Implementational Entrepreneurship and the Local Implementation of National Health Policy in China: A Comparative Case Study in a Southwestern Province

by

SHI, Yuda

A Thesis Submitted to

The Education University of Hong Kong

in Partial Fulfillment of the Requirement for

the Degree of Doctor of Philosophy

September 2022

Statement of Originality

I, SHI, Yuda, hereby declare that I am the sole author of the thesis and the material presented in this thesis is my original work except those indicated in the acknowledgement. I further declare that I have followed the University's policies and regulations on Academic Honesty, Copyright and Plagiarism in writing the thesis and no material in this thesis has been submitted for a degree in this or other universities.

Abstract

For decades, implementation research has sought answers to a simple question: Why do some policies yield notable outcomes in practice, while others don't? While many previous studies have explored a variety of factors, the influences of micro individual behaviors remain largely unexamined. This dissertation attempts to fill this research gap by analyzing local implementation of national policy in China from an actor-centric perspective. Built on the research on policy entrepreneurship, this doctoral research puts forth the concept of "implementational entrepreneurship" to describe the innovative and entrepreneurial actions undertaken by local technocrats during policy implementation. By researching implementational entrepreneurship, this dissertation also aims to broaden scholarly understanding of how individuals influence policy implementation and how their actions take effect. In particular, this study focuses on three research questions: (1) How do mid-rank officials and street-level bureaucrats in China act as catalysts of policy implementation? (2) What are the strategies adopted by implementational entrepreneurs in China to accelerate policy implementation and how do they overcome various hurdles to maximize the outcomes of policy? (3) Why does implementational entrepreneurship in China succeed or fail at the local level?

Encompassing both mid-rank officials and street-level bureaucrats, implementational entrepreneurs are sandwiched between various competing objectives and mandates. This complex situation casts implementational entrepreneurs into an intermediary role in terms of coupling national policies with local problems, thus offering them possibilities of accelerating policy implementation. Moreover, this dissertation argues that entrepreneurial traits and contextual environment have a combined influence

on effective implementational entrepreneurship. On the one hand, entrepreneurial traits include both the commitment of entrepreneurial officials and their competence in carrying out public policies. While commitment reinforces persistence and risk-taking, successful policy implementation requires entrepreneurs to possess strong abilities in regard to political acuity, persuasion, and network management. On the other hand, support from the external environment offers implementational entrepreneurs the resources necessary to clear hurdles and mitigate bureaucratic fragmentation. This dissertation contends that, when confronting difficulties, implementational entrepreneurs do not passively wait for opportunities to occur, but rather adopt various strategies to improve their own abilities and change unsupportive contextual conditions.

Based on this analytical framework, a qualitative comparative case study design is adopted in this dissertation. Two flagship programs integrating health services in Guizhou Province—the Telemedicine Program and the County Medical Alliance Reform—are selected for qualitative investigation. Controlling key contextual factors across cases, this comparative case study sheds light on the causal dynamics of implementational entrepreneurship in China by showing key variables of interest and their impacts on the reform process. By investigating the two cases, this dissertation underlines that, in both cases, implementational entrepreneurs intelligently used their domain expertise and familiarity with local conditions to develop action plans. In the meantime, coordination requires implementational entrepreneurs to maneuver within fragmented bureaucratic systems and realign conflicting interests in both horizontal and vertical directions.

Keywords: Implementational Entrepreneurship, Policy Implementation, Local Innovation, China, Integrated Care

Acknowledgements

After four years of study in Hong Kong, my PhD journey is coming to an end. During this exciting journey, I learned how to think as a scholar and sharpened my research skills. I never regret pursuing a PhD degree at The Education University of Hong Kong. Although the COVID-19 pandemic has much increased the difficulties in research, I was fortunate enough to be able to complete this dissertation with extensive support from my respected supervisors and dear friends.

First of all, I am most grateful to my principal supervisor, Dr Jingwei HE (Alex). Dr HE not only offered important guidance to my research and inspired me, but also taught me how to become a good scholar through hard working. He is always available whenever I am in need of help. I am indebted for his valuable suggestions and assistance to my research endeavor. Without his unconditional support, it would be rather hard for me to complete this journey alone.

I also appreciate constructive advice from my co-supervisors: Professor CHUNG Waiyee Joanne and Dr LEE Siu-yau. Furthermore, I want to thank the Graduate School of The Education University of Hong Kong. The Dean and staff members of the Graduate School are always available to provide efficient and necessary assistance, especially during the tough period of COVID-19 outbreak. I am so grateful to the officials of the Guizhou Provincial Health Commission and Liuzhi Health Department, as well as other informants, for their participation in the interview.

My sincere appreciation also goes to my friends at The Education University of

Hong Kong: Farid, Olga, YIN Zhichao, SHEN Xun, and colleagues in the Center for Great China Studies. I truly learned a lot from you. I am thankful to my flat-mates YAN Jiahao and ZHAO Pengfei. I will miss the many weekends when we cooked and had dinner together in the student quarters.

Finally, gratitude is due my best friend, colleague and partner in duet, YAN Zexin (Cassie), who has contributed untiringly to our common cause, slaved for our research works on public policy and administration (and I slaved for her, too), discussed the conceptual frameworks and inspired me, made important observations and discoveries, efficiently handled the process of our studies, and accompanied and encouraged me when I wrote this dissertation. Without her collaboration and inspiration, neither this dissertation nor any of my other research would have been possible. In the meantime, I am grateful for her as a skillful and emotional piano player (more skillful and emotional than me), and therefore we have opportunities to collaborate in the piano and violin duet. I also enjoyed the time when we attended concerts and shared our understanding of classical music. It is the most fortunate thing in my life to meet her as my soulmate.

Table of Contents

List of Abbreviations

NCMS	New Cooperative Medical Scheme
ICT	Information and Communication Technology
GP	General Practitioner
CPC	Communist Party of China
MoH	Ministry of Health
MHRSS	Ministry of Human Resources and Social Security
NHC	National Health Commission

List of Figures

List of Tables

List of Boxes

Chapter 1. Introduction

Policy implementation is a crucial process in public policy. Policies adopted must be carried out in practice in order to solve the social problems identified. Yet, public policies are not always successfully implemented, which may result in policy failure in practice. Why do some policies yield notable outcomes in practice, while others don't? What are key variables for effective policy implementation? For decades, scholars of both public administration and public policy have sought answers to these questions. Some previous studies have found that contextual factors, such as institutions and networks, exert critical influence over implementation. However, explaining whether a policy can effectively achieve its desired goals must also involve a consideration of the role of individual actors; it is ultimately people, rather than institutions, who make decisions and take actions. As a result, an actor-centric approach is crucial to understanding the policy implementation process. Recent years have seen a growing body of literature discussing the entrepreneurial role of different policy actors in policy implementation (e.g., Oborn et al., 2011; Zhu, 2013; Arnold, 2015, 2020; Aviram et al., 2018; Lu et al., 2020). Specifically, John Kingdon's (1985) concept of "policy entrepreneurship" broadened our understanding of how individuals influence policy implementation and how their actions take effect.

The concept of policy entrepreneurship originates from the notion of "policy entrepreneurs", which refers to individuals who are willing to invest their resources, such as time, energy, and reputation, in order to promote the desired policy change (Kingdon, 1985). Similarly, Cohen (2021) defined policy entrepreneurs as individuals who exploit opportunities to influence policy outcomes, in order to achieve their own goals, as there

are limited resources that can trigger the transformation alone. Motivated to change the "existing ways of doing things", these policy advocates adopt entrepreneurial activities, such as displaying social acuity, defining problems, building teams, and leading by example (Mintrom and Norman, 2009). This process of undertaking strategies that result in innovative activities in the public arena is defined as policy entrepreneurship (Zahariadis and Exadaktylos, 2016; He and Ma, 2020). The terms "policy entrepreneurs" and "policy entrepreneurship" have been used in a largely interchangeable fashion, notwithstanding the conceptual differences between them. The former mainly encompasses individuals and collective actors who play an entrepreneurial role in the policy process, whereas the latter refers to a series of innovative strategies that lead to policy change.

Originally used as an analytical concept to explain agenda setting—most notably in John Kingdon's (1985) seminal Multiple Streams Framework—"policy entrepreneurship" has been increasingly used to explain the dynamics of policy implementation (e.g., Ridde, 2009; Goyal et al., 2020; Fowler, 2019, 2022; Zahariadis, 2007; Zahariadis and Exadktylos, 2016). Some of these works have made remarkable contributions in regard to coupling policy entrepreneurship with implementational studies. It is argued that problem, policy, and political streams continue to coexist after the desired policy is adopted; therefore, the coupling role of policy entrepreneurship remains prominent in the policy implementation stage (Ridde, 2009; Fowler, 2019, 2022). Policy entrepreneurs in the implementation stage may enrich often ambiguous policy with necessary details so as to ensure its operability in the practice. By navigating the policy implementation process, these entrepreneurial actors devote themselves to

coupling local needs and conditions with policy, in order to maximize its outcome and even go beyond the original expectation (Exworthy and Powell, 2004; Oborn et al., 2011).

