities and programs effectively. Such capacities may in fact already be possessed by the local government health officer, the career health official employed by the local government to manage local health services, but not by the elected governor or mayor who may lack the technical understanding or appreciation of the significance of public health. Capacities for local governments to engage the private sector may also be expanded so that some aspects of service delivery can be made more efficient through public-private partnerships. Examples of such partnerships in selected local governments in the Philippines include outsourcing the provision and maintenance of expensive equipment required by the provincial hospital (e.g. X-ray machine, ultrasound machine, or CT scanner) where the income from the use of the equipment is shared by the local government and the private provider. Another example is the provision of a steady supply of medicines in the local government hospital through a consignment agreement with a private seller, which not only minimizes drug stockouts but also enables the local government to pay only for the medicines that are actually used. On the other hand, strengthening accountability in this function may be achieved when central/regional decision-makers strictly enforce licensing of local government health facilities to maintain quality, but at the same time provide technical assistance to those local governments that are struggling to achieve accreditation for their health facilities. Another mechanism is for the

central/regional level (i.e. DOH) to perform pooled or central procurement of selected supplies (e.g. medicines and vaccines) on behalf of local governments nationwide for the purpose of maintaining leverage in price negotiation, rather than let each individual local government negotiate on its own. These supplies are then provided as augmentation for local health facilities subject to the local government's satisfactory utilization of previous augmentations. In the Philippines, the DOH has also been running a "Health Facility Enhancement Program" (HFEP) that allows the use of national/central funds for the construction of new (or upgrade of existing) local government health facilities. However, such central support through HFEP must require the provision of counterpart from the local government. For example, the DOH may spend for the expansion of a provincial hospital or the renovation of a city or municipal RHU, but the local government that owns it will be required to hire the additional number of health workers needed to fully operate the upgraded facility. Moreover, strengthening current mechanisms for licensing and accreditation of local government health facilities by the DOH and PhilHealth, respectively, may be one way to enhance quality as a previous attempt that relied on certification alone failed to improve the quality of services in these facilities (Catacutan, 2006) (Table 4e).

Table 4e. Assessment of decision spaces and the desired adjustments in capacities and accountability mechanisms for the health sector functions of: (a) Management of Facilities, Equipment, and Supplies; (b) Health Workforce Management; and (c) Data Monitoring and Utilization.

Health sector functions <i>i.e. activities or tasks that involve decision-making</i>	Illustrative quotes*	<i>What is the decision space at local levels?</i>	<i>What capacities of local decision-makers are desired?</i>	<i>What accountability mechanisms can be put in place by the national/central level?</i>
Management of Facilities, Equipment, and Supplies	Director in the DOH Central Office, 28 years in government: <i>“If you would look at how the DOH works with local governments now, it seems that a bulk of our budget actually goes to them. It’s as if it is not devolved. During the last years, DOH upgraded their facilities. DOH is also providing the commodities for the programs. DOH is giving them the drugs, TB drugs, and now even hypertensive drugs, diabetic drugs. So there is always that question, are we really in a devolved set-up? It has been observed that the local governments really do not have the capacity for health services. I’m not saying that this is happening across the country, but in most municipalities and provinces, most especially in the low-income ones, well, even in some first-class provinces. Why? Because the population has increased but there was no increase in the infrastructure and the personnel. That’s why the DOH augments the local governments.”</i>	moderate	<i>Institutional:</i> <ul style="list-style-type: none"> • Creativity in partnering with the private sector to enhance the delivery of care in local health facilities <i>Individual:</i> <ul style="list-style-type: none"> • Management skills for running health facilities and public health programs effectively 	<i>Currently in place but may be enhanced:</i> <ul style="list-style-type: none"> • Licensing and accreditation of local health facilities that meet the standards of quality, while supporting those facilities that don’t qualify to eventually meet the standards • National/central support for upgrading local health facilities (especially in resource-poor settings to achieve equity) conditional on the local government’s provision of counterpart <i>Potential policy consideration:</i> <ul style="list-style-type: none"> • Central-procurement of selected equipment and supplies on behalf of local governments to gain leverage in negotiating prices; provision of these resources as augmentation to local governments but conditional on satisfactory utilization of past augmentations
Health Workforce Management	PHO of a low-income province, 29 years in government: <i>“A poor province could only afford this much, and cannot provide salaries like a wealthy province could. In my case, my salary is only for a second-class province, because my province has the capacity of only a second-class local government. If the province becomes first-class, then the salaries will go up too. That is why when you compare the salaries in different classes of provinces or municipalities across the country, the rates would be different. I think salaries should be standardized across the country, regardless of where one is serving, because we are all doctors anyway, same with nurses and midwives. We are all health professionals, right?”</i>	moderate-narrow	<i>Institutional:</i> <ul style="list-style-type: none"> • Sufficient financial capacity and regulatory authorization to: <ul style="list-style-type: none"> ○ Hire (and fire) the cadres and number of health workers needed to serve the local population ○ Provide health workers’ full range of salaries and benefits, including security of tenure <i>Individual:</i> <ul style="list-style-type: none"> • Deeper appreciation at various levels of governance on the important role played by the health workforce at local levels 	<i>Currently in place but may be enhanced:</i> <ul style="list-style-type: none"> • Deployment of centrally-hired health workers to local health facilities that lack them, but conditional on the local government’s: <ul style="list-style-type: none"> ○ Provision of counterpart support for the deployed health workers ○ Commitment to eventually allocate the budget required to hire health workers on their own <i>Potential policy considerations:</i> <ul style="list-style-type: none"> • Central/regional levels to be officially responsible for providing capacity building of local government health workers across the country • Implementation of a national policy that discourages local health workers from being partisan during local elections

<p>Data Monitoring and Utilization</p>	<p>Assistant CHO of a highly-urbanized city, 22 years in government: <i>“Perhaps if you ask the DOH, they would tell you that they are having a hard time with the data because of devolution. It takes a long time for us to submit reports to them. Why am I taking a long time? For my part, I am consolidating all of the reports, including those from our hospitals. So, it is difficult, right? Oh, we do our own surveillance and DOH also does its surveillance, that’s why it is difficult. Actually, there are instances when DOH detects cases first before we do. And there was a time also when we detected it first before they did. So before the DOH even learns about it, we already have a report. That is why maybe for them the DOH is saying that it’s more difficult. Because they feel there is an extra step before the data gets to them, and the city still needs to gather the data from all our health centers.”</i></p>	<p>moderate</p>	<p><i>Institutional:</i></p> <ul style="list-style-type: none"> • Systemic capacity for an integrated and harmonized manner of data monitoring and utilization in spite of decentralization and the use of interoperable EMRs <p><i>Individual:</i></p> <ul style="list-style-type: none"> • Basic knowledge of epidemiology to understand the relevance of the indicators collected • Skills for evidence-informed public health, or for translating data into action at local levels 	<p><i>Currently in place but may be enhanced:</i></p> <ul style="list-style-type: none"> • Deployment of centrally-hired data collectors to local governments to validate the local data collected and accelerate data transmission to the central level • Maintenance of a central electronic database, into which local governments will be required to transmit data in a timely manner <p><i>Potential policy consideration:</i></p> <ul style="list-style-type: none"> • Publication of rankings of local governments in achieving selected target outcomes
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**Please refer to the Supplementary Material for a more selection of illustrative quotes.*

4.4.5. Health workforce management

Decision space for health workforce management was assessed to be moderate-to-narrow. While local governments already have full control over the management of its health workers, in many rural areas the local governments are unable to hire the minimum number of health workers they need due to their lack of resources to pay for their salaries or the absence of an incentive for health workers to serve in these far-flung areas (Atienza, 2004). In local governments that are able to hire, the salaries and benefits vary depending on the financial capacity of the local governments, despite an existing law that provides for standard salary rates for health professionals. Many local governments have thus relied on the DOH's long-established deployment program of health workers, such as the "Doctors to the Barrios" program, to augment their health workforce needs. This deployment program has enabled the DOH to hire physicians, nurses, midwives, dentists, and medical technologists who are sent to serve in many local government health facilities across the country (Leonardia et al., 2012). Desired capacities for local governments may then include having adequate financial resources to hire the cadres and quantity of health workers which their population requires, and to provide the full range of salaries and benefits, including security of tenure, for these health workers. Local governments may also be capacitated further when they are granted with the regulatory authorization to hire more health workers as deemed necessary (Note: the national government's Commission on Audit currently puts a cap on the percentage of the budget that can be used for salaries of all local government personnel, combining health and non-health personnel, yet local health services would often require more personnel than what is allowed.). Such capacities may be complemented by accountability mechanisms that include the central/regional levels requiring local governments that benefit from the deployment program not only to provide counterpart support for the staff they receive (e.g. free housing or transportation allowance for the deployed health workers), but more so to carry out a medium- to long-term plan to prepare the necessary local budget adjustments to hire the required workforce on their own in the near future. Without such conditionalities, local governments may become constantly dependent on the national government for its health workforce needs. Other accountability mechanisms may include the national/central level taking the responsibility for building the capacity of local government health

workers across the country (58), as well as implementing a national policy that discourages local health workers from being partisan during local elections in order to insulate them from politicization.

4.4.6. Data monitoring and utilization

Finally, decision space for data monitoring and utilization was assessed as moderate because local governments are already primarily responsible for collecting health-related data at local levels and for transmitting these data to the regional and central levels for consolidation by the DOH. Nevertheless, experiences in the Philippines suggest that many local decision-makers perform data collection out of mere compliance and sometimes lack the capacities for utilizing the data to initiate actions at local levels. Thus, local decision-makers may optimize their decision space for this function when their capacities in basic epidemiology and evidence-informed public health are enhanced so that they understand what the indicators mean and how they can translate the data into effective decision-making. Accountability mechanisms in this function can include the DOH at national or regional levels deploying its own data collectors to local governments to validate the data being reported, and also to accelerate the transmission of the data to the central level. Such a scheme was recently introduced in the Philippines through the DOH's deployment of "public health associates" who perform parallel data collection at local levels. Furthermore, the national/central level may consider publicizing an annual ranking of local governments in terms of meeting selected target health outcomes in order to inform the population of the performance of the local politicians they have elected in office, and likewise maintain a reliable central electronic database through the Field Health Services Information System (FHSIS) (Robey, 1990) that pools all health-relevant indicators from local levels, which is essential for accurately assessing the state of the Philippine health system as a whole.

4.5. Discussion and conclusion

The results we have presented here are part of our efforts to understand how to make decentralization work for the health sector (Liwanag and Wyss, 2018, 2017), this time focusing on the synergy of decision space, capacities, and accountability. These results offer several opportunities for adjusting the capacities at local levels and strengthening accountability mechanisms to promote good decision-making in the devolved health system of the Philippines. The Framework Method used to analyze our interviews has allowed us to compare the perspectives between central/regional and local levels of decision-making which, for some functions, may be contrasting views. For example, in planning, some of the decision-makers at local levels felt they had the flexibility to plan on their own but some of the decision-makers at central/regional levels expressed that local plans were not fully implemented (see Supplementary Material). By comparing varying perspectives, we have triangulated these views and aimed to obtain an overall assessment of decision space for each function that drew from a synthesis of multiple views. Consequently, our analysis indicates that decision spaces at local levels have been mostly moderate or narrow despite 25 years of devolution in the Philippines.

The Philippine experience suggests that the moderate-narrow decision spaces observed at local levels are less the result of the national/central level refusing to grant the space, but more an indication of local decision-makers having inadequate capacities to perform fully the functions they have assumed in the aftermath of devolution. It would then appear that a truly wide decision space at local levels cannot be achieved unless it is accompanied by expanding capacities and strengthening accountability mechanisms. It is important to emphasize that the goal of this paper was not to prove this synergy. Bossert's study in Pakistan has already provided a quantitative justification of how expanding each of these three dimensions potentially leads to improvements in selected health outcomes (Bossert et al., 2015). Through a qualitative approach, we have been able to explore a number of specific policy considerations under the assumption that the synergy works. Several studies on decentralization in other low- and middle-income countries (LMICs) have also concluded that decentralization only grants the decision space, but its effective use by decision-makers at lower levels of the system will be realized only when their capacities are built, as what was reported for example in Fiji (Mohammed et al., 2017)

and in India (Seshadri et al., 2016). Particularly for the function of planning and priority setting, capacity building can improve the use of decision space as noted in Tanzania (Frumence et al., 2014), and enhance transparency and accountability as likewise noted in India (Shukla et al., 2018) and again at district levels in Tanzania (Maluka et al., 2010).

We have presented a list of desired capacities, organized as individual and institutional/organizational capacities, to help improve the delivery of care in a devolved health system. At individual levels, these include, among others, skills for strategic planning, management, priority setting, evidence-informed policymaking, and innovation in service delivery. At institutional levels, these desired capacities include, among others, having a multi-stakeholder approach, generating revenues from local sources, partnering with the private sector, and facilitating cooperation between local health facilities. In the context of decentralization, the responsibility for building the capacities of local decision-makers and the local governments which they constitute remains to be with the national/central decision-makers (i.e. the DOH and PhilHealth in the case of the Philippines).

In all health sector functions, we have noted a significant amount of augmentation provided by the national/central government in the Philippines to fill in the gaps of the local governments, especially in resource-poor areas, to fulfill their mandate to deliver quality health services to the populations they serve. This continuing intervention from the national/central level indicates the importance of analyzing not only the roles of local level decision-makers but also the evolving role that central decision-makers play in decentralization. Studies in other LMICs have also reported some forms of re-centralization despite decentralization, such as in financing in Kenya (Tsofa et al., 2017b), in ensuring equity in the distribution of physicians and health facilities in Indonesia (Paramita et al., 2018), and in logistics systems or management of supplies in Ghana and Guatemala where the evidence indicates the importance of having a combination of decentralized and centralized functions for optimal performance (Bossert et al., 2007). With rapid transitions to decentralization, similar to what happened in the Philippines, there have been similar disruptions in procurement resulting in drug stockouts in Kenya (Tsofa et al., 2017a), and variations in the salaries of the health workforce resulting in strikes and mass resignations also in Kenya (Tsofa et al., 2017a) and affecting the retention of primary care workers in

rural areas in Nigeria (Abimbola et al., 2015). These examples emphasize all the more the important function of the central level to enforce accountability and shepherd the entire system as a whole to minimize such disruptions even as the system remains decentralized overall.

While there are multiple aspects to accountability, in this article we have focused on accountability mechanisms which the national/central level could enforce in a decentralized health system. The mechanisms we have enumerated encompass the aspects of financial (i.e. accounting the allocation and use of resources), performance (i.e. meeting the targets), and political (i.e. publicizing the performance of local governments to inform voters) accountabilities as earlier described in the introduction of this article. These accountability lines that link local decision-makers to national/central decision-makers offer opportunities for rewarding satisfactory performance of local governments with incentives and discouraging negligence in decision-making through regulation (i.e. a “carrot and stick” approach), and our results present current mechanisms that could be enhanced, as well as potential policy considerations in the Philippines based on the perspectives of the decision-makers we have interviewed.

These insights from the Philippines draw from a growing realization to move beyond linear causation towards more complexity-informed thinking (Greenhalgh and Papoutsis, 2018). Particularly for the Philippines, the solution to the challenges in its health sector may not come from either recentralizing the health sector once more, or leaping towards federalism, but potentially from focusing on enhancing capacities and accountability regardless of what the governance structure of its health sector may be. By moving beyond an analysis of decision space alone through the lens of this synergy, we have explored opportunities for optimizing decision-making at local levels with a four-step approach that first identified the decentralized function, then qualitatively analyzed the decision space at lower levels for each function, and assessed the capacities and accountability adjustments required to improve decision-making within each function. This way of proceeding was useful to capture the complexity of analyzing decentralization and to yield concrete policy actions to be considered for the Philippines. Further studies on the Philippines may also explore the experiences of devolution for other sectors (e.g. agriculture, social welfare, public works, tourism, etc.) and compare lessons learned. In other words, to optimize decentralization for the health sector, widen decision space at lower levels indeed, but do not

forget to expand capacities and strengthen accountability. Bossert himself have wondered if the synergy that he has demonstrated in Pakistan would also work in other settings (68). It will be equally interesting and useful for policy, using a combination of methods, to see what recommendations emerge in analyzing decentralization in other settings using the lens of this synergy in order to truly optimize decentralization for the health sector in the Philippines and other countries.

4.6. Acknowledgments

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4.7. Supplementary material

The Supplementary Material provides a selection of more illustrative quotes for each of the health sector functions which could not be included in the main text due to space limitations.

Supplementary Material. Selected illustrative quotes extracted from the interviews that were analyzed using the Framework Method that provided basis for assessing decision space for each function as wide, moderate, or narrow. The assessed decision spaces are linked to the dimensions of capacity and accountability in Tables 4d and 4e in the article.

