

**THE COMMUNITY GOVERNANCE OF BASIC
SOCIAL SERVICES IN FRAGILE STATES:
HEALTH FACILITY COMMITTEES IN
BURUNDI AND SOUTH KIVU, DR CONGO**

*Thesis submitted in partial fulfilment of the requirements for
the degree of Doctor of Philosophy*

by

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ABSTRACT

In many low-income and ‘fragile’ states, citizens’ committees are elected to co-manage basic social services. However, the effects of such committees on service delivery, and the way they are influenced by local contexts, remain understudied. This thesis seeks to fill these gaps by examining the case of the health facility committees in Burundi and South Kivu between 2011 and 2014. It relies on original health facility and committee surveys, household surveys, nested interviews and focus groups, and interviews with key informants.

The thesis firstly explores how the committees came about. It then looks at the questions, *What makes them get involved in decisions at their health facility?* and, *How do measures designed to improve committee functioning lead to changes in service delivery, if at all?*

Mixed-methods work finds that chief nurses largely dominate the health facilities, and the committees appear to be both the product of recent political and administrative changes and a façade of community governance.

The work’s randomised controlled trial tests the idea that this inefficiency arises from an ‘institutional knowledge gap’: the committee members and nurses do not know the committee’s (official) functioning. An information session has strengthened the committees and led to changes in health facility management in South Kivu, but not in Burundi. This difference seems to come from dissimilar management structures and people’s relationships to service providers. The intervention has had no effect on service provision.

The remaining chapters report on additional interventions in Burundi, which theory and qualitative research suggest might improve the effects of the knowledge intervention: trust-building between nurses and committee, information about health facility performance, and increased interaction between local leaders and committees. These are either ineffective or have unintended consequences.

Overall, the thesis nuances the promises of social accountability mechanisms and stresses the importance of power relationships within basic social services.

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TABLE OF CONTENTS

Declaration of authorship	2
Abstract.....	1
Acknowledgments	2
List of acronyms.....	3
Introduction	4
Methodological Approach	8
Main Contributions	17
Structure of the Thesis	19
Overview of the Thesis.....	20
Part A. Inducing community governance in primary healthcare centres	25
in Burundi and South Kivu	25
I. The community governance of public services: aid artefact?	25
I.1. Towards conceptual clarity.....	26
I.2. Community participation in Burundi and South Kivu	34
I.3. Shaping ‘participation’ in Burundi and South Kivu	35
I.4. Typologies of post-war community participation	44
I.5. Conclusion: induced but not artificial.....	49
II. Health, Health Systems, and Health Facility Committees	51
II.1. Health Systems and Access to Healthcare.....	51
II.2. Health Facility Committees in Burundi and South Kivu	64
II.3. The reality of HFCs in DRC and Burundi	75
II.4. Insights from policymakers	86
II.5. Conclusion.....	87
Part B. A Tale of Two Stories: building the institutional knowledge of the HFC	89
III. The limits of participatory institution building: evidence from an experiment on building institutional knowledge	89
III.1. Theoretical elements: roles and capacity-building	90
III.2. ‘Building the institutional knowledge’ of the HFCs: defining interventions	92
III.3. Experimental design and identification	98
III.4. Main Results	109
III.5. Discussion: real (quasi) null results in Burundi, strong effects in South Kivu ..	116
III.6. Unpacking the implementation of the intervention	121
III.7. Conclusion.....	133
IV. Opening the black-box of ‘context’	134
IV.1. External validity and portability of community governance initiatives	135
IV.2. Breaking down ‘context’: potential sources of heterogeneity.....	137
IV.3. Methods.....	149
IV.4. Results and discussion	151

IV.5. Conclusion	163
Part C. When knowledge is not enough	166
V. Unhealthy collaborations? Intra-committee and committee-nurses relationships ..	166
V.1. Trust and decision rights in Burundian HFs	167
V.2. Empirical strategy	172
V.3. Main results	176
V.4. Discussion	179
V.5. Conclusion	183
VI. Dangerous disruption or necessary upheaval? Performance indicators	185
VI.1. Background: Health Financing and Community Participation	186
VI.2. Empirical strategy	192
VI.3. Main results	198
VI.4. Discussion and qualitative insights	204
VI.5. Heterogeneous effects: financial incentives and atmosphere at the HF	211
VI.6. Conclusion	219
VII. Spoilers or facilitators? Local elite and the HF community governance	222
VII.1. Background	223
VII.2. Theory of change	231
VII.3. Empirical strategy	232
VII.4. Results and discussion	238
VII.5. Discussion and conclusion	254
Conclusions and implications	258
Limitations	262
Policy implications	264
Moving ahead with the research agenda	266
Bibliography	269
List of tables	288
List of figures	290
Appendices	291
Appendix A. Health facilities included in the study	291
Appendix B. List of the interviewees (key informants)	293
Appendix C. Extra material by chapter	294
Appendix C.I. Chapter I	294
Appendix C.II. Chapter II	297
Appendix C.III. Chapter III	301
Appendix C.IV. Chapter IV	302
Appendix C.V. Chapter V	305
Appendix C.VI. Chapter VI	307
Appendix C.VII. Chapter VII	316

LIST OF ACRONYMS

BSc:	Bachelor of Science (<i>licence</i> in Burundi/the DRC)
CHW:	community health worker
DHS:	democratic and health surveys
DRC:	Democratic Republic of the Congo
GNI:	gross national income
HF:	health facility (in the thesis, an HF is a primary healthcare centre)
HFC:	health facility committee
HiS:	health information system
IDP:	internally displaced person
INGO:	international non-governmental organization (international aid organisation)
MoH:	Ministry of Health
MSc:	Master of Science (<i>maîtrise</i> in Burundi/the DRC)
NGO:	non-governmental organisation (local)
ODA:	official development assistance
PBF:	performance-based financing
SD:	standard deviation
UN:	United Nations
UNDP:	United Nations Development Programme
UNICEF:	United Nations Children's Fund
WHO:	World Health Organization

INTRODUCTION

Community governance, the direct co-management of social services by the communities themselves, has over the past decades become one of the most popular approaches to improving the quality of, and access to, basic social services. It follows the popular argument that ‘people know best what they need’ and has been widely adopted in programmes and policies for improving social service delivery in low-, middle-, and high-income countries. Examples of community governance span the world. In the United Kingdom, the idea was central to the ‘Big Society’ concept promoted by the 2010-15 coalition government. In Sierra Leone, Liberia and Guinea in western Africa, calls for increased community governance and engagement multiplied when the 2013-16 Ebola crisis highlighted the fragility of the three states’ health systems.

In post-conflict countries, community-driven reconstruction and governance have become a central part of the international discourse on stabilisation and development. The literature on the many different issues that affect citizens’ committees provides comprehensive but relatively impractical lists of the potential benefits of, and issues with, community governance (O’Meally 2013; Grandvoinnet et al. 2015; McCoy et al. 2012; Molyneux et al. 2012). It also reveals a dearth of sound impact evaluations of the effects of introducing social accountability mechanisms into basic social services (healthcare, education, and water and sanitation) or of the effects of initiatives to make community governance mechanisms function more effectively.

This thesis contributes to filling this gap. It is the first rigorous large-scale, mixed-methods impact evaluation of a quintessential mechanism of community governance and social accountability: the Health Facility Committee (HFC). The focus is on the HFCs of the country Burundi and of the province of South Kivu in the east of the Democratic Republic of the Congo (DRC). Both regions were devastated by wars in the late 1990s and 2000s and are, by any standard, ‘fragile’ environments. They face considerable difficulties in rebuilding basic social services, including their healthcare systems. Against this

background, their governments, supported by international aid, have argued in favour of and have set up systems of community participation (Gaynor 2014; Kyamusugulwa & Hillhorst 2015). The HFC, which is a pervasive mechanism in African countries (McCoy et al. 2012), consists of an elected body of community members who take part in the management of the Health Facilities (HFs) and make decisions concerning their functioning. Prior to starting this research, no real assessment of the HFCs in the region existed.

In a context of community participation having become ubiquitous, this thesis asks a central but often overlooked question: *What is the impact of mechanisms of community governance, and in particular HFCs, on healthcare delivery in Burundi and South Kivu?* This main question is broken down into three, complementary, more specific questions.

The first specific question asks *how mechanisms of community governance, and especially HFCs, came about in Burundi and South Kivu*. The HFCs are shown to be the product of the vision and interests of four key actors: national politicians, international aid agencies, the advocates of 'liberal' peace, and the promoters of global agendas of 'good governance' in health and international development. Through qualitative work and surveys, the thesis provides new empirical evidence suggesting that the HFCs of Burundi and South Kivu are often ineffective. HFCs appear to be largely a façade in the sense that they do not participate in decisions regarding their HFs and, more generally, do not play their role of HF co-managers. The local actors have developed narratives about this situation. The thesis explores them and researches the two key themes of the political economy of the committees (whose interests do they serve?), and the idea that the ineffectiveness of the HFCs primarily comes from the low capacity or knowledge of their members.

The core of the thesis is in the second specific question: *how can mechanisms of community governance, and in particular the HFCs, be effective – in the sense of the committee being involved in the decisions of the health centre – in Burundi and South Kivu?* The question comes logically in a context where the literature (Mansuri & Rao 2012) and field evidence alike suggest difficulties in inducing community governance.

The main argument is that the effectiveness of community governance of health centres in Burundi and South Kivu is primarily a question of negotiating power – *decision rights* – between nurses and health committee members. Without this redistribution of influence, no change can be expected from social accountability mechanisms such as the health facility centre (HFC). The leading thread of the thesis is, therefore, the question of the efficacy of the committee. In other words, when do committee members have a say in the affairs of the health centre? These questions call to consideration the prerequisites for HFCs to function and their interaction with the local context.

The HFC's knowledge and clarity about the 'rules of the game' and the expected functioning of the HF appears to be a potentially crucial prerequisite for any committee to function. In both contexts, the HFCs have little space to operate and make decisions at the HFs, which are institutions overwhelmingly dominated by the chief nurse. However, once the roles of the different actors are clarified through an intervention, the HFCs of South Kivu are able to provoke changes in HF management. The mainstream and grey literature suggest that this type of information helps committee members 'reclaim their rights' (Bovaird 2007), but its clarifications could also legitimise the positions of the committee members vis-à-vis the other local actors, or leading nurses to realise the added value of the committee.

In Burundi, however, the HFCs seem trapped in a situation of low influence and the intervention on HFC roles is not sufficient to change their situation. Shifting the balance of power to make the HFC more influential appears challenging. The more conceptual literature on community governance, such as Platteau (2002), Fung (2006), Osmani (2009), and Mansuri and Rao (2013), point to other areas that influence the functioning of citizens' committees at the level of basic social services: the information available to committee members and their relationship with service providers and local leaders. Three interventions help explore these issues, designed (1) to increase trust between HFC members and nurses, (2) to improve HFC access to information on HF service provision, and (3) to connect committee members with local leaders. None clearly improves the

functioning of the HFCs, to the exception of a handful of HFCs in specific situations. There seems to be no easy way to ‘engineer’ community participation in a non-favourable context.

The fact that context matters so much to the effectiveness of the HFC intervention supports the argument of recent research describing systems of social accountability, such as community governance, largely *context-dependent* (Mansuri & Rao 2013; Fox 2015). That community governance is necessarily contextualised is, in fact, not even a debated topic. There is, however, a growing area of research on the precise *critical contextual features* and their effect (Grandvoinnet et al. 2015; Brinkerhoff & Wetterberg 2015; Joshi 2014). I argue that the discrepancy between the cases of Burundi and South Kivu – where the HFCs show great similarity, have been in the same initial situation, and have benefitted from the same institutional-knowledge intervention – has to do with management structures. In particular, this relates to the prominence of a certain type of publicly funded, faith-based HF in South Kivu and the general attitude towards service providers as a product of different socio-political histories. The thesis argues that, in this case, it is possible to narrow down the often extensive lists of contextual factors that may matter for committee effectiveness (O’Meally 2013; Grandvoinnet et al. 2015) to a few critical micro-contextual factors.

Finally, the third specific research question goes back to the idea of measuring changes in service delivery: *how do measures designed to improve the functioning of the HFCs lead to change in service delivery, if at all?* There is little rigorous empirical research on the effects of citizens’ committees on service delivery (management, provision and quality), especially in the case of the healthcare services (Molyneux et al. 2012; McCoy et al. 2012; Loewenson & Tibazarwa 2013). The thesis shows that changes regarding HF management can be expected from strengthened HFCs in specific contexts. However, over the 2011-2014 period in Burundi and South Kivu, there is scant evidence that this change ultimately benefits the population and users of the health facilities in that it does not modify the provision of services, their perceived quality, or equity in accessing them. These findings

question the idea of induced community participation as a means of quickly improving service delivery in fragile situations.

METHODOLOGICAL APPROACH

The methodological approach draws on both qualitative and quantitative experimental methods. A mixed-method approach is necessary to address causal research questions in the complex context of healthcare governance in post-conflict Burundi and South Kivu (Craig et al. 2012; Molyneux et al. 2012; Mubyazi & Hutton 2012). In order to ground ill-defined concepts such as ‘governance’, ‘accountability’ and ‘participation’, its focus is on a well-defined set of participatory practices in the co-management of health centres by HFCs. Community governance/participation is understood as a process (Rifkin 2014), and the thesis explores how this process is affected by different types of intervention that seek to improve access to information and decision-making.

The experimental approach is crucial to overcoming common problems of endogeneity that arise when studying the HFCs. In particular, there could be both *omitted variable bias*, with variables such as literacy affecting both HFC effectiveness and HF service delivery at the same time, and *reverse causality*, with well-functioning HFs prompting HFCs to organise (Osmani, 2008). Mixing a quantitative impact evaluation with qualitative research presents many advantages (Woolcock et al. 2010): crucially, it helps with “mapping out the causal chain from inputs to outcomes and impact” (White 2009, p.272). Mixed methods are also precious to an understanding of the context, an identification of the potential sources of heterogeneous effects, an improvement to survey instruments, and a better sense of the sensitive issues and effects potentially missed by quantitative indicators. In an area where the few existing quantitative studies generate inconsistent findings, qualitative evidence is decisive for understanding potential null or unexpected effects (Ananthpur et al. 2014).

A total of four field interventions are examined. They look at the questions of (1) institutional knowledge of the HFCs, (2) trust between HFC members and nurses, (3)

localised information on HF performances, and (4) HFC relationships with local leaders. In Burundi, the four interventions were part of an action-research project carried out with the local non-governmental organisation (NGO) Coped and the Dutch International NGO (INGO) Cordaid (Caritas Netherlands), in collaboration with Burundi's Ministry of Health (MoH) and with the financial support of the European Union (total budget of the action-research: €1,035,332 over four years)¹. The number of HFCs/HFs involved was 251. In South Kivu, still in the collaboration of its MoH with Cordaid, but this time with the further financial support of the World Bank (total budget of the action-research: US\$150,000 over two years), only the institutional knowledge intervention was implemented, in 78 HFCs/HFs. I was the principal investigator of both these projects, and the only academic working full time on them. In each, reliable and competent teams implemented the project and helped me in my research. Their contribution to shaping the ideas in the present thesis and collecting the important material on which it rests are given the grateful acknowledgement in Table 1 below.

Table 1. Main staff working on the Burundi and DR Congo projects

Burundi	
<i>Intervention-implementation and supervision of data collection</i>	Pierre Bakevya, MSc (head of project) Bernard Nyagashahu, BSc; Freddy Irambona, MD; and Isidore Nkunuzimana, BSc + 5 facilitators (short-term consultants) per round + 25 enumerators (short-term consultants) per round
<i>Advisers (5 days/month)</i>	Hugues Nkengurutse, MSc; Léonard Ntakurutimana, MSc
<i>Research assistant</i>	Raymond Ngenzebuhoro, BSc
South Kivu	
<i>Intervention implementation and supervision of data collection</i>	Michel Zabiti, MD (head of project) Paterne Kalegemire, BSc + 3 facilitators (short-term consultants) per round + 25 enumerators (short-term consultants) per round

The main staff members are named. The list of enumerators and facilitators is available in the project archives. In Burundi, part of the body of baseline qualitative data were collected with the support of the local research firm CREDESS Burundi (but enumerators were contracted by the project).

¹ Only part of this amount, around one quarter, went to research-only activities. It is hard to give a more precise estimate as most budget lines are entangled (e.g. staff, transport, etc.).

The general approach is ‘participatory econometrics’ (Rao 2002) in the sense that the rigorous econometrics and analytical apparatus are deliberately informed and open to influence by the subjects of the research. It was an iterative process: qualitative research informed a survey-based assessment of the situation of the HFC/HFs, which led to the definition of the interventions discussed with key actors in the health and governance sector, and to the initial analysis plan. The carefully documented interventions were evaluated finally through nested qualitative work and end-line surveys. The approach required the collection of sizeable empirical material (Table 3), which will be presented in more depth when used in the different chapters.

Surveys were carried out among three different categories of respondents at baseline in 2011-2012 and end-line in 2013. Firstly, chief nurses were surveyed in all of the publicly-funded HFs of eight Burundian provinces and in all the publicly-funded HFs of four Congolese health zones. Secondly, in the same places, a group of HFC executives (usually the president, secretary, and two to three other members) also answered a survey, collectively. On this occasion, data about the history of aid and violence were collected for each locality, based on the recollection of the interviewee and using key events to locate them in time. Thirdly, in the catchment areas around the HFs, enumerators interviewed 30 randomly selected residents 16 years of age and older, enumerating the brackets 16-30 years, 30-45 years, and over 45, the gender, and the distance to the HF. Interviewees were not compensated or made promises of anything in exchange for the information and the surveys were conducted in the local language, Kirundi or Swahili, Shi, or Kihavu, by trained enumerators hired locally or in Bujumbura or Bukavu. A total of 15,769 households were surveyed in the two countries over the two rounds of surveys. Data on service provision from the Burundi and South Kivu health information system (HiS) and performance-based financing (PBF) system are also used. Behavioural games were played in 168 HFCs to better approach the questions of trust.

In addition, qualitative research was nested (Lieberman 2005) into a total of 108 sites in Burundi (48 in 2011-2012 and 60 in 2013) and 26 sites in South Kivu (8 in 2012 and 17

in 2013) (list in Appendix A). In each site selected for qualitative research, structured interviews and focus groups were organised with HFC members, nurses, local leaders, health officials and ordinary citizens. Some of these interviews were done by my research assistants alone, some by myself, and some jointly. The division of interviews between different interviewers was guided by logistical reasons –over 300 hundred interviews were planned in 2011-2012 and the same amount in 2013– but also by the desire to mitigate response biases linked to the characteristics of the interviewees, and especially their socioeconomic and geographical origins, ethnic group, and age. In order to provide the interviewees the most reassuring possible space to talk, the interviews were not recorded, anonymised, and conducted outside the HF when possible (except for HF staff members). For each interview or focus group, systematic notes, including quotes, were taken, with the consent of the interviewee(s).

At baseline level, in 2011-2012, the 48 interview sites in Burundi and the eight interview sites in South Kivu were randomly selected in each of the health districts and zones. They are referenced using the type of interview (interview or focus group), the function of the interviewee (HFC member, HF staff, HF chief nurse, HFC president, local leader), the name of the district where the site is located, and the date of the interview.

At end-line level, in 2013, the 17 interview sites in South Kivu were selected and are referenced in a similar fashion. The 60 end-line interview sites in Burundi were selected using data from an auto-evaluation of the functioning of the HFC carried out during a visit of the project team, nine months after the beginning of the intervention: the best, worst, and average performers were picked from the different intervention groups.² In both South Kivu and Burundi, survey data on the measured changes in terms of social accountability of the HFC (the indicator is explained in details in chapter III) then helped locate the HFC with more precision. As a consequence, the qualitative data collected in each site can be examined in the light of how much the HFC has been affected by the intervention (see table 2, next page).

² For the control group, such data was not collected and the sites were randomly selected.

Table 2. End-line interview sites in Burundi, by change in 'social accountability'¹

HF identifier	social ac- countability change (SD) ¹	percentile in group distri- bution	HF identifier	social ac- countability change (SD) ¹	percentile in group distri- bution
<i>control group</i>			HF Endline.B.2.7	1.08	40%
HF Endline.B.0.1	0.01	5%	HF Endline.B.2.8	1.44	60%
HF Endline.B.0.2	0.20	10%	HF Endline.B.2.9	1.76	69%
HF Endline.B.0.3	0.37	35%	HF Endline.B.2.10	1.93	76%
HF Endline.B.0.4	0.79	13%	HF Endline.B.2.11	1.94	79%
HF Endline.B.0.5	0.81	33%	HF Endline.B.2.12	2.14	93%
HF Endline.B.0.6	0.92	70%	<i>Intervention group 3</i>		
HF Endline.B.0.7	1.27	87%	HF Endline.B.3.1	-1.00	5%
HF Endline.B.0.8	1.31	82%	HF Endline.B.3.2	-0.09	10%
HF Endline.B.0.9	1.46	51%	HF Endline.B.3.3	0.11	12%
HF Endline.B.0.10	1.50	86%	HF Endline.B.3.4	0.17	17%
HF Endline.B.0.11	1.63	19%	HF Endline.B.3.5	0.27	26%
HF Endline.B.0.12	2.13	84%	HF Endline.B.3.6	0.92	50%
<i>Intervention group 1</i>			HF Endline.B.3.7	1.06	55%
HF Endline.B.1.1	-0.88	2%	HF Endline.B.3.8	1.12	57%
HF Endline.B.1.2	-0.26	10%	HF Endline.B.3.9	1.17	60%
HF Endline.B.1.3	0.13	19%	HF Endline.B.3.10	1.41	71%
HF Endline.B.1.4	0.33	31%	HF Endline.B.3.11	1.69	86%
HF Endline.B.1.5	0.46	36%	HF Endline.B.3.12	1.71	88%
HF Endline.B.1.6	0.59	43%	<i>Intervention group 4</i>		
HF Endline.B.1.7	0.86	48%	HF Endline.B.4.1	-0.34	7%
HF Endline.B.1.8	1.27	62%	HF Endline.B.4.2	-0.34	10%
HF Endline.B.1.9	1.29	64%	HF Endline.B.4.3	-0.20	12%
HF Endline.B.1.10	1.47	71%	HF Endline.B.4.4	0.23	17%
HF Endline.B.1.11	1.80	79%	HF Endline.B.4.5	0.37	21%
HF Endline.B.1.12	1.96	83%	HF Endline.B.4.6	0.44	26%
<i>Intervention group 2</i>			HF Endline.B.4.7	0.62	29%
HF Endline.B.2.1	-1.35	2%	HF Endline.B.4.8	0.71	31%
HF Endline.B.2.2	-0.95	5%	HF Endline.B.4.9	0.90	40%
HF Endline.B.2.3	-0.74	7%	HF Endline.B.4.10	1.67	69%
HF Endline.B.2.4	-0.02	17%	HF Endline.B.4.11	2.19	88%
HF Endline.B.2.5	0.71	26%	HF Endline.B.4.12	2.48	95%
HF Endline.B.2.6	0.79	31%			

1. See Chapter III for details about the compilation of the social accountability indicator. It is measured in standard-deviation from the baseline level for the control group.

The semi-structured format of the questions helped obtain a good grasp of the positioning towards and experiences of the interviewees of key issues: the functioning of the HFC; the functioning of the HF; the relationship between the population and the HFC and HF staff,

aspects related to local leaders, local politics, corruption, and local resources management; and changes at the past year –the year since the beginning of the intervention for the end-line interviews. Key themes that are not direct answers to the questions of the semi-structured questionnaire were identified through an analysis of the terms and issues that were the most frequently spontaneously brought up throughout the set of interviews.³

Finally, I conducted 35 semi-structured long interviews with key informants, MoH officials and representatives of organisations involved in healthcare and decentralisation, to better understand the context of community governance in Burundi and the DRC (Appendix B). These interviews were deliberately less structured than the abovementioned field and they helped comprehend how policies had been made and shaped in the recent years.

Table 3. Main data sources

	<i>type</i>	<i>years</i>	<i>location / observations</i>	
			<i>Burundi</i>	<i>South Kivu</i>
<i>Quantitative</i>	HF surveys	2011-2012	249	78
		2013	249	78
	HFC surveys	2011-2012	249	78
		2013	249	78
	Household surveys	2011-2012	3,960 ¹	2,341
		2013	7,647	2,340
	Behavioural games (sessions)	2012	168	
	Health information System and PBF data (monthly)	2011-2012	228	233
		2013	77	78
<i>Qualitative</i>	Long interviews: key informants	2011-2014	30	5
	Field interviews: HF staff	2011-2012	48	8
		2013	60	17
	Field interviews: HFC president	2011-2012	48	8
		2013	60	17
	Field Focus Group: HFC	2011-2012	48	8
		2013	60	17
	Field Focus Group: population	2011-2012	12	2
		2013	60 ²	2
	Field Interview: local leaders	2011-2012	24	2
		2013	120	4
	Field Interview: MoH field staff	2011-2012	8	4

1. Only 132 randomly selected sites were surveyed in 2011-2012 | 2. Half of which were women only.

³ A dedicated software, NVivo, was used to perform this task.

The diverse sources, especially for the comparison of the HFC and HF surveys through the field interviews and focus groups, enable triangulation, and strengthen the credibility of the information gathered. The intervention and data collection sides of the project were separated by different introductions given to the participants, and the overwhelming majority of enumerators were not facilitators (the few project staff members who combined the two roles never combined the two roles in the same place). The project had discrete phases of research, action and writing (Zuber-Skerritt & Fletcher 2007). Biases created by the presence of a foreign researcher in a poor and post-conflict setting (Zachariah et al. 2010) have been mitigated by data triangulation and collaboration with local research assistants and researchers.

The focus, deliberately, is on the situation *at the health facilities* between 2011 and 2014. The question of the potential externalities of the committees, on health outside the health centres, or on other areas of local socioeconomic life such as local democracy (Cornwall & Coelho 2007), are, intentionally, not explored. Logistical constraints, and the need to work in areas where the forced displacements of populations are limiting, both led to a focus on 8 of Burundi's 17 provinces and 4 of South Kivu's 34 health zones (see Figure 1). While the conclusions of the thesis may apply to provinces and zones that are not included but may be similar, inferences applicable beyond these provinces and zones should be considered with care. References to the health centres and HFCs in Burundi and South Kivu should be understood, respectively, as the provinces of Bubanza, Bujumbura (rural), Bururi, Makamba, Rutana, Ruyigi, Cankuzo and Karusi, and the health zones of Katana, Miti-Muresha, Walungu and Idjwi.⁴

⁴ The study does not encompass the densely populated areas of north and central Burundi nor most of the loosely populated areas and unstable parts of South Kivu. The population of interest mainly identifies with the Shi and Muhavu ethnic groups in South Kivu and Hutu and Tutsi in Burundi. A Twa minority is present in both regions. Ethnicity can be misleading in the case of Burundi: although often referred to as 'ethnic' groups, 'Hutu' and 'Tutsi' actually share the characteristics that usually define an 'ethnic group' (Reyntjens 1996, p.243). Physical features do not permit one to reliably and consistently identify whether an individual is Hutu or Tutsi. The two groups are better understood as first and foremost social constructs (see for instance Sternberg, Grigorenko, & Kidd, 2005; and Waters, 2014).

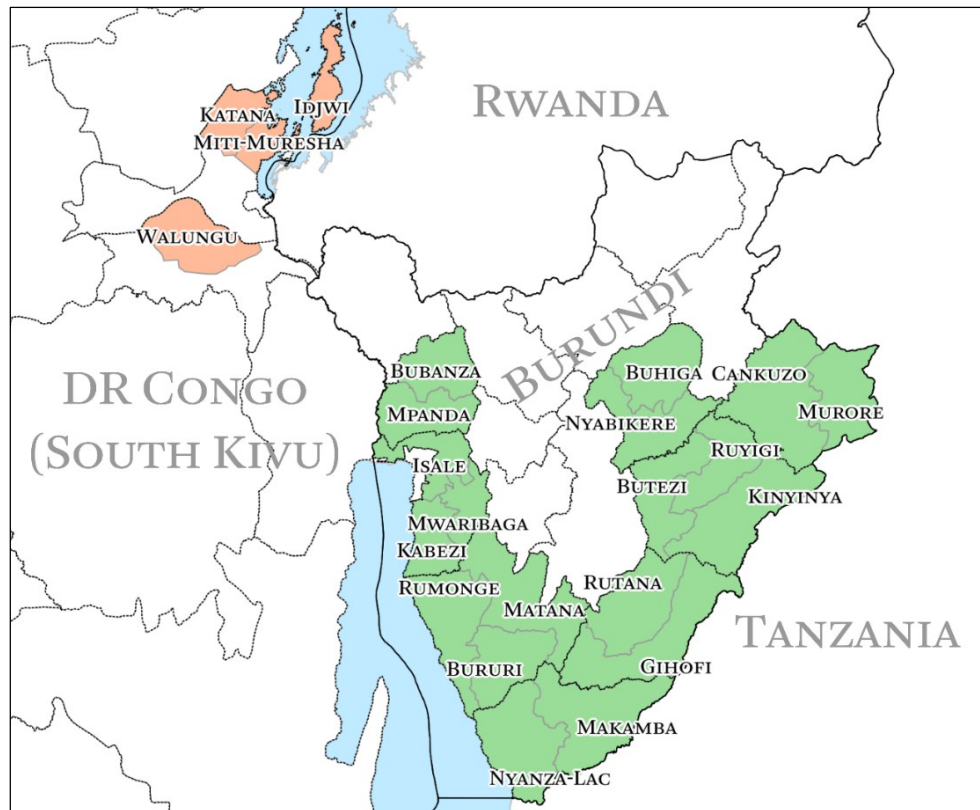


Figure 1. Localisation of the study area

South Kivu health zones in orange, Burundi health districts in green. Thicker lines within Burundi indicate provincial borders. Lines inside South Kivu indicate territorial borders.

Uncontrollable limitations arise from the fragile political situations in Burundi and South Kivu. Data are often hard to collect although the type of data used will be flagged to the reader. Some material that could have been used to control any confounding in the results could not be collected – ethnicity, for instance, remains difficult to discuss in surveys in Burundi. It must be noted that before the 2015 crisis in Burundi, ethnicity seemed no longer to play a fundamental role in access to basic services, and authors such as Vandeginste insist that the deepest division in Burundian society was along political fault lines (2015).

The thesis is first and foremost, of and on, a thoroughly empirical work, but it is of course theoretically informed, among others by a dense literature that has developed lists of potentially important elements for social accountability (Grandvoinnet et al. 2015; Molyneux et al. 2012; O'Meally 2013). These works are mainly used to develop research hypotheses and entry points. To quote Elinor Ostrom, existing theories are used as

“frameworks that help to identify the elements (and their relationships) that one needs to consider for analysis” (Ostrom 2005, p.28). The analytical work of this thesis is indeed an iterative project, which seeks to develop, ground and refine theories that explain the interactions between the HFC and the HF through a detailed examination of the situation in Burundi and South Kivu. Initial hypotheses were generated from empirical and theoretical research, they were tested in the field, and the results then helped build new theories. Although each chapter mobilises its own body of literature, the thesis as a whole is influenced by three strands in economics and political science. No one strand is a perfect fit for the analysis, and none is sufficient to understand the HFCs, but they each help cast light on important aspects, as now described.

New institutional economics draws attention to the relationship between the different actors and the ‘rules of the game’ at the HFCs/HFs. Although HFs are not common-pool resources, the institutional analysis and development framework proposed by Ostrom (Ostrom et al. 1999; Ostrom 2005) provides a lens for looking at the HFCs/HFs, one that emphasises the need properly to understand the action arena, the situation of the actors, and the way they evaluate and take decisions. In earlier work (1990), she stresses seven elements for successful management of common pool resources, four of which seem particularly relevant for HFC research and will be explored in this thesis: clearly defined boundaries (or property/decision rights), possibility of sanctions (accountability), conflict resolution mechanisms, and non-challenge by external actors.

New institutional economics can also be used to see the community governance mechanism as a question of property rights, defined as the ‘rights to use resources’ (Alchian & Demsetz 1973). A key issue explored in the thesis is the related issue of decision rights, which are defined as the possibility for the actors to participate in decisions regarding the management of services. Property/decision rights, and the transaction costs attached to their effective enforcement have been said to be key to the emergence of local and national institutions (Acemoglu & Robinson 2012; Besley & Persson 2011; North 1990).

The question of accountability and governance of the HF can also be seen as one of

information, and has sometimes been framed as a *principal-agent problem*. “A principal–agent problem arises when there is imperfect information concerning what action the agent either has undertaken or should undertake” (Stiglitz 2008). The HFC is mixed in a doubling of the principle-agent situation: it is the agent of the population and the principal of the HF staff. The focus of the thesis is on the HFC-nurses relationship, where the HFC is the principal. Once the roles of each party are determined (and sometimes written in terms of reference), the question for the HFC is how to influence and control what is happening at the HF. This framework obviously implies that the HFC, as per regulations, is recognised as a principal by its agent – but this may not always be the case, as Fox (2015) points out.

Finally, and more generally, the thesis is about the HFC as a *voice* mechanism, in Hirschman’s (1970) sense of the possibility for users facing challenges in their organisations to instil changes by expressing their concerns. As Mehrotra (2006) notes, the poor often have “limited prospects of ‘exit’ [a market strategy]”, which makes the question of whether a voice leads to changes central to service delivery in low-income settings. It is important to note that this takes place at the level of an institution/service provider, the biomedical HF, which may not be especially receptive to the voice of, and by, laypeople (Mubyazi & Hutton 2012). Healthcare is indeed a sector where barriers to effective communication between patients or laypeople and practitioners are often important (Birch & Pétry 2009; Rodwin 2001; Jaffré & Olivier de Sardan 2003).

MAIN CONTRIBUTIONS

One of the main contributions of this thesis is the development of a methodological toolbox to analyse social accountability mechanisms in health, and its large-scale application to the case of the HFCs in Burundi and South Kivu.

The thesis is the first substantial piece of research on the participatory governance of primary healthcare centres in Burundi and South Kivu, two regions in which local democratic dynamics are studied less frequently, and understood less thoroughly, than in

West and Southern Africa. The thesis significantly expands the emerging body of research on community accountability in health in ‘fragile’ settings. The research makes three main conceptual contributions to extant scholarship: (1) it approaches the question of impact rigorously; (2) it opens up the black box of ‘context’, empirically and at the micro-level; and, (3) it explores the elephant in the room: authority and power dynamics in service provision.

Firstly, mainstream research in public health and development studies has largely abandoned the idea of making causal claims between community participation and service delivery. This thesis therefore chooses to explore, cautiously, some of the key hypotheses outlined in the literature and provides a causal analysis with a general observation: HFCs have little effect on service delivery, at least in the short-run. Such an approach makes a precious contribution towards understanding the shortcomings and implications of the health committee approach.

Secondly, the thesis dissects the idea of ‘context’, and seeks to understand *what aspects of the context matter*. Part of the existing research on community participation has conflated the importance of local elements and context with quasi-relativism and the conclusion that community participation is an idiosyncratic process (possibly down to the very HF level). Three approaches are used to better identify critical contextual factors: (1) using a large sample of health centres and health committees, (2) considering a similar community governance intervention in two different countries, and (3) exploring heterogeneous effects and interaction effects. This analysis of context is crucial for policy-makers and researchers alike as it provides more workable horizons where the context is better identified. In the case of the health committees of Burundi and South Kivu, whether the health facility is faith-based, and whether local people’s general willingness to confront service providers, are identified as the critical micro-contextual factors that explain the contrasted situations between the two cases. Other, typically classic hypotheses, such as the level of education of the committee members (Frumence et al. 2014) or their involvement as local politicians (Hickey & King 2016) proved to be less relevant.

Thirdly, the core of the thesis is the question of power and interpersonal

relationships within the HFC, which is rarely touched upon by a literature in public health that often remains technical in its approach of participation (Molyneux et al. 2012). The thesis (1) localises this issue against a background that is more refined than the simplistic idea that community participation at the level of basic social services is an *aid artefact* (Cooke & Kothari 2001), and (2) evaluates the positions of the different parties in the health centre. It shows how service provision dynamics revolve around the authority of the chief nurse.

The contribution of the thesis is also to methods; not only in terms of the unique application of a mixed-methods impact evaluation framework to study a community participation, but also in proposing a combination of different approaches. Indeed, the research combines elements of the ‘technical’ analysis of community participation that comes from health economics and management with some elements coming from a more political economy approach. It combines the interests of the first for measuring inputs and outputs with the interests of the second for understanding mechanisms of power and authority. In practice, the approach deliberately mixes experiments and qualitative research yet is nested around key points, and makes claims about the mechanisms at play, which rest on more than theory.

STRUCTURE OF THE THESIS

The thesis is divided into three different parts (see Figure 2). Part A comprises chapters I and II, which introduce the theoretical and empirical background of the thesis and answer the question of how community participation at the level of basic social services and the HFCs came about in South Kivu and Burundi. The rest of the thesis is structured around the field experiments. Part B focuses on the ‘institutional knowledge’ of the HFC and HF staff and is structured around an intervention that was implemented in both regions. Chapter III shows that the intervention leads to contrasted results between the two cases of study, Burundi and South Kivu. Chapter IV seeks to provide possible explanations for this difference. Part C aims to understand what could make the HFC work better in

Burundi, where the ‘institutional knowledge’ intervention did not lead to strong effects. Three additional intervention arms are implemented on top of the basic intervention, testing the hypotheses that the failure of the committees could be a matter of (1) trust between the HF staff and committee members, (2) localised information on the health facility performance and budget, and, (3) interaction with local leaders. These hypotheses are discussed in chapters V, VI and VII respectively.

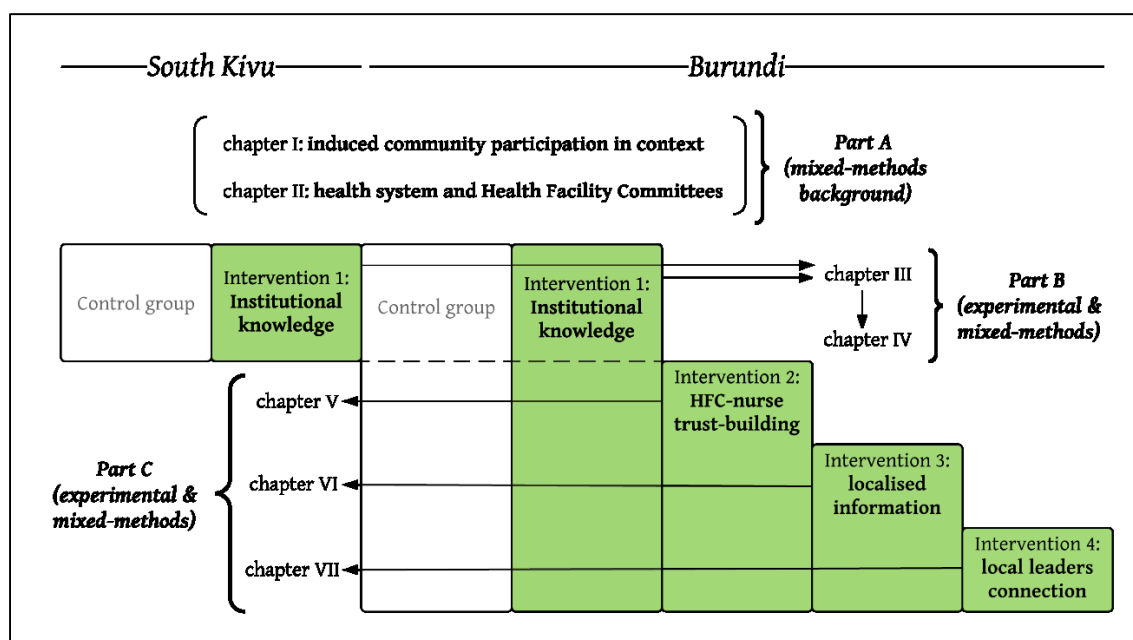


Figure 2. Broad overview of the thesis

OVERVIEW OF THE THESIS

Chapter I, *The community governance of public services: aid artefact or democratic awakening?* presents a general review of the literature on community participation and subsequently retraces the development of mechanisms of community participation in basic social services in Burundi and South Kivu. Different theoretical tensions are identified as the literature ranges from unbounded enthusiasm for participation as a solution for making social services efficient, to deep scepticism and the idea that induced participation is a form of tyranny. The chapter argues that the important development of community involvement in Burundi and South Kivu since the 2000s is the consequence of a set of four different actors finding their interest: international aid organisations, promoters of the

liberal peace model, local politicians, and high-level civil servants who all four promote global agendas in health, education, and other fields. The picture is more complex than the clichéd one of community governance as a pure artefact created by international aid. In the field, different practices of community participation in basic social services are identified: some of them correspond to a form of forced participation, but most seem to reflect democratic aspirations.

Chapter II, *Health, health systems, and health facility committees*, casts the spotlight on the HFCs. After a review of the literature on the efficiency and functioning of the HFCs around the world, which is full of promises, the chapter looks at the history of the HFCs in the context of health services in Burundi and the DRC. A paradoxical situation is exposed using original material. On the one hand, HFCs are in place in every publicly funded health facility, and the mechanism is relatively well known by the population that supports the idea of community governance. The HFCs are also present in most health policy documents. On the other hand, the HFCs appear as mostly a façade, in the sense that they do not make decisions about the HF and do not take part in its management.

Chapter III, *The limits of participatory institution building: evidence from an experiment on building institutional knowledge*, examines the hypothesis that the community members' 'knowledge gap' may explain their low efficacy: the key issue could be that committee members simply do not know what they are supposed to do. The first part of the chapter, which also serves as a methodological starting point for chapters IV-VII, depicts the low functionality of the HFCs in 2011-12 and proposes a strategy to assess meaningfully change in the HFC and the governance and management of the health centres. An intervention, an information session on the role of the HF and HFC for committee members and nurses, is then designed to explore the 'institutional knowledge gap' hypothesis. That is the chapter's focus. After one year, the randomly implemented intervention has led to almost no change in the HFC organisation or HF management in Burundi. Meanwhile, in South Kivu, the committees are much better organised, social accountability indicators are on the rise, and there are remarkable improvements in health

services management (infrastructure and human resources). There is, however, no visible change in the use and perceived quality of services. The contrasted results are unlikely to be caused by problems of implementation, statistical power, or spill-overs, and highlight the importance of the local ‘context’.

Chapter IV, *Opening the black box of ‘context’: on the contrasted effects of building the institutional knowledge of health facility committee members in Burundi and South Kivu*, complements chapter III and seeks to understand the contrasted results of the institutional knowledge intervention: what matters in the ‘context’? The focus is on changes in the decision rights of the HFC, which are a marker of the operational capacity of this strategy of social accountability. Using qualitative methods, a series of characteristics linked to the composition of the health committee, the situation of the HF, and the more general attitude towards service providers are identified and differ, on average, between the two regions. Interaction effects of the intervention described in Chapter III provide strong evidence of the importance of the managerial status of the health facility (publicly funded faith-based, or public) and slightly weaker evidence of the importance of relationships to authorities, the state, and service providers.

Chapter V, *Unhealthy collaborations? Intra-committee and committee-nurses relationships* considers a simple hypothesis: the inefficiency of the institutional knowledge intervention of Chapter III in the case of Burundi may be caused by a poor level of trust and interpersonal communication at the health centre, especially between committee members. An analysis in 2011-12, which includes behavioural trust games, shows that there is room for improving trust between the different parties. A trust-building intervention – trust-building games for HFC members and nurses – is randomly implemented among the HF/HFCs that benefitted from the intervention depicted in Chapter III, in Burundi only. The average treatment effect of this intervention, after one year, is null: no difference regarding HFC organisation or social accountability is visible. Limited heterogeneous effects suggest that trust-building could benefit more HFCs that comprise a larger proportion of women who are generally not in positions of power inside

the committee, as well as HFCs that faced important tensions with their chief nurses before the intervention. It is argued that the intervention was probably both too 'light' and based on a flawed theory of change.

Using the same experimental approach as the previous chapter, chapter VI – *Dangerous disruption or necessary upheaval? Financial and performance indicators and the health facility committees* – looks at the information held by members of participatory institutions about the levels of performance and finances of their health centres. The first section recaps the important recent reforms in health financing in Burundi, which promoted performance-based financing, autonomy in management, and transparency as the pillars of good health services. The core of the chapter is an additional randomised intervention that provided HFC members with information on the provision of services and financial situation of their HF. Rather than improving social accountability and thereby health facility management and health services delivery, the intervention provokes disruptions at the HF: the level of self-confidence of the committee members drops and the turnover of chief nurse rises. Qualitative evidence indicates that new information pushed the committee to take new action, but often in a confrontational way. It suggests that health committee members can act as watchdogs at the HF, but also casts doubts regarding the short- and medium-term effects of such social accountability initiatives. The chapter also discusses the financial incentives of the health committees.

Chapter VII, *Spoilers or facilitators? Local elites and community governance of health centres* looks at the relationship between elected HFCs and political and religious leaders in post-conflict Burundi. In addition to the possibility of elite-capture, the chapter considers the idea that local leaders could be instrumental to legitimating new forms of community participation and be facilitators rather than (only) spoilers. An experimental approach is developed to test: (1) whether *within* (internal) support, the case where local leaders are members of the committee, influences the health committee functioning and service delivery; and (2) whether *outside* support of local leaders, through new joint meetings between local leaders and the committees, has any impact on the committee functioning

and health service delivery. The results of the first approach are largely null while the intervention set up as part of the second approach has limited effects, but also limited adherence. The intervention has a higher impact when religious figures and local civil society members, rather than local politicians, meet the committee members. Vulnerabilities inherited from the civil war also negatively affect the outcome of the intervention. The chapter questions the future of health committees and community participation in post-conflict contexts where only a few individuals control social life. Overall, connecting the committees with local leaders only has a limited effect.

The *conclusion and implications* recap the general arguments of the thesis. The experiments conducted to reinforce the HFCs in Burundi have not resulted in major or lasting changes regarding service provision: participatory blockages inherited from the past seem hard to overcome. The lack of highly visible results in Burundi does not mean that the approach should be abandoned altogether, just that expectations about the effects regarding service delivery should be kept low. In the more successful case of South Kivu, the link between social accountability and service provision is mostly visible in the process indicators of resource management and mobilisation and not in the use and perceived quality of services. In any case, social accountability interventions should not be seen as quick fixes to service delivery failures. Areas for future research in the sub-field are also discussed and include the replication of the experiments, a deeper look at the iterative process of change, and an enquiry into the relationship between state fragility and the community governance of basic social services.

PART A. INDUCING COMMUNITY GOVERNANCE IN PRIMARY HEALTHCARE CENTRES IN BURUNDI AND SOUTH KIVU

This first part presents the background of the thesis. In addition to a literature review that emphasises the need for evidence on the impact of participatory institutions, it shows that community involvement at the level of basic services is the product of a process driven by different actors with their own interests. On the ground, community participation takes varying forms. The HFCs are found to exist in every HF, but they are largely a façade of community participation, which leads to precious cues for the rest of the thesis.

I. THE COMMUNITY GOVERNANCE OF PUBLIC SERVICES: AID ARTEFACT OR DEMOCRATIC AWAKENING?

Community participation has become a buzzword filled with expectations. ‘Inclusive’ institutions, externally devised and implemented, have boomed since the end of the Cold War and the stress in the 1990s on ‘good governance’. This chapter seeks to cast conceptual clarity on the ideas of ‘social accountability’ and ‘community governance’ at the level of basic social services. It also presents the situation of community participation in Burundi and the province of South Kivu, in the DRC. The focus is, deliberately (mostly deliberately) on *induced* forms of participation, in the sense of participatory schemes set up by an external party, usually the state or an NGO. Such a system exists at the very local level of provision of services, in schools, health centres and water management. As many have stressed, including Platteau (2008) and Mansuri & Rao (2013), it is key to understanding these participatory schemes in context.

The literature on induced community governance and participation in basic social services has become increasingly nuanced about the possible outcomes of such popular mechanisms. Some have pushed as far as calling it a ‘new tyranny’ (Cooke & Kothari 2001), arguing that it is too often artificial. This chapter shows that although community participation is far from meeting theoretical and normative expectations in Burundi and

South Kivu, it is important not to dismiss it too quickly – it is anchored in local histories of democratisation, takes different forms, and seems to reflect largely genuine aspirations for active citizenship. An induced participation is not necessarily artificial.

The next section is an introductory general review of the literature on community participation in basic social services, with an assumed bias towards healthcare. The second section is a brief history of community participation in Burundi and South Kivu: the current boom in community involvement initiatives is analysed as the product of the not necessarily aligned interests of different actors. Finally, empirical data help understand the different realities of community engagement at the local level and highlight varying levels of inducement and coercion.

I.1. Towards conceptual clarity

The idea of community participation has been widely adopted in programmes and policies of services delivery and in strategies for the post-conflict reconstruction of social services. Yet ‘community participation’, as well as the neighbouring concepts of ‘social accountability’ and ‘community governance’ are often catch-all terms. This section discusses how they are understood in the present thesis and how they have been viewed, analysed, and promoted in recent years. The literature on community participation and social accountability is extremely vast; it spans over multiple disciplines, including political science, development studies, public administration, public health, and economics, and includes academic and grey literature. The next paragraphs mainly draw on literature in development studies and public health and seek to provide some clarity rather than an exhaustive literature review on community participation and social accountability. Such an exercise has indeed been conducted recently – notably by Mansuri & Rao (2012) and Joshi (2013) for induced mechanisms of social accountability, and by Molyneux et al. (2012), McCoy et al. (2012), and George et al. (2015) for health services in low- and middle-income settings.

I.1.1. A short history of research on community participation

It is useful to begin with an attempt to define the concepts of ‘participation’ and ‘community’. Most of the work on ‘participation’ has consisted in defining scales of intensity of community participation, for instance from marginal or manipulative to structural, assuming that the more decisions taken by the community the better (see Table C-1 in appendix for details). In this thesis, I use community ‘governance’ to refer to the higher end of these spectrums, the situation when communities have a real say in the functioning of their social services. ‘Governance’ can be a misleading or empty term (Hewitt de Alcantara 1998). I define it as the institution or body that defines “who gets power, how decisions are taken, how accountability is rendered” and how other players “make their voice heard” (Graham & Amos 2003). A good analogy to visualise what I mean by community governance is the community, or its representatives, as (prominent) members of the board of trustees of the service provider. Most of the time, the mechanism of governance would be an elected committee of community members.

The definition of ‘community’ has been widely discussed in the literature (Jewkes & Murcott 1996). It can encompass very different realities, depending on the reference chosen (e.g. family, region, shared interests) and should not be understood as constant or static (Oakley 1989). Participation can reshape or undermine existing communities (Gryboski et al. 1996). The focus on the community governance of HFs leads to adopting a more pragmatic definition of the community as the catchment population of a HF. As it will be argued later, the hills and villages of these catchment areas in Burundi and South Kivu could be considered as ‘communities’ people relate to.

A dense literature has accompanied the evolution of the concept of community participation in basic social services (Hickey & Mohan 2004). The early literature advocated for more decision-making by poor people (Batten 1974), and by the late 1970s, the main questions were: who defines the community, who decides on priorities and actions, and whether community participation is a means or an end (Rifkin, Lewando-Hundt & Draper 2000). Until the late 1990s, research methods were primarily qualitative

(Chambers 1995; Bjärås, Haglund & Rifkin 1991) and the focus tended to be on classifying and characterising types of community participation (Oakley 1991; Pretty 1995). The founding article by Cohen & Uphoff (1980) asks *what* is at stake, *who* participates and *how* it is occurring. Rifkin, Muller & Bichmann's (1988) seminal framework identifies five dimensions to assess effective participation: needs assessment, leadership, organisation, resources mobilisation, and management.

For a long time, a key debate in the literature on community participation was about its very nature. Utilitarians viewed it as a means to reach objectives; if people participate and 'own' their services, these services will be more in line with their needs (Paul 1987). Meanwhile, activists defended it as a catalyst for further social change (Nikkhah & Redzuan 2009). The debate became less vivid as authors highlighted that community participation was not a 'magic bullet' (Rifkin 1996; Michener 1998). The focus then shifted onto community participation as an accountability mechanism, the difference between formal and informal community participation (Rodriguez-García et al. 2011), and the greater institutional local management through decentralisation mechanisms.

Most of this literature on community participation has not really considered the question of the impact of community participation on service delivery. This is probably for three reasons. Firstly, many authors have had broad and unworkable definitions of community participation as "dynamic, unquantifiable and essentially unpredictable" (Nikkhah & Redzuan 2009, p.172). This has made them reluctant to engage with any impact evaluation that would not encompass all possible outcomes. Secondly, a lot of the debate has focused on normative approaches of community participation in general, and the empirical studies have often used qualitative rapid-appraisal methods that have heavily relied on key informants being part of the process evaluated (Chambers 2007). Thirdly, due to a general a priori benevolence towards community participation, few authors went beyond the idea of community participation as good per se (Cooke & Kothari 2001).

1.1.2. From 'Community Participation' to 'Social Accountability'

In recent years, the term 'social accountability' has started to replace 'community

participation/governance’ in the academic and grey literature. This shift reflects a broader understanding of what qualifies as participatory mechanism, and also echoes the debate on corruption and good governance (Kuppens 2016). Social accountability is often loosely understood as ‘citizen or demand-side accountability’ (Gaventa & McGee 2013). Malena & Forster (2004) further define it as “an approach towards building accountability that relies on civic engagement, i.e., in which it is ordinary citizens and/or civil society organizations who participate directly or indirectly in exacting accountability” (p. 4). A spectrum of approaches exists to “ensure a desired level and type of performance” (Paul 1992), including HFCs but also expenditure track survey or social audits (Joshi 2007). The influence of ‘New Public Management’ that promotes business-like practices of accountability through rules (versus discretion) and measurable indicators, and is suspicious of the intrinsic motivation of civil servants, is often perceptible (Kelly 1998; Ranson 2003). The participation agenda is now mainstream, and, interestingly, World Bank initiatives overlap with those of community participation activists (for instance, the People’s Health Movement⁵). Both insist on accountability being dependent on institutional change and people’s empowerment (Brinkerhoff & Bossert 2008).

Social accountability can be understood using Schelder’s approach: “A is accountable to B when A is obliged to inform B about A’s (past or future) actions and decisions, to justify them, and to suffer punishment in the case of eventual misconduct” (1999, p.26). In social accountability, A is the service provider and B the community or its committee of representatives. In the public health and development literature (Berlan & Shiffman 2012), accountability is essentially a matter of *answerability* (information) and *enforcement/sanction* (Brinkerhoff 2004). Brinkerhoff (2004) underlines that sometimes asking too much of the community and service provider can create too cumbersome a system. *Responsiveness* of the provider is the way to avoid these risks and a constant question for accountability mechanisms (Cornwall & Pasteur 2000). Table I-1 sums up the

⁵ See <<http://www.phmovement.org>> for more about this grassroots health activists’ network (last accessed 21.04.2016)

different forms of accountability depicted in the literature.

In the most widespread case of community governance through an elected HFC considered by this thesis, the forum of discussion is primarily *social*, as it happens within the community. It is also *political* if we assume that the HFC is a representative legal structure. A *collective* actor, the health centre as an entity (staff), is accountable *ex-post* and *ex-ante* to the population with whom it is in a *horizontal* or ‘without hierarchy’ relationship. If the community owns the health centre, the relationship is *vertical*. The accountability mechanism is about *finances*, *procedures*, *performance*, and respect of *equity*. The HF faces *direct*, through community representatives (HFC), or *indirect* sanctions, via the population complaining to the health authorities.

Table I-1. Characterising accountability

	<i>Forum</i>	<i>Actor</i>	<i>Conduct</i>	<i>Time</i>	<i>Obligation</i>	<i>Sanction</i>	<i>Intensity</i>
Level	<u>Political</u>	Corporate	<u>Financial</u>	<u>ex-post</u>	<u>Vertical</u>	<u>Direct</u>	‘lower/
	Legal	Hierarchical	<u>Procedural</u>	<u>ex-ante</u>	<u>Diagonal</u>	<u>Indirect</u>	weak’
	Administrative	<u>Collective</u>	<u>Product/performance</u>		<u>Horizontal</u>		‘middle/
	Professional	Individual	<u>Democratic (equity)</u>				sporadic’
	<u>Social</u>						‘high/
	Economic						strong’

Based on Bovens (2007); Emanuel & Emanuel (1996); Murthy & Klugman (2004); and O’Loughlin (1990). The case of the HFC is underlined.

Collective action and collaboration are keys to community accountability (Brett 2003). According to the World Bank, the ‘demand for good governance’ is essential to avoiding the mechanism becoming a ‘voice without influence’ (Gaventa 2002). This control has to be claimed and gained rather than simply given to the population (Cornwall & Pasteur 2000). In the context of community governance, answerability must be understood as giving information *and* receiving information/feedback. In other words, accountability has both a supply and a demand side. Effective community accountability is not simply the potential to interfere but an active power (George 2003) that is not automatic or always perceived as a right (Standing 2004). Asymmetries of information, and low-skilled public who may not be knowledgeable about services delivery may be issues (Shaw 2004).

The wider evaluation of social accountability initiatives has been uneasy as much as the

evaluation of ‘community participation’ has. In their report on participatory development and decentralisation, Mansuri & Rao (2012) note that “the evidence base for most questions relevant to policy remains tight” (p. 13). In the same rich, seminal, report based on almost 500 studies, the authors also stress the importance of understanding the local context to make such a scheme work, highlight the importance of state support, and underline that civic engagement is not linear. In a piece published a decade earlier, Abelson & Gauvin had already deplored that, “generally, building rigorous evaluation into public participation processes has been an underdeveloped area of activity in many policy sectors, particularly in the health sector, [...] consequently, the evaluation of accountability as part of broader public participation evaluations is also an underdeveloped area.” (2004, p.vi). On their side, in presenting their literature review on transparency and accountability initiatives, Gaventa & McGee (2013) write that “much of the empirical work reviewed is based on poorly articulated, normatively inspired ‘mixes’, that draw unevenly from the concepts of transparency, accountability, good governance and empowerment.”

More recently, and building on recent literature reviews that find mitigated effects of social accountability initiatives (O’Meally 2013; Mansuri & Rao 2012), Fox (2015) argues that the four classic frameworks that have been used to approach social accountability are too limited. These frameworks are (1) the principal-agent, (2) the World Bank short route of accountability (see next section), (3) the idea of ‘demand for governance’, and (4) ideas of vertical and diagonal accountabilities. He introduces the distinction between ‘tactical’ and ‘strategic’ approaches to social accountability. He argues that too-tactical approaches, which are too bounded, focus too much on voice, and are too local, often fail. On the contrary, strategic approaches, where social accountability is accompanied with governmental reforms and, among others, use multiple tactics, are more successful. In a similar spirit, Joshi & Houtzager (2012) insist on the distinction between social accountability as ‘widget’, a simple tool (e.g. social audit, community score cards), and social accountability as a ‘watchdog’, a wider more long-term political engagement.

I.1.3. Community-driven development and Services Delivery in Fragile States

Community-driven mechanisms, including community governance, have been promoted widely as ways to deliver and monitor services in ‘fragile’ contexts (United Nations Development Programme 2011; World Bank 2011). ‘Fragility’ is understood as a failure in basic social services delivery and a lack of state authority and legitimacy (Stewart, Brown & Ukiwo 2009).⁶ The failure of the state is also commonly referred to as the unavailability of the ‘long route’ for services delivery (Figure 3), which would be a representative system with laws that adequately reflect the needs of the population. As the state fails to deliver services, local ownership of their delivery becomes an interesting option for adequate service provision (Chesterman et al. 2005). Reasons for failure may not be limited to conflict; they include all sorts of institutional fragility such as rent-seeking, patronage, and ethnic or ideological divide. As Cornwall & Pasteur (2000) point out, “the capacity for even basic performance monitoring is extremely limited, and providers are often fully aware that existing regulations [the long route] are very unlikely to be effectively enforced” (p.2).

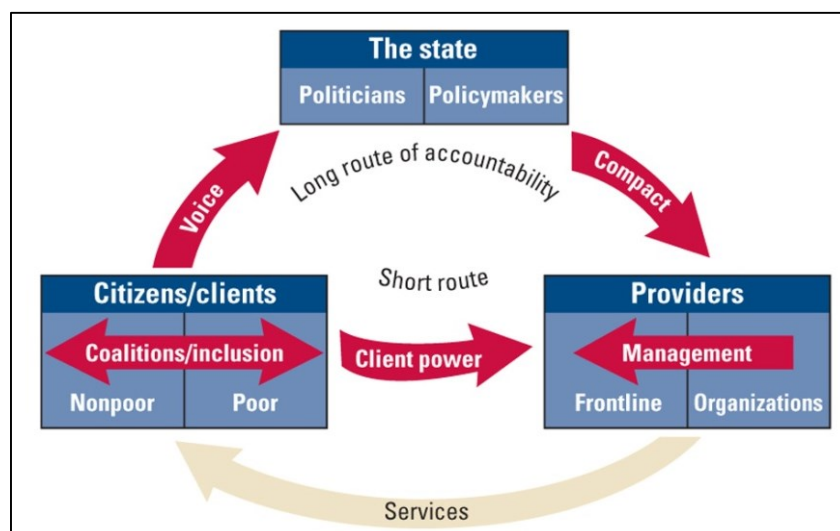


Figure 3. The World Bank's Routes of Accountability (World Bank, 2004)

⁶ As Brinkerhoff (2014) argues, the concept of a fragile state is a ‘wicked problem’ in the sense that it entails multiples interdependencies and causal connections, and does not have a clear definition or solution. The next chapters will give room to detailing the differences between the two cases. What remains clear, however, is that the trauma of violence is experienced across the border, and has long-lasting effects on health, education and welfare (Mercier et al. 2015).

The 'short route' is a form of 'contracting out' part of services provisions (such as managerial decisions) to the citizens. It bypasses the hazardous 'long route' of political representation and supposedly increases the direct power of communities over their services, particularly for poor and vulnerable people (Baird 2010). It is especially interesting for international aid agencies worried that their aid will not reach the intended beneficiaries (Noor et al. 2010). The strategy allows them "to be divorced from the predatory interest of government and at least partly from the interests of providers" (Batley & McLoughlin 2010). The 'short route' model of social accountability, in spite of no longer being promoted by the World Bank, remains greatly influential.

More recently, the World Bank has since taken a view of (slightly) more nuance regarding the potential of social accountability in fragile states. Grandvoinnet et al. (2015) develop a framework of social accountability as a fluid and iterative interaction between state-action, information, citizen-state interface, civic mobilisation and citizen action. They point out that, "although the evidence on the impact of social accountability in such situations [fragility] is sparse, there are indications that such citizen-engaged accountability initiatives could be effective, provided they overcome significant constraints" (Grandvoinnet et al. 2015). Among the issues are the weakness of the social contract, and the fact that these strategies take time, are not suitable in contexts where communities struggle to survive (Berry et al. 2005), and can lead to the creation of artificial communities of beneficiaries that are tailored to aid projects and reproduce traditional structures of authority (Platteau 2004).

The use of participatory and social accountability mechanisms to improve service delivery has been known as Community-Driven Reconstruction. It is rarely broken down into cases or analysis of what works and how it works (Narten 2009). The few existing assessments of the impacts of community-driven development programmes conclude to largely mitigated results, including in the cases of Burundi and South Kivu (Vervisch et al. 2013; Vervisch & Titeca 2010; Humphreys et al. 2014), possibly because these social engineering programmes fail to understand the nature of social capital and context (King & Samii

2014).

The ‘fragile state’ literature, however, brings to light three areas barely covered by the health and social accountability literature: (1) state-building and its interplay with participatory institutions that may either legitimise or delegitimise the state (Bornemisza et al. 2007), (2) the durability of community governance and the question of whether it is destined to become a permanent mechanism (Brinkerhoff 2005); and (3) the political dimension of the governance (Boege et al. 2009).

I.2. Community participation in Burundi and South Kivu

This section presents a history and an overview of the current situation of community participation in basic social services in Burundi and South Kivu, DRC. Both regions have been affected by conflict and instability in the last decades, and they constitute prime examples of where community-based approaches have been implemented to overcome weak state authority to reach people directly.

Landlocked, small Burundi has a troubled past that has been marked by the 1993-2008 civil war, which claimed the lives of over 300,000 people and was preceded by a succession of military coups, killings, and the politics of exclusion (Lemarchand 1996). The former Hutu rebellion *Conseil National Pour la Défense de la Démocratie–Forces pour la Défense de la Démocratie* (CNDD-FDD) won the elections in 2005, 2010 and 2015 and has engaged in neo-patrimonial practices (International Crisis Group 2012). The contested elections of 2010 and 2015 have maintained Burundi in a state of uninterrupted ‘low-intensity’ violence. The country has one of the lowest gross national income (GNI) per capita in the world (US\$400 in 2010)⁷, ranks at the bottom of governance indexes and has few natural resources to exploit. In the mid-2000s, over 500,000 people returned to the country, aggravating land disputes in one of the most densely populated countries in Africa (326 inhabitants/km² in 2010).

⁷ Indicators without a source, see <<http://databank.worldbank.org/>> (last accessed 11.04.2016)

On the other side of Lake Tanganyika, the Congolese province of South Kivu has experienced almost continuous violence since the 1994 Rwanda genocide. The first (1996-1997) and second (1998-2003) Congo Wars and the subsequent Kivu conflict (2004-2009) actively involved ten African countries and led to the deaths in the region of millions of people,⁸ added to which the looting of the country's rich natural resources (Prunier 2011). The Congo and Kivu wars were, in nature, very different from the Burundi Civil War; their international dimension led to deep popular resentment towards neighbouring countries. Rwanda in particular has been blamed consistently for the problems of the DRC (Stearns 2012). Clashes between rebel groups and the Congolese army remain frequent. This thesis, however, focuses on the areas around South Kivu's capital, Bukavu, which have been mostly free from armed clashes since 2006.⁹ The authority of the state is weak but has not disappeared. The province de facto enjoys a most considerable autonomy: Kinshasa is very far, and international support often comes directly to Bukavu. As in Burundi, churches and civil society organisations, which are often older and stronger than in Burundi, offer ways of curbing mob rule and solving community problems (Mushi 2012).

I.3. Shaping 'participation' in Burundi and South Kivu

Burundi and South Kivu have slightly different, poorly documented, histories of participation of their inhabitants in local governance and service delivery. Few forums of community participation in basic services existed before the accords that reinstated democracy in the mid-2000s¹⁰ in Burundi, while South Kivu has a slightly longer history of civil society movements and solidarity groups (the *mutuelles* and *coopératives*).

Pre-colonial Burundi has often been compared, sometimes misleadingly, to a feudal society (Chrétien 2000): the *mwami* (king) and its court (the *baganwa*) provided protection but not social services as such. Forms of collective action such as collective

⁸ A disputed figure (Duroch et al. 2011)

⁹ Combats between rebel movements, UN peacekeepers and the army have occurred mainly in the southern and western parts of the province.

¹⁰ Interview with Faustin Mbonimpa, *PARCEM* (Burundian NGOs), 23.04.2013.

farming or *ikibiri* and contribution to social events (*urubanza*) were mostly among neighbours and family members (Guichaoua 1991). Locally, committees of ‘wise men’, the *bashigantahe* (singular: *mushigantahe*) were mediators and judges in local affairs, especially in the centre of the country where the kingdom was stronger (Kohlhagen 2009). Ndimurukundo (1981) affirms that in their courts and in the local assemblies, ‘speaking the truth’ could not be denied to any adult male.

Pre-colonial Kivu, and particularly the densely populated Shi and Muhavu kingdoms share similarities with Burundi (Newbury 2009). The Shi *mwami* controlled productive land and allocated it to farmers through a tenure system. In less densely populated areas, this vertical and contractually forged control was looser and ‘decentralised’ (Vlassenroot 2013; Sosne 1979).

Across the border, the Belgian colonists who had arrived at the turn of the 19th century instrumentalised the *mwamis* and stressed ethnicity. The Congolese chiefdoms became part of the colonial administration in 1906 (Kyamusugulwa & Hilhorst 2015) and the kingdom of Burundi officially fell to Belgian mandate in 1924. Hoffmann (2014) argues that this *indirect rule*, in which chiefs became the de facto representatives of the colonial state and handled the mobilisation of taxes and labour, altered their relation with their constituencies; in many cases, rule and governance became less accountable and more coercive, arbitrary and authoritarian. During the same period, Christian missionaries opened and started administering the first schools and clinics in the region. Access to these services was often discriminatory, when not simply limited to the family and entourage of the chiefs.

Although the colonists played the chiefs to assert their domination in Burundi and Congo, they largely ignored local dynamics of community participation,¹¹ yet used the language of participation to describe what was instead their organisation of mandatory and highly

¹¹ Interview with Gilbert Ntiyegayezwa, *Kirundo province decentralisation support programme*, 22.04.2013.

coercive community work, the *corvée* (statute labour), later rebranded the ‘obligatory work realised in the interest of the population’ (*travaux obligatoires réalisés dans l’intérêt des populations*) (Guichaoua 1991, p.553).

Burundi became independent in 1962, and saw very few attempts to foster community mobilisation until the 1990s. The *bashingantahe* institution became politicised and its influence subsequently declined. As Laely (2014) points out, *clientelism* remained central in independent Burundi: requests ‘from below’ kept being considered as coming from a ‘suppliant’, and relationships remained essentially vertical and asymmetrical. The local administrators (*administrateurs communaux*) were nominated by the ruling party rather than elected and “were not local notables originating out of the ranks”¹². A predatory and ‘top-down’ state developed: “people asked little and the state gave little”¹³. The state “hindered mobilisation by undermining the leadership of the opposition through obstruction, intimidation, and explicit persecution” (Ndikumana 2007, p.59). During the third Burundian republic (1976-1987), the ban of meetings of more than ten individuals and the opposition of the government to the Catholic church considerably undermined the possibility of development of participatory movements (Palmans 2006).

In Congo, which became independent in 1960, the dictator Mobutu soon restricted the space for social mobilisation. Not unlike the colonists, he deliberately used traditional chiefs to assert his control over a vast territory. Locally, churches often became the most trusted institution and the ones capable of mobilisation because, as Sosne (1979a) notes, “from the peasants’ perspective, the church serves peasant interest better than the chiefs and other elites whom peasants encounter as they pursue their economic ends. Effectively independent [...], the church can and sometimes does oppose the local bureaucracy” (p. 206). Churches still constitute a key actor at the local level (Mushi 2012), alongside a civil society that developed through the support of Western INGOs in the 1970s. In particular, *mutuelles* (solidarity groups) such as the *Solidarité Bashi-Bahavu* (Bashi-Bahavu

¹² Interview with Liboire Kagabo, *University of Mwaro*, 22.04.2013.

¹³ *Ibidem*.

Solidarity) developed around Bukavu (Mapatano 2002).