Goyal et al. (2020) categorized entrepreneurs in policy formulation and implementation into six types, according to their distinctive roles, including problem brokers, policy entrepreneurs, political entrepreneurs, process brokers, program champions, and technology innovators. Identifying non-ideal situations, problem brokers identify social problems and spark policy actors' interest in these problematic situations (Knaggård, 2015). In response to these problems, policy entrepreneurs look for new solutions and encourage other policy actors to buy into their ideas (Kingdon, 1985; Arnold, 2015). Process brokers couple policy formulation with subsequent stages by working out plans for policy implementation and monitoring the process (Howlett, 2019). Furthermore, their activities build connections between administration and society, and catalyze knowledge sharing (Paquet, 2015; Porte and Natali, 2018). When a policy is in place, program champions add new policy instruments or modify the existing policy mix to "join up" the policy with local conditions (Paquet, 2015). Technology innovators create a bridge between science and society, bringing in technological innovations to address policy problems. Finally, political entrepreneurs provide necessary political patronship to support entrepreneurial activities adopted by the other five types of entrepreneurial actors noted above, even during the implementation stage (Ridde, 2009; Zohlnhöfer et al., 2016).

Although these works have greatly broadened implementation research, the direct application of policy entrepreneurship in scholarly debate surrounding policy implementation may not be suitable. As noted above, the concept of policy

entrepreneurship is conventionally employed to explain dynamics in agenda setting. In Kingdon's (1985) work, policy entrepreneurs intend to bring about change in policy. Their roles are supposed to be fulfilled once the desired policy has been adopted. In other words, policy entrepreneurs are not explicitly supposed to participate in the subsequent stages of the policy process. The overly stretched use of "policy entrepreneurship" in policy implementation research results in conceptual vagueness. As a result, the innovative roles of government officials in policy implementation are conflated with entrepreneurial human agency in policy formulation (e.g., Petchey et al., 2008; Arnold, 2015, 2018; Aviram et al., 2018; Huang and Chen, 2020).

At the same time, conceptualizing entrepreneurial behaviors too narrowly may create unnecessary analytical hurdles. Previous studies have noted that an entrepreneurial policy actor may simultaneously play multiple roles (Bakir, 2009). For instance, Lu and colleagues (2019) presented a case of city greening in Shanghai, in which an entrepreneurial local official undertook the dual role of designing the initiative and steering its implementation. Notably, she even managed to catalyze change in local policy, based on feedback from street-level bureaucrats. Similarly, Oborn et al. (2011) studied how an academic used his personal network of experts to broker the interests of both government and academia, thus championing major health care reform in London. Honig (2006) observed that street-level bureaucrats could act as energetic boundary spanners in education policy implementation. These works suggest that the existing categorization of entrepreneurship in the policy process does not adequately reflect the multiple identities of ambitious individuals (Goyal et al., 2020). Hence, it is an analytical necessity to establish a meso-level umbrella concept to capture these alternative identities entrepreneurial individuals adopt during the implementation process.

This doctoral research thus puts forth the concept of "implementational entrepreneurship" to describe the innovative and entrepreneurial actions taken during policy implementation. Here, *implementational entrepreneurs are defined as individuals and organizations devoted to policy implementation, with the purpose of better achieving the objectives of a given policy. Implementational entrepreneurship refers to the process by which mid-rank and street-level officials in the governmental system perform entrepreneurial actions in order to translate policy into practice*.

The remainder of this chapter is divided into five sections. The first section elaborates on the concept of implementational entrepreneurship and discusses the characteristics of mid-rank and street-level entrepreneurship, the two key types of implementational entrepreneurship. Next, the background of my research setting in Guizhou province is briefly outlined. The third section establishes research questions and presents the research design. The key arguments of the dissertation and its research contributions are presented in the fourth section, and the final section introduces the structure of the dissertation.

1.1. Local officials and implementational entrepreneurship

Similar to the policy formulation stage, a host of actors, including local leaders, mid-rank officials, street-level bureaucrats, public service providers, and non-government organizations, participates in the implementation process. Among these actors, mid-rank officials and street-level bureaucrats play crucial roles in carrying out public policies (Lipsky, 2010; May and Winter, 2009). Exercising discretionary power within the government, it is easy for them to substantially influence the outcome of policy

implementation vis-à-vis others. To theorize this crucial but often underestimated role of middle- and low-level bureaucrats, this study characterizes two major types of implementational entrepreneurship: street-level entrepreneurship and mid-rank entrepreneurship.

The term "street-level entrepreneurship" connects street-level bureaucrats with policy entrepreneurship. In Lipsky's (2010) seminal work, street-level bureaucrats are defined as "public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work" (p. 3). Recent research has expanded the scope of this concept to include grassroots bureaucrats who are responsible for implementing policies, but have fewer direct interactions with citizens (e.g., Aviram et al., 2018). Lipsky further summarized three fundamental characteristics of street-level working conditions. First, policy-makers often give ambiguous directives regarding policy implementation; assessments of the performance of street-level bureaucrats are also vague. Second, street-level bureaucrats bear heavy workloads but have limited resources such as time and money in policy implementation. Third, their frequent encounters with citizens makes them highly familiar with grassroots conditions.

These working conditions shape a multifaceted incentive structure for street-level bureaucrats in policy implementation. On the one hand, the combination of heavy workloads related to implementation and limited resources breeds inertia on the part of street-level bureaucrats, prompting them to use their discretion to routinize and simplify their work (Lipsky, 2010). These coping strategies may result in implementation deficit. On the other hand, their street-level work experiences enable them to build relationships

and trust between bureaucrats and citizens, which often reinforces their genuine motivation of serving the people (Perry, 1996; Maynard-Moody and Musheno, 2003). When rich administrative experience, an awareness of acute local problems, and strong individual motivation to "make a difference" are favorably aligned, outstanding street-level bureaucrats may go beyond their normal scope of work and play an entrepreneurial role to catalyze more effective policy implementation (e.g., Petchey et al., 2008; Aviram et al., 2018).

Mid-rank entrepreneurs are mid-rank officials who devote themselves to policy implementation and employ strategies to accelerate the process. There is no scholarly consensus regarding how to define mid-rank officials, as their identities and characteristics largely depend on the nature of the political system and administrative customs at hand. While some scholars describe mid-rank officials as "public managers" (Lipsky, 2010; May and Winter, 2009), others broadly conceptualize this group of civil servants as "local officials" (Paquet, 2015; Lu et al., 2019). The ambiguous definition results in the overly stretched use of "street-level policy entrepreneurship" when characterizing the entrepreneurship of mid-rank officials in policy implementation (e.g., Arnold, 2015, 2020). To address this conceptual vagueness, this dissertation defines mid-rank officials as technocrats assuming executive positions in local governments.

Similar to street-level bureaucrats, mid-rank officials are also the frontline troops in policy implementation (Feldman and Khademian, 2007; May and Winter, 2009; Cooper and Kitchener, 2019). They play an intermediary role in translating national policies into local practice, which is particularly crucial in a multilevel governance system. In this system, the central authorities face a dilemma between keeping uniformity

in terms of policy design and ensuring the feasibility of national policy in regard to local circumstances. Therefore, they must leave considerable leeway for local governments by intentionally keeping national guidelines quite general in nature. Granted with considerable discretionary power, mid-level officials convert often ambiguous central directives into local guidelines, thus setting the operational parameters for frontline implementation (Lipsky, 2010; Hood, 1991). Without this process of operationalization, street-level bureaucrats will face significant difficulty in implementation because national instructions often lack operationalizability. Furthermore, central authorities are usually too distant from the frontline implementers; therefore, effective implementation must rely on mid-rank officials, who steer the implementation progress through monitoring and supervision (Powell, 1997; Gatenby et al., 2015). In this way, mid-rank officials couple the policy formulation stage with implementation.

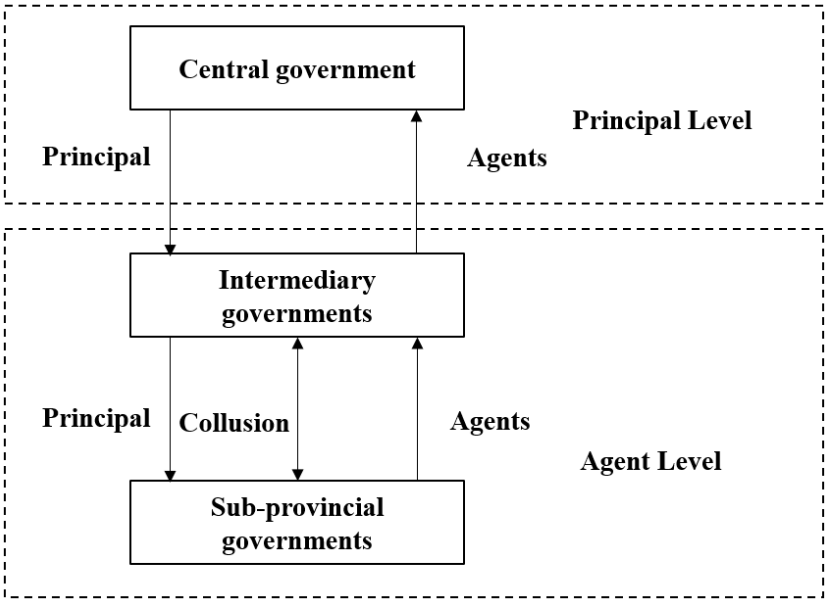
A considerable range of administrative activities takes place at this middle echelon of the hierarchy. Conventionally, mid-rank officials are often characterized as reluctant policy actors (Scase and Goffee, 1989). Trapped in complex bureaucratic structures, they tend to strictly follow directives from policy-makers or senior officials to minimize individual risks (Dopson and Stewart, 1990). However, motivated by career advancement, professional interest, or sheer benevolence, some mid-rank officials are willing to dedicate more time, energy, and resources than the ordinary "by-the-book" type of implementation would typically require (Currie et al., 2008; Teets and Hasmath, 2020). In some instances, they may even adopt aggressive strategies at the risk of harming their career prospects, in order to overcome hurdles in policy initiatives, a situation most policy implementers would want to avoid.