A. Planning		Comments
Local Levels	<p>Municipal Health Officer (MHO) who is also a member of the Association of MHOs of the Philippines (AMHOP), 16 years in government: <i>“My staff and I plan to prioritize programs with low accomplishments. We then present the plan to the Local Health Board (LHB), chaired by the mayor who will approve it. We then meet with the other municipal health officers and present the plans to the province for consolidation. The planning process is okay, but would be better if we expand participation to involve more stakeholders from the barangays [villages] and not only the local officials. Perhaps what is also lacking is the back-up. For example, the plan indicates that funding for this component will come from this agency, and then later the program does not receive the commitments, and the plan will not be implemented.”</i></p>	<p>These anecdotes from multiple backgrounds and levels of governance indicate that local decision-makers are indeed able to make decisions related to planning. Thus, decision space could not be seen as narrow. However, from development of the plans, to priority setting, involvement of stakeholders, and implementation of the plans, it is a common theme that local decision-makers cannot make decisions on their own without relying on the assistance, mostly technical in nature, provided by the DOH at central and regional levels. Thus, decision space cannot also be seen as wide. On the basis of the themes that have emerged, decision space for planning is therefore assessed as <u>moderate</u>.</p>
	<p>Mayor of a low-income municipality who is also a medical doctor, 26 years in government: <i>“National government wants LHBs to be functional, but it’s up to us to make it functional. We meet for the municipal health action planning, which flows from the Barangay [village] health action planning. So the municipal plan is a consolidation of the various Barangay plans. The DOH has a representative in the LHB, and that is very good because the mayor doesn’t know everything. It’s a coincidence that the mayor here is a doctor, but how about those areas whose mayor is not a doctor? We need help from the DOH for the technical aspects, for example, in the family planning program, immunization, etc. We also review our shortcomings. But, you know, it varies from one municipality to another [laughs]. That is the disadvantage of devolution, right? The way things are is not uniform and depends on municipal leadership.”</i></p>	
	<p>City Health Officer (CHO) of a highly-urbanized city, 32 years in government: <i>“We have the minutes of the LHB meetings, but the attendees were actually not there! [laughs]. Kidding aside, what the national government wants now is to re-organize the LHB. During our last meeting with national government representatives to discuss good local governance, we were told to expand LHB membership. If I would really assess it, and I am free to say this, our LHB is not fully functional because there were times when we set a meeting and the mayor, who should chair it, was not around. Although it is possible for somebody else to be the presider, of course what we want is for the mayor to be there. So going back to that meeting, we were told that LHB functionality will now be part of the criteria for recognizing local governments with the seal of good local governance.”</i></p>	
	<p>Provincial Health Officer (PHO) who is also a member of the PHO Association of the Philippines (PHOAP), 32 years in government: <i>“DOH asks local governments, especially the provinces, to draw our local investment plans for health. DOH gives us the roadmap, guiding us where we should go, and then we in the province make a comprehensive plan containing what we need to do to improve our health system. In this plan we see the gaps that the municipalities are not able to address, which we in the province then pass on to the DOH. In other words, there is re-integration, in a way, between the DOH, the province, and the municipalities within it, integration which was present before devolution in 1992. We try to regain that integration through planning. And we still go back to what we consider our mother unit, the DOH, because it’s the DOH that can help local governments to enhance the operations of their health facilities.”</i></p>	
Central Level	<p>Former Regional Director of the Department of Health (DOH), 29 years in government: <i>“Provincial and municipal plans are nice to read, but these are not followed [laughs]. We do so many workshops where someone from the DOH central office goes down and explains to local governments how planning should be done. Then we have issues with prioritization during implementation. I really hold the local governments accountable. I say, ‘Your plan has not been completed yet, why then will the DOH give you additional funds?’ Something like that. The idea is nice once again, but there is so much political intervention, you know. There is lobbying up there, for example, in Congress where the budget is approved. You’ll be surprised that an item in the plan was slashed, or an item was included which we did not request for, all because of political interventions. How I wish that we really follow the plans.”</i></p>	

B. Financing and Budget Allocation		Comments
<p style="text-align: center;">Local Levels</p>	<p>MHO of a low-income municipality, 17 years in government: <i>“It’s really difficult when we don’t have money. When I started here in 2000, the annual budget for health for the entire municipality was only PHP 300,000 (USD 5,600). How can you possibly function with that? I asked our municipal council to increase it, but they could not approve it because the budget was already in place. In 2003, instead of using the budget to buy medicines, we decided to use it to enroll our constituents in PhilHealth. At that time, the premium was PHP 120 (USD 2) per family per year, and in return PhilHealth would pay us a capitation fund of PHP 300 (USD 6) per family after we provide primary care services to these families. In the end, we had something like PHP 600,000, and I could use half of that to buy medicines.”</i></p>	<p>Drawing from the themes emerging from these interviews of various decision-makers, it appears that local decision-makers are somewhat able to make decisions related to local budget allocations and creation of other sources of financing, but only because of a significant amount of assistance coming from central sources (i.e. DOH support and PhilHealth payments). Otherwise, local decision-makers would likely be unable to make decisions in financing and budget allocation optimally when left on their own and without some form of central augmentation. Decision space for this function is therefore assessed as <u>moderate-narrow</u>.</p>
	<p>PHO of a high-income province, 21 years in government: <i>“About 25-27% of our Internal Revenue Allotment (IRA) is allocated for our hospitals, and about 5-7% for preventive services. I have an income recovery scheme here. The province provides the budget for maintenance and other operating expenses of hospitals, but I tell the hospitals to recover at least 90% of that and return the funds to the province. The hospitals are able to recover it through their PhilHealth income, and also through income from services not covered by PhilHealth but outpatients pay for, such as ultrasound or CT scan. So majority of our local budget is used for hospital operations, and that’s curative, right? That means we spend so little for preventive services, which should have a bigger investment. This is what I want to ask from DOH, to provide additional funding to enhance our delivery of public health programs.”</i></p>	
	<p>Mayor of a highly-urbanized city, 19 years in government: <i>“In 1998, when I was Congressman, I would ask the DOH during budget hearings to provide funds to the district hospitals in my province. And the common answer from the DOH was that these facilities were already devolved to the provincial government, and the DOH could not provide anything. When I became Governor, I enrolled my constituents in PhilHealth using the provincial budget. I would say that one of the key elements of success was PhilHealth. In fact, there was a time when we had the biggest enrolment in the country, more than 300,000 PhilHealth members. In the beginning, I knew that our provincial and district hospitals could not yet cope with the increasing demand from the increase in enrolled members. But I said that was okay, and we would be sustaining the financial operations of our hospitals.”</i></p>	
	<p>Former Provincial Governor, 17 years in government: <i>“What is lacking? Responsibilities have been given, granted. But resources continue to be centralized. The sharing of taxes is still heavily in favor of the national government, 60-40. The Local Government Code says that the regional offices of national agencies whose functions have been devolved should be diluted into monitoring offices providing technical assistance. The reality is, they continue to function, and the budget of the DOH continues to increase through the years. Now, local governments should not be dependent on their share from national taxes called IRA. They also have their local taxing powers to raise their own revenues. But local governments are not on equal standing. Some are industrialized, some are agricultural. Some have real property. So the funds that local governments could raise are not enough to underwrite the expenses for the devolved services. And Congress will not want that national funds are diminished because they won’t have access to the funds if these are downloaded to local governments.”</i></p>	
<p style="text-align: center;">Central Level</p>	<p>Former high-level official of the DOH Central Office, 41 years in government: <i>“The important thing is for local governments to understand. Once I visited a province, and I saw that their new maternal delivery unit had been completed. How many deliveries have been performed here? I asked them. They showed me the list, and it was around 30 per month. Is this facility accredited by PhilHealth? I asked. They said not yet, and they were passively waiting for the outcome of their application for accreditation. And they have been operating for 3-4 months already. I showed them the computations. They were missing like PHP 800,000 (USD 15,000) worth of potential PhilHealth payments in the last four months. Do you realize that this is the money you are missing? I told them. Even the Governor was surprised. I told him, now that you know, would you be more pro-active in securing accreditation?”</i></p>	

C. Program Implementation and Service Delivery		Comments
Local Levels	<p>MHO of a high-income municipality, 12 years in government: <i>“The DOH changed the EPI [Expanded Program on Immunization] and shifted to Td [low-dose diphtheria toxoid] as Tetanus vaccine. Oh, I was not aware of it, and the new vaccines just arrived here. So I called the DOH requesting for guidelines. My wish is for us to be informed well. Are they really asking us down here? The program just goes down. It’s a pity for the MHO because I have to dance with all of these programs. But I do have the freedom to delay implementation, because I also need to think about how these programs fit our municipality. But I cannot really disobey because it would be embarrassing as the DOH supports us in so many ways. If we don’t comply, we are like ungrateful. So all programs are coming from the DOH, but we modify in implementation. For example, DOH wants us to implement an NCD [non-communicable disease] program and form NCD clubs. But we already have a diabetes club here. So I just expanded the diabetes club.”</i></p>	<p>Analysis of the interviews of decision-makers indicates a variation in perspectives on decision-making related to program implementation and service delivery. On the one hand, implementation of health programs by the local governments is largely the result of what is being cascaded down by the DOH from central and regional levels. On the other hand, local governments also have some flexibility in deciding how to implement such programs at their level. For these reasons, decision space is assessed as <u>moderate</u>.</p>
	<p>Assistant CHO of a highly-urbanized city, 22 years in government: <i>“The DOH has a role because there are issues which we cannot answer as a city. For example, during our last maternal and child health program meeting, a question was raised about HIV-positive pregnant women who deliver in our birthing facilities. We do not have guidelines on how to manage the newborn from an HIV-positive mother. So we go back and ask the DOH because the technical guidelines should come from them. If the mother has hepatitis B, how do we care for the baby? And we do not have immunoglobulin here for the baby. The DOH should provide the guidelines for that. On Tetanus toxoid, the DOH decided suddenly to change that and buy Td instead. Can we give that to pregnant women? They should give us the guidelines for that. If something wrong happens to our patient here, we have the DOH guidelines to show for it. I know that it takes time to produce guidelines. But we cannot also neglect our patients.”</i></p>	
	<p>Member of Congress representing a low-income province, 26 years in government: <i>“What I don’t like about devolution is sometimes the department heads no longer have an initiative to think about their own programs. It’s like they always depend on the national government. Because that’s their comfort zone, to follow whatever DOH says up there. But sometimes it is really good that you have your own program in your locality which you could truly call your own. Then if you would see that there are national programs which you think are appropriate to the local context, then apply these. Otherwise, what is happening is that the PHO would insist to convene all of these committees, such as an HIV/ADS council for example, because that is what is being prescribed by the DOH from above, and we have all these committees which may not be relevant to our problems here.”</i></p>	
Central Levels	<p>Regional Director of the DOH, 32 years in government: <i>“It’s not so difficult to implement DOH programs at local levels especially if we’re able to engage the politicians. It’s really engaging them as the strategy. Once we are able to establish the relationship with the local government, it would be easy. For my part, I do it personally, by making phone calls to the governors and mayors. When the DOH rolled out the MR-OPV (measles, rubella, oral polio vaccine) mass immunization in 2014, this region achieved 91% coverage and vaccinated more than a million children. If we got a low accomplishment, national accomplishment would be pulled down as we are a big region. So I made calls to the governors and mayors, personally updated them, and made strategic visits also to about 15 Barangays. I did what it meant to be politically-savvy. It’s really letting them realize that they are part of the solution.”</i></p>	
	<p>High-level official of the DOH Central Office, 28 years in government: <i>“As the devolution process evolved, and as local governments become more capable to handle their health services, there were circulars issued by the DOH programs in the central office to ensure quality, for example, on how to package the tuberculosis control program for their locality. Some of these guidelines sought to remedy the negative aspects of devolution, and so the concept of interlocal health zones or service delivery networks to group local governments together emerged to encourage different local governments serving the same catchment area to deliver health services in a harmonized manner.”</i></p>	

D. Management of Facilities, Equipment, and Supplies		Comments
Local Levels	<p>MHO of a low-income municipality, 16 years in government: <i>“If I compare this municipality with the other GIDA [Geographically Isolated and Disadvantaged Areas] municipalities, we have the most number of BHS [Barangay Health Station] constructions because of HFEP [Health Facility Enhancement Program]. So as MHO, I proposed these to the DOH because I could see that we do not have a physical structure when I visit the barangays. Sometimes, we deliver services under the tree, sometimes in the barangay (village) hall, sometimes in the school. So for every barangay there is now a BHS. We also have equipment now because HFEP includes the corresponding equipment and instruments for every structure built, and the counterpart of the local government is to provide the staff.”</i></p>	<p>The themes emerging from decision-making related to management of facilities, equipment, and supplies suggest that most local governments in the Philippines have adequate latitude to decide on how they manage these resources, but are fully able to do so if with assistance from DOH and PhilHealth and, in some cases, private sector involvement. This observation is noted across decisions related to what facilities to build, how to maintain these facilities, and how to make these fully-equipped. Decision space for this function could neither be wide nor narrow and, thus, the overall assessment of moderate is made.</p>
	<p>DOH-hired medical doctor deployed to serve as MHO (“Doctor to the Barrios” program), one year in government: <i>“It’s really DOH that implements the construction for HFEP. For example, I will receive a letter from the DOH saying that budget for HFEP 2018 is available, and these are the eligible projects, health facilities, or medical equipment. So whatever we need for facilities and equipment we would already state there in the proposal, which we submit to the DOH regional office. And then we wait until there is news of approval. Actually, I just wait [laughs] until it is finished. So this new facility we have, I really pushed for it. Because when I talk to the contractor, he would say that they have not yet been paid by the DOH. But when I talk to the DOH, they would say that they have paid the contractor already. So I don’t know anymore, but we already need the facility.”</i></p>	
	<p>PHO of a high-income province, 21 years in government: <i>“The local government did not really have the money to buy huge equipment. I advised the Governor to get into public-private partnerships. We engaged companies that would place diagnostic machines in our hospitals, like CT scan and ultrasound. We told the companies that we would not buy the equipment but they would lend it to us under an agreement, and they get a monthly payment from us for using their equipment. We discuss a recovery scheme, which should not compromise the income of the province. For example, with our X-ray machines, the patient pays PHP 300 (USD 6), 100 of that goes to the private partner, and 200 goes to the province. We tell our private partner that their advantage is that they are securing not only one hospital but 14 hospitals owned by the province. On the other hand, I tell the Governor that the partnership is good for the province because we will not shell out a huge amount of money from our IRA to buy equipment which is just being leased to us, but we are still able to provide the service to our constituents. Maintenance and upgrade of the equipment will also be the responsibility of the private partners.”</i></p>	
Central Levels	<p>Director in the DOH Central Office, 28 years in government: <i>“If you would look at how the DOH works with local governments now, it seems that a bulk of our budget actually goes to them. It’s as if it is not devolved. During the last years, DOH upgraded their facilities. DOH is also providing the commodities for the programs. DOH is giving them the drugs, TB drugs, and now even hypertensive drugs, diabetic drugs. So there is always that question, are we really in a devolved set-up? It has been observed that the local governments really do not have the capacity for health services. I’m not saying that this is happening across the country, but in most municipalities and provinces, most especially in the low-income ones, well, even in some first-class provinces. Why? Because the population has increased but there was no increase in the infrastructure and the personnel. That’s why the DOH augments the local governments.”</i></p>	
	<p>High-level official of the Philippine Health Insurance Corporation (PhilHealth), 20 years in government: <i>“The RHUs [Rural Health Units] of the municipalities can be accredited by PhilHealth as maternity care provider, or primary care package provider, or TB-DOTS package provider. So we have to make sure that, because these facilities are not licensed like how DOH would license hospitals, the RHUs would have to go through inspection by our accreditation teams to be eligible for PhilHealth payments. So the RHUs must meet the standards. Well, some municipalities do not have enough budget to make sure that they pass the accreditation not only because they are poor, but because the services are not complete. For example, an RHU cannot be accredited as maternity care provider if there is no midwife, or no obstetrician for referral, or they lack equipment and medicines.”</i></p>	

E. Health Workforce Management		Comments
Local Levels	<p>Mayor of a middle-income municipality who is also a lawyer, 21 years in government: <i>“At the moment, we really lack health personnel because we don’t have the capacity to hire. In fact, just recently, we increased the salaries of personnel, as required by law, because the rates of health personnel are higher than those of other local employees. This is where we have a problem. We now have a population of 42,000 but we only have one doctor in the Rural Health Unit. It is also not possible for us to just hire and hire because there is this PS [personnel salaries] cap set by the Commission on Audit that limits what we can use for salaries to a certain percentage of our budget. We already proposed that we will pay personnel with honoraria rather than salaries because in this way we can contract additional personnel.”</i></p>	<p>The themes that emerge from the perspectives at various levels of governance indicate that local decision-makers are able to hire the health workforce they need, but in many cases decisions are limited by the lack of resources to provide salaries and also by political considerations. Some local decision-makers have also expressed dissatisfaction with the variations in their compensation, lack of opportunities for career development, and the frequent intervention of politicians in decision-making for health workforce management. While the DOH has aimed to augment the lack of health workforce in some localities through the deployment of centrally-hired personnel to these areas, it remains to be seen if this strategy is sustainable and would result in the availability and retention of the health workforce in the long-term. Given this context, decision space is assessed as <u>moderate-narrow</u>.</p>
	<p>MHO of an island municipality, 16 years in government: <i>“In hiring, of course, we consider political favors. If the applicant is not from the same party as the mayor’s, then he/she will not be hired. Even if I like this applicant who is very capable, but if he/she supported a different party during the last elections, he/she will not be hired. We cannot do away with this in the Philippines. You know, I have worked in the local government for so long, and I have learned to embrace politics and dance with the situation. My efforts will go to waste if I fight for the applicant I want and then I have conflict with my mayor.”</i></p>	
	<p>PHO of a low-income province, 29 years in government: <i>“A poor province could only afford this much, and cannot provide salaries like a wealthy province could. In my case, my salary is only for a second-class province, because my province has the capacity of only a second-class local government. If the province becomes first-class, then the salaries will go up too. That is why when you compare the salaries in different classes of provinces or municipalities across the country, the rates would be different. I think salaries should be standardized across the country, regardless of where one is serving, because we are all doctors anyway, same with nurses and midwives. We are all health professionals, right?”</i></p>	
Central Levels	<p>Representative of a non-government organization (NGO) assisting local governments, 14 years in government: <i>“I think the deployment of health workers by the DOH to augment the staff in local government facilities is good. But, wait, what do they actually do there? Okay, so they send 20 nurses over there, but they sit there in the facility. I think augmentation is needed but it should not be done every year. It has to be rational. There are human resources provided by the center, but how are those resources effectively used at the local level? It’s like, oh, this local government needs five midwives, so I give it five midwives. And then the other local government says, we were given 10 but we do not know what to do with them [laughs].”</i></p>	
	<p>Former high-level official of the DOH Central Office, 23 years in government: <i>“From the point of view of health personnel, it would really be better if they were part of one organization. Because from the point of view of career, somebody who does well in a local government can be tapped by the DOH, and can be assigned in different places, giving a lot of flexibility for that person’s career. Under devolution, you know, you work in a province or municipality, and you want to move to another province, or work at the regional level, or in the central office—it’s much more difficult to move because these are not the same organizations. And then, the central level will not be looking necessarily at people in the provinces or municipalities for new blood to reform the organization because the local governments are not under it. I mean, DOH would not have the data at their fingertips, unless they’ve actually developed an information system that could tap deep into local government files.”</i></p>	