The dictatorial regimes of Burundi and Zaire instated ‘community works’ that resemble the colonial *corvée*: the Burundi UPRONA regime (*Union pour le Progrès national* or Union for National Progress) established its *travaux communautaires* in 1967 and Mobutu imposed the ‘obligatory civic works’ (*salongo*) on Zaire in 1973. Guichaoua (1991) argues that, despite being highly unpopular, the coercive community works were a rare opportunity for people to judge the usefulness of what the state was undertaking.

In both countries, the dictatorial regimes flickered in the early 1990s and were forced to open up the political space, which benefited the media, churches, opposition parties, and other forms of local collective action (Uvin & Bayer 2013).¹⁴ A genuinely local civil society emerged in both countries, with significant links to the youth of Bujumbura in the case of Burundi (Palmans 2006).

In the 2000s, as peace gradually returned, widespread community participation initiatives flourished, pushed by at least four different actors. In the background of this picture are global ideas of international development and service delivery, and ‘good governance’ in particular. In the foreground are international aid organisations, liberal peace agreements, and local politicians.

1.3.1. Global movements and ‘good governance’

Global ideas of ‘good governance’ have progressively embraced the principle of community participation (Weiss 2000) and have sought, among other aims, to inject into the public service ‘new public management’ ideas of managing, among which is the concept of ‘social accountability’ (Rhodes 1996). Ideas of participation and accountability had been sporadically mentioned in the international discourse for a long time, but it is with the turn of the 1990s that they came to the forefront of international development policies. A series of international sectoral meetings set up a clear agenda. In health, the 1987 Bamako

¹⁴ Interview with Benoît Birutegusa, *Conflict Alert and Prevention Centre (CENAP)*, 09.05.2013.

Initiative – which will be discussed in the next chapter – encourages social mobilisation. In education, the 1990 ‘World Declaration on Education for All’ talks of “arrangements involving families and communities”, while the 1992 Rio United Nations conference on environment and development states in its article 10 that “environmental issues are best handled with participation of all concerned citizens”.

It is not easy to grasp the exact influence of these international declarations on concrete projects and programmes, but they clearly shaped the space in which the different actors, national government, civil servants, and international organisations are operating. In ministries and international organisations based in South Kivu and Burundi, qualitative research finds that staff members and representatives, especially those educated at (Western) universities, have often largely internalised the ‘good governance’ and participation discourse. The argument of this section is, however, that this internalisation of global discourse was further reinforced by the actions of three other actors: the artisans of ‘liberal peace’, international aid, and local politicians.

I.3.2. War and ‘liberal peace’

The peace agreements that ended the Burundi civil war and second Congo war, and the subsequent new constitutions, have been characterised by the international community’s promotion of a ‘liberal’ peace in which democratisation and decentralisation are presented as instrumental, to prevent tensions and build prosperous and stable societies (Fanthorpe, 2005).

In Burundi, the 2000 Arusha Peace and Reconciliation Accords have sanctioned the sharing of power between different parties, ethnicities, and simply citizens (Uvin & Bayer 2013). In its article 25.b, the Accord states that the parties will seek the “promotion of a policy where municipalities [and citizens] are responsible for their own affairs, in the context of decentralisation”. The 2005 Constitution confirmed this principle; a process of decentralisation of social services administration started the same year (World Bank 2014).

In the DRC, dispositions towards devolution and democratisation are found in the 2005 Constitution developed after the 2002 Sun City Accord and Pretoria Peace Agreements. Ideas of community engagement are also found in ceasefires and peace deals that were concluded later in the 2000s and 2010s, with different armed groups that continued fighting in the east of the country. The nature of these conflicts is complex and revolves around local and regional dynamics of access to and exploitation of land, minerals and services, as well as identity elements (Stearns 2012; Autesserre 2006). Peace deals signed with armed groups, such as the 2009 peace deal with the sizeable *Congrès National pour la Défense du Peuple* (National Congress for the Defence of the People) presents, among others, local autonomy as a solution for stability. The 'International Security and Stabilization Support Strategy (ISSSS)' in the DRC stresses local participation and claims to be a largely 'bottom-up' approach.

The international community is financing and supporting the decentralisation process in both Burundi and South Kivu. Decentralisation is seen as a way of providing a space where people talk to each other and grievances are resolved, but the underpinning theory of change is often unclear.¹⁵ Researchers working on either country have tended to be optimistic about the potential outcome of decentralisation. For Ndikumana, who works on Burundi, decentralisation and community participation should: (1) result "in 'ownership' of public programs by the local community, which increases the incentives for both monitoring and productivity on the part of those involved in [the] public project", (2) help overcome the legacy of colonialism, where public service is seen as forced labour, and (3) help overcome complaisance with regard to corruption and embezzlement of public funds (Ndikumana 2007, p.67). Mwanasali (2007) puts similar hopes in decentralisation and devolution of power, describing the two as "the foundation of making the state relevant to the lives of the majority of Congolese people" (Mwanasali 2007, p.94).

What is more, war itself may have also increased the demands for stronger citizenship. As

¹⁵ Interview with Philip Kuch, *GIZ decentralisation support project*, 24.04.2013.

a Burundian analyst pointed out, “the war made people angrier with the system, as its ills could be diagnosed more clearly. It made people become more critical of their institutions”.¹⁶ A *mushigantahe* interviewed in Bururi province in Burundi explains: “now, after the crisis and the dictatorship, everybody understands that unity creates strength and nobody has any advantage in being isolated”.¹⁷ This was echoed in many focus groups and interviews with local leaders: “participation became stronger after the crisis because people started to see the advantage to work in association, that way you gain time and efficiency, and people also understood the benefit of working for the community”.¹⁸ Across the border, fragile peace also afforded space to the media and civil society to develop, and shaped citizens’ demands through the provision of information.¹⁹

I.3.3. International aid

International aid is capital for both Burundi and the DRC. In 2011, the net official development assistance (ODA) was estimated at 21.2% of GNI for Burundi and 11.1% for the DRC (World Bank 2015). Possibly more significant with regard to community governance is the mass presence of NGOs and international organisations that are concerned with reaching their beneficiaries effectively and have been experimenting with new approaches for service delivery. Community participation provides them with a seductive framework: involved citizens come to realise the importance of the services and monitor them for better service delivery. As one former INGO staff explained:

*“We came to understand that the community had to contribute if we wanted them to understand local services and make them use these services. The committee also came to solve a management problem: service providers who were using public or aid funds would need somebody to be held into account.”*²⁰

¹⁶ Interview with Benoît Birutegusa, *Conflict Alert and Prevention Centre (CENAP)*, 09.05.2013.

¹⁷ Interview with *mushigantahe*, Matana district (HF Endline.B.4.11), 09.07.2013.

¹⁸ Interview with *chef de zone*, Mpanda district (HF Endline.B.0.3), 27.08.2013.

¹⁹ At the time of writing, this space had been reduced again. In Burundi, the failed coup of May 2015 led to an almost entire shutdown of independent media. In DRC, the pre-electoral tensions in DRC had also led to limitations in the freedom of the media.

²⁰ Interview with Canut Nkuzimana, *Human Development Support Initiative (NGO)*, 29.07.2013.

Even so, as Burde notes, the beauty of this framework “is often in the eye of the donor or facilitator, and less frequently in the eye of those who participate” (Burde, 2004).

In Burundi, the beginning of a generalised use of community participation mechanisms in aid and development projects can be traced to the beginning of the 2000s and possibly started in agriculture.²¹ Community committees now participate in the elaboration, organisation, and/or monitoring of projects or service delivery in sectors ranging from education to security, food security, water provision, agriculture, environment and of course health. The appreciation of the efficacy of those committees is mixed, and focus groups carried out with the population in 2013 reveal that appreciation goes along with the feeling of being indeed represented.

The situation in the DRC is quite similar, and the same organisations often operate across the border, using the same approaches. Early community projects in healthcare can be traced back to as early as in the 1970s, and are discussed in the next chapter. More recently, as in the case of Burundi, community-driven reconstruction has been a key element in the language of donors and international aid agencies (Kyamusugulwa 2013). The biggest such programme was probably the 8-year £106 million project funded by the International Rescue Committee and UK Department for International Development – *Tuungane* (Let’s Unite in Swahili) – that sought to improve the livelihoods of communities while developing grassroots democracy in the provinces of Katanga, Maniema, Orientale, and South and North Kivu in the DRC.

In both contexts, the evidence of the positive impact of community-driven aid projects remains thin (Humphreys et al. 2014; Vervisch & Titeca 2010), but these findings have not fundamentally affected a central place in assistance programmes.

I.3.4. Local politics

Analysts too often neglect the agenda of local political forces. Some of these forces are,

²¹ Interview with Gilbert Ntiyegayezwa, *Kirundo province decentralisation support programme*, 22.04.2013.

however, interested in community participation in basic social services, especially in Burundi.

In Burundi, an agenda of community participation has been clearly pushed by the CNDD-FDD, the former rebel movement that has ruled the country since 2005. Its interest in the matter dates back to the time when it was a rebel movement, as expressed in one of its pamphlets published in 2000:

“after more than three decades of a centralised democratic system pushed to the absurd by the Tutsi military using the UPRONA unique party, the people of Burundi need to be rehabilitated in their fundamental rights and creative capacities. This rehabilitation naturally comes through the principle of subsidiarity, which is a judicious share of responsibilities between the political, social, and economic actors: central State administration, regional administration, local administration, private and public businesses, associations, and individuals”.

After it had come to power, the CNDD-FDD established a myriad of local-level associations linked to the party and participatory institutions are attached to the state structures. As the spokesperson of the President of Burundi explained to me in 2013:

*“We believed that people had to understand that the local services, such as the health centres or schools, are their business. In history, the population had believed that things would always come from the government, and that the government would never go bankrupt. If there is a school crumbling, the government will fix it. If a teacher does not teach well, the school inspectors will punish him. Schools and health centres used not to be the business of the people. A lot of it was deteriorating though, and the Burundian authorities decided to do something new and make the population aware of its responsibilities”.*²²

Vision 2025 (*Gouvernement de Burundi* 2008), the general development plan of Burundi

²² Interview with Leonidas Hatugimana, spokesperson of the President of Burundi, 16.09.2013.

sponsored by the UNDP, emphasises the same grand notion of decentralisation in which everybody is ‘responsible’ at every level, just that it adds one layer of ‘good governance’ rhetoric atop it.²³

Similar motives are less visible in DRC, where national politics and rhetoric are more detached from realities on the ground. International aid supported the development of a Country Development Strategic Paper (2012) and a Poverty Reduction Strategy Paper (2007) that both put participatory development at their core; but, concretely, governmental action has mainly been restricted to specific sectors such as health and education. The revolutionary ideology of the *Alliance of Democratic Forces for the Liberation of Congo-Zaire* that brought the former Marxist Laurent-Désiré Kabila – the father of the current president – to power in 1997 had a ‘community participation’ component. In 1999, the government created the *comités du pouvoir populaire* (people’s power committees) to “help people take their destiny in their own hands”. These committees were hijacked by politicians and quickly became instruments of propaganda (Kabarhuza 2002).

At the more local level, though, a series of rebel movements, including the *Raia Mutomboki* (the angry citizens in Swahili) have presented themselves as defenders of the will of the people and might have pushed the agenda towards more local autonomy. They have, however, lost popular support in the recent years, and are often considered as no more than a gang ‘franchise’ (Stearns 2013).

Beyond the ‘good governance’ rhetoric, there is a practical interest for new political parties and forces to push for more community participation, which undermines the power of traditional and historical authorities by introducing new actors into the political arena.

I.4. Typologies of post-war community participation

The data presented in this last section confirm the prevalence of the mechanism of community participation at the level of basic service provision. It supports the idea that

²³ Interview with Deogratias Ciza, *Cankuzo Decentralisation Programme*, 30.04.2013.

this community engagement in social services was not (only) purely artificial at the time of the surveys in 2011-2013; the actors pushing for it were national and international, local and global. As highlighted earlier in this chapter, community governance is often perceived as something relatively novel. As one Bujumbura-based researcher and activist pointed out: “[community participation] is something new; in our experiences, in our daily lives, we were not really used to direct participation. People were more used to seeing the government make a decision and try to follow it, try to implement what the authority proposes. The cult of the authority is deeply rooted. It started to change with the coming of democracy”.²⁴

A clear distinction can be made between different forms of participation in basic social services provision, along the lines of *who* instigates it and *how* people are getting involved in it. The rest of this section distinguishes four different types of participation: (1) (I)NGO projects, (2) grassroots and local civil society initiatives, (3) community work (and meetings) organised by the local administrative authorities, and (4) citizens’ committees at the level of social services. This distinction aids an understanding of the different dynamics at play and of the local context of participation in which the HFCs operate.

I.4.1. (I)NGO projects

Non-governmental organisations, be they international or local, have been pushing for community engagement inside their projects. Table I-2 (next page) is based on recollection from local leaders about projects carried out in their locality. It shows that a majority of (I)NGO projects carried out in the past ten years, all sectors put together, involve the population at some point – especially in the execution phase.

However, beyond the project they organise directly, the civil society has also encouraged the creation of local structures. As observers of the Burundian society note, NGOs have contributed to change in mentality and pushed the development of associations.²⁵

²⁴ Interview with Benoît Birutegusa, *Conflict Alert and Prevention Centre (CENAP)*, 09.05.2013.

²⁵ Interview with local leader, Nyanza-lac district (HF Endline.B.3.1), 05.09.2013.

Table I-2. Community participation in (I)NGO projects (2003-2013)

Projects include community participation: ¹	Burundi		South Kivu	
at no stage	35%	310 (146 sites)	23%	190 (78 sites)
in the design phase	13%	310 (146 sites)	5.2%	190 (78 sites)
in the implementation phase	51%	310 (146 sites)	46%	190 (78 sites)
in the monitoring/maintenance	30%	310 (146 sites)	36%	190 (78 sites)
with financial compensation	31%	246 (111 sites)	36%	178 (78 sites)

Source: 2013 HFC survey

1. Based on the relevant HFC executive's recollection of aid projects carried out in the catchment area of their HF (=site) between 2003 and 2013

I.4.2. Grassroots organisations

Data coming from the large-scale 2013 household surveys show an associative/society life (*associations*) thriving locally. Although there are differences across the border, it is clear that a significant proportion of the adult population – 58% in South Kivu and 42% in Burundi – is involved in some form of *association*. These are partly, but not only, linked to income activities such as agriculture and self-help groups and can relate to basic social services.

Table I-3. Membership of associations (2013)

		Burundi		South Kivu	
		Mean	St-error	Mean	St-error
Members of association ¹		0.419	0.011	0.583	0.023
(Type of association)	Cultural	0.022	0.002	0.061	0.01
	Religious	0.08	0.008	0.239	0.022
	Self-help group	0.098	0.006	0.172	0.015
	Agriculture	0.169	0.007	0.162	0.017
	Party/union	0.047	0.004	0.052	0.009
	Security initiative	0.013	0.002	0.036	0.009
	Other	0.022	0.003	0.017	0.003
Number of observations		7,361		2,330	

Source: 2013 household survey

Sampling: 30 respondents per HF, stratification and weighting based on gender, age, and localisation. No difference between the intervention groups defined in chapters III-VII.

1. Response to: "Are you a member of any organisation/association? If so, which type of association?"

The participation in these groups is, not too unsurprisingly, correlated with indicators of

economic well-being and education (see Table C-1 in appendix). Interviewees insisted that they appreciated these associations as: “people go to them by their own will, while in the administration, it is by force”.²⁶

I.4.3. Community work and meetings

The community work described in the previous section has survived the different regimes. In both countries, it takes place on Saturday mornings officially (until 10am) – but in most parts of the DRC and South Kivu, the scheme is loosely or irregularly implemented. Raeymaekers (2004) notes that, in addition, the local administration, and armed groups, including the regular army, have instated community work.

As Table I-4 shows, a greater proportion of the population of South Kivu has said it has been involved in community work at some point in the last year. It could be because community work has had a much less strong political tone than in Burundi, where president Nkurunziza himself has been one of the main promoters of the works.²⁷

Table I-4. Self-declared participation in unpaid community work (2013)

	Burundi		South Kivu	
	Mean	St-error	Mean	St-error
Unpaid work	0.616	0.015	0.831	0.019
(Type of work) School infrastructure	0.387	0.016	0.234	0.022
Health infrastructure	0.068	0.009	0.179	0.018
Road and water infrastructure	0.257	0.012	0.407	0.022
Social activities	0.116	0.011	0.074	0.011
Hygiene and sanitation	0.172	0.013	0.196	0.018
Other	0.008	0.002	0.065	0.012
Number of observations	7,361		2,330	

Source: 2013 household survey

Sampling: 30 respondents per HF, stratification and weighting based on gender, age, and localisation. No difference between the intervention groups defined in chapters III-VII

²⁶ Interview with local leader, Rwibaga district (HF Endline.B.4.7), 26.08.2013.

²⁷ The situation varies importantly from one place to the other and accounts of measures to coerce the population into doing the works are frequent. They range from social pressure to fine up to BIF 5,000 and administrative problems such as the administration refusing to register new-borns of parents. From various focus groups with the population (among others: Isale district (HF Endline.B.1.7), 31.07.2013).

Correlation models of who participates in the community works show a bias towards middle-aged, mid-level, educated males who have some social capital (see Table C-3 in appendix). In Burundi, areas where the ruling party has been less strong have seen *more* participation in the community work – this aspect could not be explored in detail, with the possible explanation that the ruling party might have enforced stronger coercion into community work where it was less strong.

I.4.4. Committee at the level of basic services

In almost all basic services of Burundi and South Kivu, citizens' committees have been set up by the government and/or non-governmental organisations. The efficiency of these committees is often questioned, and the case of the HFC will be developed at length in this thesis. Interviews with the local population and local leaders highlight two elements, as follows.

Firstly, the committees are present, at least in name, everywhere. From the qualitative data, it appears that the population know at least a few of the committees. It seems frequent that the same individuals sit on multiple committees. Some examples of the committees found in Burundi are listed in Table I-5.

Table I-5. Examples of committees in Burundi

<i>Area</i>	<i>Committees</i>
Health	Health facility committee, Red Cross committee, TPO (INGO)
Education	Parents' committee, school management committee, FVS (NGO)
Security & peace	Burundi church committees, ADRA (INGO), security committee, local peace committees (Caritas), peace and justice committees
Administration	Municipality development committee, <i>Colline</i> community development committee

Secondly, although these committees are occasionally accused of not being very functional, and not transparent enough, nothing resembling an *opposition* to the idea (similar to what was seen with communal work) could be found. In fact, no one among the participants in the focus groups and the interviews with local leaders disagreed with the principle of the committee. Quite the contrary, the committees were seen as an

important, yet often dysfunctional, part of society. The committees, interviewees report, are seen as more comprehensive and inclusive than most political meetings: they “have the consent of everybody, while the committee organised by the politicians are not centred on the population”.²⁸ More deeply, there is a sense that the committees are part of a change in the discourse and society. As one local chief puts it: “nowadays, people are not scared to talk because they belong to the different committees”.²⁹ According to ordinary citizens and local leaders, acquiring new knowledge through community meetings and activities is important: people who do not know what is happening in their communities are said to be looked down on.³⁰

It must be noted that alongside these forms of community participation in the provision of basic social services, whether village or hill services, in Burundi, meetings are sometimes convened by local leaders and may lead to decisions relative to basic social services. Reliable data on these meetings were not collected but the qualitative research highlights that their regularity varies from one place to another. The respondents also mentioned the existence of religious meetings called *ibikorne*³¹ in Burundi. In Burundi still, community meetings supposedly lead to the community development plan and communal community development plan. But these plans were unknown to most of the interviewees, confirming that this form of participation is poorly effective, as is suggested by the literature that also flags that it is too complex for use in practice (Gaynor 2014).

I.5. Conclusion: induced but not artificial

This short analysis of community engagement at the local level in Burundi and South Kivu shows that the story of people being coerced into an artificial form of participation holds only partly, and seems to apply more to the state-sponsored ‘community works’ inherited

²⁸ Interview with *chef de colline*, Rwibaga district (HF Endline.B.0.10), 13.08.2013.

²⁹ Interview with *chef de colline*, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

³⁰ Focus group with population, Gihofi district (HF Endline.B.2.6), 16.08.2013; Interview with *chef de colline*, Mpanda district (HF Endline.B.1.10), 29.08.2013.

³¹ Interview with protestant minister, Mpanda district (HF Endline.B.1.6), 29.07.2013.

from colonial times. Some forms of constraint of the population may be present in the case of the more accomplished forms of participation that constitute committees and local associations; but at the same time, these forms of participation seem to correspond to the aspirations and evolution of society in a post-conflict context. The next chapter will focus on the HFC and show how, despite being a system that is perceived as largely dysfunctional, it remains an institution to which people feel attached, for it symbolises a shift in the governance of basic social services.

II. HEALTH, HEALTH SYSTEMS, AND HEALTH FACILITY COMMITTEES IN BURUNDI AND SOUTH KIVU

This chapter introduces the health systems of Burundi and South Kivu, and HFCs. HFCs are the quintessential example of a mechanism of social accountability in health and a typical case of externally induced community participation.

The chapter shows how international and national actors have shaped HFCs in the last four decades. Notably, it reviews the limited evidence about the impact of HFCs on HF management and access to healthcare services around the world. An odd situation is exposed. On the one hand, HFCs are in place in every publicly funded HF, and the mechanism is relatively well known by the population, which is supportive of the idea of community governance. The HFCs are also present in most health policy documents. On the other hand, the HFCs appear as mostly a façade: they do not make decisions about the HF and do not take part in its management.

The first section discusses the sanitary situation and health systems of Burundi and South Kivu and examines the different community-level actors in the health sector. The next section presents the HFCs. It starts with a general introduction to the HFC concept and then discusses the scant evidence of their impact in the literature, presenting their history and regulatory framework in the context of Burundi and South Kivu. The third section asks three simple questions that assess whether the expectations and regulatory frameworks are realised on the ground: *what are the HFCs doing in practice, who are they, and who do they represent?* The final section discusses these findings in the light of the literature and policymakers' discourse about the HFCs: it stresses the need to understand better what makes HFCs functional, and introduces the four main hypotheses that are analysed in the rest of the thesis.

II.1. Health Systems and Access to Healthcare

Before explaining in more detail what the HFCs consist in, it is necessary to describe the situation of the health systems in Burundi and DRC. In particular, this chapter will

highlight: (1) the main sanitary and health challenges in the region, (2) the architecture of the health system, (3) the functioning of the health centres the HFCs are expected to co-manage, and, (4) the different actors present at the community level. The section relies on the data collected in 2011 and 2012 that was presented in the introduction.

II.1.1. The demand side: health and access to healthcare services

Burundi and the DRC rank at the very bottom of most international health and socioeconomic development indexes (human development index, GDP per capita, life-expectancy, child mortality – see Table C-4 in appendix). The Congolese province of South Kivu is not included in these rankings, but UNDP, and demographic and health survey data on the conditions of living indicate that South Kivutians are even worse off than the average Congolese population (UNDP, 2009; DHS, 2012).

The health and sanitary challenges faced by the two countries are huge. The ‘Global Burden of Disease’ study (2013)³² found that communicable, maternal, neonatal and nutritional diseases – conditions for which inexpensive and straightforward treatments very often exist – are the leading causes of the ‘number of years of life lost’ due to premature death. Malaria is the leading cause of premature death in Burundi, and ranked third in the DRC, where diarrheal diseases and lower respiratory infections take the first and second places. In both countries, child and maternal malnutrition are by far the main factor associated with the morbidity markers of ‘years of healthy life lost’ and ‘years lived with disability’ under the overall mortality to premature death, followed by unsafe water, poor sanitation and the absence of handwashing.

Despite numerous reforms of the financing and organisation of the public healthcare sector, universal access to healthcare is not a reality for most inhabitants of the region. In the 2010 Burundi and 2012 DRC demographic and health surveys, 77% of the women in Burundi and 67.9% in South Kivu said that money could pose a problem to accessing health services. Some 52% in Burundi and 36% in South Kivu said that distance to the

³² University of Washington <<http://www.healthdata.org/>> (last accessed 11.04.2016)

health centre could also be a problem. Surveys carried out in the areas of interest in 2011-2012 confirm a difficult situation, with a substantial proportion of the interviewees not being able to access care or drugs when needed (Table II-1).

Table II-1. Access to health services (2011-2012)

<i>Ratio of respondents who:</i>	<i>Burundi</i>	<i>South Kivu</i>
– had to sell something to go to the HF (catastrophic expenditure)	0.091	0.483
– could not get drugs (unavailability, or lack of money)	0.282	0.347
– did not go to the HF when ill or injured (because of costs)	0.534	0.501
Number of observations	3,668	2,319

Source: 2011-2012 household survey

Sampling: 30 respondents per HF. Stratification and weighting based on gender, age and localisation.

The better situation, relatively, in Burundi might be a consequence of the policy of selective free healthcare (see the next subsection), although it must be noted that in the same survey, 23.48% of the Burundi patients openly declared that they had paid for a supposedly free service.³³ NGOs, and especially humanitarian organisations such as *Médecins Sans Frontières*, have also provided free healthcare services in South Kivu, but in a more sporadic manner.

The demographic and health surveys (DHSs) also highlight social barriers in accessing health services. They included women whose husbands refused them to go to an HF (DHS data: 37.3% of women in Burundi and 19.3% in South Kivu), and women who feared to go to the health centre without being accompanied (41.1% in Burundi and 14.3% in South Kivu). Qualitative interviews largely confirm social fears towards healthcare providers, which are nourished by rumours and anecdotes ranging from fear of rude behaviours to cases of sexual assault and extortion. In the 2000s, Burundi became infamous for cases of patients who were insolvent being detained in hospitals (Kippenberg 2008), a phenomenon that seems no longer to exist, but whose fact nonetheless reveals the extent

³³ 2,381 respondents; likely to be an underestimate since people typically underreport corruption.

to which patients can be mistreated. Data collected in 2011-2013 place the behaviour of the staff among the top priorities of the patients, suggesting that respectful treatment is not something patients necessarily take for granted (Table II-2).

Table II-2. Key elements at the HF, according to the population in 2011-2012

	<i>Burundi</i>		<i>South Kivu</i>	
	Ratio of respondents	Top 5 position	Ratio of respondents	Top 5 position
<i>What matters the most for you at the HF?¹</i>				
<u><i>Infrastructure and equipment</i></u>				
Drugs and equipment available	0.683	(1)	0.874	(1)
A good building	0.449	(3)	0.323	(3)
Close to home	0.218		0.231	
Shed/waiting room	0.176		0.187	
Water and electricity	0.308		0.441	(2)
Clean toilets	0.36		0.233	
<u><i>Staff</i></u>				
Qualified staff	0.23		0.165	
Welcoming staff	0.494	(2)	0.184	
Honest staff (no corruption)	0.401	(4)	0.212	
Experienced staff	0.14		0.268	(4)
Doctor comes to the HF	0.16		0.245	(5)
<u><i>Operations</i></u>				
Opening hours	0.18		0.089	
Waiting time/organisation of the queue	0.217		0.114	
Hospitalisation service	0.35		0.108	
Ambulance	0.274		0.04	
Affordable care	0.349		0.237	
Fast A&E	0.31		0.097	
Population has a say	0.350	(5)	0.170	
Number of observations	3,668		2,319	

Source: 2011-2012 household survey

Sampling: 30 respondents per HF. Stratification and weighting based on gender, age and localisation

1. Multiple choice answer to the question "What matters most for you at the Health Centre?"

HF governance is a central issue for the population, as highlighted by the elements stressed in the survey, such as the attitude of the medical staff, but also cleanliness, waiting time and the availability of drugs and equipment, the latter of which is a question of considerate and transparent stock management.

II.1.2. The supply side: health systems

The health systems of Burundi and South Kivu share many similarities: they have the same origins, were both shaped by global health initiatives, and both went through long and damaging wars during the 1990s and early 2000s (see

Table C-5 in the appendix for other characteristics).

The health system of Burundi is still recovering from the 1993-2008 war that left the country short of health workers and funding (Wakabi 2007). In 2010, at \$20 per capita (World Bank) Burundi's total health expenditure was one of the lowest in the world. The country numbered, for every 10,000 inhabitants, just 0.3 doctors and 1.9 nurses. Shortly after the peace agreement of 2000, decentralisation and contractual approaches inspired by the example of Rwanda were developed to revamp the health system and improve its service delivery (Rusa et al. 2009). The performance-based financing approach (PBF), in which part of the financing of the health facilities was based on the actual provision of services, was first piloted in 2006 and scaled-up to the whole country in 2010 (see Chapter VI and appendix C.VI. for details). Concurrently, since 2006, there has been official removal of all user fees in all health centres and hospitals for expectant mothers and children under 5 (Nimpagaritse & Bertone 2011).

In DRC, the healthcare situation is equally catastrophic. Healthcare expenditure per capita, including from aid, was at \$16 in 2010. The health system paid a heavy tribute and cost to the wars. In 2006, 30% of the population of South Kivu had no access to care despite international aid channelled through existing and new health facilities (van den Wildenberg 2006). In 2008, there were as few as 0.3 doctors and 0.9 qualified nurses per 10,000 inhabitants (*Direction Provinciale de la Santé du Sud Kivu*, 2008). The provincial health system, the *direction provinciale sanitaire*, is largely autonomous from Kinshasa. Some health zones, including the ones studied in this thesis,³⁴ are experimenting with performance-based financing mechanisms (Soeters et al. 2011) and decentralisation. The

³⁴ PBF started only in 2014, in the Walungu health zone.

province is known for having dynamic *mutuelles de santé* (community health insurances) and local solidarity mechanisms and *tontines* (Maini et al. 2014): 20.8% of the 2012 interviewees had some form of insurance in South Kivu, while this figure was just 10.01% in Burundi. Primary health care, as well as the organisation of the health centres, is a provincial competence set out by article 204.18 of Burundi's constitution.

The architecture of the health systems of Burundi and DRC has been influenced by Belgium, under its former colonial rule. The influence did not stop with the independence of Congo in 1960 and Burundi in 1962. Belgium maintains a presence in the region, through investments and development cooperation, and trains many Congolese and Burundian medical doctors. A visible Belgian heritage is, for instance, the provision of health insurance for public servants in Burundi (*mutuelle de la fonction publique*), as is the integration of faith-based health facilities into the health system, facilities that enjoy independent management and public funding, provided they meet Ministry of Health requirements.

The health systems of Burundi and DRC are largely decentralised. Health districts are responsible for 'frontline' health centres. Health centres are the first point of contact in the health system³⁵ and, under its referral and counter-referral system, the entry point expected of new patients. This thesis considers only health centres, largely referring to them as health facilities (HF). Above these are different classes of hospital: district, provincial and national, also classified as first-, second- and third-reference hospitals in the DRC, offering services for less common but more complicated pathologies. The focus of health centres is indeed on 'primary healthcare', also sometimes called 'essential healthcare'. The primary healthcare approach aims to provide 'health for all' and has, in practice, translated into a *selective* primary healthcare approach. This focuses on the most used and most needed services, with special attention to maternal and child health.

³⁵ In very rare cases, health centres run a health outpost. Most health outposts became health centres in Burundi, and only one health post was found during fieldwork in South Kivu.

Although staffed only with nurses, Congolese and Burundian health centres provide services commonly associated with the intervention of a medical doctor, such as onsite childbirth, treatment of tuberculosis and acute malaria, and medication for HIV/AIDS.³⁶ Typical cases of referral to the hospital include discotic deliveries (slow or difficult labour), severe malaria and non-minor surgery. Table II-3 gives an idea of the type and volume of activity at the health centres.

Table II-3. The situation of HFs: provision of services (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>	
	mean	SD	mean	SD
<i>Services available at the health centre (ratio)</i>				
24-hour resident service	0.924		0.923	
Minor surgery	0.976		0.962	
Maternal and child health services	0.928		0.936	
Pharmacy	0.996		0.974	
Laboratory services	0.936		0.872	
Referral	0.96		0.949	
Hospitalisation	0.861		0.923	
Preventive care	0.98		0.936	
Catchment population	14,802	8,797	10,756	4,643
Number of observations	251		78	
<i>Services per 10,000 inhabitants per month (mean, January-July 2012)</i>				
	mean	SD	mean	SD
Referral to hospital	6.379	7.368	12.739	10.807
Delivery	33.828	25.824	12.38	13.534
Vaccination (ATV 2-5)	66.045	61.976	23.702	11.583
Antenatal care	168.06	119.739	15.514	9.824
Postnatal care	32.826	32.654	29.206	19.015
Family planning	79.258	74.996	45.209	40.292
Curative visit ¹	1490.436	1062.9	363.539	158.899
Number of observations ²	228		77	

Source: 2011-2012 HF survey

1. Curative visit indicator compiled variously, with most of the services that do not involve hospitalisation registering under curative visits in Burundi, but not in DRC. | 2. Data on service provision not available for all HFs

³⁶ Not available in all health facilities. The reported prevalence is 0.4% in South Kivu (EDS-RDC II, 2012) and 1.16% in Burundi (DHS, 2010), which are lower than the rates in neighbouring countries (7.4% in Uganda, 5.1% in Tanzania, 2.9% in Rwanda – UNAIDS 2012), and at levels that are not comparable with Southern Africa (17.3% in South Africa for instance).

Health facilities in the DRC receive fewer patients on average. It is important to note that in Burundi, publicly-funded, faith-based, and especially Catholic, HFs typically do not offer family planning services.³⁷ In South Kivu, the HFs welcome the victims of gender-based violence, which is an indicator monitored by the health information system here.

Private and for-profit health facilities exist alongside publicly funded HFs. They are largely unregulated, mostly located in urban areas, and typically not very interested in primary healthcare if it is not seen as a lucrative business. Although the HF is a phenomenon of growing importance, it is not a central one to the mostly rural areas observed and analysed by this thesis. In 2011-2012, just 4% of the households surveyed in South Kivu, and only 12% in Burundi, had gone to a private health centre in the past six months, and the majority of these households lived in urban or peri-urban areas.

II.1.3. Health facilities: the ‘frontline’ healthcare providers

Burundian and Kivutian health centres enjoy a significant degree of management autonomy, with two factors having increased in the past decades. Firstly, the periods of war repeatedly cut the HFs off from their health authorities and pushed them to operate quasi-independently for years and sometimes decades. Secondly, post-war ‘New Public Management’-inspired health reforms such as performance-based financing have insisted that “a precondition for the success of *performance-based financing* is that authorities must respect the *autonomous* management of health facilities” (Soeters et al., 2006 – see Chapter VI for a discussion of performance-based financing). Key inputs, including drugs and human resource (qualified nurses) continue, however, to be dispatched from the health districts, and the ministries of health cap the prices of drugs and services.

A chief nurse – the *infirmier titulaire*, or IT, in the DRC, and simply *titulaire* in Burundi – is responsible for the daily management of the health centre and expectedly organises meetings with an elected HFC and other staff members for more strategic decisions.

³⁷ Qualitative research shows though that their nurses, even nuns, frequently redirect patients to health centres where such services are available.

Technically, the signature of the HFC president is necessary for ordering drugs and equipment. In practice, though, as the chapter will show, the chief nurse is often the real and only chief at the HF. As one former MoH official in Burundi put it, the HF often remains “something that belongs to the chief nurse”.³⁸

The district doctor appoints chief nurses. The yearly turnover of chief nurses is high – 20.32% in Burundi and 17.95% in South Kivu in 2011-2012 – and not necessarily driven by experience or qualifications gained. During fieldwork, some chief nurses appeared to be neither the most experienced nor the most qualified nurses at the health centre. A chief nurse is supported by a deputy chief nurse (*titulaire adjoint*).

Nurses usually have A2 or A1 qualifications, which correspond to one to three years of post-secondary school vocational training or higher education. Specialised nurses can include a laboratory assistant (*laborantin*) and some HFs have a cashier/manager. The HF staff varies in size from a few people to a dozen. They often count on loosely identified ‘support staff’, who are cleaners (*travailleurs*), or auxiliary nurses (*aide-soignant*) typically trained on the spot (see table below).

Table II-4 HFs’ situation: human resources (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>	
<i>Chief nurse qualification</i>	ratio		ratio	
A1 ($\approx$ BSc in nursing)	0.04		0.571	
A2 (vocational, post-secondary)	0.426		0.273	
A3 (vocational, secondary)	0.534		0.156	
<i>Cashier/manager at HF</i>	0.976		0.958	
<i>Number of staff members (including chief nurse)</i>	mean	SD	mean	SD
A1 and A2	1.542	1.345	1.231	1.044
A3	4.331	2.268	0.628	0.791
Auxiliary	6.108	3.274	2.385	3.188
Number of observations	251		78	

Source: 2011-2012 HF survey

³⁸ Interview with Jean-Paul Nyarushatsi, *EU Health Governance Programme*, 09.10.2012.

Faith-based clinics coexist alongside the public and private HFs. Most of them are integrated into the public health system. These '*centres de santé conventionnés*', health centres under convention agreements, are regulated and subsidised by the government. They enjoy more flexibility than strictly public HFs in terms of staff management, and drugs and equipment purchasing. Technically, non-religious health facilities can also obtain the *conventionné* status, but these cases are especially rare (Table II-5). Different religious groups, local or national, administer the faith-based health centres. In the case of the Roman Catholic HFs, they are set up by religious orders, the Catholic Church of Burundi or of the DRC, or the Catholic charitable organisation Caritas. The presence of an HF of a certain religious affiliation does not necessarily indicate that the local population shares the religious beliefs.³⁹

Table II-5. Number of faith-based HFs in sample, by religious affiliation

	<i>Burundi</i>	<i>South Kivu</i>
Adventist	2	1
Anglican	1	2
Baptist	0	4
Catholic	33	16
Evangelical, local	1	2
Methodist	1	0
Pentecostal	14	7
Non-religious (Red Cross, NGOs)	0	3
Total	52	35
Sample of all publicly-funded HFs	18.3%	38.4%

Source: 2011-2012 HF survey

The main source of income for health centres varies considerably across the two countries' border and between health facilities. In addition to user fees (in-pocket payments) and insurances, performance-based financing amounts to a sizable share of the HF income,

³⁹ In the 2010 Burundi census, 62% of the population declared itself Roman Catholic, 21% Protestant. Proper data does not exist for South Kivu but half of the Congolese population is estimated to be Roman Catholic, 20% Protestant, and 10% Kibanguist.

especially in Burundi (Table II-6). PBF and health insurance payments reportedly took a number of months to arrive. The MoH of Burundi forced all HFs to open a bank account in 2011. HFs in Burundi, which usually have a larger catchment population than those in South Kivu, are also significantly wealthier.

Table II-6. Situation of HFs situation: sources of revenue (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>		<i>p-value</i> ²
	mean	SD	mean	SD	
Monthly revenue (US\$) ¹	1,593	1,399	1,125	1,029	0.001
<i>Source of revenue (share)</i>					
PBF premium	0.718	0.21	0.438	0.176	0.001
Insurance	0.037	0.093	0.021	0.041	0.141
User fees	0.231	0.186	0.509	0.187	0.001
Observations	251		78		

Source: 2011-2012 HF survey: Burundi and South Kivu health information systems

1. At exchange rate US\$ = BIF1,500; Congolese accounting is in US\$ | 2. Statistical T-test p-value

The state of HF infrastructure is better in Burundi. In both countries, an HF typically includes a waiting room as well as consultation rooms and toilets. Depending on the place, the health centre may also include showers, a maternity room, observation rooms, and a residential ward for the staff. Water and electricity supplies are a continual problem (Table II-7), and the buildings are often too small to accommodate all the patients.

Table II-7. Situation of HFs: equipment, drugs, water and electricity (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>		p-value ⁵
	mean	SD	mean	SD	
<i>monthly number of days with:</i>					
Shortage of drugs ¹	3.47	2.38	7.63	7.00	0.001
Shortage of equipment ²	2.28	1.52	4.55	3.00	0.001
Shortage of medical equipment ³	1.88	1.56	3.48	2.43	0.001
Electricity supply ⁴	2.96	1.18	1.82	1.19	0.001
Water supply ⁴	3.11	1.11	2.06	1.15	0.001
Number of observations	256		77		

Source: 2011-2012 HF survey: Burundi and South Kivu Health Information systems
Mean of: acetylsalicylic acid, paracetamol, quinine, artesunate, amodiaquine, mebendazole, metronidazole, amoxicillin, co-trimoxazole, methylerythritol, zinc, lidocaine, salbutamol | 2. Mean of: fridge, isothermal box, scales, sterilisation system, microscope, stethoscope, thermometer
3. Mean of: gaze, needles, syringes, impregnated mosquito nets) | 4. Five-item Likert scale: from 1 (never) to 5 (always/constant supply) | 5. Statistical T-test p-value

Each HF has responsibility for its own ‘community’ – as reflected in the concept of catchment area or responsibility area (in the French, *aire de responsabilité*). The term ‘community’, which will be used repeatedly in this thesis, needs to be understood as the population living in an area that has correspondence to a sociopolitical reality: catchment areas do not overlap different municipalities and comprise entire villages in South Kivu, or *collines*⁴⁰ in Burundi. The strength or consistency of the ‘community’ can always be discussed (Rifkin 1986), but the *colline* or village is a prime constituent of people’s identity in the region. In the 2011-2012 surveys, 91.12% of the respondents in South Kivu, and 85.40% in Burundi said they would go to the HF the closest to their home. Of those who did not go to the nearest HF, 69% in South Kivu and 47% in Burundi went to a hospital.

II.1.4. Community Health actors in Burundi and the DRC

In addition to the provision of public and private HFs, traditional healers and community health workers take on a role of mediation, and even often provide healthcare. They interact with the HFC members, and constitute the third key actor at the community level.

In Burundi and South Kivu, traditional healers provide an alternative source of care that is based on local pharmacopoeias and beliefs (Falisse, Masino, et al. 2015; Pham et al. 2010). There is a broad variety of practices, including herbalists who work with plants that might or might not have medical value or the benefit of scientific testing, ‘witches’ and ‘sorcerers’ who perform incantations, which are rites linked to animist or syncretistic beliefs, and traditional birth attendants. Although based in the community, these actors do not necessarily encourage community participation: herbalists, traditional birth attendants and ‘witches’ are not voted in or formally controlled or influenced by the community. The Burundian and Congolese authorities have attempted to integrate herbalists and traditional birth attendants into the health system, with more success for the latter category (Chi et al. 2015). There are cases of referrals between the traditional

⁴⁰ The *colline* (French), which translates as hill and often corresponds to an actual hill, is the lowest administrative level in Burundi (large *collines* can be divided into *sous-collines*), the *zone* and *commune* (‘municipality’) come above.

and biomedical health systems (for example, traditional healers sending patients with malaria to health centres) but also anecdotal evidence of animosity between the nurses and HFCs on the one hand, and traditional healers on the other. Some HFCs indeed see it as part of their mission to allay the population from going to the ‘charlatans’ (Falisse, Masino, et al. 2015). There is no overlap between traditional healers and HFC members, with the exception of very few traditional birth attendants.

The community health workers (CHWs) are a rather broad category. The ministries of health on both sides of the border have been trying to rationalise them for a long time. They are often, but not necessarily, elected by the community and were originally set up by NGO and government health promotion programmes. The *abamegeshakiyago* or ‘peer-educators’ as they are called in Burundi are well known across the border and used by the health system to reach the population and deliver preventive health messages and sometimes assist with vaccination. CHWs can have very different roles depending on their programme and location. CHWs are an instrument of the health system or of international aid and are, to some degree, nothing more than the most peripheral service provider of the health system. CHWs execute instructions coming from the health centre, health district or an NGO. They do not have a say on the functioning of the health system or health facilities, although they may relay information. For CHWs, the ‘participation’ of the community is only in being selected by them and joining up the activities they organise. HFC members and CHWs frequently overlap, especially in the DRC, where CHWs and HFC members come from the same pool of elected community representatives (*relais communautaires*). In Burundi, the baseline study shows that 23% of HFC members are also CHWs (SD: 25, n=249 HFC).

Finally, before focusing on the quintessential form of community participation in health embodied by the HFC, it is necessary to highlight that the ministries of health of South Kivu and Burundi have officers whose loosely defined responsibilities are to promote hygiene, organise community activities and support the CHWs. These *agents communautaires (de santé)* (ACs) in Congo, and *coordinateurs de district pour la promotion*

de la santé (CPDS) or *techniciens de promotion de la santé* (TPS) in Burundi, often cover a large area.

II.2. Health Facility Committees in Burundi and South Kivu

II.2.1. General introduction to the HFCs

The idea of community governance in health emerged globally well before the 1990s push for ‘good governance’ and the concept of ‘community-driven development’ and reconstruction. After World War II, following the idea that “Informed opinion and active cooperation on the part of the public” was necessary for better health (World Health Organization 1946), ‘community health’ gradually developed as a strategy for delivering services through community members trained as *de facto* service providers (Chinese ‘bare-foot doctors’, for example; Sidel 1972). Combined with the post-1960s populist ethics supporting direct action (White 2003) and the human-centred post-colonial development aid of the 1970s (Emmerij 2002), it paved the way for projects managed by communities. Pilot projects, whereby communities identified problems and then proposed and implemented solutions, were set up (Rosato et al. 2008), mostly in socialist and non-aligned countries (Tanzania, India, Kenya). It led to an embedding of community participation into the 1978 Alma-Ata WHO Declaration on primary healthcare, “in the spirit of self-reliance and self-determination” (WHO 1978). The peculiarities of the healthcare market, namely asymmetric information, third-party agents, barriers to entry and substantial externalities, contributed to the legitimisation of community-based interventions (Wells, Ross & Detsky 2007; Arrow 1963).

In 1987, the WHO-UNICEF Bamako Initiative further stressed the idea of community involvement in health (Kahssay & Oakley 1999; Hardon 1990) and encouraged ‘social mobilisation’ (WHO, 1987). HFCs, composed of community representatives who helped manage local health facilities, became the flagship of the new focus on governance (McCoy, Hall & Ridge 2011) whereby the HFC would ‘own’ their HFs. Twenty-five years later, ‘health for all’ remains distant, but community participation is still promoted as a

key to reaching health targets such as the Millennium Development Goals and Sustainable Development Goals (WHO 2008; Lawn et al. 2008).

II.2.2. The HFCs in the literature

In spite of a dense literature on community governance, there is a lack of substantial empirical evidence on the efficiency of HFC systems. In December 2011, McCoy, Hall & Ridge published an in-depth review of the literature on HFCs. They found only four articles (out of 341) reporting case-control or experimental designs and an additional 16 reporting case studies. Another review on accountability mechanisms in healthcare at the peripheral level by Molyneux et al. (2012) found only 14 papers (out of 101) that studied community governance mechanisms of accountability, and all but three were descriptive case studies. Joshi similarly argues that “few studies look explicitly at impact or effectiveness of accountability mechanisms in service delivery – evidence has to be culled from existing accounts that are not oriented to evaluating impacts” (2010).

An updated literature review finds that only eight studies seem to have evaluated the effects of the HFCs. Most of them are not published in peer-reviewed journals and their methodology is sometimes questionable. They all report positive outcomes. Although the role of the HFC appears with slight differences between one case and another, the idea of an elected committee co-managing an HF is essentially the same.

The Björkman and Svensson (2009) study is a multicentre, randomised control trial across 50 health facilities (25 pilots, 25 control) in nine districts in Uganda. Meetings between the population and HF staff were organised to discuss the performance of the HF and define actions. Elected management committees in each unit facilitated the process. After one round of meetings, it proved to be one of the most successful community-based interventions (McCoy, Hall & Ridge 2011), with an improvement in indicators such as the weight of infants (+0.14 z-scores), under-fives mortality (-33%) and services (+20% in outpatient services). The authors, unfortunately, fail to disentangle the package of interventions convincingly. They argue that the impact is due to increased information about the HF provided to the users, and a coordination of interests between users and staff

– but do not discuss the impact of diffusing general information about health to the population. Yet, “something in the community monitoring package of interventions was clearly effective” and the challenge is in understanding the mechanism(s) behind the effect (Olken & Pande 2011, p.56). Interestingly, in a follow-up paper using the same dataset, Björkman & Svensson find community monitoring less effective in heterogeneous communities (2010), a finding consistent with other research (Gugerty & Kremer 2011). In a second follow-up paper (2012), Björkman, Svensson & De Walque insist on information as a key for efficient accountability mechanisms.

Loewesson & Rusike (2004) report the impact of the implementation of HFCs in rural Zimbabwe. They compare eight wards, four included as a control group. They find that HFCs are associated with better services outcomes (5% more visits), better-paid staff, more sensitisation campaigns, better drug availability and better community health indicators. They develop the idea of a virtuous circle enabled by the HFC that answers community needs by organising services. However, HFCs actually engaged very little with HF management and had almost no influence on the budget and running of the HF. The authors argue that HFC members lack knowledge about health resources, staff and processes, and the resistance of officials and health professionals explain this failure. Since there are no baseline data and no random selection of the cases, the validity of the results appears disputable.

Two studies from Nigeria and Tanzania adopt the same design: a rapid assessment of the functionality of HFCs before selecting effective and ineffective cases for comparative qualitative study. In the Nigeria case (Uzochukwu et al. 2011), 25 HFCs of the Orumba province were surveyed; the authors found more available staff members in more functional HFCs. Key elements that may explain this are the leadership of the HFC, linkage with other local accountability structures, remuneration of committee members, and experience and trust among members. In the Tanzanian case (Macha, Mushi & Borghi 2011), 19 Health Facility Governing Committees were surveyed. The conclusion pointed to relations with the health district and existence of activities autonomously initiated by

the committees (building construction, that is) as possible factors of success. Given the research design, the findings are, at best, correlations rather than properly identified causal relationships.

Still in Tanzania, and still suffering from weak identification, Frumence et al. (2014) suggest that the participation of HFCs is “ineffective due to their limited capacities and disabling environment”, but their study relies on 14 wards only.

Sohani’s paper (2005) on the implementation of ten dispensary health committees in Kenya is a before-and-after study. It shows a two- to fourfold improvement in the provision of services and explains how committee members can be trained for decision making. The committee mostly benefited poor people, with increases in healthcare use and revenue generation by dispensaries, staff becoming more readily available, increased availability of drugs, and decreased leakage of funds and financial mismanagement. The main challenge in implementation was the clash with nurses. The training had to address the issue of committee members’ confidence, and appease tensions.

More recently, Waweru et al. (2013) conducted a baseline survey of a nationally representative sample of 248 public health centres and dispensaries in Kenya. They found that most HFCs had the basic requirement to operate, and cited the lack of clarity in the committees’ roles and a strained relationship with nurses as potential challenges. The same team later did a process evaluation of a decentralised health financing policy in which HFCs received additional funding for management. They found that the funds were “being overseen and used in a way that strengthened transparency and community involvement” and that the policy improved the motivation of health workers and the satisfaction of patients (Waweru et al. 2016). It is a before-and-after qualitative study conducted in ten health centres and five health districts, without a clear counterfactual.

Iwami & Petchey (2002) discuss the ‘Local Committees for Health Administration’ (CLAS) set up in Peru in 1994. Theirs is the only article to address the ‘big picture’ of health committees, in this case, part of the “reforms that were implemented in the context of neoliberal economic policies” (p.1). Despite a less than 20% level of awareness of the

existence of the CLASs in the population, and with little empirical evidence, the article pictures CLAS-run HFs favourably, compared with classical HFs, for the participation of the community and the outreach to its most deprived members.

In India, Shukla et al. (2014) argue that ‘capacity building’ of people involved in community health planning “can ensure significant positive changes in the local health planning process”. It is a before-and-after study that looks at an intervention in three comparable districts. The approach is mostly qualitative and relies on 24 interviews, with some quantitative analysis of the disbursement of funds. The paper does not discuss the extent to which changes in planning have implications for service delivery.

A series of empirical hypotheses for the efficiency of HFCs emerges when these insights, the external validity of which is limited, are combined with other descriptive case studies on HFCs. I follow McCoy et al. (2011), who categorise four different sets of factors that overlap the aforementioned ones, and affirm them, as follows.

The features of the committee include the necessary clarity of the roles to avoid the HFC being only symbolic (Pakistan: Israr & Islam, 2006), and the management of different parties’ expectations about their role in the system and the ability of the committee to make decisions (Loewenson 2000; Tumwine 1993). The misspecification of the discretionary power in the hands of the committee is also underlined as a problem in the Colombian case reported by Mosquera et al. (2001), in Zimbabwe (Mubyazi, Mushi, Shayo et al. 2007) and in Niger (Meuwissen 2002). Capacities, resources and skills of the HFC are cited as potential problem areas, but mostly in more theoretical articles (Loewenson 2000; Oakley 1991).

The features of the health facility, and especially the HF staff. The problem here is mostly about negative perceptions and mistrust of the HFC by the HF staff (Mubyazi, Mushi, Kamugisha et al. 2007). This issue was already highlighted by Mosquera et al. (2001) in Colombia, where health workers saw HFCs as an interference in their work by unqualified people. This mistrust might relate to the threat to health workers of financial losses (Kyaddondo & Whyte 2003). Mubyazi & Hutton (2012, p.51) note that in most

attempts at community participation, “professionals dominate the decision-making process by downgrading the non-professional or non-technical people’s knowledge and skills”.

The features of the community mainly refer to the challenge HFCs have in trying not to reflect the existing hierarchies and structures of power and patronage (including male domination). There exists a risk that the population does not feel represented, especially among it the poor and women (Balique, Ouattara & Ag Ikname 2001). In the Philippines, it was reported that the system mostly empowered local elites and authorities (Ramiro et al. 2001). Sepehri & Pettigrew (1996) relate a case in Nepal in which health committee members and villagers held different views about the quality of the services of their HF. Promoted as best practice for HFCs has been providing inclusiveness of vulnerable groups and women (Bishai, Niessen & Shrestha 2002; Ngulube et al. 2004; Sato 2006).

Finally, there is a set of *contextual barriers*, mostly linked to the effectiveness of the health system and community support of the process – including from other sectors – (Mubyazi & Hutton 2003) and facilitation by intermediaries (Paxman et al. 2005). As in the case of Panama, central services may be unwilling to relinquish power (La Forgia 1985). Often, successful initiatives are based on constructive multi-sector engagement and dialogue between providers and users at the local level (George 2003).

A brief look at a similar body of literature on education highlights what may be the mechanism of community participation leading to better social services delivery. A randomised control trial by Barr, Mugisha, Serneels and Zeitlin (2012) shows the positive impact of introducing community score cards in schools in Uganda. These authors argue that this community participation mechanism is about collective action rather than just information dissemination. Banerjee et al. (2008) invoke but cannot demonstrate the same argument for the success of remedial reading camps organised by community volunteers (Kremer & Hala 2008).

The literature shows that community governance might be a tool for efficient delivery of

health services. The abundant work on the nature of community participation has generated some interesting hypotheses on the factors that might make community governance efficient, encouraging further research to test these hypotheses. There will be coverage of this mainly in the next chapters. The rest of the present chapter will look more in depth at the situation of the HFCs in Burundi and South Kivu.

II.2.3. A short history of the health facility committees in Burundi and South Kivu

Healthcare was the first basic social service to experience substantial community co-management in Burundi and the DRC. The first projects date back to the early 1970s in the DRC and the early 1990s in Burundi. After an encouraging start, health committees, and health systems in general, went through a difficult time during the wars of the turn of the century. A joint effort between international partners and the Burundian and Congolese governments revitalised the HFC institution around 2002.

In the DRC, the *République du Zaïre* until 1997, attempts to create health committees came even before the 1977 Alma-Ata declaration. In 1971, the Belgian Institute of Tropical Medicine set up a project for the 'rational delivery of healthcare' in the Kasongo health zone of Maniema province (Daveloose 1979). It included the compulsory presence, in each health centre, of a health committee. These health committees were close to today's HFC: they were in charge of managing the HF and finding solutions for problems of access to health services. Along with other community health experiences in Bwamanda (a province of Equateur), Vanga (province of Bandundu), Kisantu (province of Bas-Congo), and Nioki (province of Bandundu) in 1983 (Pepin et al. 1989), the Kasongo project influenced the health policy of Zaïre towards the primary healthcare approach (DRC Ministry of Health 2006). By 1977, the Alma Ata initiative had made primary healthcare a global health priority and Zaïre elaborated its 1982-1986 sanitary action plan and its 1984 health policy in this spirit (WHO 1983). The establishment of a policy of decentralisation of health

services, with the creation of ‘health zones’⁴¹ in 1985, marked the beginning of the scaling-up of the health committee approach. Most of these health districts, however, including those forming the focus of this thesis, were not operational for many years and have often been reliant on aid programmes.

In Burundi, the earliest attempt to establish a form of community management of health centres dates from 1990. This came against the background of both ethnic violence and the widening of the democratic space, and was a direct consequence of the 1987 Bamako Initiative. As part of a UNICEF-MoH programme explicitly named *Adaptation of the Bamako Initiative in Burundi*, ‘management committees’ composed of community members and local administrative officials were set up in the province of Muyinga (Baza & Hakizimana 1993). Little information is available about this first project, which was discontinued in 1994 because the civil war had started.⁴² In addition to the war effect, former civil servants of the MoH recall some issues with the motivation of those committee members who kept asking for money⁴³ and the reluctance of MoH officials to relinquish part of their control over the HFs.⁴⁴

In the DRC, and to some extent in the Burundi case, the primary healthcare strategy and the health committees have been more than a donor fad. They are part of a local understanding of healthcare that has internalised the global discourse on access to healthcare. The first director of the unit responsible for the HFCs inside Burundi’s MoH⁴⁵ has called the process through which HFCs are implemented “a multinational dynamic implemented by international partners but whose inspiration came from the MoH and WHO”.⁴⁶ He maintained that, after the civil war, in the early 2000s, it was the Burundian

⁴¹ Effectively corresponding to what the public health literature refers to as ‘health districts’. Their importance was stressed again with the 1987 Harare declaration.

⁴² Other components of the Bamako Initiative such as the national insurance health card survived a few more years at least (Arhin 1994).

⁴³ Interview with Alphonse Ciza, *World Health Organization Bujumbura*, 18.11.2012.

⁴⁴ Interview with Jean-Pierre Nyarushatsi, *EU Health Governance Programme*, 09.10.2012.

⁴⁵ *Direction pour la Promotion de la Santé, Hygiène, et Assainissement* (DPSHA).

⁴⁶ Interview with Georges Nseguyimana, *EU Health Governance Programme*, 07.12.2012

parliament and its minister of health that brought back the idea of health committees, to “promote community healthcare and improve the management and autonomy of health centres”.⁴⁷ In the field, some of the HFC projects appear to have been implemented without international aid support. The former chief doctor of the Burundian province of Kirundo recalls his experience in the early 1990s: “I saw HFCs across the border, in Rwanda, and I imported and adapted it to our context. I had to raise awareness among my colleagues and also the administration, which was a bit reluctant at first”.⁴⁸

In both countries, the wars of the 1990s and early 2000s badly affected the HFC strategy. The priorities of both countries’ ministries of health, and of the UN agencies and international partners, shifted as the states lost control over their territory: aid becomes humanitarian rather than developmental. What happened to the HFCs is unclear. There are accounts of health committees surviving the war and facilitating access to their areas for aid organisations, such as in the Ituri conflict (1999-2006) in Eastern DRC (Pottier 2006). Nevertheless, for South Kivu, it appears to be the case that the war weakened an institution in its infancy, while in Burundi, war simply killed it temporarily.⁴⁹

In DRC, renewed efforts in favour of the HFC came in 2002, when peace agreements put an end to the Second Congo War. On the occasion of the first annual review of the MoH and subsequent ‘Health Development Master Plan’ (PDDS 2002-2009), the MoH, with support from UNICEF, renamed the *comité de santé* (health committee), *Comité de Développement Sanitaire* (committee for sanitary development). The rebranding sought to stress active participation in the sanitary development of the health centre and its catchment area. At the central level, in Kinshasa, a “fifth directorate in charge of primary health care” has been in charge of promoting the HFC but it has had little influence in the east of the country.

⁴⁷ *Ibidem*.

⁴⁸ Interview with Jean-Pierre Nyrushatsi, *EU Health Governance Programme*, 09.10.2012

⁴⁹ *Ibidem*.

In Burundi, the 2000 Arusha Peace Agreement, as well as the presence of multiple humanitarian actors who attempted a transition from emergency to development aid (including ‘good governance’), paved the way for a second attempt to implement health committees.⁵⁰ A 2003 law⁵¹ made HFCs mandatory in every HF. The initiative was supported by the minister of health, from the Hutu oppressed majority, WHO, and UNICEF. In the field, different aid projects developed different variations of the HFCs, and the MoH harmonised practices in 2005.⁵²

In both South Kivu and Burundi, the introduction of performance-based financing stressed the importance of health committees as a core component of the “autonomy of management” that HFs supposedly benefit from (Falisse et al. 2012). Faith-based health centres that enter the scheme are asked to install an HFC if they do not have one already.

Since the 2000s, international aid in favour of the HFCs has declined and the state budget allocated to the HFCs is limited.⁵³ Ministries of health, and health districts are often left with few tools to monitor and support community participation; but at the same time, the HFCs are mentioned in most new projects and policies. As the head of *Médecins Sans Frontières* in Burundi framed it in 2013: “the health committees tend to be a nice concept that international aid agencies will mobilise from time to time, especially when they are asked about their *exit strategy* for their health support programme”.⁵⁴

II.2.4. Regulatory framework

The 2002 laws in Burundi and DRC (re)established the HFC institution but did not provide

⁵⁰ *Ibidem*.

⁵¹ Loi n 1/009 of July 4 2003

⁵² The 7th European Development Fund established HFCs in Rutana and Ruyigi in 2002, the Dutch NGO Memisa in Makamba the same year, Handicap International in Ngozi in 2003, *Médecins Sans Frontières* in Karusi in 2003, the Italian NGO AVSI in Cankusi the same year, GVC in Bujumbura rural in 2005. The local NGO Twitzimbere (Kayanza) also reportedly set up health committees.

⁵³ In 2012, in Burundi, the budget of the unit in charge of health promotion, hygiene in schools and workplaces, and the health committees was US\$ 90,095 (including salaries, largely unchanged over the years). Similar data could not be obtained for South Kivu.

⁵⁴ Interview with Bavo Christiaens, Head of mission, *Médecins Sans Frontières in Burundi*, 23.07.2012.

detailed information about the expected functioning of the institution. Other regulatory MoH documents give more details, specifically discussing community participation in health (Burundi 2005 and 2012, DRC 2012), with 'Health Zone Norms' (2006, DRC) and sanitary development plans (Burundi 2012). They are consistent with each other and reveal that HFCs in Burundi and the DRC are comparable institutions, as illustrated by the following excerpts:

"Those elected [in the committee] represent the population of the catchment area. They participate in decision-making in their HF, collaborate with the medical team, and help find solutions to local health problems. They are in continuous dialogue with the community and social organisations to give to everyone the maximum opportunity to participate and contribute."

(Ministry of public health, Burundi & WHO 2007)

"The HFC is a mechanism of community participation, it is representative of all the villages/streets in the health area, and it is multi-sectoral and multi-disciplinary in its composition. The HFC members are the partners of the medical staff and other stakeholders in the health area. They have the capacity to develop micro-planning activities, co-manage and mobilise local resources for the revitalization of health services, but also strengthen community capacity in the mobilisation of local resources."

(Ministry of public health, the DRC, 2012)

In both countries, the HFCs are responsible for:

- (1) the technical co-management of the HF: mostly informing the HF staff about the health situation of the population, as well as planning
- (2) the administrative co-management of the HF: prices monitoring, liaison with administration, inventories, etc.
- (3) the financial and strategic co-management of the HF: review and action plans
- (4) the co-management of the human resources of the HF, and
- (5) the promotion of the HF among the population.

A small difference is that there is slightly more stress on financial control in Burundi and slightly more emphasis on resource mobilisation in the DRC.

In both countries, the population living in the HF catchment area elects the committee. The regulatory documents do not explain how the elections are expected to take place. In Burundi, an HFC management committee (HFC MC) is elected within the overall committee and is in charge of the ordinary monitoring and management of HF resources and finances; the broader HFC intervenes in strategic management and planning as well as in liaising with the authorities and the population (Burundi MoH 2011). In the DRC, the equivalent of the HFC MC is the resource commission (*Commission de Ressources*, CORE) within the HFC. More generally, qualitative work shows that there is a distinction within the committee between the executives and ordinary members (HFC president, HFC secretary, CORE or HFCMC president), with the former being the most active and the real driving force of the committee. This chapter and the following one will, therefore, differentiate between: (1) the president of the HFC, (2) the HFC executives (the HFC management committee in Burundi or the resource commission in the DRC), and (3) the HFC as a whole.

The mandate of the committee lasts two years in Burundi and is left undetermined in the DRC. There is no general election of the HFCs, and elections are expected to be organised by district officers. The main documents are silent about whether the HFC members should be paid or compensated for their work. More general documents about the organisation of the health districts and procedures of PBF mention possible compensation of travel expenses, but generally remain vague about the issue.

II.3. The reality of HFCs in DRC and Burundi

The examples of Burundi and the DRC show no exception to the general observation that HFCs are often in a difficult situation (Loewenson & Tibazarwa 2013). This section presents the situation in 2011-2012, in 251 health facilities of Burundi, and 78 of South Kivu. It shows in almost every health facility, HFCs do exist, and have limited, if any, involvement in HF management. They also do little to relay the voice of the citizens. In both countries, the 'community governance' of the HF is merely a façade or, to use the

words of an official of the Burundi MoH, the “HFCs are walk-on parts” at the HFs. The population nevertheless tends to know of the HFCs, and remains interested in the mechanism. This section is structured around the questions of what the HFCs are doing, who they are, and how they are known.

II.3.1. What are HFCs doing?

“The HFCs – but do they actually do anything?”

(Senior official Burundi’s MoH during a meeting on HF governance, 2013)

Very little information on the actual functioning of the HFCs in the DRC and Burundi is available from the literature and grey documents. In Burundi, a 2008 survey among health district officers, conducted by a WHO technical assistant at the country’s ministry of health, revealed that: “in 13 districts, there are HFCs in at least 75% of the public HFs, in 15 districts there are HFCs in 50% to 75% of the HFs, in 10 districts they are present in less than 50% of the HFs and in 7 districts they are simply not operational” (Falisse et al. 2012). Research conducted by myself in 2009-2010 in the provinces of Bubanza, Muramvya, Mwaro, Ngozi, Makamba and Rutana, as well other research in Kirundo,⁵⁵ found that HFCs are in place in almost all HFs, but often not very functional. No similar research had been carried out in South Kivu, but 2011 contacts with the provincial MoH and its partners revealed a general impression that the HFC were not working well.⁵⁶

At the time of starting this research, MoH officials had little visibility about the actual functioning of the HFCs. The only indicator of the efficiency of the HFCs collected in the health information system was the number of monthly meetings of the HFC. Between January and July of 2012, the HFCs of the areas of interest were meeting on average a bit less the once a month (0.91, SD: 0.36 in Burundi; 0.81, SD: 0.28 in South Kivu), which corresponds to the recommendation of the MoHs across the border. The frequency of these meetings says little about the actual level of activity and efficiency of the HFCs.

⁵⁵ Interview with Belgian Technical Cooperation staff based in Kirundo, April 2012.

⁵⁶ Mafuta et al. published a study (2015) on the HFCs in the provinces of Bas-Congo and Equateur, but these are too far from South Kivu to have any relevance to the present thesis.

On the surface, HFCs seem to be doing relatively well. The HFC president and the HF chief nurse generally give positive evaluations of the work of the HFC, its functioning, and its relationship with both the population and the HF medical staff (Table II-8). It is, however, unclear how much credit should be given to this subjective information, which is also often based on a rather blurry understanding of the role of the HFC. The only indicator that signals potential problems is the HFC auto-evaluation in South Kivu.

Although the mandate of the HFC is normally two years in Burundi, the average committee lasted 1.89 years (SD: 1.81) with most committees not about to be renewed and only 45.2% having some idea of when their mandate would expire. In South Kivu, where the rules were even less clear, the average duration was 3.08 years (SD: 3.47). Most HFCs appeared little concerned with the length of their mandate, which was reported as highly dependent on the health district initiative (see

Table C-6 in the appendix for details on Burundi).

Table II-8. Perceptions of HFC functioning (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>	
	mean	SD	mean	SD
HFC executives: functioning of the HFC ¹	4.12	0.78	2.47	0.94
HFC executives: relationship with chief nurse ¹	4.25	0.79	4	0.74
Chief nurse: relationship with HFC ¹	4.28	0.7	4.09	0.61
Chief nurse: appreciation of the HFC work ¹	3.94	0.78	3.68	0.76
Number of observations	251		78	

Source: 2011-2012 HF and HFC surveys

1. Five-item Likert scale from 1 (very bad) to 5 (very good)

Qualitative research carried out in 2011-2012 suggests that the HFCs had completely heterogeneous levels of understanding of their role. In most cases, the interviewees mixed up the roles of the HFCs with those of the community health workers in charge of health promotion activities in the community. In all the interviews, including across the border, the respondents described the role of the HFC as primarily helping the population in dealing with the HF: bringing the patients to the HF, verifying that they took their medications, inviting them to go the health centre, medical staff interceding in their

favour, and so on. As one chief nurse in Burundi put it, “the HFC members should be close to the people to know their opinion vis-à-vis the HF services, or if the population meets the prescribed doses and treatments or uses the mosquito nets that were distributed”.⁵⁷ The central aspect of co-management, when mentioned, appeared to be assumed solely by the HFC president and consisted of a few symbolic actions, such as signing orders and action plans. The 2011-2012 survey reveals that only 10% of the HFCs in Burundi (n=222) and 6.4% in South Kivu (n=78) had ever refused to sign a cheque presented to them by the HF medical staff. In the interviews, HFC members often complained they were in fact nothing more than a rubber stamp mechanism.

Two sets of quantitative indicators support the qualitative evidence that HFC members are often closer to community health workers than managers of the HF. Figure 4 presents the activities cited by HFC members as being their key ones, through an order of importance (from 1 to 7, with 7 being the least important).