Underpinning most research works on policy implementation is the eminent principal–agent theory, which describes circumstances in which one party (the agent) is able to make decisions or take actions on behalf of another party (the principal) (Eisenhardt, 1989). The principal relies on the goodwill of the agent to further his or her interests when it may not be in the best interests of the agent to do so, as the latter may take advantage of information asymmetry to cheat the principal (Banks, 1995; Ellig and Lavoie, 1995; Francis, 1993). In the world of public policy, the relationship between (national) policy-makers and (subnational) implementers forms a classic principal–agent relationship. Policy-makers face constant challenges in motivating local implementers to act as faithful agents in the implementation process. Sandwiched between central principals and street-level agents, mid-rank officials in the government hierarchy actually operate within two areas of the principal–agent relationship. These intermediary personnel are typically subnational agents of the central master but, in the meantime, they are the superiors of the rank-and-file bureaucrats at the bottom of the pyramid. Their distinctive position within the hierarchy offers them a certain amount of room for entrepreneurial maneuver, when deemed necessary, in terms of adjusting central policy guidelines and accelerating local-level implementation. Unfortunately, there is a paucity of scholarly investigations explaining this part of their bureaucratic behaviors.

Given the important and multifaceted role played by government officials in this middle strata of the bureaucracy, the old dichotomous framework of the central–local relationship in implementation appears to be too crude. This dissertation is guided by a modified framework that maps out the three distinct levels of the government hierarchy (see Figure 1.1). This framework highlights the dual identity of mid-rank officials as both principals in relation to frontline implementation and agents in relation to (national)

policy-makers. If they lean toward central interests and act as faithful agents of policy-makers, these mid-rank officials may improve their capacity for steering the implementation process and pay greater attention to motivating and monitoring street-level implementers. In some cases, they may even play a more entrepreneurial role in this process, in order to catalyze policy implementation in practice (Oborn et al., 2011; Aviram et al., 2018; Lu et al., 2020).

Figure 1.1. The "central-intermediary-grassroots" framework



Source: the Author.

In contrast, these mid-rank officials acting as intermediary agents may serve their own interests or develop perverse motivations that derail them from the faithful implementation of policy. Even worse, several studies have revealed that distorted principal–agent relationships caused by mid-rank officials may penetrate down and "contaminate" the rank-and-file troops at the frontline, creating de facto collusion (Zhou et al., 2013; Rao, 2015; Shadbegian, 1999). This arguably represents the worst-case scenario in policy implementation. In recognition of their salient roles in policy

implementation, this dissertation contends that the innovative activities of mid-level officials are similarly crucial for effective implementation, vis-à-vis their street-level subordinates, perhaps to a larger extent than the latter. *Implementational entrepreneurship in this doctoral dissertation thus consists of both mid-rank and street-level entrepreneurship.*

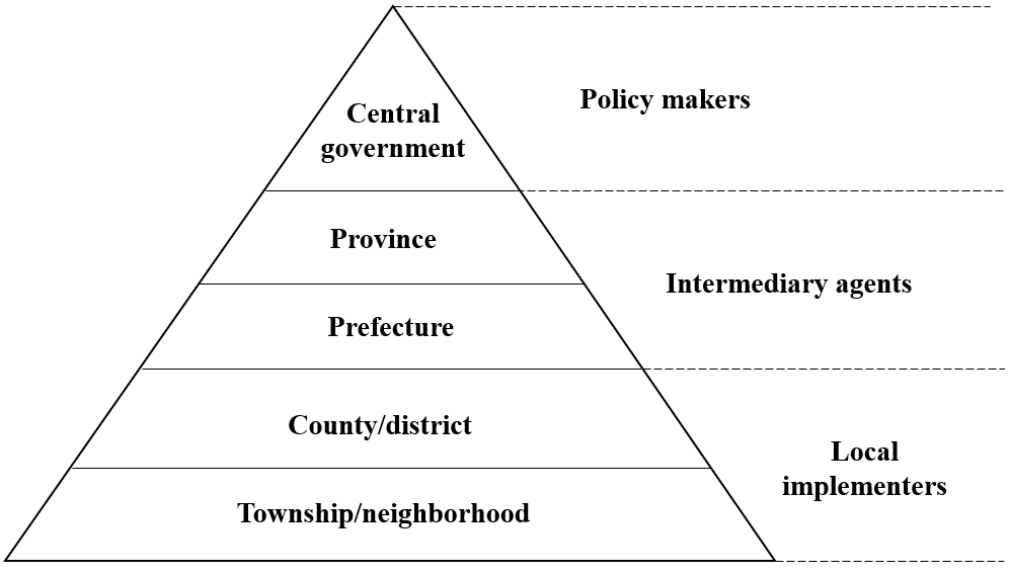
The behaviors of local government officials in China provide a useful example to illustrate the analytical necessity of broadening the research horizon of implementational entrepreneurship. With a multilevel governance structure, China's long history of authoritarianism and Leninist ideology encourage the central state to strictly control policy formulation activities (Saich, 2017; Zhou, 2011). However, acting in the third largest territory in the world, Chinese central leaders confront vast disparities in terms of local conditions, making the uniform application of the same policy design virtually impossible. Hence, the central government often adopts a loose top-down approach in policy implementation but grants local governments considerable leeway in adjusting policies (Guo et al., 2021). This room for discretion fosters a variety of implementational behaviors at the frontline. Some mid-rank officials and street-level bureaucrats are inclined to act in local interests, giving rise to the selective implementation of national policies (O'Brien and Li, 1999; Eaton and Konsta, 2014; Liu, 2019). Some local implementers may use the benefits of one program to enhance the progress of another, undermining the implementation of the former (Xun and Bao, 2007; Zhou et al., 2013). In other circumstances, these frontline troops play a more entrepreneurial role in coupling the central government's policy expectations with local needs to address local governance challenges (Zhu, 2013; Zhao et al., 2016; Huang and Chen, 2020).

The bureaucratic system in China is remarkably complex. As Chapter 4 will show, many local functional departments are placed under the dual leadership of both central ministries and local governments (Lieberthal and Lampton, 1992; Mertha, 2005; He, 2012). This bureaucratic fragmentation is prone to giving varying and sometimes conflicting signals to low-level implementers. The balance between the vertical professional line of the command chain (*tiao*) and the horizontal territorial leadership (*kuai*) is fluid. Most early studies note that grassroots implementers tend to align their implementation behaviors with local interests, as opposed to directives from above (O'Brien and Li, 1998; Zhou, 2010; Lian, 2016). Yet, there has been a salient trend of recentralization since the inauguration of Xi Jinping's leadership. Some recent studies suggest that local governments and mid-rank officials are granted greater levels of political responsibility to enact the unconditional implementation of central policies (Schubert and Alperman, 2019; Teets, 2016; Teets and Hasmath, 2020). Operating within such a fragmented bureaucracy and facing rapidly changing political dynamics, implementational entrepreneurs in China have to cope with heavier bureaucratic constraints vis-à-vis their counterparts in other parts of the world. As such, research on China can provide substantial evidence of entrepreneurial behaviors in complex institutional settings.

The governance system of China is made up of five levels of administration: the central government, provinces, prefectures, counties, and townships. Whereas the five administrative levels form a hierarchical pyramid of governance, each individual level plays a particular role in the formulation and implementation of national policies (see Figure 1.2). Located at the top of the pyramid, the central authorities make national policies, including laws, regulations, guidelines, decrees, and plans. *Located at the*

middle level of the pyramid, provincial and prefectural governments are intermediary agents within the bureaucratic system, responsible for converting often ambiguous national policies into feasible plans. While provincial governments are granted substantive discretion in operationalization, they may allow prefectural subordinates a bigger say in some circumstances, especially when policy implementation relies on local finance rather than on central or provincial funds (Ratigan, 2014; Guo et al., 2021).

Figure 1.2. The five layers of administration in China



Source: the Author.