F. Data Monitoring and Utilization		Comments
Local Levels	<p>MHO of a high-income municipality, 12 years in government: <i>“What’s happening now with the DOH’s deployment of the PHAs [public health associates] to us is that the PHAs directly interact with the DOH for the data reports. So from the municipality, sometimes I don’t even see the reports anymore, reports go directly to the DOH regional office. The PHO is bypassed and has lost its role. Ideally, the DOH should ask the data from the PHO because the municipalities submit the reports to the province. Monitoring is also too programmatic. Each DOH program coordinator also asks us for data relevant to their program only. Ideally, all these reports, for whatever program there is, should be consolidated in a database already. We are also still paper-based. We should be electronic already, but different local governments use different EMRs [electronic medical records]. We are waiting for the interoperability of these EMRs.”</i></p>	<p>The themes from the interviews reveal contrasting views on how decisions related to data monitoring and utilization are made between those at central/regional and those at local levels. Nonetheless, from the point of view of local decision-makers, the collection of indicators and management of data is mostly within their purview, while the DOH performs the function of ensuring the timeliness, accuracy, consolidation, and utilization of the data. For these reasons, decision space is assessed as moderate.</p>
	<p>Assistant CHO of a highly-urbanized city, 22 years in government: <i>“Perhaps if you ask the DOH, they would tell you that they are having a hard time with the data because of devolution. It takes a long time for us to submit reports to them. Why am I taking a long time? For my part, I am consolidating all of the reports, including those from our hospitals. So, it is difficult, right? Oh, we do our own surveillance and DOH also does its surveillance, that’s why it is difficult. Actually, there are instances when DOH detects cases first before we do. And there was a time also when we detected it first before they did. So before the DOH even learns about it, we already have a report. That is why maybe for them the DOH is saying that it’s more difficult. Because they feel there is an extra step before the data gets to them, and the city still needs to gather the data from all our health centers.”</i></p>	
	<p>PHO of a low-income province, 29 years in government: <i>“We are able to complete the data for the province, usually until after the end of the year, around the last week of February or first week of March. When we perform data quality checks, we would really see that it is not perfect, we would see many problems with the data. We are still paper-based. Although there is also an electronic database, but then usually from down there it is paper-based and then the data is manually transferred to the computer in our office. If we want to check the data, what we examine is the hard copy, because maybe there was a problem in the encoding. But from my view, this is already improving.”</i></p>	
Central Levels	<p>Regional Director of the DOH, 32 years in government: <i>“It’s difficult to collect data because even with a digital database, local governments submit reports late. So we install our own data collectors called PHAs in local governments to do parallel data collection. Sometimes the PHO complains because local data are transmitted directly to the DOH regional office. These are issues we need to be aware of to ensure coordination, but the DOH also cannot just wait always for the delayed data from the local governments when we need to make decisions.”</i></p>	
	<p>Regional Director of the DOH, 34 years in government: <i>“From the municipality, the reports go to the province, although the DOH regional office is furnished with a copy. It’s the province that consolidates the reports and submits to the region. And then we consolidate it and submit it to the central office. We are now reviewing the process for the data to be more current, because that is how it should really be, that we have the data we need to act at this time without having to wait for consolidation. Now we have what is called a dashboard where we have certain indicators to look at. When we had problems with the maternal health program, we were collecting maternal indicators monthly through our deployed staff and did not have to wait for the local governments, so that we already know the trends and could act even before the official report is finalized. What is good about the dashboard is that with certain indicators we can compare areas, so we have an idea how far we are from our targets. Previously, to be truthful about it, the local governments were already estimating in advance what they would accomplish, and that is what they were reporting.”</i></p>	

5. Discontent among local health managers and dependence on central support are driving the desire to re-centralize health services: A pilot survey in a Philippine region

Harvy Joy Liwanag^{1,2,3*} and Kaspar Wyss^{1,2}

¹ Swiss Tropical and Public Health Institute, Basel, Switzerland

² University of Basel, Basel, Switzerland

³ Ateneo de Manila University School of Medicine and Public Health, Metro Manila, Philippines

*Correspondence to:

Harvy Joy Liwanag, Swiss Tropical and Public Health Institute, Socinstrasse 57, PO Box CH-4002,
Basel, Switzerland

Email: harvy.liwanag@swisstph.ch

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5.1. Abstract

Background:

The Philippines devolved the authority for health services to local governments as part of decentralization since 1992. There have been mixed opinions among decision-makers through the years on whether the Philippine government health sector should remain decentralized or would be better re-centralized.

Objectives:

We sought to analyze local decision-makers' perspectives on the impacts of devolution, on who they think should be making decisions, and on their preferred forms of health service governance should they be able to change the situation.

Methods:

We employed a mixed methods approach. Questionnaires were emailed to three groups of decision-makers in Northern Luzon region in the Philippines: a) Department of Health staff deployed to local governments; b) elected local officials heading local governments; and c) local health officers. Participants were asked on their preferred decision-makers in the functions of planning, health financing, resource management, human resources for health (HRH), health service delivery, and data management and monitoring, and whether they prefer devolution or recentralization. Interpretation of survey results was complemented by the qualitative analysis of in-depth interviews with 27 other decision-makers.

Results:

We received 24 responses, or a response rate of 4.5%. Despite this limitation, survey participants represented a wide range of local settings. There was a consistent desire to shift decision-making away

from the local politician and more towards the local health officer in five functions. Most survey participants preferred re-centralization if they could change the situation.

Conclusion:

Discontent among local HRH due to politicization and their lack of compensation and the dependence of local governments on central support are driving the desire to take decision-making away from local politicians and the preference for re-centralization. Decentralization must therefore ensure that those who are empowered by the process will perform decision-making with adequate capacities and full appreciation of the technical nature of health services.

5.2. Introduction

Health sector decentralization, particularly devolution of authority as a form of decentralization (Mills, 1994), has been promoted globally to capacitate local governments to steer and oversee health services that they will be in charge of (Saltman et al., 2007). But an essential question hereby is: Who among the actors at local levels is in the best position to make decisions for health services? Take the case of Kenya, which has decentralized its government health sector since 2013 as part of a broad effort to transfer powers to 47 semi-autonomous counties. The rapid transition to devolution has led to anxiety among sub-county managers who were ill-prepared to assume their new roles and unclear about their new lines of accountability (Nyikuri et al., 2017). Or take the case of the Philippines, one with a much longer history of devolution since 1992 (Grundy et al., 2003; Langran, 2011). Through the years, there's been a tug-of-war between those who believe that local governments should have more control over financial resources in order to support local health facilities well (Requejo, 2018), and those who believe that these facilities would be better off if their ownership and management are re-taken by the central government by reversing devolution and re-centralizing the health sector (Baquero, 2018; Senate of the Philippines, 2015).

Given these diverging positions, we have previously argued that the way forward is not to debate whether health service governance is better decentralized or better centralized, but rather to understand what really makes decentralization more effective in strengthening the health system in some settings but not in others (Liwanag and Wyss, 2017). Drawing from Bossert’s “decision space” approach (Bossert, 1998), we have previously analyzed some of the conditions in the Philippines that enable decentralization or devolution to be more effective (Liwanag and Wyss, 2018). We have likewise explored how to optimize decision-making at local levels through the lens of the synergy of decision space, capacity, and accountability (Liwanag and Wyss, 2019), a synergy initially explored in studies on decentralization in Pakistan (Bossert et al., 2015; Bossert and Mitchell, 2011). These previous studies on the Philippines have indicated that, despite devolution, the government at central level continues to support many local governments which, if left on their own, would still be unable to fully perform the health sector functions they have taken on.

5.2.1. Setting the context: Central support for financing local health services

The aspect of financing local health services provides an example of this continuing support from the central government in the Philippines. Devolution led to provinces taking on ownership and management of provincial and district hospitals that deliver secondary-tertiary care, while municipalities, geographically within these provinces but nevertheless semi-autonomous, assumed “Rural Health Units” (RHUs) that deliver primary care services (Atienza, 2004; Liwanag and Wyss, 2018). City governments, on the other hand, would own RHUs and also hospitals depending on their resources. Despite devolution, the central government retained the power of national tax collection and would re-distribute the income to local governments based on their land area and population. In many cases, this “Internal Revenue Allotment” (IRA) that local governments would receive from the central government serves as the main revenue stream for financing both health and non-health services

(Capuno and Solon, 1996). Additional financing may come from local taxes which the local governments could impose and collect, although this income would depend on the number of businesses that thrive in the locality. Particularly for local health services, another revenue stream from the central level would be income from the Philippine Health Insurance Corporation (PhilHealth), which administers the national social health insurance program and pays local governments for selected services provided in their accredited health facilities (Obermann et al., 2018). Further financing from the central level, specifically with the aim of assisting the local governments in building new and upgrading existing health facilities, was also provided in recent years by the Department of Health (DOH) (i.e. Ministry of Health) through the “Health Facility Enhancement Program” (HFEP) (Liwanag and Wyss, 2019, 2018). The DOH would further provide in-kind forms of support to augment local governments in delivering quality health services, such as technical assistance in planning (La Vincente et al., 2013), training local decision-makers in management (Sucaldito et al., 2014), supplying local health facilities with vaccines and additional medicines, and deploying physicians to rural areas that lack them (Leonardia et al., 2012).

Nevertheless, analysis of revenue streams for local health services would suggest that central sources may differ among local governments. For example, data from year 2015 on budget allocation in 4/4 provinces, 8/9 cities, and 111/116 municipalities in the region of Northern Luzon in the Philippines revealed that the share of central revenue streams per capita was only substantial in provinces (49%) and cities (27%), but rather small in municipalities (10%), which relied mostly on their local budget to finance health services. Furthermore, PhilHealth comprised a bulk of the central revenue stream, especially in provinces and cities that manage more capital-intensive hospitals compared to municipalities that manage RHUs, while the share of DOH support through HFEP was only 3-5% across the three types of local governments (Figure 5a).

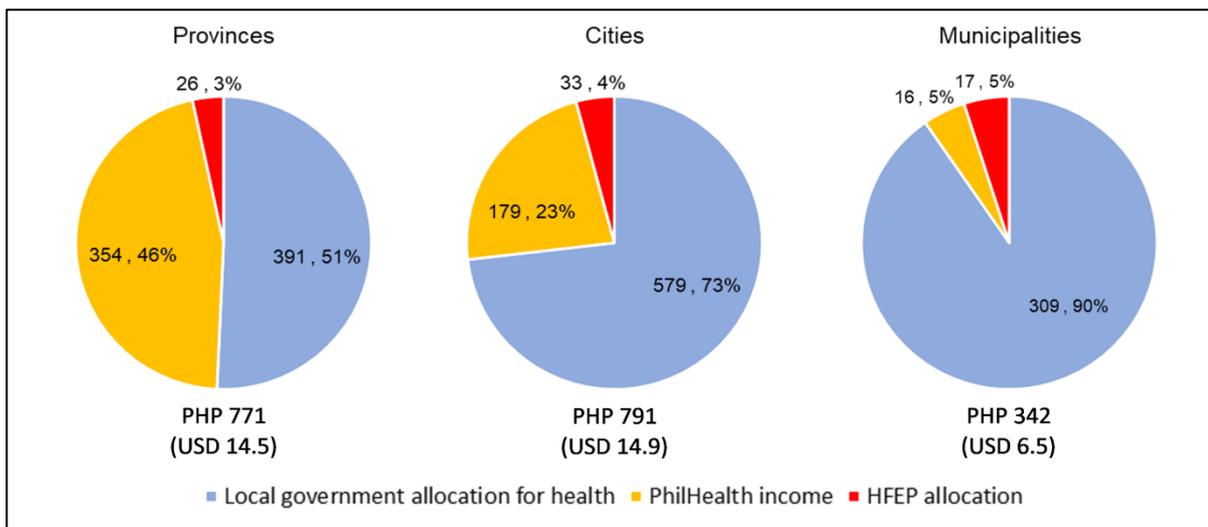


Figure 5a. Per capita allocation in 2015 for local health services divided into three revenue streams in four provinces, eight cities, and 111 municipalities of Northern Luzon in the Philippines. Amounts in Philippine Peso (PHP) (USD 1 = PHP 53). (Source: analysis of data provided by PhilHealth and the DOH Regional Office).

5.2.2. Who should be making decisions at local levels?

Given this trend in central support for financing across types of local governments and the diverging positions in the Philippines on whether local health facilities should remain under local governments or would be better managed if re-taken by the central government, the question is hereby once again raised: Who should be making decisions for local health services? In this article, decision-making was defined in terms of six functions at local levels where authorities make decisions relevant to local health services. Furthermore, local health services were defined as encompassing all services provided by the local governments to prevent and treat disease and promote health that are delivered to the local population both in and outside of health facilities. Focusing on one region in the Philippines, we sought to analyze local decision-makers' perspectives on the impacts of devolution to the management of local health services, on who they think should be making decisions for local health services, and on what

forms of health service governance (i.e. decentralized or centralized) they would prefer based on their experience in working within the government health sector.

5.3. Methods

5.3.1. Survey questionnaire

We employed a mixed methods approach for this study. For the quantitative component, we developed a structured survey questionnaire based on the findings of our previous in-depth interviews (Liwanag and Wyss, 2019, 2018) that asked for decision-makers' understanding of devolution, their opinions about its benefits to the health sector, as well as their perceived challenges in its implementation in their region. The questionnaire then asked respondents about local level decision-making, which we organized into six health sector functions, or the broad categories of tasks that involve decision-making based on Bossert's previous studies on decision space (Bossert, 1998; Bossert et al., 2015; Bossert and Mitchell, 2011). These functions were:

- a) Planning – development and implementation of plans for local health services;
- b) Health financing – revenue generation, allocation, and utilization to support local health services;
- c) Resource management – maintenance and upgrade of local health facilities (e.g. hospitals, primary care centers or RHUs, etc.) including equipment, and provision of supplies (e.g. medicines);
- d) Human resources for health (HRH) – hiring and firing of local health staff, including building their capacity and supporting their professional advancement;
- e) Health service delivery – developing and delivering public health programs to promote health and address local health needs; and

- f) Data management and monitoring – collection of data to monitor the health system, including the use of data to inform actions at local levels.

There was a two-step approach in the questionnaire to inquire about decision-making for each function, such that a question first asked respondents to identify who among the actors at local levels currently exerted the most influence over decision-making for that particular function. This was followed by a question that asked them to identify whom they would rather prefer to be influencing the decisions for that function if they could change the situation. These two questions for the function of planning are provided below as an example:

- *Drawing from your experience, who has the most influence in developing local health plans (e.g. plans discussed in the “Local Health Board” or those that become the “Investment Plan for Health”)?*
- *If you could change the situation, who should control the development of local health plans?*

The survey questionnaire then asked respondents for their preferred governance structure of the health system; that is, whether they prefer to maintain the current devolved system, or prefer to modify the governance structure by adopting options for re-centralization.

The survey tool was designed such that questions allowed survey participants to choose from a list of multiple options, but were also given an opportunity to further explain their answers in sentences, particularly for those questions that asked about their preferred structure of governance. Other questions (e.g. on understanding of devolution) did not give options but rather allowed survey participants to provide their answers directly in phrases or sentences. The questionnaire was converted in Google Forms to an online survey tool in order to facilitate collection of responses by implementing the survey in an electronic manner.

5.3.2. Study site and participants

Northern Luzon in the Philippines was selected for this study out of convenience because of the first author's (HJL) contacts with key officials of the DOH Regional Office in this region who supported the study and provided access to records. Northern Luzon is also a mid-sized region in the Philippines, which meant that survey implementation would aim to cover a feasible number of decision-makers given limitations in resources. This region is defined by the four provinces of Ilocos Norte, Ilocos Sur, La Union, and Pangasinan, together with nine cities and 116 municipalities, and has a combined population of 5 million based on the latest census of the population (Philippine Statistics Authority, 2016b).

We obtained from the DOH Regional Office a list of the email addresses of decision-makers at local levels whose eligibility for the survey was based on the following inclusion criteria:

- a) DOH Regional Office staff deployed to the various local governments in the region to provide assistance (e.g. "District Management Officers" or DMOs, "Nurse Deployment Program" or NDP nurses, "Doctors to the Barrios," and "Public Health Associates" or PHAs);
- b) Elected officials heading the local governments (e.g. provincial governors, city and municipal mayors and other local politicians); and
- c) Health officers responsible for managing the health services under the local governments (e.g. provincial, city, and municipal health officers).

The online survey questionnaire was sent to each of the email addresses in the list at least three times in a three-month period in 2018.

5.3.3. Mixed methods approach to data analysis

Responses were initially collected in Google Forms and the data subsequently exported as a Microsoft Excel file. Quantitative analysis to describe the characteristics of survey participants, including the use of radar charts to better visualize results, was performed in Microsoft Excel. For the qualitative component of the analysis, we drew from the survey participants' explanations for some of their choices in the survey (i.e. their answers in sentence form), and also from the Framework Analysis (Gale et al., 2013) of our previous in-depth interviews with 27 other decision-makers (Liwanao and Wyss, 2019, 2018). The themes that emerged from the analysis of these other in-depth interviews were used to complement the results of the online survey in order to deepen the explanations for the findings.

5.3.4. Ethics approval

This study was a component of a research protocol that was reviewed and approved in Switzerland by the Ethikkommission Nordwest- und Zentralschweiz (EKNZ 2016-00738) and in the Philippines by the National Ethics Committee (NEC 2016-013-Decentralization).

5.4. Results

5.4.1. Response rate and characteristics of respondents

We received from the DOH Regional Office a list of 682 unique email addresses of all DOH deployed staff, elected officials, and health officers in the region as described in the inclusion criteria above. An email invitation with a link to the online survey questionnaire was sent to all the email addresses, 153 of which bounced back or failed to deliver, suggesting these were invalid or deactivated email addresses. The email invitation was therefore re-sent to 529 email addresses. A total of 24 responses were received, corresponding to a response rate of 4.5%. Table 5a provides a summary of the number of responses received and the characteristics of survey participants.

Table 5a. Summary of responses received and characteristics of survey participants.

Email addresses	
No. of unique email addresses in the list	682
No. of emails that bounced back	153
No. of valid email addresses for follow-up	529
No. of responses received	24
Response rate	4.5%
Sex	
Female	14
Male	10
Age	
Mean	42
Maximum	62
Minimum	22
No. of years working in the government health sector	
Mean	14
Maximum	33
Minimum	1
Main professions	
Nurse	12
Medical doctor	10
Others	2
Present roles in the region	
<i>DOH staff deployed to local governments</i>	
District Management Officer (DMO) ^a	6
Public Health Associate (PHA) ^b	5
Nurse Deployment Program (NDP) ^c	3
“Doctor to the Barrio” (DTTB) ^d	1
<i>Elected officials of local governments</i>	
Municipal Mayor	2
<i>Health officers of local governments</i>	
Municipal Health Officer	6
City Health Officer	1

^a DMOs, or previously “DOH Representatives,” are DOH regional staff who liaise with the local governments in the region to advocate for the attainment of DOH objectives, provide technical assistance in planning, and perform monitoring and evaluation (Department of Health, 2019a).

^b PHAs are DOH regional staff deployed to local governments to assist in the development and implementation of health programs and primarily in the collection, analysis, and transmission to the DOH of local data (Department of Health, 2019b).

^{c,d} NDPs (Garma, 2018) and DTTBs (Leonardia et al., 2012) are nurses and medical doctors, respectively, hired by the DOH and deployed to the local government health facilities to augment the lack of staff and assist in service delivery.

Mapping the locations of assignments of the 24 survey participants indicated a wide representation of local settings in the region (Figure 5b). Some of the survey participants also had the responsibility for multiple locations.