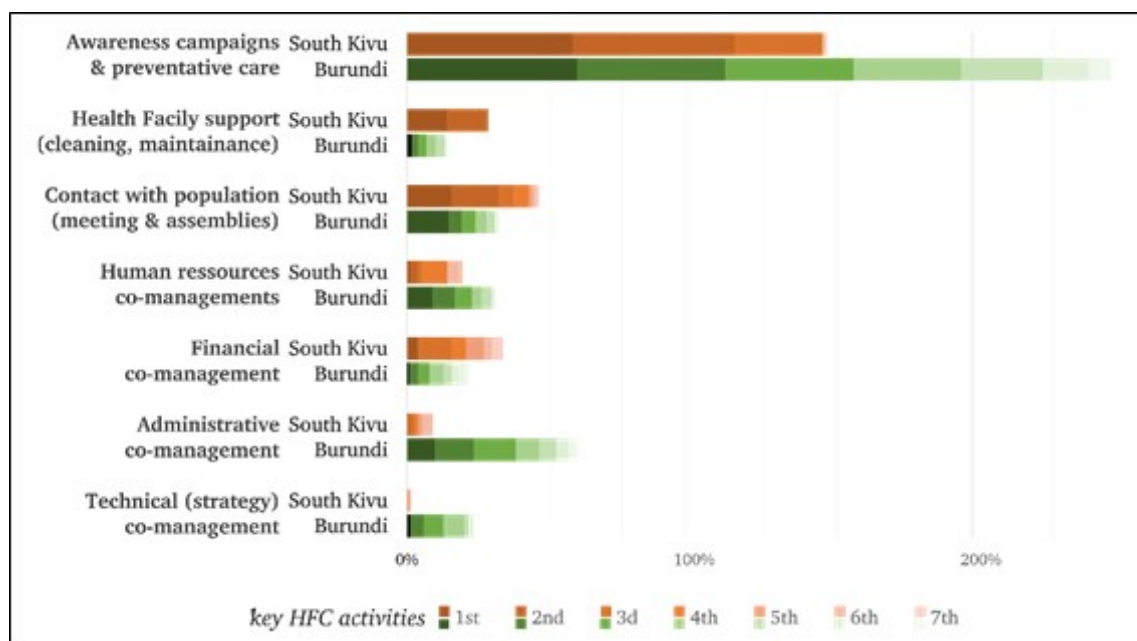


Figure 4. Key HFC activities (2011-2012)

Source: 2011-2012 HFC survey. Based on a coding of the question, “Please mention the most important activities of your HFC, by order of importance”

⁵⁷ Interview with chief nurse, Ruyigi district, 02.09.2011.

It shows that the committees were rarely engaged in managerial activities and did more for health promotion, which was not their core mission, than they did to hold the HF accountable to its population. No co-management related activity was declared in more than 25% of HFCs. In comparison, health promotion activities on hygiene, infant deliveries at the HF, and vaccination were reported by 61%, 30% and 26% of the HFCs respectively. The response that HFCs did broad, unspecified health promotion activities was total – it was declared by 99%. There were some slight differences between the situations of the HFCs in the two countries; these differences are statistically significant but without economic importance. If anything, the HFCs seem to do slightly more work in Burundi.

Similarly, HFC members appear not to be consulted in the main areas of HF management. Table II-9 reports the actual involvement of the HFC, HFC president, and HFC executives in the HFC management, according to the HFC executive members and chief nurse.

Table II-9. Involvement of the HFC in HF management (2011-2012)

<i>HFC president decision rights¹</i>	Burundi		South Kivu		<i>in theory³</i>
	<i>consulted</i>	<i>decides</i>	<i>consulted</i>	<i>decides</i>	
Qualified staff	0.140	0.012	0.205	0.097	<i>consulted</i>
Support staff	0.370	0.072	0.230	0.052	<i>decides</i>
Drugs purchase	0.472	0.089	0.217	0.006	<i>decides</i>
Drugs pricing	0.285	0.042	0.230	0.051	<i>consulted</i>
Services pricing	0.251	0.085	0.294	0.089	<i>consulted</i>
Action plan	0.353	0.023	0.294	0.128	<i>decides</i>
Equipment purchase	0.480	0.110	0.269	0.072	<i>decides</i>
<i>Average decision rights² (0 = not consulted, 1 = consulted, 3 = decides)</i>					
	<i>mean</i>	<i>SD</i>	<i>mean</i>	<i>SD</i>	<i>in theory</i>
HFC Pdt decisions (says the HFC)	0.45	0.36	0.39	0.48	1.57-1.85
HFC Pdt decisions (says the HF)	0.47	0.38	0.45	0.49	1.57-1.85
HFC executives decisions (ditto)	0.32	0.36	0.20	0.32	1.57-1.85
HFC executives decisions (ditto)	0.40	0.40	0.30	0.41	1.57-1.85
HFC decisions (ditto)	0.15	0.25	0.27	0.36	1.57-1.85
HFC decisions (ditto)	0.18	0.27	0.20	0.38	1.57-1.85
Number of observations	251		78		

Source: 2011-2012 HF and HFC surveys

1. As declared by the HFC president and executive members | 2. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, price drugs, price services, development plan | 3. According to the regulatory framework

The first part of the table presents the situation of the HFC president, according to himself, in details. It shows that in a majority of HFs, the HF president is never consulted, let alone involved, in actual decision-making. The second part of the table presents a summary of the result for the HFC, HFC president, and HFC executives, taking the viewpoint of either the HFC executives or chief nurse and clearly showing that the HFC is not involved in decisions at the HF.

In Burundi, the translation of the Kirundi names of the HFCs further illustrates the variety of situations and (mis)understanding about the actual role of HFCs. *Comité de Santé* is the only official name for the HFC, and it is in French, the official language of Burundi that is spoken, the 2011 census suggests, by only 6% of the population. The HFC and medical team often translate the term to make it understandable to most. Their translations can be divided into four broad categories that each emphasises a different aspect of the HFC:

1. As agents working to support the HF medical staff in their medical tasks, for instance: ‘the committee that works with the health centre’
2. As a committee in charge of monitoring the health of the population, for instance: ‘the populations’ health committee’, ‘the committee that closely follows the health of the population at the popular level’, ‘the health committee on the hills’, ‘the committee in charge of good health’, or ‘the committee in charge of people’s health’
3. As a committee in charge of sanitary development, for instance: ‘the committee in charge of the development of people’s health’, ‘the assembly that represents people’s health’, ‘the committee that represents people’s health at the hill level’
4. As a committee that represents the population at the HF, for instance: ‘the committee that represents the people at the HF’, ‘health committee at the health centre’, ‘the committee elected by the people that takes care of the problems the population faces at the health centre’, and the ‘committee in charge of the HF’.

In the DRC, the French acronym CODESA was widely used, and it was not possible to carry out the same translating exercise. The situation nonetheless showed confusion in the example of when HFC members were invited for the training, and community health

workers came.

This confusion about the nature of the committee is unsurprising since only 29% of the HFCs surveyed in Burundi, and 56% in South Kivu, declared having some sort of reference document. As shown in previous research on a smaller sample of HFCs, this document was not the same in every HF and was often a reminiscence of past interventions (Falisse et al. 2012). The absence of clear terms of reference is also an absence of benchmark, which may partly explain why most chief nurses and HFC presidents do not find problems with their HFCs. In the longer run, issues arise from this lack of clarity. As one Burundi HFC member put it: “we have been working together with the chief nurse for three years, but it does not go that well. Both the medical staff and the HFC need to know about each other’s roles and limitations”.⁵⁸

II.3.2. Composition of the committees

On average, HFC members appeared better off than the population they represented: the proportion of members who did not live off farming and attended secondary school was higher than in the rest of the population (Table II-10).

Table II-10. HFC Demographics (2011-2012)

	<i>Burundi</i>			<i>South Kivu</i>			p-value ⁵
	sample		population mean	sample		population mean	
	mean	SD		mean	SD		
Members (core committee)	11.24	4.891		9.44	3.64		<0.001
Proportion of women	0.347	0.350	0.566 ¹	0.391	0.189	0.542 ²	<0.001
ditto who went to sec. school	0.322	0.211	0.152 ¹	0.526	0.237	0.510 ²	<0.001
ditto who speak French	0.400	0.320	0.080 ¹	0.572	0.238	0.445 ³	<0.001
Proportion of farmers	0.291	0.247	0.775 ¹	0.713	0.298	0.725 ⁴	<0.001
President is political leader	0.187	0.390	<0.01	0.397	0.492	<0.01	<0.001
Number of observations	251			78			

Source: 2011-2012 HFC survey

1. Burundi census 2010 | 2. DHC Congo, 2012. | 3. Organisation Internationale de la Francophonie, 2014. | 4. UNDP, 2009. | 5. Statistical T-test.

⁵⁸ Focus group with the HFC members, Isale district, 2011.

Similarly, committee members were more likely to speak French, the language of the administration, intellectuals and business elite. There were also almost about twice as many men as women in the committee in Burundi, a little under that figure in the DRC. These socioeconomic and gender biases have already been described by various authors in numerous other contexts (Dasgupta & Beard 2007; Platteau & Gaspart 2003), in low-, middle- and high-income countries. Only in Burundi, and only since 2014, there has been a primary school educational requirement for committee members.

For chief nurses and key informants based in the capitals, opportunity costs explain the bias: poor people do not join the HFC because they cannot afford to spend time working for the HFC “when nothing goes well in their households”.⁵⁹ Most HFCs rejected this hypothesis, and pointed out the potential benefits to be gained from voluntary activities: “the true poverty is intellectual! By joining communal works, we learn to know other people and acquire knowledge and strategies to escape poverty”.⁶⁰ They also insisted that “it is rather the contrary, not very rich people participate, and rich do not, because they have other concerns. Although those who participate have some instruction because of the matter they are in charge of”.⁶¹ For them, poverty is not an excuse, “there are people who, despite being poor, do not hesitate to sacrifice themselves for the community”,⁶² the true factors for not participating are “laziness, because hands are enough”,⁶³ and the HFC “requires little time anyway”.⁶⁴

A more complex analysis, which echoes capability theories, came from a technician for health promotion who was in daily contact with the population:

“Yes, poverty can slow down participation. On the one hand, poor people live day by day and to participate is to waste time that cannot be used to gather

⁵⁹ Focus group with HFC, Isale district (HF Endline.B.1.7), 01.08.2013.

⁶⁰ Focus group with HFC, Rwibaga district (HF Endline.B.2.11), 21.08.2013.

⁶¹ Focus group with HFC, Matana district (HF Endline.B.3.7), 02.08.2013.

⁶² Focus group with HFC, Bururi district (HF Endline.B.4.10), 06.08.2013.

⁶³ Focus group with HFC, Rumonge district (HF Endline.B.3.10), 06.08.2013.

⁶⁴ Focus group with HFC, Mpanda district (HF Endline.B.1.11), 28.08.2013.

*food. On the other hand, these people often underestimate themselves, and the community underestimates them too, in such a way that they are never heard by the population. These people have developed a behaviour in which they withdraw from others by themselves”.*⁶²

Interest for the HFC principle is high: 91.2% of the respondents in Burundi and 87.1% in South Kivu said that they were, in principle, interested in taking part in the management of their local HF (see

Table C-8 in appendix). Regression models do not highlight particularly strong correlations with sociodemographic indicators, even when considering whether people had said they would need remuneration to play an active role at the HF (see Table C-9 in appendix). Interestingly, only 20.9% of the interviewees in Burundi and 18.9% in South Kivu would be ready to become involved in their HF management without asking financial compensation.

This invites us to consider the intrinsic motivation as a factor influencing the decision to become an HFC member, something that is not easily captured by socioeconomic indicators. Qualitative interviews suggest that when the population knows its HFC members, it generally considers them ‘competent people’ and chooses the members because ‘they love to help other people’. The same idea of ‘community service’ is present in the discourse of the HFC members and will be discussed in chapter VI.

II.3.3. Who knows and votes for the HFC?

Who does the HFC represent? That is not a trivial question. The literature on HFCs, social accountability, and democracy in general, has long been aware of the risk of ‘representatives’ of the population who are disconnected from it (Jewkes & Murcott 1998). The issue is not only about differences in the socioeconomic situation, it is, more fundamentally and simply, about how the community knows the HFC institution and

⁶² Interview with technician for health promotion, Isale District (HF Endline.B.1.11), 02.08.2013.

chooses its members.

In the 2011-2012 survey, 60.5% of the people interviewed had not heard of the existence of HFCs (n=3,715) in Burundi, 51% in South Kivu (n=2,246).⁶⁶ The difference between the places shrinks and becomes statistically insignificant when the number of people who could name at least one HFC member is considered: 32.38% of the interviewees could name one in Burundi, 34.16% in South Kivu.

According to the official guidelines, the population elects the HFC members. Some 87% of the committees in Burundi⁶⁷ and 93% in South Kivu confirmed that this was indeed the case. In non-elected HFCs, political and religious leaders and the HF chief nurse nominate the HFC members; 58% of the non-elected HFCs were located in faith-based HFs. The population strongly disapproved of the lack of democratic elections, as evidenced many times during the nested qualitative research;⁶⁸ a good committee was repeatedly described as one that was “solemnly elected and visits its electorate”.⁶⁹ Against this background, it is maybe surprising to find that only 34.54% of the interviewees who knew of the existence of the HFC had voted for it in Burundi, 46.46% in South Kivu.⁷⁰ The lack of information and the practical impediments (‘not there’, ‘no time’) were the main reasons respondents gave for not voting (n=327). Only a small minority of people (5%) said they were not interested in the matter.

The gap between the members of the HFC and their constituency is clear, but is perhaps not peculiar to the situation in question of the HFCs. By comparison, the 2010 local level (‘*colline*’) elections in Burundi, which gathered much less attention than the national elections, reportedly failed to reach a participation level above 30%.⁷¹

Simple logit regression models are used to explore the factors correlated with knowing

⁶⁶ The proportion for South Kivu may be an overestimate as there is confusion around the name.

⁶⁷ Of this 87%, 3.2% said they were ‘partly elected’.

⁶⁸ Focus group with population, Isale district (HF Endline.B.1.4), 01.08.2013.

⁶⁹ Focus group with population, Murore district (HF Endline.B.3.9), 21.08.2013.

⁷⁰ In areas where there was a vote.

⁷¹ From the EU election monitoring mission – no centralised data could be found for local elections.

the HFC, being able to name at least one HFC member, and having voted for the HFC (see Table C-10 in appendix). A key factor that is consistently and positively associated with the three outcome variables is the membership to local associations (other than HFCs), a proxy for the social capital. Older and more educated people were more likely to know about the HFC or to be able to name an HFC member (although these returns are diminishing for age), and to vote for it. Some of the factors, such as living in urban areas, were not consistent across the border. There was a gender bias that was mostly visible in the consideration to vote: women were much less likely to vote than men. Interestingly, socio-professional categories and catastrophic expenditures (proxys for wealth) show effects that are not very significant, or not significant at all, as for the political colour of the area. Provincial discrepancies are shown, with the more remote eastern provinces of Burundi doing slightly better than the western ones in terms of the proportion of people who knew about the HFC. The fit of these models is quite low in measure, but the strong correlations convey a clear idea that not everybody is equal when it comes to knowing and voting for the HFC.

The typical portrait of somebody who knows and votes for the HFC is of a middle-aged educated male with high social capital, which is in a sense the opposite of the average user of the HF, who is typically a young, low-educated mother (DHS 2010 and 2012). These results are at odds with what Besley et al. (2005) found in South India: in the Burundi and South Kivu cases, the more disadvantaged groups have taken less part in the form of participatory democracy than represented by the committees.

These aspects of HFC composition and process have the potential to influence the functioning of the HF and the efficiency of interventions designed to reinforce them, hence the particular attention to heterogeneous effects in the next chapters.

All three aspects reviewed – the composition of the HFC, its activities and its representativeness – point in the same direction. The committees are weak. Their members do not seem to be the most representative of the population, they do not understand their role, and they have little if any power at the HF.

II.4. Insights from policymakers

Policymakers and health authorities are aware of the realities of community participation. Their discourse on the HFCs usually stresses both an explanation of what community participation ought to be and a recognition that community involvement in practice is far from the recommendation of official guidelines.

Context and culture is the first explanation advanced by the authorities for the limited success of the HFC strategy. In 2012, the director of the MoH department in charge of the HFCs in Burundi started the interview by describing the HFCs as “very important” and instrumental to solving the health problems at the local level, before adding that “the community has not yet realised the importance of community participation”. Importantly, he insisted that the “community participation is not *anchored in our culture*, people in the hills are not used to participating in the health centres”.⁷² This idea of a contextual problem was not present in interviews in South Kivu. The notion was also remote from the understanding held by international organisations, who blamed government capacities, as was explained by a UNICEF representative in Burundi: “at the national level, there is a big problem in terms of technical capacity. The managerial level suffers from the lack of national vision and poor implementation capacity”.⁷³

Official documents on the two sides of the border describe technical issues with the committees. Interviews with the civil servants who designed the documents reveal that what these people identify as technical issues is informed at best by anecdotes; they do not rely on any systematic data collection. Burundi’s national health development plan for 2011-2015 (*Plan National de Développement Sanitaire II*) states that:

“This form of community representation [the HFC] presents limitations due to: i) the unwillingness of the nursing staff to collaborate with members of the HFC; ii) the limited practical decision-making power of these committees; iii) the gap between the elected committees and the population and the lack of

⁷² Interview with Protais Ntirampeba, MoH department for health promotion, 18.10.12.

⁷³ Interview with Célestin Traoré, UNICEF community health unit, 07.11.12.

adequate supervision and capacity strengthening; iv) the risk of disinterest of the population; v) the lack of legal status of the HFCs”.

In South Kivu, a similar 2012 MoH document on community health indicates that:

“[the problems of the HFCs] are related to deficiencies in planning, low level of collection and analysis of data by the HFCs when they make their decisions, absence of supervisory training for CHWs and HFC members, weak links between health services and the community, and poor community funding.”

Although the documents show some confusion between the nature and consequences of the problems faced by the HFs, the hypotheses they advance are generally consistent with the existing literature on HFCs around the world. They revolve around the features of the committees (capacity), the features of the HF (attitude of the nurses and trust), and the features of the community (relation to HFC members). Empirical quantitative or qualitative findings reported in the previous section, however, do not indicate a disinterest of the population, and the relationship between the nurses and the HFC members seem, on the surface, non-problematic.

II.5. Conclusion

Together with the literature review and empirical findings reported in the above sections, the analyses of the policymakers invites further investigation of the factors that may improve the functioning of the HFCs and their social accountability in general. This will be the topic of the next chapters, building on four hypotheses that emerge from this chapter, as follows.

The first hypothesis is that there were serious concerns about the HFC members' knowledge of their regulatory framework and expected functioning. Did most HFCs not seem to know what they were supposed to do, and did they not have clear terms of reference? The question is about the HFC knowing its role but also, potentially, understanding what is happening at the HF.

Second, interviewees, especially in Burundi, suggested that some 'cultures' or contexts

might have been more likely to encourage the development of functional HFCs (in the literature, see O'Meally, 2013 and Iwami and Petchey, 2002). This is a clear invitation to compare Burundi and South Kivu, and to have a careful look at the local sociodemographic characteristics of the committees and their catchment areas.

Third, and importantly, the relationship between the committee and its population could have been a key determinant for the efficiency of the HFC. It is also a matter of who the committee members were.

Fourth, the attitude of the chief nurse and of the nurses towards the committee, which this chapter has barely touched on, require further investigation. While any attitude did not reveal itself in the analysis of the situation of the HFCs, policymakers and the literature alike have pointed it out as being important.

This chapter has highlighted the ambivalent situation of the HFCs in Burundi and South Kivu around 2011-12. On the one hand, the HFCs have been largely non-functional: they did not actively co-manage or monitor the situation at the HF and were merely a *façade* of community governance. On the other hand, the HFCs were not simply a donor or government fad. The population has esteem for the idea of community governance, and the HFCs fit into the evolution of the health systems of Burundi and the DRC, and retain an important place in health policies. Considering these tensions, the future of the HFCs is unclear. To be efficient, “interim institutions must have the potential to engage with[,] while also participating in the transformation of, the political economies within which they exist” (Adler et al. 2009). In that respect, the committees were not, at least during the period in question, actors capable of influencing healthcare delivery.

PART B. A TALE OF TWO STORIES: BUILDING THE INSTITUTIONAL KNOWLEDGE OF THE HEALTH FACILITY COMMITTEE IN BURUNDI AND SOUTH KIVU

This second part of the thesis seeks to understand the impact of HFCs on service delivery, including HF management. To that purpose, a randomised control trial is designed to provide HFC members with basic information concerning their role and the functioning of the HFC. The intervention leads to changes in management but not in service provision (use of services and perceived quality) in South Kivu and leads to no significant change in Burundi, apart from an improvement in the organisation of the committee. Chapter IV seeks to understand these differences and suggests that variations in HF management structures and the way people relate to their service providers could be key factors.

III. THE LIMITS OF PARTICIPATORY INSTITUTION BUILDING: EVIDENCE FROM AN EXPERIMENT ON BUILDING INSTITUTIONAL KNOWLEDGE

Nta wukora icyo atizye'
Nobody will do what they have never done before

Kirundi proverb (Rodegem 1983, p.72)

A basic hypothesis as to why induced participatory institutions such as the HFCs fail to play an active role in local health governance is in the poor 'institutional knowledge' of their members: they cannot navigate and fully use the institutions they are part of because they do not understand their functioning. Academic research and grey literature alike have pointed out that participatory institutions at the level of social services first and foremost require citizens to know about the functioning of these services (Mansuri & Rao 2012). In the mainstream developmental discourse, the idea that the skills of representatives need to be 'built' to make the best of deliberative institutions is central (James 2010). Empirical research on the health committee has not missed that point and has provided numerable empirical evidence that committee members too often lack a basic understanding of what a committee and a health centre are supposed to do (McCoy et al. 2012). Burundi and South Kivu are no exceptions. The 'institutional knowledge gap' (Osmani 2008) hypothesis

has, however, rarely been subjected to proper impact evaluation. The present chapter tests the institutional knowledge gap hypothesis. By looking at two different cases, it takes into account recent empirical (Banerjee et al. 2008) and theoretical (Lodenstein et al. 2013) work that stresses the importance of context when testing the institutional knowledge gap hypothesis, and echoes the calls from these findings for more evidence from the field.

The first section introduces recent research and theoretical considerations on the building of institutional knowledge among committee members. The second section presents the situation on the ground. It shows that little capacity building has been done so far and presents an intervention designed to test the institutional knowledge gap hypothesis. After a detailed methods section that explains how the difficulties of measuring impact on service delivery are addressed, the results are presented. The impact of the intervention is very limited in Burundi but there is a substantial impact in South Kivu. The discussion suggests that this difference is not due to implementation issues or measurement problems, and seeks to explain how change occurred in South Kivu.

III.1. Theoretical elements: roles and capacity-building

A simple and obvious prerequisite for citizens' committees to work is that their members understand what their role is and how the institution they are supposed to manage functions. In their literature review on HFCs, McCoy, Hall and Ridge (2011) highlight the importance of "*clarity and consensus on their [the HFCs'] mandate and authority*, where HFCs are expected to play a role of public monitoring and accountability, and *clarity on accountability arrangements* between community representatives and facility staff" (p. 457 – emphasis is by the authors). Taking the broader perspective of basic social services, Joshi (2013) discusses the importance of the 'nature of the boundaries' between the different actors, while Mansuri and Rao (2012) insist on 'clear systems of accountability'.

The idea of 'institutional knowledge' is defined, in line with management literature (Nissen 2007), as is the knowledge of how institutions – in the present case the HF committee and the health centre – are expected to work. This institutional knowledge

entails the understanding of the official regulatory framework of the committees and health facilities as well as the general ‘rules of the game’ (Williamson 2000) that are expected to be similar across health facilities and committees. They may not be formalised: for instance, the fact that minutes are taken at committee meetings and approved at the beginning of the next committee meeting is not written down anywhere.

In addition to knowing their roles, it is also expected that the committee members have the *capacity* to play them (Osmani 2008). Recent literature has discussed the danger of ‘capability traps’ (Andrews et al. 2013), which makes external support to institutions (understood as organisations here) unlikely to have any impact – until the trap is disarmed through capacity-building. Capacity or capability refers not only to understanding but also to “identifying and solving self-identified problems” (Guggenheim 2006), which is by definition context-specific. This makes capacity-building a complicated task. It is a buzzword in international development, and “despite a continued rhetorical commitment to the concept of ‘capacity building’, there [often] seems to be little substance as to what this might mean” (McLaughlin 2004, p.561). What is more, literature on and experiences with health committees provide few practical examples of building the knowledge and skills of committee members. In most cases, it is assumed that the problem is primarily one of transferring knowledge (McCoy et al. 2012). Grey documents obtained from different ministries of health in East Africa are not particularly instructive about the *how* of HFCs; they mostly highlight the exemplary or expected proper functioning of a health committee. In any case, recent literature on community participation (Cornwall 2008) and institutional reform in fragile states (Woolcock 2014) is quite wary of ‘best practice’ approaches, especially when imported from abroad.

The main reason is that building governance is a complex and adaptive task that does not match “readily onto a well-established administrative infrastructure and body of ‘universal’ professional knowledge” (Adler et al. 2009). It is an iterative adaptation that favours local solutions to local problems, facilitates positive deviance, and promotes active and experiential learning (Andrews et al. 2013) and a participative approach (Loewenson

& Rusike 2004). As in the case of every institution, the starting point of this process is nonetheless an understanding of how things *could* or *should* function, generally speaking. The official regulations of the HFCs in Burundi and South Kivu do not make HFCs work, but they represent locally anchored frameworks from which each committee and its medical staff can define a working relationship.

III.2. ‘Building the institutional knowledge’ of the HFCs: defining interventions

This section highlights the institutional knowledge gap among HFC members in Burundi and South Kivu and suggests a simple method for understanding how much it matters: an experiment in which a random sample of HFC will benefit from a capacity-building intervention.

III.2.1. The situation of the HFCs

Chapter II has already elucidated and analysed in detail the issues that the HFCs were facing in 2011-2012.

Table III-1. HFC situation at baseline (overview, 2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>		
<i>HFC executive</i>	mean	SD	mean	SD	p-value ²
Has reference document (binary)	0.263	0.441	0.564	0.499	<0.001
Cites management (as activity) (binary)	0.283	0.451	0.282	0.453	
HFC decision rights according to HFC (0-2) ¹	0.154	0.248	0.262	0.359	<0.05
ditto according to chief nurse (0-2) ¹	0.178	0.27	0.2	0.379	
HFC president rights according to HFC (0-2) ¹	0.45	0.356	0.394	0.478	
ditto according to chief nurse (0-2) ¹	0.47	0.376	0.452	0.488	
Number of observations	251		78		

Source: 2011-2012 HFC survey

1. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, drugs pricing, services pricing, the development plan. See Table II-9 for details | 2. Statistical paired T-test p-value

Importantly, as shown in Table III-1, HFCs rarely named HF management among their

main activities, took part in very few decisions at their HFs, and often simply had no reference document.

In qualitative interviews and focus groups, HFC members, medical staff, members of the population, and MoH officials alike linked the low functionality of the HFC with the lack of training or ‘capacity-building’ for HFC members. This issue was formulated in different ways and appears in almost all the 137 qualitative interviews conducted in 2011 in Burundi in 46 sites with HFC members, HFC presidents, and nurses, and in all the exploratory interviews carried out at eight sites in South Kivu in 2012. The idea of a knowledge gap in the literature appears to be confirmed: “the individual agents [the HFC members] lack capacity – [...] they could not have implemented the policy even if they [had] wanted to” (Pritchett et al. 2012).

In the face of a broad agreement that *training/capacity-building*, a concept that is omnipresent in the grey literature on international development, is what is needed, anthropologists of aid, however, invite caution (Chopra & Hohe 2004). They remind us that, in a region that sees many aid projects, people become fluent in the language and discourse of aid (‘aid-speak’) and use it to attract aid projects that often come with opportunities to make money. Precautions were taken to separate clearly the researchers from the aid projects.⁷⁴ Similarly, the fact that the interviewees often called for training and capacity-building, but did not have a clear picture of what these should consist in, does not mean that they did not genuinely believe that the HFC had a role to play albeit needing more knowledge to be efficient. If anything, the lack of precision about the expected content of training conveys the idea that there is a fundamental lack of clarity about the roles of the committee.

III.2.2. Capacity-building of HFCs in Burundi and South Kivu

The idea that the HFC members did not have sufficient skills and knowledge is also

⁷⁴ Among other precautions: a clear introduction that stated the scientific purpose of the research and made clear that no material benefit should be expected from the interview, use of unmarked cars, and use of research assistants who would not also be in the implementation team.

confirmed by the fact that they received very little formal training on their missions. Most HFCs were poorly supported by the health authorities and NGOs, and newly elected HFCs were briefed only quickly by the chief nurse or a health district officer, and then left by themselves, as the following example from a Burundi HFC shows:

“Invitations for the elections were launched at church [...]. People from all the hills of the catchment area gathered and received a brief explanation on the role of the HFC. People who wanted to be candidates raised their hands and had their names written on the board. Then the new HFC started.”⁷⁵

Paradoxically, the Congolese and Burundian governments and their partners have long recognised the need to train or at least inform newly elected representatives, including HFC members, on the principles and tools of governance and government. Various aid programmes have specifically targeted national and decentralised levels. Unions of representatives in Burundi and South Kivu have kept lobbying for training and ‘capacity-building’ programmes.⁷⁶ The lack of acquaintance with principles of management and governance has been doubled, at the local level, through a drain of human resource carrying post-high school qualification to Burundi’s capital city, Bujumbura, and South Kivu’s provincial capital, Bukavu. Table III-2 shows the HFC training situation in the two countries in 2011-2012: in more than half of the committees, not even a single member had ever received any form of substantial explanation on their role at the HF.

Many HFC members complained that past training programmes, when they existed, were limited to the president of the HFC and the executive members. Important regional differences exist as interventions are often decided and implemented at the provincial level: for instance, the HFCs of the province of Rutana in Burundi were the only ones to receive training from the INGO International Medical Corps in 2011. Instead, NGOs are the main providers of training (68% in Burundi, 61% in South Kivu), far ahead of the MoH (21% in Burundi, 39% in South Kivu). When provided by a local or international NGO,

⁷⁵ Focus group HFC, Babanza district, 08.08.2011.

⁷⁶ Interview with Noël Nkurunziza, *Transparency International Burundi*, 12.11.2012.

the training was mostly a means towards some other end: coming in the context of, and designed to serve, a specific project – for example, health prevention, therapeutic feeding, or the building of new infrastructure.

Table III-2. Past training of HFCs

	Burundi		South Kivu		p-value ¹
	mean	SD	mean	SD	
Training on management and HFC role (binary)	0.50		0.32		<0.001
<i>If so, who?</i>					
Entire committee	0.31		0		<0.001
Part of committee	0.21		0.50		<0.001
Small part (<5 members)	0.48		0.50		
<i>How long before intervention? (years)</i>	1.875	2.262	1.411	1.502	<0.1
Number of observations	251		78		

Source: 2011-2012 HFC survey

1. Statistical paired T-test p-value

III.2.3. Design of the interventions

This dysfunctional situation provides a good background for trying to understand the effects of the knowledge gap, and, provided that this issue can be addressed, seeing what difference a ‘functional’ HFC makes.

A simple intervention was designed to explore the knowledge gap hypothesis. It was part of the action-research projects *Inama n’Amagara* in Burundi and *Renforcement des Comités de Développement Sanitaires* in South Kivu. Capacity-building interventions are routinely criticised for only “teaching people what they already know”.⁷⁷ A series of precautions helped minimise this risk. The intervention: (1) was designed in the light of a comprehensive mixed-methods assessment of the situation (see chapter II) as well as after discussions with HFC members and HF staff, and with focus groups with the population; (2) was discussed on the occasion of two workshops with health district representatives and organisations working in community health in Burundi; and (3) was approved by the MoH. An assessment of the situation in South Kivu was conducted in June 2012, when the

⁷⁷ “The Aidspeak Dictionary”, from William Easterly’s blog <<http://williameasterly.org/the-aidspeak-dictionary/>>, last accessed 04.01.2016.

Burundi intervention was about to start. Qualitative and quantitative research highlighted a substantial knowledge deficit, in a fashion very similar to what had been found in Burundi. It was then decided, after consulting with the local MoH, that the very same intervention would be implemented. The curriculum of the session was first developed in Burundi and then adapted to the DRC context. The main changes are about the small differences in the Congolese health system.⁷⁸

The intervention focused on the roles and tools of the HFCs and HFs. It was conceived as an interactive session that used real examples of local initiatives, or positive deviance, to illustrate the possibilities of action of the HFC and the necessity to come with local solutions and adaptations. Simple language, role-play, drawings, explanations and participant-to-participant teaching ('peer instruction', Crouch & Mazur, 2001), as well as images were used to improve the chances that skills and knowledge were efficiently learned. The session comprised the following three module sessions:

- On the national health system, and the services offered at the HF and its functioning (1/2 day)
- On the roles of the HFCs, based on the MoH guidelines (1/2 day)
- On the different management tools at the HF-level, and possible action tools (including scorecards and terms of reference) (1/2 day).

Sessions were organised at the HF-level and started only when three-quarters of the HFC members were present.⁷⁹ The chief nurse and their deputy were invited to join the participants. The sessions took place at the end of the dry season, between the June and October 2012 (September-October only for South Kivu).

The discontinuity of support beyond a first 'training' had been denounced in the qualitative survey and the literature (McCoy et al. 2012). To avoid this problem, phone contact was established in January 2013, and a first half-day recap session was organised in February-

⁷⁸ One more level in the health system pyramid, different names, and different health statistics.

⁷⁹ In South Kivu, 20 people maximum were expected for each training as the exact number of people in the core committee was unknown prior to the intervention.

March of the same year. A second recap session took place in June 2013. Those sessions focused on evaluations of the HFC work as well as on exchanges for points that were not well understood. In line with the 1990s debate on community participation (Rifkin 1996; Zachus & Lysack 1998), the intervention was meant to inspire and guide the community to establish its own practices depending on its context, within the legal framework.

Three aspects that could have influenced the interventions received particular attention: (1) the (material) expectations of the participants, (2) the identity and approach of the facilitator, and (3) the composition of the attendance.

Time is costly, especially for people living at the margins of poverty. At the same time, it was important not to create expectations among the HFC members by overcompensating for the attendance to the meeting (Ridde 2010), something that was not sustainable and would not be in line with the idea of autonomous HFCs. For these reasons, only the travel expenses of the participants were covered by the project: \$3/day in Burundi and \$5 in South Kivu, where the cost of living is higher. Only the expenses relating to participation in one of the two recap session were compensated. One booklet containing a Kirundi or Kiswahili translation of the legislation on the HFC was distributed in each HF, with clear instruction given to keep it at the HF. In Burundi only, the participants received a soft drink and a t-shirt during the initial training.

The personality of the facilitator often influences the group (Rosenthal 1966). There were a total of four different facilitators in South Kivu and six in Burundi. The facilitators, with the exception of one medical doctor in Burundi, had similar higher education backgrounds and training, mostly in public health and psychology/adult learning. They came from the different ethnic groups of the region (Hutu and Tutsi in Burundi, Mashi and Muhavu in South Kivu), from both sexes, and between the ages of 35 and 50 years. The facilitators visited different HFs during the initial session and each of the recap sessions. The sessions were held in local language (Kirundi or Shi/Kihavu, Swahili in Kivu) to facilitate understanding. People from foreign countries were present during only five of the 207 training sessions, so that attention would not be diverted and biased expectations would

be limited (Cilliers et al. 2012).

Finally, the sessions were kept away from the potential interference of civil servants external to the HF, such as health district (or province) officials or representatives of the territorial administration. In some very rare occasions, civil servants in charge of community health visited the training sessions. In Burundi, the sessions were implemented “on behalf of the Coped/Cordaid consortium, with the support of the European Union and the Ministry of Health” and in Kivu “on behalf of Cordaid, with the support of the World Bank and the Ministry of Health”.

III.3. Experimental design and identification

III.3.1. Dimensions of analysis

Measuring changes in community governance and delivery of services is not straightforward. Governance is a broad concept, which quantitative researchers have approached using multiple proxy indicators. Service delivery is less of a blurry idea, and is often easily measurable, but it encompasses many different aspects related to the supply, quality, management, and accessibility of specific sub-services. As a consequence, the number of potential outcome variables is important. It is even larger when trying to take into account the growing body of literature that argues that the outcomes of institutional reform are hard to predict with any accuracy (Weijer 2012). This last view does not prevent an impact evaluation but it constitutes another reason to consider a broad spectrum of possible outcomes. The particular focus on HFCs, which are similar institutions in the same sociopolitical environment (Gaventa & McGee 2013), is the only factor that reduces the scope of the impact evaluation. A data-mining approach to the question would not be a sensible idea, as it would indeed be liable to generating a high number of false-positives. A theory of change, even if a simplification, is useful, if not essential, to the guiding research and indicating the areas of interest.

In the present case, the theory of change is inspired by the existing official documents (MoH, Burundi & WHO 2007). The main causal chain is as follows. The interventions are

expected to modify (1) the HFC organisation and HF accountability, which leads to changes in (3) management, in turn improving (4-6) the use of, quality of, and access to healthcare. It is a deliberately simplistic theory of change, whose function is primarily heuristic. The actual detailed mechanism through which change occurs may be more complex, but this is complicated, if not impossible, to pinpoint *ex ante*. Alternative causal chains include, for instance, individual HFC members directly influencing the HF management, with the interventions having an impact on the management but not on the general HFC functioning. Similarly, trained HFC members could directly interact with the users and, by providing more information on health services, influence the use, perceived quality, or access to health services.

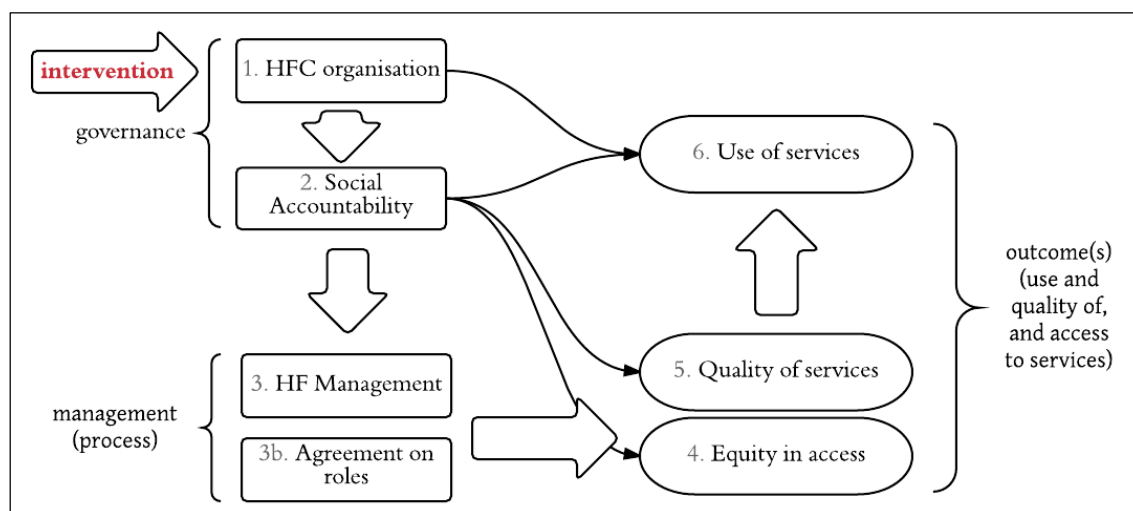


Figure 5. simplified theory of change and dimensions for impact evaluation

Plain white arrows reflect the 'classic' approach to social accountability
Black arrows represent other possible scenarios of change

In this theory of change, HFC organisation; social accountability; HF management; and agreement on roles, all potentially mediate the effect of the interventions on the final three outcome indicators (quality, use and equity in services). It is possible and common practice in social psychology explicitly to explore the validity of mediators through a system of regression equations. Yet this approach is often considered with suspicion in experimental economics (Gerber & Green 2012, ch. 10). It also seems impracticable in the present case because: (1) it is hard, as mentioned earlier, to reduce potential mediator(s) for community accountability down to a single variable, (2) the mediator approach assumes

a constant causal effect across observations, which is unrealistic in the case of HFCs/HFs,⁸⁰ and (3) the aforementioned potential direct effects and alternative causal mechanisms run the risk of overstating the effect of a potential mediator. The approach was therefore to “regard mediators as outcome variables, paying special attention to the question of when potential mediators can be dropped from consideration on the grounds that they appear to be unaffected by the randomly assigned treatment” (Gerber & Green 2012, p.337).

The analysis is organised along the three ‘steps’ (governance, management, outcomes), which are further divided into dimensions that encompass the key aspects of HFC and HF organisation and services delivery. The dimensions are based on a general analysis plan laid out, pre-intervention, in 2011.⁸¹ All the indicators that are part of the analysis plan and could be collected are presented, and indicators that could not be collected or were not part of the pre-analysis strategy are systematically reported (Humphreys et al. 2013; Miguel et al. 2014). This approach does not prevent research outside the original 2011 framework and does not contradict the idea that community participation and governance could have unexpected effects; it simply means that (1) all the original hypotheses are examined, and (2) there is clear mention when new variables of interest have been defined *ex post*. A likely consequence of this strategy to prevent cherry-picking is that more results are reported, including statistically insignificant ones.

The first step, governance, is a notion built on different conceptual pillars (deliberation, accountability, participation, and so on) that are not always easily quantifiable or directly observable. Indicators developed to measure the different aspects of governance can be “interpreted as imperfect proxies for some unobserved dimension of governance” (Kaufmann & Kraay 2008). The key question is to ask *what* is being measured with governance indicators (Thomas 2009), and answering it implies recognition that the notion of ‘good governance’ is partly, if not totally, normative. Two dimensions of

⁸⁰ As shown in Table II-9, there was some variance in the baseline situation; some committees were more functional than others and might have reacted to the interventions differently.

⁸¹ This plan was included in my DPhil *transfer of status* but has not been registered formally.

governance are now explored.

The first dimension is the *organisation of the HFC* (1. in Table III-3). This dimension refers to this key question: *Is the HFC organised and functioning, in the sense that it knows what it is supposed to do, and does meet?* Providing the answer necessitates an idea of some sort of benchmarking or reference point; in the present case, the assumption is that a good HFC is an HFC that knows what it is legally supposed to do, functions in a democratic manner, and sees HFC management as its priority. Key indicators come from the MoH guidelines and the literature: (1) existence of terms of reference for the HFC (Israr & Islam 2006), (2) participation in co-managerial activities, including procurement, (3) consensual decision-making (Uzochukwu et al. 2011), and (4) self-evaluation of the quality of the committee. The HFCs were not reelected during the intervention period and the focus is therefore on the internal organisation.

The second dimension is *social accountability* (2. in Table III-3), which is operationalised following the key components defined by Brinkerhoff (2004):

1. *Enforcement and sanction mechanisms*, which are mostly captured through questions on decision rights or the 'who does what'. These indicators measure whether the HFC is in a position to force changes at the HF level. The key question answered by this dimension is, *Do the HFC members and the HF staff attribute decision rights to the HFC?*
2. *Information given to users*, which encompasses indicators on the experience of the users at the HF and at the level of transparency of bills and prices
3. *Circulation of information through the HFC*, which comprises variables that assess how much the HFC is playing its role as an information platform and circulating information such as its own minutes or reports to the nurses, district and municipalities.

A complementary dimension on the *agreement on decision rights* was added to the analysis plan (2b. in Table III-3). It reflects how much the nurses and the HFC agreed on what the HFC did at the HF. It was introduced when it became evident that there were some conflicts between nurses and HFC members.

Table III-3. Indicators for impact evaluation

Dimension	Indicator	Source
Community Governance	1. HFC organisation HFC meetings per month; decision-making process (consensus-based or other); terms of reference available (at time of visit); HFC pride in their work (5-item Likert scale); existence of executive committee;* activities undertaken: coding of the question, 'What are the main activities of the HFC?' (management aspects divided between broad general management and precise activities*).	HFC/HF surveys HFC minutes
	2.1. <i>HFC decision rights</i> : HFC, HFC executives and HFC president decision rights in 7 areas, according to the chief nurse and HFC executives (Table II-9), signature of bills.	HFC/HF surveys
	2.2. <i>Information on user side</i> : respondent knows HFC, HFC members, went to HFC meeting last year, asked the HFC a question last year, understood the bill when visiting HF, prices were displayed during the visit.	H-hold surveys
	2.3. <i>Information sent by HFC</i> : HFC information (minutes) sent to chief nurse and health district, months since last general assembly.	HFC/HF surveys
	2b. Agreement on rights* Chief nurse – HFC executives agreements on the HFC, HFC executives and HFC president decision rights in 7 areas (see Table II-9), from HF/HFC surveys.	HFC/HF surveys
Management	3.1. <i>Drugs and equipment</i> (number of days of stock-out per month): drugs, medical items (non-drugs), and equipment (see Table II-7 for details).	HiS data
	3.2. <i>Human resources</i> : qualified staff, support staff, change in chief nurse in the last year.	HFC/HF surveys
	3.3. <i>Infrastructure</i> : small building* (e.g. shed, toilet, shower), building (new),* provision of electricity and water.	HFC/HF surveys
	3.4. <i>Budget and organisation</i> : part of user fees in revenue, expenses/revenue ratio, ratio of basic services available* (see Table II-3).	HFC/HF surveys
Service delivery	4. Quality Experience at HF in last year: rating of quality, attention of staff, clarity of bill, price paid, and use of drugs by staff; use of equipment by staff,* relative quality (patient went to the closest HF); waiting time at HF.*	H-hold surveys
	5. Equity in access Household-level binary variables based on experience in the past year: household faced catastrophic expenditure in health; could not afford drugs; or could not afford care.	H-hold surveys
	6. Provision of services Institutional delivery, curative visit, prenatal visit, postnatal visit, family planning (new users), referral, immunization of children (ATV 2-5).	HiS/PBF data

* Variable not part of the 2011 analysis strategy

The indicators regarding the *management* of the HF were thought of in the perspective of

the components of an imaginary ‘production function’ of an HF, or what is needed to provide services (3. in Table III-3). The key elements that emerged from this exercise were: (1) human capital (medical staff), (2) drugs and equipment, (3) infrastructure, and (4) finances, including which services were available. The actual inputs were measured through official data collected and verified by the each health information system, and data collected and verified by the enumerators. The services available were based on declarations of the chief nurse.

Finally, the *delivery of services per se* was examined through three dimensions that reflect key preoccupations in healthcare services delivery in low-income countries and in Burundi and the DRC, as highlighted by the demographic and health surveys: quality of services, equity in access, and the provision of services.

The question of the *quality of healthcare* goes well beyond the scope of this thesis (Berendes et al. 2011). This is nonetheless approached using a dual measurement of (1) the subjective perceived quality of care as expressed by the three groups – patients, medical staff and health committee; and (2) what the MoH defined as the ‘technical quality of care’, which in fact was the respect for procedures designed to ensure that patients at the health centre were attended to (4. in Table III-3).

Equity is another widely debated topic in global health (Culyer & Wagstaff 1993) and the approach presented here is basic: it looks at the reported lack of medical treatment and drug use due to financial (or other) constraints, catastrophic expenditures in health, and free HF healthcare for registered ‘indigents’. The three indicators are based on the population survey (5. in Table III-3).

The provision (use) of services is easily measured through indicators that are collected monthly by the health information system (HiS) and the performance-based financing (PBF) payments and systems of verification at the ministries of health (6. Table III-3). PBF indicators are reputedly more reliable than the HiS indicators, are subject to internal verification, and cover the main services offered by the health centres. The mean of the

six months before intervention and the six months after the intervention is used (Bertrand et al. 2004).

Minor adaptations to the initially proposed list of indicators had to be made since some were not available in South Kivu, especially variables related to the provision of services that come from the HiS (see Table C-11 in appendix).⁸²

III.3.2. Identification strategy

The intervention was implemented in randomly selected health facilities. In Burundi, 168HF/HFCs received the intervention and 83 were kept as a control group. In the DRC, the sample was split in half, with 39 HF/HFCs receiving the programme intervention and 39 being in the control group. The interventions started in July-October 2012 in Burundi and September-October 2012 in South Kivu. Impact evaluation data were collected between October 2013 and January 2014.

Verification was made that each group had a similar ratio of faith-based publicly-funded HFs. In Kivu, the randomisation ensured that each health zone was represented in each group, while in Burundi a check was made that each group comprised a similar ratio of HFCs/HFs located in each of the following distinct regions: (1) the shores of Lake Tanganyika and the coastal mountains, where political violence had been the most intense; (2) the plateaux of southern Burundi, home to most of the returnees; and (3) the more remote eastern provinces, where traditional religion and healthcare remained important. The project team did not contact the HFCs/HFs randomly assigned to the control group until the end of the pilot phase. On average, and against 36 key indicators for the HFs and their HFC, the groups are closely comparable. Table III-4 presents the main indicators only; there are two instances in which the control and pilot groups are slightly different, but only at the 0.1 level, and of minor importance and opposite signs, and only in the case of South Kivu.

⁸² Running the estimations on the Burundi data with the variables that were not kept does not affect the results.

Table III-4. Situation at baseline

Outcome	Burundi		South Kivu	
	control mean ¹	intervention difference ¹	control mean ¹	intervention difference ¹
<i>HFC Features</i>				
Terms of Reference available	0.222 (0.047)	-0.008 (0.079)	0.641 (0.078)	-0.154 (0.112)
Ratio of Women	0.347 (0.02)	0.036 (0.033)	0.389 (0.03)	0.016 (0.042)
Ratio went to sec. school	0.328 (0.025)	-0.002 (0.04)	0.521 (0.038)	0.017 (0.051)
Collines/villages represented in HF	5.247 (0.321)	0.372 (0.653)	9.205 (0.826)	-0.333 (0.13)
<i>HF features</i>				
Water ²	03.099 (0.128)	0.139 (0.218)	02.103 (0.194)	-0.077 (0.285)
Electricity ²	3.074 (0.134)	-0.098 (0.228)	1.974 (0.174)	-0.308 (0.27)
Support staff at HFC	5.951 (0.315)	-0.308 (0.503)	5.667 (0.443)	-0.564 (0.517)
Urban area	0.148 (0.04)	-0.029 (0.064)	0.103 (0.049)	-0.051 (0.061)
Faith-based HFC	0.173 (0.042)	-0.03 (0.069)	0.41 (0.08)	0.026 (0.113)
Population in area	14628 (1052)	1099 (1773)	10781 (600)	-50 (1058)
<i>Outcomes</i>				
1. HFC organization	0.029 (0.031)	-0.017 (0.058)	0.054 (0.056)	-0.111 (0.072)
2. Accountability	-0.025 (0.076)	0.156 (0.14)	0.022 (0.104)	-0.045 (0.14)
2.1. HFC rights	0.015 (0.087)	0.026 (0.157)	0.05 (0.066)	0.237* (0.132)
3.1. Equipment	-0.092 (0.092)	0.208 (0.127)	0.139 (0.102)	-0.274 (0.176)
3.2. Human resources	-0.016 (0.06)	0.062 (0.107)	0.121 (0.12)	-0.242* (0.142)
3.3. Infrastructure	0.041 (0.093)	0.021 (0.152)	0.08 (0.114)	-0.16 (0.177)
3.4. Finances	-0.026 (0.055)	-0.025 (0.085)	0.053 (0.086)	-0.192 (0.136)
6. Provision of services	-0.019 (0.085)	0.163 (0.132)	0.08 (0.093)	-0.159 (0.127)
Number of observations	83	166	39	39

1. Difference is the β in the simple OLS regression (on baseline data): $Y = c + \beta I + \varepsilon$, where I is the intervention and c is the control group. * p -value < 0.1 . Standard errors in parenthesis

2. Five-item Likert scale (0: never, to 5: constant) – from interview with chief nurse.

The evaluation primarily uses a differences-in-differences approach (DiD), which is estimated through an OLS or logit regression model (Khandker & Koolwal 2010) for each country. Formally, with $Y_{d,i,t}$ the outcome variable, t time, I the intervention, cX_i a vector of covariates, and cD_d the district-level fixed effects, the equation to be estimated is:

$$Y_{d,i,t} = c + t + I + \beta It + cX_i + cD_d + \varepsilon_{d,i,t} \quad (\text{III.1})$$

– where β captures the impact of the intervention in context.⁸³ In the cX_i vector are a set of key pre-intervention level covariates: the size of the HFC; the ratio of women to men and of members who had attended secondary school versus had not; the number of *collines* or villages represented; whether the HF was faith-based or public; the number of qualified nurses; water and electricity provisions; and the population of the HF catchment area. Controls cX_i and cD_d only improve the precision of β because the regression without controls is unbiased (Angrist & Pischke 2008). Estimating this model separately in Burundi and Congo gives β_C for the DRC and β_B for Burundi. In the context of a purely random allocation of the intervention, where the units of observations are the same type and the interventions rigorously similar, and with all other things being equal, $\beta_C - \beta_B$ provides useful information of the influence of the context. For logit estimations, the results reported are the conditional marginal effect of being in the treatment group post-intervention.

In the case of population-level data,⁸⁴ the approach is similar:

$$Y_{d,i,t,h} = c + t + I + \beta It + cX_i + cD_d + cU_{h,t} + \varepsilon_{d,i,t,h} \quad (\text{III.2})$$

The additional set of covariates $cU_{h,t}$ contains person-level sociodemographic information

⁸³ A total of four different arms, stacked on each other (so that intervention groups are: 1, 1+2, 1+2+3, 1+2+3+4), were tested in Burundi. Restricting the estimation to the HFCs/HFs that received the second intervention only yields the same results but diminishes statistical power. The effects of the three interventions that are stacked up on the intervention described in this paper in Burundi are also accounted for using intervention group dummies and their interactions with time [$I_2, I_3, I_4, I_2^*t, I_3^*t, I_4^*t$].

⁸⁴ Household data at baseline level in Burundi come from only 126 HF catchment areas.

in four items: age, gender, education and wealth (the latter through a proxy; whether the interviewee is a farmer). Since different randomly selected individuals were interviewed at baseline and end-line, $cU_{h,t}$ captures individual-level covariates through time. Standard errors are clustered at the HF-level and the survey is weighted to ensure gender and age representativeness with respect to the 2011 Burundi census and 2012 data from the South Kivu HiS, as explained in the introduction.

The robustness of the results is tested by removing control variables and testing an ANCOVA specification in which the outcome is regressed on the lagged outcome values (McKenzie 2012), which gives the following model in the case of the HF-level data model:

$$Y_{1,i,d} = c + \beta I + Y_{0,i,d} + cX_i + cD_d + \varepsilon_{d,i,t} \quad (\text{III.3})$$

– where Y_1 is the outcome after intervention, Y_0 the pre-intervention level of the same outcome variable (lagged variable) and I , cX_i and cD_d are the intervention group and the sets of covariates and district fixed-effects described above.

The large number of outcome variables led to the adoption of three different strategies in order to limit the likelihood of type I errors and ensure robust results (Glennerster & Takavarasha 2013).

Firstly, indexes that are unweighted means of different indicators were used in lieu of each individual outcome when in presence of similar indicators measured the exact same way: stock-out of different drugs and medical equipment (in number of days per month) and decision rights by area (from 0 to 2).

Secondly, a mean standardised effect (Duflo et al. 2007) was calculated for each dimension introduced in the previous sub-section. This consisted of the generation of z-scores for each component of a dimension by use of the mean and the standard deviation of the control group, in this case at baseline (t_0) (or the control group for the few variables that were not available at baseline). Recent literature (Glennerster & Takavarasha 2013) points to two main approaches to then estimate the mean effect of using those z-scores.

The first option, which is the one that was used in this chapter, is to calculate the unweighted mean of z-scores for each observation and then run the evaluation model using those. As missing values in some of the indicators used in calculating the mean of z-scores for each observation would bias the estimation, Kling, Liebman and Katz (2007) suggest imputing the indicator's mean value into the randomly assigned treatment group. The second approach consists of running individual regressions for each component and calculating a simple unweighted average of all the coefficients, before computing standard errors using a seemingly unrelated regression (SUR) framework (Glennester & Takavarasha 2013). The SUR approach is often not the one that is preferred (Casey et al. 2012) as the weight of each component in calculating the standard errors is not explicit. As an index, the mean standardized effect is used to paint the general picture of the impact of the intervention.

Thirdly, standard errors were adjusted within each dimension and across dimensions to account for the testing of multiple related hypotheses. The approach follows Casey et al. (2011), who, in their paper on reshaping local institutions in Sierra Leone, systematically present the unadjusted or 'naïve' p-value and the Westfall and Young family-wise error rate (FWER)-adjusted p-value. Comparing to classic adjustments such as Bonferroni, the FWER approach presents the advantage of taking into account the correlation between the outcomes. The procedure comprises five steps that are explained by Anderson (2008), and a central component is to bootstrap the random attribution of observations to treatment groups (Anderson suggests 10,000 times) in order to see what is the likelihood of having the same results produced at random. It is more conservative than the false discovery rate (FDR) sometimes used in data exploration (Anderson, 2008).

Since quantitative indicators may fall short of pinpointing the process through which the interventions might have had an impact, a nested qualitative research strategy (Lieberman 2005) was developed in Burundi.⁸⁵ Twelve sites were selected in the control group and

⁸⁵ Qualitative material was also collected in the DRC, but in a less systematic and structured way. It remains nonetheless possible to nest the case *ex post*.

the same amount in the intervention group. The following were organised in all sites: one focus group with the HFC, one focus group with the population (women only in half of the cases), a structured interview with the HFC president, a structured interview with the chief nurse, and two structured interviews with local leaders (religious figures, traditional and political leaders, school directors, civil society leaders, and so on).

III.4. Main Results

The intervention had a clear impact on three dimensions in South Kivu (Table III-5).

Table III-5. Institutional knowledge intervention: main effects

Mean effects (dimensions)	Burundi				South Kivu			
	Effect	p-value	FWER p-value	N	Effect	p-value	FWER p-value	N
1. HFC organisation	0.260	0.003**	0.09*	498	0.419	0.000***	0.01***	156
		*						
2. Accountability	-0.029	0.81		498	0.4572	0.015**	0.01***	156
2.1. HFC rights	-0.044	0.81		498	0.846	0.000***	0.00***	156
2.2. Share info w. users [†]	-0.018	0.87		7,083	0.007	0.908		4,589
2.3. Share info w. nurses	0.017	0.86		498	0.217	0.213		156
2b. Agree on HFC rights [‡]	0.216	0.30		498	-0.376	0.131		139
3. Management	-0.016	0.88		498	0.348	0.00***	0.01***	156
3.1. Equipment	-0.177	0.25		496	-0.051	0.755		154
3.2. Human resources	-0.024	0.81		498	0.314	0.066*	0.152	156
3.3. Infrastructure	0.121	0.49		498	0.342	0.058*	0.152	156
3.4. Finances	-0.045	0.74		498	0.227	0.146		156
4. Equity in access [†]	-0.241	0.05*	0.22	3,608	0.025	0.65		4,039
5. Quality of services [†]	-0.145	0.22		7,069	0.075	0.49		4,589
6. Provision of services	0.004	0.97		461	0.018	0.91		154

See Table III-3 and chapter III (experimental design) for details about the construction of the standardised dimensions. | [†] Data and analysis at the household-level (2.2. aggregated at HF-level when dimension 2 was constructed). | [‡] Not part of the original analysis plan. | Effect is β in model III.1 or III.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

This impact is robust to the FWER correction. Only one dimension, the HFC organisation, in which the HFC members had been probed about the HFC practical organisation and goals, was changed by the intervention in Burundi. With the exception of the agreement

over the decision rights of the HFC at the HF, most of the dimensions and sub-dimensions take the expected sign in South Kivu (the shortage of drugs and equipment has an expected negative sign), which is not at all the case for Burundi. It is useful to bear in mind that the intervention in South Kivu had less statistical power than the one in Burundi. The impact on some dimensions invites to a closer look at what exactly has changed.

HFC organisation

In the case of the HFC organisation, all but one of the indicators take the expected sign in South Kivu, but most changes are not important enough to reach statistical significance when taken on their own, the availability of terms of reference excepted (Table III-6). In the case of Burundi, the situation is a bit more confused: in addition to having new terms of reference, HFCs also gained more self-confidence, but other variables are non-significant (some with a negative sign).

In both cases, the main effect of the intervention was the establishment of formal terms of reference, documents in which the responsibilities and functioning of the HFC were described, and which were supposedly adapted to particular contexts. The existence of these terms of reference was verified by enumerators, who could not, however, verify who wrote the documents. The effect is bigger in Burundi, a difference that might come from the fact that 50% of the members of the HFC in South Kivu, versus only 14.8% in Burundi, said they already had terms of reference before the intervention. The presence of terms of reference is at least partly an input of the first intervention, as leaflets were distributed to the HFCs explaining their roles. Another more subjective indicator that is not reported in the table confirms that HFCs better understood their roles following the intervention: when asked what had changed in the HF in the past year, 31% of the HFCs and chief nurses agreed that the HFC now “knows what it should do”, compared with only 13% in the control group. In Burundi, this measure produced 16.4% in the intervention group, compared with 8.4% for the control group (the difference is statistically significant in both cases, at $p < 0.5$ and $p < 0.01$ respectively).

Table III-6. Institutional knowledge intervention: effects on HFC organisation

	Burundi			South Kivu		
	control (2013)	effect	N	control (2013)	effect	N
Meetings per month HFC	0.975	-0.050	498	1.590	-0.026	156
Decisions by consensus	0.889	0.000	498	0.462	0.228	156
HFC self-confidence (1-5) ¹	4.162	0.515(**)	498	3.107	-0.253	156
Terms of reference available	0.148	0.809**	498	0.641	0.486**	156
Executive committee exists [‡]	0.864	-0.047	498	0.270	0.197	156
Key activity; management ²	0.259	0.055	498	0.308	0.314(*)	156
ditto detailed management ²	0.370	-0.063	498	0.282	0.000	156
ditto information/voice ²	0.210	0.182	498	0.154	0.148(*)	156

1. Based on a 5-item Likert scale: from 1, no confidence at all, to 5, very confident. | 2. Created from coding the open-ended question, 'What is the main activity of the HFC?' | ‡ Not part of the original analysis plan. | Effect is β in model III.1. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the [naïve p-value] is indicated in parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Social accountability

The situation of the HFC accountability indicators shows relative similarity to that of the HF organisation; with the exception of the relationship-to-population component, the signs are as expected in Kivu but not in Burundi (Table III-7). The significant impact found for the HFC accountability dimension is clearly driven by the decision rights component, and comes from the HFC more than from the HF staff. The HF staff reports some change but it is mostly the HFC members who see themselves empowered by the intervention. The relationship between the population and the committee serving it does not improve much in either context; the signs are mixed and none of the variables is significant, even at the $p<0.1$ level, in any of the contexts.

The intervention shows no clear impact on the average declared decision rights of the HFC at the HF in Burundi. This lack of obvious change in decision rights seriously questions whether the interventions brought any structural change. Indicators of the transparency of the HF as experienced by the users (price display and clarity of bill) also fail to show significant change brought by the interventions. HFCs, which have been supposed to provide the platform for exchanging healthcare services-related information, did not exchange significantly more information with the population or the HF after the

intervention. Their exchanges with third parties, such as local authorities, also prove statistically non-significantly changed by the interventions. The population is shown to have been slightly better connected to its HFC after the intervention (knowledge of the HFC members and interactions), but the result is statistically non-significant.

Table III-7. Institutional knowledge intervention: effects on HFC accountability

	Burundi			South Kivu		
	control 2013	effect	N	control 2013	effect	N
<i>2.1. Decision rights of (according to...)</i>						
HFC (...nurses) ¹	0.628	0.073	498	0.297	0.322**	156
HFC (...HFC executives) ¹	0.587	-0.030	498	0.432	0.579***	156
HFC executives (...nurses) ¹	0.257	-0.093	498	0.542	0.011	156
HFC executives (...HFC exec.) ¹	0.293	0.001	498	0.630	0.388***	156
HFC president (...nurses) ¹	0.312	-0.045	498	0.322	0.249	156
HFC president (...HFC exec.) ¹	0.279	0.003	498	0.410	0.590***	156
HFC co-signs orders, binary ¹	0.667	-0.006	498	0.314	0.250(*)	145
<i>2.2. Shared info. with population</i>						
Knows the HFC [†]	0.423	0.004	7110	0.770	-0.048	4507
Num. of HFC members known [†]	2.558	0.029	2884	7.397	0.655	4589
Went to a HFC meeting ^{2,†}	0.825	0.055	2626	1.918	0.245	4589
Asked the HFC a question ^{2,†}	0.819	0.344	2629	1.491	0.223	4589
Identifies HFC as HF manager ^{3,†}	0.187	-0.118	3503	0.352	-0.072	4352
Bill is understood (1-5) ^{4,5†}	4.091	0.063	2933	3.951	-0.118	3837
Prices displayed at HF ^{5†}	0.382	-0.052	3449	0.826	-0.016	3835
<i>2.3. Shared info. with nurses</i>						
Minutes to chief nurse; binary	0.420	0.068	498	0.231	0.115	119
Minutes to district; binary	0.160	-0.262	498	0.846	0.061	156
Months since last gen. assembly	3.230	0.089	377	1.759	-0.228	156

1. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, price drugs, price services, development plan. See Table II-9 for details. | 2. In the past 6 months | 3. Dummy created from the question "Who is the manager of the HF?" | 4. 5-item Likert-scale | 5. Users who visited the HF in the past 6 months only. | † Data and analysis at the household-level | Effect is β in model III.1. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the [naïve p-value] is indicated in parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

When considering the level to which chief nurses and HFCs agreed on decision rights, all the variables take a negative sign in Kivu, with the HFC executives' rights statistically significantly different (Table III-8). By contrast, all the indicators take a non-significant

positive sign in Burundi.

Table III-8. Institutional knowledge intervention: effect on decision rights agreement‡

<i>HFC and chief nurse nurses</i>	<i>Burundi</i>			<i>South Kivu</i>		
	control (2013)	Effect	N	control (2013)	effect	N
agree on HFC decision rights	0.72	0.021	498	0.68	-0.123	156
ditto on HFC executives rights	0.78	0.069	498	0.64	-0.195*	156
ditto on HFC president rights	0.71	0.055	498	0.54	-0.114	156

‡ Not part of the original analysis plan. | Effect is β in model III.1. P-values are FWER p-values. * p-value < 0.1.

HF Management

The analysis of HF management indicators shows patterns similar to those in the previous two dimensions (Table III-9). The changes that are statistically significant for South Kivu are in terms of medical equipment, change of chief nurse, and, most importantly, infrastructure. The HF management dimension is also driven, however, by the fact that most indicators take the expected sign, signalling that the lack of statistical significance of some of them could be a question only of a lack of statistical power. On the Burundian side, though, where statistical power is shown to be much less of an issue, the signs often are not those expected, and no variable is independently significant, even without FWER adjustment.

The main, and only robust, impact of the intervention is shown to be on the construction of new buildings (simple difference), and such an intervention often happens to be one of the ‘lowest-hanging fruits’ at Congolese HFs. HFCs recall how it was almost always possible to mobilise local resources – adobe bricks, builders, tiles and planks – to get a new project started. Data on the (pre-intervention) state of the infrastructure across the border are missing, but observations from qualitative fieldwork indicate that Burundian HFs tended, on average, to be in a better state than their Congolese counterparts, which might have made their improvement harder. Similarly, the decrease in shortage of medical equipment in DRC, which is not robust to the FWER correction, also took place in a context where stock-outs are more frequent.

In Kivu, the rise in turnover of chief nurses (+28.6%), in addition to the negative effect on the agreement about the decision rights of the HFC, seem to indicate that changes took place in a contentious context.

Table III-9. Institutional knowledge intervention: effects on HF management

	Burundi			South Kivu		
	control (2013)	effect	N	control (2013)	Effect	N
<i>2.1. Equipment</i>						
Days/month stock-out of drugs ¹	1.351	-0.216	493	2.529	0.500	154
ditto of equipment ¹	0.596	0.644	483	2.705	0.174	154
ditto of medical equipment ¹	1.908	0.623	492	6.071	-2.736[*]	154
<i>2.2. Human resources</i>						
Qualified staff (number) ²	0.481	-0.047	498	0.154	0.051	156
Support staff (number) ²	5.951	0.643(*)	498	5.974	0.308	156
Chief nurse (change this year)	0.160	-0.037	498	0.308	0.286[*]	156
<i>3.3. Infrastructure</i>						
Water ³	3.074	0.065	498	2.564	0.000	156
Electricity ³	3.098	0.046	498	2.231	0.051	156
New building this year‡	0.210	-0.028	256 ^{EO}	0.205	0.312**	78 ^{EO}
New building small this year‡	0.160	0.109	256 ^{EO}	0.308	0.336**	78 ^{EO}
<i>3.4. Finances and services</i>						
HF direct revenue / revenue ⁴	0.147	0.051	498	0.500	0.057	156
HF expenses / income ⁴	1.054	0.021	498	0.182	0.031	156
Services available ⁵	0.95	-0.192	498	0.842	0.068	156

1. A negative impact on stock-outs constitutes an improvement, mean value of the items presented in Table II-7. | 2. Post-secondary at least | 3. All staff that do not have post-secondary qualification. | 4. 5-item Likert scale (0: never to 5: constant) | 4. Direct revenue is revenue generated from user fees. | 5. Out of seven services –see Table II-3 for details. | EO: end-line only (not a difference-in-difference indicator). | ‡ Not part of the original analysis plan. | Effect is β in model III.1. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the [naïve p-value] is indicated in square parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Quality of services

Measures of the quality and use of healthcare services are not importantly modified by the interventions. Almost all the indicators take an unexpected negative sign in Burundi and a positive sign in South Kivu. The quality of listening and clarity of the bill are statistically significant in Burundi, but this result is not robust to the FWER correction.

Table III-10. Institutional knowledge intervention: effects on perceived quality of services

<i>measured at household level, relate to experience in last year</i>	<i>Burundi</i>			<i>South Kivu</i>		
	cont. 2013	effect	N	cont. 2013	effect	N
HF: Quality of care (1-5) ¹	4.170	-0.161	3,826	3.856	-0.083	3,744
HF: Listening (1-5) ¹	4.225	-0.296[**]	3,817	3.897	0.104	3,347
HF: Clarity (1-5) ¹	4.133	-0.286[**]	3,804	3.866	0.167	3,255
HF: Price (1-5) ¹	3.986	-0.134	3,786	3.665	0.082	3,224
HF: Drugs (1-5) ¹	3.914	-0.253	3,799	3.736	0.052	3,332
HF: Staff used equip. (binary)	0.685	0.0811	2,219 ^{EO}	0.914	0.021	1,931 ^{EO}
Went to the closest HF (binary)	0.692	-0.007	7,086	0.903	0.005	4,143
HF: Waiting time (1-6) ²	2.172	-0.041	2,380 ^{EO}	1.311	0.027	1,717 ^{EO}

1. 5-item Likert scale from 1 very bad to 5 very good. | 2. From 1 no waiting time to 6 more than a day (0: less than 30 minutes, 2 less than 1 hour, 3 less than 2 hours, 4 less than ½ day, 5 less than a day and 6 more than a day). | EO: end-line only (not a difference-in-difference indicator). | Effect is β in model III.2. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the [naïve p-value] is indicated in square parenthesis. Significance level: * < 0.1, ** < 0.05, *** < 0.001.

Equity in access to services

Access to the services is equally unchanged by the interventions (Table III-11). If anything, the situation worsens in Burundi, but none of the effects is actually significant.