County and township governments are located at the bottom of the pyramid. At the lowest echelon of the hierarchy, township governments in China are grassroots implementers of central policies. However, township governments have become "hollow shells" (Kennedy, 2007; Li, 2007) in three prominent respects, as some scholars argue. First, instructions assigned to them are typically split into specific tasks and township officials are required to implement them at the frontline, leaving them little room for discretion. Second, stringent supervision from multiple political superiors imposes heavy

pressure on township officials, who have to spend enormous resources on coping with inspections on a regular basis (Wu, 2007; Gu, 2006). Third, mandated to perform work identified and prioritized by political superiors, such as economic growth, COVID-19 prevention, and family planning, most township officials have to hold multiple concurrent posts, struggling to complete these competing assignments with limited resources and within a tight schedule (Smith, 2010). Ultimately, the hollowing-out of township governments in China has drastically reduced their capacity.

County governments are crucial policy actors responsible for local policy implementation. Given the diversity of local contexts, they enjoy considerable autonomy throughout a large part of this process (Ahlers and Schubert, 2015), which enables them to play an entrepreneurial role in policy implementation. Furthermore, compared with their township subordinates, bureaucracy at the county level consists of essential functional departments, such as health departments and environment protection departments. This relatively intact bureaucratic structure enables county governments to carry out fairly complex work in regard to social affairs.

1.2. Reintegrating health care in Guizhou

To analyze implementational entrepreneurship, this doctoral dissertation uses two local reforms enacted to reintegrate health service delivery systems in Guizhou province. Reforming health care systems involves extraordinary complexities. The system in question consists of a variety of components, including governance, service delivery, financing, payment, and regulations (Roberts et al., 2004; Ramesh and Bali, 2021). While these components involve different sets of institutions, processes, and actors, they overlap and are intertwined with each other; initiating change in one area may rely on

the effective and complementary implementation of another (Savigny and Adam, 2009; Bali et al., 2022). Therefore, institutional inertia created by path dependence and material interests embedded in one component area can easily impede reform in another area. Consequently, substantial changes rarely take place unless reformers possess competence, commitment, good strategies, and professional knowledge (Robert et al., 2003; He, 2018; Bali et al., 2022). These reformers include not only policy-makers at the national level but also implementers at subnational levels. Without firm support from capable local officials, the desired change would not occur, regardless of how well the policies are designed, as vested interests may fiercely resist reform.

The integration of service delivery systems is one important area of health care reform. Integrated care represents a mode of health service delivery in which different service providers develop close collaborations and connections with each other, in order to ensure people receive the care they need when they need it (World Health Organization, 2008). Modern medicine is delivered through four independent but interrelated care systems: curative, preventive, rehabilitative, and promotive care (He and Tang, 2021). In most parts of the world, the rapid aging of the population accelerates the epidemiological transition from infectious disease to non-communicable chronic illness, imposing heavy burdens on both the financing and the workforces of most health systems. Furthermore, most degenerative diseases require a close connection between curative services and long-term and social care (World Health Organization, 2015; Nolte and McKee, 2008). These rapid changes result in a shift from the traditional hospital-centric mode of service delivery to a primary-centered one. Despite the potential benefits of preventive and promotive care, most health systems around the world are still dominated by a preference for curative medicine, aggravating the fragmentation of health services (Glasby et al.,

2006; He and Tang, 2021). Within the curative system, care integration has become an urgent imperative to improve the cost-efficiency of health services and respond to the rising prevalence of the multiple morbidities of the elderly population (World Health Organization, 2002, 2008). As such, building up an integrated care system is a prominent policy task in most nations.

The old health system of China under the planned economy did integrate care to a commendable level (Yip and Hsiao, 2001; Hsiao, 1995). In urban areas, numerous clinics and hospitals were established by the government and state-owned enterprises (SOEs). Government employees were given access to free medicine in government-funded hospitals. Financed by the Labor Insurance Scheme, enterprise-owned clinics and hospitals provided affordable services to staff and their families, as a form of socialist welfare (Hsiao, 1995). When encountering difficulties in treatment, enterprise-owned health facilities could refer patients to government-funded hospitals (Jamison et al., 1984). In contrast, rural residents enjoyed the benefits brought about by the three-tier health network, under which barefoot doctors, physicians at township health centers, and specialists at county hospitals provided services to meet the diverse needs of residents (Liu et al., 1995; Meessen and Bloom, 2007). Furthermore, these different levels of services were connected by various mechanisms, such as referral, training, and supervision. These mechanisms ensured there was necessary collaboration between facilities in the delivery of affordable health care to the population (Sield and Sield, 1975).

Unfortunately, the market-oriented economic reform enacted over the last two decades of the 20th century has gradually dismantled the old health system. A laissez-faire stance has been adopted in health care. Central and local governments have

drastically reduced the fiscal subsidies granted to public hospitals in both cities and the countryside, but have granted them greater financial autonomy (Hsiao, 1995; Yip and Hsiao, 2001). Other health facilities have also suffered from the significant decline in financial subsidies. In urban areas, the fierce competition brought about by the market economy forced state-owned enterprises to cut funding for their affiliated clinics and hospitals (Jamison et al., 1984; Hsiao, 1995). In rural areas, the collapse of communist communes led to the loss of regular income for numerous village clinics and barefoot doctors, who had to rely on user charges instead (Wang, 2009; Meessen and Bloom, 2007). In addition, the deterioration of the health service system was exacerbated by a distorted pricing system that essentially encouraged the use of high-tech equipment and expensive drugs in treatment (see Chapter 4).

The abovementioned changes fueled de facto competition between large hospitals and their smaller peers. Attracted by higher salaries and better opportunities for professional development, many doctors at township health centers moved to urban hospitals. Within a short period of time, primary care facilities in China suffered from tremendous “brain drain”. A large-scale study in nine western provinces revealed that 70% of village doctors received formal medical training of less than 20 months (Wang et al., 2003). As the capacity of township health centers was drastically undermined, they could no longer provide services of a decent quality to the local populations. Many primary care facilities were converted into “cash cows”, chasing profits and driven by various perverse incentives in the Chinese health system. A survey conducted in 1998 and 1999 in western provinces indicated that more than 98% of drugs prescribed by village doctors were considered inappropriate (Zhang et al., 2003).

The significant deterioration of primary care led to lower service quality and declining trust from patients, most of whom ended up flooding to major hospitals in the cities (Messen and Bloom, 2007; Hsiao, 1995). The collapse of the referral system has created an enormous waste of health resources because primary care was significantly underutilized, while overutilization plagued tertiary care facilities (Yip and Hsiao, 2008). To resolve these problems, the Chinese government has launched a series of reforms since the late 1990s. In particular, building up an integrated health service delivery system was envisioned as a key objective in China's new national health care reform that commenced in 2009.[1] Since then, the central government has been encouraging local governments to explore various forms of care integration.

Located in the Yunnan–Guizhou Plateau in southwestern China, Guizhou province faces daunting challenges in health care. As one of the poorest provinces in China, Guizhou is constrained by both financial and human resources in its health system. Its mountainous geography creates natural hurdles for the delivery of health services, especially in the vast countryside. Remote rural areas have very limited access to basic health services (Li et al., 2009). Within the province, good hospitals are located in big cities, leading to the highly uneven distribution of health resources. In Bijie, one of the most underdeveloped prefectures in Guizhou, the number of doctors per thousand members of the population was 1.12 in 2015—only half that of the national average—even though the health infrastructure in this region had been significantly improved in

[1] Central Committee of Chinese Communist Party & State Council. (2009). *Opinions on Deepening Health Reform in China.* (*guanyu yiyao weisheng tizhi gaige de yijian),* available at http://www.gov.cn/jrzg/2009-04/06/content_1278721.htm, accessed on May 6, 2022.

the past decade.[2] In contrast, the number of doctors per thousand members of the population in Guiyang, the provincial capital, was triple the number of that in Bijie.[3]

Against this grave backdrop, the provincial government placed the integration of health services at the top of its social policy agenda. Over the past decade, numerous flagship programs have been launched in this respect. For example, the provincial health commission established a comprehensive telemedicine system between 2010 and 2018, which greatly accelerated the integration of health services in Guizhou. Another major reform seeking to integrate health service providers across the urban–rural division by establishing county medical alliances also yielded commendable outcomes. These two local health policy innovations are chosen as in-depth cases for this dissertation for two reasons. First, it has been argued that poor socioeconomic conditions combined with hierarchical local governance represents the least conducive environment for policy innovations (Ratigan, 2014; Aviram et al., 2018). The context of Guizhou is one such example. Poor socioeconomic conditions cause this province to often rely on fiscal transfers from the central government and top-down mandates in policy implementation. Therefore, local policy innovations in Guizhou can provide a "least-likely" situation as a case study. Second, implemented in the same province and almost within the same period of time, the Telemedicine Program and the County Medical Alliance Reform represent different policy implementation processes, which allows this study to identify the causal dynamics between implementational entrepreneurship and reform outcomes in different contexts.