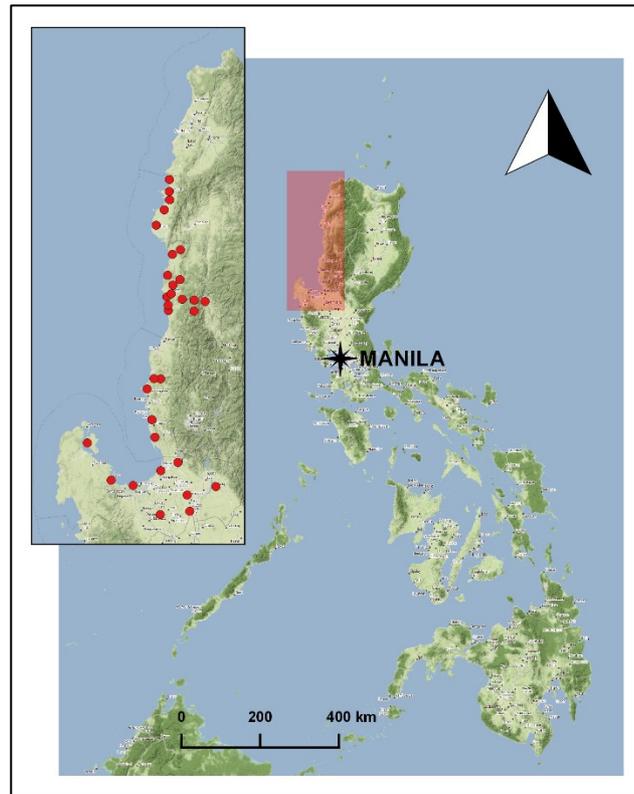


Figure 5b. Map indicating the locations of assignments of survey participants from the Northern Luzon region in the Philippines. (*Map tiles by Stamen Design, under CC BY 3.0. Data by OpenStreetMap, under ODbL.*)

5.4.2. Perspectives on health sector devolution

Most survey participants (22/24) understood devolution in the health sector as the “transfer” or “delegation” of “power,” “control,” “authority,” “responsibility,” “management,” “supervision,” “ownership,” “duties,” and/or “functions” for health services from the central level to local levels.

When asked about the benefits of devolution to the health sector, more than half of survey respondents (13/24) answered “empowerment of local governments to decide for themselves and address their own health needs.” On the other hand, their responses to the challenges in implementing devolution were more varied, such that 6/24 answered “decisions related to local health services have become politicized rather than evidence-based,” another 6/24 answered “local governments have continued to depend on assistance from the DOH,” and 5/24 answered “local health workers’ full range of compensation and benefits has not been provided consistently.”

5.4.3. Current vs. preferred decision-makers for health sector functions

Plotting the responses on radar charts for the six health sector functions revealed that most survey participants perceived decision-making to be currently influenced the most by the elected local official (e.g. provincial governor or city/municipal mayor), but would rather have the local health officer (“Local Government Code of 1991,” 1991), a medical doctor in an appointed position responsible for managing local government health services, to influence the decision-making (Figure 5c). This pattern of divergence was consistent in most functions, except for data management and monitoring where the local health officer was perceived to be both the current and preferred decision-maker.

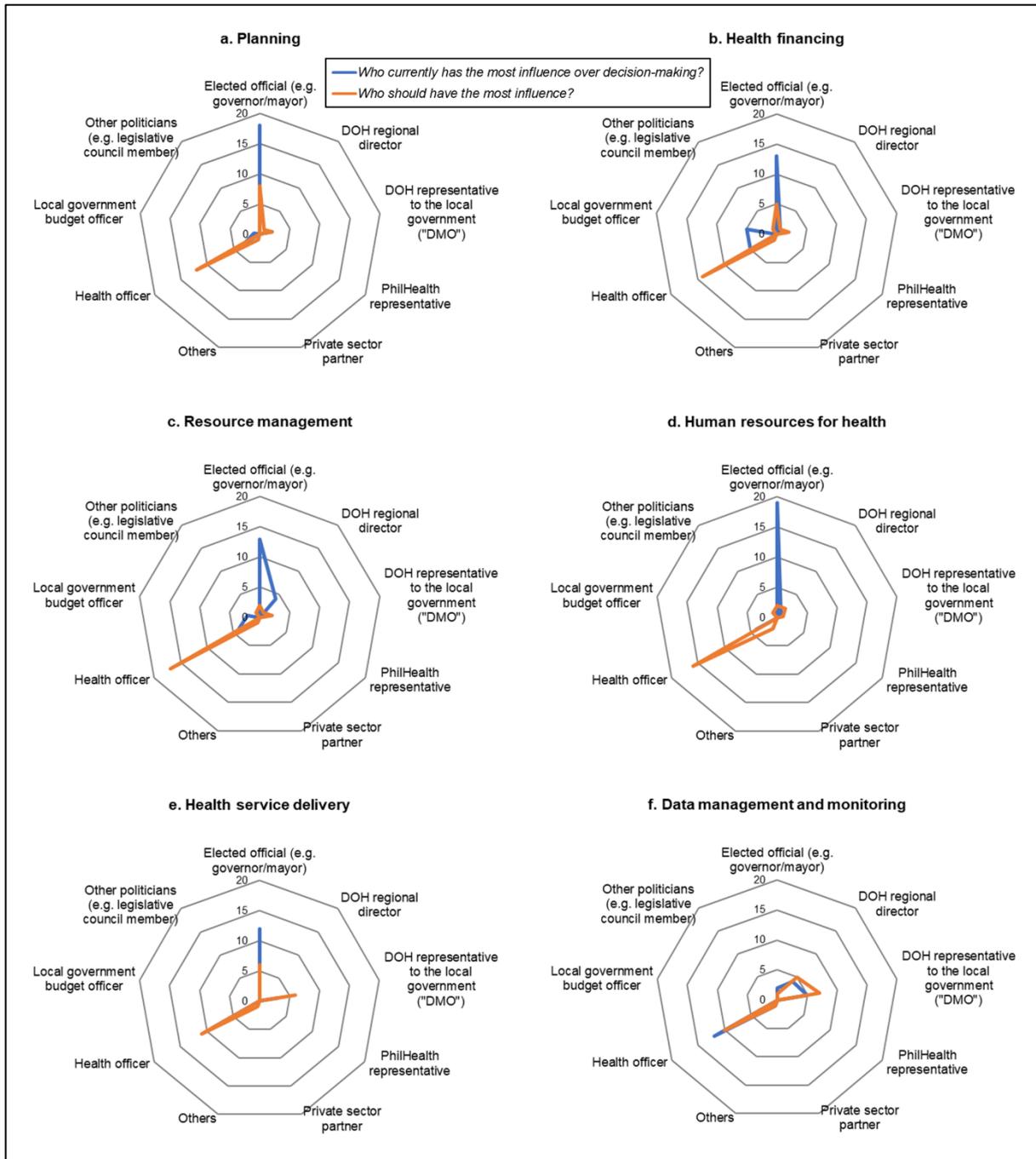


Figure 5c. Radar charts for each of the six health sector functions to visualize survey participants’ perception on who currently has the most influence over decision-making at local levels, and who they would rather prefer to decide for that function.

Illustrative quotes from the in-depth interviews are provided below to shed some light on the potential reasons behind survey participants' desire to shift decision-making away from the local politician in favor of the local health officer. The following is an illustrative quote for the function of planning:

“Our Local Health Board [note: LHB is where plans are discussed] is not really functional because we would set a meeting and the mayor is not around. It is possible for somebody else to be the presider. But of course, what we want is for the mayor to be there because once he calls for it, the other members really attend.” – City health officer in a highly-urbanized city, 32 years in government.

The following quote for the function of health financing further illustrates why the local health officer may be preferred in decision-making:

“It’s different before devolution when people were all health workers, we had the same thinking and understood the mandate of a hospital, which is to serve the people. But now, the finance staff in my local government have a different outlook. They are more into saving money. I really have to exert effort to convince them to fund this program or this purpose. My decisions pass through the governor, and I need to convince him. Whereas, before devolution, the chief of the hospital had the autonomy, and as the money from the national government goes down, I could decide what to do with the money. That is not the situation anymore.” – Provincial health officer in a low-income province, 29 years in government

For resource management, this illustrative quote provides an example of the how the local health officer may not be able to secure support for upgrading or supplying health facilities because of conflict with the local politician:

“Every time I support a candidate during the elections, a different one wins as mayor. That is why all the improvements in our primary care centers come from assistance from the national government, and none from my local government. I went to my mayor once and asked bluntly, ‘Mayor, why are you

squeezing me? Why can't we have a good relationship? It's difficult. He's always saying yes to me, but on the contrary, there is no support for facilities.” – Municipal health officer in a middle-income municipality, 28 years in government

For the function of HRH, the following quote may also explain the preferred shift of decision-making away from the local politician:

“I don't always get the right person for the right job. When it comes to hiring, it's still the governor who has the final say. Of course, there is patronage, whoever is close to the governor, whoever will be able to add to his votes, that's the person who gets hired. Most of the time, I get consulted in hiring the professionals, for example, laboratory staff, or the positions with supervisory roles. But for the rank and file positions, it's the governor who decides. But these people should also be capable. We should not just hire anybody who knows nothing.” – Provincial health officer in a low-income province, 29 years in government

For health service delivery, this quote illustrates an example of the difficulty in implementing health programs because of the involvement of the local politician in decision-making:

“My mayor was not supportive of my anti-smoking initiative. In fact, he did not like it because he said that people will get mad, the stores will be mad. I was able to convince him later because I told him that he will get an award for this, he will be recognized. So he supported it, not because he was thinking that disease can be prevented, but because he wants to get the award. But politicians are like that, they are for recognition, never mind the impact.” – Municipal health officer in a low-income municipality, 16 years in government

Finally, the following two quotes may illustrate why data management and monitoring, in contrast to the five other functions, indicated no divergence between current and preferred decision-makers as the local politician's involvement in decision-making for this function was never mentioned:

“We submit our reports to the provincial health office, which then submits the reports to the DOH in the region. With the deployment of the Public Health Associates, they could be tapped by the DOH directly to submit the data that the regional office needs.” – Municipal health officer in a high-income municipality, 12 years in government

“Our data are updated, partly-paper and partly-electronic. We submit our reports to the DOH through the public health associates. Because gathering the data is important, we make sure that every pregnant woman is monitored at the level of the Barangay (village). We also know the indicators where we are lagging behind.” – Municipal health officer in a low-income municipality, 17 years in government

5.4.4. Preferred structure of governance

Analyzing the answers to the preferred structure of governance revealed that most survey participants (18/24) would prefer not to maintain the current devolved system but would rather consider various options for re-centralization should they be able change the situation (Figure 5d). At least half of survey participants (12/24) preferred the most extreme option of re-centralizing the entire system such that the central government would re-take authority over all local health facilities and HRH.

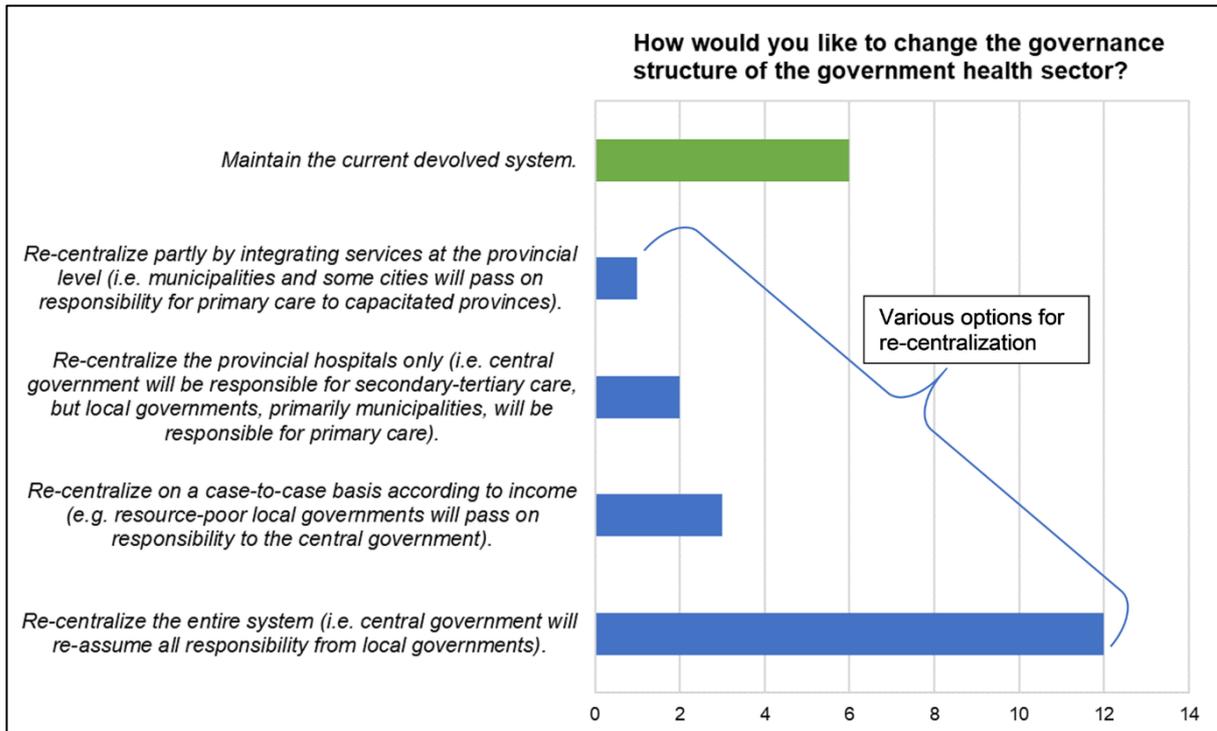


Figure 5d. Bar graph showing the number of survey participants who preferred maintaining the current devolved structure of governance and those who preferred various options for re-centralization.

Some of those who preferred maintaining devolution explained that “the potential gains from devolution still outweigh the existing problems and inefficiencies” and that “majority [of local governments] are supportive of the national health thrust especially if these are well promoted and explained by DOH representatives [i.e. DMOs].” When asked what could improve the current devolved system, one survey participant responded with “enlightening and empowering the local politicians about their respective health situations,” and another answered that the DOH “devolved the personnel, facilities, and equipment but not the budget for MOOE [maintenance and operating expenses]” and that the DOH should also transfer this budget to the local governments.

Survey participants' explanations for their preference to re-centralize the entire health sector could be summarized into two broad themes, namely, discontent among HRH and the perceived dependence of local governments on central support. For example, some of the HRH issues that drive the desire to re-centralize were captured by the following answers:

- *“So that all the benefits will be given to the health personnel and their supervision will be under the DOH and not influenced by politics.”*
- *“So that hiring of staff will be based on the qualifications and not on the who they know in government.”*
- *“Too much politicking in the local government. Health workers are being demoralized as benefits like hazard pay are not being given.”*
- *“Some benefits are not approved due to reasons that the local government has no budget and the compensation for municipal staff is far lower compared to staff at the central level, yet local staff do have overloaded designations added to their work.”*

On the other hand, the perceived dependence on central support as a reason for the preference to re-centralize were explained in the following answers:

- *“The main source of medicines, vaccines, trainings and augmentation of HRH is the DOH, but the direction of local health services is controlled by the local politician. With full re-centralization of the health system... the resources from DOH will be maximized and used according to their purpose... There will be systematic and organized mobilization of resources.”*
- *“Since local governments depend a lot on the DOH augmentation, I would rather prefer the entire system to be re-centralized so that all the needs of government health facilities will be provided, including the benefits and incentives of their human resources.”*

5.5. Discussion

This paper sought to analyze local decision-makers' perspectives on the impacts of devolution on local health services, on who they think should be making decisions, and on their preferred forms of health service governance should they be able to change the situation. Though survey response rate was low despite our best efforts, our interpretation of results nonetheless banked on the wide range of local settings in the region which survey participants represented and the use of a mixed methods approach to enrich our analysis.

There was good understanding among survey participants on what devolution means. Likewise, more than half understood its advantages for the health sector. However, the discontent among HRH due to the politicization of decision-making and the failure to provide their full range of compensation and benefits, as well as the persisting dependence of local governments on the central government for assistance were themes already emerging from the survey participants' answers to the initial question on challenges in devolution.

Consequently, the striking consistency in the pattern of responses that showed the desire to shift decision-making away from the local politician and more towards the local health officer was likely influenced by the survey participants' presumption that such a shift would rectify the perceived politicization in decision-making. The illustrative quotes provided some examples of difficulties in upgrading facilities (resource management function), hiring the qualified people for the job (HRH function), and implementing initiatives for health promotion (health service delivery function) when the final decisions had to be made by the governor or mayor and not by the local health officer who has the appreciation and technical expertise for these functions. The quotes further illustrated challenges in planning and financing when the local politician who is supposed to make decisions in these functions was either disinterested in health or not prioritizing it.

These observations are consistent with previous studies on devolution in the Philippines that reported on the common conflict between the local health officer and the local politician (Ramiro et al., 2001), on how the local politicians' decisions were driven by their desire to get re-elected in office (Capuno and Panganiban, 2012), yet they continued to have substantial discretion in planning and budgeting for health services (Kelekar and Llanto, 2015) and had a tendency to invest in tangible projects rather than support capacity building and improving the system (Obermann et al., 2008). Such observations in the Philippines are not unique. Other studies likewise reported on how tribal affiliations rather than qualifications influenced the hiring of HRH by local governments in Kenya (Tsofa et al., 2017a), how decisions for local health services in Indonesia and also in Kenya were made based on their appeal to the electorate (McCollum et al., 2018a, 2018b), or how political interference in health planning in Tanzania led to a complex relationship between the local politician and the local government technocrat (Frumence et al., 2013).

On the other hand, we postulate that data management and monitoring, as a more technical function, did not usually involve the exercise of wielding power to increase electability in office, benefits which would often attract the interest of politicians. Unlike the responses in the other five functions, data management and monitoring would therefore tend to be left within the purview of technocrats, which could potentially explain why the current and desired decision-maker for this function was the same person. A previous comprehensive study on decentralization of health information system in Tanzania, for example, did not report political interference in data management as one of the issues (Kimaro and Sahay, 2007).

Drawing from the explanations by the survey participants themselves, the clear preference by a majority to re-centralize the government health sector was likely driven once again by the two themes of discontent among local HRH and the recurring perception on the dependence of local governments on central support. Discontent among HRH due to their lack of compensation and benefits in the wake of devolution has been reported in other settings, such as in the non-payment of salaries for local HRH

with limited accountability for local governments in Nigeria (Khemani, 2006). A review of case studies in several countries has also reported on how decentralization threatened equal pay for equal work when national employees got compensated differently from decentralized employees, and yet equitable remuneration and satisfactory working conditions are known to be very important for motivating HRH (Kolehmainen-Aitken, 2004). However, the prominence of discontent among HRH as a theme in this study should also be interpreted with a caveat that there were only two local politicians (i.e. municipal mayors) among survey participants, with the rest as health officers and DOH staff. In a future survey, it is possible for findings to be different should more local politicians agree to participate and submit their responses.