Table III-11. Institutional knowledge intervention: effects on equity in access

<i>all binary, measured at household level, relate to experience in last year</i>	<i>Burundi</i>			<i>South Kivu</i>		
	cont. 2013	effect	N	cont. 2013	effect	N
Catastrophic expenditure in health ¹	0.325	-0.024	6,881	0.429	-0.002	4,741
Could not afford drugs	0.284	-0.062	6,881	0.382	0.095	4,741
Could not afford care	0.260	-0.054	6,638	0.643	0.023	4,633

1. Answer to the question “did you have to sell something to afford school, healthcare, or a social duty?” | Effect is β in model III.2. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the naïve p-value is indicated in parenthesis. Significance level: * < 0.1, ** < 0.05, *** < 0.001.

Finally, there is no visible impact of the interventions on the provision of services (Table III-12), focusing here on the key primary healthcare services defined by the MoH.

Table III-12. Institutional knowledge intervention: effects on provision of services

<i>per 10,000 inhabitants in catchment area and per month</i>	<i>Burundi</i>			<i>South Kivu</i>		
	cont. 2013	effect	N	cont. 2013	effect	N
Institutional delivery	34.037	-3.839	461	18.412	1.065	154
Curative visit	1696.208	112.101	461	147.532	4.264	154
Prenatal visit	151.211	-0.236	461	24.215	0.780	154
Postnatal visit	29.597	-1.704	461	46.915	3.334	154
Family planning (new users)	64.105	-4.299	461	74.673	2.303	154
Referral	8.553	0.845	461	20.743	1.247	154
Immunization (childhood; ATV 2-5)	55.866	-7.829	461	28.536	0.655	154

*Effect is β in model III.1. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the naïve p-value is indicated in parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

The models were also run (1) without any of controls; (2) on end-line data only; (3) in the Burundi sample, keeping as a pilot group the HFs that received only the main intervention (effectively reducing the pilot group size to 42 observations through two periods); (4) using the SUR approach (rather than the mean z-scores approach) described in the last section; and (5) using the ANCOVA specification (see Table C-12 in appendix).⁸⁶ The results are robust to those alternative models and no new effect was found.

III.5. Discussion: real (quasi) null results in Burundi, strong effects in South Kivu

The intervention on building the capacities of the HFC members led to substantial changes in the organisation of the HFs and their committees in South Kivu. This finding is important; it seems to contradict part of literature that argues that “information is not enough” to provoke changes (Fox 2015). By contrast, in Burundi the only significant change was that HFCs gained terms of reference, said they had become more confident in their capacities, and gained a better idea of what they could and should do, but nothing indicates that they behaved too differently compared with before the intervention. This

⁸⁶ All the checks show robust results, only the ANCOVA – the other best way to estimate effect with the difference-in-difference model – is reported in appendix.

section argues that the difference shown in the results is real, in the sense that it is not fuelled by measurement errors, spill-overs, or other flaws in the implementation process.

Although there have been a series of vocal calls for improving transparency in social sciences research, and more specifically for combatting the publication bias against research and experiments with null results (Franco et al. 2014; Miguel et al. 2014; Mervis 2014), there remains surprisingly little guidance on how a researcher could or should proceed when confronted with such results. In the present case, the chosen strategy was, first, (1) firmly to establish that the results in Burundi were *robustly null* through a series of re-specification of the estimations already presented in the last section; (2) to assess the quality and nature of the data, including issues of statistical power; and, (3) to evaluate the quality of the implementation intervention. The last two steps are presented below; they are instrumental in showing that nothing is problematic in the technical side of the experiment. Only after these verifications, in a third subsection, can the delicate work be attempted of trying to understand how things worked in South Kivu and why the intervention did not change much in Burundi.

III.5.1. Data quality and analytical framework

No major incident was reported during the surveys. Enumerators were trained and assessed, went through mock sessions, and observed clear guidelines to avoid deception from the respondents. Expectations from the interviewees were minimised as much as possible by use of a clear ethical protocol. To optimise the triangulation and quality of information, the HFC and HF surveys were run at the same time and the enumerators made sure the HFC president and the chief nurse did not share views on the survey before it was administered. The results are robust against the identity of the enumerator.⁸⁷

The HiS data used primarily for part of the HF management dimension come from reports that were filled in by the HF staff and whose quality was monitored by the MoH. PBF,

⁸⁷ This was controlled for by including an enumerator fixed effect in the regression models.

which is used for the provision of services dimension, was subject to a tighter verification procedure.⁸⁸

The different sources of data, as well as the qualitative research, triangulation and verification procedures help mitigate biases and measurement errors, including the risk that responses to the survey, and importantly those on decision rights, correspond more to wishful thinking than the actual situation at the HF. The bulk of the impact (dimensions 1-3) is on data collected at the HFC and HF-levels. The impact on part of the social accountability dimension (2.2), and the perceived quality and equity dimensions (4 and 5), which are based on data from the population surveys, are largely null. The aspects captured by these indicators, rather than the source or quality of the data, probably explain this lack of visible change. As has been argued earlier in this paper, and will be detailed below, the time-frame of the experiment may explain why well-informed HFCs did not have an influence on the perceived quality of and accessibility to healthcare services.

It would be equally hazardous to blame statistical power for the lack of visible change in Burundi:⁸⁹ the Burundi side of the intervention has more statistical power than the South Kivu side. In addition to this: (1) the non-significant effects are usually of limited intensity and do not always even go in the expected direction; (2) no broad effect is detected through the means-effect approach, a strategy that is sometimes used to address issues of statistical power (Glennerster & Takavarasha 2013); similarly, the ANCOVA approach that is slightly more efficient (McKenzie 2012) than the difference-in-difference specification does not show new results; and (3) power calculations show that changes that would be economically meaningful⁹⁰ have a decent chance of being detected (Table

⁸⁸ The system is however not immune to ‘gaming’, a phenomenon that has not been thoroughly studied in either country (Ireland et al. 2011). There is, however, no reason to believe that the bias would be stronger in the intervention group.

⁸⁹ The supplementary (orthogonal) treatments in Burundi may increase variance in the dependent variable and reduce power, but even without the part of the sample that received additional treatment, the statistical power is higher in Burundi (n=125) than South Kivu (n=78).

⁹⁰ No clear guidelines exist in this respect but the (change in) means-effects approach bears similarities with Cohen’s d, and Cohen (1988) suggests that $d < 0.2$ shows a ‘small’ effect, and $d < 0.5$ a ‘medium’ effect.

III-13), especially for dimensions 1, 3 and 6. This, in addition to the fact that the sample includes all the HFCs of the eight provinces, makes it unlikely that repeating the experiment in the very same context would yield different results.⁹¹

Table III-13. Power calculations for 4 key dimensions (HF-level) in Burundi

Power for z-score increase of <i>dimension</i>	0.01 SD	0.25 SD	0.5 SD	1 SD
1. HF organisation (with z-score SD ¹ = 0.33)	0.61	0.99	1	1
2. Social accountability (ditto = 0.92)	0.12	0.52	0.98	1
3. HF management indicators (ditto = 0.55)	0.27	0.92	1	1
6. Provision of services (ditto = 0.64)	0.21	0.82	1	1

1. The reference SD values are the highest values between the pilot and control groups at baseline. These power calculations are therefore conservative in their assumptions.

The nested qualitative analysis helped to ensure that the study did consider most of the relevant areas of possible impact. Interviews confirmed that the key aspects of HF management had already been captured by the indicators defined initially or added for the end-line survey. The few elements that were not captured by the surveys and HiS data, such as the anecdotally reported fact that the HF staff would sometimes be “staying longer hours” and be “more open to criticisms”, have still been encompassed by broader indicators such as the availability of 24/7 services, or decision rights indicators.

In short, the issue seems not to be with the type and quality of the data, nor with the statistical power.

III.5.2. Compliance and implementation

There are no obvious reasons to believe that the lack of results on the Burundi side has been due to a poor implementation of the intervention: the training sessions took place as expected, and were well-attended. All but two of the 166 sessions were able to be organised.⁹² In this respect, the intervention in itself was highly successful for the whole

⁹¹ <<http://blogs.3ieimpact.org/well-that-didnt-work-lets-do-it-again/>> (last accessed 26.12.2014).

⁹² One health facility in Bururi district was discarded from the sample before the intervention as

sample, but the HF/HFC complies with the requirement of being exposed to interactive information sessions on the functioning of the HF and HFC (in short, Intention to Treat = Average Treatment Effect). Before the intervention, the facilitators estimated that, in Burundi, only 19.64% of the HFCs had a sufficient knowledge of the HFC and HF functioning, while only 7.74% had a working knowledge of the available management tools. In debriefing sessions, participants confirmed that they indeed “learned new things” and now “better know what they do” – and qualitative evidence supports the idea that most of the content of the session has been understood. The attendance rate to the training was 92.5% of the HFC members (SD: 0.28) and 97.5% of the chief nurses in Burundi. The results are robust to the identity of the facilitator.⁹³

During the recap sessions, the facilitators tried to assess the level of adherence to the intervention by asking the committee members to explain their roles. They gave a mark of 0 when nobody was able to explain their role, 1 when a nurse helped, 2 when only the HFC president helped, and 3 when committee members were able to explain their role. None of the HFCs received a score of zero, and the mean was 2.38 (SD: 0.60) for South Kivu and 2.27 (SD: 0.43) in Burundi.

Technically, a contamination of the control group is unlikely in the sense that the HFCs that were not part of the intervention group did not receive information sessions from the project officers. It remains possible, however, that pilot HFCs heard about the project and tried to emulate the pilot groups. Extra precautions were taken to prevent this sort of contamination; for instance, the project staff, not local health authorities, implemented the training and guidebooks and other tools were distributed in only one copy per committee. Yet the project could not prevent a chief nurse who had received the intervention being MoH-led redeployed to HFs of the control group. Those cases remain

the MoH communicated to us that it had decided to shut it down. One HFC of Nyanza-lac district was in the midst of an intractable conflict between the HFC and the staff and was also left out. One HF of Makamba district, which had been assigned to group 2 but had no existing HFC, was replaced.

⁹³ This was controlled for by including six facilitator dummies, and their interaction with the treatment and intervention in the abovementioned regression models.

limited, however, and the fact that a lot of contact time seems necessary to fully sensitise the HFC makes the hypothesis of a proper large-scale contamination very unlikely. Spill-overs always remain possible; some indicators in changed at a faster pace than expected in the control group (the knowledge of HFC members by the population, the person in charge of the HFC minutes, and so on) but it is not possible to establish whether this was caused by the intervention. This evolution is of limited size (between -0.002 and 0.234 standard deviations for the worst case). The control group did not see any significant change in the adoption of terms of reference (- 0.03, t-test p-value 0.69), which is one of the clearest and most direct outcomes of the intervention. No spill-over effect was found when re-estimating the impact with the control group divided between the control HFCs located close to the intervention group and those located farther away.

III.6. Unpacking the implementation of the intervention

III.6.1. Burundi

In Burundi, the main impact of the intervention is an increase in the proportion of HFCs that have terms of reference. It is the most direct possible output of the intervention, and was partly initiated during the sessions. In the absence of any other changes apart from the HFC members' self-declared self-confidence, the adoption of new terms of reference could be – and there is anecdotal evidence of this – ‘institutional mimicry’ (Andrews 2013): HFCs simply did the easiest possible thing they could, and copied their, supposedly very own and localised, terms of reference from the examples given in the facilitation session.

Following the aforementioned theory of change, it is possible to locate where exactly the intervention failed. As mentioned earlier, the recycling session began with an assessment of the level of understanding of the key roles of the HF and HFC, as well as of the management tools. From the data, it is clear that the HFCs understood how the HF worked, had a good idea of their role as an information transmitter, and a good idea of their role as co-managers of the HF (see Table C-13 in appendix). Nevertheless, compliance could also be seen from a slightly different standpoint; in its original medical

acceptation, compliance or adherence is “the degree to which a patient correctly follows medical advice” (Tilson 2004). Against this definition, the intervention has severe adherence problems (the Intention to Treat $\neq$ Average Treatment Effect). The HFCs clearly did not manage to put into practice the advice about co-management and communication. This problem is illustrated by the ‘funnel of attrition’ presented in Figure 6 below.⁹⁴

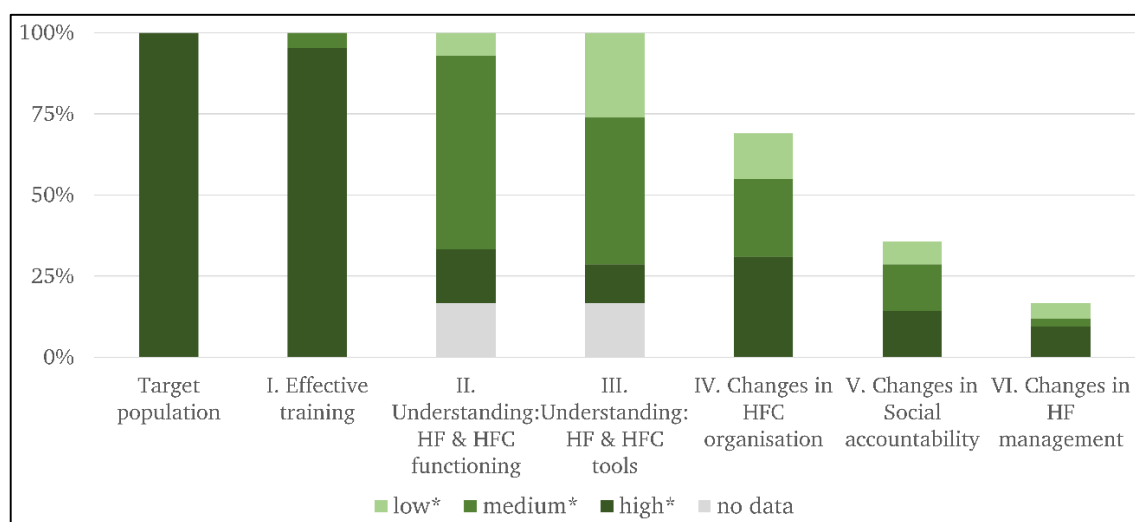


Figure 6 ‘funnel of attrition’

* In I: High = no incident, 2: part of the HFC changed and retrained. In II & III: see

Table C-13 in the appendix for detailed explanations. In IV, V and VI: high = change in z-score > 0.5 ; medium = change in z-score > 0.2 but ≤ 0.5 ; low: change in z-score > 0 but ≤ 0.2 . Data on 78 HFCs that benefited from the intervention. Others are not included as the intervention was slightly different.

The idea is close to the approach followed by Lieberman et al. (2014), who suggest and then decompose a causal pathway to understanding the lack of treatment effects of an education intervention in Kenya. Figure 6 above includes the detailed first steps of the theory of change presented earlier in the chapter and shows that most HFCs were ‘lost’ between the stage of understanding what the HFC/HF was about and what their tools were, and the stage where they supposedly changed their organisation and improved the HF social accountability. For some reason, a better understanding does not lead to

⁹⁴ An idea borrowed from a blog post by Howard White <<http://blogs.3ieimpact.org/using-the-causal-chain-to-make-sense-of-the-numbers/>> last accessed 26.12.2014.

important changes in social accountability.

Nested qualitative analysis helps to understand how this bottleneck appeared. HFCs were ranked relative to their evolution through time with respect to the second dimension, 'social accountability', which is supposed to be the core of the intervention.⁹⁵ That way, meaningful comparisons between best and worst performers can be carried out. Also useful to understanding what happened in the HFs is to contrast the interviews and phrasing of the nurses, HFC members and active HF staff members against their very different levels of social accountability. Interestingly, the same themes – relationship with the nurses, information, financial motivation, local facilitators – emerge across cases, both from HFCs that recorded a lot of changes and HFCs that did not, but they were experienced with considerable difference.

In the worst performers' group, the bottom quartile of the distribution, interviewees tended to remain vague. HFC members and staff often said that they "never disagree"⁹⁶ and said "they learned" from the training (as confirmed by other data). They, however, fail to provide compelling explanations about what the HFC did in terms of management. In line with quantitative data, the HFCs in fact still appear to not be involved in HF decisions. HFC members typically blame the nurses: "sometimes they listen to us, but sometimes they decide alone, for instance when they hired new support staff and a cashier"⁹⁷ and denounced the lack of transparency of the chief nurse and other staff members.⁹⁸ In turn, the nurses criticised the apathy of the committee members: "they do some work, maybe I could give them a mark of 70%, but they do not take decisions when

⁹⁵ Initially, in the absence of final data, two sets of indicators were used to select the site: (a) the average change in the number of (1) visits of patients above 5 years old, (2) prenatal consultations, and (3) institutional deliveries, and (b) an indicator of the level of effectiveness of the HFC based on an auto-evaluation conducted during the last recap visits, sometimes corrected *ex post* by the facilitator of the session (for pilot group HFCs, pre-intervention survey data on decision rights were used)

⁹⁶ Interviews with HFC president and chief nurse, Nyanza-lac district (HF Endline.B.1.1), 08.05.2013.

⁹⁷ Focus group HFC, Nyanza-lac district (HF Endline.B.1.1), 08.05.2013.

⁹⁸ Interview with HFC president, Ruyigi district (HF Endline.B.1.4), 23.08.2013.

they should”.⁹⁹ The deeper reasons are often confused. Financial motivation comes up regularly: “we are called to sign the forms and then we are only given a soap [a small financial incentive]”,¹⁰⁰ as well as the lack of thorough understanding of the HF functioning and the bad atmosphere between the nurses and HFC members.

The analysis of data from the top quartile, representing the few HFs where some change in the social accountability dimension did occur, is easier. There, HFCs applied the somewhat general principles of the training session to their own situation. Contrary to the group of HFCs described above, the changes were not limited to the procedural aspect of the HFC meetings. In a health centre of Rwibaga district,¹⁰¹ the HFC members and its president have explained that during the year after the intervention, they have instituted a new system of receipts to control money flows, and the HFC executives now discuss the development plan with the chief nurse. Similarly, the president of a different HFC has explained that “when we understood that there were management problems, we met with the medical staff to discuss the matter and decided to set up our own debt recovery system. In the beginning, the climate was not good, but it has improved”. The starting point, as members of yet another HFC explain, is probably the intervention: “Before, after we were elected, we did not know anything about our rights and duties, and with the training we realised what our rights and duties are”.¹⁰²

The attitude of the medical staff was said to be crucial and in some cases, where the situation was initially tense, the HFC and medical staff had decided to organise social events and parties to “make sure the relationship remains good”.¹⁰³ Contrary to the HFCs of the bottom group, the interviewees did not say that they had agreed on everything but, rather, explained that meetings helped to find consensus, and constructive criticism was

⁹⁹ Interview with deputy chief nurse, Murore district (HF Endline.B.1.5), 19.08.2013.

¹⁰⁰ Interview with chief nurse, Butezi district (HF Endline.B.1.2), 21.08.2013.

¹⁰¹ Focus group HFC, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

¹⁰² Interview with HFC president, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

¹⁰³ Focus group HFC, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

favoured.¹⁰⁴ “In the meetings, everything can be said without fear and recommendations are adopted collectively.”¹⁰⁵

Financial motivation also comes out, but is not as an obstructive factor. “Even if we had no compensation [the members of this HFC receive something], it would not change anything, because we have been informed since the beginning that we would not benefit from anything. Yes, we hope that someday we will get something more regular from the ministry of health”.¹⁰⁶

Finally, compared with the low-performing group, the interviewees of the high-performing one stressed much more the role of external actors. Churches have been cited as crucial intermediaries.¹⁰⁷ In one case, the HFC explained how it piggy-backed on communal work meetings to talk to the population, and how collaboration with the local Burundian Red Cross committee and the dynamic local government-supported Family Development Centre had helped the HFC to develop. Problems, the HFC explained, tended to be treated outside the health centres, at local meetings with the rest of the community.

This qualitative exploration provides hypotheses for why institutional knowledge may not be sufficient to make HFCs work in the context of Burundi. These are in line with some of the literature reviewed in chapters I and II, and will be developed in later chapters: the chief nurse-HFC relationship will be discussed in chapter V, the financial incentive and localised information in Chapter VI, and the local actors in Chapter VII.

III.6.2. South Kivu

Interestingly, the very same constraints as the ones observed in Burundi came up in the 17 interviews carried out with HFCs that benefited from the intervention across the border in South Kivu: HFCs recall how the chief nurse sometimes blocks the development of the

¹⁰⁴ Interview with HFC president, Isale district (HF Endline.B.1.10), 21.07.2013.

¹⁰⁵ Interview with HFC president, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

¹⁰⁶ Focus group HFC, Isale district (HF Endline.B.1.10), 21.07.2013.

¹⁰⁷ Focus group HFC and interview with HFC president, Isale district (HF Endline.B.1.10), 21.07.2013.

HFC, how requests for financial compensations (*per diems*) are a constant problem to deal with,¹⁰⁸ and how “nothing can be done without local leaders”.¹⁰⁹ They, however, seem not to have prevented important changes from unfolding.

Based on qualitative fieldwork and follow-up reports, the typical scenario after the intervention in South Kivu appears to be the following: the intervention prompted discussions within the HFCs, which led to discussing or calling out the chief nurse and the medical staff,¹¹⁰ which often led to both the HF staff and HFC members getting involved in resource mobilisation activities such as the building and renovation of infrastructure at the HF-level, as shown in the results. There are also accounts of commissions being created to address specific issues.¹¹¹ In most cases, the training session appeared and was described as a “turning point”.¹¹²

The resource mobilisation aspect is visible in the coding of the end-line survey open-ended question, “Has anything changed in your HF in the past year; if so what, and in what sense?”, which was triangulated with the independent declarations from the chief nurse and the HFC. This type of information is not void of possible confirmation bias –HFC members who benefited from the intervention might have been inclined to declare or see changes in line with their terms of reference.

Table III-14. Self-reported change in the past year at the HF (1)

	Burundi			South Kivu		
	control	effect	N	cont. 2013	effect	N
HFC recovers debts from patients	0.01	0.01	249	0.100	0.051	78
More money in HFC budget	0	0	249	0.212	0.353***	78
HFC income generating activity	0	0	249	0.131	0.283***	78

Information was triangulated between the HFC, HF, and enumerator declarations. Effect is β in a model similar to III.3, without the lagged outcome that is not available. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the naïve p-

¹⁰⁸ Focus group HFC, Idwji health zone, 19.06.2013.

¹⁰⁹ Focus group HFC, Miti-Muresha health zone, 26.06.2013.

¹¹⁰ For instance, focus group HFC, Idjwi health zone, 17.06.2013.

¹¹¹ Focus group HFC, Miti-Muresha health zone, 24.06.2013.

¹¹² Focus group HFC, Idjwi health zone, 21.06.2013.

value in indicated in parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Bearing that it mind, Table III-14 seems to confirm that only the South Kivu HFCs of the intervention group managed to significantly mobilise more resources for the HFC than their counterparts of the control group. Overall, more changes are reported in Congolese HFs – they could reveal slight spill-overs or simply less frozen situations.

The second area in which the HFC became more active is the monitoring of the activities at the HF, as reflected by the drop in shortage of medical equipment and the change in chief nurse (see chapter VI for more hypotheses on this point). Although these two results are not statistically robust to multiple hypotheses testing, they are backed by qualitative stories. These monitoring activities seem to have resulted from the impressive improvements in HFC decision rights and organisation (main role of the HFC, terms of reference, and so on). There were also changed behaviours, which again were measured only at end-line. Table III-15 gives the changes as reported by the HFC and HF staff, but as the results of the previous section show, they were not confirmed by the patients who had, on average, not reported change.

Table III-15. Self-reported change in the past year at the HF (2)

	Burundi			South Kivu		
	control	effect	N	cont. 2013	effect	N
HF staff makes patient wait less time	0.168	0.142[*]	249	0.312	0.257**	78
ditto is more present at HF	0.325	0.058	249	0.336	0.353**	78
ditto better organised in welcoming	0.132	0.205***	249	0.33	0.283**	78

Information was triangulated between the HFC, HF and enumerator declarations. Effect is β in a model similar to III.3, without the lagged outcome that is not available. P-values are FWER p-values, except when the FWER p-value is not significant, in which case the level of significance of the [naïve p-value] is indicated in square parenthesis. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Overall, the main effects of the intervention in South Kivu are not so much on technical aspects of management as they would be on improvement of the financial supervision of the HF, for instance. Rather, the most visible changes seemed to be at the level of some relatively low-hanging fruits: building new infrastructure, exerting pressure to change staff, and checking the shortage of drugs. With the intervention, the HFC members might

have acquired some understanding of the financial situation of their HF that they had not had before, but most of the observed changes were in activities of low complexity on which the HFC members could have an easy leverage.

As chapter II suggests, there could be more such low-hanging fruit in South Kivu than in Burundi, where the infrastructure has been in a slightly better state. Indeed, as recent research has shown, new health policies such as the exemption of user fees for pregnant mothers and children under 5, as well as performance-based financing in health, may already have boosted the use and quality of health facilities, especially with regard to child and maternal healthcare in Burundi (Bonfrer, Soeters, et al. 2014; Falisse, Ndayishimiye, et al. 2015). Does that mean that further incremental changes are impossible to attain? Not really, with health facilities receiving on average 33% of the expected antenatal visits,¹¹³ almost constant stock-out of drugs, and overall a very poor quality of care, there has remained much room for improving services in Burundi (Bonfrer, Soeters, et al. 2014).

The changes in South Kivu did not come easily. In a handful of health centres, the chief nurse opposed the (newly) entrepreneurial committee, which sometimes led to escalation, pushing the committee to ask the health zone for the replacement of the chief nurse. In most cases, though, the chief nurse seemed eventually to have agreed to the HFC's increased oversight and resource mobilisation. The opposition of the chief nurse remained a problem in a series of health facilities, and he or she often seemed not to agree fully with the new role taken up by the committee. As the results of dimension 2b show, after intervention, the HFC and the medical staff disagreed more on what the committee was responsible for – the committee was much more ready to say it was in charge of the health centre than was the chief nurse.

This leaves the question unanswered of whether community governance is beneficial at all to the health of the community. There are a few hints that services for the community have improved: infrastructure has developed, and there has been a possible reduction of

¹¹³ WHO <<http://www.who.int/gho/countries/bdi.pdf?ua=1>> (last accessed 11.04.2016).

the shortage of drugs and an improvement in the workforce. The increased turnover of chief nurses, although often backed by qualitative interviews underlining the misbehaviours of the nurse that was replaced, has had a largely unclear effect on the medium and long-run. No evidence of change in access to, or use of, health services could be found. Whether the changes have been due to community governance itself or to an increase in resources caused by the intervention is still open to debate.

III.6.3. Time and the lack of impact on service provision

The lack of impact of the intervention on the use, perceived quality, and access to services needs to be balanced against the fact that the impact evaluation was done a bit more than a year after the start of the intervention. Population survey data show that in 2011, 28% of the surveyed households in Burundi and 21% in South Kivu had had no interaction at all with a HF in the past six months. What is more, the intervention did not target the HF users, or even medical staff, directly. The recent literature has stressed the (temporal) unpredictability of community participation (Cornwall 2008). As Mansuri and Rao note, “effective civic engagement does not develop within a predictable trajectory. It is instead likely to proceed along a punctuated equilibrium where long periods of seeming quietude are followed by intense, and often turbulent, change” (2012, p. 12). Was the period of 13 to 16 months between the interventions and the end-line round of surveys at HF, HFC, and population levels simply too short to expect to observe a potentially “turbulent change”? After all, as one interviewee from the government put it: “asking a peasant to hold the chief nurse of his health centre accountable will not be made in one day”.¹¹⁴ It is hard to totally discard this hypothesis, although the change in South Kivu seems to indicate that some change did occur quickly. A series of elements go against the hypothesis that the considered time-frame was inadequate.

¹¹⁴ Interview with MoH official (DPSHA), May 2013. Similarly, there could be a problem of benchmarking and of the survey instrument; indeed, a lot of respondents already gave positive appreciation of the health facility in the baseline survey and did not have a very clear understanding of what the services at the HF should or could be. There is no reason to believe that bias would have been different across groups, especially since the impact evaluation showed that the intervention had none on the HFC relationship with its population.

Firstly, and keeping in mind that the portability of community interventions is a matter of debate, successful interventions designed to improve community monitoring in two other East African countries, Uganda and Kenya, have usually had a one-year period before conducting the impact evaluation (Björkman & Svensson 2009; Barr et al. 2012). They suggest that when a change occurs, it occurs rapidly. This is consistent with the nested qualitative data collected in Burundi in the few HFCs that saw some change after the intervention. In research conducted four years after their intervention on community participation in health, Björkman, De Walque and Svensson (2012) show that effects are mostly visible in the short-run, especially when interventions fail to correct asymmetries of information. The reasons why the HFC intervention failed where Björkman & Svensson succeeded are unclear. As mentioned earlier, the intervention was different, the HFCs were also changed before the intervention, and obviously the context was not the same, but it is hard to summarise which factor played the most important role.

Secondly, monthly HiS and PBF data are available until June 2015. These data are about the management of the HF and the use and quality of services. The largely null results remain when taking the latest possible point in time (June 2014, when new interventions started being implemented in control HFCs) as the last period for the differences-in-differences evaluation. Along the same lines, in the absence of any major change at the HF and HFC level, it does not seem to neglect pre-end-line non-linear change (King & Behrman 2009). The possibility of an early change in service provision that faded away with time can be explored and discarded with the monthly HiS and PBF panel data.¹¹⁵

These two elements do not totally dismiss the possibility that some effect of the interventions could yet be seen, especially in the case of Burundi, but they point to the fact that the main reason for the largely null impact of the intervention is probably located elsewhere. As for health outcomes, properly speaking they are even further in the causal

¹¹⁵ Plotting dimensions for which indicators are available (building, drugs, staff, provision of services) does not reveal any immediate or delayed meaningful change.

pathway and were not measured by the intervention. Measurements of these outcomes would, however, have been of limited use since no change in service provision was detected.¹¹⁶

III.6.4. What did the intervention trigger?

The structural change happening in South Kivu seems to be more in terms of who is in charge of the strategic vision of the health centre than who manages the health centre on a daily basis. This raises questions about the nature of the ‘institutional knowledge gap’ intervention. There is evidence that the HFC members do have, in both countries, a better understanding of what they can realistically achieve and expect at the HF. Yet, qualitative work suggests that the mechanism at play could be more complex than the simple acquisition of new, critical knowledge. At least two other elements, which are hard if not impossible to disentangle from the institutional knowledge gap hypothesis, need be considered – especially given the fact the intervention remained, after all, quite light.

Firstly, the intervention could also be seen as a form of ‘priming’ of the HFC members on their identity as such: it simply reminded the HFC members of, or suggested to them, the rights and duties that came with their mandate. Some HFCs have in fact used the vocabulary of ‘rights and duties’ and the intervention had been referred to as an ‘eye-opener’ by HFC members who had declared that, before it, they did not know ‘who they were’ in the health system.¹¹⁷ The distinction with the knowledge gap hypothesis is subtle: the stress in the priming scenario is not on gaining knowledge but rather on being assigned a role, even a loosely and generally defined one. It is a change in self-identity (the way one perceives themselves). An HFC member explains how the intervention, by highlighting their role at the HFC, triggered a shame that led them to act, as they could not accept being responsible for the poor state of the HF.¹¹⁸ Similarly, another HFC member explained

¹¹⁶ More fundamentally, Rifkin (2014) argues that assessing changes in health outcomes after community intervention is tricky.

¹¹⁷ Focus group HFC, Idjwi health zone, 17.06.2013.

¹¹⁸ Focus group HFC, Idjwi health zone, 17.06.2013.

that the intervention led the HFC to assume its responsibility and take concrete actions by itself, without soliciting external support, as “the hand that asks has no power”.¹¹⁹

Secondly, the intervention possibly legitimised the position of the HFC at the HF, mostly vis-à-vis the HFC medical staff but also maybe vis-à-vis the health district staff and the community in general. This legitimisation can stem from HFC members being more knowledgeable or the mere fact that somebody took an interest in the HFC. The external facilitators were not MoH officials, but they nonetheless had moral authority: they would have money and were known to influence, if not shape, policy. The stress in this second legitimacy scenario is not on gaining knowledge but rather on changing the balance of power and interpersonal relations. The change here would be one in entitlement, and could affect both or either: the self-perception of HFC members; or the perception other actors have of the HFC. The latter is illustrated by South Kivu HFC members recalling that “before, we were already demanding things, but back then the chief nurse did not accept our demands”.¹²⁰ Some of the HFCs also explained how the HF staff and local leaders were more willing to help after the intervention,¹²¹ even if the reluctance of some chief nurses kept being pointed out as a constant problem.¹²² The former hypothesis, that the effect was also a matter of self-perception, is also supported by anecdotal evidence: “the training and visitors make us feel followed and attended to and motivate us” declared members of a HFC.¹²³

The three scenarios – knowledge gap narrowing, priming on responsibilities, or legitimisation of entitlement – could easily have coexisted and it is hard to pinpoint the extent to which each one had any play in every particular situation, or in general. The knowledge gap, because it is anchored in sound data analysis and supported by qualitative material, seems to be at the forefront, but more was probably at play.

¹¹⁹ Focus group HFC, Idjwi health zone, 19.06.2013.

¹²⁰ Focus group HFC, Miti-Muresha health zone, 25.06.2013.

¹²¹ Focus group HFC, Idjwi health zone, 19.06.2013.

¹²² Focus group HFC, Miti-Muresha health zone, 24.06.2013.

¹²³ Focus group HFC, Miti-Muresha health zone, 26.06.2013.

III.7. Conclusion

On the one hand, this chapter has shown the important limitations of the discourse on and practices of capacity building of locally elected representatives to co-manage basic social services. Only in the South Kivu case did the intervention on narrowing the institutional knowledge gap lead to making HFCs more efficient, let alone improve service delivery. As the example of Burundi shows, committee members who better knew what they are supposed to do and how their HF worked may still not have been in a position to change the functioning of their health centres. The implementation of the intervention in Burundi, which was carefully devised in a participatory way to best meet the needs of the HFC members, may not be the main problem, and the quality of the data seem not to be a major issue either. In fact, classic explanations that the poor performances of the HFCs were primarily due to a lack of support and training may not fully account for the failure to produce any impact; the root causes are more complex and interactions with the ‘context’ deserve more attention. This will be the core of the next chapter.

On the other hand, this chapter also warrants a reconsideration of recent reviews of experiments and literature on community-driven development and community participation in health (Rifkin 2014; King 2013) that have criticized the theory of change behind community interventions, and especially the idea that they could, in the short run, lead to substantially better provision of services and health outcomes. Changes can occur after a ‘simple’ information intervention, although they seem to be about the lower-hanging fruits of HFC organisation, social accountability and HF management rather than perceived quality and provision of services.

The next chapter delves further into the reasons behind the contrasted impacts in Burundi and South Kivu. The present chapter is also the foundation for chapters V, VI, and VII, which explore the hypothesis that, in Burundi, the failure of the committee is also a matter of trust between the HFC and the nurses, localised knowledge rather than simply theoretical institutional knowledge, and legitimacy of the committee members among the local leaders and community.

IV. OPENING THE BLACK-BOX OF ‘CONTEXT’: ON THE CONTRASTED EFFECTS OF BUILDING THE HFC INSTITUTIONAL KNOWLEDGE

“Article Quinze: débrouillez-vous!”

Article Fifteen: fend for yourself!

(popular saying in the DRC, said to be the last, unwritten, article of Zaire’s constitution)¹²⁴

Chapter III has shown how an intervention designed to improve the institutional knowledge of the HFC members resulted in dissimilar outcomes in Burundi and South Kivu. The present chapter explores a series of hypotheses accounting for this difference and seeks to ground them in a causal framework. Research has long highlighted the potentially crucial role of the social, political and economic ‘context’ in social accountability mechanisms (Mansuri & Rao 2012), but the lack of suitable data too have often limited such analyses to semi-informed guesses and theoretical considerations. This chapter takes advantage of the rare opportunity of having a similar experiment conducted simultaneously in two different countries to try and break down the monolithic idea of ‘context’, which tends to be overlooked in studies of randomised control trials that are often ‘prisoners’ of their study areas (Barrett & Carter 2010, p.227). It is a reflection on *what in the context* may matter for community governance initiatives. The combination of qualitative and quantitative methods provides novel empirical contribution to a refined understanding of the conditions conducive to effective accountability mechanisms.

The chapter looks at the interaction between the institutional knowledge intervention of chapter III and a set of contextual variables: the features of the HFCs and their HFs and the broader relationship between people and public service providers. The latter seems particularly important in a context where the people of South Kivu are said to challenge local service providers in a much more direct and open way than Burundians (van

¹²⁴ The origins of the saying is unclear: Vlassenroot and Raeymaekers (2004) write that it never was written and is the fruit of popular imagination. According to Jouannet (1984, p. 45), it comes from the Independent South Kasai State (1960-1962) Constitution.

Leeuwen 2008; Hajayandi 2012). The analysis focuses on the changes in the decision rights of the HFC, which measure the operational capacity of this mechanism of social accountability.

Empirical results provide strong evidence of the importance of the status of the HF (publicly funded faith-based or public) and slightly weaker evidence of the importance of relationships to authorities, the state, and service providers. The elements that underpin the South Kivu (versus Burundi) context effect are not totally elucidated, but interaction effects show that an important part of the South Kivu effect can be attributed to (1) a higher proportion of faith-based, and especially Protestant health facilities, as well as (2) a local context where citizens confront service providers more easily in South Kivu communities.

The first section briefly presents the state of the current debate on the external validity and portability of participatory governance initiatives and experiments. The methods section then explains how datasets are pooled to test potential heterogeneous effects suggested by qualitative research. Section three shows the impact of the intervention when the data are pooled and explores three possible sources of heterogeneity: (1) the HF resources and HFC membership; (2) the incentive for HFC members and the management structure of the HF; and (3) local relationships to authority, the state, and service providers.

IV.1. External validity and portability of community governance initiatives

The external validity of randomised interventions and impact evaluation has generated a significant debate in the last years (e.g. Deaton, 2009; Imbens, 2010; Vivalt, 2015). At its core is a simple question: how much can we learn from experiments, especially when they take the form of a one-time intervention in one particular region of a country? The problem is the narrowness and scope of evaluations (Rodrik 2008) and, ultimately, about the *portability* of findings: will the mechanisms that produced effects in one place produce

the same effects somewhere else (Cartwright 2013)? Measuring the mechanism at play is, however, challenging (Ludwig et al. 2011) and the question is often framed as one of *external validity*: is the technical property of the programme/intervention such that it would lead to a similar change in outcome in different settings? One implication of full external validity is that the interaction effect between the programme and elements of the context is non-significant.

More formally, taking the case of a perfectly randomised difference-in-difference framework, where the intervention is denoted by I and the context by C , full external validity would imply that the effect of the intervention is given by:

$$\begin{aligned}
 & E[Y_{t1} - Y_{t0} | I = 1 \cup C = 1] - E[Y_{t1} - Y_{t0} | I = 0 \cup C = 1] \\
 &= E[Y_{t1} - Y_{t0} | I = 1 \cup C = n] - E[Y_{t1} - Y_{t0} | I = 0 \cup C = n] \\
 &= E[Y_{t1} - Y_{t0} | I = 1] - E[Y_{t1} - Y_{t0} | I = 0]
 \end{aligned}
 \tag{IV.1}$$

– where C is trivial.

Replication, a fundamental scientific principle, is the usual way to test such an assumption. Calls for the replication of interventions – a common practice in medical sciences and a growing concern in psychology – have become increasingly common in social sciences (Schmidt 2009). Replications are not easy in experimental economics and programme evaluation, if only because ensuring that interventions are exactly similar is difficult. Successful replication does not totally solve the question of portability either, but it is a step towards evidence of external validity: if outcomes of the same magnitude are found with the same programme in different contexts, either elements of the context are trivial or they interact in the same way with the intervention, which is less likely.

Unsuccessful replication raises the question of how elements of the context affect the mechanism. The previous chapter has already pointed out to different outcomes of the intervention in Burundi and South Kivu, suggesting heterogeneous effects of the context. This chapter, however, seeks to move beyond the context dummy (Kivu/Burundi) and considers a vector of different elements that describe this context.

‘Context’ is being increasingly discussed in research on social accountability and

community participation. The seminal report of Mansuri & Rao (2012) ‘Localising Development. Does Participation Work?’ paved the way for a series of research works that attempt to provide frameworks to understand the contextual drivers of social accountability (O’Meally 2013; Joshi 2014; Brinkerhoff & Wetterberg 2015; Hickey & King 2016; Grandvoinnet et al. 2015). Each comes with its own typology of the factors that influence social accountability, in a fashion not too dissimilar to the public health literature reviews that came out a few years earlier (McCoy et al. 2012; Molyneux et al. 2012). These typologies, which largely overlap each other, bring often overlooked elements into the picture, such as the ‘macro-factors’ of social accountability that are cultural norms and state-society relations. Brinkerhoff & Wetterberg (2015) differentiate between three different types of factors: demand-related (that they see as over-emphasised), supply-related and state-society relations. On her side, Joshi (2014) makes a distinction between the macro features, broad political economy features, and micro-features that are themselves divided into the components of the social accountability pathway and the mechanism. O’Meally (2013) talks about six areas of importance: political society, civil society, inter-elite relations, intra-society relations, and state-society relations. These works have some heuristic value to suggest areas of investigations, but their frameworks do not provide guidance on how to do empirical research. What is more, when the frameworks are put in operation by their authors, the comparison remains between fundamentally different mechanisms and at the country-level (Fox 2015; Brinkerhoff 2005; Grandvoinnet et al. 2015), which often does not allow an understanding of the context in great detail since the number of cases remains limited.

To break down the context and move beyond an analysis that solely compares average treatment effects in each case (Pritchett & Sandefur 2015), essentially a $n=2$ situation, this chapter exploits variance in the local situations within each country.

IV.2. Breaking down ‘context’: potential sources of heterogeneity

Breaking down the context dummy essentially consists of identifying the key elements that

matter in this context. In the present case, it requires choosing between a large number of context variables that are on average different between the two countries and could, potentially, interact with the intervention. Sound theoretical or empirical reasoning is essential to guiding this decision. Without it, the selection would not only be harder to manage but also more prone to type 1 errors (false positives). The interest is thus in variables that are different between the two countries but that also have an important variance within each country. The core idea of the chapter is indeed that the country-level effect is, at least partly, a case of omitted variable bias: interactions with HF or community level characteristics rather than the location in one country or another explain the discrepancy in results. Some of these features are correlated with the country dummy but it does not mean that these characteristics are necessarily caused by the country's culture, economy or administration. It may be misleading to see the country as such as the key driver of the contrasted results.

The present section relies on qualitative research and a literature review to identify three sets of relevant local context variables: (1) the composition of the HFC and the situation at the HF; (2) the incentive and management structure at the HF; and, (3) the local relationship to public service providers and the state. This follows the theoretical distinction sketched by Osmani (2008) and literature reviews of on the HFCs by McCoy et al. (2012) and on the contextual factors influencing the HFCs by George et al. (2015). The first category, the composition of the HFC, relates to the idea above of 'capacity gap' that George et al. and McCoy et al. discuss as the features of the HF and its staff. The second category, the HF management structure and local relationship to service providers relate to the idea of, respectively, 'incentive' and 'power' gaps and have to do with the HF administration and what McCoy et al. call the process factors (facilitation and support). The third category still relates to the idea of power gaps and is discussed in the literature review as the features of the society of the community.

Qualitative fieldwork suggested similar categories. Some 35 interviews carried out in 2011-2014 with key informants – MoH officials and representatives of organisations

working in health delivery service, public service and administration decentralisation – led to the establishment of a list of elements perceived as key for effective community participation. Amongst the more frequent responses were: the ‘level’ (of education) of the HFC members, whether they are paid, and whether the HF is public or faith-based. The main hypothesis given to the difference between the results in Burundi and South Kivu was, however, that the ‘cultures’ are different, in the sense that people in the Kivu have a longer tradition of confronting authorities. To use the words of one interviewee: “Burundians, in their history, have been accustomed not to make decisions about their basic services; decisions have usually been imposed upon them by the authorities”.¹²⁵

IV.2.1. HFC composition and situation at the HF

Both the existing literature (Macha et al. 2011; McCoy et al. 2012) and the Bujumbura-based elite are uncertain of the capacity of a population with low education to play a meaningful role in the management of its health centre. A series of key informants from the MoH, civil society and international organisations highlighted the challenge of working with the local ‘uneducated’ population.¹²⁶ In the words of a Burundi member of the East African Community Parliament, “sometimes, the available human resources are simply not capable to face the real challenges”.¹²⁷ Recalling his work on the HFCs in the early 2000s, a senior public health official mentioned that: “there was a real difficulty for people with no or a low-level of qualification to understand how the HF work and what they could bring”.¹²⁸ This discourse around the level of education is sensitive: while it is sometimes based on genuinely challenging field experiences that echo the common-sense idea that monitoring a health centre requires basic numeracy and literacy capacities, in the context of Burundi, it can also reflect ethnic prejudice.¹²⁹

¹²⁵ Interview with Patrick Hajanyandi 29.04.2015.

¹²⁶ From interviews with MoH, bilateral cooperation, and civil society organisation.

¹²⁷ Interview with François Bizimana, Member of the East African Community Parliament, 18.11.2012.

¹²⁸ Interview with Canut Nkunuzimana, *Human Development Support Initiative (NGO)*, 29.07.2013.

¹²⁹ The majority Hutu ‘ethnic’ group still suffers from an important disadvantage in terms of

The view that it is essential to be educated to make the HFC work was given less emphasis in interviews carried out in South Kivu. As Table VI-1 shows, the Kivu HFCs also tended to have a higher ratio of better educated members on average. This is true, however, only when considering the entire membership of the HFC: the difference between the two countries does not hold when looking at executive members only.

Gender aspects also came up in the preliminary qualitative research. Women constituted the bulk of the users of HFs but were underrepresented in the committees. Their proximity with the HF users could, however, put them in a better position to understand the role of the HFC and make it act in favour of the beneficiaries. Qualitative research highlights the difficulty for women to speak out, as well as the fact that “the problem is not really that the women are not part of the committees, the problem is that in most cases they are not in the most important positions”.¹³⁰ The ratio of women among the executive members of the committee may, therefore, have mattered more than the ratio of women in the committee. South Kivu was doing better in terms of gender inclusion (Table IV-1), which would be in line with the hypothesis that a key element of the context was the ratio of women in the committee.

Table IV-1. Descriptive statistics: HFC composition and situation at the HF (2011-2012)

	<i>Burundi</i>		<i>South Kivu</i>		<i>diff.³</i>
	<i>mean</i>	<i>SD</i>	<i>mean</i>	<i>SD</i>	
ratio of women among HFC executives	0.279	0.355	0.388	0.450	**
ratio of women among HFC members	0.351	0.177	0.396	0.185	*
ratio of HFC executives went to sec. school	0.656	0.307	0.648	0.575	
ratio of HF members went to sec. school	0.318	0.209	0.499	0.449	***
Number of nurses at HF	5.872	2.734	5.384	2.258	
Monthly average days of stock-out of essential drugs ¹	2.029	5.883	4.555	0.337	***
User fees/total revenue ²	0.232	0.184	0.622	0.259	***
Observations	251		78		

Source: 2011-2012 HF and HFC survey, Health Information System. | 1. Pre-intervention level for the period 01-06.2012. The drugs include: AAS 500, paracetamol, quinine, artesunate-amodiaquine, mebendazole, metronidazole, amoxicillin, cotrimoxazole, methylergometrine, zinc, lidocaine,

education that goes back to the massacres of 1972 and 1988 and the civil war period (Nkurunziza 2011; Bavel & Verwimp 2013).

¹³⁰ Interview with Annonciate Nkimasaba, *Swiss Cooperation in Burundi*, 02.04.2013.

salbutamol. | 2. Data collected at the HF, based on their registers for the month before the visit. | 3. Two-tailed t-test: p-value: * <0.1 , ** <0.05 , *** <0.001 .

The Burundian health system has generally been in a better state than its Kivutian counterpart, as illustrated by the average number of days of stock-out of essential drugs in the table above and described in more detail in Chapter II. As discussed in Chapter III, one hypothesis could be that the intervention was efficient when only there was something obvious, and relatively easy, to do to improve the situation at the HF. In this case, the intervention should have had a positive interaction effect with indicators on the shortage of essential drugs, which reflects a poor functioning of the HF. The situation regarding human resources, measured by the number of nurses per health centre, is on average comparable across the border and will therefore not be considered a valid hypothesis for breaking down the context dummy.

Finally, a last hypothesis related to the situation at the HF, which comes from the public health literature (Ridde 2011) rather than from qualitative work, is that free healthcare could endanger participation as the population has no financial interest in the HF anymore. As explained in Chapter II, there is no universal free healthcare in the region, only exemption of fees for children below five and expectant mothers in Burundi and some sporadic subsidy of care in South Kivu. Nevertheless, the Burundi HF clearly rely less on user fees for their functioning and this could affect, negatively, community participation, both in terms of the attention of the nurses give to the ‘voice’ of the users and the HFC, and the desire of the HFC and the population to get involved in HF management.

IV.2.2. Incentives and management structure

Incentive and management structures vary across health facilities: more Kivu HFs are publicly-funded, autonomous, faith-based health centres; a higher proportion of Kivu HFs have a HFC that receives a financial compensation; and, finally, Kivu HFCs benefit from more international aid projects.

In the field, calls for equipment and payment for the HFC members have come numerous times and financial compensation is referred to as a ‘motivation’. In the extremely poor

context of Burundi and the DRC, workshops, meetings and participation in public activities are often financially compensated (Uvin & Bayer 2013), and the qualitative interviews have revealed mixed views on whether some people are too poor and too much in need to do voluntary and often unpaid work. As chapter II has shown, official documents do not give clear guidelines for remuneration or compensation of the HFC members. In 2011-2012, the monthly allowance in Burundi was around US\$3.2/member (SD 2.86, max: 21.8) and US\$10 in South Kivu (SD 7.35, max: 33) but with payments being very irregular on the Kivu side, the comparison is complicated. If money is indeed a motivation, this could have led to heterogeneous effects, with paid HFC members being more receptive to the institutional knowledge intervention. Another possibility, which was also mentioned in the interviews, is that money is used to buy off the silence of HFC members and should, therefore, be seen as a deterrent for change within the HF.

Table IV-2. Descriptive statistics: HFC incentive and management structures

	<i>Burundi</i>		<i>South Kivu</i>		<i>Diff. ²</i>
	mean	SD	mean	SD	
Faith-based HF	0.191		0.423		***
Paid HFC	0.649		0.410		***
Aid project carried out in the HF area ¹	1.768	1.666	2.820	1.193	***
Observations	249		78		

*1. Between 2003 and 2013. For most projects, identifying a starting date with the local informants proved difficult (in 62% of the case, the date provided was too vague to be used meaningfully). In the sample for which dates are available, 72% of the projects were less than 5 year old. | 2. Chi-squared or two-tailed t-test: p-value * < 0.1, ** < 0.05, *** < 0.001.*

International aid has had very much presence in both Burundi and South Kivu (Table IV-2. Descriptive statistics: HFC incentive and management structures). Its interaction with the intervention could have gone either way. On the one hand, capital-based informants, sceptics of community participation, argued that it “only works where there is a donor and money”¹³¹ and insisted that donor involvement was important to preparing the ground for projects that would change community dynamics. On the other hand, as Table IV-3 shows,

¹³¹ Interview with Jean-Baptiste Kirimwinzigo, *Burundi Local Representatives Association*, 12.11.2012.

most aid projects come with material benefits. This may deter people from participating in community activities. As a Congolese health district officer put it, “all the projects give something to people, and it has become impossible to mobilise people if you are not offering something as well”.¹³² The intervention came with very few material incentives and it was made quite clear that the intervention would not provide anything beyond travel expenses for attending the first session.

Table IV-3. Descriptive statistics: aid in the catchment areas of the HFs

	Burundi	South Kivu	Diff. ²
	ratio	ratio	
Area has received aid in the recent years ¹	0.668	0.833	***
<i>Proportion of aid projects that gave goods³</i>			
Small (umbrella, boots, etc.)	0.178	0.131	
Medium (goat, poultry, building equipment)	0.223	0.455	***
Large (buildings, cattle, etc.)	0.323	0.256	

*Source: 2013 HFC survey. | 1. Based on the HFC executives recollection of aid projects carried out in the catchment area of their HF between 2003 and 2013. | 2. Chi-squared t-test: p-value: *<0.1, **<0.05, ***<0.001. | 3. Out of 291 projects (137 sites) in Burundi and 144 projects (54 sites) in South Kivu*

As explained in Chapter II, public and publicly-funded HFs have different management structures. The faith-based health facilities, which are more present in Kivu, have more autonomy in management than public structures. The intervention on HFC knowledge may then have had a stronger impact in more autonomous health centres because their administrative procedures were expected to be more flexible, and their internal hierarchy (decision rights and responsibilities) is expected to be easier to change.

IV.2.3. Local context and relation to service providers

The influence of the ‘features of the community’ on community participation is a frequently overlooked issue. Most of the literature in public health neglects to explore this point in detail (Molyneux et al. 2012; Sohani 2005). Anthropologists have been more

¹³² Interview with focus group of the *Agents Sanitaires* of the four South Kivu health zones, 2012.

interested in the question (Sepehri & Pettigrew 1996).

The levels of poverty, education, and even population density are relatively similar across the border (see

Table C-5 in appendix), but a striking difference between Burundi and South Kivu is the type of settlement: Burundian houses tend to be scattered across the hills while their Kivu counterparts tend to be grouped in villages. In an article long forgotten,¹³³ Green and Isely (1988) dismiss the appealing idea that settlement pattern as such has an influence on community participation and rather invite a look at the social features associated with the settlements: how power is organised within the community and the history of participation.

This is also what came out of interviews with key informants: MoH officials, district chief doctors, decentralisation ‘experts’, and HFCs and their medical staffs. When asked to reflect on the preliminary results showing an important contrast between Burundi and South Kivu, the same behavioural explanation was constantly brought up: Congolese have a stronger tradition of participating in decision-making about public goods. None of the accounts mentioned logistical issues, human resources, or even the health system.¹³⁴ Re-interpreted differently, relationship to authority and public services seems to differ from one country to the other. This hypothesis is in line with the thin literature on how citizens apprehend decentralisation and participation in local services in both Burundi and South Kivu.

The approach is also consistent with the recent literature on social accountability, with some nuances. Firstly, the large sample and area of the study allows to look at the ‘political economy’ of power at the *micro*-level and the analysis rather than simply at the relatively

¹³³ It has been cited one single time according to the Web of Science.

¹³⁴ Local authorities were not directly involved in the implementation of the project, and across the border the HFCs have the same history of being set-up in a top-down fashion, without people necessarily directly asking for it. Meuwissen (2002) and Zakus et al. (1998) argument that the origin of the community governance mechanism -induced or 'spontaneous'-could explain the difficulty for HFCs to take off is therefore difficult to explore.

impractical macro-level as most frameworks do (Joshi 2014; Grandvoinnet et al. 2015). Secondly, where Grandvoinnet et al. (2015) Brinkerhoff & Wetterberg (2015) and Hickey & King (2016) discuss 'state-society relations' as mostly the attitude of the state towards social accountability, the focus here is on the flipside: the attitude of citizens towards the state, which is something that can be observed at the micro-level. It is, in part, a 'cultural factor', and what has been identified as the capacity and commitment of citizens to demand accountability but also a question of society-state relation and the structure and history (a question of 'political settlement' to use another buzzword).

In Burundi, Laely's work (2014) depicts a centralised society with a rigid structure of control that goes down to the local level. Similarly, Nkurunziza (2011)'s economic work shows how service provision has been instrumented for a long time and is a function of the unrepresentative elite's pleasure rather than the product of social struggle. Ndikumana, writing in 2007, underlines that there is no history of tribal authority in Burundi and that "the power structures guarantee that political dissent is suffocated and does not trickle through the layers of institutional fences to disturb the central authority. At the same time, the population remains alienated and *muselée* (*silenced*)" (Ndikumana 2007). More recently, Hajayandi holds something very similar when he insists that:

"since Burundi became independent in 1962 and until very recently, the relationship between people and the elite were characterised by disconnection. The authority was usually taking decisions without asking the people, but it is also important to note that the people did not ask much. [...] On the one hand, people in charge were only accountable to people above them. On the other hand, citizens lacked information about their rights"

(Hajayandi 2012, pp.67–68)

This being said, the regional and local variance is important, as shown by the *Afrobarometer* data,¹³⁵ and some areas have a stronger history of participation and local democracy than others (Purdekova 2016).

¹³⁵ See <<http://afrobarometer.org/countries/burundi-0>> (last accessed 14.04.2016)

Across the border, the Mashu and Muhavu cultures have been described by historian and anthropologist Newbury (2001) as ‘in the mist’, at a distance from central power. Recent work also highlighted a vibrant civil society and a more direct attitude of confrontation with the authority and resource mobilisation within the community (Mushi 2012). South Kivu has a longer history of assemblies and concentration at the local levels, where the numerous kings and chiefs would engage with the population and villages would hold assemblies. Kivu was, and still is, made of a patchwork of different ethnic groups (only on the small portion of territory this study looks at, two of them, the Shi and the Muhavu can be found) and polities. The central power and party politics that characterise Burundi are much less present in this region, which was the borderland of larger political entities (the kingdoms of Burundi, Rwanda and Buganda). The Belgian colonisation and the rule of Mobutu consecrated a policy of divide and rule and left a *de facto* large autonomy to local polities. Access to public goods such as schools was not as strongly, or directly, discriminatory as in pre-Peace Accords Burundi (where Hutu and Northerners were systematically barred from the highest positions in society). Health and school services, in a region often abandoned by the central power, was often left to the hands of local communities. There were “instances where local communities took upon themselves, with some success, the decision to manage their own affairs, sometimes against the interests of the local single-party establishment” (Mwanasali 2007, p.92). Mwanasali also explains how the repression under dictator Mobutu led “Zairians to mobilise outside institutionalised politics” and talks about the expansion of NGOs in the early 1990s, this time, building on the strong cooperative movement in the 1970s and 1980s and the “age-old practice of clan/ethnic solidarity”.

A set of questions included in the population survey helps to understand further how people relate to authority, state and service delivery. Unfortunately, those questions were not part of the initial analysis plan and were collected only after intervention. There is however no *ex post* difference in these variables between the treatment and control groups. The intervention – as it has been shown in chapter III – does not have any impact on the

level of knowledge of the HFC by the population and the variables of interest are legitimate controls.

The three questions of Table IV-4 show a very different attitude towards local service providers and authority: Burundians are, on average, expecting more from the state and avoid direct confrontation, as underlined by the anthropological and historical literature. Within-country variation must also be underlined, and echoes research carried out in Burundi, which suggests that some provinces such as Bujumbura and Ruyigi witnessed the development of a stronger culture of community participation.¹³⁶

Table IV-4. Descriptive statistics: relation to authority and service providers

	<i>Burundi</i>	<i>South Kivu</i>	
	<u>ratio</u>	<u>ratio</u>	<u>difference¹</u>
<i>What would you do if you have a problem at your local HF? (multiple answers)</i>			
Nothing, I would be stuck [†]	0.491	0.226	***
Confront staff	0.048	0.264	***
Confront HFC	0.099	0.324	***
Talk to leader	0.020	0.092	***
Talk to administration	0.028	0.035	**
Talk to religious leader	0.005	0.047	**
Do not go anymore	0.033	0.117	***
Other	0.333	0.067	***
(of which 'spread rumours')	0.320		
<i>Were your community to receive \$1,000 for a project, who should manage it to ensure it benefits everybody?</i>			
Local chief	0.037	0.154	***
Local administrator	0.105	0.060	***
'Wise men'	0.096	0.187	***
Elected committee [†]	0.357	0.445	***
None of the above/other	0.405	0.154	***
<i>How much do you trust the state to provide you basic social services such as healthcare or education? (5-item Likert scale from 1 strongly disagree to 5 strongly agree)</i>			
	<u>mean</u>	<u>SD</u>	<u>mean</u> <u>SD</u>
Trust in state for social services [†]	4.134	0.056	2.747 0.081
Number of observations	3,235		1,981

¹³⁶ Based on field interviews. A key driver in both places seems to be the set up and development of vibrant local NGOs (*Maison Shalom* in Ruyigi and *Organisation pour l'Auto-Promotion*, OAP, in Bujumbura rural)

*Source: 2013 household survey. Sampling: 30 respondents per HF, stratification and weighting based on gender, age, and localisation. No difference between the intervention groups defined in chapters III-VII.1. Chi-squared and t-tests: p-value: * <0.1 , ** <0.05 , *** <0.001 . | † HF mean of this variable is used in the heterogeneity analysis below.*

It must be noted that in both countries the elected committee comes as a first solution for managing the common good and that a high percentage of the population is dismissive of its possibility to influence healthcare delivery and to find somebody in the community who would use money to the benefit of the entire community. This figure is especially high in Burundi, where informal channels and especially rumour¹³⁷ are said to be ways of holding service providers accountable.

Although the data was not collected to be representative at the HF-level – only 30 people were interviewed per catchment area – it still gives an important insight on the local context, which can then be interacted with the intervention. Three indicators are defined, taking the weighted mean of the 30 interviews for each area: (1) the ratio of people who replied ‘nothing, I would be stuck’ to the question, What would you do if you have a problem at the HF?¹³⁸ (2) the ratio of people who selected ‘elected committee’ as a response to the \$1,000 question mentioned in the table above; and (3) the average level of trust in the state in the catchment area.

This section led to identifying ten variables that (1) are different on average across the border; (2) have an important variance in each country; and (3) quite importantly, were described in the literature or qualitative fieldwork as having a potential interaction effect with the institutional knowledge intervention. They could therefore potentially explain the contrasted effect between the two countries. They can be seen as part of a vector defined as:

$$C_i \{[\text{education}_i, \text{gender}_i, \text{drugs}_i, \text{fees}_i], [\text{status}_i, \text{aid}_i, \text{paid}_i], [\text{trust}_i, \text{committee}_i, \text{nothing}_i]\}$$

¹³⁷ Rumours are key to understand Burundians, as telling the truth is considered part of the art of speech, and is something often alluded to rather than directly expressed (Turner 2009).

¹³⁸ The indicators were chosen to ensure a measure of variance across health centres as fine-tuned as possible: ratios below 10% were excluded. Using the answer ‘confront HFC’ would introduce a serious bias as not everybody knows the HFC.

The elements of the vector are correlated with each other, which will cause multicollinearity in the estimation and invites the use of models that include the most relevant variables only.

IV.3. Methods

The data sources are explained in previous chapters. Baseline health-facility level data, as well as end-line household data survey, are used.

The analysis is concerned with heterogeneous effects. They are approached through (1) separate estimations for Burundi and South Kivu and (2) estimations using a pooled dataset.

The outcome variables are unchanged from chapter III. There is, however, limited interest in testing heterogeneous contextual effects on outcome variables that are not at all changed by the intervention in either DRC or Burundi. Only the dimensions 1 (HFC functioning – probing the HFC members about the HFC practical organisation and goals), 2 (social accountability), and 3 (HF management), are of some interest. The focus will be on dimension 2.1, the declared decision rights at the HF, as empowering the committee is the core idea of the intervention and is expected to be the key for change at the HF.

In a first approach, the ten context variables described in the previous section, H , are inserted one at a time into the model described in Chapter III and interacted with the time dummy (t), the intervention (I), and their interaction ($t \cdot I$). The OLS model becomes:

$$Y_{d,i,t} = c + t + I + \psi H + \beta I t + \lambda H t + H I + \kappa I t H + cX_i + cD_d + \varepsilon_{d,i,t} \quad (IV.2)$$

H can either be a continuous or a context dummy variable. The rest of the terms are unchanged from the last chapter: cX_i and cD_d are a vector of control variables and health district fixed effects. κ gives the interaction effect in the context of Burundi or South Kivu. Comparing the effect between the two countries helps us to understand the consistency of the effect across the border but does not indicate what matters in the Kivu context

dummy.¹³⁹

The core of the analysis comes with the second approach when heterogeneous effects are easily estimated using the pooled dataset. The Burundi and South Kivu experiments presented in Chapter III conveniently use the same survey instruments. This allows the econometric approach to pool both datasets. In this case, the means effects used to estimate each dimension, the standardisation and aggregation of variables of the same dimension, are slightly different as they are generated relative to a cross-border control group rather than a country specific control group. This approach will necessarily produce slightly different estimates from the previous chapter.¹⁴⁰

Let H in the previous model become K, a country dummy in the pooled model:

$$Y_{d,i,t} = c + t + I + \psi K + \beta I t + \lambda K t + K I + \kappa I t K + c X_i + c D_d + \varepsilon_{d,i,t} \quad (IV.3)$$

With $K=1$, if the HF/HFC is in South Kivu, λ gives the additional change through time for South Kivu observations. κ is the proper (double) interaction term; it gives the additional change through time for South Kivu observations that benefited from the intervention. The interest of this pooled model is that κ and λ can be disentangled. It is particularly important when the difference through time, irrespective of the intervention, is non-trivial, which could be the case with the intervention in Burundi and South Kivu. Between 2012 and 2013, Burundi's economy struggled and the country had relatively low levels of violence while South Kivu was in a phase of post-conflict growth marked by some episodes of violence.

Specific sources of heterogeneity that are not the country dummy can now be added to the previous model, allowing to assess the relevance of each source. In the following model, a source of heterogeneity H is added, together with its interactions with t, I, and

¹³⁹ Another approach to test the consistency of heterogeneous effects across the two countries would be to pool the two datasets and include a triple interaction $I*t*H*K$, with K the country dummy.

¹⁴⁰ Estimations using country-specific means effects are used as robustness checks.

t*I:

$$Y_{d,i,t} = c + t + I + \beta It + K + Kt + KI + \kappa ItK + H + Ht + HI + \chi ItH + cX_i + cD_d + \varepsilon_{d,i,t} \quad (IV.4)$$

The contribution of the new interaction term can be tested by looking at the difference in adjusted-R² between this model and the previous one. In this approach, three elements are important to consider: (1) whether the effect of the Kivu dummy (κ) is mitigated by the introduction of other interaction terms, both in terms of size and statistical significance; (2) the size and significance of the double interaction term (χ); and (3) whether interactions different from the Kivu dummy improves the goodness-of-fit of the model (looking at the adjusted R²).

The model can then be easily extended to a number z of linear or binary sources of heterogeneity:

$$Y_{d,i,t} = c + t + I + It + K + Kt + KI + \kappa ItK + \sum_z (\chi_z ItH_z + H_z + tH_z + H_z * I) + cX_i + cD_d + \varepsilon_{d,i,t} \quad (IV.5)$$

The approach has practical limitations. Each source of heterogeneity adds not one but multiple new terms in the model,¹⁴¹ some of them likely collinear with other variables (especially K , the Kivu context dummy), which reduces degrees of freedom and potentially the precision of the estimates in a dataset that only counts 654 observations.

Logically, there is still little difference between the control and treatment groups when merging the control and pilot groups across the border to create the pooled dataset (see Table C-14 in appendix).

IV.4. Results and discussion

Impact estimations using the pooled dataset are, expectedly, consistent with the results

¹⁴¹ Three other interventions were stacked on the institutional knowledge intervention and also need to be accounted for, leading in fact to adding 15 new terms [$4*(I_n*K*H + I_n*K + I_n*H) + K*H + t*H + H$] for each new source of heterogeneity added to the model.

presented in chapter III (Table IV-5): the effect of the interaction with the Kivu dummy is very small and not significant in the case of the HFC organisation (dimension 1), suggesting an impact of the intervention on the functioning HFCs across the border. In the case of the social accountability and HF management dimensions (dimensions 2 and 3), the difference between the two contexts is significant and strong.

In the case of the HF management and social accountability, there is a clear difference in the change across time between South Kivu and Burundi (K*t). The difference suggests different dynamics in the two countries, as hypothesised in the methods section. The bulk of the analysis focuses on the case of the HFC decision rights sub-category (dimension 2.1, column 3). It is also, in terms of statistical properties, the best candidate: country differences are not significant in the control group but they are the strongest and highly significant when looking at the intervention group.

Table IV-5. Institutional knowledge intervention: effects using pooled dataset model

<i>Dimension¹</i>	<i>1</i>	<i>2</i>	<i>2.1</i>	<i>2.2</i>	<i>2.3</i>	<i>3</i>
Intervention effect (I*t)	0.261*** (0.084)	0.011 (0.172)	-0.048 (0.175)	0.206 (0.151)	-0.025 (0.116)	0.024 (0.081)
Kivu interaction effet (I*t*K*)	0.047 (0.145)	0.597** (0.260)	1.029*** (0.295)	-0.215 (0.253)	0.181 (0.158)	0.377** (0.173)
Kivu effect (K*t)	-0.006 (0.103)	0.479*** (0.168)	0.112 (0.175)	0.510*** (0.167)	0.108 (0.107)	0.410*** (0.106)
Adjusted-R ²	0.214	0.337	0.300	0.426	0.151	0.530
Number of observations	656	656	656	11,672	656	656

*1. Dimensions – see Table III-3 and Chapter III for details. 1: HFC functioning, Dimension 2: Social accountability (2.1 HFC decision rights, 2.2 relation with users (measured at household-level), 2.3 relation with medical staff and local authorities), Dimension 3: HF management. | Coefficients from model IV.3. Standard errors in parentheses. Significance level: p-value *<0.1, **<0.05, ***<0.001.*

The significance and size of the estimations remain stable when the model is tested in simple difference (using end-line data only) or when country-relative means effects, rather than across the border means effects, are used.

With these results, and especially the impact on the decision rights dimension, in mind, heterogeneous effects will now be explored, first using the three set of variables identified

in section 3, then integrating them into a model. The decision rights dimension is computed through asking HFC members and HF staff what the HFC decides about the health centre.

IV.4.1. Differences in the HFC and HF situations

Differences in the HFC composition and HF situation explain little of the Kivu effect. As Table IV-6 shows, the ratio of committee members who went to secondary school interacts positively with the intervention (column 4) but this result has only borderline significance (p-value=0.123). The interaction terms do not contribute to increasing the goodness-of-fit of the model adjusted-R² or to substantial changes in the size and significance of the Kivu interaction effect. Interestingly, the effect is statistically bigger in Burundi,¹⁴² and only significant in this sub-sample. This is consistent with the fact that the education issue was brought up more often in qualitative interviews in Burundi than in South Kivu.

Table IV-6. Institutional knowledge heterogeneous effects: education and gender

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pooled	Burundi	Kivu	Pooled	Burundi	Kivu	Pooled
HFC education ratio ¹ (I*t*H)		1.290** (0.651)	0.420 (0.707)	0.741 (0.480)			
HFC gender ratio ² (I*t*H)					-0.029 (0.308)	0.505 (0.440)	0.022 (0.247)
Kivu interaction (I*t*K)	1.029*** (0.295)			1.059*** (0.294)			1.068*** (0.296)
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.279	0.337	0.298	0.276	0.356	0.301

1. Ratio of HFC members who went to secondary school. | 2. Ratio of HFC executives who are women.
| Coefficients from model IV.4. Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.