[2] Guizhou Statistic Bureau. (2016). *2015 Guizhou Statistic Yearbook.* (*guizhou tongji nianjian)*, available at https://navi.cnki.net/knavi/yearbooks/YGZTJ/detail, accessed on May 6, 2022.
[3] Ibid

1.3. Research questions

As noted above, some previous studies have advanced policy theories by coupling policy entrepreneurship with policy implementation. These notable works have underscored the factors that influence the effectiveness and outcomes of public policies, such as the identities of entrepreneurs (Lu et al., 2020), entrepreneurial abilities (Arnold, 2015, 2020), institutional structures (Aviram et al., 2018), and entrepreneurial strategies (Arnold, 2015, 2020; Huang and Chen, 2020). However, a comprehensive discussion of the interactions between these factors and their combined effects in regard to the entrepreneurial behaviors of local government officials remains largely absent. Therefore, the causal links behind the effective implementation of entrepreneurship are still unclear. Furthermore, due to limited empirical evidence, the role of implementational entrepreneurship needs to be further investigated. In light of these theoretical considerations, this dissertation raises three sets of questions to guide the research:

Research Question #1: How do mid-rank officials and street-level bureaucrats in China act as catalysts of policy implementation?

Research Question #2: What are the strategies adopted by implementational entrepreneurs in China to accelerate policy implementation? How do they overcome various hurdles to maximize the outcomes of policy?

Research Question #3: Why does implementational entrepreneurship in China achieve varying outcomes at the local level?

1.4. Research design

Built on an ontological orientation toward post-positivism, this study follows deductive logic in its analyses. Through thorough engagement with the literature, Chapter 2 raises five theoretical propositions to explain implementational entrepreneurship, which are tested through comparative case studies presented in Chapters 5 and 6. Controlling key contextual factors across cases, the comparative case study sheds light on the causal dynamics of implementational entrepreneurship in China by showing key variables of interest and their impact on the reform process.

Two flagship programs integrating health services in Guizhou province—the Telemedicine Program and the County Medical Alliance Reform—are selected for qualitative investigation. Implemented in the same province, these two cases share similarities in regard to most contextual factors, yet the implementational entrepreneurship creates different dynamics. Purposive and snowball strategies were used in sampling. I first identified key interviewees through my extended personal network, and then gradually snowballed this into a larger group of 15 informants, including key government officials and frontline hospital staff. Archival resources, open access data, and internal materials were also used. Qualitative methods were extensively utilized in analyzing the rich data collected.

1.5. Central arguments and contributions

In this dissertation, I study the role of individual and collective agents in policy implementation through the concept of implementational entrepreneurship. By presenting two prominent cases of health care reform in Guizhou, I provide new insights into policy implementation in China. Implementational entrepreneurs are catalysts of

policy implementation, and they take the lead in fostering outstanding policy outcomes on the ground. China's experimentalist policy style and the central government's need to accommodate varying local conditions in the formulation of policy often result in a considerable amount of vagueness in policies. Severe bureaucratic fragmentation across both horizontal and vertical lines frequently impedes effective coordination. These conditions make it remarkably difficult to effectively implement national policies at the local level. I argue that, under these circumstances, mid-rank officials and street-level bureaucrats, who used to be described as "doing their jobs as instructed", can notably accelerate implementation by developing action plans and enhancing interdepartmental coordination. In particular, while previous studies have noted the power of street-level bureaucrats in policy implementation, I further argue that mid-rank officials also play a critical role in linking policy formulation to policy implementation.

Positioned within the middle and lower echelons of bureaucracy, implementational entrepreneurs have limited power to influence the policy process (Cohen and Aviram, 2021). However, driven by a multiplicity of incentives, these active policy actors are willing to take action to clear hurdles for policy implementation and accelerate the reform progress. This dissertation argues that, in China, some local officials actively take up the role of implementational entrepreneurship for three major reasons: (1) protecting or advancing individual or organizational interests; (2) the innate desire to share ideas; and (3) the genuine intention of attaining good local governance. This dissertation elucidates that, once they are motivated, these ambitious local officials can take advantage of their knowledge in professional domains and local conditions to catalyze the implementation process. Furthermore, experience of working in the government enriches their familiarity with bureaucratic procedures. Therefore, these

active policy actors can intelligently use procedural tools to strengthen the effective operation of national policies by influencing decision-makers and "rank-and-file" implementers on the frontline.

This dissertation also examines the causal dynamics underlying implementational entrepreneurship. *The central argument of this thesis is that entrepreneurial traits and contextual environment exert a combined influence over effective implementational entrepreneurship.* On the one hand, entrepreneurial traits include both the commitment of the entrepreneurial officials and their competence in regard to carrying out policies. While commitment reinforces persistence and risk-taking, successful policy implementation requires entrepreneurs to possess strong abilities in terms of political acuity, persuasion, and network management. On the other hand, support from the external environment offers implementational entrepreneurs the resources necessary to clear hurdles and mitigate bureaucratic fragmentation. Focusing on implementational entrepreneurship in China, I argue that firm endorsement from political principals is of vital importance to effective entrepreneurial maneuvers. Consequently, variation in entrepreneurial traits and contextual factors creates four distinctive types of implementational entrepreneurship that are illustrated in Chapter 2. Moreover, this dissertation contends that, when confronting particularly challenging difficulties, implementational entrepreneurs do not passively wait for opportunities to occur, but rather adopt various strategies to improve their own abilities and change unsupportive contextual conditions.

Overall, this dissertation argues that implementational entrepreneurship, as a kind of human agency, has profound influences on policy implementation in China. These

ambitious policy actors couple policy goals and the mix of policy instruments of central authorities with local conditions and clear institutional hurdles related to bureaucratic fragmentation within the established institutional structure. While entrepreneurial traits and external environment mutually affect the progress of implementation, implementational entrepreneurs can strategically improve their own abilities and reshape the circumstances at hand, and thus accelerate the entire policy implementation process.

These arguments echo previous studies on both policy implementation and policy entrepreneurship, and make theoretical contributions in four respects. First, the development of policy implementation research reconciles scholarly debate over whether policy implementation is predominantly promoted by the national government in a top-down manner or by subnational agents through a bottom-up approach. However, as presented in Chapter 2, these notable studies have focused more on influences brought about by macro political institutions or meso policy networks, but have overlooked the important role of micro individual actors. However, despite the constraints of institutional norms and organizational boundaries, it is ultimately frontline implementers who put policy into practice. Furthermore, the scholarship has resulted in managerial and instrumental insights. These salient characteristics of previous research have resulted in significant theoretical fragmentation and have decoupled policy implementation research from policy process theory (Howlett, 2019). In this context, the concept of implementational entrepreneurship offers a useful perspective that can be used to fill "the missing link" in the policy theory literature.

Second, this dissertation contributes to the Multiple Streams Framework and policy entrepreneurship literature. Although the Multiple Streams Framework has been

extensively applied to explain agenda setting and policy formulation, there is an emerging body of literature attempting to use it to analyze the dynamics of policy implementation. These works insightfully emphasize that problem, policy, and political streams do not vanish with the adoption of policies, but rather keep running through the implementation stage. The entrepreneurship of policy actors is still crucial for coupling the streams, which fosters successful implementation (see Chapter 2). Despite their remarkable contributions, these works offer limited explanations of how the coupling process takes place. My dissertation fills this research gap by illustrating the entrepreneurial activities of mid- and low-level officials in regard to catalyzing policy implementation.

Third, this study contributes fresh findings to studies on policy innovation in China. The existing literature underscores a host of structural and institutional factors that influence policy outcomes in China, such as experimentalist governance (Heilmann, 2008a, 2008b; Zhu and Zhao, 2021), de facto fiscal federalism (Montinola et al., 1995), and promotion tournaments among cadres (Teets et al., 2017; Li and Zhou, 2005). In recent years, a growing body of literature on policy entrepreneurship has provided a complementary perspective by discussing the crucial role of human agency in catalyzing policy reforms (Hammond, 2013; Zhu and Xiao, 2015; He, 2018; He and Ma, 2020). These works have made significant contributions by elaborating on the dynamics of policy innovation at the local level in China. However, there remains a dearth of knowledge in regard to how middle- and street-level bureaucrats play innovative roles in the implementation process. My dissertation seeks to broaden the scholarly horizon in this area.

Finally, most previous studies on policy entrepreneurs present single cases, which limit their capacity to explore effective entrepreneurship variables. In contrast, this dissertation presents a research design utilizing a comparative case study. The two health care reforms selected for comparison were enacted in the same province over approximately the same period of time, but contrast each other in the implementation process, the level of support from the external environment, and the entrepreneurial traits of key policy actors. Furthermore, the implementational entrepreneurs adopted different strategies in these two cases, thus allowing me to make further contributions to the extant literature by investigating the causal dynamics between the variables of interest and the effectiveness of implementational entrepreneurship.