On the other hand, the dependence on central level support in decentralization has similarly been reported in Indonesia where many functions have been transferred to local levels, but only those localities with revenues available from their own natural resources fared well in performing the functions (Silver, 2005). Thus, just like in the Philippines, the central government in Indonesia supported many local governments with grants, which increased their reliance (Silver et al., 2001). What is notable from our study, however, is that the perceived reliance on central support could be challenged by the data on revenue streams for local health services (as presented in the Introduction), at least in Northern Luzon where central sources were only substantial in provinces and cities but not in municipalities. If comprehensive data are available, it would be relevant to further investigate central-local revenue streams across multiple years in more regions in the Philippines to see if the reliance of local governments, at least in the function of financing, is an assumption that is supported by the evidence. Financing local health services from central sources is, of course, only one aspect of augmentation. Non-financial central support, such as the in-kind contributions of the DOH to the local governments in the form of vaccines, medicines, and other medical supplies, as well as the deployed HRH to many areas may also be quantified in further studies to analyze the extent of the share of central sources in supporting local health services. There is an opportunity for these further studies to use the

lessons from this survey to gather the perspectives of more local decision-makers in the Philippines and analyze if the sentiments in Northern Luzon reflect those in other regions with varying sociopolitical and economic contexts.

5.6. Conclusions

Local health services in the Philippines have been decentralized through devolution for the past 27 years, and yet the promise of reforming the health sector has not been fully realized according to the perspectives of decision-makers in this study. Discontent among local HRH, particularly due to the politicization of the decision-making process in resource management, HRH management, and health service delivery, and the local politician's disinterest in planning and lack of prioritization for health in financing are driving the desire to shift decision-making away from the local politician in favor of the health officer. This same discontent among local HRH due to their lack of fair and adequate compensation and the perceived dependence of local governments on central support are also driving the preference among local decision-makers to re-centralize the system. It is, however, uncertain if taking decision-making away from the local politicians or reversing devolution by re-centralizing the government health sector will provide the needed solution to these issues in the Philippines. Nevertheless, any attempt to decentralize (or, on the other hand, re-centralize) health services whether in the Philippines or elsewhere must ensure that the actors at local levels who will be empowered by the process will make the decisions for the various functions with adequate capacities and full appreciation of the unique and technical nature of health services.

5.7. Acknowledgments

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5.8. Author contributions

HJL conceived and designed the study under the supervision of KW. HJL performed data collection and analysis. KW contributed to interpretation of findings. HJL wrote the first draft of the manuscript. Both HJL and KW reviewed the drafts of the manuscript, provided intellectual content, and approved this version of the manuscript.

5.9. Disclosure statement

The authors have declared that no competing interests exist.

5.10. Ethics and consent

All study participants were provided with an informed consent form (ICF) prior to participation. The ICF form and the research protocol was reviewed and approved in Switzerland by the Ethikkommission Nordwest- und Zentralschweiz (EKNZ 2016-00738) and in the Philippines by the National Ethics Committee (NEC 2016-013-Decentralization).

5.11. Funding information

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5.12. Paper context

In countries like the Philippines it was not always clear who among the actors at local levels should decide for the health sector in decentralization. Our paper contributes to the global discussion by analyzing the perspectives of decision-makers in one region and concluding that discontent among local health staff and perceived dependence on central support are driving the desire for re-centralization. Therefore, those empowered by decentralization must have adequate capacities for decision-making for health services.

6. Decentralised governance of health services for improving health system performance (Protocol)

Harvy Joy Liwanag^{1,2,4}, Chandrashekhar T Sreeramareddy³, Kaspar Wyss^{1,2}, and Xavier Bosch-Capblanch^{1,2}

¹Swiss Tropical and Public Health Institute, Basel, Switzerland

²University of Basel, Basel, Switzerland

³Division of Community Medicine, International Medical University, Kuala Lumpur, Malaysia

⁴Ateneo School of Medicine and Public Health, Ateneo de Manila University, Metro Manila, Philippines

Contact address: Harvy Joy Liwanag, Swiss Tropical and Public Health Institute, Socinstrasse 57, P.O. Box CH-4002, Basel, Switzerland. harvy.liwanag@swisstph.ch

Editorial group: Cochrane Effective Practice and Organisation of Care Group (EPOC)

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6.1. Abstract

This is a protocol for a review and there is no abstract. The objectives are as follows:

To assess the effectiveness of decentralisation of governance of health services in improving health system performance, such as, but not limited to, access to and utilisation of health services, health insurance coverage, availability and mobilisation of resources for health services, healthcare provider outcomes, quality of care, impacts on equity, patient or population health outcomes, and other outcomes of interest.

6.2. Background

“Good governance” is an important determinant of economic growth, social advancement, and overall development, including the attainment of the 17 Sustainable Development Goals (SDGs) that succeeded the eight Millennium Development Goals (MDGs) and provided framework to guide development in the period 2016 to 2030 (UN, 2015; WHO, 2016).

According to the United Nations Development Program (UNDP), governance is “the exercise of political, economic, and administrative authority in the management of a country’s affairs at all levels” (UNDP, 1997). In order to achieve development goals, during the last two decades public sector policy reforms have been implemented in both high-income countries (HICs) and low and middle-income countries (LMICs). Decentralisation is one such public sector policy reform, wherein greater autonomy is transferred from higher to lower levels of governmental authorities, including the management of the delivery of health services. In some countries, decentralisation of health services is introduced as part of a broader public sector reform process that may also include other sectors, such as the administration of transportation, road infrastructure, culture, and others (Saltman et al., 2007). Decentralisation of health services has been implemented in a variety of forms depending on the existing political and public

administrative structures and the organisation of the health system itself in the country where decentralisation is introduced (WHO, 1995). In HICs like the United States, United Kingdom, Spain, and Italy, decentralisation of health services has been part of a broader fiscal decentralisation process in which central authority has been devolved to the sub-national level by providing autonomy to regional and local authorities (Litvack et al., 1998; Mills et al., 1990; Saltman et al., 2007). On the other hand, decentralisation of health services in many LMICs has mostly been a response to the primary healthcare approach promoted by international agencies such as the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) (Akin et al., 2005; WHO, 1995). For example, in Botswana primary health care has been decentralised to district and town councils and managed by a district health team while the central government continued to fund the capital grants and recurrent expenses (Mills et al., 1990). In Chile, there have been two levels of decentralisation, at the regional level and at the level of the municipalities, where the regional health secretariat has complete autonomy in health services administration, although the municipalities through an agreement with the director of health services are responsible for the primary healthcare system, including infrastructure, equipment, and staff, while the costs of services, including staff salaries, are paid for by national authorities (Mills et al., 1990). On the other hand, the Philippines in 1992 transferred decision-making authority to elected local government units all over the archipelago not only for public health services but also for the management of infrastructure, agriculture, environment and natural resources, and social services (“Local Government Code of 1991,” 1991).

6.2.1. Description of the condition

The forces that drive countries to move towards more decentralised arrangements in the governance of health services vary. For example, decentralisation has been viewed as a means to bring decision-making closer to the people who know better their needs, especially in countries that have just

transitioned into democracy (Mills et al., 1990). For the health sector, the objectives behind the desire for decentralisation have been previously summarised as follows: to improve both technical and allocative efficiency by reducing the levels of bureaucracy and matching health services to local priorities; to empower local governments to own their decisions for the health sector; to promote innovation in health service delivery by way of experimentation; to enhance accountability by increasing community participation in decision-making; to improve the quality of health services that meet the demands of users; or to improve equity by enabling local authorities to meet the needs of specific and disadvantaged groups (Saltman et al., 2007). Despite these varied objectives, countries pursue decentralisation in the governance of health services with an expectation that such public sector policy reforms will, in theory, help improve health system performance.

6.2.2. Description of the intervention

Decentralisation in the health sector is not a simple intervention because it is not always clear which functions exactly are being decentralised, who will initiate the process, and at which levels decentralisation should take place. It may encompass some of the typical functions of higher level government, such as, among others, the collection of taxes and/or user fees at local levels for revenue generation, or the hiring and firing of human resources for health (HRH). Authority for some functions may remain centralised while authority for other functions are decentralised. Hence, decentralisation may be usefully viewed as a movement towards one end of a pole, with the opposite pole as that of centralisation (Mills et al., 1990), and each country may appear at various points away from these two imaginary poles depending on the extent of decentralisation adopted.

One way to define decentralisation is that it is the transfer of decision-making authority from national to sub-national levels (e.g. regional, state, or district/municipal/local levels), or generally from higher levels to lower levels in the hierarchy of governance (Mills et al., 1990; Robalino and Picazo,

2001). Two approaches have been proposed as a way to understand decentralisation in the health sector. In the early 1990s, a four-fold typology was proposed (Mills et al., 1990) that included the following types of decentralisation: (a) deconcentration, or the transfer of some authority to locally-based units that are still under the jurisdiction of central or higher authorities; (b) devolution, or the transfer of authority to subnational or local levels of government that are substantially independent from the national or central government; (c) delegation, the transfer of managerial responsibility over a defined set of functions to organizations that are outside the central government structure; and (d) privatization, or the transfer of government functions to the private sector with a variable degree of government regulation.

On the other hand, the “decision space” approach (Bossert, 1998) has been proposed which introduced the concept of a “decision space” as a tool to analyse the range of choices made available to decision-makers for health sector functions after the introduction of decentralisation. This approach focuses on how much choice is exercised by decentralised decision-makers over particular “functions” of the health sector at peripheral or local levels. The decision space approach defines health system functions, such as strategic and operational planning, management of HRH and other resources (i.e. financial resources, health facilities, and medicines and equipment, etc.), and health service delivery, and the range of choice exercised for these functions by decision-makers, which may be defined as narrow, moderate, or wide (see Table 6a) (Bossert and Mitchell, 2011). Where governance is more decentralised, the range of choice (decision-making authority) over health sector functions is, in theory, wide for the lower and narrow for the higher levels of administration.

6.2.3. How the intervention might work

Governance forms one of the WHO’s building blocks for health systems and influences the functions of the other building blocks within this framework (WHO, 2007). It has been suggested that

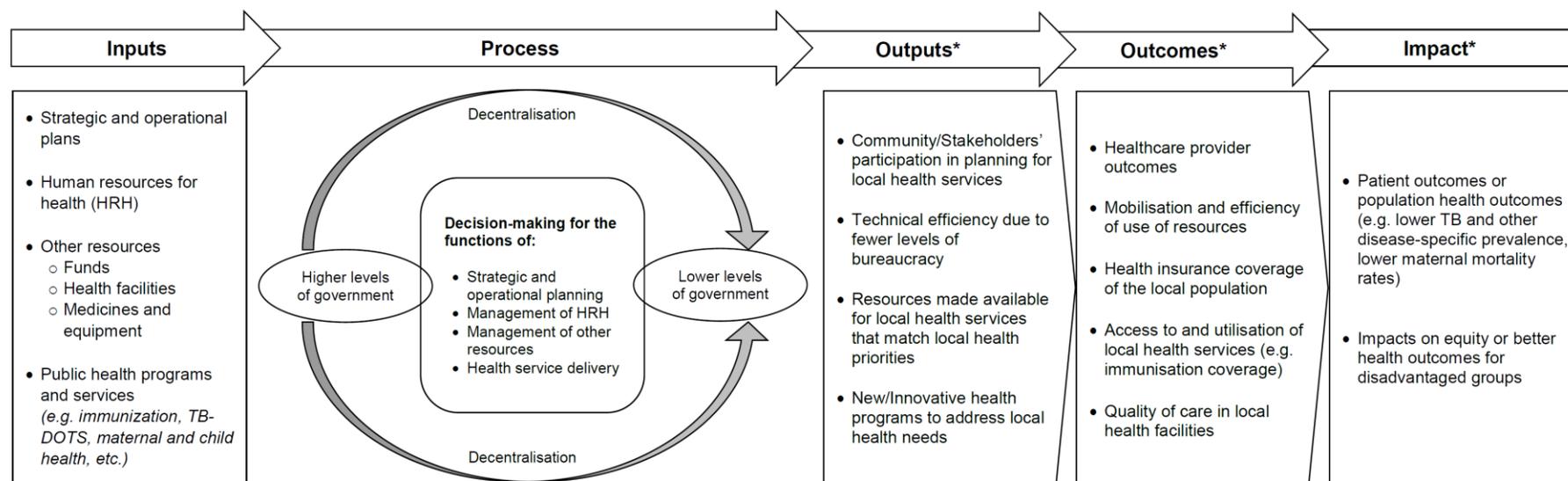
good governance may lead to improved health system performance. Indeed, the ultimate goal of health system reforms involving decentralised governance is to improve access to and utilisation of health services. Improved access may, in turn, lead to improvements in population health outcomes such as morbidity, disability, and mortality (Khaleghian, 2004; Mills et al., 1990). In centralised governance, resources such as staffing and funding are managed from the center and allocated to specific health programmes or functions. However, more decentralised models of governance, in which local decision-makers have greater decision space, may help to ensure that the selection of priorities is more congruent with local needs as lower level authorities may have a better understanding of how best to use available resources. Decentralised governance may also be more accountable to local communities and stakeholders and may help to build local institutional capacity (Heywood and Choi, 2010). One of the pathways through which decentralisation may improve access to healthcare and other social services may therefore be through enhancing the participation of the community in decision-making (Collins and Green, 1994; Robalino and Picazo, 2001). In addition to the above benefits, decentralised health programmes are said to be closer to their users, fulfil local health needs, and allow for increased flexibility and transparency (Lieberman, 2002; Litvack et al., 1998). On the other hand, decentralised governance of health services may also have negative effects. For example, poor local governments may not be able to raise the necessary revenues, resulting in the inadequate allocation of funds. Likewise, local governments may provide inadequate funding for preventive services in the absence of centrally-funded vertical health programmes. Other unintended effects could include increased workloads of frontline health workers due to the integration of services at local levels and expansion of the range of services provided by them. This, in turn, may lead to burnout and low morale (Lakshminarayanan, 2003). Other potential negative consequences include the mismanagement of funds in the absence of control by higher authorities, and poor management of health services due to new roles and responsibilities, particularly if local managers do not have sufficient capacity and training to take on these roles (Tanzi, 1995).

The enabling or constraining conditions for successful decentralisation are not well understood (Asfaw et al., 2007; Jütting et al., 2005). However, it has been proposed that widening decision space alone is not enough to improve health system performance as other dimensions, such as institutional capacity and mechanisms of accountability may be necessary for decentralised authority to translate into improvements in the health sector (Bossert et al., 2015; Bossert and Mitchell, 2011). A recent review examined the various ways by which the concept of decision space has been used for studies on health sector decentralisation in the literature and recommended the need to explore its relationship with other dimensions, such as organizational capacities and accountability, as these interactions could potentially explain how decentralisation improves health system performance (Roman et al., 2017).

6.2.4. Logic model

Logic models have been described in the literature as a useful tool to understand and conceptualize complex interventions more clearly, promote transparency in the manner by which the review would be performed (Anderson et al., 2011; Baxter et al., 2014; Rohwer et al., 2017), and have been used in a number of Cochrane systematic reviews (Kneale et al., 2015). Consequently, we will be guided by a logic model that builds on the logic model used in a protocol for a Cochrane systematic review on decentralised versus centralised governance of health services (Sreeramareddy and Sathyanarayana, 2013) authored by one of our co-reviewers (CTS). Decentralisation takes place in a complex system where outcomes are the result of many interlinking components and processes within this system which, taken together, impact the system in either positive or negative ways. As such, the logic model for this review (Figure 6a) was developed through an iterative process among all the reviewers and attempts to track the proximal, intermediate, and distal effects, which is appropriate whenever examining complex public health actions that often exert their effects over long periods of time (Rutter et al., 2017).

Figure 6a. The logic model for this review draws from the “decision space” approach (Bossert 1998) by outlining the health sector functions that are decentralised and tracking from proximal to distal (outputs→outcomes→impact) the plausible ways through which the process of decentralisation could result to its desired (or undesired) effects for the health system.



*List is not exhaustive and could also be on the negative side; i.e., both positive and negative effects will be examined by this review.

6.2.5. Why it is important to do this review

The evidence on the effectiveness of decentralisation in improving health system performance remains mixed based on previous studies (Anokbonggo et al., 2004; Atkinson and Haran, 2004; Bossert et al., 2007; T. J. Bossert et al., 2003; Bossert and Beauvais, 2002; Gupta et al., 2003; Heywood and Choi, 2010; Lakshminarayanan, 2003; Robalino and Picazo, 2001; Rubio, 2011; Soto et al., 2012). Two recent systematic reviews that analysed the impacts of decentralisation also report mixed results, i.e. both positive and negative effects, in terms of health-related equity (Sumah et al., 2016) and based on studies conducted in LMICs (Cobos Muñoz et al., 2017). An attempt to systematically analyse the literature for the effectiveness of decentralisation is therefore both timely and highly-relevant for policymakers and decision-makers in the health sector if the benefits expected from this public sector policy reform were to be maximized in countries that are implementing or contemplating any degree of decentralisation in the health sector (Liwanag and Wyss, 2017). This review aims to build on a previous Cochrane systematic review protocol on decentralisation (Sreeramareddy and Sathyanarayana, 2013) by including new studies that have been published in recent years and also expanding the criteria for study designs (see Methods). Findings from this review will be highly-relevant to health sector policymakers and decision-makers in countries, both HICs and LMICs, that have implemented or are contemplating decentralisation in their health sectors.

6.3. Objectives

To assess the effectiveness of decentralisation of governance of health services in improving health system performance, such as, but not limited to, access to and utilisation of health services, health insurance coverage, availability and mobilisation of resources for health services, healthcare provider outcomes, quality of care, impacts on equity, patient or population health outcomes, and other outcomes of interest.

6.4. Methods

6.4.1. Criteria for considering studies for this review

We will search for studies on all types of decentralisation of health services in both published and grey literature and which can be categorized as deconcentration, devolution, or delegation (Mills et al., 1990). We will draw from the decision space approach and include studies on decentralisation that transfer decision-making authority from higher to lower levels of governance in any of the health sector functions of strategic and operational planning, HRH management, management of other resources, and health service/program delivery (Bossert and Mitchell, 2011). If the data is available, we will also report the range of choice exercised by decision-makers for these functions into narrow, moderate, or wide as one way to classify the intervention further. We will examine all effects of decentralised decision-making, both positive and negative, on the outcomes of interest listed in this protocol

6.4.2. Types of studies

We will include the following types of studies (Cochrane Effective Practice and Organisation of Care (EPOC), 2017):

- Randomised controlled trials (RCTs) and non-randomised controlled trials (NRCTs) (with at least two “decentralisation sites” and two control sites)
- Controlled before-after (CBA) studies (with at least two “decentralisation sites” and two control sites)
- Interrupted time series studies (ITS) and repeated measures studies (with at least three time points before and after the introduction of decentralisation)

Because decentralisation is typically a population-level intervention that countries implement as part of a broad public sector reform process where randomization is not feasible, it may be difficult to find studies that use the designs listed above (Liwanağ and Wyss, 2017). Consequently, for this review we will also consider any other type of quantitative study design that allows comparison of decentralisation with centralisation, and/or comparison between two timeframes. These other study designs are likely to be at higher risk of bias but:

- (a) may provide estimates of plausible effects which can be discussed in relation to the effects reported for the study designs listed above
- (b) may provide us with a better idea of what has been researched about decentralisation by mapping the various types of decentralisation tested in one way or another and, thus, inform health policymakers and stakeholders on the various types of decentralisation of health services that they may wish to consider for their respective countries.