This difference between Burundi and South Kivu is not easy to explain. The effect disappears when only levels of education higher than post-secondary are considered – and

¹⁴² This was tested inserting a triple interaction time*Kivu*Intervention*Education in equation 5.

at that level, there is a clear imbalance in favour of Burundi (mean: 0.474, SD: 0.319; South Kivu mean: 0.097, SD: 0.204). A possibility is that secondary education carries less prestige in the DRC than in Burundi, where it is rarer: DHS data indicate that 15.2% of adults attended secondary school in Burundi (DHS Burundi, 2012) against 51.2% of the Congolese (DHS RD Congo, 2014). In this case, prestige, rather than skills learned at school, may matter for the HFC members to take control of their HF. More generally, the level of education may be only a proxy for some unobserved characteristics of the members or of the community, such as social capital, social structure and general interest for the HFC.¹⁴³ Heterogeneous effects exploring a proxy for the wealth of the HFC members – the ratio of farmers to the executive members of the committee – do not however lead to any significant results (see Table C-16 in appendix). Another possible explanation is that the quality of secondary education is, or was, substantially different between the two countries. No data exists to back this argument as there are no international standardised test scores data (PISA or TIMSS for instance) available for DRC and Burundi. What is more, the variance between schools within regions is expected to be important.

The ratio of women who are executive members of the committee does not interact significantly with the intervention. The effects in both Burundi and South Kivu are not significant (of different sizes and even signs, which suggest potentially different gender dynamics across the border). The lack of effects remains when taking the ratio of women in the entire committee instead of limiting the scope to the executive members (see Table C-15 in appendix).

Differences in numbers of days of stock-out of essential drugs go in the expected direction, suggesting that HFs facing more difficulties would be more likely to react positively to the intervention (Table IV-7). The sign and significance of the Kivu dummy are slightly decreased by the introduction of the stock-out variable and its interactions with the

¹⁴³ The possibility that the educated HFC members had different expectation or interpretations when answering the survey cannot be totally discarded either; but it is made less likely by the fact that the HFC president, who went to secondary school in almost all the cases, was usually the one leading the answer.

intervention. Using other indicators such as the stock-out of basic medical or non-medical equipment leads to similar results (see Table C-17 in appendix).

Importantly, the hypothesis that the share of revenue of the HF coming from user fees, which is a proxy for the financial interests of the users in the HF, is not associated with heterogeneous effects, in none of the cases (Table IV-7). This result is important for the debate on free healthcare, and suggest that fears that user fees will damage community participation may not be well grounded in the empirical reality of Burundi and South Kivu.

Table IV-7. Institutional knowledge heterogeneous effects: stock-outs and user fees

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pooled	Burundi	Kivu	Pooled	Burundi	Kivu	Pooled
Stock-out of drugs ¹ (I*t*H)		0.150 (0.094)	0.004 (0.068)	0.040 (0.052)			
User fees / revenue (I*t*H)					-0.779 (0.961)	0.342 (0.730)	-0.113 (0.610)
Kivu interaction (I*t*K)	1.029*** (0.149)			0.864** (0.359)			1.079*** (0.415)
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	652	498	154	656	498	154	652
Adjusted-R ²	0.300	0.288	0.336	0.299	0.287	0.342	0.307

*1. Pre-intervention average number of days of stock-out of essential drugs at the HF (see Table IV-2 for details). | Coefficients from model IV.4 (χ and κ). Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.*

IV.4.2. Management structure and financial incentives for the HFC

The number of aid projects in the area and whether the HFC is faith-based or public interact, respectively negatively and positively, with the intervention (Table IV-9). Whether the HFC members are paid does not seem to affect the intervention (Table IV-8).

The aid projects effect is significant in the Kivu model, and almost significant in the pooled model. This may confirm the qualitative hypothesis that some aid has a negative impact on community participation initiatives. A possibility is that it crowds out the intrinsic motivation for unpaid services to the community, but this does not explain the difference between Burundi and South Kivu. When only projects that gave goods to people are

considered, the negative effect is stronger in South Kivu and the non-significant effect in Burundi diminishes (see Table C-18 in appendix).

Table IV-8. Institutional knowledge heterogeneous effects: incentive structure at the HF

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pooled	Burundi	Kivu	Pooled	Burundi	Kivu	Pooled
Aid interaction ¹ (I*t*H)		-0.051 (0.117)	-0.169* (0.101)	-0.101 (0.076)			
Paid HFC (dummy) (I*t*H)					-0.328 (0.388)	-0.007 (0.433)	-0.126 (0.303)
Kivu interaction (I*t*K)	1.029*** (0.149)			1.084*** (0.300)			0.913*** (0.315)
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.281	0.377	0.314	0.294	0.363	0.313

1. Number of aid projects recorded in the HF catchment area in the past twenty years (see Table IV-3 for details). | Coefficients from model IV.4 (χ and κ). Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.

Whether the HFC members used to receive some financial compensation before the intervention does not seem to affect the intervention, although the variable contributes to increasing the goodness-of-fit of the model and reducing the size of the Kivu effect.¹⁴⁴ Chapter VI will deal with financial motivation in Burundi in more detail. Using the average amount HFC members reported being paid also yields non-significant results, although the signs turn positive, suggesting a possible threshold effect.

The status of the HFC is, as expected, taking a positive sign and is statistically significant. It also contributes to diminishing both the size and significance of the Kivu effect. There is, however, a strong difference between Burundi and South Kivu, and the effect seems driven mostly by the Kivu part of the sample. It may be partly explained by the type of faith-based structures. Chapter II has highlighted different situations: 60% of the faith-based structures in Burundi are Catholic while this figure drops to 41% in South Kivu.

¹⁴⁴ A likelihood-ratio reveals that this change in R² is not statistically significant (p-value=0.185).

Catholic HFs are known to have a more rigid and more centralised form of governance: health centres would typically depend on a religious congregation headquartered far away from the HF. In terms of centralisation, they share similarities with public health centres and sometimes do even worse. Some Protestant health centres, especially Anglican, would also have a relatively similar hierarchy but Evangelical, Pentecostal, Baptist and Adventist health centres are typically dependent on a local church.

Table IV-9. Institutional knowledge heterogeneous effects: HF status

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Pooled	Burundi	Kivu	Pooled	Burundi	Kivu	Pooled
Faith-based HF ¹		0.042	1.362***	0.718**			
(I*t*H)		0.549	0.400	0.312			
Non-Cath. faith-based HF ¹					0.773***	1.489***	1.275***
(I*t*H ₁)					0.283	0.439	0.384
Catholic faith-based HF ¹					-0.330	1.427***	0.583
(I*t*H ₂)					0.636	0.489	0.42
Kivu interaction	1.029***			0.804***			0.736**
(I*t*K)	0.149			0.347			0.315
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.275	0.406	0.300	0.286	0.392	0.317

1. Dummy variables. | Coefficients from models IV.4 (columns 2-4) or IV.5 (χ_z and κ). Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.

Differentiating between the confessions of the health centre (Catholic versus non-Catholic) reveals a clear ‘non-Catholic’ effect, although it does not entirely explain the difference across the border: if Protestant HFs on both sides interact significantly and positively with the intervention, there is a clear distinction between Catholic health centres in Burundi and in South Kivu. In South Kivu, there is no statistical difference between Protestant and Catholic health centres, while in Burundi the interaction effect between Catholic health centres and the intervention takes a non-significant negative sign. A possible explanation for this is that the Catholic health centres in South Kivu are mostly run by a progressive and generally distant administration within the Catholic Church, the

Bureau Diocésain des Oeuvres Médicales (BDOM), while congregations run most Burundian Catholic HFs. The fact that Catholic faith-based HFs of South Kivu but not their Burundian counterparts offer family planning services is another example of the different mindsets.

IV.4.3. Relationship to state and service providers

The three proxy variables of relationship between citizens and their public service providers defined in section 3 take the expected sign when interacted with the intervention (Table IV-10): (1) the proportion of people finding that an elected committee is the best instance to manage an unexpected \$ 1,000 gift to the community interacts positively but not significantly; (2) the trust in the capacity of the state to provide services to citizens interacts negatively and not significantly; and (3) the proportion of people who see no other option than resignation when unhappy with health service interacts negatively, with borderline statistical significance. Only in this last case is there a decrease in the sign and significance of the Kivu dummy. The goodness-of-fit of the model is also improved, as it is with the trust indicator. The effect is more visible in Kivu. Overall, the three indicators, because they were collected in end line and only include the average of 30 respondents per HF, may not be the most accurate and underestimate the actual effect,¹⁴⁵ especially for such a general attitude. Yet they point to something important. They suggest that the expectations and experiences that the population had of its public service matters when trying to understand the contrasted impact of the intervention in Burundi and South Kivu.

Table IV-10. Instit. knowledge here. effects: population's relationship to service providers

	(1) Pooled	(2) Burundi	(3) Kivu	(4) Pooled	(5) Burundi	(6) Kivu	(7) Pooled
'Committee is best' ¹ (I*t*H)		0.500 (0.668)	1.063 (1.022)	0.768 (0.597)			
Trust in state ² (I*t*H)					0.276 (0.252)	-0.095 (0.262)	-0.025 (0.228)
Kivu interaction	1.029***			0.978***			0.992**

¹⁴⁵ This lack of precision is likely to lead to measurement errors, which as Hausman notes (2001), may bias the estimate downward.

(I*t*K)	(0.295)	(0.303)			(0.421)		
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.283	0.394	0.300	0.276	0.384	0.306

	(8)	(9)	(10)
	Burundi	Kivu	Pooled
'Stuck with bad HF' ³	-0.268	-2.034*	-0.917 ^
(I*t*H)	(0.614)	(1.171)	(0.573)
Kivu interaction			0.742**
(I*t*K)			(0.343)
Basic controls	YES	YES	YES
District fixed effects	YES	YES	YES
N	498	156	656
Adjusted-R ²	0.279	0.351	0.306

1, 2, and 3: see Table IV-4 for details. 1. Ratio of people in the catchment area who find that an elected committee is the best way to manage a gift to the community. 2. Mean of the answer to how much people trust the state in the catchment area (5-item Likert scale). 3. Ratio of people in the catchment area who say they feel powerless when there is an issue with their HF. | Coefficients from model IV.4 (χ and κ). Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.

Based on qualitative material, the perceptions collected through the questions appear partly informed by past and practical experiences but also echo a more general attitude towards public services and even different understanding of interpersonal relationships. As one interviewee put it, often “in Burundi we want to preserve good relationships. You never know when you could need somebody, so you do not want to hurt or shock and you hold back to preserve relationships”.¹⁴⁶

On the other hand, ‘article 15’ appears as a defining feature in many places in Eastern DRC. As Vlassenroot and Raeymaekers note: “the ‘article 15’ can be considered as an implicit social pact between the state and its citizens [...] in a context where [...] everything was left to the capability of individuals to cut out a personal space of power within the society” (Vlassenroot & Raeymaekers 2004).

¹⁴⁶ Interview Gilbert Ndayiragije, EU decentralisation support programme, 22.04.2013

None of the contextual factors mentioned in this section totally absorbs the effect of the context dummy. Elements such as the status of the HF or the relationship between citizens and their service providers only *contribute* to explaining the context (Table IV-11). Combining the different contextual factors leads the context dummy becoming non-significant

Table IV-11. Institutional knowledge heterogeneous effects: multiple sources of heterogeneity

	(1)	(2)	(3)	(4)	(5)
HFC education ¹		1.184*	0.662		
(I*t*H ₁)		(0.652)	(0.681)		
Women ²		-0.066			
(I*t*H ₂)		(0.272)			
Stock-out ³		0.068		0.055	
(I*t*H ₃)		(0.059)		(0.054)	
User fees/revenue		-0.141			
(I*t*H ₄)		(0.696)			
Paid HFC (dummy)		-0.259			
(I*t*H ₅)		(0.159)			
Aid at the HF ⁴		-0.050			
(I*t*H ₆)		(0.025)			
Not Catholic faith-based HF		1.303***	1.167***	1.160***	1.158***
(I*t*H ₇)		(0.385)	(0.374)	(0.383)	(0.368)
‘Committee is best’ ⁵		1.258*			
(I*t*H ₈)		(0.682)			
Trust in state ⁶		-0.176			
(I*t*H ₉)		(0.243)			
‘Stuck with bad HF’ ⁷		-1.029*	-0.947*	-1.050*	-0.952*
(I*t*H ₁₀)		(0.606)	(0.576)	(0.582)	(0.532)
Kivu interaction	1.029***	-0.481	0.389	0.265	0.492
	(0.295)	(0.688)	(0.366)	(0.428)	(0.359)
Basic controls	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES
N	656	652	656	656	656
Adjusted-R ²	0.300	0.345	0.313	0.315	0.315

1. Ratio of HFC members who went to secondary school. | 2. Ratio of HFC executives who are women. | | 3. Pre-intervention average number of days of stock-out of essential drugs at the HF (see Table IV-2 for details). Standard errors in parentheses. | 4. Number of aid projects recorded in the HF catchment area in the past twenty years (see Table IV-3 for details). | 5, 6, and 7: see Table IV-4 for details. 5. Ratio of people in the catchment area who find that an elected committee is the best way to manage a gift to the community. 6. Mean of the answer to how much people trust the state in the catchment area (5-item Likert scale). 7. Ratio of people in the catchment area who say they feel powerless when there

*is an issue with their HF. | Coefficients from model IV.5 (χ^2 and κ). Outcome variable is dimension 2.1 (see methods). Standard errors in parentheses. Significance levels: p-value * < 0.1, ** < 0.05, *** < 0.001.*

In the table above, column (2) shows the results when a vector with all the interactions above is added in the model. The Kivu dummy effect entirely disappears and the adjusted R^2 of the model increases, but at the huge cost of efficiency as a very high number of variables are added to the model. This model is over-fitted and suffers from important multicollinearity issues.¹⁴⁷ This is addressed by simply keeping the three most significant interactions (column 3), or the three that contribute the most to the goodness-of-fit of the model (column 4), which is enough to see the volatile Kivu effect become non-significant. Substituting the ratio of people who feel powerless in front of problems with the HFC with another of the two variables on relationship to power, trust in state ability to deliver social services and preferred manager for money given to the community, still diminishes the Kivu dummy substantially and leaves it statistically insignificant at $p < 0.1$. In fact, whether the HF is non-Catholic faith-based and the ratio of people who feel without any option if they have a problem at the HF is enough to more than halve the size of the Kivu interaction effect, which also becomes non-significant.

The heterogeneity analysis highlights two important points.

First, it is possible, to a certain extent, to break down the context dummy. Although issues of multicollinearity invite to remain prudent with the significance of individual factors, a vector of characteristics that includes the type of HF and the local context of governance of public services seems to explain most of the Kivu effect. The stability of most effects through different specifications allows cautious optimism about the fact that the HFC status and relationship to power matter, or are correlated to something that matters, for the efficiency of the institutional knowledge intervention.

Second, the difference in the size and sometimes even sign of the interaction effects across the border reminds that HFCs and the health facilities are part of complex systems, where elements are linked to each other and identification is tricky: some factors, whether

¹⁴⁷ The mean VIF is 75.24.

the HF is Catholic or the ratio of women among the HFC members, for instance, have opposite effects across the border. Breaking down the context goes beyond the simplistic and not very useful assertion that context matters. It suggests direction for understanding the type of external validity claim that can be made, but it does not mean that all the underpinning mechanisms are fully comprehended.

IV.4.4. Revisiting Community-Driven Development Initiatives

The results of the intervention, especially in South Kivu, may cast some light on why other participatory schemes have failed. Results are particularly interesting with respect to the *Tuungane* programme in Eastern DRC (including in areas covered by the present study) mentioned in Chapter I, one of the biggest community-driven development (CDD) programmes ever organised. Led by the International Rescue Committee and funded by UK's department for international development, the programme established new committees of elected citizens to manage grants for development projects, including in health, with the final idea of improving local democratic practices. Humphreys et al. (2014) could not, however, find any impact of the project on democratic behaviour and the management of local public goods.

Acknowledging the fact that the nature of the two interventions are different –importantly the HFC intervention did not provide anything new to the committee members to manage – the comparison of the two studies nonetheless suggests two potentially important points. First of all, and this is in line with the contrasted results between Burundi and DRC, it seems clear that local democracy – or at least participation in the governance of HF – does exist in South Kivu, and the vitality of these mechanisms need not be underestimated. In fact, as King & Samii (2014, p.749) point out, even the Humphreys et al. recognised that the most local levels may not display the same problems of governance as the macro-level. Secondly, the South Kivu HFC intervention shows that existing institutions, rather than fresh new institutions, can be worth mobilising and can be usefully reformed through external interventions. There is, however, no clear evidence that the HFC does not constitute a form of elite-capture. In fact, the absence of impact on the equity dimension

and the composition of the committee suggest that the HFC may not reflect the interests of the poorest fringes of the population (this will be discussed in more depth and focusing on the case of Burundi, in chapter V). Interestingly, Ho et al. (2015), show that a sub-component of *Tuungane* in which community scorecards were introduced in collaboration with the HFC, seem to improve the relationships of patients to providers and the performance of service provider. The study does not quantify this change, which is culled from interviews in 25 sites.

Comparing the HFCs and *Tuungane* committees in the context of South Kivu suggests a trade-off between, on the one hand, relatively efficient institutions that are rooted in the local fabric – which may be reformed but also potentially maintain inequalities – and, on the other hand, the social engineering of theoretically more egalitarian institutions that are largely foreign to the population.

IV.5. Conclusion

In conclusion, participatory institutions as exemplified by HFCs can improve service delivery – when citizens are made aware of what they are entitled to do. Narrowing the ‘institutional knowledge gap’ will not be sufficient in all cases, however, as demonstrated by the average null effect of the intervention on the health committees’ decision rights in Burundi. Understanding which of the, often related, contextual factors matter unveils a better understanding of how the HFCs function (George et al. 2015).

Taking into account the type of HF management structure appears crucial to understanding when social accountability mechanisms such as the HFC are most efficient. Protestant faith-based HFs were found to be more responsive to the institutional knowledge intervention. The exact mechanism is unclear, but two non-exclusive hypotheses stand out: (1) the greater autonomy these health facilities have benefitted from might have made them more flexible to a reshuffling of decision-making rights; and (2) these HFs were more anchored in the local socioeconomic tissue, more connected to a local community, which might have made them more responsive to an intervention

stressing the role of the community. The former is supported by qualitative evidence but the literature also offers some support for the latter. Jacobs and Price (2003) who worked on externally funded community participation projects in health in Cambodia suggest that “engagement with existing community-based organisations and agencies”, of which faith-based organisations are a prime example, is conducive to better chances of success for these types of project.

Institutional history, and especially the way people perceive and relate to public services, may also be crucial for the uptake of community governance initiatives and could explain the null result on the Burundian side. Generally speaking, future research in this area of research would greatly benefit from a deeper understanding of historical work on the institutions and their relationship to citizens (Woolcock et al. 2011), and potentially even from a historical institutionalist approach (Mahoney & Thelen 2010). The argument is *not* cultural relativism. Although a history of participatory institutions and low expectations in state capacity to deliver services seem to have a strong influence on the success of community-based initiatives, neither does it mean that culture is the only factor influencing the success of this intervention, nor does it have normative implications. It simply hints at a more pragmatic approach as to what to expect from community governance and participatory institutions in certain settings. In the unsuccessful case of HFCs in Burundi, more community governance initiatives (rather than less) could even be advisable, provided that expectations as to how these initiatives will affect service delivery remain realistic. In fact, the recent uprising in Burundi suggests aspiration to redefine ordinary relationships to power and secure more democratically managed public services. The chapter shows that the success of HFCs in Burundi and South Kivu is less a problem of capacity gap, a problem of skills and knowledge, than a question of ‘power’, and to a certain extent ‘incentives’. The key seems to be about the space available to reshuffle decision-making rights – such as a flexible management structure or a culture of confrontation with underperforming service providers. Education, as the Burundi example shows, is not trivial and it is clear that HFCs cannot function with illiterate members, but

beyond a certain threshold it seems that it ceases to be a key driver of the success of participatory institutions.

As Mansuri and Rao point out, “breaking this nexus – changing the [current] equilibrium [...] – is at the heart of effective participatory development” (Mansuri & Rao 2012, p.290). In a series of cases, and in the case of Burundi, ‘knowledge building’ needs to coincide with measures that can effectively alter the old structures of power and responsibility, or are directed towards actors that are in a position to do so. How can the power and incentive gaps be narrowed, and the governance of HF changed in the direction of deeper social accountability? The next chapters, using other arms of the experiment in Burundi, will explore different ways to build a space for changing decision rights: (1) working on trust between the different actors, (2) providing the HFC information about the actual situation at the HF, and, (3) strengthening the accountability of the committee towards local leaders and the population.

PART C. WHEN KNOWLEDGE IS NOT ENOUGH: HEALTH FACILITY COMMITTEES AND THEIR INFLUENCE ON HEALTH CENTRE MANAGEMENT IN BURUNDI

This last part of the thesis focuses on the situation of the HFCs in Burundi and tries to understand what, in the unfavourable context described in the previous chapters, could make the HFCs more efficient. In particular, the next three chapters explore what happens in terms of HF management and HFC organisation when three interventions – trust-building, localised information, and connection between the HFC and local leaders – are implemented in an attempt to give the HFC members more influence at the HF. None of the interventions has a clear positive impact: the intervention on localised information leads to conflictual situations and the intervention on the connection with local leaders is only effective in specific contexts.

V. UNHEALTHY COLLABORATIONS? INTRA-COMMITTEE AND COMMITTEE-NURSES RELATIONSHIPS

This chapter looks at the relationship between HFC members and nurses, and to a lesser extent the relationship between HFC members themselves. It explores the idea that improving these relationships, through trust-building games designed to enhance collaboration between the different actors, improves the organisation and decision-making rights of the HFC at the HF, and thereby service delivery.

In a post-conflict context like Burundi, which is also marked by decades of an almost total lack of citizens' engagement with public service providers, trust is seen as crucial to social service development. Against this background, the inefficiency of the HFCs may be caused by a *power gap*: the HFC may be knowledgeable about the HF and its functioning, and genuinely interested in changing the way it works, but is not in a position to do so. The trust-building intervention tries to narrow this power gap. Through improving the relationship between the HFC and the medical staff, it is expected that the HFC will have the space to access and circulate information and take an active role at the HF.

The first section reviews the literature and the situation in Burundi before the intervention. It shows that there is, potentially, room for improving trust between the different parties. The second section presents the methodological approach, which is similar to the one explained in Chapter III: a trust-building intervention that is randomly implemented among the HF/HFCs that benefitted from the intervention depicted in Chapter III. The average treatment effect is null: the intervention does not make any difference in terms of HFC organisation or social accountability. There are limited heterogeneous effects that suggest that trust-building could benefit more HFCs that comprise a larger proportion of women who are, at baseline, in the worst position. The reasons for the null effects are further explored in the last section; it is argued that the intervention was probably both too 'light' and based on a flawed theory of change.

V.1. Trust and decision rights in Burundian HFs

This section locates the chapter in the literature that has repeatedly stressed the role of trust in the development of institutions and effective service delivery around the world. A second subsection shows that despite appearances of improvement, trust issues remain at the chief nurse-dominated HFs. Within the committee, women display lower levels of trust in the HFC members and nurses.

V.1.1. Theoretical framework

Social psychology, economics and other social sciences have produced a large body of research on trust within organisations (see for instance Bachmann and Zaheer, 2013). As in the case of other basic social services, “trust underpins the co-operation within health systems that is necessary to health production”, for it establishes relationships and legitimacy, reduces transaction costs, and enhance motivation (Gilson, 2003). Applied research on the HFCs has highlighted these features but often does not elaborate on it, possibly because of the difficulty of assessing the exact level of trust and collective action in a HF (Uzochukwu et al. 2011; Björkman & Svensson 2009; Cleary et al. 2013). An increased level of trust in the committee is, however, seen in the literature as important

to enhancing genuine social accountability at two levels. Firstly, the trust the population places in the HFC is key for the HFCs to really represent the population, articulate requests, and take actions that are in the interest of the population (Mosquera et al. 2001; Mubyazi, Mushi, Shayo, et al. 2007). Secondly, trust between committee members and between the nurses and committee members is instrumental for the HFC to work: HFC members and the chief nurses are co-managers, which implies a collaborative work, cooperation, and a recognition of the role of the other party (Fung & Wright 2003). The chapter will focus on trust at this level.

Looking at participatory institutions, Poteete, Janssen & Ostrom (2010) pointed out a series of factors that potentially influence the level of trust between different parties: marginal return of cooperation (extrinsic motivation), security, reputation and time horizon. In the case of the health committee, the time horizon had often been showed to be unclear (Chapter II) and the expected reputation effect is potentially important in close-knit communities. At the same time, the post-conflict context of Burundi is also one where social ties and interpersonal relationship have suffered badly. The long civil war, and before and after it, periods of political tension, put into opposition not only members of different 'ethnic' groups but also individuals who, within a same community, sided with different political groups. Communities have been profoundly divided by the conflict and this has affected interpersonal trust and willingness to cooperate (Voors et al. 2011).

The challenge of improving trust in local institutions in such a context is double. It is about (1) restoring collaboration between individuals who have become suspicious of each other (Wolpe et al. 2004), and it is (2) also about improving the relationship between elected representatives and service providers, which is a challenge in itself in a lot of (not necessarily post-conflict) contexts and echoes tensions between technocrats and politicians (Katz & Capron 2002). Community-driven initiatives in post-conflict contexts place trust as an outcome of their programmes (World Bank 2006), but critical approaches of such programmes have stressed reverse causality and the impossibility of inducing community participation initiatives without pre-existing trust (King & Samii 2014).

Trust is tied to the idea of a power gap: in the HFC case, the committee members are not in a position to influence the functioning of the HF because mistrust prevents them from collaborating with or influencing the nurses, who are the actual service providers. Against this background, the way through which increased trust could improve social accountability and service delivery is relatively straightforward: a situation where HFC members and nurses respect and trust each other *should* help HFC members influence the decisions made at the HF. The influence could be direct as HFC members gain a say in decisions, or indirect as people who make these decisions – the nurses – take into account the HFC members they respect. In addition to these, social contracting theories (Moore 1999) stress the fact that trust decreases transaction cost, through collaboration and the lesser need for monitoring, and could therefore facilitate the work of the HFC at the HF.

V.1.2. Situation in the HFCs and initial observations on trust

At first glance, HFC and medical staff seem to collaborate, yet there is quantitative, qualitative and experimental evidence that tensions and frictions are common, especially when the HFC tries to co-manage the HF. As chapter III has shown, power (decision rights) at the HF is rarely shared with the HFC, even after the role of the HFC is clearly explicated to all the actors.

“We collaborate” and “there is no problem” are the laconic answers of the HFC members and medical staff to questions on the relationship between medical staff and HFC members. Similarly, 5-item Likert scale questions show that most HFCs and chief nurses find their relationship ‘good’ (Table V-1). The correlation between the trust the HFC says it has in the chief nurse and the trust the chief nurse says is only 0.160 (Pearson Correlation coefficient). In 9.39% of the cases, there are two or more points (out of a 5-point Likert scale) of difference, which indicates very different perceptions of the situation or a desire of at least one of the parties to misreport the situation.

Table V-1. Self-declared HFC – chief nurse relationship (2011-2012)

	according to	HFC executives	Chief nurse
		ratio	ratio
<i>The HFC-chief nurse relationship is</i>			
Not good at all		0.000	0.008
Not good		0.016	0.012
Average		0.033	0.101
Good		0.639	0.654
Very good		0.311	0.224
Observations		251	251

Source: 2011-2012 HF and HFC surveys. P-value of chi-squared test with data rearranged into 3 categories: 0.671.

In fact, closed-ended questions and even one hour interviews and focus groups probably miss deeper problems that are not easily shared. Reports from and discussions with facilitators, as well as some interviews, reveal numerous situations of tension and mistrust that could affect the nurses and HFC work and ultimately service delivery. These develop around three main issues that can be linked to each other: (1) the remuneration of the HFC members; (2) the bad perception the nurses have of the HFC, which are often informed by wrong expectations about the HFC role; and (3) the opposition of the nurses to the monitoring function of the HFC.

Tensions sometimes develop around money. HFC members are unpaid volunteers who sometimes receive some monetary compensation as a reimbursement for their travel expenses (see Chapters IV and VI). The amount and frequency of this payment is often intensely debated in the HFs, and the HFC is often isolated in its demands. The nurses rarely see the added value of the HFC, as nurses of a HF of Rutana district put it: “the situation is not good. They [the HFC members] do not understand why they do not receive money, but we cannot accept that they receive money as they are not doing anything”.¹⁴⁸ Tension also comes from the nurses who blame the HFC for not doing their work. In a series of cases, the problem comes from a misunderstanding of the role of the HFC: the

¹⁴⁸ Focus group with nurses, Rutana district, 2011.

medical staff expected the HFC to do the work of the Community Health Workers. For example, in a HF, the medical staff insisted that “the HFC is not good, they need to learn some things, especially about early diagnosis, in order not to mix up pathologies”.¹⁴⁹ Conversely, in another HF, the medical staff said it appreciates the HFC because it brings the population to the HF and sensitises the population about the most common diseases.¹⁵⁰ Tensions can also originate in the monitoring function of the HFC. In an interview, a chief nurse criticised the HFC members for being “policemen”,¹⁵¹ which may or may not be linked to fear that poor management practices are uncovered (see Chapter VI for more on this point). In these circumstances, the situation sometimes escalates:

“Nurses are really bothered by our presence. When we invite the staff to attend our meeting, they refuse to come. They denigrate us by calling us ‘talkers’, which means people who do evil, and we do not have the courage to continue denouncing what is wrong at the health centre. They do not serve us properly. Recently, a male member of the committee came to seek treatment and he received vaginal ovules!”¹⁵²

The issue in this last case is how to constructively consider criticisms. It is often anchored in the two parties not knowing each other.

In order to better understand the situation and confirm this initial assessment, behavioural trust games were played in 164 HFCs in 2012, right before the interventions mentioned in the next section.¹⁵³ HFC members, chief nurses, deputy chief nurses, and HF managers sat in a circle, were given a voucher worth BIF 600.¹⁵⁴ and were asked to indicate secretly what they wanted to do with that money: either keep it as it is or send all or part of it to somebody else unknown in the group, in which case the sum sent would be multiplied by three and the receiver would have the possibility to send back any amount they wanted to

¹⁴⁹ Focus group with nurses, Murore district, 2011.

¹⁵⁰ Focus group with nurses, Matana district, 2011.

¹⁵¹ Focus group with HFC, Kabezi district, 2011.

¹⁵² Focus group with HFC, Gitanga district, 2011.

¹⁵³ In order to avoid any unintended ‘gathering around effect’, the games were not played in HFs where no intervention took place.

¹⁵⁴ US \$0.5 at the time the game was played.

the sender. The behavioural trust game has been played in different contexts and is arguably a good way to measure the level of trust within a group (Houser et al. 2006; Welter & Nadezhda 2012).

The results of the behavioural trust game show a neat difference between players from the medical staff and players from the HFC, the latter trusted the group much less and sent 16% less money on average, even when controlling for factors such as gender, education, and wealth (see Table C-19 in appendix). There is also a clear gender bias, with women trusting the rest of the committee less: they sent around 6% money less, a result that is consistent across different model specifications. The last result comes against the background of mixed findings about the relationship between trust and gender. Ultimately, a key factor for mistrust seems to be belonging to a group that is being discriminated against (Bohnet & Zeckhauser 2004).

Combined with the qualitative insights, those results indicate a context marred by possibly mistrusts and suspicion, and questions the possibility of the HFC to appropriately fulfil its role, which necessitates working in collaboration with the HF. A more collaborative space where HFC and medical staff can work together seems needed.

V.2. Empirical strategy

An experimental approach was used to test the hypothesis that increased trust between HFC members and the chief nurse (and between HFC members) improves the influence of the HFC at the health centre. The methods are largely similar to Chapter III.

V.2.1. Intervention

Trust is partly dependent on repeated interactions (Rousseau et al. 2014), and in order to initiate – some medical staff did not know their HFC members – or re-initiate a good first contact, a simple approach that has become part of the policy of many organisations and businesses around the world is ‘team-building games’. The positive effects of such collaborative games have been evidenced by research (Klein et al. 2009), and their observed outcomes include “positive effects on perceptions and attitudes” (Tannenbaum

et al. 1992).

Existing team-building games (Newstrom & Scannell 1998) were adapted to the context of Burundi. The games included:

- ‘The circle of question’: where HFC members and medical staff are introduced to each other through personal but non-threatening questions (e.g. food, age of children);
- ‘Early bird versus second mouse’, where the group is separated into two and participants asked to defend that it is better to act as soon as possible when a problem emerges, or rather to take more time. The idea is to improve listening skills;
- ‘My dreamed health centre’, where the participants share their view of what an ideal health centre would be.
- ‘Tag team’, where participants identify each other’s skills to improve the HF situation.

The team-building games seek to help the medical staff and the health committee talk to each other and reinforce mutual respect and trust. The intervention only makes sense in a context where the HFC and HF staff, including the chief nurse, know what the HFC is supposed to do and it therefore came in addition to the intervention described in Chapter III. A subset of three quarters of the HF/HFCs that benefited from the first ‘institutional knowledge’ intervention also benefited from the trust intervention, leading to three distinct groups: a control group (n=83 HFCs/HFs), an ‘institutional knowledge’ intervention only (n=42 HFCs/HFs), and an ‘institutional knowledge’ + trust group (n=126 HFCs/HFs). The trust intervention is quite light: it is meant to augment the impact of the first main intervention and represents a smaller investment in time and resources than the knowledge intervention -only one session of trust-building games took place.

The team-building games took place after the first part of the knowledge intervention (after the first module and at the end of the day) and at the end of it, when the HFC and the medical staff had already had the opportunity reflect on the role of the HFC. All the precautions explained in Chapter III apply as the trust intervention was integrated into the ‘institutional knowledge’ intervention.

V.2.2. Methods

The outcome variables are unchanged from chapter III. In particular, the intervention is expected to have a direct impact on the decision rights of the HFC (as perceived by the HFC executives and the HF chief nurse), on the level of exchange of information between the nurses and the HFC, and on the self-confidence of the HFC members. Changes in these regards could also trickle down and affect the HFC organisation and HF management. Improvements in terms of access to and provision of services are possible, but they are unlikely as quite far in the expected causal chain to be realistically impacted by a soft, management-level only, trust-building intervention.

The difference-in-difference impact is evaluated through a model similar to Chapter III:

$$Y_{d,i,t} = c + t + I_1 + I_2 + \beta_1 I_1 t + \beta_2 I_2 t + cX_i + cD_d + \varepsilon_{d,i,t} \quad (V.1)$$

– where Y is the outcome variable. t , I_1 , and I_2 dummy variables that respectively identify time (pre- or post-intervention), and intervention groups. $I_2=1$ when the HFCs received the trust *and* institutional knowledge intervention. $I_1=1$ when the HFCs received the institutional knowledge intervention only (part of them did not receive the trust intervention).¹⁵⁵ cX_t is a set of covariates explained in Chapter III. cD_d still captures health district-level fixed effects. The effect of the trust information intervention relative to the institutional knowledge intervention is given by β_2 , while its effect relative to the control group is given by $\beta_1 + \beta_2$, and a Wald F-test is used to determine whether $\beta_1 + \beta_2 = 0$.

The robustness of the results is tested by removing control variables as well as running the estimation with a database that only contains the control group and the group that received exactly the localised knowledge and trust interventions, and running ANCOVA models. As Table V-2 below shows, the groups are highly comparable at the baseline level.

¹⁵⁵ Other groups were also created for two other arms and the estimations included I_3 and I_4 , which will be discussed in chapter VI and VII. The effects of I_3 and I_4 are totally absorbed by the dummies and their interactions with t . Running the models excluding the part of the sample that did not received I_3 and I_4 leads to the exact same effect size but diminishes the sample size.

Table V-2. Situation at baseline

	control mean ¹	difference knowledge intervention ¹	difference control group ²
<i>HFC Features</i>			
Terms of Reference available	0.222 (0.047)	0.071 (0.095)	0.063
Ratio of Women	11.173 (0.498)	-0.571 (0.165)	-0.125
Ratio went to sec. school	0.347 (0.02)	-0.044 (0.039)	-0.009
Collines/villages represented in HF	0.328 (0.025)	-0.03 (0.041)	-0.032
<i>HF features</i>			
Water (0: never to 5: constant)	3.099 (0.128)	-0.119 (0.245)	0.02
Electricity (0: never to 5: constant)	3.074 (0.134)	-0.143 (0.258)	-0.241
Support staff at HFC	5.951 (0.315)	-0.167 (0.655)	-0.474
Urban area	0.148 (0.04)	-0.071 (0.06)	-0.101
Faith-based HFC	0.173 (0.042)	0.071 (0.084)	0.041
Population in area	14628 (1052)	-1689.29 (1786)	-590.074
1. HFC organisation	0.029 (0.031)	-0.055 (0.074)	-0.071
2. Accountability	-0.025 (0.076)	-0.144 (0.169)	0.012
2.1. HFC rights	0.05 (0.066)	0.192 (0.147)	0.045
3.1. Equipment	-0.092 (0.092)	-0.043 (0.126)	0.165
3.2. Human resources	-0.016 (0.06)	0.033 (0.129)	0.096
3.3. Infrastructure	0.041 (0.093)	-0.114 (0.166)	-0.093
3.4. Finances	-0.026 (0.055)	0.107 (0.103)	0.082
6. Provision of services	-0.019 (0.085)	-0.239 (0.133)	-0.076
N	83	41	125

1. Difference knowledge is the β_2 in: $Y = c + \beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \beta_4 I_4 + \varepsilon$, where I_2 is the trust intervention group. Control group mean is the constant. | 2. $\beta_1 + \beta_2$ in the previous model, significance is F-test joint significance. | P-value: * < 0.1, ** < 0.05, *** < 0.001. Standards errors in parenthesis.

V.3. Main results

At first sight, the trust intervention does not have the slightest statistically significant effect on the HFC organisation, its functioning as a social accountability mechanism or the management of the health centre (Table V-3).

Table V-3. Trust intervention: main results

	Relative to ‘institutional knowledge’ intervention			Relative to control group		
	Effect ^a	p-value	FWER p-value	Effect ^b	value	FWER p-value
1. HFC organisation	-0.008	0.928		0.263	0.034**	0.192
2 Accountability	0.186	0.377		0.157	0.411	
2.1. Enforcement / HFC rights	0.169	0.436		0.125	0.488	
2.2. Share information with users [†]	0.024	0.879		0.006	0.963	
2.3. Share Information with nurses	0.045	0.69		0.062	0.553	
2b. Agreement on HFC decisions [‡]	0.193	0.879		0.111	0.800	
3. Management	-0.012	0.924		-0.029	0.771	
3.1. Equipment	0.100	0.703		-0.077	0.968	
3.2. Human resources	0.029	0.820		0.004	0.500	
3.3. Infrastructure	-0.094	0.134		0.027	0.787	
3.4. Finances	0.084	0.605		0.039	0.553	
4. Equity in access [†]	0.101	0.442		-0.063	0.245	
5. Quality of services [†]	0.200	0.204		0.056	0.666	
6. Use of services	0.074	0.516		0.078	0.438	

See Table III-3 and chapter III (experimental design) for details about the construction of the standardised dimensions. *N* unchanged since chapter III. | [†] Data and analysis at the household-level (2.2. aggregated at HF-level when dimension 2 was constructed). | [‡] Not part of the original analysis plan. | *a* and *b*: effects are respectively β_2 and $\beta_1 + \beta_2$ in model V.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Knowing the nurses better could, in theory, help the HFC members improve the organisation of the committee, but this is clearly not the case with the trust intervention. None of the individual components of the HFC organisation index is affected by the intervention – the self-confidence indicator is the closest to significance and, expectedly, contributes towards improving the positive effect generated by the knowledge intervention.

Table V-4. Trust intervention: impact on HFC organisation

	mean control (2013)	Relative to 'institutional knowledge' intervention			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p-value
Meetings HFC per month	0.975	0.028	0.654		-0.022	0.743	
Decisions by consensus (binary)	0.889	-0.128	0.265		-0.128	0.208	
HFC self-confidence (1-5) ¹	4.162	0.309	0.247		0.821	0.00***	0.00***
Terms of Reference available [‡]	0.148	-0.047	0.710		0.758	0.02**	0.04**
Executive committee exists	0.873	0.001	0.978		-0.058	0.145	
Key activity; management ²	0.864	0.077	0.403		0.030	0.709	
“ ” detailed management ²	0.259	-0.001	0.994		0.054	0.687	
“ ” Information / voice ²	0.370	0.025	0.867		-0.038	0.759	

1. Based on a 5-item Likert scale: from 1 no confidence at all to 5 very confident. | 2. Created from coding the open-ended question 'what is the main activity of the HFC?' | ‡ Not part of the original analysis plan. | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model V.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

As expected, the views of the HFC and chief nurses on the decision rights of the HFC at the HF are positively influenced by trust intervention, but these results are not statistically significant. In fact, the only element that is affected by the intervention, and this result is not robust to the FWER correction, is whether the HFC communicates its minutes to local authorities (Table V-6 – next page).

The only strongly significant result across all the indicators considered is the ratio of HFC and HFs that agree on the decision rights of the HFC president (Table V-5).

Table V-5. Trust intervention: effects on agreement on decision rights[‡]

	mean control (2013)	Relative to 'institutional knowledge' intervention			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p-value
HFC and chief nurse nurses agree on HFC decision rights	0.72	-0.024	0.681		-0.057	0.430	
“ ” on HFC executives rights	0.78	0.080	0.244		0.007	0.926	
“ ” on HFC president rights	0.71	0.041	0.506		0.174	0.014**	0.042**

‡ Not part of the original analysis plan. | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model V.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

As the previous Table V-5 has shown, it does not mean that they agree on more responsibilities than prior to the intervention. The same results are not found for the cases of the HFC in general or the HFC executives.

Table V-6. Trust intervention: effects on social accountability

		Relative to 'institutional knowledge' intervention			Relative to control group		
	mean control (2013)	(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p-value
<i>2.1. Decision rights of, (according to...)</i>							
HFC (...nurses) ¹	0.628	-0.082	0.459		-0.008	0.935	
HFC (...HFC executives) ¹	0.587	0.173	0.133		0.143	0.143	
HFC executives (...nurses) ¹	0.257	0.102	0.373		0.009	0.934	
HFC executives (...HFC exec.) ¹	0.293	0.099	0.447		0.099	0.362	
HFC president (...nurses) ¹	0.312	0.020	0.846		-0.025	0.785	
HFC president (...HFC exec.) ¹	0.279	0.133	0.169		0.136	0.109	
HFC co-signs orders, binary ¹	0.667	-0.068	0.627		-0.074	0.546	
<i>2.2. Shared info. with population</i>							
Knows the HFC [†]	0.423	-0.027	0.723		0.034	0.561	
Num. of HFC members known [†]	2.558	0.199	0.786		0.539	0.298	
Went to a HFC meeting ^{2,†}	0.825	-0.013	0.967		0.010	0.969	
Asked the HFC a question ^{2,†}	0.819	0.048	0.881		-0.070	0.822	
Identifies HFC as HF manager ^{3,†}	4.091	0.001	0.980		0.004	0.915	
Bill is understood (1-5) ^{4,5†}	0.382	0.373	0.358		-0.166	0.550	
Prices displayed at HF ^{5†}	0.420	-0.061	0.576		0.004	0.967	
<i>2.3. Shared info. with nurses</i>							
Minutes to chief nurse (binary)	0.160	0.132	0.418		0.200	0.163	
Minutes to district (binary)	3.230	0.313	0.059*	0.265	0.051	0.681	

1. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, price drugs, price services, development plan. See Table II-9 for details. | 2. In the past 6 months | 3. Dummy created from the question "Who is the manager of the HF?" | 4. 5-item Likert-scale | 5. Users who visited the HF in the past 6 months only. | † Data and analysis at the household-level | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model V.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

All these results are based mostly on the declaration of the HFC members and HF staff. If anything, they provide a vague sense that the trust intervention may have contributed to very slightly improving the atmosphere at the HF, without necessarily improving social

accountability or management. In these conditions, as social accountability and the HFC organisation have barely changed, it makes little sense to look in details at the HF management indicators (no individual variable is significant, see Table C-21 in appendix for details) or at detailed use and perception of services. The results are robust to the ANCOVA specification (Table C-20 in appendix).

V.4. Discussion

On average, the trust-building games do not change the situation at the HF and do not improve the results of the institutional knowledge intervention described in Chapter III. The effects go in the expected (positive) direction but none of them is significant, not even when considering composite indicators. The only exception is the agreement on the role of the HFC president, but these effects seem to only counterbalance a negative effect triggered by the institutional knowledge intervention. Overall, the responsibilities at the HFs have not changed, and the HFC still seems in a weak position. This section argues that the problem is not technical, in the sense of an underpowered intervention or weak adherence. The real issue with HF inefficiency may not be, only, a matter of knowing what to do and getting along well with the chief nurse.

The sample is of reasonable size ($n=498$), and an effect like the one obtained for the social accountability index (0.186 standardised scored) still had a decent estimated power of 0.70 (with alpha 0.05)¹⁵⁶ when performing power calculations *ex post*. Again, referring to chapter III, effects are found on much smaller samples in other contexts (see the case of South Kivu).

Similarly, the games are the products of a history of trust-building games and had been tested in Burundian context. No participant refused to play in the game, and there was no report of reluctant participation. Compliance to the trust-building game module was maximal in the sense that all the participants to the institutional knowledge intervention

¹⁵⁶ Assuming no change in standard deviation.

were involved, in all sites.

A key hypothesis is therefore that the trust-building intervention, in the context of Burundi, is indeed inefficient. Two levels need be considered: (1) the possibility that the intervention did not affect trust and collaboration, and (2) the possibility that trust is not the actual problem: increased communication or understanding between the different parties does not necessarily mean that the HFC becomes more of a co-manager of the HF.

The first case comes down to asking whether the trust-building games indeed lead to building trust, which means changing perceptions of the different parties. Behavioural trust games like the one depicted earlier, which was played at baseline-level, would have been an ideal tool to measure these changes, but they could not be implemented at endline,¹⁵⁷ which means that the main indicators that are left are the mutual perceptions of the HFC and HF-nurses, all using imperfect 5-point Likert scales. These indicators give a sense of whether the relationship is perceived as bad or not (Table V-7).

Table V-7. Trust-building intervention: impact on mutual perception

	mean control (2013)	Relative to 'institutional knowledge' intervention			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p-value
HF relation with HFC	4.256	0.348	0.070*	0.148	0.074	0.671	
HF relation with HF	4.051	0.054	0.836		0.343	0.123	

*N unchanged since chapter III. | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model V.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

The effect on these variables, to which the results on the HFC self-confidence reported in the results section can be added, is positive. It is significant in only one case, the perception

¹⁵⁷ It was supposed to take place in January-March 2015, but tension was mounting in country as the elections were approaching. Severe unrest eventually exploded in major cities in the first days of April.

the HF-nurse has of the committee, and this result is not statistically very robust (p-value=0.07). These results constitute some considerably weak evidence that the intervention may slightly improve the atmosphere at the HF. This does not mean that more team-building activities are a solution. Interestingly, some interviewees mentioned that bringing the HFC closer to the nurses may negatively affect social accountability, as for instance on HFC reported, “we have stopped sending reports to the nurses and the administration because then they come back to us angry and it creates a bad atmosphere for collaboration”.¹⁵⁸

As highlighted in the background section, not all HFCs are in a situation of tension with their nurses. Looking back at qualitative data from the baseline survey, three broad cases appear: (1) the HFs where HFC members are very clearly going along well with the medical staff and with each other; (2) a majority of grey cases where HFCs and medical staffs say that “things are alright”; and, (3) a minority of HFs where there are obvious problems. The data does not enable clearly flagging the difference between the first and second cases, but negative responses to the two questions mentioned in the table above are a clear signal that the situation is not good and that the situation is probably the third case. Heterogeneous effects could be expected in this case, with the worst cases benefitting more from the intervention than HF where the atmosphere is better. Testing this empirically can be done through an adaptation of the model presented in the methods section. The interaction term is either the baseline value of the HFC appreciation of the chief nurse or the chief nurse appreciation of the HFC is introduced (A), leading to:

$$Y_{t,i,d} = c + t + \sum_{n=1}^2 (I_n + I_n t + I_n A + \xi_n I_n t A) + tA + A + cX_i + cD_d + \varepsilon_{t,d,i} \quad (V.2)$$

where $\xi_1 + \xi_2$ gives the heterogeneous effects in the case of the bundle of intervention and is the main interest. ξ_2 gives the additional heterogeneous effects in the case of the trust-building intervention and indicates whether the supplementary intervention comes with

¹⁵⁸ Interview with HFC president, Matana district (HF Endline.B.3.3), 27.08.2013.

extra heterogeneous effects.

The results of these interaction models are, by and large, consistent with the theory briefly exposed above: that the trust-building games have a stronger effect in the HFCs where the initial perception of the chief nurse of HFC members is lower, especially when it is the chief nurse who reports an uneasy relationship with the members (Table V-8).

Table V-8 Trust-building intervention: interaction with HFC – chief nurse mutual perception

	Relative to basic package		Relative to control group	
	(1) Effect ^a	(2) p-value	(1) Effect ^b	(2) p-value
<i>Chief nurse perception of their relationship with the HFC (binary: 1 = below ‘good’)</i>				
Chief nurse relationship with HFC	1.149	0.012**	0.169	0.534
HFC relationship with chief nurse	0.743	0.170	0.822	0.052*
1. HFC organisation	0.240	0.318	0.156	0.663
2. Social accountability	1.164	0.000***	0.410	0.459
3. HF management	0.569	0.080*	-0.547	0.355
<i>HFC executives perception of their relationship with the chief nurse (binary: 1 = below ‘good’)</i>				
Chief nurse relationship with HFC	0.024	0.973	1.497	0.012**
HFC relationship with chief nurse	-0.205	0.752	-0.506	0.438
1. HFC organisation	-0.182	0.474	0.544	0.034**
2. Social accountability	0.177	0.706	0.610	0.294
3. HF management	0.083	0.804	0.156	0.637

*N unchanged since chapter III. | a and b: effects are respectively ξ_2 and $\xi_1 + \xi_2$ in model V.2.
Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

This scenario is consistent with qualitative evidence and is not trivial: in some cases, one or two hours of team-building games may actually have softened conflicts entrenched in years of suspicion. Looking at the qualitative data and HFs where the collaboration seems to have changed, interviewees mention the importance of knowing the nurses to improve their work: “now that we know the nurses, the collaboration is good. Initially, he was the only one to manage the HF, but now we participate as well”.¹⁵⁹ This type of change is however only visible in a minority of cases (about 9%) where the situation was very tense

¹⁵⁹ Focus group with HFC, Rwibaga district (HF Endline.B.2.7), 21.08.2013.

to begin with, and should not hinder the average *null* treatment effect remains.

Heterogeneous effects can also be explored in terms of the different sociodemographic composition of the committee. In particular, trust games have highlighted a possible gender bias: women trust the rest of the committee and the nurses less. Interacting the intervention with the ratio of women in the committee leads to a positive effect, it is significant in the case of the social accountability indicators (Table V-9).

Table V-9. Trust-building intervention: heterogeneous effects using the proportion of women in the committee

	Relative to basic package		Relative to control group	
	(1) Effect ^a	(2) p-value	(1) Effect ^b	(2) p-value
Chief nurse relationship with HFC	1.151	0.530	1.710	0.182
HFC relationship with chief nurse	0.904	0.478	0.219	0.850
HFC self-confidence	0.483	0.323	0.483	0.323
1. HFC organisation	-0.510	0.428	0.302	0.532
2. Social accountability	2.139	0.068*	1.875	0.049**
3. HF management	0.977	0.216	0.382	0.581

*N unchanged since chapter III. | a and b: effects are respectively ξ_2 and $\xi_1 + \xi_2$ in model V.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

This suggests that the team-building games may not be a waste of time under certain circumstances, with certain types of committee. It is worth noting that at baseline level, committees with a higher ratio of women have not done significantly worse in terms of social accountability.

V.5. Conclusion

This chapter sought to explore a simple hypothesis: that HFCs that have been informed of their roles and functions fail to put them into practice because the relationship they have with the chief nurse (and to a lesser extent between themselves) bars them from the collaboration necessary to influence the way the HF functions. This hypothesis is not confirmed, but the chapter finds that this scenario may be occurring in a specific case: when the chief nurse has a really bad perception of the committee and when the

committee is made of people, women in particular, who are known to trust the committee and the nurses less in general. In the rest of the cases, trust-building does not contribute to building a space for change at the HF. Generally speaking, the HFC members barely remain decision makers as they are still unable to create “a robust authorising environment in which to begin the process of articulating and implementing a different approach, [...] assessing the current nature and extent of these problems, interrogating how positive change is being achieved, and to share this with others through an indigenous community of practice” (Woolcock 2014, p.13). In short, the trust-building intervention, combined with the knowledge intervention, does not curb the autocratic governance of the HFs in Burundi.

In fact, in a few instances, medical staff, district officers, and even HFCs turned against the NGO that implemented the project, blaming it for spreading subversive ideas about HF governance. The HFC members did not manage to reallocate decision-making rights by themselves – even when trust-building games supposedly ameliorated or ‘smoothed’ relationships. The reason behind this lack of change is unclear, but possibly the HFC members had no personal interest in doing so, or were not in a position to risk clashes with the nurses. The key question remains how to make a good collaboration also *a critical and influential* collaboration, and emulate the few cases where “the collaboration is good, and differences in viewpoints are constructive”.¹⁶⁰ As Vervisch et al. (2013), who worked on the creation of new associations in post-conflict Burundi, posit, the issue may be one of social engineering and the difficulty of “restoring social cohesion within the liberal peace model for post-conflict reconstruction” (p. 486).

¹⁶⁰ Interview with HFC president, Isale district (HF Endline.B.1.10), 31.07.2013.

VI. DANGEROUS DISRUPTION OR NECESSARY UPHEAVAL? FINANCIAL AND PERFORMANCE INDICATORS AND THE HEALTH FACILITY COMMITTEES

“Havuga uwo bubezwe, nawe uwo buteruranywe n’icibo ntaco aba akivuga”

He, whose food has been partially taken away, speaks out, but if all his food and his dish have been taken away, he will find nothing to say (The greater the injustice, the less demonstrative the reaction)

(Kirundi proverb, Rodegem, 1983, p. 314)

This chapter considers the hypothesis that the availability of localised information about HF performance and financing has an influence on the functioning of the HFC. The core idea this chapter tests is whether obtaining information about the finances and performance of a public service puts the citizens’ committee in a better position to trigger changes.

In Chapters III, IV and V, the idea of the capacity of the HFC was closely associated with its knowledge of the *organisation of the HF*. This knowledge was about the services that were part of the minimum package of activities, the responsibilities and hierarchies inside the HF and HFC, and the basic management principles. In line with Brinkerhoff (2004), the hypothesis is that what matters most is information about the *actual functioning* of the social service. Indeed, the knowledge gap mentioned in earlier chapters could also be a ‘*localised information*’ gap: to fully play its role, the HFC needs to know what is happening in its HF, in particular in terms of performance (use of service) and finances. Recent experimental evidence (Björkman & Svensson 2009; Peisakhin & Pinto 2010) supports the idea that access to information is a powerful vehicle for citizens to force change. The question is both one of accessing and of using localised information.

This comes in a particular, and possibly receptive, context: in the past decade, new health financing and management policies have profoundly affected the functioning of health centres in Burundi. A central piece of the health system is now the ‘Performance-Based Financing’ scheme (PBF), whereby the HF receives a bonus based on its achievements as measured per indicators on the use and ‘quality’ of services. In this new framework, the

HFC is expected to be both a watchdog that ensures that the funds are being used appropriately and a strategic planner that analyses what is happening at the HF and orientates its development (Burundi Ministry of Health 2009).

A first section exposes the conceptual and contextual reasons for looking at the ‘information gap’. The recent reforms of HF management are presented, and with them the new financial incentives of the different actors at the HF and the reaffirmed role of the HFC as strategic planner at the HF. An intervention is designed to address the lack of knowledge of HF performances and finances by the HFC. The two final sections discuss the effects of the intervention. The apparent disruption the intervention creates questions the ultimate consequences of social accountability mechanisms. Heterogeneous effects help approach the delicate question of HFC member remuneration and feed into the discussion of the integration of HFCs inside the PBF system. The chapter also resorts to qualitative material to unpack the changes at the HF after the intervention.

VI.1. Background: Health Financing and Community Participation

The first sub-section uses theoretical literature and empirical examples to develop a theory of change. The second sub-section locates the HFC in the context of recent health reforms in Burundi, and in particular PBF.

VI.1.1. Theoretical considerations

The starting point of the chapter is a situation of low understanding of the committee members of what is happening at the HF, which can be characterised as a classic problem of asymmetry of information. The HFC, theoretically the principal, cannot adequately measure the performance of its agent, in this case the HF medical staff (Eisenhardt 1989). The reason why the committee does not have access to information can be thought of along the same lines as the three obstacles to effective participation identified earlier: lack of capacity, lack of interest (incentive), or hindrance from the principal (e.g. the nurses preventing the HFC to do their work). Information about the outputs of the HF, externally

provided or acquired as obstacles to access information are removed, is expected to help the HFC correct the asymmetry of information. It thereby should strengthen the position and control of the principal (the HFC) vis-à-vis its agent (the nurses). The empirical literature on community participation in the cases of Philippines and Uganda has experimentally shown that information about performances gathered by the community or community committees may help diminish corruption and improve service provision (Olken 2007; Reinikka & Svensson 2005; Khagram et al. 2014). This is very much in line with standard social accountability theory, and the literature on open budget transparency initiatives (Malena & Forster 2004). The chapter goes beyond strict budgetary aspects. Transparency is understood as also the release of information on the volume and type of activity, not solely for checking the consistency of the budget but also to understand the situation of the HF.

There are two non-exclusive ways through which transparency and information initiatives could bring change in the functioning of the HFs, as follows.

First, the mere *possibility* of the committee knowing about mismanagement and bad practices could create an incentive for the medical staff to improve its behaviour and management, for the sake of preserving its image or avoiding problems. According to social accountability theory, this mechanism is especially efficient if there is a possibility that the community – in this case the HFC – can indeed sanction or at least have some leverage on the HF. This need not be formal; indirect channels could work.

Second, the fresh localised information gives the HFC a better understanding of the situation at the HF and helps it make better informed decisions as to which actions should be taken (theoretically in the interest of the population). Concretely, the idea is that by comparing the results – the provision of services and financial situation – with the targets set by the Ministry of Health and with neighbouring HFs, HFCs establish a benchmarking system that can help them identify priority areas for action. This idea is very close to the PBF ‘theory’, whose latest manual reads: “data analysis and learning are essential parts of PBF systems. Comparing performance trends, looking at the percentages of population

coverage obtained, and benchmarking are the three most important analytical methods” (Fritsche et al. 2014, p.227). This analysis, in the PBF model, is in part the job of the HFC, which “participates in the elaboration of the annual and termly action plans of the HFC” (Burundi Ministry of Health 2009, p.24). As Fox (2015) recently argued, this theory of change is only valid if the information is ‘actionable’, which means that the piece of information can be used to modify the situation at the HF.

Both mechanisms can develop in a static one-shot fashion or in a more dynamic way. In the one-shot case, access to information comes from a third party but the HFC does not have any easy way or willingness to access that information in the future – information release is then a form of ‘shock therapy’ to the HF. More sustainable and promising is, however, the set-up of a sequential and dynamic system, by removing the abovementioned hindrances. This is what the intervention detailed in the next section tries to do. In the case of this chapter, it is not only information on the actual HFC functioning and performance that a third party gives to the HFC, but also a training on the managerial skills for the HFC members so that they can gather information about the actual level of performance and management of their HF by themselves. Managerial skills, a fuzzy concept (Whitley 1989), must be understood here as the capacity of the HFC to have a general view of the situation at the HF, in its different components, and obtain the information they require to participate efficiently in decision-making.

The hypothesis of a lack of information on the actual functioning of the HF only makes sense if the HFC and the medical staff, the principal and the agent, have clear views on their missions and the *expected* work. To use a New Institutional Economics framework, a prerequisite is that the expected property and decision rights of each party are clarified (Meessen 2009). The importance of having a clear framework has also been developed in empirical literature on citizens committees in multiple instances (McCoy et al. 2012), and can be seen as a question of *institutionalizing* the committee (Meier et al. 2012), making the HFC part of the institutional fabric and making its decision rights public knowledge. The chapter tests the knowledge/information gap hypothesis mentioned at the beginning

of the thesis in terms of *both* expected role at the HF (a more institutional question, explored in Chapter III) *and* understanding of what is happening regarding finances and performances (a more technical question). It does not test one hypothesis against the other.

VI.1.2. Reforming the Health System in Burundi

In the past few years, the landscape of HF management has changed in Burundi. In particular, three new policies have affected the way resources are handled in health centres: (1) the abolition of user fees for pregnant mothers and children below five in 2005; (2) the introduction of a new health insurance, the *Carte d'Assurance Maladie* or CAM, in 2012; (3) and before that and maybe more importantly, the rolling out of Performance-Based Financing (PBF) schemes between 2005 and 2010. These reforms have introduced more complexity in the health system and constituted shocks on the resources available at the health centre level. They may have improved access to health services (Bonfrer, Poel, et al. 2014; Falisse, Ndayishimiye, et al. 2015). A section in the appendix presents these reforms in more details (Appendix C.VI).

Chapter II has already highlighted the central role PBF has come to play in HF financing. The core idea of this financing scheme is that HFs are eligible for a subsidy based on the amount of services delivered, the so-called 'quantity' bonus, and the state of their infrastructure and service provision, the so-called 'quality' bonus. The 'performances' of the HF are verified by a state purchasing agency and a community-based organisation. The bonuses are linked to a series of measured indicators defined by the MoH, and the nurses decide which part of the bonus goes into their pockets and which is invested in the HF development (or savings). Central to the system is the contract between the purchasing agency and the HFs, which requires the HF to submit a development plan every semester. PBF, and especially the introduction of a new planning system constitutes, on paper, an opportunity for the HFC to affirm its role at the HF-level, for three main reasons: (1) it introduces more money at the HF-level, providing the HFC with more options in terms of HF development; (2) it provides the HFC with an opportunity to assert its influence at

the HF as the HFC is supposed to be leading to writing of the development plan; and (3) it provides publicly available indicators that can help the HFC monitor the situation at the HF.

Qualitative evidence from 2011-2012 fieldwork shows that HFC members know very little about PBF principles. When known, PBF was, for HFC members, a bonus system for the medical staff whose functioning was globally obscure. HFC participation to the PBF action plan was mostly in name and the mandatory signature of the president just a rubber stamp. More generally, despite PBF and its requirements, the exchange of information about the state of the HF was limited before the intervention. At baseline level in 2011-2012: 55% of the HFCs were transmitting the minutes of their meetings to the nurses, and 14% of the HF staff were transmitting the action plans and other documents on the HF functioning to the HFC.

A typical New Public Management scheme, the theory of PBF also brings to the forefront two important issues related to the HFCs and their role: (1) monitoring and (2) personal incentives.

Monitoring and anti-corruption

By linking performance to payment, PBF increases the risk that results are made up by health facilities.¹⁶¹ Purchasing agencies send staff to verify HF performance and prevent fraud. They also contract community-based organisations to verify the existence and profile of randomly selected patients. This system has been, somewhat misleadingly, presented as a way for the population to express its (dis)satisfaction with health services (Soeters et al. 2006; Falisse et al. 2012).

The HFC has, potentially, an important role of safeguard within the PBF system. As the World Bank 'PBF toolkit', which largely quotes the Burundi experience, puts it: "Enhanced autonomy with regards to the use of public funds requires oversight, which necessitates

¹⁶¹ More generally, the issue is one of biased effects of anticipation and is known as the Goodhart's law: "when a measure becomes a target, it ceases to be a good measure". See Desrosières (2014) for a recent discussion.

the creation of a HFC. Apart from the standard financial management tools used for accounting purposes, such as the income and expense registers and the quarterly income and expense statement that are auditable through the regular bureaucratic oversight mechanisms, public oversight is achieved through creating a health facility management committee” (Fritsche et al. 2014, p.145). HFCs are expected to make sure that the activities and actions of the HF are in line with the interests of the population, and prevent forms of corruption that would not necessarily be caught by the verification mechanism such as patronage and overpricing. These are genuine issues for the population as revealed by the 2011-2012 household survey (see Table II-2).

The terms of references of the HFC adopted in 2013 by the MoH, in furtherance of anterior guidelines, make the HFC a central element for fighting fraud and corruption at the HF. They specify that the HFC is in charge of “overseeing the respect of drugs and services prices at the HF”, “helps in the mobilisation, management and affectation of the resources of the HF to ensure an optimal implementation of the activities”, and “checks the integrity of the health infrastructure, drugs and equipment” (Burundi Ministry of Health & WHO 2007).

Personal incentives

In the New Public Management-driven PBF, health facilities are viewed as autonomous organisations that develop their business. By doing so, the utility of both the users, the ‘clients’ (to use the PBF vocabulary) and the medical staff increases. This model relies on the idea of autonomy in management that was presented in chapter II. Critics have called this model another attempt of the state to cut its spending (Barumwete 2010).

In this new framework of autonomy, financial incentives play a key role. Basenya et al. (2011) found in their study that between April 2010 and March 2011, the PBF bonus amounted on average to 50% of the official salary of the HF nurse in the area covered by this thesis.¹⁶² It is also important to bear in mind that the PBF bonus is typically paid with

¹⁶² At the exception of Bujumbura rural, which is replaced by Gitega in the study.

more regularity than salaries (PBF is in effect implemented by international organisations under the authority of the MoH). In early versions of the PBF system, the HFC would also get 5% of the total bonus as a recognition of its contribution to the performance of the HFC. Through time, the amount has varied from 3% to 10%, and at the time of the baseline study in 2011, PBF guidelines did not mention HFC compensation anymore. This unclear framework and history explains why, in 2011-2012, the situations of HFCs differed: 36% of the HFCs were unpaid, 43% had a flat compensation, and 19% were paid based on their work or performance (data on the origin of the funding was not collected – see Figure 9 in appendix for more details).

This introduction to health financing reforms in Burundi reinforces the hypothesis that the inefficiency of the HFC could be caused not only by its lack of understanding of its theoretical role and its *raison d'être*, but also by a lack of understanding on what is happening, as well as low practical analytical and financial literacy. In that perspective, the HFC may need tools for finding out what is going on at the HF and how to affect it.

VI.2. Empirical strategy

An experimental approach is used to test whether localised information on the HF actual finances and performances makes a difference regarding social accountability and HF management, and if so, how. The approach bears similarities with a series of recent experiments on releasing information about service delivery and finances, most notably Björkman and Svensson (2009) and Reinikka and Svensson (2005) in Uganda. The methods are similar to the one described in Chapters III and V.

VI.2.1. Intervention

A group of 84 health facilities was randomly selected to receive a 'localised information' intervention in addition to the two interventions described in Chapters III and V, and which will be referred to as the 'basic bundle of interventions' from now on. It was indeed not conceivable to ask the HFC members to delve into the finances and operations of their HF before making sure they had a good idea of what their role was and what the HF's

main functions are. Similarly, the trust intervention sought to create a positive atmosphere between the chief nurse and the medical staff that would put HFC members in a more favourable position to access HF management information.

The intervention took place during an extra one-day session to which the chief nurse, the deputy chief nurse, and the HFC members were invited. The sessions were organised in October and November 2012, one to three months after the HFC/HF was exposed to the interventions described in chapters III and V. The session consisted in the following.

First, a discussion about finding information about the HF management was organised, together with a briefing about the general functioning of the PBF system. The key themes were: (1) what is PBF and how is it different from ordinary financing (payment according to use of services, and some quality requirements; bonus shared between the staff and investments at the HF; and the idea that the money should be spent according to a development plan in which the HFC is expected to play a key role); (2) what was the idea behind PBF and why did the ministry implement it (incentivise health workforce and reinforce autonomy in management through direct financing); (3) what elements are available to the HFC to assess whether their HF is doing well; and (4), following the previous point, what is the development plan and what is the role of the HFC in it.

Second, to make the understanding of the operational and financial management and PBF more tangible, an analysis of key indicators on the use of services was conducted with the HFC. It included looking at the provision of services to the population of the HF responsibility area (and calculating the HF target using the MoH/WHO formula¹⁶³), more particularly (1) curative consultation of users above 5 years old, (2) small surgery, (3) anti-tetanus vaccine for pregnant mothers (AVT 2-5), (4) HIV/AIDS testing, (5) new visits for pregnant mothers, (6) institutional deliveries, (7) family planning, (8) ante-natal visits, (9) post-natal visits, and (10) reference of patients to the hospital. These indicators were defined as the most important for primary healthcare during a discussion with the

¹⁶³ For a discussion of the shortcomings of this formula, see Falisse et al. (2014)

MoH and an extra indicator, the balance between the monthly HF revenue and expenditures was added. In line with social accountability and transparency approaches developed in recent years (Ringold et al. 2011), it was then proposed to the HFC to report these results on cards that could be used to disseminate the information among the population and the visitors of the HF (for samples, see Figure 10 and Figure 11 in appendix). The card also included information on whom to contact at the HF to have more information about the service, its cost, and when the service is accessible. The HFC was free to use the cards as it pleased but it was recommended that the cards be displayed in the health centre and used during meetings with the population.

The facilitators were from the same pool of facilitators as in the basic interventions. In order to avoid a facilitator's effect, the facilitators went to HFs they had not already visited. In February and March 2013, the HFC members had a chance to participate in a re-cap session; their questions were mostly about the functioning of PBF. They received a minimal US\$ 3.5 fee for transportation to the re-cap session, which was held at the HF.

VI.2.2. Estimation strategy

The outcome variables consist in the different dimensions explained in Chapter III, for which different components can also be studied individually to have a finer grain picture of the situation. Two new indicators were added to this section, as they are important to understand the effect of the intervention: (1) whether the HFC knows the budget of the HF, and (2) who in the HFC is involved in the business plan. Baseline data are unfortunately unavailable for these indicators.

The difference-in-difference impact is again evaluated through an OLS model similar to the one presented in the previous chapters:

$$Y_{d,i,t} = c + t + \sum_{n=1}^3 (I_n + \beta_n I_n t) cX_i + cD_d + \varepsilon_{d,i,t} \quad (\text{VI.1})$$

– where Y is the outcome variable. t, I₁, I₂, and I₃ are dummy variables that respectively identify the time (pre- or post-intervention), the group that benefitted from the basic

institutional intervention discussed in Chapter III, the group that also benefitted from the trust-building intervention discussed in Chapter V, and the group that also benefitted from the ‘localised information’.¹⁶⁴ cX_t is a set of key pre-intervention level covariates that includes the size of the HFC, the ratio of women and members who attended secondary school, the number of ‘collines’ represented, whether the HF is faith-based or public, the number of qualified nurses, water and electricity provisions, and the population of the HF catchment area. cD_d captures health district-level fixed effects. The effect of the localised information intervention relative to the bundle of basic intervention is given by β_3 , while the total effect of the localised information (that is, in combination with the basic bundle of interventions) relative to the control group is given by $\beta_1 + \beta_2 + \beta_3$, and a Wald F-test is used to determine whether $\beta_1 + \beta_2 + \beta_3 = 0$.