1.6. Structure of the dissertation

This dissertation consists of seven chapters. Reviewing the theoretical literature in relation to policy implementation, Chapter 2 establishes the central research puzzles at hand. Despite the rich wisdom uncovered over the past few decades, theoretical pluralism has yielded significant theoretical fragmentation. I underscore that adopting an actor-centric approach in research enables us to help address this weakness. Summarizing recent empirical and theoretical knowledge, the rest of Chapter 2 highlights the role of implementational entrepreneurship in putting national policies into practice and the causal dynamics involved in doing so. Five propositions are put forward at the end of this chapter to steer the empirical investigation.

Chapter 3 elaborates on the research methods used in this study. Established on an epistemological basis of post-positivism, this dissertation adopts an explicit qualitative approach. Specifically, I use two case studies related to reintegrating health

services in Guizhou—the Telemedicine Program and the County Medical Alliance Reform—to explore the role of implementational entrepreneurship and test the propositions raised in Chapter 2. Chapter 3 also sheds light on the rationales underlying the case selection in this dissertation; both policy programs have similar contextual factors and use an experimental approach to carry out Central Government directives, yet implementational entrepreneurship presents itself in distinctive ways across the two cases. This research design enables me to explore the causal dynamics behind the implementational entrepreneurship in question. Details of the data collection process and analytical methods used are reported in Chapter 3.

Chapter 4 outlines the background of the case studies. I first introduce the ecological conditions in which implementational entrepreneurs in China work, including three salient characteristics: complex central–local relations, the preference for experimentalism, and the prevalence of bureaucratic fragmentation. Chapter 4 then underlines complexities and difficulties involved in health care reforms in China. While China used to use an integrated system of health services in Mao's era, this system unfortunately deteriorated, leading to a plethora of severe problems in both the health system and society at large. This chapter also reviews the vision and policy framework of the landmark national health care reform begun in 2009, especially in regard to how the fragmented health care system is being integrated.

Chapter 5 and Chapter 6 investigate the development of telemedicine and county medical alliances, respectively, in Guizhou. The Telemedicine Program presented in Chapter 5 witnessed the entrepreneurship of mid-rank officials in a top-down implementation process. Displaying strong professional expertise in health informatics,

the implementational entrepreneur who embarked on the policy implementation generated passionate enthusiasm for telemedicine. However, in its early stages, this implementational entrepreneurship was impeded by the unsupportive environment within the provincial health bureau. To create more favorable circumstances for the program, a coalition was proposed for policy implementation, which encompassed a variety of mid-rank officials from other departments. Then, this collective of entrepreneurs successfully shifted the venue to provincial leadership. With unconditional backing from provincial leadership, the implementational entrepreneurs cleared hurdles presented by bureaucratic fragmentation in both vertical and horizontal directions, which ultimately resulted in remarkable outcomes on the ground.

Chapter 6 examines a case that combines both top-down and bottom-up implementation, in which mid-rank entrepreneurs experienced numerous interactions with street-level entrepreneurs. The County Medical Alliance in Guizhou was first initiated by a number of pioneering localities, such as Liuzhi. Concerned about the fragmentation of local health service, officials in Liuzhi health department considered a medical alliance championed by provincial authorities as a solution. These street-level entrepreneurs learned from other demonstrated models and persuaded local leaders to participate. Using a variety of entrepreneurial strategies, the entrepreneurial officials eventually made remarkable achievements in regard to carrying out the reform. Motived by numerous factors, the street-level entrepreneurs promoted the Medical Alliance Reform to provincial health authorities, who decided to scale up the reform to the whole province. The scaling-up process was sped up after central authorities released general guidelines. The mid-rank entrepreneurs nonetheless encountered difficulties brought about by severe horizontal fragmentation and the lukewarm reception from provincial

leaders. In this context, they accelerated the scaling-up process by championing the policy program across counties, which consequentially led to successful implementation.

This dissertation concludes with Chapter 7, which summarizes the major findings arising from the comparative case studies. The role of implementational entrepreneurship and the causal dynamics underlying it are theorized. This chapter also discusses the limitations of this dissertation in terms of the research design and data collection. My future research agenda is presented at the end of Chapter 7.

Chapter 2. Literature Review

This chapter connects the existing literatures on policy implementation and policy entrepreneurship, thus characterizing implementational entrepreneurship as the key phenomenon of concern. Section 2.1. offers a brief introduction to the evolution of implementation research, highlighting the need for an actor-centric approach to scholarly investigations. Section 2.2. reviews the literature on policy entrepreneurship as a theoretical basis for formulating the concept of implementation entrepreneurship discussed in Section 2.3. The last section concludes this chapter with the theoretical framework underlying the empirical investigation.

2.1. The evolution of implementation research

The evolution of implementation research dates back to Jeffery Pressman and Aaron Wildavsky's (1973) pioneering work. They investigated how the expectations of the US federal government in terms of developing the local economy failed at the level of the locality, as the outcomes of the policy programs deviated from their original goals. Earlier scholars in other fields have also discussed various issues related to policy implementation, such as discretionary power, the relationship between politics and administration, and organizational behaviors (Roosevelt, 1949; Wilson, 1968; Davis, 1969). However, this early stream of literature typically does not consider policy implementation as a key issue in the public sphere. As a result, when Pressman and Wildavsky first considered policy implementation as an independent area of study, they were regarded as having filled this gap (e.g., Hargrove, 1975; Goggin et al., 1990; Parsons, 1995; Ryan, 1995).

In Pressman and Wildavsky's top-down perspective of implementation research, when lower-level governments receive policy mandates assigned by their political superiors, they must use the prescribed means to accomplish their goals. In this way, implementation should take place in a rational way through a clearly defined chain of command, while any behaviors that deviate from the original policy goals are regarded as "abnormal". Following this top-down perspective, political principals can control the policy implementation process by improving the policy design and providing incentives for local implementers (Van Meter and Van Horn, 1975; Sabatier and Mazmania, 2010).

This top-down approach to policy implementation research, however, is challenged by a bottom-up perspective. In contrast with the top-down scholarship, the bottom-up approach contends that the variety of contextual factors at play creates hurdles for the full implementation of policies at the level of the locality (Matland, 1995). In particular, the dilemma created by the gap between policy goals and limited resources on the frontline encourages street-level bureaucrats to strategically use their discretion to adapt national directives based on local conditions (Lipsky, 2010). As such, policy implementation becomes a process in which local implementers consciously modify the objectives of policy-makers and select suitable instruments to achieve their goals (Hjern and Porter, 1981). While debates concerning top-down and bottom-up approaches have enriched our scholarly knowledge of policy implementation, they have, to some extent, impeded theory development by freezing the analytical foci as two static modes (Howlett, 2019). To break this theoretical impasse, a "second generation" of implementation research conducted since the 1990s has sought to reconcile the two contrasting perspectives.

First, some scholars have attempted to synthesize the top-down and bottom-up scholarship through the analytical concept of "networks", which is defined as relatively stable social relations between independent actors established for the sake of policy implementation (Klijn and Koppenjan, 2000). This network perspective has been increasingly used by scholars to underscore the complexities and dynamics of collaboration (Dowding, 1995). Network theory assumes that all stakeholders in policy implementation are part of a virtual network in which they bargain and negotiate with each other for their own interests. By investigating these interactions, scholars underscore how networks can affect the outcomes of policy in practice (Lecy et al., 2014). In particular, identifying the possession and distribution of power is essential in understanding any type of network, including that of policy implementation, which is formed as a result of hierarchical authority or advantages in regard to information (Gouglas, 2015; Hupe and Hill, 2003; Smith, 2000).

Strategies adopted by network managers—critical actors who possess central power in the network—exert a profound influence on the outcomes of policy implementation in a variety of situations. For example, when there is no salient conflict of interest, network managers can hold modest positions and motivate other participants in the network to collaborate with each other (O'Toole, 1997). In contrast, when conflicting interests within the network undermine policy implementation outcomes, these key policy actors can play a more entrepreneurial role in the coordination process to overcome the barrier of implementation (Bardarch, 1998; Schapf, 1978).

Second, implementation research has been increasingly integrated into policy process theories. From this perspective, policy implementation is regarded as a legitimate

part of the entire policy process and, thereby, the effectiveness of policy implementation is significantly influenced by the outcomes of other stages, such as policy design. The instrument perspective assumes that policy implementation ultimately involves the changing behaviors of target groups, relying on the use of policy instruments in the government's toolkit to manipulate their incentives (Schneider and Ingram, 1990). Policy instruments are defined as "the set of techniques by which governmental authorities wield their power in attempting to ensure support and effect social change" (Vedung, 1998, p. 67). In the past, policy scholars have principally focused "substantive" tools that directly affect policy outcomes (Hood, 1986; Schneider and Ingram, 1990; Remesh and Howlett, 2003) but, in many instances, the effectiveness of substantive tools can be strengthened or weakened with fluctuations in bureaucratic procedures. Recent years have witnessed the salient development of policy theories through "procedural tools", defined as "policy techniques or mechanisms designed to affect how a policy is formulated and implemented" (Bali et al., 2021, p. 298). Indeed, ample empirical observations demonstrate the critical importance of these tools, which can practically affect the power, location, and, ultimately, the behaviors of policy actors in a given network.