An example of how these “other” types of studies might be used is described in an “augmented review” by (Arditi et al., 2016) where the evidence has been made applicable to a broader set of patients and settings after the inclusion of additional studies. Tentative examples of these other study designs and how these may contribute to this review are presented in Table 6b.

6.4.3. Types of participants

Decision makers, including policymakers, public officials, and health facility managers, health service providers, and health service users in any country; “Authorities” including governments and government agencies with responsibility for policymaking, planning, or management of health services; Government agencies that can have varying degrees of autonomy, independence, and accountability.

6.4.4. Types of interventions

Decentralisation of governance of health services where decision-making authority for health sector functions are transferred to a lower (more decentralised) level of government, from a higher (more central) level of government (e.g. from national to state or from state to district authorities). The types of decentralisation may encompass any of the classifications of deconcentration, devolution, and delegation as previously defined above (Mills et al., 1990).

6.4.5. Exclusions

We will exclude interventions that transfer authority from the government to a government agency at the same level of government because such changes do not constitute decentralisation of governance of health services. We will exclude interventions that transfer decision-making authority outside the governance of health services. These may include transfer of authority over educational institutions that train health professionals, or authority over other sectors that affect health (e.g. food or housing), unless these are part of a broader reform that also includes transfer of authority over health services. We will exclude interventions that transfer the authority from the government to the private sector, otherwise known as privatization, which may include transfer of authority to professional organisations, non-governmental organisations, and international development agencies. Such changes, while may be considered a type of decentralisation (Mills et al., 1990), transfer authority to entities outside of government and may therefore be difficult to assess especially when compared with the other forms of decentralisation in the context of this review.

We will not be including studies on centralisation because the focus of this review is the effectiveness of decentralisation and not centralisation. Centralisation, wherein decision-making authority is with higher levels of governance, may also be viewed as one way to strengthen the health system especially in countries where health services are centralised. As centralisation also comes in various types, it is difficult

to ascertain which forms of centralisation would qualify as the opposite of the forms of decentralisation. Consequently, any comparison between the two would not be meaningful for policy and will therefore be not an aim of this review.

6.4.6. Types of outcome measures

6.4.6.1. Primary outcomes

To be included, studies must report any of the following outcomes of health system performance:

- Utilisation, coverage, or access to health services or health insurance
- Quality of care
- Resource generation for local health services, including mobilization, or efficiency of use
- Healthcare provider outcomes
- Any adverse (undesirable) effects

6.4.6.2. Secondary outcomes

In addition, we will examine any of the following outcomes that are reported in the included studies:

- Impacts on equity (i.e. differential effects across advantaged and disadvantaged populations, such as low-income or rural populations)
- Patient outcomes and population health outcomes

6.4.7. Search methods for identification of studies

We will search for studies on both published and grey literature that are reported in the English language without any time limits.

6.4.8. Electronic searches

We will search the following electronic databases:

- The Cochrane Central Register of Controlled Trials (including The Cochrane Effective Practice and Organisation of Care or EPOC Group Specialised Register) (*The Cochrane Library*)
- MEDLINE (Ovid)
- EMBASE (Athens)
- PubMed
- Scopus
- International political science abstracts (EBSCO)
- World Health Organization (WHO) Global Health Library
- The Cochrane Library
- JSTOR
- Campbell Collaboration
- Dissertations and Theses Global (ProQuest)

We will develop strategies that incorporate the methodological component of the EPOC search strategy combined with selected index terms and free text terms. The MEDLINE search strategy will be translated into search strategies that are appropriate for the other databases using the appropriate controlled vocabulary as applicable.

We will search for ongoing trials in the following two trial registries:

- International Clinical Trials Registry Platform (ICTRP), World Health Organization (WHO): <http://apps.who.int/trialsearch/>
- ClinicalTrials.gov, US National Institutes of Health (NIH): <http://clinicaltrials.gov>
- Prospero Trials Registry: <http://www.crd.york.ac.uk/PROSPERO/>

6.4.9. Searching other resources

We will search the websites and online resources of the following organisations: United Nations Development Program, World Bank, Asian Development Bank, European Observatory on Health Systems and Policies, Health Systems Global, and The Asia Pacific Observatory on Health Systems and Policies.

We anticipate that there are many studies on decentralisation in the grey literature. To enhance our detection of studies in the grey literature (e.g. books/monographs, book chapter, theses/dissertations, conference papers, working papers), we will also run a search in Google Scholar. In a paper by Haddaway, searching in Google Scholar has been shown to lead to the detection of moderate amounts of grey literature, which complements the search results from traditional search methods. We will document the search results made through Google Scholar to maintain transparency and also to provide an opportunity to perform an update in the future (Haddaway et al., 2015).

We will check the reference lists of all the identified primary studies, as well as systematic reviews detected during the search to identify additional studies. We will search the Science Citation Index and the Social Sciences Citation Index for the studies which are cited in these reference lists.

6.4.10. Data collection and analysis

6.4.10.1. Selection of studies

The search results from the various sources will be uploaded into EROS (Early Review Organising Software) (<http://www.eros-systematic-review.org>). We will use EROS for managing and screening references. We will delete duplicate records of the same references. Titles, abstract, and full-text articles for potentially-relevant studies will be screened independently by two review authors (HJL and CTS). Any disagreements between the two will be resolved through discussion and by consultation with a third review author (XBC or KW). If a potentially-eligible study or included study has incomplete information, we will also attempt to contact the authors to obtain the missing information.

6.4.10.2. Data extraction and management

Each of the two review authors (HJL and CTS) will independently extract data from the eligible studies, including the following elements:

6.4.10.2.1. Study details

- Last name of the first author
- Year when the study was conducted
- Date of publication

- Country and region within the country where study was conducted
- World Bank classification of the country during the year when the study was performed (i.e. low-income country, middle-income country, or high-income country)

6.4.10.2.2. *Types of interventions*

- Level of government or government agencies from which and to which decision-making authority is transferred
- Health sector functions for which authority is transferred (i.e. strategic and operational planning, HRH management, management of other resources, or service organization and delivery)
- How decentralisation was undertaken (i.e. the process used to implement this change)
- Intervention group participants
- Control group participants (if available)

We will also extract information about key functional areas for which decision-making authority was transferred. For example, for the health sector functions of strategic and operational planning and resource management, these may include the formation of local governing bodies (e.g. at district hospitals or at community level) that have the autonomy to levy user fees and to use the funds generated for hospital development, procuring essential drugs and equipment, recruiting doctors, nurses, technicians, and others.

6.4.10.2.3. *Study characteristics*

- Study design
- Sample size
- Risk of bias

6.4.10.2.4. *Outcome measures assessed in the study*

- Method used to assess outcomes
- Primary outcomes
- Secondary outcomes

6.4.10.3. *Assessment of risk of bias in included studies*

Two review authors (HJL and CTS) will assess the risk of bias for studies that are included in the review. We will use the “risk of bias” criteria recommended by the EPOC Review Group (Cochrane Effective Practice and Organisation of Care (EPOC), 2017). These include nine criteria which provide guidance to assess sequence generation, allocation concealment, blinding, incomplete outcome data, selective outcome and reporting, and other potential sources of bias for RCTs, NRCTs, and CBA studies, and seven criteria for ITS studies. The studies will be divided into three categories based on the “risk of bias” approach recommended in the Cochrane Handbook (Higgins and Green, 2011) low risk of bias, moderate risk of bias, or high risk of bias. Disagreements about risk of bias will be resolved either through discussion or by consulting a third author (XBC or KW).

In parallel with the use of the EPOC risk of bias criteria, we will also use the Graphic Appraisal Tool for Epidemiological Studies or GATE (National Institute for Health and Care Excellence, 2012). The GATE tool is appropriate for all study designs and therefore allows quality assessment of the additional study designs which are not covered in the EPOC risk of bias tool. Similarly, risk of bias will be based on consensus of the two review authors (HJL and CTS) with any disagreements to be resolved by consulting a third author (XBC or KW).

6.4.10.4. Measures of treatment effect

Continuous and categorical data extracted from eligible studies will be analysed separately. For dichotomous outcome variables we will calculate risk ratios and their 95% confidence intervals (Cis). For continuous data we will calculate mean differences and their 95% CIs. If similar outcomes are measured on different scales, we will calculate standardised mean differences. For continuous outcomes, we will attempt to extract post-intervention values if the required means and standard deviations are available (Higgins and Green, 2011).

For ITS studies, we will perform re-analysis if sufficient data are available. For each outcome measure we will undertake re-analyses to calculate standardised short- and long-term effects as the changes in level and in trends before and after the intervention (Aaserud et al., 2006).

6.4.10.5. Unit of analysis issues

If cluster randomised trials or controlled before-after studies are included in the review, we will use the reported cluster adjusted risk ratios or mean differences and their 95% CIs. If the analysis was not adjusted for clustering we will use the intra-cluster correlation coefficient (ICC), if available, to adjust the confidence interval. If the ICC is not available, we will attempt to impute it from other studies included in the review.

6.4.10.6. Dealing with missing data

We will try to contact the authors of included studies to obtain missing data where possible. If it is not possible to obtain missing data, we will attempt to impute missing values. All the assumptions made for any imputations will be documented.

We will use intention-to-treat analyses if the authors have reported this or contact the authors so we could perform such re-analyses. In case of unavailability of intention-to-treat analyses and indications that the data are not missing at random, we will assess whether or not this constitutes a risk of bias.

If aggregate data such as the standard deviation for change-from-baseline are missing, we will use the standard deviation for the same outcome from another study, if available, or we will impute the standard deviations using recommended methods (Abrams et al., 2005).

6.4.10.7. Assessment of heterogeneity

Studies meeting the inclusion criteria will be assessed for heterogeneity on the basis of the context (including the income level of the country), differences in the participants, differences in the interventions with respect to the levels from and to which authority is transferred, and the decision space (types of authority that are transferred), and differences in study designs. For studies that evaluate similar interventions and report similar outcomes, we will explore the possibility of undertaking a meta-analysis to obtain a pooled estimate, whenever possible. For these meta-analyses, statistical heterogeneity will be measured according to recommendations in the Cochrane Handbook for Systematic Reviews of Interventions (section 9.5.2). We will measure heterogeneity using the I^2 statistic, which describes the percentage of total variation across studies that is due to heterogeneity (Higgins and Green, 2011).

We expect that there could be variations in the findings of the different studies included in the review due to various sources of heterogeneity. These include the level to and from which authority was transferred, the specific health sector functions for which authority was transferred, economic status of the countries (HICs or LMICs according to the World Bank classification), political structure (i.e. the system of government of the country), and the outcomes measured (e.g. utilisation, coverage or access for different types of health services, etc.) (see Table 6c). If this approach suggests important heterogeneity, and there are sufficient numbers of studies, meta-regression will be used to examine the listed variables

as predictors of heterogeneity. We will use “metareg” command in STATA with the restricted maximum likelihood option. We will also consider equity analysis for selected outcomes. Equity analysis will explore if subgroups of the included populations, such as the poorest and richest or lowest educated and highest educated groups, benefited equally from the intervention. We will classify the populations according to whatever relevant social determinants of health are reported in each study. In addition, we will also use the harvest plot (Ogilvie et al., 2008) as a graphical way to report the results to explore visually the potential heterogeneity due the factors outlined above.

6.4.10.8. Assessment of reporting biases

If there is a sufficient number of included studies (i.e. at least 10) reporting similar comparisons and outcomes, we will examine asymmetry in funnel plots to explore the risk of publication bias or other causes of asymmetry (Sterne et al., 2001). For continuous outcomes with intervention effects measured as mean differences, the test proposed by (Egger et al., 1997) will be used to test for funnel plot asymmetry. For dichotomous outcomes with intervention effects measured as risk ratios, and continuous outcomes with intervention effects measured as standardised mean differences, we will also explore the risk of publication bias through funnel plots whenever possible.

We will interpret the results of tests for funnel plot asymmetry in the light of visual inspection of the funnel plot, as the statistical results may not be representative if there are small study effects.

6.4.10.9. Data synthesis

Studies that evaluate similar interventions will be grouped together and the results for these studies will be summarised in tables, including key characteristics of each study (explanatory factors), outcomes reported in natural units and, when relevant, standardised outcome measures to facilitate comparisons

across studies. If there are two or more studies that evaluate similar interventions and report similar outcomes, we will calculate pooled risk ratios, mean differences, or standardised mean differences using a random-effects model. Otherwise, we will report the median and range of effects, if relevant, or measures of effect from individual studies when there are no other studies evaluating a similar intervention and reporting a similar outcome.

We will perform data synthesis first using data from the group of studies that qualify under the EPOC criteria for study designs. Afterwards, we will then perform data synthesis separately using data from the additional study designs and explore the differences in the direction and size of similar estimates whenever appropriate.

For each group of studies, we will prepare a “Summary of Findings” table, including an assessment of the quality of evidence for each of the main outcomes or types of outcomes. Quality of evidence will be assessed using the GRADE approach (Guyatt et al., 2008).

6.4.10.10. Subgroup analysis

If sufficient studies reporting similar interventions and similar outcomes are available, we will perform subgroup analyses to explore the differences in outcome measures according to the following categories.

Table 6c provides more details on how we intend to perform subgroup analysis.

- Study design
- Form of decentralisation implemented in terms of health sector function (including the extent of decision space in that function if reported)
- Income classification (with the World Bank as reference) of the country during the time of conduct of the study

- Geographic location of the country (i.e. Asia Pacific, Africa, Europe, etc.)
- Type study participants to whom authority was transferred (e.g. local elected officials, district health minister, etc.), including level at which authority was transferred (e.g. community, district, provincial, or regional level)
- Duration between the time of the study and the time when decentralisation was initiated

We will use the Cochrane RevMan software (Review Manager ver. 5.3) and STATA® (ver. 14.1) for data analysis.

6.4.10.11. *Sensitivity analysis*

We will test the robustness of our findings by modifying any assumptions that are made about missing data within a plausible range of values and by removing studies at a high risk of bias, if there are studies with different risks of bias evaluating the similar interventions and reporting similar outcomes.

6.5. Appendices

Table 6a. Health sector functions that are decentralised and within which decision-makers could exercise varying degrees of decision space.

Key functional areas
Strategic and operational planning - Facility boards - Health offices - Community participation - Accountability
Human resources for health management - Salaries - Contracts - Civil service - Hiring and firing of human resources
Management of other resources - Revenue sources and allocation - Upgrade of facilities - Procurement of drugs/equipment
Service delivery - Hospital autonomy - Contracts with private providers - Disease control programs

Table 6b. Studies to be considered and what useful information these studies contribute to this review.

Types of studies	Tentative examples of studies	Objective and study design of the example	Reasons for including the study to this review			
			To assess the effectiveness of decentralisation in improving health system performance	To compare the reported outcome estimates with the effect estimates in the “EPOC-qualified” studies	To describe and map the type of decentralisation implemented (including the decision space if data is available)	To describe and map the study designs and outcome measures used
“EPOC-qualified” studies: <ul style="list-style-type: none"> • Randomised controlled trials (RCTs) • Non-randomised controlled trials (NRCTs) • Controlled before-after (CBA) studies (at least two intervention sites and two control sites) • Interrupted time series studies (ITS) and repeated measures studies (at least three time points before and after the intervention) 	To be identified	Not applicable	Yes, by assessing the effect estimates reported	Not applicable	Yes	Yes
Other types of CBAs, ITS, and repeated measures studies that do not fulfil the EPOC criteria	Bossert 2003	<ul style="list-style-type: none"> • To investigate the relationship between decentralisation and equity in Colombia and Chile • Interrupted time series 	No	Yes / We will examine if the estimates of equity measures in this study are consistent with the direction and size of the effect estimates in the EPOC-qualified studies (if available).	Yes	Yes
Cohort studies and case-control studies	Chan 2010	<ul style="list-style-type: none"> • To compare treatment outcomes between HIV patients who received anti-retroviral therapy in centralised facilities and those who received it in decentralised facilities in Malawi • Retrospective cohort study 	No	Yes / We will examine if the estimates of treatment outcomes are consistent with the direction and size of similar effect estimates in the EPOC-qualified studies (if available).	Yes	Yes
Cross-sectional studies	Atkinson 2004	<ul style="list-style-type: none"> • To examine whether decentralisation is associated with improved health system performance in a state in Brazil • Cross-sectional study 	No	Yes / We will examine if the reported outcome measures of health system performance are consistent with the effect estimates in the EPOC-qualified studies (if available).	Yes	Yes

Table 6c. Subgroup analyses for this review.

Explanatory factors	Categories that will be considered for each factor	Predicted interaction and its direction	
Study design	<ul style="list-style-type: none"> • Randomised controlled trials (RCTs) and non-randomised controlled trials (NRCTs) (with at least two “decentralisation sites” and two control sites) • Controlled before-after (CBA) studies (with at least two “decentralisation sites” and two control sites) • Interrupted time series studies (ITS) and repeated measures studies (with at least three time points before and after the introduction of decentralisation) (“EPOC studies”) 	The estimates of the effects of decentralisation on outcomes of health system performance could point to either the desirable or undesirable direction.	
	Other types of studies	The estimates of outcome measures of decentralisation or its association with outcomes of health system performance could point to either the same or opposite direction of the effect estimates in the EPOC-qualified studies; the size of the estimates could be bigger, smaller, or the same.	
Form of decentralisation implemented in terms of health sector function (and the extent of decision space in that function, if reported)	Decentralised strategic planning	*with/without decision space reported as wide, moderate, narrow	There are many possible interactions to be explored, for example: <ul style="list-style-type: none"> • Decentralising strategic planning only but not the other functions may result in undesirable effects on some outcomes of health system performance • Decentralising in all functions may result in desirable effects on more outcomes • Decentralising in all functions but with only a narrow decision space may result in undesirable effects on some outcomes • Decentralising in all functions coupled with a wide decision space may result in desirable effects on more outcomes
	Decentralised HRH management		
	Decentralised management of other resources		
	Decentralised service delivery		
Income classification of the country (with the World Bank as reference) during the time when decentralisation was introduced	<ul style="list-style-type: none"> • High-income countries • Middle-income countries • Low-income countries 	The estimates of the effects of decentralisation on outcomes of health system performance could point to a desirable direction and have a bigger size in higher-income countries when compared to lower-income countries	
Geographic location of the country	e.g. Asia Pacific, Oceania, South Asia, Middle East, Central Asia, Eastern Europe, Western Europe, Africa, North America, Latin America, etc.	Because of the variety in the cultural and/or political contexts, the estimates of the effects of decentralisation on outcomes of health system performance could also vary by region.	
Type of study participants to whom authority was transferred	e.g. local elected officials, district health minister, etc. including level at which authority was transferred (e.g. community, district, provincial, or regional level)	The estimates of the effects of decentralisation on outcomes of health system performance could vary in terms of direction and space depending on who and at which level of government decision-making authority was transferred.	
Duration between the time of the study and the time when decentralisation was initiated	e.g. < 5 years, 5-10 years, > 10 years etc. after decentralisation was initiated	The estimates of the effects of decentralisation on outcomes of health system performance could point to a desirable direction and have a bigger size when the assessment is done at a longer time after decentralisation was introduced.	