The main interest is whether the full intervention bundle has an effect relative to the control group. It is not possible to test the effect of the localised information component of the bundle alone but, as it was highlighted above, it would make little sense in the context of HFCs in Burundi. It is, however, possible to see what sort of difference this new component makes when it is added to the bundle (and therefore interacted with it) and thereby identify potential complementarities or ‘compensation’ effects: does the intervention reinforce previously identified effects, or do some effects disappear?

The power for detecting changes was reasonable, with 83 HFCs in the control group and 83 in the localised information intervention group (and an additional 83 that only received the basic bundle of interventions). With regards to the baseline standard deviations of the first dimension, HFC functioning, the power for detecting a change of 0.15 units (standard deviation, as the dimensions are standardised indicators) was 0.82.

The robustness of the results is tested by removing control variables, following ANCOVA

¹⁶⁴ As well as a dummy and interaction for a fourth intervention that comes on top of the third intervention and will be discussed in the next chapter. This picks up any difference with the control group at the baseline level that would not be accounted for. The intervention that is not part of this chapter is controlled for by using covariates I_4 and I_{4t} .

models, as well as running the estimation with a database that only contains the control group and the group that received exactly the interventions 1+2 (basic bundle), and 3 (localised information).

The changes expected from the intervention mainly take place at the HF-level: it is expected that the HFC will take up a more active role at the HF as it will know what the situation is. This is only fully possible if the HFC members (1) have no vested interests (or not too many), (2) are ready to make the effort of changing the situation, and, (3) are in a position to decide. Because these conditions are not necessarily easy to fulfil, heterogeneous effects will look at different the situations of the HFCs regarding experience with PBF composition, and financial incentives. The theory of change exposed in the first section rests on the assumption that the HFC actually reflected the will of the population. As Table VI-1 shows, the groups are highly comparable at the baseline level.

Table VI-1. Situation at baseline

	control mean ¹	difference basic bundle ¹	difference control group ²
<i>HFC Features</i>			
Terms of Reference available	0.222 (0.047)	0.095 (0.103)	0.159
Ratio of Women	11.173 (0.498)	-0.476 (1.114)	-0.601
Ratio went to sec. school	0.347 (0.02)	0.008 (0.039)	-0.001
Collines/villages represented in HF	0.328 (0.025)	0.021 (0.041)	-0.011
<i>HF features</i>			
Water (0: never to 5: constant)	3.099 (0.128)	-0.071 (0.234)	-0.051
Electricity (0: never to 5: constant)	3.074 (0.134)	0.238 (0.248)	-0.003
Support staff at HFC	5.951 (0.315)	-0.048 (0.597)	-0.522
Urban area	0.148 (0.04)	0.048 (0.057)	-0.053
Faith-based HFC	0.173 (0.042)	-0.024 (0.089)	0.018
Population in area	14628 (1052)	718 (1812)	128
1. HFC organisation	0.029 (0.031)	0.079 (0.078)	0.008
2. Accountability	-0.025 (0.076)	-0.028 (0.164)	-0.016
2.1. HFC rights	0.05 (0.066)	0.014 (0.135)	0.031
3.1. Equipment	-0.092 (0.092)	-0.057 (0.146)	0.108
3.2. Human resources	-0.016 (0.06)	-0.193 (0.114)	-0.097
3.3. Infrastructure	0.041 (0.093)	0.069 (0.163)	-0.024
3.4. Finances	-0.026 (0.055)	-0.101 (0.131)	-0.019
6. Provision of services	-0.019 (0.085)	0.074 (0.124)	-0.002
Number of observations	83	83	83

1. Difference knowledge is the β_3 in: $Y = c + \beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \varepsilon$, where I_3 is the localised information intervention group. Control group mean is the constant. | 2. $\beta_1 + \beta_2 + \beta_3$ in the previous model, significance is F-test joint significance. | P-value: * <0.1 , ** <0.05 , *** <0.001 . Standards errors in parenthesis.

VI.3. Main results

Looking at the general picture and using the dimensions of analysis defined in chapter III, the localised information intervention combined with the basic bundle of interventions does not appear to improve the effects of the basic bundle of interventions (Table VI-2). With respect to the control group, the localised information intervention together with the basic bundle of interventions has a significant impact on the HFC organisation index, but the actual contribution of the localised information intervention (and its interaction with the basic bundle) to this effect is very little (0.019 points). Still relative to the control group, the intervention also has a positive and statistically significant impact on drugs management, but this impact is not robust to the FWER correction (the standard deviation is quite important and was 0.709 at the zero standardised baseline level already).

Table VI-2. Localised information intervention: main results

	Relative to basic bundle of interventions			Relative to control group		
	(1) Effect ^a	(2) p-value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p-value
1. HFC organisation	0.019	0.841		0.259	0.005***	0.030**
2 Accountability	-0.145	0.501		0.012	0.949	
2.1. Enforcement / HFC rights	-0.203	0.296		-0.078	0.622	
2.2. Share information with users [†]	-0.026	0.817		0.036	0.698	
2.3. Share Information with nurses	0.144	0.274		0.115	0.311	
2b. Agreement on HFC decisions [‡]	0.014	0.930		-0.031	0.831	
3. Management	0.209	0.114		0.214	0.053*	0.320
3.1. Management: Drugs	0.073	0.689		-0.028	0.860	
3.2. Management: Staff	0.043	0.816		0.082	0.606	
3.3. Management: Buildings	-0.156	0.106		-0.079	0.429	
3.4. Management: Budget	-0.104	0.658		0.008	0.970	
4. Equity in access [†]	-0.067	0.671		-0.201	0.160	
5. Quality of services [†]	-0.092	0.576		-0.035	0.788	
6. Provision of services	-0.015	0.859		-0.018	0.774	

N unchanged since chapter III. | See Table III-3 and chapter III (experimental design) for details about the construction of the standardised dimensions. | [†] Data and analysis at the household-level (2.2. aggregated at HF-level when dimension 2 was constructed). | [‡] Not part of the original analysis plan. | *a* and *b*: effects are respectively β_3 and $\beta_1 + \beta_2 + \beta_3$ in model VI.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * < 0.1, * < 0.05, *** < 0.001.

In this context of quasi-null results, looking at the indicators that compose each dimension helps to understand whether nothing changed at all or whether there are positive changes on specific aspects that are cancelled off by adverse effects. Dimensions 4 (perceived quality), 5 (equity in access), and 6 (provision of services) are not presented in detail as they are expected to be a consequence of general changes in HF management and social accountability, which have clearly not occurred after the ‘localised information’ enhanced intervention compared to the basic intervention.

Unpacking the HFC organisation index reveals that the committees are in fact affected by the localised information intervention, but in somewhat counter-intuitive and conflicting ways (Table VI-3).

Table VI-3. Localised information intervention: effects on HFC organisation

	mean control (2013)	Relative to basic bundle of interventions			Relative to control group		
		(1) Effect ^a	(2) p-value	(3) FWER p- value	(4) Effect ^b	(6) p-value	(6) FWER p-value
Meetings HFC per month	0.975	-0.103	0.307		-0.125	0.177	
Decisions by consensus	0.889	0.372	0.007***	0.012** *	0.245	0.072*	0.193
HFC self-confidence (1-5) ¹	4.162	-0.786	0.001***	0.002** *	0.039	0.840	
Terms of Reference available	0.148	-0.329	0.058**		0.429	0.005***	0.057*
Executive committee exists	0.873	0.024	0.561		-0.034	0.345	
Key activity; management ²	0.864	0.026	0.775		0.056	0.399	
“ ” detailed management ²	0.259	0.262	0.098*		0.316	0.025**	0.193
“ ” Information / voice ²	0.370	-0.025	0.859		-0.063	0.599	
Meetings HFC / month	0.210	0.173	0.183		0.180	0.103	

*N unchanged since chapter III. | 1. Based on a 5-item Likert scale: from 1 no confidence at all to 5 very confident. | 2. Created from coding the open-ended question ‘what is the main activity of the HFC?’ | ‡ Not part of the original analysis plan. | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model VI.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * < 0.1, ** < 0.05, *** < 0.001.*

Relative to the basic bundle of interventions, the localised information intervention (and its interaction with the basic intervention) changes the way the HFC says it makes decision, which becomes more consensus-based as opposed to majority-based or imposed by the

HFC president. The proportion of HFCs that say they are involved in their HF management as part of the HFC core activity is also on the rise, though this result is only borderline significant. The presence of the terms of reference and the confidence and pride HFC members have in their work as HFC members take an unexpected negative sign. Only the results relative to the confidence in HFC and the decision by consensus are robust to the FWER correction when looking at the impact of the bundle of interventions.

Relative to the control group, the intervention has a positive effect on the HFC identifying management as its core activity and making decisions by consensus. These effects are not FWER robust. The impact on the terms of reference remains, overall, positive and significant, although the extra intervention clearly diminishes the size of the effect compared to the case of the basic intervention only (see previous chapter). The negative effect on self-confidence is not visible anymore, suggesting that the localised information intervention offsets the positive change triggered by the basic bundle of intervention on this matter.

The accountability indicators are not really changed by the interventions (Table VI-4). Compared to the basic bundle of interventions, there seems to be a slight positive impact on the proportion of HFCs that co-sign drugs orders and a negative impact on the transmission of the HFC minutes to the HF staff. Only the second impact is statistically robust, and this negative effect is, in fact, consistent with the impression of an increased disorganisation of the HFC that was suggested by the results on the HFC organisation. It is worth mentioning the important number of indicators that take a negative value, even when they are not significant, especially those related to the decision rights HF staffs and HFC members attribute to the HFC.

In relation to the control group, the only positive impact and statistically significant impact is a slight increase in the number of people who identify the HFC as one of the managers of the HF. This effect is however not robust to the FWER correction.

Knowledge of the HF budget by the HFC, which was not part of the original analysis plan and for which baseline data does not exist (no difference-in-difference), is

positively but not significantly affected by the intervention. Participation in the HF development plan is increased, but mostly for the HFC executives rather than for the entire HFC, and the result is only significant relative to the basic bundle of intervention and not FWER robust.

Table VI-4. Localised information intervention: effects on social accountability

		Relative to basic bundle of interventions			Relative to control group		
	mean control (2013)	(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p-value
2.1. Decision rights of, (according to...)							
HFC (...nurses) ¹	0.628	-0.105	0.352		-0.114	0.238	
HFC (...HFC executives) ¹	0.587	-0.153	0.161		-0.010	0.912	
HFC executives (...nurses) ¹	0.257	-0.058	0.606		-0.049	0.571	
HFC executives (...HFC exec.) ¹	0.293	-0.054	0.636		0.045	0.612	
HFC president (...nurses) ¹	0.312	-0.085	0.377		-0.110	0.133	
HFC president (...HFC exec.) ¹	0.279	-0.150	0.101		-0.014	0.861	
HFC co-signs orders, binary ¹	0.667	0.236	0.085*	0.354	0.162	0.187	
2.2. Shared info. with population [†]							
Knows the HFC [†]	0.423	-0.080	0.307		-0.046	0.520	
Num. of HFC members known [†]	2.558	-0.857	0.102		-0.318	0.371	
Went to a HFC meeting ^{2,†}	0.825	0.059	0.830		0.069	0.752	
Asked the HFC a question ^{2,†}	0.819	-0.153	0.601		-0.223	0.302	
Identifies HFC as HF manager ^{3,†}	0.187	0.078	0.132		0.081	0.051	0.357
Bill is understood (1-5) ^{4,5†}	4.091	0.179	0.535		0.013	0.952	
Prices displayed at HF ^{5†}	0.382	0.051	0.661		0.055	0.605	
2.3. Shared info. with nurses							
Minutes to chief nurse (binary)	0.160	0.132	0.418		0.200	0.163	
Minutes to district (binary)	3.230	0.313	0.059*	0.265	0.051	0.681	
Not part of initial analysis plan							
Months since last gen. assembly	3.230	1.301	0.445		0.363	0.798	
HFC president does HF plan ^{EO}	0.578	-0.029	0.761		0.111	0.216	
HFC members do HF plan ^{EO}	0.132	-0.001	0.608		-0.001	0.874	
HFC executives do HF plan ^{EO}	0.180	0.146	0.075*	0.450	0.128	0.204	
HFC says it knows HFC budget ^{EO}	0.332	0.096	0.293		0.132	0.228	
HFC can estimate HFC budget ^{6,EO}	0.168	0.034	0.678		0.043	0.632	

N unchanged since chapter III. | 1. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, price drugs, price services, development plan. See Table II-9 for details. | 2. In the past 6 months | 3. Dummy created from the question “Who is the manager of the HF?” | 4. 5-item Likert-scale | 5. Users who visited the HF in the past 6 months only. | 6. Dummy: budget estimated by HFC is not 33% higher or lower than the official budget as per budget files kept at the HF | † Data and analysis at the household-level | EO: end-line only (not a difference-in-difference indicator) | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model VI.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .

Since the confidence of the HFC members seems to have deteriorated with the intervention, it is interesting to note that the agreement on the HFC rights between the HF staff and the HFC is largely unchanged by the intervention (Table VI-5). It seems the situation remains stuck in a status quo, a sort of low-level equilibrium: no change is detected and neither the HFC nor the HF staff are expecting the HFC to have much say at the HF, on which they agree at 68-82%, depending on the issue.

Table VI-5. Localised information intervention: effects on agreement on decision rights

	mean control (2013)	Relative to basic bundle of interventions			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p-value
<i>HFC and chief nurse nurses</i>							
agree on HFC decision rights	0.72	0.010	0.879		-0.013	0.747	
“ ” on HFC executives rights	0.78	-0.029	0.721		0.047	0.491	
“ ” on HFC president rights	0.71	-0.057	0.422		-0.027	0.732	

*N unchanged since chapter III. |a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model VI.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

The management of the HF is also, in appearance, largely unchanged by the intervention (Table VI-6). The general overview, however, shows a non-robust joint positive effect on the stock of drugs and equipment (which means a decrease in the number of days of stock-out of drugs). Looking at the components of this dimension, there also appear to be a slightly negative impact on the construction of small buildings at the HF (relative to the control group) – yet this result is only simple difference and not robust to the FWER correction.

There is, however, something intriguing playing out at the level of human resources management: two stories seem to be unfolding in parallel. On the one hand, there is an increase of mid-level staff members in the localised information intervention group in comparison to the basic intervention group. The increase is by 1.8 staff members (while the mean number of such staff in a HF in the control group in 2013 was 5.58), which is non-negligible but not robust to the FWER correction. This change is not significant when

the comparison is with the control group. On the other hand, the turn-over in chief nurses is significantly higher (+30%) when comparing the intervention group with the control group. The effect relative to the basic bundle of interventions is not robust to the FWER correction.

Table VI-6. Localised information intervention: effects on HF management

		Relative to basic bundle of interventions			Relative to control group		
	mean control (2013)	(1) Effect ^a	(2) p-value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p-value
2.1. Equipment							
Days/month stock-out drugs ¹	1.351	0.441	0.248		0.295	0.447	
“ ” of equipment ¹	0.596	-0.181	0.615		0.258	0.378	
“ ” of medical equipment ¹	1.908	-0.577	0.318		-0.468	0.357	
2.2. Human resources							
Qualified staff (number) ²	0.481	0.095	0.581		0.072	0.586	
Support staff (number) ²	5.584	1.784	0.037**	0.107	0.839	0.173	
Chief nurse (change this year)	0.160	0.238	0.071*	0.173	0.298	0.007***	0.021**
3.3. Infrastructure							
Water ³	3.074	-0.122	0.603		0.090	0.695	
Electricity ³	3.098	-0.086	0.739		0.133	0.575	
New building this year ^{‡,EO}	0.210	-0.076	0.436		-0.155	0.059*	0.236
New small build. this year ^{‡,EO}	0.160	0.126	0.235		0.095	0.323	
3.4. Finances and services							
HF direct revenue / revenue ⁴	0.147	-0.038	0.492		0.024	0.507	
HF expenses / income ⁴	1.054	-0.061	0.107		0.051	0.140	
Services available ⁵	0.95	0.008	0.794		0.018	0.554	

*N unchanged since chapter III. | 1. A negative impact on stock-outs constitutes an improvement, mean value of the items presented in Table II-7 p-value | 2. Post-secondary at least | 3. All staff that do not have post-secondary qualification. | 4. 5-item Likert scale (0: never to 5: constant) | 4. Direct revenue is revenue generated from user fees. | 5. Out of seven services –see Table II-3 for details. | EO: end-line only (not a difference-in-difference indicator) | ‡ Not part of the original analysis plan. | a and b: effects are respectively β_2 and $\beta_1 + \beta_2$ in model VI.1. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

‘Softer’ changes in terms of behaviours may not have been captured by the above-mentioned indicators, but simply asking ‘has anything changed at the HF’ to the HFC and chief nurse and then coding the answers and triangulating them, a process that is prone to confirmation biases, does not show any impact of the intervention relative to the basic intervention. Most of the visible effects are not different to the effects of the basic package (Table VI-7).

Table VI-7. Localised information intervention: effects on self-reported nurses' attitudes

	mean control	Relative to basic bundle of interventions			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p- value
Staff more available at HF	0.096	-0.142	0.167		-0.102	0.213	
Waiting time/order of arrival	0.132	0.032	0.754		0.259	0.002***	0.008***
Better welcoming of patients	0.144	0.121	0.190		0.137	0.081*	0.098*
More explanations to patients	0.096	-0.014	0.079		0.112	0.066*	0.108

N unchanged since chapter III. | The difference is the β in $Y = c + \beta \text{Intervention} + cX + \varepsilon$, cX the vector of covariates of the equations mentioned above (including, importantly, district fixed effects). Paid is a dummy variable that takes the value 1 for paid HFCs.

The results are robust to ANCOVA specifications (see Table C-23 in appendix) and the other robustness checks explained in Chapter III.

VI.4. Discussion and qualitative insights

The 'localised information' intervention did not lead to visible and measurable positive changes at the HFC and HF-levels. This invites to revisit the initial theory of change in order to understand why, in the case of HFCs in Burundi, information about the HF functioning and finances: (1) has not led to an empowerment of the HFC; (2) has not led to visible changes in the HF management with the very noticeable exception of a higher turn-over in the chief nurses; and, (3) seems to have affected the HFC self-confidence and its relationship with the chief nurse.

As this section discusses, the main tool that was proposed to the committees to exploit information about the finances and performance of their HF, the summary cards, was quickly discontinued and the understanding of PBF and its functioning remained very low. Weak adherence to the intervention is a plausible hypothesis for the 'null' part of the results, but it is unlikely to explain results that seem, in part, negative. After discussing the intervention implementation, it will be argued that, (1) the few effects measured as negative may hide effects that can be judged positive, and, (2) the intervention, which consists of information about the actual situation at the HFC, might not be sufficient to

bring rapid change as it may put HFC members in a complicated position vis-à-vis the chief nurse and nurses.

VI.4.1. Adherence

The low adherence to the intervention may be an explanation for its relative failure. In practice, six months after the cards were implemented, only six of the HFCs (7.1%) had taken the initiative to update them with fresh data.

Post-intervention qualitative fieldwork and implementation reports revealed three competing explanations for why the cards failed to take off. Firstly, some HFC members argued that there was no need for them to use the cards anymore as they knew how and where to find the information and did not need to report them on elaborate cards. Secondly, other HFCs argued that they did not need yet another tool to disseminate the information to the population – in their opinion the new tool was ultimately ill-suited or simply too complicated to use. Thirdly, HFCs explained that tensions at the HF, as evidenced by the results section, prevented further use of the cards: filling in the cards required the nurses to let the HFC look at the HF data, which is not possible in a climate of tension.¹⁶⁵

Similarly, it is uncertain that the localised information intervention succeeded in providing HFC members with sufficient knowledge of the functioning of PBF and new management practices. As a matter of fact, the facilitators that came for a re-cap session six months after the intervention found that only 22% of the targeted HFCs had a good understanding of the PBF. In another 44% of the HFCs, there was some decent understanding of PBF but it was only coming from the HFC executives. Some HFCs, for instance, recall that “we do not know anything about PBF because we never sit [with the HF staff] in a good atmosphere to talk about it and decide on strategies”.¹⁶⁶ In some other HFs, PBF generated material expectations and frustration from the HFC members. The second recap session,

¹⁶⁵ Focus group with HFC members, Matana district (HF Endline.B.3.3), 08.08.2013, Interview with HFC president, Kinyinya district (HF Endline.B.3.5), 23.08.2013.

¹⁶⁶ Focus group with HFC members, Matana district (HF Endline.B.3.3), 08.08.2013.

which came nine months after the initial session did cover PBF again. However, it might have been too late to provoke visible changes and no evidence shows that this second session was more efficient than the first one.

A real concern is that the cards, and more generally the PBF system are a complex tool that requires knowledge, practice, and competencies that exceed what can be reasonably expected from a health committee member in a short period (Andrews et al. 2013; Bertone & Meessen 2013). PBF, given its central position in the Burundian health system, cannot be ignored by the HFC, but the expectations regarding what non-professional managers may be capable of doing may need to be kept low. In 95% of the HFCs that benefited from the intervention, the HFC was still not participating in the PBF action plan. The HFC executives were involved in 38% of the case, and the president was still not involved in 23.81% of the cases. As one HFC member recalls, “all the activities come from the HF and the president of the committee only intervenes to sign”.¹⁶⁷ Similar situations were reported in at least 30% of the cases at the time of the re-cap session. This could explain part of the negative effect on self-confidence.

VI.4.2. Nested analysis: destabilising the health centre?

“the current chief nurse listens to us, but the previous one was mediocre. It was very rare when he joined the meetings, and whenever he came there were clashes. The disagreement was solved by changing the chief nurse”

(HFC, intervention group)¹⁶⁸

The lack of adherence and counter-intuitive results lead to questioning the theory of change and investigate what happened in the HFs once the intervention was implemented. One year after the intervention, most HFCs still do not know the financial situation of their health centre and are not more involved in its management and development plan. What the intervention, however, seems to trigger is increased tension at the HF: HFC members

¹⁶⁷ Focus group with HFC members, Makamba district (HF Endline.B.3.2), 29.07.2013.

¹⁶⁸ Interview with HFC executive committee president (*PréCOGE*), Makamba district (HF Endline.B.4.5), 12.08.2013.

are less likely to have terms of reference (typically the product of a discussion with the nurses) and they have more doubts about their capacity to do the job than the HFCs that only received basic training on their mission. The intervention also led the HFC to communicate less (the minutes of its meetings) with the chief nurse and the medical staff. Nested qualitative analysis, carried out in the same way as in the previous chapters help understand what happened after the HFC received the package of interventions (see Table C-24 in appendix for case selection).

In the best-performing cases, the HFC insists that it now participates in writing the development plan according to the budget that is available at the HF,¹⁶⁹ has the necessary access to verify the inflows and outflows,¹⁷⁰ and, contrary to previous situation “can follow the money without any problem”.¹⁷¹ The summary cards are said to be very useful, and HFC members declare that they “are not afraid to denounce what is not working well”.¹⁷² As other HFC members put it “[With the training] we have understood how to help in the management of the HF and how to look at the management. Nowadays, the HFC president is free to enter in any services at any time, without any fear”.¹⁷³

In HF ranked at the bottom of the nested analysis are HFCs that seem in a total impasse with their HF staff. One committee, for instance, declares: “the priest who is in charge refuses to collaborate with us and he is really the only one who manages the HF. We do not know what the HF possesses”¹⁷⁴. The intervention possibly exacerbated the tension, as in a HF where “the chief nurse confiscated the summary sheets. He said it is private and we [the HFC] have no right to interfere whatsoever”.¹⁷⁵ Expectedly, in such HFCs, the members declare: “we have not understood the action plan too well, we do not know how

¹⁶⁹ Focus group with HFC members, Bururi district (HF Endline.B.3.8), 12.08.2013.

¹⁷⁰ Focus group with HFC members, Murore district (HF Endline.B.3.9), 21.08.2013.

¹⁷¹ Focus group with HFC members, Rutana district (HF Endline.B.3.10), 29.07.2013.

¹⁷² Focus group with HFC members, Murore district (HF Endline.B.3.9), 21.08.2013.

¹⁷³ Focus group with HFC members, Bururi district (HF Endline.B.3.7), 06.08.2103.

¹⁷⁴ Focus group with HFC members, Makamba district (HF Endline.B.3.2), 29.07.2103.

¹⁷⁵ Focus group with HFC members, Rwibaga district (HF Endline.B.3.4), 29.07.2103.

to do it, but we participate in it, well, actually we just witness it being made”.¹⁷⁶ They give up on management and fall back on preventative activities.¹⁷⁷ Chief nurses readily blame their hierarchy for not supporting the HFC¹⁷⁸ and the HFC members themselves, who are said to lack financial motivation¹⁷⁹ and not understand the HF functioning.

The most puzzling change after the intervention is the 23 percentage point increase in the chief nurse turnover relative to the control group, which corresponds to a staggering 81% relative change (from 16 to 39%). *Ex post* contacts with the HFCs help understand what happened, and show that in most cases the HFC was directly involved in the removal of the chief nurse. HFC members are normally not competent to univocally remove a chief nurse: the decision comes from the health district or, in the case of a faith-based health centres, from the church that owns the health centre. The bundle of interventions, and especially the intervention that gives information on the financial and performance situation at the HF, seems to push the HFC to ask and successfully obtain the replacement of the chief nurse.¹⁸⁰ The removal of a chief nurse is either linked to cases of malpractice or disagreements between the nurses and the chief nurse.

The cases of malpractice range from suspicion of mismanagement to blatant embezzlement. In one HF, the intervention led the HFC to look closer at management and realise the extent of mismanagement. The committee then decided to denounce the situation to the district officers, an initiative that “scared the chief nurse so much that he never reappeared at the HF”¹⁸¹. In another HF, the case was more obvious: “the stock of drugs was empty on the fifteenth of the month” and later on “the chief nurse even sold the fridge [in which the drugs are stocked]”¹⁸². In yet another case, the HF manager was selling the surgical thread of the HF for his benefit. In both cases, the district immediately

¹⁷⁶ Focus group with HFC members, Nyanza-lac district (HF Endline.B.3.1), 05.08.2013.

¹⁷⁷ Focus group with HFC members, Matana district (HF Endline.B.3.11), 08.09.2013.

¹⁷⁸ Interview with HFC president, Makamba district (HF Endline.B.3.2), 08.08.2013.

¹⁷⁹ Interview with chief nurse, Rwibaga district (HF Endline.B.4.3), 29.07.2013.

¹⁸⁰ There are also stories of change of other staff members, but these were not systematically collected.

¹⁸¹ Interview with chief nurse, Mpanda district (HF Endline.B.4.6), 29.08.2013.

¹⁸² Interview with chief nurse, Makamba district (HF Endline.B.3.4), 07.08.2013.

took measures but only after the HFC had denounced the fact, which only came once the HFC had participated in the sessions described in the previous section. The causal chain linking the action of the HFC and the removal of the chief nurse is often clear, as in the words of a HFC: “the former chief nurse was not managing the HF money well, and a nurse hit a woman who came to deliver her baby. We made report that we sent to the health district and provinces and these two people were transferred away”.¹⁸³ In some places, the familiarity between the chief nurse and the health district make those removals a long process, even when there is clear evidence of embezzlement.

In a few other cases of removal of chief nurses, there was no misappropriation or mismanagement but a clash between the HFs and the HFCs, with the HFC upholding that the chief nurse refused to listen to them and “hid the functioning of the HF to the HFC”¹⁸⁴. These cases are rarer because the health districts are obviously generally reluctant to remove chief nurses without evidence of gross misconduct. The intervention reportedly encouraged some HFC members to persevere and have the chief nurse they disliked to be replaced.¹⁸⁵ In some cases, the localised information intervention seemed to have given the HFCs a sense of entitlement to information from the nurses and strengthened their understanding of their role as supervisors of health workers. If not mitigated by important interpersonal skills, this could lead to communication problems. In other cases, it is unclear whether the HFC’s conflict with the manager or chief nurse is benefitting the HF and the population. In one case, the district did not intervene in a situation opposing the chief nurse, the HFC president, and the cashier. In the words of one of the facilitators “everybody is corrupt there” – and the conflict is along political lines, opposing members of two political parties.

Finally, it is important to highlight that the change of chief nurse indicator does not pick the cases where the HFC found out about problems but managed the problem internally.

¹⁸³ Focus group with HFC members, Makamba district (HF Endline.B.4.5), 12.08.2013.

¹⁸⁴ Focus group with HFC members, Mpanda district (HF Endline.B.4.6), 29.08.2013.

¹⁸⁵ Interview with HFC president, Mpanda district (HF Endline.B.4.6), 29.08.2013.

In the last case mentioned above, the HFC managed to set up a deal with the cashier so that he would pay back the money he had embezzled to the HF.

The view of the removed chief nurse could rarely be collected and the benefits of removing the chief nurse for the population and healthcare delivery are, in general, unclear. The level of interaction between HFC and population remains low, which invites to consider with precaution the idea that the HFC would push to remove the chief nurse *in the interest of the population*.

Together with the results of the previous section, these qualitative accounts suggest three different, alternative, theories of change of the intervention. Indeed, information on the actual situation at the HF seems to have led the committees to adopt three different attitudes, none of which really matches the theory of change suggested by the literature. In the 'best case' scenario, the 'voice' route works: the HFC got initial access to information, and learned how to access more information with the collaboration of the chief nurse. In this case, limited anecdotal changes in the HF management and HFC organisation are reported in the case studies.

In the next two scenarios, the intervention is better understood as a 'one-shot' release of information or eye-opener than properly equipping the HFC with tools to acquire information. In the first alternative scenario, the HFC simply does not see itself as capable or willing to act on that information, and the next section will explore possible reasons for this behaviour. In the second alternative scenario, the HFC mobilises the knowledge to oppose the situation at the HF and works on what is the most visible, and possibly the simplest, most 'actionable', element of management: human resources and especially the leadership of the chief nurse. The HFC members do not contest the situation by directly seizing decision rights at the HF to confront the nurses, but rather complain and lobby at the level of a third party, the health district, which then takes concrete measures to change the situation. This direct action option may jeopardise the longstanding functioning of the system and idea of a continuous debate at the health centre.

VI.5. Heterogeneous effects: financial incentives and atmosphere at the HF

The localised information intervention discussed in this chapter focuses on information about the financial situation and performance of the HF, as well as managerial and financial literacy, which are part of a necessarily *localised* knowledge and experience. The previous sections of this chapter have underlined contextual elements that could, in theory, make the intervention more efficient. They can be divided into three categories: (1) elements linked to the financial experience and exposure to the HFC members such as their literacy, whether they were part of one of the pilot PBF project, and how much they were involved in the HF management before the intervention, (2) elements of the relationship between the HFC and the chief nurse that the previous chapter has highlighted, and (3) the type of financial incentives the HFC members have.

Heterogeneous effects are introduced in the impact evaluation to test whether these hypotheses hold in the Burundian case. In a fashion similar to the one depicted in previous chapters, the model is:

$$Y_{t,i,d} = c + t + \sum_{n=1}^3 (I_n + I_n t + I_n H + \lambda t H + \chi_n I_n t H) + H + cX_i + cD_d + \varepsilon_{t,d,i} \quad (\text{VI.2})$$

where H is the expected source of heterogeneity (the education of the HFC members for instance) and the rest of variables are unchanged. H can be a dummy or a linear variable. $\chi_1 + \chi_2 + \chi_3$ gives the total heterogeneous effect for a characteristic H in the localised information intervention group, controlling for the changes that happen for similar levels of H in the control group (λ). The rest of the covariates is not changed from the original model presented in the methods section. cX_i includes the controls for the interventions mentioned in chapters III, V, and VI. When H takes more than two different values, it can be interesting to look at the effect for the different values of H or to look at different parts

of the distribution (quintiles, terciles¹⁸⁶), in which case the model becomes:

$$Y_{t,i,d} = c + t + \sum_{n=1}^3 (I_n + I_n t + \sum_z (\lambda_{n,z} I_n t H_z + H_z + H_z t + H_z I_n)) + H + cX_i + cD_d + \varepsilon_{t,d,i} \quad (VI.3)$$

with z numbers of H dummies with the same reference category.

For each case, the effects on the HFC functioning, social accountability, and HF management is considered, as well as the effects on the three variables that are the most impacted when looking at the Average Treatment Effect in the last section: whether the HFC has terms of reference, how confident it says it is in its skills and the turnover in chief nurse.

VI.5.1. Committee literacy and experience with PBF

Across Burundi, HFCs have different levels of literacy and managerial experience. In particular: (1) some of them have more members with secondary school education or above, who may have better numerical and analytical skills; (2) some HFC members have received management training prior the intervention (see chapter II); and (3) some HFCs received more training on the PBF as they were part of pilot programmes during which international NGOs and organisations spent more time with the HFC.¹⁸⁷ Three variables help to capture these aspects: (1) the ratio of HFC members who went to secondary school, (2) whether some of all HFC members received management training in the past, and (3) whether the HF is located in one of the (former) PBF pilot areas (Table VI-8).

Table VI-8. Descriptive statistics members experience with PBF and management

	Baseline mean	SD	≠ control / intervention groups ¹	N
(1) HFC members with sec. education (ratio)	0.319	0.209	-0.007	251
(2) members with management training	0.525	0.500	-0.021	251
(3) are part of the PBF pilot phase	0.315	0.465	-0.015	251

1. No difference for any of the variables (t-test).

¹⁸⁶ The size of the sample does not really allow breaking down the variable into more parts.

¹⁸⁷ Interview Jean-Paul Nyarushatsi, technical assistant at the MoH, 12.10.2012.

As described in the previous section, the estimation includes district fixed effects, which are particularly important since the variable 'former PBF area' is determined at the district level. The table below summarises the interaction effects (Table VI-9).

Table VI-9. Localised information heterogeneous effects: HFC experience

<i>Dimension / variable</i>	<i>relative to the basic package of intervention</i>					
	(1) second. educ.		(2) past training		(3) exp. PBF	
	effect ¹	p-value	effect ¹	p-value	effect ¹	p-value
1. HFC organisation	-0.340	0.535	-0.405	0.026**	0.076	0.653
2. Social accountability	-0.203	0.818	-0.256	0.492	-0.002	0.997
3. HF management	0.271	0.635	0.089	0.694	-0.121	0.640
Terms of reference available	-0.478	0.385	-0.025	0.922	0.249	0.360
Confidence	0.536	0.557	-0.157	0.699	-0.002	0.997
Change of chief nurse	-0.090	0.871	0.290	0.183	0.045	0.851

*N unchanged since chapter III. | 1. The effect is given by $\chi_1 + \chi_2 + \chi_3$ in model VI.2. Significance level: * < 0.1, ** < 0.05, *** < 0.001.*

In most cases, the null hypothesis of no difference could not be rejected. The only interaction that is significant, and this result is robust to the FWER correction, is a negative and strong interaction effect of HFC members who have received management training with the HFC functioning index. At baseline level, the HFCs that have received training are more organised (+0.14 on dimension 1, p-value: 0.005) and their members have less to gain from a new set of modules. This echoes qualitative findings that relate cases where routines and areas of responsibility are well defined and resistant to change.

VI.5.2. Relationship with the chief nurse

Another hypothesis is that since the intervention is potentially disruptive for the HFCs, it requires good relationships between the HFC members and the HF staff. A naive question “how do you get on with the HFC/chief nurse”, with answers ranging from 1 very badly to 5 very well (Likert scale), was asked separately to the HFC and chief nurse. In both cases, the value at the first quartile is “(4) well”, which may suggest a low level of precision of the survey instrument (see discussion on the atmosphere at the HF in the previous chapter). The two variables, although they have a limited variance, still capture the worst

situations: at this point there is no possibility to even pretend that things are going well (Table VI-10).

Table VI-10. Descriptive statistics: relationship nurse – HFC

	Baseline mean	SD	≠ control / intervention groups ¹	N
(1) relationship with HFC (says chief nurse)	4.245	0.794	0.080	249
(2) relationship with chief nurse (says HFC)	4.283	0.704	0.001	249

1. No difference for any of the variables (t-test).

There are significant (linear) interaction effects only in the case of the chief nurse's perception of their relationship with the HFC (see Table C-25 in appendix).

When the chief nurse says they have a good relationship with the HFC, the intervention has much less effect on the social accountability indicators. This FWER robust effect suggests that changes in social accountability are less likely to arise when the chief nurse has a 'good' feeling with the HFC, which could reflect that they genuinely gets along well with the HFC member or that they have a strong grip on them.

Given the peculiar distribution of the variable 'relationship with the HFC', it is useful to decompose the effect into three categories: less than good relationship (values 1-3, percentiles 1-12), good relationship (value 4, percentiles 13-61), and very good relationship (value 5, percentiles >61). Table VI-10 (next page), which uses the model described in equation VI.3, clearly shows that the 'below good' category only significantly influences the 'change in chief nurse' and 'terms of reference' effects. The reference group is when the chief nurse says he/she has very good relationship with the HFC.

It is interesting to observe that the 12% of HFs where the relationship is judged 'below good' are responsible for most of the effects. In every single of those HFs, the chief nurse was removed during the year after the intervention. The rest of the results confirm serious disruption at the HF as the HFC claims more decision rights, fails to agree on the terms of reference for the nurses, and the self-confidence of its members is undermined.

Table VI-11. Localised information heterogeneous effects: relationship nurse–HFC

Dimension / variable	relative to the basic package of intervention			
	Chief nurse perception of HFC (good)		Chief nurse perception of HFC (below good)	
	effect ¹	p-value	effect ²	p-value
1. HFC organisation	-0.035	0.857	-0.846	0.012**
2. Social accountability	0.867	0.027**	1.154	0.016**
3. HF management	-0.077	0.750	0.673	0.039**
Terms of reference available	0.065	0.806	-1.071	0.023**
Confidence	-0.151	0.692	-1.189	0.115
Change of chief nurse	-0.066	0.792	0.717	0.001***

N unchanged since chapter III. | 1 and 2. The effects are respectively given λ_{13} and λ_{23} in model VI.3.
Significance level: * <0.1 , ** <0.05 , *** <0.001 .

The results do not allow to disentangle the timing of the changes at the HF. In the case of the relationship between changing the chief nurse and becoming more influent, the causation could go either way: either the HFC acquires more rights and uses them to have the chief nurse they dislike removed or the committee removes the chief nurse through another channel (e.g. district officers) and as a consequence gains more influence at the HF. The qualitative elements presented in the last section support the second hypothesis.

The absence of effect when looking at how the HFC perceives the chief nurse suggests that what matters is the perception or feeling of the chief nurse. What matters is only the position of the chief nurse *vis-à-vis* the HFC, which potentially reflects his/her insecurity as a chief nurse. Indeed, looking at the *discrepancy* between the HFC members' and chief nurse's mutual perception, no effect is found (see Table C-26 in appendix).

VI.5.3. Interaction effect with the remuneration of the HFC

The question of (financial) motivation was constantly brought up in the baseline survey and interviews. The amount of money the HFC receives is a regular source of complaints, and HFC members often maintain an ambivalent position on the topic, as reflected in a focus group with HFC members: “We believe that there is no material gain in working for the HFC. We joined the HFC knowing it would be unpaid voluntary work. Our idea is not

that being a HFC member could one day bring us money, *but that would motivate us more.*¹⁸⁸ Even when it is worded less explicitly, the idea of motivation usually has a clear monetary undertone. There are also clear non-monetary advantages (“We are loved by the population, and we are friends with everybody”),¹⁸⁹ which are harder to measure. The population often does not know whether their HFC is paid. In a focus group with the population, one person mentioned: “I have heard they receive soap, but I do not have details”.¹⁹⁰ while another one recalled: “I have heard that when they go to a seminar, they receive between 5,000 and 10,000 BIF”.¹⁹¹

There is a clear argument, echoed in the PBF ‘theory’, in favour of extrinsic motivation, and therefore, good reasons to explore whether the intervention is more efficient in a context where the HFC receives money. Two dimensions need be considered: the type of remuneration (none, flat pay, or work/performance-based) and the amount of such remuneration at the baseline level (see table below). More details about the policy and realities of HFC remuneration are found in Chapter II. The group of paid HFCs is in a slightly better situation than unpaid HFCs at baseline level, but only in terms of social accountability indicators and by a mere 0.18 standard deviation (p-value = 0.05), which does not represent a major difference. It is important to underline that none of the interventions has an impact on whether the HFC is paid or on the amount the HFC receives (see Table C-28 in appendix).

The linear interaction of the amount of money received by the HFC with the intervention does not yield any significant result (column 1 in Table VI-12), with the notable exception of a negative impact on the HFC confidence.

These null results hold when the three categories of remuneration are considered, using the model described in equation VI.3 with the absence of pay as a control group (columns

¹⁸⁸ Focus group with HFC members, Mpanda district (HF Endline.B.1.6), 29.07.2013

¹⁸⁹ Focus group with HFC members, Bubanza district, 05.08.2011.

¹⁹⁰ Focus group with population, Mpanda district (HF Endline.B.4.6), 29.08.2013.

¹⁹¹ Focus group with population, Cankuzo district (HF Endline.B.0.4), 22.08.2103.

2 and 3 in the table above). The adverse effect on the HFC self-confidence seems mostly driven by the few HFCs that are paid based on their activities or performance. It is difficult to understand what exactly happened, but it is possible that the interventions question their routine at the HF.

Table VI-12. Localised information heterogeneous effects: HFC remuneration

<i>Dimension / variable</i>	<i>relative to the basic package of intervention</i>					
	(1)		(2)		(3)	
	linear (*BIF 10,000)		flat pay		performance- based	
	Effect ¹	p-value	Effect ²	p-value	Effect ³	p-value
1. HFC organisation	0.046	0.312	-0.484	0.049	-0.338	0.123
2. Social accountability	-0.015	0.847	0.206	0.707	0.009	0.984
3. HF management	-0.075	0.332	0.032	0.907	0.154	0.558
Terms of reference available	-0.017	0.822	-0.482	0.131	-0.350	0.198
Confidence	-0.248	0.007***	-0.200	0.720	-0.944	0.037**
Change of chief nurse	-0.064	0.542	0.046	0.860	0.495	0.073

*N unchanged since chapter III. | 1, 2, and 3: the effects are respectively given by χ^2 3 in model VI.2 and λ_{13} and λ_{23} in model VI.3. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

Payment was not randomised across the HFs, and may result from dynamics that are not taken into account in the model. At baseline level, the decision rights of the HFC are slightly more important in the group paid HFCs (see Table C-29 in appendix). A strong hypothesis, which finds echo in anecdotal evidence, is that the payment of the HFC has sometimes been used by the chief nurse as a tool to control or cap the claims of the HFC members. In at least one case, qualitative research found that the HFC was in essence bought off by the chief nurse who agreed on raising the compensation of the committee in exchange for them not to claim rights at the HF.

Bearing in mind these limitations, the extent to which PBF principles of extrinsic motivation can apply to HFC remains uncertain. Current practices do not seem to make HFCs more reactive to attempts designed to revitalise them. If anything, the evidence suggests that paid HFCs are in fact less prone to change.

More fundamentally, the introduction of results-based financing in the system has let some

HFC members as well as HF staff and district officers to push for contracting the HFC in the same fashion as the medical staff. In addition to the evidence presented above, there is a clear practical and a more conceptual obstacle to moving in this direction. Practically, finding appropriate indicators is tricky, as some of the tasks supposedly performed by the HFC are advocacy and ‘interface’ work between the people and the HF. These activities are difficult to capture through indicators and may vary importantly from one place to another. Conceptually, granting bonus questions the idea of volunteering and risks pushing the HFC towards professionalisation, therefore attracting those primarily interested in financial incentives. It could also introduce conflicts of interest and end up ‘instrumentalising’ the HFC, making it a lesser form of community participation on the scales defined in the early eighties (see Cohen and Uphoff, 1980). This would jeopardise the HFC’s function as a board of the people in the interest of the people. During the pilot phase of the PBF projects, two attempts to directly contract HFCs were made but were not retained when PBF was scaled up (Falisse et al., 2011). In Bubanza, the set of indicators to be reported in the monthly update were the indigent list, the drugs inventory, the update of patients files, participation in the business plan, and the control of the budget and orders through co-signature. In Ngozi, it included the monthly meeting (with minutes) and cost-recovery activities. Both cases reportedly led the HFC to focus on the indicators and to neglect genuine communication with the population. Both pilots were discontinued.

Qualitative research conducted at both baseline and end-line levels highlighted the important tensions introduced by the PBF system. HFCs do not master PBF and it does not benefit them financially, although HFCs see themselves as part of the joint effort for ‘better performances’. In the words of the HFC members of Magara: “The staff receive the PBF bonus, and there is a percentage for each service, for instance, vaccination, hygiene, etc. It is thanks to us that the bonus increases”.¹⁹² Introducing performance-based bonuses,

¹⁹² Focus group with HFC members, Kabezi district, 29.08.2011.

which are often an important share of income, at all levels in the health system as is done in Burundi triggers financial demands from new, not contracted actors who claim a contribution to the 'performance' rewarded.

More generally, and even without considering PBF, the issue of payment can only be addressed in a systematic way. Unpaid HFCs hear about paid HFCs, and this threatens to destabilise the entire system: “*Interviewer*: Would you be willing to renew your mandate as HFC member? *HFC member*: Honestly, no, we work hard without making any money, while HFC members of other HFs earn something for their work”.¹⁹³

VI.6. Conclusion

This chapter examined the hypothesis that information about the actual situation at the HF, regarding budget and services delivered, is essential for the HFC to fulfil its role of social accountability. More specifically, it considered the idea that for the HFC to function properly, HFC members need not only to know what their role is but also what is happening at their HF. This hypothesis was especially important to consider in the context of Burundi, where PBF has become a central piece of the health system and conditions the funding of the HFs, thus influencing service delivery. PBF puts information at its core and provides HFC members with concrete tools for monitoring the situation within their HF. It also introduces, in a very concrete way, ideas of extrinsic financial motivation.

The intervention designed to provide the HFC members with better information about the actual functioning of their HF did not lead to visible improvements on a broad range of indicators related to the functioning of the HFC, social accountability aspects, and the management of the HF. What is more, the information intervention seems to prompt crises within HFs: the confidence of HFC members drops, communication between the chief nurse and the HFC deteriorates, and, importantly, the turnover in chief nurses increases. Accounts from interviews and qualitative material confirm these tensions and show how,

¹⁹³ Focus group with HFC members, Makamba district (HF Endline.B.4.5), 22.09.2013.

in the medium-term, the tools introduced by the information intervention have not been used by HFC members who either do not see the point of collecting information or are prevented from doing so by the chief nurse.

However, the relative failure of the information intervention could conceal a success that challenges the theory of change. The removal of chief nurses was clearly linked to the action of HFC members who, once informed about the actual functioning of their HF, managed to get the chief nurses sanctioned for wrongdoing or corruption. The channel they pursued was rarely that of claiming decision-making rights at the HF; instead, they consulted district officers. Ultimately, information about the actual situation at the HF, especially when combined with an intervention that clarifies the role of the HFC, may well have reduced corruption and malpractice at the HF. Smaller changes in management remain unpronounced, raising the question of whether HFC members, in the context of Burundi, could improve aspects such as the shortage of drugs and equipment, the good care of patients upon arrival, or the state of the infrastructure. It may well be that because the PBF system created financial incentives mostly linked to easily measurable aspects, many of the less measurable initiatives remain out of the reach of the committee and are not easily 'actionable'.

The strong increase in the turnover of chief nurses also raises questions about the long-term effects of such interventions: should such disruptive interventions be encouraged, in view of the fact that beyond an apparent majority of removals based on wrongdoing, some removals seem motivated by local politics? The data does not provide conclusive evidence element to guide decision. Satisfaction with the HF and HFC do not change, and the use and perceived quality of services is equally unaffected by the intervention.

Finally, the question of accountability and performance has led to an examination of the financial incentives of the HFC, revealing no major difference between HFCs that are not compensated, HFCs that receive a flat rate, and HFCs that are paid 'on performance'. The amount also does not seem to matter much. Although paid HFCs start in a slightly better position in terms of decision-making rights and influence at the HF, which could come

from the pay itself or from the context that led them to secure this pay, non-paid HFCs benefit more from the intervention in terms of HFC organisation. The financial compensation of HFC members may also sometimes be used as a tool to mute their voice. This does not mean that HFC members should not be reimbursed for their expenses, or even paid, but that the question is sensitive and intricate. It changes the very concept of the HFC. Ultimately, paying the HFC members may be unavoidable, given the pressure PBF imposes on the entire health system. The PBF coexists with the older HFC system in an inherent tension. The former is a prime example of a New Public Management strategy where agents are predominantly extrinsically motivated, whilst the latter rests on an older conception of public service and volunteerism based on intrinsic motivation and commitment to the public good.

Overall, the chapter shows that changing the dynamics of decision-making rights and power inside the HF is not a smooth process. More often than not, the decisive action of a committee that gained knowledge is to remove the chief nurse, who constitutes a clear obstacle to exercising authority at the HF and is seen as the biggest problem. More subtle changes are hard to measure, and possibly harder to implement, being technically more complicated. The chapter also shows that accessing information does not mean that such information is easily used for the greater good. Indeed, the localised information seems to put the HFC members in a stronger position but does not provide them with tools to 'peacefully' deal with the chief nurse and resolve tensions induced by this new position.

VII. SPOILERS OR FACILITATORS? LOCAL ELITE AND THE COMMUNITY GOVERNANCE OF HEALTH CENTRES

“Aho abagabo bari ntihagwa isanganya”

“Where public figures are, there is no misery”

Kirundi proverb (Rodegem 1983, p.270)

“Hakundana abanganya ntihakundana abangana”

“Those who maintain relationships are of the same status, not equal”

Kirundi proverb (Rodegem 1983, 147)

The previous chapters have deliberately overlooked the interactions between the HFCs and local leaders. This chapter looks beneath and beyond the health system and considers the HFC as part of a broader socio-economic environment that is shaped by political and religious leaders. It not only examines the well-investigated classic question of elite-capture but also explores the case of ‘co-opt-elite’ (Wong 2010), which is the idea that local leaders can help legitimate new forms of community participation and be facilitators rather than (only) spoilers. Since participatory institutions never come in a socio-economic void, no *tabula rasa* departure point is possible for the committee. In a context like Burundi where social life and relations to authority are often mediated through religious and political leaders and where there is a strong ‘culture of the chief’ (Laely 2014), there may, in fact, be no other option than compromising with local leaders.

The background section shows how the HFCs of Burundi are captured by better-off people, but also suggests that HFC members may not be able to influence the functioning of health centres without the support of local religious and political leaders. An experimental approach is thus developed to test: (1) whether *within* support, the case when local leaders are members of the committee, influences the health committee functioning and service delivery; and (2) whether *outside* support of local leaders, through the organisation of joint meetings between local leaders and the committees, has any impact on committee functions and health service delivery. The results of the first part of the experiment are largely null while the second intervention has limited effect, but also limited adherence. A possible reason for this is the lack of financial incentives or easy rents. The intervention has a higher impact when religious figures and local civil society members, rather than

local politicians, meet the committee members. Vulnerabilities inherited from the civil war also affect the outcome of the intervention.

The chapter questions the future of health committees and community participation in post-conflict contexts where few individuals control social life. Connecting the committees with local leaders only has a limited effect and the reason behind the failure of the committee seems to lie in more structural features of Burundian society. The background and theory of change sections cover the conceptual framework and provide a description of the relationship between HFC members and local elites. The methods and results explore three different hypotheses: support of local leaders to the HFC from inside, support from outside, and support from both inside and outside the committees.

VII.1. Background

This section first presents a brief review of the literature on the role of local elites in participatory service delivery from the perspective of public health, economics, and Burundi area studies; this literature mostly stresses the risks of elite-capture but some authors have also argued that local leaders are instrumental to making participatory delivery work. A second sub-section discusses the position of local elites vis-à-vis the HFC in 2011-2012.

VII.1.1. Counter versus co-opt-elite

Researchers and policy-makers have long recognised that the space of social accountability is not neutral or a-political. Not only is social accountability “embedded within a particular political socioeconomic system” (Kelly 1998, p.201) but it is also, by definition, a space for public decision-making and decision about public affairs. Social accountability and community participation are ‘politics’ in the original etymological sense something of, for, or relating to citizens. The extent to which the HFC is influenced and reproduces existing structures of domination is therefore not trivial (Foucault 1982; Townley 1993).

Considerable energies have been devoted to the study of mechanisms through which elite or specific groups capture participatory institutions and the negative consequences of this

capture.

The public health literature has largely highlighted the challenge for the HFCs not to reflect the existing hierarchies and structures of power and patronage, including the domination of the wealthy and men (Balique, Ouattara & Ag Ikname 2001). In the Philippines, Ramiro et al. (2001) reported that the HFC system mostly empowered local elites and authorities, while Sepehri and Pettigrew (1996) showed that, in villages of Nepal, health committee members and villagers held different views about their HF. Despite a discourse of inclusiveness of the various fringes of the population in the committee, HF staff and local leaders usually very reluctantly open up the committee (Bishai, Niessen & Shrestha 2002; Ngulube et al. 2004; Sato 2006). Health services committees also exist in high-income countries, and in a viewpoint that comes from the United Kingdom National Health Services experience, Hogg and Williamson (2001) suggest that the 'lay people' who make up the committees are expected to represent the patients' interests, which they define as the repressed interests, but often end up supporting the dominant or challenging interests, which is the point of view of the professionals or managers.

The theoretical and empirical economics literature also underlined that participatory projects can create opportunities for local elites to establish or develop their patronage networks (Conning & Kevane 2002). Platteau suggests that local leaders must be 'disciplined' for aid provided through participatory institutions to be efficient, and invites funders to set up coordination and reputation mechanisms to avoid the embezzlement of aid by local elites (Platteau 2004; Platteau & Gaspart 2013; Platteau 2002). Indeed, participatory institutions intend to create a new space for the delivery of basic social services or commodities, and there is no reason to believe that existing locale elites would not attempt to occupy that space. Looking at a major community-driven project in Indonesia, Dasgupta and Beard (2007) find that whenever the local political elite controlled decisions, benefits for the poor are lower. Similarly, Caeyers and Dercon (2012) look at a community-based food aid programme in Ethiopia and find a strong correlation

between political connections and obtaining free food.

The above-mentioned literature does not necessarily come with policy recommendations, but the depiction of the pitfalls of elite-capture have led policy-makers to often favour 'counter-elite' approach (Wong 2010). In this view, maintaining local elites within the committee comes with a too high risk of "legitimizing the authority of the elites and worsening poverty by implementing 'anti-poor' policies" and this local elite should, therefore, be, as much as possible, excluded from grassroots participatory institutions.

A different view is taken by a thinner stream of the literature that has argued that local leaders often cannot be bypassed. Moreover, they could, in fact, play a positive role in local participatory institutions by publicly supporting them or bringing their skills and networks to help their functioning. Wong (2010) names the concept 'co-opt-elite' as the participatory institution is deliberately 'absorbing' local elites. Elites can be pragmatically used to channel and access resources (Platteau & Abraham 2002). Although they do not argue in favour of the 'co-opt-elite' approach, Mansuri and Rao (2004) stress that not all elites are 'greedy', some can be 'benevolent' and Dasgupta and Beard (2007) establish a distinction between elite-capture and elite-control, with the latter not necessarily implying misappropriation. The literature on cases of community participation in Jamaica (Rao & Ibanez 2003), water management in Bangladesh (Lewis & Hossain 2008), and community-driven development projects in Mozambique (Arnall et al. 2013) highlight the potentially positive role of the local elite in empowering participatory institutions.

In the context of Burundi, different authors have highlighted the development of patronage networks (Vandeginste 2015a; Vandeginste 2015b; Nkurunziza 2011; Uvin & Bayer 2013). Vandeginste even talks about a "historical continuity between the post-conflict polity and the traditional patronage system which structured societal relations from the king down to the peasant" (Vandeginste 2015a, p.18). Uvin and Bayer (2013) explain that the ruling party has used "practices that were known to work" and essentially set up its patronage networks in a context where "traditions of transparency and bureaucratic autonomy" are not deeply internalised. Their study, as well as most of the

rest of the literature on the topic in Burundi, however, remains focused on the macro-level situation. Micro-dynamics of patronage are left largely unexplored. The extent and intensity of the capture of local institutions, and especially institutions where rents are *a priori* not too important or the easiest to extract such as health centres and schools, is unclear.

VII.1.2. HFC members in Burundi: a powerless elite?

“The population listens to the HFC members, but they first have to wait that the local authorities finish to say what they have to say, and then they leave some time to the HFC”.¹⁹⁴

Chapter III showed that HFC members are, on average, better off than the average rural Burundian. Dominant categories of the population –men, educated people, civil servants and business people– are overrepresented in the HFC (see Table C-31 in appendix for more details). This sub-section further explores HFC membership and the relationship between the HFC and other local elite members in 2011: it shows that HFC members may be a local elite but are not necessarily local *leaders* or the most influential members of their community.

In practice, the HFC members appear more like a group of well-intentioned and often slightly better-off citizens than as local representatives who crystallize health issues.

As highlighted earlier in this thesis, HFC members are elected but these elections are often not the result of proper campaigning. 7.39% of the elected HFCs even declared that there were more seats in the committee than candidates. In the words of some HFC members “we were not really candidates. We were chosen and we were happy with that. The Health District team came the day of the election with the chief nurse and they explained what the committee is about”¹⁹⁵. When asked why they accepted or sought to become part of the HFC, interviewees emphasise the idea of service to the community and improvement

¹⁹⁴ Focus group with population, Nyanza-lac district (HF Endline.B.0.2), 07.08.2013.

¹⁹⁵ Focus group with HFC, Bururi district (HF Endline.B.0.5), 07.08.2013.

of access to health services. Sometimes the candidacy is described as sparked off by the bad situation of the HF. Elements of social consideration also appear –as some HFC members point out, it is “well-regarded to be a HFC member”.¹⁹⁶ as well as other advantages “if our child is sick, we do not have to queue with other patients, he or she is quickly taken care of”.¹⁹⁷ Health committee members are aware that the position is unpaid but most also evoke hopes of future financial benefit from the HFC directly or positions they could access more easily as HFC members. Interestingly, the situation of the resources at the HF and local socio-demographics indicators are not good predictors of the ratio of local leaders within the HFC (see Table C-32 in appendix). It may indicate idiosyncratic dynamics and/or low stakes for these elections.

The qualitative research carried out in 2013 also found that in a vast majority of HFCs (55 out of 60 interviews), HFC members are often members of local school and water committees, as well as Red Cross and other NGO-induced committees. In one instance, the HFC declared “the main other committees here are Red Cross and *Tubaramure* [a nutrition programme led by the International Food Policy and Research Institute]. Some of us are members of the Red Cross committees; the rest is in *Tubaramure*”.¹⁹⁸ This, in practice, could facilitate the transmission of HF information but also suggests that a particular type of citizen monopolises participatory institutions and that HFC members could be somewhat ‘generic representatives’.

Focus groups with the population highlight the importance for HF users to know who the HFC members are to have respect for them: “if they are not elected and we do not know them [the HFC members], the population will not respect them”.¹⁹⁹ On average, in 2011, the minority of people who knew the HFC could name 2.13 of its members (SD: 0.791).²⁰⁰

¹⁹⁶ Focus group with HFC, Murore district (HF Endline.B.0.11), 19.08.2013.

¹⁹⁷ Focus group with HFC, Murore district (HF Endline.B.4.12), 21.08.2013.

¹⁹⁸ Focus group with HFC, Ruyigi district (HF Endline.B.2.2), 27.08.2013.

¹⁹⁹ Interview with primary school director, Isale district (HF Endline.B.1.4), 01.09.2013.

²⁰⁰ Incidentally the 147 HFCs that had complied to the MoH requirement of two representatives per *colline* had knew on average only 1.91 (SD: 0.867) HFC members. Unfortunately it is impossible to know whether these almost two people are the two *colline* representatives.

Among the people who had visited the health centre in the past six months, 85.9% had not had any interaction with the HFC (2011).²⁰¹ A primary school director sums up what seems to be the general impression of the HFC: “it is useful, but I cannot say it is efficient because it is not in a position to take important decisions”.²⁰² Interviews with HF users highlight that a strong committee is seen as one that is in contact with the local authorities,²⁰³ and is known by them.²⁰⁴ In that sense, that the HFC counts local leaders in its rank is often seen as an advantage by the population. As highlighted during a focus group: “it is good that the HFC is made of local leaders, they command respect and can transmit messages without any problem”.²⁰⁵ The population, nurses, and HFC alike explicitly recognise that the composition of the HFC and its connections matter.

The presence of local political figures in the committee is a key concern in the literature on elite-capture (Hickey & Mohan 2004). HFC members, HF users, and policy-makers alike amply discussed the theme during the interviews carried out before (and after) the intervention, and often took polarised positions that reflect the “counter-elite” versus “co-opt-elite” dichotomy:

On the one hand, a majority of people finds too risky to have politicians in the HFC. They cite two clear forms of elite capture: (1) cronyism, as “people of different political parties do not collaborate well”, and (2) the ‘hijacking’ of the HFC for the purpose of party propaganda.²⁰⁶ The interviewees are also wary of a negative (self-)selection bias of the local politicians who are seen as (1) unlikely to have time to invest in the HF management²⁰⁷ and (2) inherently corrupt and “looking only at their own profit”,²⁰⁸ and

²⁰¹ HFC declarations also point out to some deficit in meeting the population, although in a less dramatic manner: they claim that they meet with the population but recognize that they rarely have bigger meetings (general assemblies) where the population of the *collines* are invited.

²⁰² Interview with primary school director, Rwibaga district (HF Endline.B.0.10), 27.08.2013.

²⁰³ Focus group with population, Mpanda district (HF Endline.B.3.10), 28.08.2013.

²⁰⁴ Interview with *mushignatahe*, Mpanda district (HF Endline.B.0.3), 27.08.2013.

²⁰⁵ Focus group with population, Bururi district, 20.09.2011.

²⁰⁶ Interview with *TPS*, Rwibaga district (HF Endline.B.1.11), 02.08.2013.

²⁰⁷ Focus group with population, Ruyigi district (HF Endline.B.2.2), 27.08.2013.

²⁰⁸ Interview with chief nurse, Matana district (HF Endline.B.3.11), 08.09.2013.

could ‘contaminate’²⁰⁹ the rest of the committee.

On the other hand, some interviewees also stress positive aspects: (1) local politicians are “more active people in general”²¹⁰ and (2) “the population is already used to talk to the leaders, so all is really easier when local politicians are also HFC members”.²¹¹ The interviewees insist that a clear agenda and rules²¹² are important, and that local leaders need to differentiate clearly between their activities as political representatives and as HFC members.²¹³ As a technician for health promotion recalled from his experience: “one of the members of the committee of that health centre is an *imbonerakure* [member of the youth wing of the ruling party], but he has always tried to serve and we just advised him not to mix up things”.²¹⁴

Conversely, the presence of religious leaders in the committee does not come up as a major issue and does not lead to any debate.

During the 2011-2013 fieldwork, it was very clear that the HFC was usually *not* the main actor at the community level, even sometimes in matters related to health. In focus groups in 2011 and 2013, HFC members and the general population alike stressed that the most influential people at the local level were local politicians or religious leaders.²¹⁵ In some places, everything was said to be channelled through these local leaders,²¹⁶ who were often not the most sensitive to health issues. The connection between HFC members and other local elite is not formalized at all. In only 3.2% of the HFC were the minutes of the

²⁰⁹ Focus group with population, Mpanda district (HF Endline.B.1.6), 29.07.2013.

²¹⁰ Interview with chief nurse, Nyanza-lac district (HF Endline.B.3.1), 08.09.2013.

²¹¹ Focus group with HFC, Rutana district (HF Endline.B.2.8), 16.08.2013.

²¹² Focus group with population, Mpanda district (HF Endline.B.0.3), 27.08.2013.

²¹³ Focus group with HFC, Rumonge district (HF Endline.B.4.10), 08.06.2013.

²¹⁴ Interview with deputy chief nurse, Gihofi district (HF Endline.B.0.12), 14.08.2013.

²¹⁵ Focus group with population, Mpanda district (HF Endline.B.0.3), 27.08.2013.

²¹⁶ The situation was also, arguably, evolving rapidly, from a situation where authority was in the hands of the person invested of the administrative function to a situation where position within the CNDD-FDD ruling party became the main criteria for leadership, and the gradual spread of a patronage system. It is hard to identify the extent of this system at the time of the fieldwork, as interviewees give mixed feelings about it. What seems relatively clear though, is that lower political offices, such as the *chefs de colline*, which used to largely escape national politics, have become a lot more politicised.

HFC transmitted to the municipality, 9.2% of HFC had contact with local leaders and organisations, and 3.6% transmitted their minutes to some NGO (n=250, 2011). Qualitative evidence points to the fact that the connection with local leaders comes from the HFC president and HFC executives rather than ordinary members.²¹⁷

Local governance in Burundi remains highly hierarchical, and qualitative work has revealed that talking in public or addressing an assembly might not be a simple task. It often requires the endorsement of at least one of two key actors: local politicians (*chefs de colline*) or churches. HFC, although representative of the population at the HF, do not have a natural forum as churches or hill meetings and therefore often piggy-back on existing meetings.²¹⁸ As one HFC puts it: “organising meetings is not easy, but we use the meetings of the local authorities”.²¹⁹ It remains very rare that committees can organise meetings by themselves, and it seems that when they do, it is using the fragile and narrow connection of the president or another influential member, which can “cause trouble and worry now that we have problems with the president”.²²⁰

In fact, many HFCs say that they simply cannot organise meetings without using the local authorities,²²¹ as the president of one HFC explains: “organising a meeting without the intervention of the *chef de colline* is very complicated, even impossible”.²²² The relationship between the HFC and the population is *de facto* mediated by the local politicians “who are the ones who communicate with the population”.²²³

Similarly, religious leaders are key players for the HFC, as they help communicate messages to the population.²²⁴ As it was noted earlier, churches are crucial for the

²¹⁷ Interview with *chef de colline*, Rumonge district (HF Endline.B.2.11), 02.08.2013.

²¹⁸ Focus group with HFC, Makamba district (HF Endline.B.4.8), 13.08.2013.

²¹⁹ Focus group with HFC, Nyanza-lac district (HF Endline.B.3.1), 05.08.2013.

²²⁰ Focus group with HFC, Rumonge district (HF Endline.B.4.10), 06.08.2013.

²²¹ Focus group with HFC, Bururi district (HF Endline.B.3.7), 06.08.2013.

²²² Interview with HFC president, Mpanda district (HF Endline.B.0.3), 27.08.2013.

²²³ Interview with priest, Murore district (HF Endline.B.1.5), 19.08.2013.

²²⁴ Focus group with HFC, Isale district (HF Endline.B.1.10), 31.07.2013.

mobilisation that precedes the election of the HFC,²²⁵ but also for reaching the population once the committee is in place since churches occupy a central place in social life. As a Protestant minister put it: “people are believers, and apart from farming in the fields, they do not do much and come to the church”.²²⁶

VII.2. Theory of change

The lack of connection between the HF staff, the population, and their committee constitutes a form of a *power gap*. Osmani explains how this situation “arises from systematic asymmetries of power that is inherent in unequal societies” (Osmani 2008, p.38). The idea of the *power gap* is that the committee members fail to play their role as a mechanism of social accountability because they do not have, or do not think they have, the rights or ‘space’ to do so –even though they (may) know how the HFC should function, have the skills to make it work, and have clear incentives to act. The question is, to a large extent, one of the absence of legitimacy of the HFC members, a lack of legitimacy that often has “long been internalised by the oppressors [dominant party – HF staff] and the oppressed [dominated party – HFC] alike” (Osmani 2008, p.39).

Against the background of a promotion of the knowledge (chapter III) and skills (Chapter VI) of the HFC and an important legitimacy of religious and political leaders (see previous section), two of the most obvious possibilities to narrow the *power gap* of the HFC are the following:

1. Local leaders could directly become part of the HFC, thereby reinforcing the HFC in the eyes of the population and the nurses *from the inside*. Since some local leaders are already HFC members, HFCs with a higher ratio of local leaders or local leaders in key positions should be more efficient, as in a better position to exploit information about the HFC and HF functioning (see Chapters III and VI).
2. Local leaders could back the HFC *from the outside*, bring their support to the HFC

²²⁵ Interview with primary school director, Rumonge district (HF Endline.B.4.10), 06.08.2013.

²²⁶ Interview with protestant minister, Bururi district (HF Endline.B.4.1), 08.08.2013.

members and help them to confront the HF staff and address the population. The strength of their support may depend on and their opinion of the committee members and the identity of the latter. As George (2003) argues, a key issue is whether the HFC is perceived as competent and legitimate by the nurses, and support from the outside is expected to boost this recognition.

According to these perspectives, the local leaders have a positive role to play as facilitators or ‘enablers’. This however comes against the background of an important literature that is wary that bringing local leaders close to the HFC would in fact increase elite-capture and have adverse effects.

VII.3. Empirical strategy

As detailed in chapters II and III, the HFCs functioned very poorly at the time of the baseline study in 2011-12: they had no say in HF affairs, no understanding of their roles, and no information on the situation at their HFs.

This chapter builds on the bundle of interventions designed to address the knowledge and capacity gaps explained in the previous chapters. It will be referred to as the ‘standard bundle of interventions’ in this chapter. In line with the theory of change, three different approaches are followed:

1. Firstly, interaction effects between characteristics of the HFC membership and the randomly implemented standard bundle of interventions (terms of reference, trust, and localised information – see previous chapters) are used to explore the ‘support from inside’ theory of change.
2. Secondly, a randomly implemented intervention tries to force, through joint-meetings, HFC and local leaders to talk, know each other, and hopefully collaborate –thereby testing the ‘backing from outside’ theory of change.
3. Thirdly, interaction effects between the same HFC characteristics and the joint meeting intervention are explored to test the joint effect of elite support from within *and* outside, which is the question of whether external support varies

depending on the identity of the committee members.

VII.3.1. Support from *within*: interaction effects

The interaction effects were designed in the same fashion as explained in Chapter III, V, and VI. The sources of heterogeneity are divided between:

1. The presence of political and religious leaders, which the previous section has found to be the key actors at the local level.
2. The presence of individuals that are known to be more vulnerable, which tests another side of the local leaders hypothesis: that the presence of ‘vulnerable’ individuals complicates the work of the HFC. These worse-off groups include:
 - Women who are known to be systematically unrepresented in institutions and public life (see chapters II, III, and V).
 - Farmers: as a proxy for the socio-economic class. Although most people do cultivate some land (which might not be their own) in rural Burundi, people who identify themselves as farmers are those who do not have another source of income (that would be better considered, such as a position in the public service, a shop, or some activity as a craftsperson or employee).
 - Victims of war: returnees who resettled in the mid-2000s and later, and internally displaced people.