As policy instruments are crucial to implementation outcomes, the selection of instruments is a core activity in policy design (Ramesh and Howlett, 2003). This "policy mix" can be built up based on numerous governing resources at the government's disposal, leading to the classification of four types of means for attaining policy goals: information, authority, treasure, and organization (Hood, 1986). Bali and others (2021) have argued that this schema helps simplify the analysis of substantive tools, as well as procedural ones (see Table 2.1). Circumscribed by the organizational culture of the

concerned implementing agencies, the selection of policy instruments can be influenced by contextual factors and the individual preferences of policy implementers (Linder and Peters, 1989).

Table 2.1. A typology of procedural policy instruments

		Governance resources and target need			
		Information	**Authority**	**Treasure**	**Organization**
Purpose of tools	Substantive	Public information campaign	Independent regulatory agencies	Subsidies and grants	Public enterprise
	Procedural	Official secret acts	Administrative advisory committees	Interest group funding	Government regulation

Source: Bali et al. (2021, p. 301).

Finally, some scholars have attempted to integrate the study of implementation with governance theory. Governance refers to the institutional capacity of public organizations to effectively provide public services and other goods, in order to meet citizens' demands in the context of constrained resources (Katsamunska, 2016). The governance perspective underlines the importance of institutions to the implementation process, which can be categorized into three modes: hierarchy, market, and networks. In different modes of governance, government officials may adopt distinct strategies to steer the implementation process (Hill and Hupe, 2014). For example, hierarchical governance is typically associated with the use of accountability and mandates to promote effective implementation. In the mode of market governance, government officials who steer the process should prioritize the setting of clear objectives and performance targets. In comparison, network governance is usually associated with persuasive tools and negotiations that are often used to improve compliance on the part of policy subjects. Hierarchical governance, on the other hand, is associated with the use of authority and

mandates within the bureaucracy, whereas market governance and network governance rely more on principles of exchange and persuasive mechanisms, respectively. Hill and Hupe (2014) characterized policy implementation as operational governance, during which frontline implementers undertake various activities to put policy directives into practice, based on the hierarchical, market, and network mechanisms cited above.

These scholarly efforts to integrate the top-down and bottom-up perspectives have fostered theoretical pluralism in implementation research, which now incorporates both macro political structures and micro individual behaviors into the analytical landscape. However, Howlett (2019) insightfully pointed out that this pluralism has also created notable theoretical fragmentation, with scholars paying too much attention to administrative and managerial aspects of policy implementation. To address this weakness, an actor-centric approach offers a useful heuristic to integrate the fragmented implementation scholarship.

The actor-centric approach underscores the actions of individuals in institutional and social changes. As Giddens (1979) suggested, individual actions and institutional structures presuppose one another, creating a dialectical relationship. An actor-centric approach never denies the importance of institutional structure or organizational settings, but it contends that institutions provide areas that individual and collective actors can manipulate (Mahoney and Thelen, 2009). Furthermore, these actors may be motivated by goodwill to resolve governance problems or earn profits for personal interest, which could encourage them to take actions to catalyze the desired change, even though they may face sanctions for violating institutional rules (Campbell, 2004; DiMaggio, 1988). Moreover, institutional change cannot take place without the presence of active

individuals, especially when existing institutions create new political constituencies of beneficiaries who may resist change (Scharpf, 1997; Pierson, 1994). Therefore, an actor-centric approach can provide complementary explanations for why institutional change occurs or fails to occur.

2.2. Implementational entrepreneurship

Put forth by John Kingdon (1985) to explain agenda setting, the Multiple Streams Framework assumes that three elements are essential for the adoption of a policy; namely, three parallel streams, policy entrepreneurs, and windows of opportunity. In Kingdon's conceptualization, the opening of a window is conditional upon the convergence of three separate hypothetical streams. The "problem stream" refers to the identification of a problematic status quo that needs to be addressed. In some cases, these problems are detected through routine administrative activities, such as monitoring, research, and feedback. In other cases, social problems are identified in the public sphere through the occurrence of events, especially crises. When these social problems become acute, policy-makers are pressured to take action. Composed of a so-called "primeval soup", the policy stream denotes the availability of potential policy solutions. The eventual choice of policy solutions is profoundly influenced by the political stream, which may be represented by public mood, group campaigns that exert pressure on politicians, and changes in administration (Kingdon, 1985).

The three streams are assumed to run in parallel in normal times, until a policy entrepreneur joins them together through active human agency. John Kingdon defined policy entrepreneurs as individuals who are willing to invest their resources, such as time, energy, and reputation, and devote themselves to promoting policy change (p. 179).

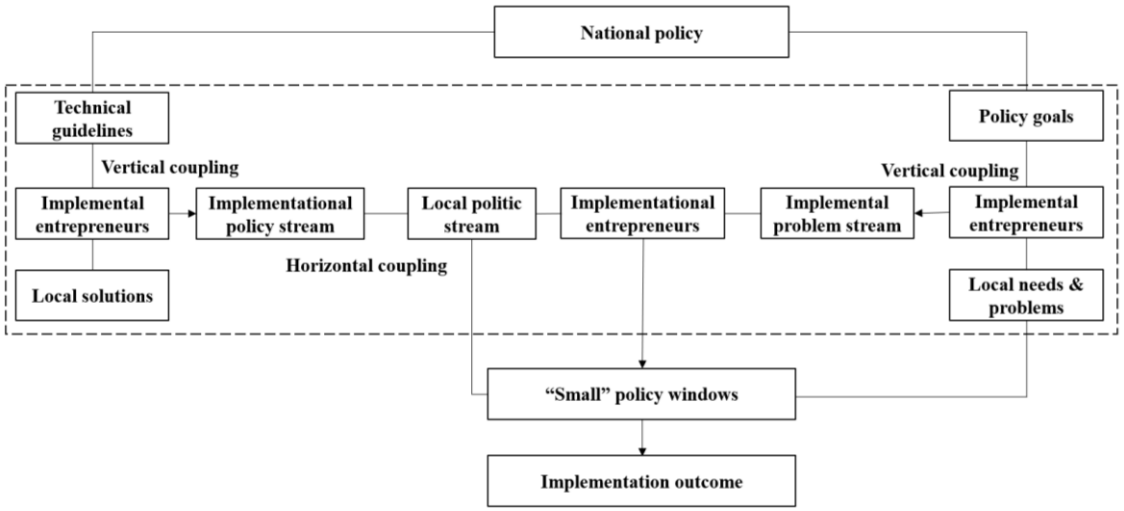
Policy entrepreneurs play a decisive role in agenda setting, because they actively couple the independent streams and open up a policy window. It is crucial to underline that the opportunities for opening a window may stem from either the political stream or the problem stream. A political window normally involves routine processes of policy formulation, such as legislative proceedings, regular government meetings, and the preferences of key political leaders. In contrast, a problem window typically derives from real social problems and calls for policy solutions. When they miss one opportunity, policy entrepreneurs may have to wait until the next window of opportunity opens.

Kingdon (1985) did not seek to expand the Multiple Streams Framework beyond agenda setting, but more recent studies suggest that this framework can be used to analyze the rich dynamics between institutions and actors in the subsequent stages of the policy process (Zahariadis, 2007; Howlett et al., 2015; Howlett 2019). As some scholars have insightfully pointed out, while the adoption of policy marks the joining together of the three streams at the national level, a separate set of streams may independently flow at the local level (Ridde, 2009; Flower, 2019, 2020). Furthermore, stemming from local problem and political streams, windows of opportunity similarly open and close at the subnational level, even though their influences are limited within a given region (Exworthy and Powell, 2004; Oborn et al., 2011). In this context, coupling the adopted national policy with the local streams appears to be crucial for effective policy implementation at the subnational level (Howlett, 2019; Goyal et al., 2020), reflecting the pivotal role of implementational entrepreneurship.

As noted in Chapter 1, implementational entrepreneurs are sandwiched between various competing objectives and needs. Entrepreneurial street-level bureaucrats need to

mitigate the tension between top-down policy mandates and local social problems (Lipsky, 2010). Their mid-rank peers need to reconcile local needs and conditions with policy-makers' expectations (Hood, 1991). Indeed, this complex situation casts implementational entrepreneurs in an intermediary role in regard to coupling national policies with local problems, thus accelerating policy implementation. Figure 2.1 illustrates the intermediary role of implementational entrepreneurs.

Figure 2.1. The role of implementational entrepreneurship



Source: the Author.

The intermediary role of implementational entrepreneurship involves both operationalization and coordination. On the one hand, operationalization acts as a crucial stage linking policy formulation with policy implementation. As Howlett (2009) stressed, designing effective policies, in practice, is achieved through coherent policy activities at different layers of governance. While policy goals and policy means are highly abstract at the policy level, they are gradually converted to operationalizable policy objectives and policy mixes, and then turned into specific targets and tool calibration on the ground (Stavins, 2008; Cashore and Howlett, 2007; Howlett, 2005). Eventually, policy success depends on the consistency of policy goals, objectives, and the congruence of policy

means mix and tool calibration (Howlett, 2009).