6.6. Contributions of authors

HJL and CTS drafted the protocol for this review with inputs from XBC and KW. HJL will obtain copies of the studies. HJL and CTS will select studies to be included and extract data independently. HJL will enter data into RevMan and perform the analysis with assistance from CTS and XBC. All authors will interpret the results and draft the final review.

6.7. Declarations of interest

XBC is an associate editor of the Cochrane EPOC Review Group.

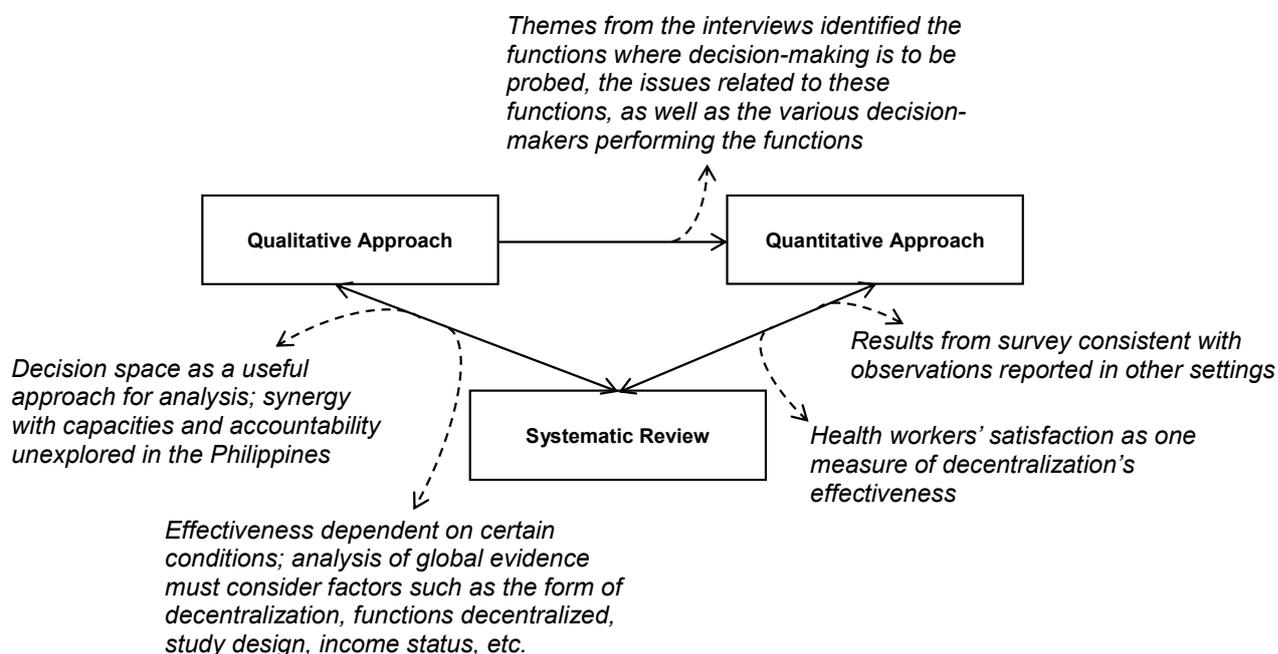
7. Conclusions

7.1. Recap of the three components of the thesis

This thesis aimed to analyze the effectiveness of decentralization as devolution in improving health system performance in the Philippines. Specifically, this thesis drew from the Philippine experience to describe the conditions that enable decentralization to be effective and to explore the interplay between decision space, capacities, and accountability. This thesis likewise analyzed the preferences of decision-makers in one region on the governance adjustments that can be considered in the context of decentralization in order to enhance decision-making and service delivery. Finally, this thesis developed a systematic review protocol for assessing the global evidence on the effectiveness of decentralization in improving health system performance in various settings and contexts.

As explained in the Introduction, the qualitative, quantitative, and systematic review components of this thesis sought to inform one another to achieve thesis objectives (Figure 7a). For example, the qualitative component was conducted after drawing from the preliminary literature review where the decision space approach and its proposed synergy with capacity and accountability appeared to offer a useful framework for exploring the experience of devolution in the Philippines and analyzing the perspectives of decision-makers. Consequently, the themes that emerged from the qualitative analysis of the interviews guided the conduct of the quantitative online survey, particularly the functions wherein decision-making was probed, as well as the issues and preferences related to the decision-makers at local levels who were performing these functions. The results from the quantitative component were interpreted in relation to what has also been reported in the literature regarding decentralization in other settings, which suggested similarities especially in the politicization of decision-making. Finally, the findings from the mixed methods approach guided the development of the new systematic review protocol that aims to assess the effectiveness of decentralization in improving health system performance.

Figure 7a. The three methodological components of this thesis, including brief indications on how each informed one another.



7.2. Summary of findings

Findings are summarized in the tables that follow in order to highlight what new this thesis contributes to the literature on decentralization. Table 7a provides the summary of findings related to the analysis of devolution in the Philippines, particularly the conditions that enable decentralization to be effective, and the synergy of decision space, capacities, and accountability.

Table 7a. Summary of findings related to the Philippines, specifically on the conditions that enable decentralization to be effective and the synergy of decision space, capacity, and accountability.

What was already known prior to this work	What this thesis contributes
<ul style="list-style-type: none"> • Previous studies have already shown that devolution of the government health sector in the Philippines has encountered several problems and resulted in suboptimal delivery of health services at local levels. 	<ul style="list-style-type: none"> • This thesis is the first to analyze the conditions that enable decentralization/devolution to be effective in the Philippines based on the decision space approach and organized according to functions.

<ul style="list-style-type: none"> • Previous studies have described some examples of how the center has interacted with local levels to assist them in the delivery of quality health services. 	<ul style="list-style-type: none"> • Changing the structure of governance alone will not improve service delivery without meeting certain conditions (e.g. multi-stakeholder approach in planning and monitoring plan implementation, capacities to raise revenues at local levels while pooling certain funds at the central level, etc.). • The role of the center in decentralization/ devolution remains important even when the system is decentralized, and one condition for effectiveness is an optimal combination of decentralized and centralized functions even as the system remains decentralized overall.
<ul style="list-style-type: none"> • Previous studies (on the Philippines and others) have mostly described <i>de facto</i> decision space as not wide enough, in contrast to what the policy has granted as <i>de jure</i> decision space, and have recommended to grant more autonomy to the local levels. • The basis for the synergy of decision space, capacities, and accountability to improve service delivery in decentralization has only been explored statistically in Pakistan; although previous studies suggest that the synergy works, the quantitative measures do not indicate what the desired measures of capacities and accountability mean in practice in relation to decision space. 	<ul style="list-style-type: none"> • Widening decision space at local levels is easier said than done, and based on the Philippines experience, it also relies on whether or not local decision-makers and institutions have adequate capacities to fulfill the functions they have taken on. • This thesis offers a dynamic visualization of this synergy which emphasized that the expansion of one dimension contributes to the expansion of the others. • This thesis is also the first to explore decision-making in the Philippines through the lens of the synergy. Through the use of a qualitative approach, concrete recommendations are proposed to enhance capacities (e.g. willingness to collaborate with neighboring local governments for service delivery, innovation in the delivery of local health programs) and accountability (e.g. development of technical guidelines at central level to maintain fidelity to national objectives).

Table 7b, on the other hand, presents a summary of the findings related to the analysis of devolution in the Philippines, specifically the preferences for the structure of governance of the health sector based on the online survey.

Table 7b. Summary of findings related to devolution in the Philippines on the preferences for the structure of governance of the health sector based on the online survey.

What was already known prior to this work	What this thesis contributes
<ul style="list-style-type: none"> • It's been known that a number of groups in the Philippines have been advocating to reverse devolution and re-centralize the system, but no study has so far validated if such a sentiment is shared by decision-makers at local levels. 	<ul style="list-style-type: none"> • Similar to the experience of health sector devolution in other countries, politicization in decision-making for several functions has been blamed by survey respondents as a source of discontent among the health workforce in the Philippines • There is a consistent desire among local health managers to re-centralize the system primarily because of the perceived politicization in decision-making and the continuing dependence on central support • It remains to be seen if re-centralizing the system, as the local decision-makers in the pilot survey desired, would solve the problem on politicization • The pilot survey offers an opportunity to examine a bigger sample of local decision-makers and see if the preference to re-centralize the system reflects the sentiment of decision-makers in other regions of the Philippines.

Finally, Table 7c presents the summary of findings related to the systematic review protocol that was developed as part of this thesis to assess the global evidence on the effectiveness of decentralization in improving health system performance.

Table 7c. Summary of findings related to the systematic review protocol to assess the global evidence on the effectiveness of decentralization in improving health system performance.

What was already known prior to this work	What this thesis contributes
<ul style="list-style-type: none"> • Systematic reviews that aimed to analyze the effectiveness of decentralization in improving health system performance have often concluded that either: (a) the evidence is mixed; or (b) the evidence is lacking. 	<ul style="list-style-type: none"> • A systematic review will be better able to demonstrate effectiveness if it would consider the complexity of decentralization and organize the review such that the analysis clearly takes into account:

	<ul style="list-style-type: none"> ○ The specific forms of decentralization being assessed (de-concentration, devolution, delegation, etc.); ○ The decentralized function being assessed (e.g. planning? financing? health workforce management?); ○ The study designs to be considered for the review, without limiting the eligibility of studies to randomized trials alone; ○ The income status of the country where decentralization was undertaken; ○ Health workforce satisfaction as one of measures of effectiveness that have to be considered.
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These findings are further discussed in three discussion points, namely: (a) decentralization as a continuing feature of public sector reform; (b) human resources and institutions at the core of decentralization; and (c) the utility of the synergy of decision space, capacities, and accountability for various settings.

7.2.1. Decentralization as a continuing feature of public sector reform

Chapter 2 delved into the question of whether decentralization is better than centralization in improving health system performance. As noted in that chapter, this research question has been pursued by a few recent systematic reviews, including one ongoing review with the Cochrane Collaboration (Sreeramareddy and Sathyanarayana, 2013), which this thesis is aiming to update. Chapter 3, which drew from the perspectives of key decision-makers in the Philippines, likewise noted this decentralization vs. centralization debate in the country despite having devolution in place for more than two decades.

It is unlikely that this perceived opposing sides to decentralize the health sector, on the one hand, and centralize it, on the other hand, would wane in the short-term. Most of researches in health services still remain focused on the question of causality and the assumption of systems as closed rather than complex systems riddled with unpredictability and uncertainties (Greenhalgh and Papoutsis, 2018). The

findings from this thesis therefore contributes to the efforts to understand health sector interventions, such as decentralization, through the lens of complexity instead of linear causality. As discussed in three publications emerging from this thesis (Chapters 2-4), the question ought to be asked and pursued in decentralization is not whether it is more effective than centralization, but rather what makes it effective in improving health system performance.

For the Philippines, the answers to this question have been proposed in the analysis of the conditions that make decentralization effective (Chapter 3) and the exploration of the synergy of decision space, capacities, and accountability (Chapter 4). The observations made about local health services in the Philippines such as, for example, the inadequate resources at local levels to sustain health facility operations, or the reliance of many local governments for support from the central level in spite of devolution, indicate not the lack of effectiveness of decentralization *per se* but rather the challenges in its implementation. Further research on health sector decentralization could pursue the question on what makes it effective by looking into the dimension of implementation.

Whether or not this thesis or other similar researches would provide the comprehensive answers to fully understand what makes decentralization work for the health sector, decentralization will continue to feature as part of public sector reform. In the Philippines or elsewhere, various forms of decentralization will likely be pursued under the increasing call for more local self-reliance and community participation in decision-making. In other words, decentralization will be pursued because of the primarily desired outcome that local authorities become empowered to decide for themselves, regardless if it is associated with better or suboptimal health system performance. Hence, it becomes all the more important for health systems research to sustain efforts to understand what else is needed to enhance the effectiveness of decentralization in order to achieve its desired effect of improving health system performance.

Reiterating what has been discussed in Chapter 3, the evolving role of the central level in decentralization remains highly-relevant. Part of analyzing what makes decentralization work in favor of health system performance is to understand the role of the central level (which goes beyond the

Ministry of Health and involves many other state actors) in steering the decentralized system. The role of the central level will certainly vary depending on the context of each decentralized country. For the Philippines, however, this thesis has described the intervention of the central level (i.e. DOH and PhilHealth) in supporting local governments by augmenting their inadequacies in the various functions of the health sector. In Chapter 4, the role of the central level in building capacity at local levels and enforcing accountability to promote good decision-making has likewise been discussed. As decentralization continues to feature as part of public sector reform, ensuring that it becomes effective in improving health system performance during implementation requires a clear understanding of roles between central and local levels so that an optimal combination of decentralized and centralized functions is put in place even as the system remains decentralized overall.

7.2.2. Human resources and institutions at the core of decentralization

Regardless of the structure of governance adopted for the health system (i.e. whether it is decentralized or centralized), the findings from this thesis have been consistent in highlighting the critical importance of human resources and the institutions they comprise in ensuring successful implementation of any health system intervention.

Despite the preference among local decision-makers in one region to re-centralize the health system (see Chapter 5), it remains unclear if such a change in the structure of governance would automatically provide the solutions to the perceived challenges in the current devolved system. Again, there is a need to move beyond the simplistic view that solutions can be found in merely decentralizing or centralizing some functions of the health sector without putting the emphasis on the human resources and institutions operating within the system.

The importance of human resources and institutions in implementing decentralization is a conclusion that is evident not only from the findings of this thesis about the Philippines but also from the experience of decentralization in other countries. Although the effectiveness of decentralization in improving health system performance may be influenced by the prevailing socio-political context, or

the availability of financial resources at local levels, in the end, it is still the human resources and institutional dimension which will ensure that health sector functions are performed satisfactorily whatever the limitations in the settings may be. What was discussed in Chapter 4 is hereby brought into light once again—the need to build individual and institutional capacities for effective decentralization.

Similarly, the importance of human resources with adequate capacities for steering local health services and for appreciating the need to prioritize public health has been discussed in Chapter 5, where survey respondents preferred shifting decision-making away from local politicians in favor of technocrats. Therefore, one essential requirement to make decentralization effective is to ensure that the required capacities for human resources who will implement the changes brought about by decentralization are put in place. The capacities of human resources will influence how well organizations will function as they perform their roles within these organizations, and will thus impact the entire system within which these organizations operate.

7.2.3. The utility of the synergy of decision space, capacities, and accountability for various settings

Finally, this thesis has substantially drawn from the conceptual synergy of decision space, capacities, and accountability and demonstrated how it could be applied to analyze health sector decentralization/devolution in the Philippines. In one previous commentary, Bossert himself have called for more research to elucidate further how the three dimensions work in synergy to improve health system performance (Bossert, 2016). This thesis is a contribution to such an endeavor, primarily by bringing in a qualitative approach to analyze decentralization on the basis of this synergy.

Consequently, the findings from this thesis complement previous quantitative studies on the synergy by exploring some practical ways to enhance capacities and accountability mechanisms, as discussed for the Philippines in Chapter 4. This synergy has been shown to be applicable in various settings, based on how it has been used in this thesis and in previous studies of other countries (e.g. Pakistan and Fiji). There remains an opportunity to utilize the concept of this synergy and build on the

findings of this thesis to show, using a combination of methods, how decentralization becomes more effective in improving health system performance when decision spaces are widened, capacities are built, and accountability is strengthened in the Philippines and beyond, particularly in low- and middle-income settings.

7.3. Strengths and limitations

This thesis had the following strengths and limitations, which are discussed below, together with some explanations and recommendations on how to address these in future research.

7.3.1. Decision space approach

The decision space approach has been a very useful framework in examining the degree of flexibility that decision-makers have in decentralization. In this sense, it has been a useful tool to ascertain whether or not decentralization was effective in granting sufficient autonomy to local levels, as a wide decision space in itself is an indicator of decentralization's effectiveness.

However, assessing whether decision space is narrow, moderate, or wide for each health sector function has proven to be not always an easy exercise. If the methodology involved quantitative methods, the assessment of the space would have been easier as it would rely on the calculation of scores based on the use of an assessment tool. On the other hand, a score would not provide an idea on what the extent of space means in practice, which was otherwise possible with the use of qualitative methods (as accomplished in this thesis). Categorizing the decision space using qualitative analysis, however, often required the challenging task of finding a common ground for assessment given the diversity of experiences that were expressed during the interviews. In this regard, this thesis also introduced the categories of moderate-narrow or moderate-wide in order to better reflect the spectrum of opinions expressed. For future research on decision space, a mixed methods approach, whenever feasible, is the desired approach for assessment where the quantitative component provides a

statistically-representative score that becomes the basis for categorizing the space as wide, moderate, or narrow, while the qualitative component provides specific examples of what such a space means in practical terms.

The experience of applying the decision space in this thesis likewise revealed the need to adapt the framework according to the particular situation of the study setting. For example, the health sector functions identified in the study of the Philippines had some overlaps with (but nevertheless not exactly the same as) the functions enumerated in Bossert's initial map of decision space (Bossert, 1998). It will be interesting to explore what other categories of health sector functions one would come up with in analyzing the decision space in other countries.

7.3.2. Synergy of decision space, capacities, and accountability

The conceptual synergy also proved to be useful in achieving the aim of this thesis to analyze the effectiveness of decentralization by assessing how to optimize decision-making in a decentralized system by linking the decision space to adjustments in capacities and accountability. Once again, the strength of applying this synergy through a qualitative approach is that the analysis would offer concrete examples of how capacities and accountability could be strengthened in practice.

However, what accountability means in practice also proved to be a difficult dimension to define. For the purpose of this thesis, in Chapter 4, accountability was simply understood as a line that links local governments to the central government. In a devolved system where local governments enjoy a substantial amount of independence from the center, this accountability line with the center would not always be easy to enforce in practice. Thus, other lines of accountability such as, for example, accountability to the electorate are areas for an extended analysis.

Furthermore, the conceptual synergy was applied in this thesis under the assumption that it works, or that overall it would make decentralization effective and improve health system performance. In future researches using multiple approaches, it would be interesting to see whether the proposed

expansion in decision space and strengthening of capacities and accountability, as proposed in this thesis, would result in actual improvements in indicators of health system performance.