These characteristics are well balanced between the different groups (Table VII-1). There are few victims of war and church representatives, which will limit the statistical power of the analysis in the already small sample (only 83 HFAs received the full standard bundle of interventions).

The composition of the HFA varies by region (see Chapter II) and this feature is controlled for with district fixed effects. The estimation is done through an OLS model that is very similar to the previous chapters:

$$Y_{t,i,d} = c + t + \sum_{n=1}^3 (I_n + I_n t + I_n H + \beta_n I_n tH) + tH + H + cX_i + cD_d + \varepsilon_{t,d,i} \quad (\text{VII.1})$$

Table VII-1. HFC composition: possible sources of heterogeneity

	control group		standard bundle		joint meeting	
	mean	SD	mean	SD	mean	SD
IDPs & returnees: HFC ratio	0.141	0.298	0.183	0.314	0.12	0.243
HFC executives ratio	0.147	0.295	0.127	0.253	0.087	0.224
HFC president	0.181	0.387	0.135	0.343	0.095	0.297
IDPs: HFC ratio	0.073	0.209	0.095	0.243	0.057	0.2
HFC executives ratio	0.068	0.188	0.052	0.177	0.055	0.2
HFC president	0.108	0.313	0.04*	0.196	0.048	0.216
Returnees: HFC ratio	0.069	0.184	0.088	0.171	0.063	0.141
HFC executives ratio	0.079	0.202	0.075	0.161	0.032	0.118
HFC president	0.072	0.261	0.095	0.295	0.048	0.216
Women: HFC ratio	0.343	0.177	0.356	0.177	0.355	0.185
HFC executives ratio	0.234	0.245	0.239	0.194	0.262	0.191
HFC president (binary)	0.084	0.28	0.087	0.283	0.071	0.261
Non-farmers: HFC ratio	0.298	0.257	0.278	0.236	0.317	0.268
HFC executives ratio	0.385	0.333	0.446	0.315	0.391	0.375
HFC president	0.289	0.456	0.31	0.464	0.286	0.457
Faith-based HFC	0.193	0.397	0.183	0.388	0.214	0.415
HFC executives ratio	0.024	0.075	0.023	0.076	0.026	0.098
HFC president	0.084	0.28	0.103	0.305	0.071	0.261
Politics: HFC ratio	0.172	0.18	0.153	0.172	0.119	0.154
HFC executives ratio	0.12	0.328	0.111	0.316	0.095	0.297
HFC president	0.383	0.681	0.211*	0.547	0.22	0.613
Observations	83		126		41	

Source: 2011-2012 HFC survey. Two-tailed *t*-test difference with control group: *p*-value: * <0.1 , ** <0.05 , *** <0.001

– where *H* is the source of heterogeneity, *I* the intervention group and *t* a time dummy. The interventions are treated as a bundle and *I*₃ captures the group of HF/HFCs that have received the full package: the basic knowledge intervention described in Chapter III, the ‘trust’ intervention of chapter V and the localised information of chapter VI. *D* is the district fixed effects and *cX* the vector of basic HF and HFC characteristics already described in previous chapters. β_3 gives the heterogeneous effect of a binary or linear *H* source of heterogeneity. *H* can be divided in multiple dummies to test heterogeneous effects with more than two categories (see previous chapter).

VII.3.2. Support from *outside*: joint meeting intervention

In the second approach, the influence of external support is explored. Joint meetings were organized in 42 randomly selected committees that had received the standard bundle of interventions. Ethical and conceptual reasons prevented the implementation of the joint meeting intervention separately from the other three interventions: HFC members would first need to know about their role and the situation at their HFC before being put in a joint meeting with local leaders. The intervention took place at two times, and in the conditions (language, travel expenses, etc.) described in chapter III.

In the first step, on the occasion of the standard knowledge intervention, HFCs were asked to name up to 10 local leaders whom they think would facilitate the work of the HFC members if they knew more about the HFC and its members.

The second step was the organisation of the joint meeting between HFC members, HF staff, and these local leaders. The meetings were facilitated by the project assistants –and participants did not receive any compensation (*per diem*) for it, to avoid generating wrong expectations. The meeting was an occasion for HFC members to introduce themselves and their work and become closer to the leaders who are in touch with the population. The facilitators were the same as in the previous interventions, and the sessions took place in October 2012 and February 2013.

The evaluation is in line with what was depicted in chapter VI. The difference-in-difference approach uses the same OLS approach:

$$Y_{t,i,d} = c + t + \sum_{n=1}^4 (\beta_n I_n t + I_n) + cX_i + cD_d + \varepsilon_{t,i,d} \quad (\text{VII.2})$$

The total effect of the joint meeting intervention relative to the control group is then given by $\beta_1 + \beta_2 + \beta_3 + \beta_4$ and its significance can be tested with an F-test.

The joint meeting mobilises a group of local leaders external to the committee. Using heterogeneous effects in a fashion similar to the one described in the last section, it is possible to analyse whether the composition of this group of local leaders affects the

efficiency intervention. Concretely: does it make a difference that the local leaders chosen by the HFC members are, for instance, religious figures or local politicians? χ gives the estimation in the following model:

$$Y_{t,i,d} = c + t + \sum_{n=1}^4 (\beta_n I_n t + I_n) + \chi I_4 t P + P + cX_i + cD_d + \varepsilon_{t,d,i} \quad (\text{VII.3})$$

Where P is a continuous or a dummy variable that characterises the group of local leaders that was chosen by the HFC members (for instance the ratio of local politicians). The limited size of the group that received the joint intervention (n=42) unfortunately prevents more detailed analysis of heterogeneous effects (for example by quartile).

The nested qualitative research was organised in twelve different sites where the joint meeting intervention was implemented, in the same way as described in previous chapters.

VII.3.3. Support from within *and* outside

Finally, heterogeneous effects can also be used to explore whether the efficiency of the joint meeting intervention is influenced by the composition of the committee using the following model, which is a simple update of the model used to explore the support from within hypothesis:

$$Y_{t,i,d} = c + t + \sum_{n=1}^4 (I_n + I_n t + I_n H + \chi_n I_n t H) + H + t H + cX_i + cD_d + \varepsilon_{t,d,i} \quad (\text{VII.4})$$

H is the source of heterogeneity and χ_4 gives the heterogeneous effect. H can also be a measure of the overlap between the identity of the committee members and the local leaders. Again, the sample size limits the options for exploring heterogeneous effects.

Situation at baseline and robustness

Robustness checks are very similar to what was depicted in previous chapters of the thesis: splitting the sample, removing controls, using an ANCOVA specification, and adjusting p-values to multiple hypotheses testing. As Table VII-2 shows, there is a good balance between the control and intervention groups regarding outcome variables and covariates.

Table VII-2. Situation at baseline

	control mean ¹	difference standard bundle ¹	difference control group ²
<i>HFC Features</i>			
Terms of Reference available	0.222 (0.047)	-0.119 (0.102)	0.04
Ratio of Women	11.173 (0.498)	1.143 (0.1069)	0.541
Ratio went to sec. school	0.347 (0.02)	0.009 (0.039)	0.007
Collines/villages represented in HF	0.328 (0.025)	0.011 (0.047)	00
<i>HF features</i>			
Water (0: never to 5: constant)	3.099 (0.128)	-0.024 (0.242)	-0.075
Electricity (0: never to 5: constant)	3.074 (0.134)	-0.286 (0.252)	-0.288
Support staff at HFC	5.951 (0.315)	0.048 (0.532)	-0.474
Urban area	0.148 (0.04)	-0.048 (0.057)	-0.101
Faith-based HFC	0.173 (0.042)	0.024 (0.089)	0.041
Population in area	14628 (1052)	386 (1944)	514
1. HFC organisation	0.029 (0.031)	-0.107 (0.08)	-0.1
2. Accountability	-0.025 (0.076)	0.076 (0.169)	0.06
2.1. HFC rights	0.05 (0.066)	0.045 (0.13)	0.014
3.1. Equipment	-0.092 (0.092)	-0.071 (0.156)	0.037
3.2. Human resources	-0.016 (0.06)	0.132 (0.125)	0.036
3.3. Infrastructure	0.041 (0.093)	-0.132 (0.17)	-0.156
3.4. Finances	-0.026 (0.055)	0.159 (0.128)	0.139
6. Provision of services	-0.019 (0.085)	0.024 (0.155)	0.022
N	83	124	41

1. Difference knowledge is the β_3 in: $Y = c + \beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \beta_4 I_4 + \varepsilon$, where I_4 is the local leaders intervention. Control group mean is c . | 2. $\beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \beta_4 I_4$ in the previous model, significance is F-test joint significance. | P-value: * <0.1 , ** <0.05 , *** <0.001 . Standards errors in parenthesis.

VII.4. Results and discussion

The conceptual framework of local leaders' supporting the HFC from *within*, *outside*, or both *within and outside* provides the structure for reporting and discussing the results.

VII.4.1. Support from within: interaction with the standard bundle of interventions

The effects of the HFC composition are explored using the aforementioned criteria of the gender, professional activity, vulnerability (as a consequence of war), and involvement in local politics of the HFC members.

Notwithstanding the appeal and rationale of the abovementioned arguments in favour and against the inclusion of local politicians in the committee, there is no clear evidence that HFCs that count members with political responsibilities react differently to the standard bundle of interventions (Table VII-3).

Table VII-3. Interaction standard bundle – political membership

	All members (ratio)		HFC president (binary)		HFC executives (ratio)	
	effect ¹	p-value	effect ¹	p-value	effect ¹	p-value
1. HFC organisation	-0.139	0.798	0.239	0.168	-0.336	0.137
2. Social accountability	-1.756	0.086*	-0.085	0.845	-0.132	0.801
3. HF management	-0.435	0.575	0.124	0.631	-0.186	0.513

*N unchanged since chapter III. | 1. The effect is given by $\beta_1 + \beta_2 + \beta_3$ in model VI.2. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

Data about the name of the party the HFC members are affiliated to and about membership to a party without public mandate were unfortunately too delicate to collect. Both could affect the results. The results are robust to transforming the linear variables into dummies and decomposing the level of political responsibility of the local politician (*colline*, *zone*, or *municipality*).

Whether the head of the HFC is a religious figure, a Catholic priest or a Protestant (Anglican, Baptist, Evangelical) pastor, as well as the ratio of HFC executive members who are religious figures, interacts negatively with the standard interventions, but is not

statistically significant once the FWER correction is applied (Table VII-4).

Table VII-4. Interaction religious figures - standard bundle

	Faith-based HF (dummy)		HFC president (dummy)		HFC executives (ratio)	
	effect ¹	p-value	effect ¹	p-value	effect ¹	p-value
1. HFC organisation	0.001	0.998	0.194	0.421	0.747	0.487
2. Social accountability	-0.426	0.331	-0.853	0.098*	-4.776	0.048**
3. HF management	0.001	0.997	0.210	0.543	0.128	0.943

*N unchanged since chapter III. | The effect is given by $\beta_1 + \beta_2 + \beta_3$ in mode I.VI.2. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

The effect is driven by the indicators on how the HF staff and HFC members perceive the HFC decision rights, a scenario that is consistent with qualitative information from the project facilitators that report a clash between the paternalistic approach of governance adopted by many religious leaders, especially in the Catholic Church, and principles of social accountability. In line with this, Catholic HFs do worse than their Protestant counterparts (Table C-34 in appendix), possibly because of their more rigid structure described in Chapter II. More important than the status of the HF is the presence of religious leaders in the HFC,²²⁷ which interacts negatively and significantly with the social accountability index. In the case of the standard bundle of intervention, religious leaders appear as proponents of the status quo and resist change in line with the theory that local leaders can impede change driven by participatory institutions.

Interactions with other criteria of vulnerability do not lead to any even remotely significant results (Table VII-5). The effects are not even taking the same signs across dimensions or cases. The composition of the committee remains fundamentally endogenous to the local situation of the HF and reflects local dynamics. The presence of local leaders within a committee is indeed not random: committee members are chosen by the population and may, therefore, incarnate a form of consensus about the importance the committee. In this

²²⁷ Religious leaders are, in 78% of the cases, found in faith-based HFs, but only 37% of the faith-based HFs have a religious leader as the head of their HFC.

context, a form of equilibrium could be in place at the HF, where the HFC pre-existed before the intervention and moving away from this equilibrium may not be achievable until the HFC members are replaced.

Table VII-5. Interaction standard bundle – criteria of vulnerability

	All members (linear)		HFC president (binary)		HFC executives (linear)	
	effect ¹	p-value	effect ¹	p-value	effect ¹	p-value
<i>Women</i>						
1. HFC organisation	0.241	0.617	0.476	0.089	0.248	0.560
2. Social accountability	0.596	0.533	0.789	0.229	0.048	0.961
3. HF management	0.241	0.730	0.038	0.931	0.409	0.467
<i>Farmer</i>						
1. HFC organisation	-0.177	0.555	0.219	0.417	0.219	0.417
2. Social accountability	0.268	0.733	-0.013	0.984	-0.013	0.984
3. HF management	0.620	0.139	-0.298	0.409	-0.298	0.409
<i>IDPs and returnees</i>						
1. HFC organisation	0.184	0.459	-0.013	0.984	0.425	0.165
2. Social accountability	0.339	0.562	-0.298	0.409	0.245	0.693
3. HF management	0.317	0.370	0.201	0.480	0.290	0.475

*N unchanged since chapter III. | The effect is given by $\beta_1+\beta_2+\beta_3$ in model VI.2. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

Part of the committees were not elected but appointed by the chief nurse or the congregation in charge of the HF. As the table below shows, there is a negative, non-FWER robust interaction with the standard bundle of interventions (Table VII-6).

Table VII-6. Interaction effects with whether the HFC is elected

	Effect ¹	p-value
1. HFC organisation	-0.393	0.056*
2. Social accountability	0.249	0.669
3. HF management	-0.267	0.337

*N unchanged since chapter III. | The effect is given by $\beta_1+\beta_2+\beta_3$ in model VI.2VII.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

The phenomenon is probably mostly catching up: at baseline level, the non-elected committees are doing significantly worse than the elected committees regarding HFC

organisation (z-score -0.128 versus 0.027, t-value: -2.957).

This section has shown that the composition of the HFC is not associated with different effects of the standard bundle of interventions, with the exception of the presence of religious leaders that is borderline significant. The lack of visible interaction effect does not necessarily mean that the composition of the HFC does not matter. Indeed, the indicators may not capture the position of the local leader in the local context with enough precision and they also do not fully capture interpersonal dynamics, including kinship, friendship, and ethnicity. There is no evidence that being on the committee for some years weakens the position of the local elite vis-à-vis the chief nurse: interacting the bundle of intervention with the age of the HFC (which is not available for 20 HFCs) does not lead to significant results.

VII.4.2. Support from outside: joint meetings between the HFC and local leaders

Relative to the standard bundle of interventions, the joint meetings with the local leaders have a statistically significant positive impact only on the level of involvement the HFC decision rights (a sub-component of the ‘social accountability’ dimension) (Table VII-7 – next page).

The intervention, however, did not lead to obvious changes in the HF management and service delivery. The effects regarding the different elements that compose the indexes HFC organisation, social accountability, and HF management (the entry points for change) are presented below.

Table VII-7. Leaders intervention: main results

	Relative to the 'standard bundle' of interventions			Relative to control group		
	(1) Effect ^a	(2) p-value	(3) FWER p-value	(4) Effect ^b	(6) p-value	(6) FWER p-value
1. HFC organisation	0.181	0.104		0.440	0.00***	0.00***
2 Accountability	0.134	0.538		0.146	0.450	
2.1. Enforcement / HFC rights	0.398	0.028**		0.320	0.054*	0.162
2.2. Share information with users†	-0.020	0.793		-0.038	0.595	
2.3. Share Information with nurses	-0.032	0.796		0.004	0.972	
2b. Agreement on HFC decisions‡	-0.011	0.962		-0.003	0.987	
3. Management	-0.042	0.756		0.073	0.541	
3.1 Management: Drugs	0.056	0.732		0.025	0.876	
3.2 Management: Staff	-0.149	0.276		0.065	0.583	
3.3 Management: Buildings	0.189	0.339		0.161	0.339	
3.4 Management: Budget	-0.114	0.534		-0.032	0.830	
4. Equity in access†	-0.028	0.859		-0.229	0.057	
5. Quality of services†	-0.176	0.258		-0.211	0.084	
6. Use of services	0.108	0.445		0.029	0.838	

*N unchanged since chapter III. | See Table III-3 and chapter III (experimental design) for details about the construction of the standardised dimensions. | † Data and analysis at the household-level (2.2. aggregated at HF-level when dimension 2 was constructed). | ‡ Not part of the original analysis plan. | a and b: effects are respectively β_4 and $\beta_1 + \beta_2 + \beta_3 + \beta_4$ in model VII.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

Relative to the standard bundle of interventions, the joint meetings only marginally improve the presence of terms of reference and the likelihood that the committee names management as one of its key activities (Table VII-8 – next page).

Relative to the control group, though, all indicators but those related to the HFC meetings change positively, and there is a significant and robust impact on management as a key activity and the availability of terms of reference. The HFC seems to better understand its role as a platform for management and transmitting the voice of the population.

Table VII-8. Leaders intervention: effects on HFC organisation

	mean control (2013)	Relative to 'standard bundle' of interventions			Relative to control group		
		(1) Effect ^a	(2) p- value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p- value
Meetings HFC per month	0.975	0.103	0.295		-0.022	0.728	
Decisions by consensus (binary)	0.889	-0.135	0.368		0.110	0.321	
HFC self-confidence (1-5) ¹	1.838	-0.049	0.840		-0.019	0.963	
Terms of Reference available	0.148	0.290	0.089*	0.356	0.719	0.000***	0.001***
Executive committee exists [‡]	0.873	-0.004	0.922		-0.038	0.323	
Key activity; management ²	0.864	0.048	0.561		0.104	0.146	
“ ” detailed management ²	0.259	0.073	0.651		0.389	0.006***	0.027**
“ ” Information / voice ²	0.370	0.267	0.075*	0.251	0.204	0.129	
Meetings HFC / month	0.210	-0.009	0.940		0.171	0.091*	0.263

*N unchanged since chapter III. | 1. Based on a 5-item Likert scale: from 1 no confidence at all to 5 very confident. | 2. Created from coding the open-ended question 'what is the main activity of the HFC?' | ‡ Not part of the original analysis plan. | a and b: effects are respectively β_4 and $\beta_1+\beta_2+\beta_3+\beta_4$ in model VII.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

Relative to the standard bundle of interventions, the social accountability indicators that change are almost all related to the ways the HF medical staff perceives the role of the HFC, and especially its management committee – which would tend to support the theory of change that the HFC indeed needs local leaders support to appear legitimate.

The HFC itself does not report important changes in its rights at the HF (Table VII-9).

When put in perspective with the control group, the intervention only slightly reinforces social accountability: the only indicator that sees a statistically positive change is the rights of the executive members, according to the HF staff. Overall, the standard bundle of interventions combined with the joint meetings benefits the HFC executive members, which are both supposedly the most involved in the actual management of the HF and the 'elite' part of the committee, rather than ordinary members of the HFC. Importantly, there is no evidence that the joint meetings improve the relationship with the population: most of the indicators related to the population's perception of the HFC actually take a non-significant negative sign.

Table VII-9. Leaders intervention: effects on social accountability

		Relative to ‘standard bundle’ of interventions			Relative to control group		
	mean control (2013)	(1) Effect ^a	(2) p-value	(3) FWER p- value	(4) Effect ^b	(5) p-value	(6) FWER p-value
2.1. Decision rights of, (according to...)							
HFC (...nurses) ¹	0.628	0.201	0.081*	0.189	0.087	0.396	
HFC (...HFC executives) ¹	0.587	0.068	0.488		0.058	0.496	
HFC executives (...nurses) ¹	0.257	0.262	0.004***	0.028**	0.213	0.009***	0.063*
HFC executives (...HFC exec.) ¹	0.293	0.085	0.404		0.130	0.171	
HFC president (...nurses) ¹	0.312	0.214	0.016**	0.056*	0.105	0.206	
HFC president (...HFC exec.) ¹	0.279	0.133	0.134		0.119	0.146	
HFC co-signs orders, binary ¹	0.667	-0.140	0.330		0.022	0.868	
2.2. Shared info. with population [†]							
Knows the HFC [†]	0.423	-0.044	0.568		-0.090	0.114	
Num. of HFC members known [†]	2.558	0.545	0.199		0.227	0.593	
Went to a HFC meeting ^{2,†}	0.825	-0.102	0.710		-0.033	0.898	
Asked the HFC a question ^{2,†}	0.819	0.248	0.278		0.025	0.920	
Identifies HFC as HF manager ^{3,†}	0.187	-0.129	0.303		-0.074	0.486	
Bill is understood (1-5) ^{4,5†}	4.091	-0.035	0.833		-0.202	0.168	
Prices displayed at HF ^{5†}	0.382	-0.045	0.723		-0.115	0.250	
2.3. Shared info. with nurses							
Minutes to chief nurse (binary)	0.420	-0.035	0.833		0.127	0.388	
Minutes to district (binary)	0.160	0.005	0.975		0.616	0.793	

*N unchanged since chapter III. | 1. The score is the average of decision about: hire/dismiss staff, hire/dismiss support staff, order drugs, order equipment, price drugs, price services, development plan. See Table II-9 for details. | 2. In the past 6 months | 3. Dummy created from the question "Who is the manager of the HF?" | 4. 5-item Likert-scale | 5. Users who visited the HF in the past 6 months only. | † Data and analysis at the household-level | a and b: effects are respectively β_4 and $\beta_1 + \beta_2 + \beta_3 + \beta_4$ in model VII.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * < 0.1, ** < 0.05, *** < 0.001.*

The management of the HF is largely unchanged by the intervention (Table VII-10).

There is a slight positive impact on the construction of small buildings at the HF (relative to the standard group) but this result is only in simple difference, not robust to the FWER correction, and is visible only relative to the standard bundle of interventions.

Table VII-10. Leaders intervention: effects on HF management

		Relative to ‘standard bundle’ of interventions			Relative to control group		
	mean control (2013)	(1) Effect ^a	(2) p-value	(3) FWER p-value	(4) Effect ^b	(5) p-value	(6) FWER p-value
<i>2.1. Equipment</i>							
Stock-out of drugs ¹	1.351	0.562	0.173		0.267	0.460	
“ ” of equipment ¹	0.596	-0.050	0.904		-0.308	0.480	
“ ” of medical equipment ¹	1.908	-0.372	0.542		0.096	0.853	
<i>2.2. Human resources</i>							
Qualified staff (number) ²	0.481	-0.095	0.547		-0.023	0.868	
Support staff (number) ²	5.951	0.762	0.167		0.429	0.363	
Chief nurse (change this year)	0.160	-0.996	0.233		-0.157	0.854	
<i>3.3. Infrastructure</i>							
Water ³	3.074	-0.171	0.531		-0.081	0.733	
Electricity ³	3.098	-0.047	0.892		0.085	0.708	
New building this year ^{‡,EO}	0.210	0.013	0.863		0.013	0.128	
New small build. this year ^{‡,EO}	0.160	0.167	0.085*	0.340	0.132	0.863	
<i>3.4. Finances and services</i>							
HF direct revenue / revenue ⁴	0.147	0.038	0.707		0.132	0.128	
HF expenses / income ⁴	1.054	-0.053	0.262		-0.029	0.488	
Services available ⁵	0.95	-0.033	0.380		0.017	0.637	

*N unchanged since chapter III. | 1. A negative impact on stock-outs constitutes an improvement, mean value of the items presented in Table II-7 p-value. | 2. Post-secondary at least | 3. All staff that do not have post-secondary qualification. | 4. 5-item Likert scale (0: never to 5: constant) | 4. Direct revenue is revenue generated from user fees. | 5. Out of seven services –see Table II-3 for details. | EO: end-line only (not a difference-in-difference indicator). | a and b: effects are respectively β_4 and $\beta_1 + \beta_2 + \beta_3 + \beta_4$ in model VII.2. FWER corrected p-values indicated only when the naïve p-value is below 0.1. Significance level: * <0.1 , ** <0.05 , *** <0.001 .*

In short, the joint meetings have not led to important changes in the HFs and their HFCs. The rest of this chapter argues that (1) adherence to the intervention has been limited, and that (2) the type of attendees to the joint meetings influences the outcome of the intervention.

It is also important to bear in mind that the statistical power of this last intervention is more limited as the intervention group is smaller: using the baseline values of the second dimension (social accountability) reported above, a 0.25 standard deviation change had a power of only 0.628 (alpha 0.05). Some indexes and variables however have a smaller baseline variance, such as dimension 2.1 on enforcement and decision rights, and effects had a fair chance to be detected. In the case of the 0.32 standard deviation on dimension

2.1, power was 0.999 (alpha 0.05).

Adherence

The joint meetings did take place in all the targeted HFs except one site where a conflict between the HFC and the nurses prevented any intervention. On average, 7.731 local leaders out of the 10 expected turned out at the meeting (SD: 2.294). Implementation reports describe a good atmosphere. Although the original idea was to let the HFC members organise and facilitate the joint meeting, this soon proved impractical. When the idea was mentioned to the HFC, social structures suddenly became extremely apparent: in the HFCs with fewer local leaders, the HFC members insisted that for the meeting to work the implementing team would need to officially organise the meeting. The HFC members launched the invitations. This change in the original plan reveals, once again, the complexity of simply setting up a reunion and accessing local leaders in rural Burundi.

The lack of financial incentives (no *per diem* was paid) or deliberate actions from the HFC president or chief nurse may explain the variance in attendance. In one instance, the HFC president reportedly discouraged local leaders to come to the meeting when he stressed that there was no financial benefit to extract from the meeting.²²⁸ The HFC members who recall the story also insist that: “the HFC president left the meeting shortly after it started; he is a businessman and does not want to do anything that does not pay”.²²⁹

Further adherence to the principle of a joint meeting between the HFC and local leaders is very low. Six months after the intervention, only two HFCs had organised another meeting. Two main explanations emerge from the nested qualitative research:

In a first scenario, the HFC members do not feel they are in a position to invite local leaders and organise a meeting without external support, for social and financial reasons. Socially, committee members deplore their lack of authority and influence to convene the meeting, which is very much in line with the difficulties in implementing the

²²⁸ Focus group with HFC, Makamba district (HF Endline.B.4.8), 13.08.2013.

²²⁹ Focus group with HFC, Makamba district (HF Endline.B.4.8), 13.08.2013.

joint meeting explained above –and reveals the failure of the intervention in substantially strengthening the position of the HFC members vis-à-vis the local leaders. Financially, the HFC members insist that convening a meeting with the local leaders implies gifts or at least compensations that are unaffordable or unacceptable for the HFC.

In a second and apparently less frequent scenario, the meetings are described as “not necessary” because the contact has been initiated and the new channels of communication are informal: local leaders and HFC members know each other better and keep track of each other’s action through informal chats. This explanation is consistent with the reportedly overwhelming number of local formal committee meetings suggested or imposed by third parties such as government’s agencies or NGOs (see chapter II).

Nested qualitative analysis also helps to understand further how the intervention was received and exploited in HFCs that registered different levels of change in the social accountability index. There are clear issues with meaningfully exploiting the joint meeting tool.

In the low social accountability group, two different scenarios are playing out. First, there are HFCs where the HFC says it already comprises “almost all the leaders”, and indeed comprises *chefs de collines* and religious figures. In these cases, few local leaders came to the joint meeting, which was then nothing different from a normal HFC meeting with a few guests. Second, there are places where the tension between the chief nurse and/or the local leaders and the HFC remain important.²³⁰ For instance, in one case the committee explained how the chief nurse refused to join the meeting with the local leaders²³¹ while in another one the HFC deplores that it is struggling to reconnect with the nurses after having obtained the replacement of a chief nurse that refused to let them check the books.²³²

In the middle and high performing group of HFCs, committee members explain

²³⁰ Focus group with HFC, Bururi district (HF Endline.B.4.1), 08.08.2013.

²³¹ Focus group with HFC, Mpanda district (HF Endline.B.4.6), 29.08.2013.

²³² Interview with HFC president, Bururi district (HF Endline.B.4.1), 08.08.2013.

how they have been working towards improving the situation, but are not quite there yet –and the problems are very similar to the problems reported in the low-performing group.²³³ “Until now, we disagree about the control of finances and drugs, but we gave up”.²³⁴ Even when the chief nurse works in full collaboration with the HFC, gathering local leaders is not easy. As one chief nurse recalls: “I work with various partners: I had even planned to meet with the representatives of the churches, but they have not come to the meeting. I carry on though”.²³⁵ One the HFC further elaborates: “we could meet the local leaders once only. We are leaders, and have among us primary school teachers who work really well, but we are not accepted by the rest of the local leaders. It is very hard; we really need to ask the authorities to talk. They are the ones who have the power to give us the authorisation to talk”.²³⁶

In the HFCs where the most important gains in the social accountability indicator were recorded, the communication seems more fluid. In a HF for instance, the HFC president explained how there was an inter-sectoral coordination mechanism,²³⁷ and other HFCs explained that the informal meetings with the leaders were frequent.²³⁸ This, however, does not mean that changes happened in the management of the HFC. Running the model described in the methods section (heterogeneous effects) with a dummy identifying the top quartile of HFCs in terms of social accountability, only has a limited, positive, but non-significant effect is found on the HF management dimension (+0.115 SD when using the end-line social accountability level, and + 0.086 SD when using the difference-in-difference level).

Heterogeneous effects

An almost natural question that comes with the joint meeting intervention is whether

²³³ Focus group with HFC, Rumonge district (HF Endline.B.4.10), 08.06.2013.

²³⁴ Interview with chief nurse, Rutana district (HF Endline.B.3.3), 13.08.2013.

²³⁵ Interview with chief nurse, Makamba district (HF Endline.B.4.8), 13.08.2013.

²³⁶ Interview with HFC president, Nyanza-lac district (HF Endline.B.4.7), 05.08.2013.

²³⁷ Interview with HFC president, Murore district (HF Endline.B.4.12), 20.08.2013.

²³⁸ Interview with chief nurse, Matana district (HF Endline.B.4.11), 07.09.2013.

attendance to it and the type of attendees lead to different outcomes. Table VII-11 reports the identity of the local leaders who joined the meeting after being selected by the HFC members.²³⁹

Table VII-11. Local leaders picked by the HFC and present at the joint-session

<i>Type of leader</i>	Mean ratio per HFC	Standard deviation	At least one picked	N
Low-level religious (assistants, ' <i>catéchiste</i> ')	0.238	(0.177)	0.805	41
High-level religious (priest, pastor, imam)	0.108	(0.174)	0.463	41
Low-level local politics (<i>colline</i> , <i>sous-colline</i>)	0.320	(0.223)	0.854	41
High-level local politics (<i>zone</i> and above)	0.078	(0.165)	0.317	41
Teacher, school director	0.094	(0.190)	0.366	41
Local civil society figure	0.126	(0.190)	0.488	41
Community Health Worker	0.031	(0.083)	0.146	41
Local 'wise man' (<i>mushigantahe</i>)	0.006	(0.028)	0.049	41

The important proportion of local politicians and church representatives confirms that they are indeed perceived as the key authorities at the local level, and echoes think-tank (International Crisis Group 2012; International Crisis Group 2011) and academic research (van Leeuwen 2008). Civil society is the third pick of the HFC, and interestingly the traditional 'wise men', the *bashigantahe*, are almost totally off the picture, thereby confirming a trend already highlighted in the literature that the local influence of this traditional actor has become very limited (Kohlhagen 2009). None of the HFC that counts religious leaders has selected religious leaders as interlocutors,²⁴⁰ and there is a similarly negative but statistically insignificant correlation when looking at the ratios of local politicians (-0.268; $t=-1.63$). This may indicate a strategic approach to engaging the local elites by the HFC members who select local leaders that cover areas of the public life that are less represented on the committee (and in which they are probably less visible).

Using the model described in the methods, different scenarios are tested using (1) the

²³⁹ In eight HFs, the lists were not taken properly and names had to be imputed ex-post.

²⁴⁰ The OLS correlation is -0.523 ($t=-3.41$).

ratio of religious leaders, politicians, and civil society members among the local leaders who participated in the joint meeting; and (2) for each category, a binary variable that takes the value 1 when the ratio of participants of that category is above the sample median (Table VII-12).

Table VII. Leaders intervention heterogeneous effects: invitees to the meeting

	<i>attendance</i>		<i>ratio religious</i>		<i>ratio politics</i>		<i>ratio civil society</i>	
	binary	linear	binary	linear	binary	linear	binary	linear
1. HFC organisation	0.104	0.013	0.166	0.254	-0.091	-0.464	0.215	0.097
2. Social accountability	-0.196	-0.014	0.040	0.335	-0.422	-0.108	0.519*	1.262*
3. HF management	-0.094	0.006	0.435**	1.181***	-0.397**	-0.606	0.012	0.105

N unchanged since chapter III. | Effect is the interaction effect χ in model VII.3. Significance level:

** <0.1 , ** <0.05 , *** <0.001 .*

The level of attendance of local leaders to the joint meeting does not seem to influence the outcome of the intervention.

The best allies of the HFC seem not to be the local politicians but rather civil society and religious figures. Higher ratios of religious figures in the joint meeting are however associated with better outcomes in HF management index while higher ratios of political figures lead to worst outcomes. A higher ratio of civil society members in the joint meeting is correlated with a more substantial change in the social accountability index.

The ratios of religious leaders, politicians, and civil society members are all linked to each other, which makes it complicated to understand what drives the heterogeneous effects: the positive effect of the ratio of religious leaders among the selected local leaders could also be the consequence of this group having less of the negative effect of the interaction between the ratio of politicians with the joint meeting. What is more, the HFC was let free to choose the local leaders and the different ratios reflect local realities of power and authority that can vary from one place to another.

VII.4.3. Support from outside and within: meeting intervention interaction

Interaction effects between the composition of the HFC and the joint meeting intervention

seek to explore a simple idea: that linking up local leaders with HFC members is more efficient when HFCs comprise local leaders. Under this hypothesis, committees with a higher ratio of local elite members are more likely to be taken seriously by the local leaders they chose to meet. The ratio of politicians in the HFC does not interact significantly with the intervention but the intervention does interact positively with the presence and ratio of religious leaders within the HFC, and, more generally, with whether the HF is faith-based rather than public (Table VII-12).

Table VII-12. Leaders intervention heterogeneous effects: religious leaders in the HFC

	Faith-based HF		HFC Pdt is a religious leader		religious leaders /HFC exec.	
	effect	p-value	effect	p-value	effect	p-value
1. HFC organisation	0.565	0.009***	0.517	0.040**	1.250	0.088*
2. Social accountability	0.498	0.312	1.822	0.015**	4.317	0.052*
3. HF management	0.244	0.391	0.630	0.089	1.494	0.214
Meetings HFC	0.283	0.083	0.115	0.569	0.018	0.979
Decisions by consensus	0.006	0.976	0.319	0.281	0.804	0.241
HFC self-confidence (1-5) ¹	0.567	0.304	-0.236	0.649	-1.217	0.435
Terms of Reference available	0.209	0.388	0.098	0.792	0.204	0.848
Executive committee exists	0.249	0.359	0.939	0.001***	2.376	0.016**
Key activity; management ²	-0.088	0.735	-0.163	0.606	-0.318	0.752
“ ” detailed management ²	0.190	0.538	-0.064	0.896	0.005	0.997
“ ” Information / voice ²	0.600	0.021**	0.919	0.004***	2.609	0.006***

*N unchanged since chapter III. | 1. Based on a 5-item Likert scale: from 1 no confidence at all to 5 very confident. | 2. Created from coding the open-ended question “what is the main activity of the HFC?” | Effect is the interaction effect χ_4 in model VII.4. P-value significance level: * < 0.1, ** < 0.05, *** < 0.001.*

This observation is only valid for the HFC organisation and social accountability indexes.

The effect is more than simply counter-balancing the destabilising effect of the standard bundle of intervention in faith-based/religious leader-dominated HFCs that was described in the last sub-section (see Table VII-4). The mechanism at play may relate to what was said earlier about religious leaders in the following manner: religious HFC presidents are perceived as more paternalistic and Catholic HFs are known to have a less flexible management, but the interaction with other influential figures from the community come to mitigate that influence and provides external support for change at the HF. It must be

noted that only three HFC presidents are priests in the intervention group, and the effect needs therefore be considered carefully (and is also remarkably strong to be detected).

Indicators of the vulnerabilities of the HFC members interact, largely negatively, with the joint meeting intervention. In the case of the ratio of 'farmers', a proxy for the non-elite socio-professional group, there is no clear impact when looking at the ratio of farmers in the HFC but there is a significant non-robust negative effect on the social accountability index when the case of the HFC president and the HFC executives are considered Table VII-13.

Table VII-13. Leaders intervention heterogeneous effects: socio-professional activity in HFC

	farmers /HFC		HFC president farmer		farmers/HFC exec	
	effect ¹	p-value	effect ¹	p-value	effect ¹	p-value
1. HFC organisation	0.062	0.840	-0.193	0.233	-0.105	0.649
2. Social accountability	-0.379	0.633	-0.963	0.030**	-0.931	0.084*
3. HF management	-0.100	0.831	0.097	0.718	0.060	0.854

*N unchanged since chapter III. | 1. Effect is the interaction effect χ_4 in model VII.4. P-value significance level: *<0.1, **<0.05, ***<0.001.*

Similarly, there is a negative but non-significant interaction with the ratio of IDPs and returnees, two types of victims of the 1993-2005 civil war, in the HFC. Since IDPs and returnees correspond to two different demographics, it is important, although the statistical power for this exercise remains quite limited, to look at each category separately. Returnees are typically Hutu, who came back from exile in Tanzania while IDPs are typically Tutsis who are prevented to live next to their land and often concentrate near market towns. The categories typically suffer from important problems of integration within the Burundian society (Vorrath 2007; Fransen & Kuschminder 2012).

In the case of the returnees, not effect is visible (see Table C-37 in appendix) while in the case of the IDPs who are HFC president, there is a clear negative interaction, not only the HFC functioning dimension, but also the social accountability dimension (Table VII-14).

All the signs of the components of the HFC organisation index take a negative sign, with one clear and significant exception: the decisions are more consensual. This could reflect

an attempt of the committee to try to reform its governance in a context of communal tensions, or the difficulty for a minority group to keep their influence without resorting to constant discussions.

Table VII-14. Leaders intervention heterogeneous effects: IDPs in the HFC

	IDPs/members		HFC Pdt is IDP		IDPs/HFC exec	
	effect	p-value	effect	p-value	effect	p-value
1. HFC organisation	-0.292	0.289	-0.468	0.017**	-0.241	0.389
2. Social accountability	-0.564	0.464	-0.889	0.066*	-0.266	0.702
3. HF management	0.550	0.210	0.273	0.413	0.553	0.248
Meetings HFC	0.069	0.831	-0.023	0.916	-0.157	0.621
Decisions by consensus	0.960	0.009***	0.617	0.017**	1.071	0.009***
HFC self-confidence (1-5) ¹	0.591	0.534	0.306	0.666	1.210	0.218
Terms of Reference available	-0.230	0.643	-0.358	0.402	-0.166	0.753
Executive committee exists	-0.010	0.987	-0.131	0.829	0.005	0.993
Key activity; management ²	0.439	0.247	-0.156	0.531	0.055	0.895
“ ” detailed management ²	-1.110	0.035**	-0.897	0.032**	-1.133	0.055**
“ ” Information / voice ²	-0.970	0.084*	-0.619	0.187	-0.367	0.534

*N unchanged since chapter III. | 1. Based on a 5-item Likert scale: from 1 no confidence at all to 5 very confident. | 2. Created from coding the open-ended question “what is the main activity of the HFC?” | Effect is the interaction effect χ_4 in model VII.4. P-value significance level: * < 0.1, * < 0.05, *** < 0.001.*

Gender issues were briefly touched upon in the third and fifth chapters, which showed that, before intervention, women were typically marginalised in the HFC functioning. The composition of the HFC has not changed and the interventions did not stress gender issues. There is no visible interaction effect (see Table C-35 in appendix), but at the same time, there is also very little statistical power for this: in the case of the HFC presidency, there are a total of 21 women in the 249 HFs of this study.

The last hypothesis this section could have tested is whether having the same type of local leaders, for instance, politicians or religious leaders, on both end, in the committee and in the group of local leaders that participates in the meetings, improves the effect of the intervention. In other words, is there a ‘peer’ or ‘matching’ effect’ (the same types of agents match with each other)? No such effect is found when interacting the joint meeting intervention with a dummy for the situation where there are politicians in both the HFC and the group of local leaders. The exercise could not be done with religious leaders as

there is no such situation of overlap. Interactions with indicators of whether the HFC says it was elected and the presence of NGOs and violent incident are largely insignificant (see Table C-39 in appendix), although interestingly non-elected HFCs seem slightly more receptive to the joint leaders intervention; the effect is, however, only on the organisation of the committee.

VII.5. Discussion and conclusion

The chapter started with a depiction of an unexpected form of elite-capture of HFC positions. With respects to socio-economic characteristics, HFC positions are, expectedly, filled in with better-off individuals on average. At the same time, qualitative evidence point out to the fact that these educated and wealthier notables are not necessarily the most influential within their communities and often not the type of elite who has power. Local-level politicians and religious leaders appear to be the key entry points to the population: they are the ones who are in a position to convene meetings and assemblies and are respected by both the HF staff and HFC members. To test the hypothesis that connection with these local leaders matters for improving the HFC functioning, a double strategy was elaborated. It comprised the study of (1) the composition of the HFC and in particular the presence of potentially influential local leaders and (2) an intervention designed to offer more support to HFC members through meetings with selected local leaders.

None of these two approaches leads to very conclusive results. Joint meetings seem slightly more promising for rebalancing decision rights within the HFC but suffer from a series of implementation problems that reveal the difficulty to forge alliances from the outside. The discontinuation of the meetings beyond the one that was facilitated by the project may have roots in aid-dependency mentality, but ultimately the problem is that the HFC is not perceived as legitimate or fails to convince local leaders of the importance of the meetings. Whether this issue can be solved is unclear. The one and only joint meeting that could be organised however does slightly improve the functioning of the committee, and reinforces

the decision rights of the executive members of the committees, but do not lead to further changes in the HF management, and importantly does not improve the connection with the population.

The more central story that emerges from the chapter is one of persistence if not worsening of some form of elite-capture. This is consistent with the findings of Gaynor (2014) who shows that support to decentralisation in Burundi has consolidated the power of local elites and reinforced horizontal inequalities and with Sheely (2015) who provide experimental evidence that elite control can adapt to attempts to increase mobilisation and participation. The joint meetings indeed appear to (1) on average only reinforce the executive members of the committee rather than all its members and (2) have adverse effects when vulnerable groups, women, farmers, and victims of war are present inside the committee. All of this without clear improvement of service delivery. If anything, the re-definition of power brought by the intervention is a shift from an autocracy, the dominance of the HFC president, to an oligarchy, the dominance of the executive members. Interestingly, though, party politics, as captured with indicators on whether HFC members have been elected to any position, do not seem to play any role: the main patterns are rather about social positions in the local society. A possible explanation is that the financial benefits derived from the HFC are limited and known to be limited.

There is, however, one clear case when the intervention seems promising, it is the case of faith-based health centres, whose management is known to be less transparent, and HFC led by religious figures who are known for their paternalistic management. In these cases, the intervention clearly improves the functioning of the HF and the social accountability dimension; and when a majority of religious figures are chosen as intermediaries, there are clear benefits in terms of HF management. The intervention, in this case, may ‘democratise’ the HFC and “reorder local political relationships” (Guggenheim 2006: 138).

When put in perspective with Chapter VI and the standard bundle of interventions, the joint meeting intervention seems to smooth the relationship between HFC members and the medical staff: there is no visible effect of the new bundle of interventions on the

turnover of chief nurses or the level of self-confidence of the committee. A likely explanation, which is backed with qualitative data, is that local leaders help to calm the situation at the HF. The long-run effects of this are hard to predict. Beyond the possibility already mentioned that HFC and local leaders simply do not interact much anymore, a probable scenario is that either gradual change will occur, or more likely, that the local leaders will push for a *status quo* at the HF, as the lack of impact of the intervention on HF management suggests.

The real risk this chapter points to is that the committee just becomes an embodiment of itself, not serving the interests of the population, or even worst, serving no interests at all. The problem here is not only in the selection of the HFC – as the background section shows, elections are in place although not working perfectly – it is much more in the general attitude towards the committee system. The population has little knowledge of the HFC existence, and when they know about it, most of the people deplore their lack of connection to it. Disconnected from its people, its base, the HFC becomes not more but possibly less democratic when provided with clearer guidelines.

It is important to highlight that the situation on the ground is changing quickly. At the time of the study, only a few of the HFC presidents and chief nurses seemed partly politicised, but often with the population and HFC acting as watchdogs, interviewees, however, insisted that the situation was degrading.²⁴¹ Some analysts, however, warned that: “now it is the culture of the party. The chief is respected only if he or she has some weight inside the ruling party”.²⁴²

The relative failure of the committee system in the case of Burundi does not necessarily mean that the approach should be abandoned. The study mostly shows that relatively low-cost and standard interventions for reinforcing the HFC are not sufficient and that forging an alliance with local leaders is complicated. This does not mean that democratic

²⁴¹ Focus group with chief nurse, Makamba district, 08.08.2013. Interview with Siméon Barumwete, professor at the University of Burundi, 07.12.2012.

²⁴² Interview with Rose Nitunga, *UNDP Burundi*, 30.05.2013.

participation should not be an approach for improving or simply governing health services or that the state should withdraw from such initiatives.

In fact, the chapter highlights the importance of a series of upward accountabilities, towards the party, churches, and other strong institutions. Reaching efficient committees and participation, in line with recent findings in the literature (Fox 2015; Mansuri & Rao 2013), seems to require bolstering the state capacity and *more* state intervention. Fox (2015) argues that a sandwich strategies is needed: public interest advocacy needs to encounter a reformist attitude from above. Hickey & King (2016) have a similar argument when they talk about the need to strengthen and legitimise public authorities to promote bottom-up forms accountability. As HFC members mention it themselves, the impetus may need to come from above: “the administrator himself told the *chefs de colline* to facilitate our work. Without the *chef de colline*, it would be really hard for us to connect with the population”.²⁴³

The health system currently typically fails at the level of inter-sectoral coordination. It is not the only one, a striking feature of the health system, but also of education, water management, and security at the local level is the silo logic that prevails. Although there are numerous cross-cutting issues, each field has its own committee, and the territorial administration is often disconnected from them (Observatoire de l’Action Gouvernementale 2014). The joint meetings, although they arguably failed to become a durable mechanism, constituted a first attempt to formally re-establish healthcare as part of the local tissue, as part of a network of local services.

²⁴³ Focus group with HFC, Rutana district (HF Endline.B.3.6), 13.08.2013.

CONCLUSIONS AND IMPLICATIONS

This doctoral dissertation has set out to explore the effects of a specific mechanism of social accountability, the health facility committee (HFC), in the contexts of Burundi and South Kivu (the Democratic Republic of the Congo) between 2011 and 2014. The HFCs comprise community members elected to co-manage local primary healthcare centres. They are the quintessential and most common form of community participation, or governance, in African health systems. Despite the ubiquity of the HFCs, the factors that render this induced form of community governance effective and influential with regard to service delivery had remained largely understudied.

A robust experimental mixed-method approach was used to answer the question of *the impact of the HFC system on the delivery of healthcare services*. An intervention, an information session on the role of the HFC for the HFC members and the HF staff, successfully empowered the HFCs of South Kivu. It led to a series of changes at the HF in terms of management of the infrastructure, human resources and equipment. In the specific context of South Kivu but not in Burundi, the HFC seems, indeed, to have had an impact on HF management. This impact occurs through the HFC ‘simply’ receiving access to basic information about its role and the functioning of the HF, which nuances Fox’s (2015) idea that “information alone is not enough”. However, as demonstrated throughout the thesis, the research found no evidence that improving HF management through information support to the HFC has any significant impact on the *use and perceived quality* of primary healthcare services. These findings constitute an important contribution to the body of evidence concerning the effects and efficacy of social accountability mechanisms and are somewhat at odds with some of the more optimistic literature in the field (Björkman & Svensson 2009; Grandvoinnet et al. 2015). The findings confirm the need to rethink the simple linear theory of change that often lies, implicitly, behind the HFC strategy. Improving supply-side community management may not lead to rapidly visible changes in the use, quality or access to HF services in the fragile contexts of Burundi and South Kivu.

The thesis also asked more specific questions. Answering the first, of *how mechanisms of community governance, and especially HFCs, came about in Burundi and South Kivu*, led to the HFC being seen as part of a bigger picture, as the strategic product of different interests. HFCs do exist in both Burundi and South Kivu. They are not a ‘tyranny’ (Cooke & Kothari 2001), but they are also not usually involved in HF affairs, which is not surprising with regards to the thin but growing amount of evidence on the often mitigated impact of social accountability initiatives on service delivery (Mansuri & Rao 2012). This situation has obvious implications for the community governance narrative and theory of change: setting up committees is not sufficient to make them effective. Support seems essential and has historically come from outside the HF: NGOs, and to a lesser extent the ministries of health, have played this role. The literature on decentralisation, highlighting the difficulties of carrying out such reforms in ‘fragile’ states (Brinkerhoff et al. 2012), as well as the more general literature on social accountability (Mansuri & Rao 2013), supports the idea that community participation does not happen by itself and that it may need more state intervention and strong states to work.

The second specific question of the thesis, which was the real core of the thesis, was of *how mechanisms of community governance, and in particular of the HFCs, can be effective – in the sense of the committee being involved in the decisions of the health centre – in Burundi and South Kivu?* The answer is complex. On the one hand, basic information about the HF and HFC functioning is sufficient to make the HFC effective in the favourable context of South Kivu. This also confirms the relevance of the knowledge/capacity gap hypothesis described in the literature (Osmani 2008; Mansuri & Rao 2012; James 2010). On the other hand, in the ‘less favourable’ context of Burundi, the community governance of HFs is a complicated thing to induce. Putting the committee in a position of decision-making is challenging, and certainly not achieved with the same basic institutional knowledge approach used in South Kivu. Some positive changes can come from improving the nurse-committee relationship, but they remain marginal and limited to cases of important disagreement. Similarly, endorsement by local leaders – especially figures from local

churches and civil society groups – may have a positive effect, but it benefits only a handful of HFCs. In short, modifying the *authorising environment* (Andrews 2008) is difficult, especially when none of the parties seem to be willing to risk their position for change. Platteau (2008) argues that community participation will struggle when there is donor competition and expectation that someone outside the community will tackle problems. Similarly, it could be that in the case of Burundi, a long history of a vertical and authoritarian state makes community participation difficult, and for the population to regain interest and capacity in actively participating and claiming a say on the social services in place, time and trust need to be re-established (which echoes findings about democratisation processes).

It is in this sort of exploration of the external validity of community governance initiatives, and their interactions with local contextual variables, that the most original contribution of this research lies. In addition to the first empirical examination of the effects of HFCs on service delivery, the thesis has provided an empirical micro-level attempt at understanding what the critical contextual elements are. The stark discrepancy in the effects of the basic institutional knowledge intervention between Burundi and South Kivu proved to be a rich case-study and the mixed-methods approach proved particularly useful in exploring it. The difference of effects between two countries seems to stem partly from power dynamics and the population's capacity to challenge power relationships (how prone people are to confront nurses in case of problems). These elements are anchored in local institutional history and invite a deeper historical understanding of social accountability. The study of the specific context also found that the 'status' of the HF is crucial, in the case of Burundi and South Kivu: the HFCs of faith-based health centres are more responsive to the institutional knowledge intervention. This may be a result of their management structure, or of their proximity to the population. These conclusions are corroborated by a vast literature that sees faith-based health centres as dynamic actors in the health systems in the region and in Africa (Seay 2013). Disaggregating findings shows that the observation is valid for the Protestant HFs of South Kivu and Burundi, the Catholic

HFs of South Kivu, but not for the Catholic HFs of Burundi, which illustrates the danger of hasty generalisations.

Notably, the empirical research in Burundi and South Kivu also did not find strong evidence to support elements regularly listed as critical contextual factors influencing the HFC functioning. Factors such as free access to health services, the local history of aid, whether the HFC are paid, and even, to a certain extent, the level of education of the HFC members, are not associated with strong heterogeneous effects of the different interventions. These results invite more research and a refinement of the existing typologies of the contextual factors (Brinkerhoff & Wetterberg 2015; Joshi 2013; Fox 2015; King & Samii 2014).

In terms of conceptual contribution, the thesis suggests that the efficacy of the committee is fundamentally a question of narrowing the *power gap* between those in charge of the HF and the HFC. On addressing how to do this, the thesis argues, in line with recent research (Mansuri & Rao 2012), that the questions are *when* social accountability works and *when* the conditions are conducive to the development of mechanisms of social accountability, rather than the more simplistic question of *what mechanisms of social accountability work*. This is fundamentally a question of *authorising* or *enabling* environment. As Fung and Wright (2003) assert, “inequalities of background power can subvert the democracy-enhancing potential of institutional designs”. In this case, other actors easily undermine the reinforcement of a participatory institution, which seems to be the case in Burundi, but to a lesser extent in South Kivu.

Importantly, change towards deeper social accountability, when it occurs, seems rarely smooth. As social reformer Frederick Douglass noted, “power concedes nothing without a demand. It never did and it never will”.²⁴⁴ In South Kivu and Burundi, the interventions designed to strengthen the HFC led to uneasy situations: qualitative and quantitative

²⁴⁴ From “West India Emancipation” speech Frederick Douglass delivered at Canandaigua, New York, on August 3, 1857.

evidence of power struggles was best exemplified by the higher turnover in chief nurses. This pattern of change contradicts the theory and normative framework that suggests that the relationship between the old decision-makers and those involved in the new participatory institution needs to be collaborative rather than adversarial for change to occur (Fung & Wright 2003).

Finally, the thesis deployed mixed methods to overcome the shortcomings of strictly qualitative or quantitative approaches. The timely iteration processes between the different methods and nested analyses allowed for refinement of hypotheses about what lies behind the null effects in Burundi and to better understand the results in South Kivu. This mix of methods is also a mix of disciplines. By bridging methodologies and literature from different disciplines to conduct experimental quantitative studies and ethnographic research, our knowledge of participatory institutions can be advanced, especially in such challenging environments as Burundi and the DRC.

LIMITATIONS

Some of the key limitations of this research have already been discussed in the introduction. It is useful to add two elements that prompt careful consideration of the general results and conclusions: the quality of data and, more importantly, the limits of the identification strategy.

The thesis uses the richness of a unique, extensive dataset collected in collaboration with local partners. Measurement errors remain possible, but measures were taken to limit their occurrence as much as possible. The enumerators had little experience with large-scale surveys but were trained appropriately prior to the data collection phase. The logistics were complicated, especially in the remote Walungu health zone in South Kivu and eastern Burundi, but this was not a particularly new challenge for the team. Four years after starting the research, more options have emerged for improving survey design and data collection; some of them, like the *world management survey*, already existed when the survey started. These tools, including new technology, could have helped data quality, but

it remains unlikely that they would have drastically altered the results.

More importantly, and despite the experimental framework, the identification of causality needs to be treated carefully. Most interventions are bundles that integrate different components, making it challenging to understand what exactly led to changes. For instance, the basic institutional intervention of Chapters III and IV includes a module on the health system, one on the HFC role, and another one on the tools the HFC can use. The caveat that it is difficult to identify which exact part of the bundle led to changes is acknowledged and discussed in the thesis. A similar problem is the analysis of heterogeneous effects using local characteristics. These characteristics are not randomly allocated and are potentially endogenous. For instance, the proportion of members who went to secondary school and even the presence of a faith-based health centre are both influenced by local dynamics, which means that heterogeneous effects are exposed to omit variable bias. There are practical and ethical issues that made the randomisation of such characteristics impossible, and the thesis was consequently cautious in the interpretation of heterogeneous effects.

Perhaps even more fundamentally, it is important to keep in mind that the thesis does not provide evidence about the effects of having a committee in place; the experiments only test hypotheses about what makes HFCs efficient, in the sense of what makes them more active in HF management. Introducing new committees, which was not an option for this study, would have involved other limitations that also make identification imperfect; notably, setting up a new local institution comes with a potential ‘novelty’ effect that cannot be distinguished from the ‘committee’ effect.

These limitations in identification are assumed. Despite them, the thesis goes further than existing studies in causally exploring the effects of health committees. The results are, however, better understood as an entry point and an exposition of general trends rather than neatly identified and precise effects.

POLICY IMPLICATIONS

The research also has implications for policymakers and the management of social services, especially primary healthcare services. At the core of the argument is the question of *external validity*, or more generally the *portability*, of the HFC system. The thesis stresses the importance of policymakers' understanding of what matters in the local context in which the committees operate. It invites the serious consideration of the micro dynamics of authority and management within health centres and local attitudes towards service providers and authority. The thesis has also highlighted, in line with the emerging realist literature in global health policy (Lodenstein et al. 2013), the idea that community governance is not a 'magic bullet' that solves the difficult questions of access and use of primary healthcare services in fragile settings. Realistic expectations regarding the outcome of induced mechanisms of community participation are needed, and would benefit from taking into account the serious effort this thesis has made to study impact in context.

The different chapters build on larger action-research on health committees in Burundi and South Kivu. The practical lessons of this rich experience are deliberately not documented at length here, but it is clear that the deployment of a complex research programme involving randomised interventions and mixed methods data collection was possible only with the continuous involvement of policymakers and other stakeholders. The question of the translation of potential research findings into policy was discussed during the project's inception and well in advance of implementation. This design crucially facilitated the discussion of results with policymakers, especially regarding what could or should be scaled up. Eventually, the HFC guidelines were redesigned in both regions; an HFC course was developed for the nurse training curriculum, and new HFC support projects were developed in the control groups in Burundi and South Kivu. Revised HFC support projects were launched in two new health provinces in Burundi and four new health zones in South Kivu. The translation of research into impact in Burundi and South Kivu, and in Burundi the tricky issue of what to do 'when the results are not what you

were looking for',²⁴⁵ benefitted greatly from interaction with stakeholders prior to even commencing the action-research.

It is also absolutely crucial to flag the fact that the partial lack of effects of HFC support strategies exposed in this thesis does not necessarily bear strong normative implication. The conclusions and focus of the thesis are the organisation of the health committees and the access to, and management and use of, health services. The thesis does not posit anything about the broader implications of the HFCs. Despite these shortcomings, HFCs might well remain an area the Burundian government wants to invest in because it fulfils other policy objectives; what policymakers should refrain from doing, however, is claiming or expecting that HFCs drastically improve health services in the short-run. The question of cost-effectiveness is also one that governments may want to ask: at US\$ 538-758 per committee, depending on the region and package of intervention, the aforementioned interventions are relatively inexpensive, although more cost-effective management interventions may exist.

Nor is the argument that the HFC system is a 'bad policy'; it merely provides evidence that this approach of induced community participation has limited results regarding improving access to, and the management of, health services, especially in Burundi. As highlighted earlier, this lack of short-term results can also be a reason for pursuing more research concerning these committees and other efforts of participatory institutions, especially in a context where people seem to aspire to participative democracy and increased social accountability.

A related implication of these empirical findings, which is along the same line as recent discussions (Brinkerhoff & Wetterberg 2015; Fox 2015), is that 'social accountability' alone is probably not enough; it may need to come with other forms of accountability that

²⁴⁵ Borrowed from the title of a lecture given by Macartan Humphreys, the Principal Investigator of the *Tuungane* impact evaluation project in DRC mentioned earlier on in this thesis
<<https://hosting2.desire2learncapture.com/MUNK/1/Watch/353.aspx>> (last accessed April 25, 2016).

are outside the scope of the present work, such as for instance the relationship between frontline health providers and health districts or the health system and elected political representatives. These other channels remain challenging though: the health districts are often poorly functional; the municipalities suffer from a crucial lack of resources; national and regional politicians have developed networks of patronage rather than lines of accountability to their constituencies; and space for the media, freedom of the press, has been sharply reduced, especially in Burundi. The question of what to do with the HFCs remains an open-ended one.

MOVING AHEAD WITH THE RESEARCH AGENDA

This thesis contributes to the rapidly growing research programme on social accountability and participatory institutions. Even within the specific area of HFCs, much territory remains uncharted. Previous sections already mentioned the potential externalities that HFCs may produce in terms of social cohesion and local democracy. They also highlighted the necessity of examining HFCs in other countries and replicating impact evaluations in order to gauge the full extent of what matters in the local context and what makes some HFCs more effective than others. The methodological legacy and findings of the research will be useful to the development of frameworks for a better understanding of relationships to service providers and authority, and for facilitating between-case comparisons. This requires survey instruments, and ideally health information systems, that collect detailed data about the HFCs, going far beyond the classic questions of whether the HFCs exist and meet.

Among the many questions raised by these conclusions this author considers three to be particularly important.

First, the process and chronology of changes induced by community governance interventions often remain vague. This thesis takes a mainly before-and-after approach, and the monthly panel data available cover only the provision of services and drugs. These elements may not be the most informative to understand exactly how new information

and access to it changes, or does not change, the delivery of services. In particular, as highlighted in Chapters III and VI, it is not clear whether HFC members gain influence at the HFC and then launch a series of actions at the HF level, or whether the HFC members find unofficial ways to provoke changes at the HF (e.g. replacing the chief nurse), which then reinforces their authority. A few authors have insisted that governance is an iterative process (Andrews et al. 2013; Mansuri & Rao 2012) and more research is needed to capture this iteration. The minutes of the 2010-14 meetings of about two-thirds of the HFCs covered in this research were collected. Their analysis, in the spirit of Besley et al.'s (2005) and Ban et al.'s (2012) research in India, could prove very informative. The results could also enable a better understanding of the null results of the interventions in the Burundi case.

Second, the focus of this thesis on what is happening at the HF level has left largely unexplored the question of the relationship between committee members and the population. The preventive services that the committee members are involved in, as well as the organisation of meetings with the population and household visits reported in many instances, are also part of the *responsiveness* of the health system, and thus, deserve more attention. One issue, the relationship between the committee and the poorest, often officially recognised as 'indigents', is of particular importance when considering social accountability as a way to improve access to social services. A new experimental research project on the relationship between HFCs and the 'indigents' that was recently launched in South Kivu should help cast some light on this question.

Third, the HFCs of Burundi and South Kivu are not only operating in the context of state fragility, but also form part of the state and are unlikely to be 'neutral' with respect to the fragility of the state. There are multiple and conflicting narratives about the role of the committee – in health but also education and other basic social services – concerning state building. Committees are presented by some as a way for the state to exempt itself from providing services, and by others as a way to reconnect with citizens. Empirical research is needed in this field, especially in a context like Burundi, where fragility has increased

dramatically in the past year, and in South Kivu, where conflict remains sporadic and pervasive. This question is especially relevant given the latest development of the situation on the ground. In Burundi, the deep political and economic crisis that started in April 2015, when president Pierre Nkurunziza announced his intention to seek a third term, has hit health services hard. The committees have been affected most by the bankruptcy of the state and by violence. Little is known about what remains of the research-action and more research is needed. When the situation becomes stabilised, the attention will turn to rebuilding and ensuring social service delivery, and understanding what works in managing HFCs will again be useful.

These questions will not be answered overnight and their answers will be complex. Their pursuit is nonetheless crucial for furthering the work of this thesis and understanding how basic social services can be more resilient and responsive to the populations that depend on them.

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LIST OF TABLES

Table 1. Main staff working on the Burundi and DR Congo projects	9
Table 2. End-line interview sites in Burundi, by change in ‘social accountability’	11
Table 3. Main data sources	13
Table I-1. Characterising accountability	30
Table I-2. Community participation in (I)NGO projects (2003-2013)	46
Table I-3. Membership of associations (2013)	46
Table I-4. Self-declared participation in unpaid community work (2013)	47
Table I-5. Examples of committees in Burundi	48
Table II-1. Access to health services (2011-2012)	53
Table II-2. Key elements at the HF, according to the population in 2011-2012	54
Table II-3. The situation of HFs: provision of services (2011-2012)	57
Table II-4 HFs’ situation: human resources (2011-2012)	59
Table II-5. Number of faith-based HFs in sample, by religious affiliation	60
Table II-6. Situation of HFs situation: sources of revenue (2011-2012)	61
Table II-7. Situation of HFs: equipment, drugs, water and electricity (2011-2012)	61
Table II-8. Perceptions of HFC functioning (2011-2012)	77
Table II-9. Involvement of the HFC in HF management (2011-2012)	79
Table II-10. HFC Demographics (2011-2012)	81
Table III-1. HFC situation at baseline (overview, 2011-2012)	92
Table III-2. Past training of HFCs	95
Table III-3. Indicators for impact evaluation	102
Table III-4. Situation at baseline	105
Table III-5. Institutional knowledge intervention: main effects	109
Table III-6. Institutional knowledge intervention: effects on HFC organisation	111
Table III-7. Institutional knowledge intervention: effects on HFC accountability	112
Table III-8. Institutional knowledge intervention: decision rights agreement	113
Table III-9. Institutional knowledge intervention: effects on HF management	114
Table III-10. Institutional knowledge intervention: perceived quality of services	114
Table III-11. Institutional knowledge intervention: effects on equity in access	115
Table III-12. Institutional knowledge intervention: effects on provision of services	116
Table III-13. Power calculations for 4 key dimensions (HF-level) in Burundi	119
Table III-14. Self-reported change in the past year at the HF (1)	126
Table III-15. Self-reported change in the past year at the HF (2)	127
Table IV-1. Descriptive statistics: HFC composition and situation at the HF	140
Table IV-2. Descriptive statistics: HFC incentive and management structures	142
Table IV-3. Descriptive statistics: aid in the catchment areas of the HFs	143
Table IV-4. Descriptive statistics: relation to authority and service providers	147
Table IV-5. Institutional knowledge intervention: effects using pooled dataset model	152
Table IV-6. Institutional knowledge heterogeneous effects: education and gender	153
Table IV-7. Institutional knowledge heterogeneous effects: stock-outs and user fees ..	155
Table IV-8. Institutional knowledge heterogeneous effects: incentive structure	156
Table IV-9. Institutional knowledge heterogeneous effects: HF status	157
Table IV-10. Instit. knowledge hete. effects: relationship to service providers	158

Table IV-11. Instit. knowledge hete. effects: multiple sources of heterogeneity	160
Table V-1. Self-declared HFC – chief nurse relationship (2011-2012).....	170
Table V-2. Situation at baseline	175
Table V-3. Trust intervention: main results	176
Table V-4. Trust intervention: impact on HFC organisation.....	177
Table V-5. Trust intervention: effects on agreement on decision rights [‡]	177
Table V-6. Trust intervention: effects on social accountability	178
Table V-7. Trust-building intervention: impact on mutual perception.....	180
Table V-8 Trust-building intervention: interaction with HFC – chief nurse perception.	182
Table V-9. Trust-building intervention: het. effects using women in the committee.....	183
Table VI-1. Situation at baseline	197
Table VI-2. Localised information intervention: main results.....	198
Table VI-3. Localised information intervention: effects on HFC organisation.....	199
Table VI-4. Localised information intervention: effects on social accountability.....	201
Table VI-5. Localised information intervention: effects on agree. on decision rights	202
Table VI-6. Localised information intervention: effects on HF management	203
Table VI-7. Localised information intervention: effects on nurses' attitudes.....	204
Table VI-8. Descriptive statistics members experience with PBF and management	212
Table VI-9. Localised information heterogeneous effects: HFC experience.....	213
Table VI-10. Descriptive statistics: relationship nurse – HFC	214
Table VI-11. Localised information heterogeneous effects: relationship nurse–HFC.....	215
Table VI-12. Localised information heterogeneous effects: HFC remuneration	217
Table VII-1. HFC composition: possible sources of heterogeneity	234
Table VII-2. Situation at baseline	237
Table VII-3. Interaction standard bundle – political membership.....	238
Table VII-4. Interaction religious figures - standard bundle	239
Table VII-5. Interaction standard bundle – criteria of vulnerability.....	240
Table VII-6. Interaction effects with whether the HFC is elected.....	240
Table VII-7. Leaders intervention: main results	242
Table VII-8. Leaders intervention: effects on HFC organisation	243
Table VII-9. Leaders intervention: effects on social accountability.....	244
Table VII-10. Leaders intervention: effects on HF management.....	245
Table VII-11. Local leaders picked by the HFC and present at the joint-session.....	249
Table VII-12. Leaders intervention heterogeneous effects: religious leaders	251
Table VII-13. Leaders intervention heterogeneous effects: socio-professional activity ..	252
Table VII-14. Leaders intervention heterogeneous effects: IDPs in the HFC	253
Table C-1 Levels of Community Participation.....	294
Table C-2 Explaining membership to a local association (2013)	295
Table C-3 Explaining participation in community work (2013)	296
Table C-4 Health and Development Indicators in Burundi and DRC	297
Table C-5 Study area in Burundi and South Kivu	297
Table C-6 Characteristics of HFC mandates.....	297
Table C-7 The HFCs in Burundi and South Kivu.....	298
Table C-8 Participation in the HF management (ratio of respondents)	298
Table C-9 Interest in the HFC (2011-2012)	299

Table C-10 Knowledge and vote of HFC	300
Table C-11 Indicators removed from the analysis	301
Table C-12 ANCOVA robustness check (abridged version with key dimensions only) .	301
Table C-13 Understanding of key HF and HFC activities and responsibilities	301
Table C-14 Situation at baseline.....	302
Table C-15 Extra interaction effects: HFC composition and situation at the HF	303
Table C-16 Extra interaction effects: HFC composition and situation at the HF	303
Table C-17 Extra interaction effects: situation at the HF.....	304
Table C-18 Extra interaction effects: ‘aid fatigue’	304
Table C-19 Behavioural game (Trust), 2011-2012.....	305
Table C-20 ANCOVA robustness check (abridged version with key dimensions only) .	306
Table C-21 Joint intervention: impact on HF management.....	306
Table C-22 Trust-building intervention: heterogeneous effects (mutual perception)...	306
Table C-23 ANCOVA robustness check (abridged version with key dimensions only) .	314
Table C-24 HFs selected for nested analysis	314
Table C-25 Heterogeneous effects: relationship nurse - HFC	314
Table C-26 Heterogeneous effects: relationship nurse – HFC (discrepancy).....	315
Table C-27 Heterogeneous effects: HFC remuneration (‘basic intervention’)	315
Table C-28 Impact on HFC remuneration	315
Table C-29 Difference at baseline level: paid HFCs.....	315
Table C-30 Variables for heterogeneous effects: HFC remuneration	315
Table C-31 HFC composition.....	316
Table C-32 Explaining the composition of the HFC	316
Table C-33 ANCOVA robustness check (abridged version with key dimensions only) .	317
Table C-34 Interaction with the type of HFC	317
Table C-35 Interaction between the meeting intervention and women in the HFC.....	317
Table C-36 Interaction between the ntervention and the ratio of IDPs + returnees	318
Table C-37 Interaction between the joint meeting and returnees in the HFC	318
Table C-38 Interaction effects with presence of NGOs and violent incidents	318
Table C-39 Interaction effects with whether the HFC is elected	319

LIST OF FIGURES

Figure 1. Localisation of the study area.....	15
Figure 2. Broad overview of the thesis	20
Figure 3. The World Bank’s Routes of Accountability (World Bank, 2004)	32
Figure 4. Key HFC activities (2011-2012)	78
Figure 5. simplified theory of change and dimensions for impact evaluation	99
Figure 6 ‘funnel of attrition’	122
Figure 7 Evolution of PBF and direct (input) support to health facilities.....	3099
Figure 8 PBF and Ministry of Health budget in Burundi	30909
Figure 9 HFC Payment, per HF and district.....	312
Figure 10 Sample summary card: children above 5 visits at the HF	313
Figure 11 Sample summary card: financial situation at the HF.....	313

APPENDICES

Appendix A. HEALTH FACILITIES INCLUDED IN THE STUDY

All are Primary Health Care Centres (*Centres de Santé*). The nested qualitative interviews were carried out either in 2011-2012 or in 2013 in the sites that are underlined.

