

University of Groningen

## Community health centers in Indonesia in the era of decentralization

Miharti, Suwatin

**IMPORTANT NOTE:** You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

*Document Version*

Publisher's PDF, also known as Version of record

*Publication date:*

2018

[Link to publication in University of Groningen/UMCG research database](#)

*Citation for published version (APA):*

Miharti, S. (2018). Community health centers in Indonesia in the era of decentralization: The impact of structure, staff composition and management on health outcomes. [Groningen]: University of Groningen.

**Copyright**

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

**Take-down policy**

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

# Community Health Centers in Indonesia in the Era of Decentralization

The Impact of Structure, Staff Composition and Management on Health Outcomes

**Suwatin Miharti**

© Suwatin Miharti

ISBN (print) :978-94-034-1232-0

ISBN (digital) :978-94-034-1231-3

All Rights Reserved. No part of this publication may be reproduced in any form or by any means, including scanning, photocopying, or otherwise without prior written permission of the copyright holder.

Printed by : CV. Mulya Indah

Cover design : Disya Praditina

Funding : This PhD project has been financed by Scholarship for Strengthening the Reforming Institution (SPIRIT), Ministry of National Development Planning/  
National Development Planning Agency, Republic of Indonesia.





university of  
 groningen

# **Community Health Centers in Indonesia in the Era of Decentralization**

The Impact of Structure, Staff Composition and Management on Health Outcomes

**PhD thesis**

to obtain the degree of PhD at the  
University of Groningen  
on the authority of the  
Rector Magnificus Prof. E. Sterken  
and in accordance with  
the decision by the College of Deans.

This thesis will be defended in public on  
Thursday 6 December 2018 at 16.15 hours

by

**Suwatin Miharti**

born on 7 April 1975  
in Jakarta, Indonesia

**Supervisors**

Prof. R.P.M. Wittek  
Prof. R.L. Holzacker

**Co-supervisor**

Dr. L. Heyse

**Assessment Committee**

Prof. P. Groenewegen  
Prof. B.J.M. Steverink  
Prof. L. Trisnanto

# Table of Contents

CHAPTER I: INTRODUCTION	1
Decentralized health care in Indonesia	1
Community health centers in the Indonesian health care system	3
Decentralization and CHC performance: research questions and framework	5
Data and information sources	6
Four studies on Indonesian Community Health Centers	7
CHAPTER II: COMMUNITY HEALTH CENTER INNOVATION AND DECISION-SPACE USE	13
Introduction	14
Indonesia's primary health care system under decentralization	16
Two waves of decentralization	17
Theoretical background	18
Decentralization and health system innovation in Indonesia: institutional analysis	21
Decentralization and health system innovation in Indonesia: case analysis	27
Conclusion	35
CHAPTER III: COMMUNITY HEALTH CENTER EFFICIENCY, ORGANIZATION DESIGN AND CONTEXT	37
Introduction	38
Indonesia's health care system and CHCs' characteristics	39
Theoretical background	40
Methods	44
Results	49
Discussion and conclusion	55
CHAPTER IV: COMMUNITY HEALTH CENTER EFFICACY AND SKILL-MIX OF PROFESSIONALS	57
Introduction	58
Complementarity and substitution of health care skills in Indonesian Community Health Centers	60
Methods	62
Results	67
Discussion and conclusion	78

THE CO-PRODUCTION BETWEEN COMMUNITY HEALTH CENTERS AND COMMUNITY ORGANIZATIONS	80
Introduction	81
Indonesian Community Health Centers and Posyandu	83
Theoretical background	86
Community co-production: Posyandu – Community Health Centers interaction	90
Methods	91
Results	93
Discussion and conclusion	98
<i>Summary and conclusion</i>	101
<i>Samenvatting</i>	111
<i>Dissertation summary</i>	120
<i>References</i>	128
<i>Appendixes</i>	143
<i>Acknowledgement</i>	147
<i>About the author</i>	149
<i>ICS dissertation series</i>	150

## Tables

Table 1-1 Summary of research questions and research design of the studies	12
Table 2-1 Description of decision-space domains	22
Table 2-2 District level health care innovation cases - summary overview	28
Table 2-3 Community health centre innovation cases - summary overview	29
Table 3-1 Input and output variables	47
Table 3-2 Descriptive statistics for input and output variables	49
Table 3-3 Technical efficiency scores	50
Table 3-4 Descriptive statistics	50
Table 3-5 Correlations between independent variables (CHCs in non-remote areas)	51
Table 3-6 Correlations between independent variables (CHCs in remote areas)	51
Table 3-7 Results of Tobit censored regression analysis	52
Table 4-1: Primary health care functions and required	62
Table 4-2. Calibration and sample descriptives	65
Table 4-3. Skill-mix configurations sufficient for high CHC efficacy	68
Table 4-4. Summary of skill-mix mechanisms	73
Table 4-5. Exploring shared CHC characteristics in the seven pathways	76
Table 5-1 The characteristics of the four categories of <i>Posyandu</i>	85
Table 5-2 Description of the complete data	94
Table 5-3 Correlation between independent variables of the complete data	94
Table 5-4 Negative binomial regression analysis on all observations	95
Table 5-5 Description of data categorized in non-remote and remote area	96
Table 5-6 Correlation between independent variable in non-remote & remote area	97
Table 5-7 Results of negative binomial regression on remote & non-remote areas	97
Table 10-1 Test Statistics for curvilinearity and moderation	144
Table 10-2 Summary of analysis of job descriptions of CHC staff	145



## Figures

Figure 1-1 CHCs within Indonesian administrative jurisdiction	4
Figure 1-2 Decentralization-performance framework	5
Figure 2-1 Conceptual model	20
Figure 2-2 Changes in decision-space from the first to the second wave	23
Figure 2-3 Changes in accountability pressure from the first to the second wave	26
Figure 3-1 The structure of health institutions in Indonesia	40
Figure 3-2 Illustration of the estimation of efficiency levels in DEA	46
Figure 5-1 CHC- <i>Posyandu</i> position based on administrative level	86
Figure 5-2 Theoretical framework	90