7.3.3. Mixed methods approach

The use of a mixed methods approach proved to be useful in accomplishing a more comprehensive analysis of decentralization's effectiveness. However, both the qualitative and quantitative approaches also had limitations.

7.3.3.1. Qualitative approach and data validity

One of the strengths of using the qualitative approach is that it allowed a better understanding of a diversity of perspectives. Nevertheless, one limitation is that a qualitative approach is not able to provide results that are representative of the general population. Therefore, this thesis is unable to claim that the perspectives and themes that emerged from interviews are representative of the perspectives in the entire Philippines, or in other countries. However, the application of maximum variation in the purposive selection of interviewees, as well as the judgement of saturation helped ensure that results reflect the most common themes and a wide range of perspectives.

It must also be pointed out that it was not always easy in qualitative analysis to distinguish one's own personal views and judgment from what is being reflected in the findings. In this case, constant reflexivity and critical reflection on the part of the researcher, working with others who also provide their feedback, has helped in maintaining integrity in the analysis and interpretation of findings.

7.3.3.2. Quantitative approach and data validity

One of the limitations of the online survey was the low response rate, which meant that results related to the desire to re-centralize the system were not representative of the views of the general

population. Possible reasons for the low response rate may be because some local decision-makers were loaded with responsibilities and, thus, had little time to respond to the survey, or because some decision-makers were not very computer-literate, or because others did not have stable internet access. For further research in similar settings, face-to-face interactions in the conduct of the survey would be best, or interactions via phone calls may also be considered, although either of this will require additional resources, research staff, and time.

7.3.4. Systematic review

The development and approval of a systematic review protocol and the conduct of the review itself require a substantial amount of commitment and time. Within the frame of a PhD thesis, the conduct of a systematic review, especially in this case when the effectiveness of a complex intervention like decentralization is being assessed, would likely be an undertaking that will exceed the timeline of PhD studies, but would nevertheless remain a worthwhile scientific pursuit as it highly-contributes to the strength of thesis results.

7.4. Opportunities for future research

Finally, the following are proposed for consideration in future research. To build on the findings of this thesis in the aspect of the synergy of decision space, capacities, and accountability, the following research questions are suggested:

- Does the perceived widening in decision spaces correspond to improvements in measures for capacities and accountability? *(To our knowledge, such was investigated so far only in Pakistan and Fiji)*
- Are the changes in decision space associated with measurable improvements in health system performance and, whenever feasible, in improvements in population health outcomes? *(To our knowledge, such has been investigated only in Pakistan)*

- What are the desired capacity and accountability adjustments when decentralization is implemented for various functions of the health sector that are applicable not just in the Philippines but across different country contexts?

To further explore the optimal combination of centralized and decentralized functions in a decentralized system, the following research question may also be considered:

- Based on the global experience of decentralizing the health sector across different countries, what specific aspects of health sector functions are better decentralized, and what specific functions are better centralized to improve health system performance? (*i.e. in the functions of planning, financing, resource management, health workforce, service delivery, and data monitoring and utilization, etc.*)

The scope of this thesis did not include an exploration of the role of the private sector in decentralization, although privatization is considered the most extensive form of decentralization. At the same time, as described in Chapters 3 and 4, some public-private partnerships in the Philippines have been reported to be helpful in enhancing service delivery in a devolved system. Future research in this regard may explore the following research question:

- In the context of decentralization when local governments assume responsibilities for health services, what roles could the private sector play in the system to perform some of these functions and contribute to the delivery of quality health services at local levels?

7.5. Policy recommendations for the Philippines

The completion of this thesis comes at an opportune time when the Philippines is on the brink of passing into law the Universal Health Care (UHC) bill which aims to ensure that every Filipino citizen will have access to comprehensive health care without financial hardship (Philippine News Agency, 2018). Once again, this development in the Philippines indicates an attempt to centralize the function of financing the delivery of health services through the national social health insurance program even

as the government health sector remains under a devolved set-up. In the context of implementing this new law, and drawing from the findings of this thesis, the following policy considerations, particularly for local government-provided health services, are proposed.

It is recommended that UHC be pursued in the Philippines with a clear understanding and agreement between central and local decision-makers on how much each level would be expected to contribute to the attainment of UHC. Specifically, the central level (i.e. DOH and PhilHealth) must take the lead in pooling the resources to finance the health system and accelerate UHC, but this should be accomplished without making local governments dependent. In other words, the central level should also ensure that the increase in resources in the system to support UHC is accompanied by strengthening capacities at local levels and enforcing clear accountability lines in order for local governments to utilize these resources optimally. Moreover, even as the system remains devolved, the central level should make local governments understand and appreciate the significant role that they play in accelerating UHC, which includes a commitment from them to also take the initiative to generate and mobilize local resources in support of the system.

Moreover, as human resources and institutions are at the core of implementing decentralization, it is recommended that the Philippine government establishes a policy that provides support for strengthening individual and institutional capacities at local levels in the performance of health sector functions—a policy on capacity building that is sustainable and does not merely rely on occasional support from NGOs.

On the other hand, in consideration of the findings from the quantitative survey that revealed discontent among local health managers and health workers, another relevant policy recommendation would be the creation of the necessary incentives, both from central and local level sources, to boost the morale and satisfaction of the health workforce who are so essential in ensuring the delivery of quality health services at local levels in decentralized systems.

Aside from the UHC law, another continuing development in the Philippines is the current government's advocacy to change the type of government from a republican into a federal form

(Romero, 2017). As the current government contemplates this shift in governance structure, the central level should take the lead in examining what feasible configurations of health sector governance in federalism would be more optimal than the current configuration, and likewise make a clear statement on the official policy direction to unite the health sector. Whatever the configuration of governance being pushed forward by the government, the central level should make sure that the sentiments and preferences of decision-makers at local levels are heard and considered; and, therefore, the pilot survey implemented as part of this thesis offers a starting point for this endeavor.

8. References

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9. Additional materials

9.1. Ethics approval from the Philippines



08 November 2016

DR. HARVEY JOY LIWANAG
Swiss Centre for International Health
Swiss Tropical and Public Health Institute

Study Title: Analyzing the Effectiveness of Decentralization in Improving the Health Sector with a Focus on the Philippines

NEC Code: 2016-013-Decentralization

Subject: Ethical Review

Dear *Dr. Liwanag*:

Greetings!

This is to acknowledge receipt of your response letter and updated proposal dated 07 November.

An expedited review established that the submitted documents satisfactorily addressed the recommendations contained in the 28 October 2016 letter of the National Ethics Committee. Hence, the proposed study is hereby approved for implementation.

This ethical clearance is valid for the period **9 November 2016 until 8 Nov 2017**. The NEC requires submission of a midterm progress report for monitoring purposes and of an application for renewal of the ethical clearance one month before the expiration date, if the study will be extended.

Amendments to the protocol, informed consent form or questionnaires need to be submitted to the NEC for approval, and other concerns like protocol deviations shall be communicated to the NEC for guidance.

Finally, the NEC requires the proponent to submit a final report one month upon project completion, which will contain a summary of findings and other issues encountered during study implementation.

Very truly yours,

Marita V.T. Reyes
MARITA V.T. REYES, M.D.
Chair

3/F, DOST Main Building, General Santos Avenue
Bicutan, Taguig City
Philippines

Tel No. (63-2) 837-75-37
Fax. No. (63-2) 837-29-24

9.2. Ethics approval from Switzerland

EKNZ

Ethikkommission
Nordwest- und
Zentralschweiz

Präsident
Prof. André P. Perruchoud
Vizepräsidenten
Prof. Gregor Schubiger
Dr. Marco Schärer

Herr
Dr. med. Harvy Joy Liwanag
Swiss Topical- and Public Health-Institute
Socinstrasse 57
4002 Basel

Basel, 25. Januar 2017 / nj

**EKNZ BASEC UBE-req. 2016-00738:
Analyzing the Effectiveness of Decentralization in Improving the Health Sector with a Focus on the Philippines**

Sehr geehrter Herr Dr. Liwanag

Die obgenannte Studie wurde am 04. Januar 2017 anlässlich der Ausschuss-Sitzung der Ethikkommission Nordwest- und Zentralschweiz geprüft und beurteilt. Die folgenden Punkte wurden diskutiert:

- Protokoll: Gegen die Studie bestehen keine grundsätzlichen ethischen Bedenken.
- Die EKNZ bestätigt, dass aus ihrer Sicht keine weiteren ethischen Bedenken vorliegen gegen die Durchführung der Studie.

Diese Studie wurde gemäss der ICH-GCP (International Conference on Harmonisation - Good Clinical Practice) Richtlinie evaluiert. Sie erfüllt die Voraussetzungen für die Durchführung von Forschungsstudien in der Schweiz, nämlich:

- Die wissenschaftliche Stichthaltigkeit und Relevanz des Forschungsprojekts wie auch der zu erwartenden Resultate;
- Ein günstiges Nutzen-Risiko Verhältnis;
- Das Einverständnis der Studienteilnehmer;
- Den Schutz der Privatsphäre und Vertraulichkeit;
- Die berufliche Qualifikation der in diesem Projekt involvierten Schweizer Forschenden;
- Die Festlegung der Qualifikationen, die für weitere beteiligte Forschende erforderlich sind.

Ob dieses Projekt aus ethischer Sicht gutgeheissen werden kann, hängt von lokalen Umständen ab, die hier nicht abgeschätzt werden konnten. Im Speziellen wurde im Antrag nicht auf die folgenden Punkte eingegangen:

- Vorgehen und Dokumentation der Rekrutierung von Studienteilnehmern, insbesondere die in der lokalen Sprache verfassten Informationsblätter und Einverständniserklärungen;
- die Angemessenheit der lokalen Infrastruktur (Material, Einrichtungen, Personal etc.) hinsichtlich des bestmöglichen Schutzes der Studienteilnehmer;
- berufliche Qualifikation des Nicht-Schweizerischen Personals.

Die oben aufgelisteten Punkte müssen, je nachdem wo das Projekt durchgeführt wird, durch das für das jeweilige Land / die jeweiligen Länder zuständige(n) Ethikkomitee(s) beurteilt werden.

./.

Geschäftsführerin Irene Oberli | Hebelstrasse 53 | 4056 Basel | Tel 061 268 13 50 | Fax 061 268 13 51 | eknz@bs.ch | www.eknz.ch

Zudem hat die EKNZ die revidierten Dokumente (Teilnehmerinformation und Einverständniserklärung - Version 03 vom 19. Januar 2017) zustimmend zur Kenntnis genommen.

Mit freundlichen Grüßen

A handwritten signature in black ink, appearing to read 'i.v. Perruchoud'.

Prof. A. P. Perruchoud
Präsident der Ethikkommission
Nordwest- und Zentralschweiz / EKNZ

9.3. Systematic review protocol approval from the Cochrane Collaboration



Harvy Joy Liwanag, MD, MBA
PhD Student in Epidemiology and Public Health
Swiss Tropical and Public Health Institute (Swiss TPH)
Basel, Switzerland

12 March 2018

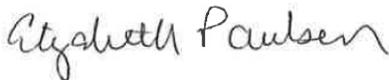
Decentralised versus centralized governance of health services

Dear Harvy,

I am writing to confirm that your protocol for the update of the review “Decentralised versus centralised governance of health services“ has been approved and you can now begin work on updating the review.

We look forward to receive the draft of the update. Please let me know if you have any questions.

Sincerely,



Elizabeth Paulsen
Managing Editor, Cochrane Effective Practice and Organisation of Care
Norwegian Institute of Public Health

9.4. Informed consent form

Informed Consent Form for health sector decision-makers in the Philippines who are invited to participate as respondents in the research entitled “Analyzing the Effectiveness of Decentralization in Improving the Health Sector with a Focus on the Philippines”

Principal Investigator: Dr. Harvy Joy Liwanag
PhD Supervisor: Prof. Kaspar Wyss
Organization: Swiss Tropical and Public Health Institute
Socinstrasse 57, P.O. Box CH-4002, Basel,
Switzerland

This Informed Consent Form (ICF) has two parts:

- Information Sheet (to share information about the study with you)
- Certificate of Consent (for signatures if you choose to participate)

You will be given a copy of the full Informed Consent Form.

Part I: Information Sheet

Introduction

I am Dr. Harvy Joy Liwanag, a Filipino physician who is undertaking this research as part of my PhD in Epidemiology and Public Health at the Swiss Tropical and Public Health Institute. The aim of my research is to analyze the effectiveness of decentralization in improving the health sector in the Philippines, where devolution in the health sector was implemented 25 years ago. I am going to give you information and invite you to be part of this research. Before you decide to be part of it, you may talk to anyone you feel comfortable with about the research topic. The consent form may contain terms that are not easily understood. Please feel free to ask me as we go through the information and I will take the time to explain further if necessary. If you have questions later, you are always welcome to ask me.

Purpose of the research

In 1991, the Local Government Code was passed into law in the Philippines which included, among others, the transfer of decision-making authority over health services from the national government to local government units. We want to know how people like you make decisions regarding different functions in the health sector. We also want to understand how your decisions are related to your perceptions about your capacity as well as accountability to the health needs of the people you serve. Finally, we hope to get your opinion on how to improve the implementation of health sector devolution in the Philippines.

Type of research intervention and duration

This research will involve your participation in:

- An interview that will take about 1 hour.
- Answering a survey that will take about 20 minutes.
- A group discussion that will take about 1.5 hours.

Participant selection

You are being invited to take part in this research because we feel that your experience as a decision-maker in the Philippine health sector can contribute to our knowledge and understanding of devolution in the Philippines.

Voluntary participation

Your participation in this research is entirely voluntary. If you choose not to participate, it will have no effect on your job or any work-related evaluations or reports. Please remember that even if you already agreed to participate, you may still change your mind and stop participating during the course of the interview / survey questionnaire / group discussion.

Procedures

If you accept our invitation for you to be part of this research:

- For interviews:

You will participate in an interview with me. During the interview, I will sit down with you in a comfortable place that we will agree upon. If you do not wish to answer any of the questions during the interview, you may say so and I will move on to the next question. No one else but me will be present unless you would like someone else to be there. The entire interview will be audio recorded. The audio recording of the interview will be stored in my office computer which is protected by a password. The information recorded is confidential, and no one else except me will have access to it. The audio recording will be deleted after five years.

- For the survey:

You will answer an electronic survey which will be sent to you through email. If you do not wish to answer any of the questions included in the survey, you may skip it and move on to the next question. Once you finish answering the survey, your answers will be sent to an electronic and secure database hosted by the Swiss Tropical and Public Health Institute. The information to be collected is confidential and your name will not be collected. No one else except me will have access to the compiled answers to this online survey.

For group discussions:

You will take part in a discussion with 5-6 other persons with similar experiences. This discussion will be facilitated by me. I will begin the group discussion, making sure that you are comfortable. We can also answer questions about the research that you might have. Then we will ask you questions related to our research findings on health sector devolution in the Philippines and give you time to share your inputs. The questions will be about how to interpret our research findings based on your experience working in the health sector. The discussion will take place in a place that we will agree upon, and no one else but the people who will take part in the discussion and myself will be present during this discussion. The entire discussion will be audio recorded. The audio recording of the group discussion will be stored in my office computer which is protected by a password. The information recorded is confidential, and no one else except me will have access to it. The audio recording will be deleted after five years.

Risks

There is a risk that you may share some personal or confidential information by chance, or that you may feel uncomfortable talking about some of the topics. However, we do not wish for this to happen. You do not have to answer any question or take part in the interview / survey / group discussion if you feel the question(s) are too personal or if talking about them makes you uncomfortable.

Benefits

There will be no direct benefit to you, but your participation is likely to help us find out how to improve the implementation of health sector devolution in the Philippines.

Compensation/Reimbursements

You will not be provided with any incentive to take part in this research. However, we will reimburse the costs of your travel (should there be any) to the place of the interview or group discussion if you come from a place that is far away.

Confidentiality

The information that we will collect from this research will be kept private. Any information about you will have a code on it instead of your name. Only I will be able to link your code and your identity. Likewise, your personal information will not be shared with anybody.

The following applies to group discussions:

We will ask you and others in the group to keep what was discussed within the group confidential. You should be aware, however, that we cannot stop or prevent participants who were in the group from sharing with others information that should be confidential.

Data storage

The information you provide will be stored in either Microsoft Word or Microsoft Excel files which will be protected with a password known only to me. These files, together with the audio recordings of the interviews and FGDs, will be stored in a restricted database of the Swiss Tropical and Public Health Institute. These files will be maintained securely for a maximum of five (5) years from the time of data collection, after which these files will be deleted. If requested, the audio tapes will be destructed.

Sharing the results

Nothing that you tell me today will be shared with anybody outside the research team, and nothing will be attributed to you by name. The knowledge that we get from this research will be shared with you before it is made widely available to the public. We will publish the results so that other interested people may learn from the research.

Right to refuse or withdraw

You do not have to take part in this research if you do not wish to do so, and choosing to participate will not affect your job or job-related evaluations in any way. You may stop participating in the interview / survey / group discussion at any time that you wish without your job being affected. In case you withdraw your participation, the data collected until the receipt of the withdrawal will be further used.

Who to contact

If you have any questions, you can ask them now or later. If you wish to ask questions later, you may contact me at the following contact information:

Dr. Harvy Joy Liwanag
Mobile no.: +63928-524-8059
Email address: harvy.liwanag@unibas.ch

This proposal has been reviewed and approved by the National Ethics Committee (NEC) of the Philippines, which is a committee whose task it is to make sure that research participants are protected from harm. If you wish to find about more about the NEC, contact:

National Ethics Committee
Philippine Council for Health Research and Development
Bicutan, Taguig City, Metro Manila
Tel. nos.: (02) 837-7537, or (02) 837-2071 to 82 local 2112
Email address: nationalethicscommittee.ph@gmail.com

This proposal has also been reviewed and approved by the ethics review committee of Northwest and North Central Switzerland (EKNZ).

You can ask me more questions about any part of this research, if you wish to. Do you have any questions?

Part II: Certificate of Consent

I have been invited to participate in this research about decentralization/devolution of the health sector in the Philippines.

I have read the foregoing information. I have had the opportunity to ask questions about it, and any questions have been answered to my satisfaction. I consent voluntarily to be a participant in this study

Name of participant: _____

Signature: _____

Date: _____
day/month/year

Statement by the Researcher

I have accurately read out the information sheet to the potential participant and, to the best of my ability, ensured that the participant understands the information provided.

I confirm that the participant was given an opportunity to ask questions about the study, and all the questions asked by the participant have been answered correctly. I confirm that the individual has not been coerced into giving consent, and the consent has been given freely and voluntarily.

A copy of this ICF has been provided to the participant.

Name of researcher: Dr. Harvy Joy Liwanag

Signature: _____

Date: _____
day/month/year