<i>zone/province</i>	<i>health facilities</i>
SOUTH KIVU (per health zone)	
Idjwi	Bugarula, Bulegeyi, <u>Bunyakiri</u> , Bushonga, Bushusha, Bwando, Bwina, <u>Camahiri</u> , Kasihe, Kihumba, <u>Kintama</u> , Kisiza, <u>Lemera</u> , <u>Lumala</u> , <u>Mafula</u> , Misimbwe, <u>Mpene</u> , <u>Mugote</u> , Muhyahya, Nyakalengwa, Shayo
Katana	Birava, <u>Ciranga</u> , Ibindja, Ihimbi, Iko, Irambi, Ishungu, Izimero, Kabamba, <u>Kabushwa</u> , Kadjucu, Katana Nuru, <u>Lugendo</u> , Luhihi, Mabingu, Mugeru, Mushweshwe
Miti-Muresha	<u>Buhandahanda</u> , Bushumba, Cifuma, <u>Combo</u> , Itara, Kahungu, Kajeje, Kalwa, Kashusha, Kavumu, <u>Lwiro</u> , M'bayo, <u>Muganzo</u> , Mulungu, <u>Murhesa</u> , Mushunguri, Cibumbiro
Walungu	Bideka, Burhale, <u>Cagombe</u> , Cazi, Cigukiro, Ibinza, <u>Ikoma</u> , Izirangabo, Kalole, Kampuse, <u>Karhundu</u> , <u>Kazimu</u> , Kidodobo, <u>Lurhala</u> , Mugogo, Muku, Mulamba, Mwendo, Nyakakoba, Nyandja, Rukwende, Rushindye, <u>Walungu</u>
BURUNDI (per health province)	
Bubanza	<i>Bubanza district</i> : <u>Bubanza II</u> , Ngara, Ciya, Bubanza, Musigati, <u>Kivyuka</u> , Muyebe, <u>Ntamba</u> <i>Mpanda district</i> : <u>Mpanda</u> , <u>Butanuka</u> , <u>Murengeza</u> , <u>Rugazi</u> , Ruce, Ruyange, <u>Muzinda</u> , <u>Buramata</u> , Ninga, Gihungwe, <u>Gihanga</u>
Bujumbura rural	<i>Isale district</i> : Rushubi, Ruhinga, Kibuye, <u>Muberure</u> , Mageyo, <u>Mubimbi</u> , Martyazo, <u>Kirombwe</u> , Muyira, Ruyaga, Buhonga, Kiyenzi, Kiriri, Sororezo, Rubirizi, <u>Maramvya</u> , Rukaramu, Gatumba <i>Kabezi district</i> : <u>Kabezi</u> , Mubone, Kimina, Mutumba, Gitaza, Muhuta, Rutongo, Mutambu, <u>Magara I</u> , Bugarama <i>Rwibaga district</i> : <u>Rwibaga</u> , <u>Mugongo</u> , <u>Kankima</u> , Ijenda, Nyabibondo, <u>Nyabiraba</u> , <u>Matara</u> , Rukina, <u>Mayuyu</u> , Bikanka
Bururi	<i>Bururi district</i> : Bururi, Muzenga, Nyagatovu, Bamba, <u>Munini</u> , Gahago, Ndagano, <u>Nyantobo</u> , Murinda, Nyavyamo, <u>Kiremba</u> , Buta, Buhinga, Gitsiro, Bugeni, Bwatamba, Rweza <i>Matana district</i> : Matana, Nyagihotora, Butwe, Rutovu, Condi, Kivubo, <u>Kajondi</u> , <u>Muhweza</u> , Bigomogomo, <u>Vyuya</u> , Muramba, Kibezi, Nyagasasa, <u>Mwumba</u> , Kiruri, Muheka, Kiryama, Ndago, Ruvumvu, <u>Rumeza</u> <i>Rumonge district</i> : Rumonge, Kizuka, <u>Bitare</u> , Minago, Cabara, Muhuzu,

<i>zone/province</i>	<i>health facilities</i>
	<u>Buruhukiro</u> , Gatete, Mugara, Karonda I, Kigwena, Muyama, Muzenga II, Kizuga, Mudende, Bubera, Muyange, Maramvya, <u>Murago</u>
Cankuzo	<i>Cankuzo district</i> : Cankuzo, Musenyi, <u>Minyare</u> , Murehe, <u>Muyaga</u> , <u>Twinkwavu</u> , Nyamugari, Gashigwe, Cendajuru, Kigamba, Humure, <u>Gitanga</u> , Shinge, Nyarurambi, Kigarika <i>Murore district</i> : Murore, Nyuro, Camazi, Murago, <u>Ruramba</u> , <u>Gitwenge</u> , <u>Kibimba</u> , Ntunda, <u>Munzenze</u> , <u>Rutsindu</u> , Gishungo
Karusi	<i>Buhiga district</i> : Buhiga, Rutonganikwa, Kanyange, <u>Karusi</u> , Nyakabugu, Ntunda, Nyaruhinda, <u>Gitaramuka</u> , Kiranda, Masabo, Bugenyuzi, <i>Murore district</i> : <u>Nyabikere</u> , Rugwiza, <u>Gatonde</u> , Rusamaza, <u>Gihogazi</u> , Mugogo, Gisimbawaga, <u>Rabiro</u> , <u>Bibara</u> , Rusi, <u>Nyabibuye</u> , Nyarurambi
Makamba	<i>Makamba district</i> : <u>Makamba</u> , <u>Murenge</u> , <u>Misasa</u> , Nyange, Canda, Gisenyi, Mat. Makamba, Dunga, Mayange, <u>Kayogoro I</u> , <u>Mugeni</u> , Gatabo, <u>Muhama</u> , Kiyange, <u>Jimbi</u> , <u>Kivoga</u> , Bukeye <i>Nyanza-Lac district</i> : Nyabigina, <u>Kabonga</u> , Muyange, <u>Kazirabageni</u> , <u>Mukungu</u> , Rimbo, Bukeye II, Aventiste, Mabanda, Gitara, Mat. Mabanda, Kayogoro II, Vugizo, <u>Mpinga</u> , Gishiha
Rutana	<i>Rutana district</i> : <u>Rutana</u> , Gitaba, Kivoga, <u>Nyamure</u> , Gasakusa, Rugunga, <u>Shanga</u> , Ngoma, Gatakazi, <u>Musongati</u> , <u>Mpinga</u> , Ngara, Kiguhi, <u>Kayero</u> , <u>Gakwende</u> <i>Gihofi district</i> : Kabanga, Bukemba, <u>Ruranga</u> , Butare, Muzye, <u>Muhafu</u> , Butezi, Giharo, Gakungu, Nyembuye, <u>Kinzanza</u> , Nyakuguma, <u>Gihofi</u> , Gitanga, Museno
Ruyigi	<i>Butezi district</i> : Butezi, <u>Sorero</u> , <u>Mubira</u> , <u>Kwisumo</u> , Nyankanda, Biyorwa, Muriza, Mugege <i>Kinyinya district</i> : Kinyinya, Kabanga, <u>Nyabitare</u> , Gisuru, Kavumwe, Muhwazi, Nyabitsinda, <u>Nyaruganda</u> , Mago, <i>Ruyigi district</i> : Ruyigi, <u>Bisinde</u> , Kigamba, <u>Dutwe</u> , Rusengo, Kayongozi, Mubavu, <u>Nyarunazi</u> , Kirambi, <u>Busoro</u>

Appendix B. LIST OF THE INTERVIEWEES (KEY INFORMANTS)

<i>Name of interviewee</i>	<i>position, institution (at time of interview)</i>	<i>date</i>
SOUTH KIVU		
Dieudonné Cigajiraomwirhwe	Community mobilization specialist, <i>Integrated Health Project (IHP) & International Rescue Committee (IRC)</i>	27.08.12
Emmanuel Rugarabura	Officer, <i>South Kivu 'mutuelles de santé' Support Unit</i>	03.09.13
François Defourny	Deputy Director, <i>IRC DRC</i>	26.11.12
Hugo de Vries	Coordination Officer, <i>Stabilisation Support Unit (SSU) MONUSCO (UN Peace-Keeping mission in DRC)</i>	06.09.11
Pacifique Mushagalusa	Director, <i>PBF Purchasing Agency (AAP)</i>	12.09.12
Zozo Mustafari	Director, <i>Community Health Unit, South Kivu MoH</i>	14.09.12
BURUNDI		
Alphone Ciza	Programme leader, <i>WHO Burundi</i>	07.11.12
Deogratias Ciza	Coordinator, <i>Cankuzo decentralisation programme</i>	30.04.13
Annonciate Ndikumasabo	Deputy head of office, <i>Swiss Cooperation in Burundi (formerly: Spokesperson, Burundi National Assembly)</i>	02.05.13
Bavo Christiaens	Head of mission, <i>Médecins Sans Frontières in Burundi</i>	23.07.12
Benoît Birutegusa	Researcher, <i>Conflict Alert and Prevention Centre</i>	09.05.13
Benoît Nizigiyimana	Head of Health-Care Unit, <i>Burundi Red Cross</i>	22.04.13
Canut Nkunzimana	Director, <i>NGO Human Development Support Initiative</i>	29.07.13
Célestin Traoré	Programme manager, <i>UNICEF Community Health Unit</i>	07.11.12
Elias Serutamba	Researcher, <i>Institute of Burundi Econ. Development</i>	07.12.12
Eric Bigirimana	Director, <i>BREGMANS Consulting & Research</i>	10.10.12
Faustin Ndikumana	Director, <i>PARCEM (Burundi Civil Society)</i>	24.04.13
François Bigirimana	Member of the <i>East African Parliament</i>	18.11.12
Georges Nsengiyuma	Director, <i>EU health governance Programme</i>	07.12.12
Gilbert Ntiyegayezwa	Coordinator, <i>Kirundo Decentralisation Programme (formerly: Head of Cabinet, MoH)</i>	23.04.13
Jean Bosco Nzosaba	Researcher, <i>Government Action Observatory</i>	07.12.12
Jean-Baptiste Kirimwinzigo	Director, <i>Burundi Local Representatives Association</i>	05.12.12
Jean-Marie Ntihirageza	Director, <i>Ministry of Decentralisation</i>	30.04.13
Jean-Paul Nyarushatsi	Technical Assistant, <i>EU Health Governance Programme</i>	09.10.12
Leonidas Dusabe	Director, <i>MoH Inspection Unit</i>	13.05.13
Léonidas Hatugimana	Spokesperson of the <i>President of Burundi</i>	30.05.13
Liboire Kagabo	Dominican father, <i>Rector of University of Mwaro</i>	23.04.13
Noël Nkurunziza	President, <i>Transparency International Burundi</i>	02.05.13
Pascalie Kana	Director, <i>OAP (Burundi Civil Society)</i>	10.05.13
Patrick Hajanyandi	Project Leader, <i>Institute for Justice & Reconciliation</i>	29.04.15
Philip Kuch	Lead, <i>GIZ Decentralisation Support Programme</i>	24.04.13
Protails Ntirampeba	Director, <i>MoH Department for Health Promotion</i>	18.10.12
Rose Nitunga	Programme Manager (Governance), <i>UNDP Burundi</i>	30.05.13
Siméon Barumwete	Professor, <i>University of Burundi</i>	07.12.12

Appendix C. EXTRA MATERIAL BY CHAPTER

Appendix C.I. Chapter I

Table C-1 Levels of Community Participation

<i>author</i>	Arnstein, 1969	Oakley, 1989	Pretty, 1995	Draper et al., 2010
<i>concept</i>	Ladder of participation	Stages of participation	Typology of participation	The participation continuum
<i>scale</i> (low to high)	<i>Non-participation:</i> 1. Manipulation 2. Therapy <i>Tokenism:</i> 3. Informing. 4. Consultation. 5. Placation. <i>Citizen power:</i> 6. Partnership. 7. Delegated power. 8. Citizen control.	1. <i>Marginal</i> (limited scope and focus on objective). 2. <i>Substantive</i> (input to activities but no decision). 3. <i>Structural</i> (active and direct role).	1. Manipulative. 2. Passive. 3. By consultation. 4. For material incentive. 5. Functional. 6. Interactive. 7. Self-mobilisation.	1. Information sharing. 2. Mobilisation. 3. Collaboration. 4. Empowerment.

Table C-2 Explaining membership to a local association (2013)

	Cross-country (logit)	South Kivu (logit)	Burundi (logit)
Kivu (binary)	0.518 (0.309)		
Gender (binary, 1: woman)	-0.029 (0.051)	-0.319* (0.125)	0.068 (0.055)
Age (years)	0.153*** (0.012)	0.093*** (0.025)	0.179*** (0.014)
Age squared	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Education (0: none to 6: university)	0.436*** (0.061)	0.226 (0.130)	0.528*** (0.067)
Education squared	-0.043** (0.013)	-0.006 (0.028)	-0.063*** (0.013)
Demobilised rebel/military (binary)	0.445** (0.141)		0.444** (0.144)
Internally Displaced Person (binary)	0.494*** (0.096)	0.344 (0.242)	0.502*** (0.105)
Fish/meat per week ¹	0.167*** (0.028)	0.120 (0.068)	0.173*** (0.030)
Civil servant ³	0.342*** (0.102)	0.212 (0.191)	0.453*** (0.110)
Student ³	1.262*** (0.296)	1.453*** (0.373)	-0.111 (0.495)
Animist ²	-0.929*** (0.172)	-1.279*** (0.281)	-0.732*** (0.207)
Urban area (binary)	0.089 (0.135)	-0.371 (0.238)	0.231 (0.153)
Ruling party vote in area (% in 2010 local elections)			0.746 (0.610)
Constant	-4.107*** (0.336)	-1.742** (0.602)	-5.046*** (0.422)
District fixed effects	YES	YES	YES
N	9,155	2,224	6,931

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ - standard errors were clustered to account for the survey design (svyset on Stata). It is not possible to calculate a pseudo R^2 in the case of weighted survey data. 1. Proxy for wealth | 2. Reference category: Catholic (main religious group) – other categories (Muslim, Protestant) were also included but are not significantly different from farmer and not reported in this table | 3. Reference category: farmer – other categories such as police and military, shopkeepers were also included but are not significantly different from farmer and not reported here.

Table C-3 Explaining participation in community work (2013)

	Cross-country (logit)	South Kivu (logit)	Burundi (logit)
Kivu (binary)	0.222 (0.558)		
Gender (binary, 1: woman)	-0.407*** (0.061)	-0.182 (0.204)	-0.463*** (0.064)
Age (years)	0.134*** (0.013)	0.108*** (0.025)	0.150*** (0.016)
Age squared	-0.002*** (0.000)	-0.001*** (0.000)	-0.002*** (0.000)
Education (0: none to 6: university)	0.256*** (0.065)	0.271 (0.163)	0.224** (0.068)
Education squared	-0.056*** (0.013)	-0.063 (0.032)	-0.051*** (0.015)
Demobilised rebel/military (binary)	0.366* (0.159)		0.316 (0.164)
Internally Displaced Person (binary)	-0.081 (0.123)	-0.227 (0.315)	0.051 (0.122)
Member of association	0.667*** (0.076)	0.931*** (0.183)	0.657*** (0.082)
Fish/meat per week ¹	0.031 (0.037)	-0.078 (0.075)	0.069 (0.044)
Student ³	-0.964** (0.351)	-0.994* (0.406)	0.287 (0.559)
Animist ²	-0.341 (0.190)	0.230 (0.351)	-0.440* (0.205)
Urban area (binary)	-0.035 (0.188)	-0.478 (0.363)	-0.036 (0.192)
Ruling party vote in area (% in 2010 local elections)			-5.313*** (0.976)
Constant	-1.027 (0.536)	-0.608 (0.616)	0.519 (0.582)
District fixed effects	YES	YES	YES
N	9,155	2,224	6,931

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ - standard errors were clustered to account for the survey design (svyset on Stata). It is not possible to calculate a pseudo R^2 in the case of weighted survey data. 1. Proxy for wealth | 2. Reference category: Catholic (main religious group) – other categories (Muslim, Protestant) were also included but are not significantly different from farmer and not reported in this table | 3. Reference category: farmer – other categories such as police and military, shopkeepers, and civil servants were also included but are not significantly different from farmer and not reported here.

Appendix C.II. Chapter II

Table C-4 Health and Development Indicators in Burundi and DRC

	Burundi		DRC	
		rank ¹		rank ¹
Human Development Index (UNDP, 2014)	0.400	184	0.433	176 /188
GDP/capita at purchasing power parity (WB, 2014)	\$ 772	184	\$ 809	182 /185
Life expectancy at birth (WHO, 2013)	56	180	52	189 /194
Under-5 mortality per 1,000 live birth (UNDP, 2013)	82.9	162	118.5	186 /186
Maternal mortality “ ” (UNDP, 2013)	7.40	175	7.30	174 /178

1. World ranking. WB is World Bank

Table C-5 Study area in Burundi and South Kivu

	Burundi (8 province province)	South Kivu (3 territories)
Health Facilities in the study	249	78
Population per HF	14,822 (SD: 8,809) rural only: 13,347.36 (SD: 6231)	10,756.21 (SD: 4,643)
Population density of study area	267.72/km ² (weighted mean) [Bujumbura rural: 475; Bururi: 245; Karusi: 316; Cankuzo: 123; Makamba: 232; Rutana: 179; Ruyigi: 180 - UNFPA, 2013]	294.85/km ² (weighted mean) [Kabare: 253; Walungu: 254; Idjwi: 550 - Ansoms & Marivoet, 2009]

Table C-6 Characteristics of HFC mandates

	mean	standard deviation
Members past HFC (ratio)	0.329	0.358
First HFC? (binary – proportion of HFC)	0.327	0.470
HFC age, in months	20.620	21.76
HFC know date mandate expiration (binary – proportion of HFC)	0.452	0.499
Total expected mandate (HFC age + mandate expiration), in months	38.509	20.60
Met with population in last 3 months (binary – proportion of HFC)	0.869	0.339
Months since meeting	1.940	3.188
General assembly in last 3 months (binary – proportion of HFC)	0.426	0.496
Months since general assembly	3.647	6.656

Table C-7 The HFCs in Burundi and South Kivu

	Burundi	DRC
<i>Official Denomination</i>	<i>Comité de Santé</i> (Health Committee)	<i>Comité de Développement de l'aire de Santé</i> (Health Area Development Committee)
		Previously <i>Comité de Santé</i> and before that <i>Comité du milieu</i> (Gastaldello 2003)
<i>Background</i>	Pilot projects in the early 1990s', Set up in the mid-1970s', with implementation by the MoH, WHO, and NGOs in the early 2000s	support from NGOs and UNICEF.
<i>Regulatory framework</i>	2007 <i>Guide pour le fonctionnement et l'organisation des comités de santé</i>	2005 <i>Normes de la Zone Sanitaires</i> (Health Zone Norms)
<i>Mission</i>	"Those elected [in the committee] represent the population of the catchment area. They participate in decision-making in their HF, collaborate with the medical team, and help find solutions to local health problems. They are in continuous dialogue with the community and social organizations in order to give to everyone the maximum opportunity to participate and contribute". (Ministry of Public Health & WHO 2007)	"[The committee's] attributions include: to participate in the planning, monitoring, and evaluation of the activities at the HF; participate in the identification of the needs of the population; co-manage the resources of the health centre; participate in meetings with the medical team; and organise community work". (Ministry of Public Health, 2005)
<i>Composition</i>	one man and one woman elected on each hill of the HF catchment area"	"a dozen of members elected among local leaders"

Table C-8 Participation in the HF management (ratio of respondents)

	Burundi	South Kivu
Interested in the idea principle ¹	0.912	0.871
Even if unpaid ²	0.209	0.189
Only if travel allowance ²	0.168	0.401
Only if full pay ²	0.622	0.408
Observations	3,692	2,075

1. Answer to the question: "Would you be interest in taking part in the management of your HF?" | 2. Answer to the question: "If so, should it be paid?"

Table C-9 Interest in the HFC (2011-2012)

	Interest in joining the HFC? (Logit)			If so, should be paid? (Ordered logit) ¹		
	Pooled	Burundi	South Kivu	Pooled	Burundi	South Kivu
Kivu (binary)	-1.09*** (0.201)			0.080 (0.313)		
Gender (binary, 1: woman)	-0.094 (0.093)	-0.219 (0.121)	0.015 (0.141)	-0.147* (0.061)	-0.239** (0.081)	0.083 (0.115)
Age (years)	0.017 (0.016)	0.015 (0.024)	0.026 (0.022)	0.021 (0.013)	0.015 (0.018)	0.022 (0.024)
Age squared	-0.000* (0.000)	-0.000 (0.000)	-0.001* (0.000)	-0.000** (0.000)	-0.000 (0.000)	-0.000 (0.000)
Education (0:none,6: univ.)	0.300** (0.106)	0.170 (0.159)	0.377** (0.134)	0.056 (0.076)	0.339** (0.113)	-0.079 (0.111)
Education squared	-0.051* (0.024)	-0.025 (0.042)	-0.067* (0.029)	-0.023 (0.020)	-0.11*** (0.031)	0.021 (0.029)
IDP/returnee	-0.165 (0.166)	-0.123 (0.207)	-0.290 (0.281)	0.017 (0.110)	0.024 (0.144)	-0.177 (0.178)
Association member	0.102 (0.136)	-0.050 (0.176)	0.198 (0.192)	0.120 (0.085)	0.178 (0.127)	-0.060 (0.143)
Civil servant ³	-0.028 (0.242)	-0.154 (0.278)	0.093 (0.379)	-0.227 (0.136)	0.128 (0.246)	-0.752** (0.236)
Employee ³	-0.212 (0.142)	-0.069 (0.305)	-0.249 (0.171)	-0.482*** (0.104)	-0.618** (0.207)	-0.425** (0.153)
Protestant ²	-0.163 (0.216)	-0.514* (0.243)	0.561 (0.393)	-0.032 (0.164)	0.169 (0.216)	-0.121 (0.297)
Muslim ²	-0.042 (0.112)	-0.094 (0.137)	-0.003 (0.173)	-0.131 (0.068)	-0.234* (0.104)	-0.087 (0.103)
Catastrophic expenditure ⁴	-0.080 (0.149)	-0.384 (0.225)	0.018 (0.176)	-0.063 (0.085)	-0.083 (0.166)	-0.200 (0.119)
Urban area	0.175 (0.241)	-0.062 (0.260)	0.457 (0.442)	0.431* (0.177)	0.276 (0.159)	1.002** (0.349)
Vote ruling party in area		1.550 (1.104)			0.028 (0.592)	
Constant	2.05*** (0.371)	1.884** (0.589)	0.595 (0.533)	-1.295** (0.392)	-1.140* (0.537)	-1.453* (0.582)
				-0.022 (0.391)	-0.196 (0.533)	0.483 (0.582)
District fixed effects	YES	YES	YES	YES	YES	YES
N	5,653	3,616	2,037	5,400	2,938	1,701

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ - standard errors were clustered to account for the survey design (svyset on Stata). There is no pseudo R^2 in the case of weighted survey data. 1. 0: no, 1: travel fees, 2: yes | 2. Reference category: Catholic (main religious group) | 3. Reference category: farmer – other categories such as police and military, shopkeepers, and civil servants were also included but are not significantly different from farmer and not reported here. | 4. Answer to the question “did you have to sell something to afford school, health-care, or a social duty?”

Table C-10 Knowledge and vote of HFC

	Knows a HFC member (Logit)			Voted for the HFC (Logit)		
	Pooled	Burundi	South Kivu	Pooled	Burundi	South Kivu
Kivu (binary)	-0.299 (0.235)			0.555 (0.342)		
Gender (binary, 1: woman)	-0.159* (0.067)	-0.248** (0.080)	0.013 (0.123)	-0.33*** (0.088)	-0.55*** (0.112)	-0.151 (0.150)
Age (years)	0.082*** (0.013)	0.079*** (0.017)	0.077** (0.023)	0.08*** (0.017)	0.107*** (0.024)	0.078** (0.029)
Age squared	-0.00*** (0.000)	-0.00*** (0.000)	-0.001** (0.000)	-0.00*** (0.000)	-0.00*** (0.000)	-0.001* (0.000)
Education (0: none, 6: university)	0.273*** (0.072)	0.151 (0.102)	0.518*** (0.114)	0.33*** (0.090)	0.421** (0.156)	0.498*** (0.131)
Education squared	-0.015 (0.016)	-0.016 (0.027)	-0.053* (0.024)	-0.042* (0.019)	-0.110* (0.047)	-0.061* (0.027)
IDP/returnee	-0.123 (0.115)	-0.021 (0.122)	-0.638* (0.304)	0.027 (0.149)	0.171 (0.177)	-0.375 (0.345)
Member of association	0.756*** (0.097)	0.589*** (0.109)	0.909*** (0.178)	0.94*** (0.113)	0.824*** (0.160)	1.045*** (0.180)
Civil servant ²	0.538*** (0.159)	0.247 (0.194)	0.785* (0.301)	0.355 (0.181)	-0.188 (0.271)	0.540 (0.290)
Employee ²	-0.321* (0.129)	-0.421* (0.190)	-0.143 (0.185)	-0.359* (0.166)	-0.883* (0.360)	-0.164 (0.218)
Craftsman ²	-0.292 (0.152)	-0.067 (0.184)	-0.280 (0.197)	-0.404* (0.197)	-0.266 (0.297)	-0.167 (0.239)
Protestant ¹	-0.342 (0.174)	-0.408* (0.196)	-0.092 (0.390)	-0.178 (0.202)	-0.240 (0.251)	0.106 (0.347)
Catastrophic expenditure ³	0.169 (0.109)	0.177 (0.155)	0.208 (0.144)	-0.120 (0.124)	-0.136 (0.206)	-0.025 (0.162)
Urban area	-0.402 (0.229)	-0.76*** (0.209)	0.193 (0.406)	-0.403* (0.192)	-0.352 (0.258)	-0.530 (0.323)
Vote ruling party in area		-0.179 (0.731)			-0.423 (1.090)	
Constant	-2.49*** (0.328)	-2.16*** (0.415)	-3.209*** (0.525)	3.553*** (0.450)	-3.38*** (0.619)	-3.320*** (0.650)
District fixed effects	YES	YES	YES	YES	YES	YES
N	5689	3617	2072	5744	2967	1996

Standard errors in parentheses * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$ - standard errors were clustered to account for the survey design (svyset on Stata). There is no pseudo R^2 in the case of weighted survey data. 1. Reference category: Catholic (main religious group) | 2. Reference category: farmer – other categories such as police and military, shopkeepers, and civil servants were also included but are not significantly different from farmer and not reported here. | 3. Answer to the question “did you have to sell something to afford school, health-care, or a social duty?”

Appendix C.III. Chapter III

Table C-11 Indicators removed from the analysis

Dimension	Indicator removed	Reason
1. HFC organisation	attendance at HFC last meeting	confusion on which meeting (DRC)
2. HF accountability	minutes to local authorities	all response 'no' (Burundi and DRC)
3. HF management	[changed] water supply	no HiS data available, used survey
6. Use of service	hospitalisation, minor surgery, references to the hospital, TB test and TB treatment, family planning (intrauterine device), pregnant women curative visit.	no HiS data available on these issues for South Kivu
	[changed] merged curative visits	No details in DRC HiS

Table C-12 ANCOVA robustness check (abridged version with key dimensions only)

	Burundi			South Kivu		
	(1) Effect	(2) p-value	N	(1) Effect	(2) p-value	N
Means effects (dimensions)						
1. HFC organisation	0.173	0.005***	249	0.276	0.002***	78
2. Social accountability	0.145	0.206	249	0.376	0.003***	78
3. HF Management	0.045	0.573	249	0.182	0.055*	78

p-value: * < 0.1, * < 0.05, *** < 0.001. P-value is the naïve p-value. The ANCOVA model includes lagged outcome values. See chapter III for details about the outcome variables and model.

Table C-13 Understanding of key HF and HFC activities and responsibilities (Burundi)

mean (median)	mean (median)
Medical activities	HF management
Curative visits	Inventory
Emergency visits	Drugs management
Children follow-up	HR management
Prenatal visits	Bills (checks and balance)
Deliveries	HF equipment
Small surgery	Patients monitoring
Family Planning	Community work
STD tests	
Communication	Co-management
Communication HF	Co-management
Communication Pop.	Planning
Community surveys	HF resources management
HF announcements	Prices monitoring
Household monitoring	General assemblies
Household visits	Meetings

Appendix C.IV. Chapter IV

Table C-14 Situation at baseline

	control mean ¹	difference intervention ¹
<i>HFC Features</i>		
Terms of Reference available	0.358 (0.044)	0.013 (0.069)
Ratio of Women	06.533 (0.384)	0.652 (0.706)
Ratio went to sec. school	0.361 (0.016)	0.033 (0.026)
Collines/villages represented in HF	0.39 (0.023)	0.038 (0.034)
<i>HF features</i>		
Water (0: never to 5: constant)	02.717 (0.116)	0.371* (0.194)
Electricity (0: never to 5: constant)	02.775 (0.115)	0.121 (0.19)
Support staff at HFC	05.925 (0.259)	0.518 (0.345)
Urban area	13378 (753)	56 (1168)
Faith-based HFC	0.25 (0.04)	0.034 (0.064)
Population in area	0.133 (0.031)	0.047 (0.044)
1. HFC organisation	0.049 (0.031)	0.065 (0.049)
2. Accountability	0.002 (0.06)	0.045 (0.095)
2.1. HFC rights	0.022 (0.061)	0.019 (0.097)
3.1. Equipment	0.018 (0.071)	0.013 (0.11)
3.2. Human resources	0.028 (0.057)	0.063 (0.081)
3.3. Infrastructure	0.054 (0.073)	0.06 (0.116)
3.4. Finances	00 (0.047)	0.093 (0.077)
6. Provision of services	0.015 (0.064)	0.018 (0.093)
N	122	205

1. Difference knowledge is the β_2 in: $Y = c + \beta_1 I_1 + \beta_2 I_2 + \beta_3 I_3 + \beta_4 I_4 + \varepsilon$, where I_1 is the trust intervention group and I_2 , I_3 , and I_4 the interventions of chapters V-VII. Control group mean is the constant. P-value: * <0.1 , ** <0.05 , *** <0.001 . Standards errors in parenthesis.

Table C-15 Extra interaction effects: HFC composition and situation at the HF

	(1) Pooled	(2) Burundi	(3) Kivu	(4) Pooled	(5) Burundi	(6) Kivu	(7) Pooled
Education interaction (I*t*H) [exec only]		2.143** (0.924)	-0.321 (0.868)	0.924 (0.663)			
Gender interaction (I*t*H) [all]					0.739 (0.868)	0.086 (1.328)	0.523 (0.832)
South Kivu interaction (I*t*K)	1.029*** (0.295)			0.828*** (0.294)			1.011*** (0.298)
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.286	0.344	0.302	0.271	0.357	0.298

Outcome variable is HFC decision right. See chapter IV for details about the variables and details of the OLS model including N). p-value: *<0.1, *<0.05, ***<0.001.

Table C-16 Extra interaction effects: HFC composition and situation at the HF

	(1) Pooled	(2) Burundi	(3) Kivu	(4) Pooled
Non-farmer interaction (I*t*H) [exec only]		1.436 (1.606)	1.222 (1.289)	1.211 (0.932)
South Kivu interaction (I*t*K)	1.029*** (0.295)			1.124*** (0.300)
Basic controls	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES
N	656	498	156	656
Adjusted-R ²	0.300	0.277	0.367	0.304

Outcome variable is HFC decision right. See chapter IV for details about the variables and details of the OLS model including N). p-value: *<0.1, *<0.05, ***<0.001.

Table C-17 Extra interaction effects: situation at the HF

	(1) Pooled	(2) Burundi	(3) Kivu	(4) Pooled	(5) Burundi	(6) Kivu	(7) Pooled
Stock-out medical equipment (I*t*H)		-0.124* (0.070)	-0.018 (0.028)	-0.013 (0.053)			
Stock-out other equipment (I*t*H)					-0.003 (0.091)	-0.065 (0.105)	-0.059 (0.062)
South Kivu interaction (I*t*K)	1.029*** (0.295)			1.03*** (0.326)			1.05*** (0.306)
Basic controls	YES	YES	YES	YES	YES	YES	YES
District fixed effects	YES	YES	YES	YES	YES	YES	YES
N	656	498	156	656	498	156	656
Adjusted-R ²	0.300	0.283	0.356	0.308	0.274	0.346	0.295

Outcome variable is HFC decision right. See chapter IV for details about the variables and details of the OLS model including N). Stock-outs are in number of days per month. p-value: *<0.1, *<0.05, ***<0.001.

Table C-18 Extra interaction effects: 'aid fatigue'

	(1) Burundi	(2) Kivu	(3) Pooled
Projects gave goods ¹ (I*t*H)	0.071 (0.217)	-0.351** (0.166)	-0.201* (0.119)
South Kivu interaction (I*t*K)			1.203** (0.357)
Basic controls	YES	YES	YES
District fixed effects	YES	YES	YES
N	498	156	656
Adjusted-R ²	0.268	0.371	0.299

Outcome variable is HFC decision right. See chapter IV for details about the variables and details of the OLS model including N). 1. Number of aid projects that gave goods or equipment for free in the area in the past ten years. p-value: *<0.1, *<0.05, ***<0.001.

Appendix C.V. Chapter V

Table C-19 Behavioural game (Trust), 2011-2012

OLS, standard errors clustered at HF-level	(1)	(2)	(3)	(5)
Male	17.96 [*] (1.71)	17.03 ⁺ (1.61)	19.88 [*] (1.79)	21.64 [*] (1.80)
HFC member	-51.08 ^{***}	-47.95 ^{**}	- 51.50 ^{***}	-55.27 ^{***}
Age (4 categories)	(-2.95) 10.81 ⁺ (1.65)	(-2.58) 10.84 ⁺ (1.65)	(-2.93) 10.79 ⁺ (1.61)	(-2.97) 11.30 ⁺ (1.59)
Education (years of schooling)	-0.780 (-0.47)	-1.927 (-0.93)	-0.557 (-0.36)	-1.203 (-0.72)
Lends money to friends (frequency 1-5) ¹	5.214 (1.05)			
Lends goods to friends (frequency 1-5) ¹	14.78 ^{**} (2.53)	17.61 ^{***} (3.35)	17.05 ^{***} (3.32)	16.83 ^{***} (3.09)
Rich (dummy based on occupation) ²		-4.674 (-0.29)		
Farmer (dummy)		-14.94 (-0.87)		
Game-level variable: ratio female players			-23.98 (-0.97)	-25.76 (-0.83)
Game-level variable: number of players			1.106 (0.69)	1.414 (0.88)
HF-level variable: female ratio in HFC				-9.096 (-0.30)
HF-level variable: ratio French speaker (education/social position)				13.05 (0.56)
HF-level variable: age of the HFC (in years)				0.342 ⁺ (1.31)
HF-level variable: number of 'collines' represented in HFC				-1.626 (-0.80)
HF-level variable: ratio 'collines' represented HFC / 'collines' catchment area				-9.412 (-1.24)
Constant	307.5 ^{***} (10.63)	323.7 ^{***} (8.55)	301.8 ^{***} (8.78)	312.9 ^{***} (7.60)
Observations	841	842	842	739
Adjusted-R ²	0.0388	0.0388	0.0406	0.0537

t statistics in parentheses, standard errors are clustered at the catchment area level. + $p < 0.15$, * $p < 0.1$, ** $p < 0.05$, *** $p < 0.001$ | 1. Likert-scale 1: never to 5: very often | 2. Civil servant or wholesaler

Table C-20 ANCOVA robustness check (abridged version with key dimensions only)

	relative to basic package		relative to control group		N
	effect	p-value	effect	p-value	
1. HFC organisation	-0.021	0.767	0.152	0.020**	249
2. Social Accountability	0.043	0.752	0.187	0.079*	249
3. HF management	0.024	0.804	0.069	0.422	249

*p-value: * < 0.1, * < 0.05, *** < 0.001. P-value is the naïve p-value. The ANCOVA model includes lagged outcome values. See chapter III for details about the outcome variables and model.*

Table C-21 Joint intervention: impact on HF management

	Relative to basic package			Relative to control group	
	mean control 2013	(1) Effect	(2) p-value	(1) Effect	(2) p-value
Stock-out of drugs ¹	1.351	-0.070	0.823	0.147	0.656
Stock-out of equipment ¹ ^	0.596	0.205	0.657	-0.439	0.257
Stock-out of medical equip ¹ ^	1.908	0.514	0.379	-0.109	0.820
Qualified staff	0.481	0.024	0.888	-0.023	0.882
Support staff	5.951	-0.167	0.729	0.476	0.242
Mid-level staff	5.584	-0.323	0.733	-0.945	0.282
Chief nurse (change, binary)	0.160	0.100	0.410	0.063	0.538
Water (1 none to 4 always)	3.074	-0.122	0.704	0.090	0.788
Electricity (1 none to 4 always)	3.098	-0.086	0.741	0.133	0.628
New building (binary)	0.210	-0.050	0.562	-0.078	0.323
New building small (binary)	0.160	-0.141	0.153	-0.032	0.736
direct revenue / revenue	0.147	0.011	0.856	0.062	0.215
Expenses / income	1.054	0.005	0.948	-0.066	0.337
Services available (% of 7)	0.95	0.029	0.290	0.009	0.687

*p-value: *0.1, *0.05, ***0.001 – FWER p-value in parentheses. ^ Not part of the original analysis plan. SD: simple difference. 1. A negative impact on stock-outs constitutes an improvement.*

Table C-22 Trust-building intervention: heterogeneous effects using baseline levels of chief nurse mutual perception

Means effects (dimensions)	Chief nurse vis-à-vis HFC		HFC vis-à-vis chief nurse	
	Effect	p-value	Effect	p-value
1. HFC organisation	-0.011	0.925	-0.056	0.685
2. Social Accountability	0.081	0.745	-0.387	0.126
3. HF Management	-0.201	0.182	-0.078	0.635

*p-value: * < 0.1, * < 0.05, *** < 0.001. P-value is the naïve p-value. See chapter V for details about the outcome variables and model.*

Appendix C.VI. Chapter VI

A short overview of the reforms in the health sectors in Burundi

This supplementary section seeks to provide more background information on how the Burundi health system was affected by three recent reforms: (1) the abolition of user fees for pregnant women and children below five, (2) the introduction of a new health insurance scheme, and (3) the introduction of performance-based financing. It shows that the outcomes of these reforms are still unclear and highlight the important stress for HFs and the entire health system. It also provides some details about the functioning of the main health-financing scheme in Burundi at the time of the study, Performance-based financing.

Selective abolition of user fees

The abolition of user fees for pregnant women and children below five was the first reform to be introduced, in 2006. Nimpagaritse & Bertone (2011) found that it “reduced financial flows, which prevented the possibility of investments and caused frequent drugs stock-outs; the reduced quality of the services and the disruption of the referral system” (ii63) and had impact on the motivation of the staff because of the “administrative workload increase” and the “imprecise targeting of the reform”. They point out that “little if no preparatory work was done to think over the aims of the policy and the operational dimension of its implementation”. Although free health-care, and particularly its implementation, was and still is debated in the global health community (Ridde & Morestin 2011) and was reportedly pushed by *Médecins Sans Frontières* (MSF) and Humans Rights Watch, it was almost out of the blue, and certainly after little if no consultation with its Ministry of Health, that the newly elected President Pierre Nkurunziza announced on May 1, 2006, the immediate abolition of user fees. The national budget reflects this suddenness, and echoes the financial problems health facilities faced. There is no mention of free health-care in the 2006 MoH budget, and the 2007 budget only includes a BIF 1.8 billion line ($\approx$ 2008 US\$ 1.56 million) for “subsidised health care services”. This budget line was multiplied by 2.5 the next year, and eventually reached BIF 12 billion in the 2010 budget. In 2011, the selective free health-care scheme was integrated into the PBF scheme.²⁴⁶

Health Insurance Card

The story of un-preparedness seemed to repeat itself in 2013 with the Carte d'Assurance Maladie (CAM – Health Insurance Card). As a 2014 report puts it: the “introduction [of the CAM] in 2012 without preliminary technical studies seems to have put the efficiency

²⁴⁶ From the Burundi national budgets 2006-2015.

and sustainability of the entire mechanism at risk. Evidently, the annual membership fee of \$1.96 USD (3,000 BIF) per household was not determined based on a calculation of the cost of services, the ability of households to pay, and/or the potential level of public subsidy. As a result, the CAM is underfunded. This is the reason for the long delays in reimbursement and the accumulation of debts by health units” (Girard 2014). The budget of the CAM jumped from BIF 2.3 billion in 2012 to BIF 10.9 billion in 2014, and this still was not enough back then. Field interviews conducted in 2013-2014 revealed that the CAM -which had an official adhesion rate of 23% in 2013- remained underfunded and a financial burden for the HF. The changes in management provoked by the CAM were still unclear at the time of the study. In fact, the unfinished story of the CAM worryingly resembles the story of a first CAM scheme implemented in Burundi in 1984, which never really took off and did not survive the civil war (Arhin 1994). In January 2015, the Minister of Public Health herself recognised that the scheme is underfunded and would need profound restructuring to work²⁴⁷.

Performance-based financing

Performance-based financing, which came at the same time as the abolition of user fees in two pilot provinces, possibly gave health centres some financial breath space. PBF is a contractual arrangement between a principal, an NGO and the state, and an agent (the HF) and is popular in “situations of complexity and where there is often great uncertainty surrounding, and lack of understanding about, the results chain” (Pearson et al. 2010). Between 2005 and 2010, PBF was piloted by international organisations in a total of eight provinces, and PBF money came on the top of the classic input funding, with a limited contribution from the MoH. Starting from 2010, the PBF and selective free health care schemes were merged as PBF was scaled up. Interestingly, it does not seem that this scaling-up was possibly done at the expense of other, classic 'input' funding channelled through the health province. The budget officially available per HF, both through PBF and health provinces, has been relatively stable over the last few years.

However, very much as the CAM, the PBF budget is regularly exhausted. In March 2015, interviewees at the MoH revealed that the MoH had run out of funding²⁴⁸ and was counting on the restructuring of a World Bank support programme to pay its health facilities – and this despite the fact that PBF was between 22.8 and 26% of the MoH, with the MoH budget clearly growing over the years.

²⁴⁷ <<http://www.iwacu-burundi.org/une-restructuration-de-la-politique-de-la-cam-est-indispensable/>>

²⁴⁸ The Burundi fiscal year runs from January to December. The interviewees asked not to be identified.

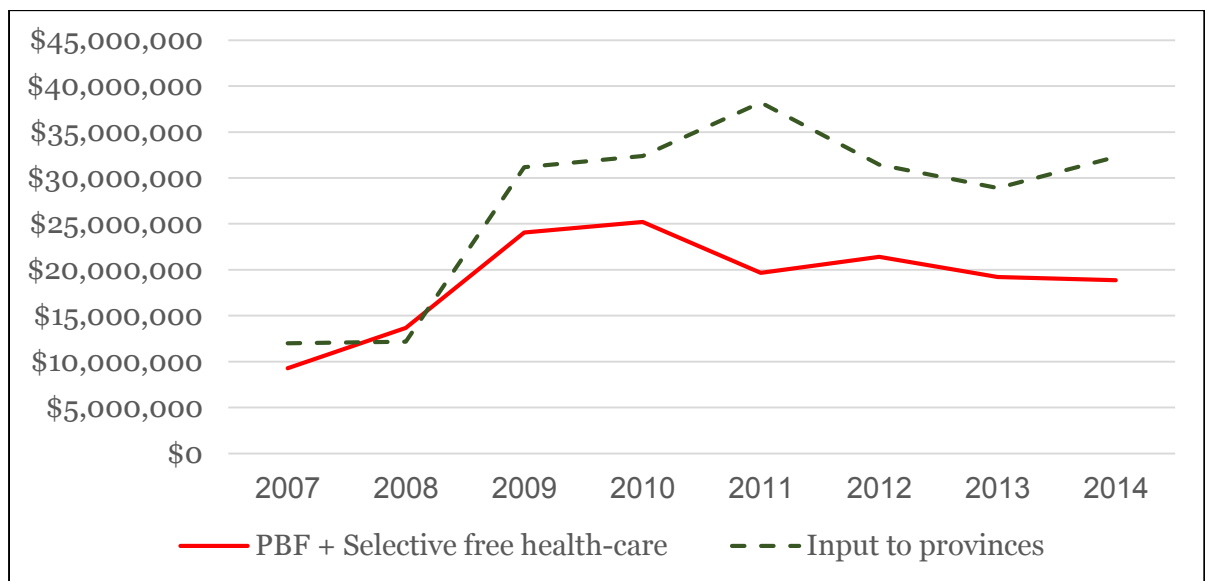


Figure 7 Evolution of PBF and direct (input) support to health facilities, in 2014 US\$

Source: Burundi official budget documents, 2007-2014

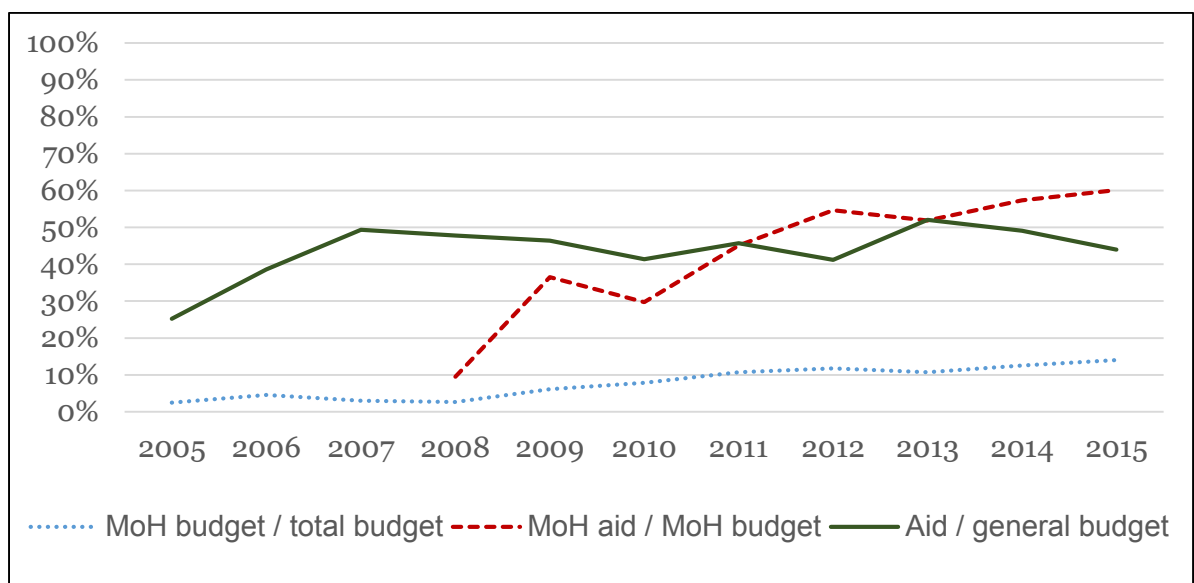


Figure 8 PBF and Ministry of Health budget in Burundi

* including Ministry against HIV/AIDS for periods when it was not part of the MoH | ** aid poorly recorded before 2009, the data still typically does not include part of the NGO aid. Based on budgets – 2015 budget known to be totally off-tracks.

PBF not only changed health-care funding, but it also introduced a new set of administrative procedures. Under PBF, Health Facilities have had to develop business plans, re-organise their accounting, and abide by new procedures designed to check their performances. The version of PBF that was implemented in Burundi is close to other countries (Canavan et al. 2008);

“its core mechanism consists in establishing results- (or ‘output-’ or ‘performance-’) based contracts with health facilities. Through these contracts, the implementing agency (i.e. an NGO or the MoH) pays subsidies for the amount of services delivered by the HF. Every time a HF delivers a contracted service, it is eligible for a unit subsidy that can be assigned to different uses: (1) HF day-to-day operations (drug purchase, cleaning materials, etc.), (2) small investments in equipment and facilities to improve the quality of care, and (3) financial motivation of health workers, traditional birth attendants or community health workers. The services that are part of the contract are determined in advance and encompass most of the activities of the minimum package of activities of a HF as defined by the MoH. Contracted services may vary and have varied over time, according to the implementing agency and the priorities of the MoH. Throughout the years, more than half of the contracted indicators at the health centre-level have been services for which users are not required to pay any fee. The integration of PBF in the free health care policy has been described as potentially contributing to the strengthening of the health system (Meessen et al. 2011). With the introduction of PBF, a new set of procedures for monitoring and verification (e.g. counter-verification of results by a third-party agency) has also been implemented to ensure that the services provided are of good quality, that health providers do not ‘game’ by declaring fabricated services, and that the different functions of the health system are clearly separated (Cordaid – SINA, 2009)”

(Falisse, Ndayishimiye, et al. 2015)²⁴⁹

The PBF also introduced bi-annual development plans, which are supposed to be realised by the HFC and the medical staff together and introduce some strategic planning at the HF-level: decisions about money allocation, projects, and local health policies are supposed to be made on that occasion.

Contrary to the CAM and the selective abolition of user fees, performance-based financing was, originally, not a political move. It came from two partners of the MoH, the Dutch Non-Governmental Organizations (NGOs) Cordaid and HealthNet TPO (supported by the Dutch government and later the European Union). “Their inspiration was reportedly coming from the 1993 World Bank report ‘Investing in Health’, the agenda of the millennium development goals (MDG), which insisted on concrete results and more transparency, and the PBF experience in neighbouring Rwanda that was then described as ‘encouraging’ (Soeters et al. 2006; Meessen et al. 2007)” (Falisse, Ndayishimiye, et al.

²⁴⁹ A longer explanation of the history of PBF in Burundi can be found in my paper Falisse et al. (2014), which I am quoting in part in the coming pages.

2015). The project was scaled up in April 2010, and officially taken over by the MoH. The World Bank and the European Union backed and financed the idea, which seemed to have convinced most of the key officials within the MoH. A National Technical PBF Unit was created (the *Cellule Technique Nationale sur le Financement basé sur la Performance*, CTN) and has gained considerable power and influence over the year.

There were no serious attempts to evaluate the effects of PBF on health or management before it was scaled up. Impact evaluation are gradually emerging (Bonfrer, Poel, et al. 2014; Bonfrer, Soeters, et al. 2014; Falisse, Ndayishimiye, et al. 2015), but they often focus on easily measurable variables such as the use of (some) services. The effects they find are mostly limited to child and maternal health: PBF is associated with increase in institutional deliveries and ante-natal care. These evaluations started after PBF was scaled-up, and face important methodological limitations issues ranging from the paucity of data to the lack of easy credible counterfactuals as PBF was gradually implemented across entire provinces (Blacklock et al. 2015). If anything, the evaluations show that PBF is no magic bullet, especially with respect to curative, preventative, and outreach health-care services. Yet, PBF is now a strikingly central element of the Ministry of Health and the way it is organised, with contracting organised from the HF to the central level.

An obvious evidence of the centrality of PBF is that it has become a major source of funding for health facilities. On average, 72% of the funding of the HFs surveyed in 2011-2012 came from PBF. There are regional discrepancies: the richer Bujumbura rural and Bururi have as bigger share of income coming from user fees and insurance schemes (mostly from public servants, themselves better off than the average Burundian). The PBF funding is fragile: it comes from the MoH but behind it are international donors. Since it was scaled up, PBF sees regular delays in payment. Interviews with HF staff and MoH officials, however, revealed that with PBF, large amount of money went directly to the HFs, which often have constituted savings to help cope with delays and other shocks. The PBF includes an 'indices tool' to allocate the bonus within the HF, and specifies that no more than 50% of the money can go to staff bonuses (Fritsche et al. 2014).

A series of actors interviewed in the field especially young doctors and supervisors at the district and province-level, associated the introduction of PBF with the beginning of the HFC system²⁵⁰. Although this is factually incorrect, the new PBF system required every contracted HF to have a HFC and *de facto* may have led to electing new committees where the HFC was non-existent or forgotten (Falisse et al., 2012). Faith-based HFs (19% of the sample), which tended not to have a HFC, had to create a committee to benefit from PBF.

In conclusion, this supplementary section shows a story of erratic changes in health

²⁵⁰ Interviews with health district and province authorities: Ruyigi 02.09.2011 and Mpanda 02.08.2011.

financing and the set-up of a possibly more efficient and more accessible health system. The reforms, however, may also have contributed to the fragility of the system that is reliant on possibly too complex procedures (Witter et al. 2015) and international aid support. The long-run consequences of introducing a large output-based financing system are still unclear.

Map: payment structure per HF

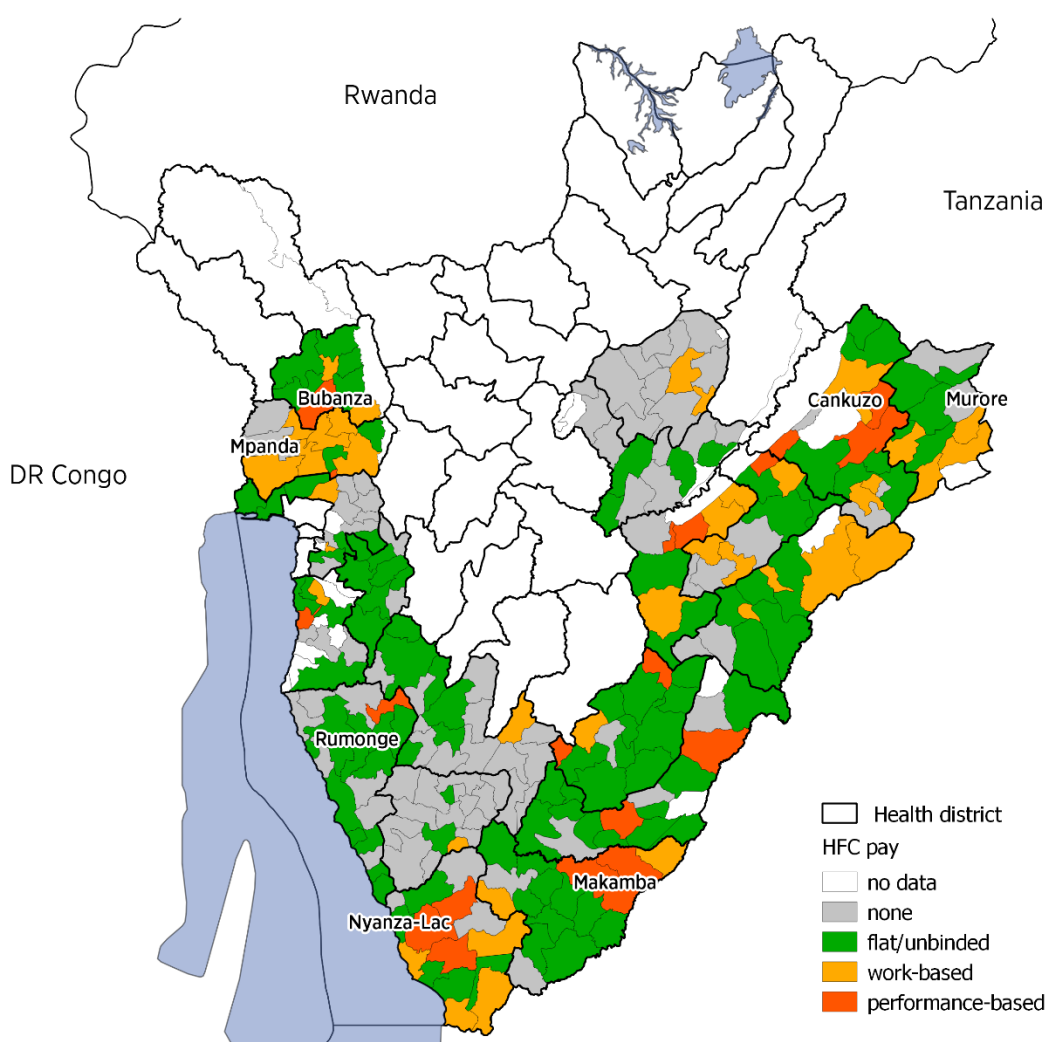


Figure 9 HFC Payment, per HF and district

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Figure 10 Sample summary card: children above 5 visits at the HF

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Figure 11 Sample summary card: financial situation at the HF

Table C-23 ANCOVA robustness check (abridged version with key dimensions only)

	relative to basic package		relative to control group		N
	effect	p-value	effect	p-value	
1. HFC organisation	0.101	0.171	0.253	0.000***	249
2. Social Accountability	-0.155	0.217	0.032	0.745	249
3. HF management	0.038	0.712	0.106	0.209	249

p-value: * < 0.1, * < 0.05, *** < 0.001. P-value is the naïve p-value. The ANCOVA model includes lagged outcome values. See chapter III for details about the outcome variables and model including N).

Table C-24 HFs selected for nested analysis

HF	Auto-evaluation ¹ (/30)	social accountability ²		
		at endline	increase	percentile of group (endline)
HF Endline.B.3.1	23.5	0.767	-1.005	5%
HF Endline.B.3.2	19	0.113	-0.093	10%
HF Endline.B.3.3	21.5	0.189	0.106	12%
HF Endline.B.3.4	21	0.216	0.171	17%
HF Endline.B.3.5	28	0.647	0.269	26%
HF Endline.B.3.6	25	0.102	0.923	50%
HF Endline.B.3.7	25	0.567	1.059	55%
HF Endline.B.3.8	29	0.493	1.119	57%
HF Endline.B.3.9	29	0.786	1.165	60%
HF Endline.B.3.10	28.08	1.261	1.409	71%
HF Endline.B.3.11	28	1.546	1.694	86%
HF Endline.B.3.12	24.5	1.362	1.71	88%

1. Auto-evaluation is based on an assessment carried out by HFC members. | 2. Social accountability uses the indicator on social accountability defined in chapter III. In each site (HF), focus groups were organised with the HFC (without its president) and the population (alternating between women only and mixed groups). The sites for qualitative research were originally selected using a HFC functioning self-assessment carried out during the re-cap session, which turned out to be a rather average predictor of their final score on the dimensions 'HFC functioning' (Pearson's correlation coefficient: 0.105) and 'HF social accountability' (Pearson's correlation coefficient: 0.142). At the extremes, however, the correlation is stronger, and the cases can be used for a nested analysis

Table C-25 Heterogeneous effects: relationship nurse - HFC

Dimension / Variable	HFC perception of c. nurse ¹		Chief nurse perception of HFC ¹	
	effect	p-value	effect	p-value
1. HFC functioning	0.075	0.535	0.231	0.132
2. Social accountability	0.071	0.818	-0.697	0.005***
3. HF management	0.010	0.959	-0.166	0.361
terms of reference	0.153	0.422	0.236	0.281
HFC self-confidence ¹	0.063	0.860	0.348	0.265
change chief nurse	0.031	0.864	-0.188	0.266

See chapter VI for details about the variables and details of the OLS model including N). p-value: * < 0.1, * < 0.05, *** < 0.001. P-value is native p-value. 1. 5-item Likert scale.

Table C-26 Heterogeneous effects: relationship nurse – HFC (discrepancy in perception)

Dimension / variable	(1) opinion chief nurse - HFC		(2) opinion chief nurse - HFC	
	effect	p-value	effect	p-value
1. HFC functioning	-0.448	0.109	0.081	0.830
2. Social accountability	0.323	0.497	-0.501	0.436
3. HF management	-0.608	0.049**	-0.453	0.061*

See chapter VI for details about the variables and details of the OLS model including N). p-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value. 1. 5-item Likert scale.

Table C-27 Heterogeneous effects: HFC remuneration ('basic intervention')

Dimension / variable	(1) linear (x 10,000 BIF)		(2) flat pay		(3) performance- based	
	effect	p-value	effect	P- value	effect	p-value
1. HFC functioning	-0.039	0.375	-0.232	0.178	-0.295	0.142
2. Social accountability	-0.247	0.153	-0.939	0.02**	-0.632	0.236
3. HF management	-0.053	0.422	0.028	0.922	0.036	0.886

See chapter VI for details about the variables and details of the OLS model including N). p-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value. 1. 5-item Likert scale.

Table C-28 Impact on HFC remuneration

outcome	'basic bundle'		'Basic bundle' + 'localised knowledge'	
	effect	p-value	effect	p-value
paid HFC (dummy)	0.139	0.256	0.139	0.259
amount paid (in BIF 10,000)	-691	0.749	-924	0.701

See chapter VI for details about the variables and details of the OLS model including N). p-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value.

Table C-29 Difference at baseline level: paid HFCs

	Difference paid HFC - non-paid HFC ¹	p-value	N
1. HFC functioning	0.052	0.264.	249
2. Social accountability	0.181	0.050*	249
3. HF management	0.091	0.160	249

1. Paid is whether the HFC receives any money. Difference from t-tests. Chapter III contains the details about the three dimensions. p-value: * <0.1 , ** <0.05 , *** <0.001 .

Table C-30 Variables for heterogeneous effects: HFC remuneration

	N	mean	st. deviation	difference I ₃ -I ₀ ¹	difference I ₂ -I ₀ ²
(1) paid HFC	251	0.645	0.479	-0.079	0.079
(2) amount paid	162	6156	15464	-704	456

1. Group that benefited from the basic bundle + localised intervention version control group | 2. Group that only benefited from the bundle versus control group. T-test p-value: * <0.1 , ** <0.05 , *** <0.001 .

Appendix C.VII. Chapter VII

Table C-31 HFC composition

	HFC (all) (2011)	HFC board (2011)	HFC president (2011)	Burundi (2011 census)
Women	0.35 (0.35)	0.29 (0.26)	0.08 (0.28)	0.51
Speaks French	0.40 (0.32)	0.78 (0.25)	0.86 (0.35)	0.06
Secondary Education	0.32 (0.21)	0.65 (0.24)	0.77 (0.42)	0.08
Repatriate / returnee	0.08 (0.17)	0.03 (0.18)	0.08 (0.27)	0.06
Internally displaced	0.08 (0.23)	0.07 (0.18)	0.07 (0.25)	0.02
Not farmer	0.29 (0.24)	0.53 (0.35)	0.70 (0.46)	0.10
Age	n.a	39.6 (6.53)	41.6 (10.01)	35.69
Has a political mandate	0.15 (0.17)	0.38 (0.21)	0.23 (0.42)	<0.001

Standard deviation in brackets.

Table C-32 Explaining the composition of the HFC

	Women ¹ (OLS)	Non- farmers ¹ (OLS)	Politicians ¹ (all) (OLS)	High-level politicians ² (OLS)	Elected HFC (Logit)
Electricity (1:never - 4: always)	0.017* (0.010)	0.001 (0.004)	-0.015 (0.009)	-0.033 (0.033)	-0.638** (0.282)
Faith-based HF (dummy)	0.050 (0.036)	-0.002 (0.015)	0.033 (0.034)	0.237** (0.107)	-2.956*** (0.561)
Population area (x10,000)	0.008 (0.014)	-0.000 (0.006)	-0.037** (0.017)	-0.011 (0.060)	-0.022 (0.340)
Size HFC	-0.003 (0.002)	-0.014*** (0.001)	-0.002 (0.002)	0.019 (0.014)	-0.021 (0.047)
Size staff	0.004 (0.005)	-0.000 (0.003)	0.0114 (0.009)	-0.019 (0.018)	0.077 (0.139)
Qualified staff / staff size	0.000 (0.027)	-0.011 (0.010)	-0.018 (0.027)	-0.023 (0.085)	1.313* (0.751)
Urban area (dummy)	0.050 (0.033)	-0.001 (0.016)	0.016 (0.029)	0.047 (0.112)	-0.441 (0.708)
Vote CNDD-FDD	-0.009 (0.126)	-0.097* (0.058)	0.242* (0.133)	-0.070 (0.393)	-0.393 (2.647)
First HFC (dummy)	0.017 (0.028)	-0.008 (0.011)	0.023 (0.030)	-0.125 (0.101)	0.153 (0.681)
Elected HFC (dummy)	0.048 (0.037)	-0.014 (0.015)	0.0201 (0.037)	0.261** (0.117)	
Time chief nurse at HF (in months)	0.000 (0.000)	-0.000 (0.000)	0.000 (0.001)	-0.003 (0.002)	0.032 (0.023)
Constant	0.348**	0.430***	-0.054	-0.00648	5.658**

	(0.153)	(0.0669)	(0.146)	(0.308)	(2.600)
Province fixed-effect	YES	YES	YES	YES	YES
Observations	249	249	249	249	249
R ² (pseudo for Logit)	0.170	0.504	0.153	0.105	0.45

Standard deviation in brackets. P-value: * <0.1 , ** <0.05 , *** <0.001 . 1. Ratio in HFC | 2. Ratio in HFC, high-level is above local (above chef de colline or chef de zone).

Table C-33 ANCOVA robustness check (abridged version with key dimensions only)

	relative to basic package		relative to control group		N
	effect	p-value	effect	p-value	
1. HFC organisation	0.047	0.541	0.300	0.000***	249
2. Social Accountability	0.202	0.106	0.234	0.030**	249
3. HF management	0.037	0.731	0.143	0.107	249

P-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is the naïve p-value. The ANCOVA model includes lagged outcome values. See chapter III for details about the outcome variables and model.

Table C-34 Interaction with the type of HFC

	Protestant HF (dummy)		Catholic HF (dummy)	
	effect	p-value	effect	p-value
HFC organisation	0.336	0.216	-0.671	0.008***
Social accountability	-1.028	0.058*	-0.537	0.308
HF management	0.185	0.361	-0.345	0.444

See chapter VII for details about the variables and details of the OLS model including N). p-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value.

Table C-35 Interaction between the joint meeting intervention and women in the HFC

	All members		HFC president		Committee only	
	effect	p-value	effect	p-value	effect	p-value
1. HFC organisation	0.287	0.501	-0.105	0.702	0.215	0.606
2. Social Accountability	0.256	0.791	-0.287	0.650	0.942	0.359
3. HF management	-0.817	0.240	0.165	0.640	-0.175	0.755

See chapter VII for details about the variables and details of the OLS model including N). P-value: * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value.

Table C-36 Interaction between the joint meeting intervention and the ratio of IDPs + returnees in the HFC

	All members		HFC president		Committee only	
	effect	p-value	effect	p-value	effect	p-value
1. HFC organisation	-0.304	0.159	-0.344	0.108	-0.295	0.103
2. Social Accountability	-0.337	0.592	0.045	0.953	-0.589	0.343
3. HF management	0.405	0.311	0.382	0.364	0.381	0.405

See chapter VII for details about the variables and details of the OLS model including N). P-value: * < 0.1, ** < 0.05, *** < 0.001. P-value is native p-value.

Table C-37 Interaction between the joint meeting intervention and returnees in the HFC

	All members		HFC president		Committee only	
	effect	p-value	effect	p-value	effect	p-value
1. HFC organisation	-0.238	0.506	-0.114	0.590	-0.401	0.239
2. Social Accountability	0.444	0.641	-0.317	0.708	1.920	0.230
3. HF management	0.152	0.853	0.444	0.545	-0.006	0.994
Voice core activity	-0.227	0.762	-0.114	0.590	0.070	0.915
Management core activity	0.455	0.494	-0.317	0.708	-0.255	0.544
Management (details) “”	0.720	0.347	0.444	0.545	-0.434	0.665
Existence of a HFCMC	-0.244	0.535	0.420	0.560	0.256	0.639
Attendance to last meeting	0.018	0.941	0.172	0.113	-0.392	0.023
Terms of Reference available	0.131	0.875	0.445	0.082*	1.054	0.078
Confidence in HFC (0-4)	-2.925	0.016	-1.888	0.000***	-2.522	0.013
Decisions by consensus	-0.685	0.484	-0.190	0.453	-0.581	0.436
Meetings HFC	0.016	0.949	-0.035	0.859	0.309	0.346

See chapter VII for details about the variables and details of the OLS model including N). P-value: * < 0.1, ** < 0.05, *** < 0.001. P-value is native p-value.

Table C-38 Interaction effects with presence of NGOs and violent incidents

	Joint leaders intervention		Information intervention	
	effect	p-value	effect	p-value
<i>Presence of NGOs (0-6)</i>				
1. HFC organisation	0.158	0.132	-0.104	0.152
2. Social Accountability	-0.072	0.761	0.290	0.179
3. HF management	-0.019	0.917	0.108	0.397
<i>Violent incidents (attacks 0-6)</i>				
1. HFC organisation	0.011	0.830	0.290	0.179
2. Social Accountability	0.178	0.170	0.108	0.397
3. HF management	0.106	0.293	-0.010	0.954

See chapter VII for details about the variables and details of the OLS model including N). P-value: * < 0.1, ** < 0.05, *** < 0.001. P-value is native p-value.

Table C-39 Interaction effects with whether the HFC is elected

	Joint leaders intervention		Information intervention	
	effect	p-value	effect	p-value
1. HFC organisation	-0.559	0.006***	-0.393	0.056*
2. Social Accountability	-0.232	0.671	0.249	0.669
3. HF management	0.007	0.981	-0.267	0.337
Voice core activity	-0.680	0.022**	-0.217	0.499
Management core activity	0.160	0.543	0.397	0.155
Management (details) ""	-0.111	0.719	0.594	0.040
Existence of a HFCMC	-0.339	0.233	-0.422	0.151
Attendance to last meeting	-0.004	0.971	-0.177	0.092*
Terms of Reference available	-0.002	0.994	-0.429	0.194
Confidence in HFC (0-4)	-0.834	0.142	-1.291	0.083*
Decisions by consensus	-0.442	0.056**	-0.067	0.809
Meetings HFC	-0.175	0.384	-0.114	0.673

See chapter VII for details about the variables and details of the OLS model including N). P-value:
 * <0.1 , ** <0.05 , *** <0.001 . P-value is native p-value.