This process of operationalization is represented in activities related to coupling national policy with local problem and policy streams. As presented in Figure 2.1, implementational entrepreneurs actively link the goals of national policies with local problems through issue reframing. Even assuming the explicit articulation of national policy objectives, it is still necessary to reframe policy issues at the local level, because subnational policy actors may not necessarily appreciate the same form of problem identification (Exworthy and Powell, 2004; Ridde, 2009). Given the critical importance of contextual factors in local implementation, it is vital that implementational entrepreneurs develop operational specifications and tailor central guidelines regarding policy instruments to fit local conditions (Goyal et al., 2020; Ridde, 2009; Hood, 1991). On the other hand, similar to policy formulation, bureaucratic fragmentation results in the fluidity of the political stream at the local level. As local departments are often keen to defend their own territories and seek gains from policy implementation, an "unwelcomed" national policy may be boycotted in different ways. Furthermore, bureaucratic fragmentation does not only exist horizontally between functional departments, but also takes place vertically across the administrative hierarchy. Therefore, to catalyze effective policy implementation, implementational entrepreneurs must couple local streams by maneuvering within the fragmented bureaucracy (Aviram et al., 2018; Lu et al., 2020; Arnold, 2015). Coupling local political streams therefore includes numerous coordination activities.

Before I discuss what constitutes effective implementational entrepreneurship, a critical analytical problem must be addressed: how to measure its effectiveness. In the

policy entrepreneurship literature, scholars tend to measure the success of policy entrepreneurship by whether the desired policy is ultimately adopted. Similarly, this study assesses the effectiveness of implementational entrepreneurship by whether a national policy is successfully implemented at the subnational level. Successful implementation is to be evaluated through policy outputs that arise directly from the implementation of a given policy.

Most implementation studies tend to define the effectiveness of implementation in a dichotomous way: success or failure. However, this dichotomy is too broad to capture the rich dynamics of real-world policy implementation. There are situations in which social problems can be partially resolved through policy interventions; therefore, a purely binary conception of implementation is unhelpful in analysis. Following Zahariadis and Exadktylos (2016), this study employs a trichotomous perspective to assess the effectiveness of implementational entrepreneurship: success (desired change occurs), failure (no change occurs), and partial change.

2.3. Effective implementational entrepreneurship

Cohen (2016) characterized six prominent factors with combined impacts that lead to successful policy entrepreneurship: (1) a window of opportunity; (2) the existence of an alliance; (3) minor opposition; (4) political ability; (5) the presentation of a persuasive idea; and (6) the willingness of those involved to take calculated risks. Cohen argued that the first three factors refer to the structural conditions under which policy entrepreneurs work and the last three capture their entrepreneurial attributes. My study uses a conceptual extension of policy entrepreneurship at the implementation stage, in which implementational entrepreneurship is associated with several salient

characteristics. Cohen's dichotomous framework yields an effective analytical tool that underscores the dynamic interaction between individual traits and environmental factors.

Yet, Cohen's framework is associated with two notable shortcomings. First, this dichotomous framework cannot cover all of the key variables pertinent to effective entrepreneurship. For instance, while persistence is characterized as a key attribute of competent policy entrepreneurs (He, 2018; Shearer, 2015; Kingdon, 1985), it is not included in Cohen's group of endogenous factors. In addition, institutional factors are crucial to effective entrepreneurship (Lu et al., 2020; Frischer-Aviram et al., 2018; Meijerink and Huitema, 2010). However, they are not incorporated into Cohen's (2013) framework either. Another notable weakness is its exclusion of important entrepreneurial strategies, such as learning and venue shopping, which are crucial factors in improving endogenous entrepreneurial competence (e.g., He and Ma, 2020; Leeve and Cohen, 2019). As such, I develop three sets of independent variables that are key to implementational entrepreneurship: entrepreneurial traits, support from the external environment, and the adoption of entrepreneurial strategies (see Table 2.2). The remainder of this section explains how these three variables influence effective implementational entrepreneurship.

Table 2.2. Implementational entrepreneurship variables

Variables		Functions
Support from external environment	Intellectual or technological support	Making innovative policy devises available
	Institutional & organizational support	Providing an overarching framework
	Political support	Providing authority
Entrepreneurial traits	Commitment/enthusiasm for entrepreneurship	Improving persistence and risk-taking of implementational entrepreneurs
	Entrepreneurial abilities	Making implementational entrepreneurs competent in carrying out the reform
Entrepreneurial strategies	Adoption of entrepreneurial strategies	Change the endogenous traits of the entrepreneurs and the exogenous conditions

Source: the Author.

2.3.1. Entrepreneurial traits

As individuals, policy entrepreneurs typically manifest salient attributes, such as "letting others listen to their voice", skills in persuasion and negotiation, and amassing support from key decision-makers (Kingdon, 1995). The concise yet influential framework set out by Mintrom and Norman (2009) presented four defining attributes of successful policy entrepreneurs: displaying social acuity, defining problems, building teams, and leading by example. Dozens of empirical studies across national contexts have found that these characteristics indeed distinguish policy entrepreneurs from ordinary participants in the policy process (Aviram et al., 2018; Lu et al., 2019; He, 2018; Arnold, 2015, 2020). Entrepreneurs at the middle and lower echelons of the governmental system are known for their lack of resources, and much of the innovative work they carry out goes beyond what is usually expected on rank-and-file bureaucrats. Hence, successful entrepreneurial maneuvers rely more on their in-built traits.

In this dissertation, I broadly categorize critical personal traits essential to effective implementational entrepreneurship into two groups: entrepreneurial commitment and competence. Commitment refers to the willingness of entrepreneurs to devote themselves to policy implementation, which stems from a variety of motivations. Previous studies have identified three major sources of entrepreneurial motivation, including: (1) protecting or advancing individual or organizational interests (He and Ma, 2020; Arnold, 2020; Kingdon, 1985); (2) the innate desire to share ideas (Lu et al., 2020; Aviram et al., 2018); and (3) genuine sympathy toward underprivileged groups due to life or work experiences (Aviram et al., 2021; Lavee and Cohen, 2019).

Commitment yields persistence and risk-taking among entrepreneurs (Aviram et al., 2018). Persistence is highly crucial in policy implementation, as it is normally a long and difficult march that involves growing bureaucratic inertia and declining momentum among frontline bureaucrats. In addition, carrying out complex reforms often involves struggles with vested interests and agents who may mobilize resources to boycott reform, placing implementational entrepreneurs at high risk. Thus, a strong commitment to "making a difference" represents a remarkable personal trait that distinguishes implementational entrepreneurs from their ordinary peers.

Competence constitutes another critical entrepreneurial trait. Implementational entrepreneurs should possess extensive domain knowledge and professional skills in order to claim certain authority in the implementation process (Cohen, 2016; Mintrom and Norman, 2009). This is particularly the case in technically sophisticated policy domains, such as research and development, technological innovation, health care, and financing (He, 2018; He and Ma, 2020). Policy implementation requires a great deal of frontline know-how—a strength of mid-rank and street-level bureaucrats—but competence here means much more than that. First, to capture the short duration of policy windows, implementational entrepreneurs must display excellent acuity in terms of identifying opportunities that stem from different problems and institutions. Second, persuasion and negotiation play crucial roles in creating a shared understanding of the policy issue at hand, thereby facilitating coordination in the implementation process. To gain support from other policy actors, implementational entrepreneurs must be adept at strategically framing an issue using sense-making and rhetoric. Third, policy networks established in implementation often involve a large number of policy actors, especially in administrative systems with greater bureaucratic fragmentation. As other actors in the

policy network may provide complementary resources to the entrepreneurs, managing the network is particularly vital to accelerating policy implementation. Thus, competent implementational entrepreneurs typically demonstrate an excellent ability to manage social networks, build trust, and forge collegial working relationships with key members of the policy network.

2.3.2. Support from external environment

Implementational entrepreneurs are constrained by institutional structures and norms, but valuable support may be secured from the external environment. This sometimes happens accidentally but, in most circumstances, requires active efforts on the part of implementational entrepreneurs. Two types of support are most crucial: institutional/organizational support and political support. These twin types of exogenous conditions are of critical importance for implementation entrepreneurs to maneuver within the fragmented bureaucracy and couple local streams.

Much of the existing literature underlines the significance of institutions in bureaucratic coordination (Tsai and Zhou, 2021; Peters, 2018; Kapcau, 2009; Matland, 1995). Institutions, in broad terms, are made up of the formal and informal rules of the social and political arena, organizational structures, and social norms (North, 1990). They provide fundamental rules for policy actors with regard to how to engage in collaboration. Peters (2015, 2018) has argued that institutions within the governmental system, such as lead agencies, committee, and procedures, offer an overarching framework for other coordination activities. Located in the intermediate and lower strata of the governmental system, implementational entrepreneurs are constrained by limited political authority. Therefore, support from political leaders and senior officials is essential for effective

implementational entrepreneurship. These political patrons can be invaluable sources of support, able to not only remove hurdles to bureaucratic coordination, but also reduce political risks for implementational entrepreneurs.

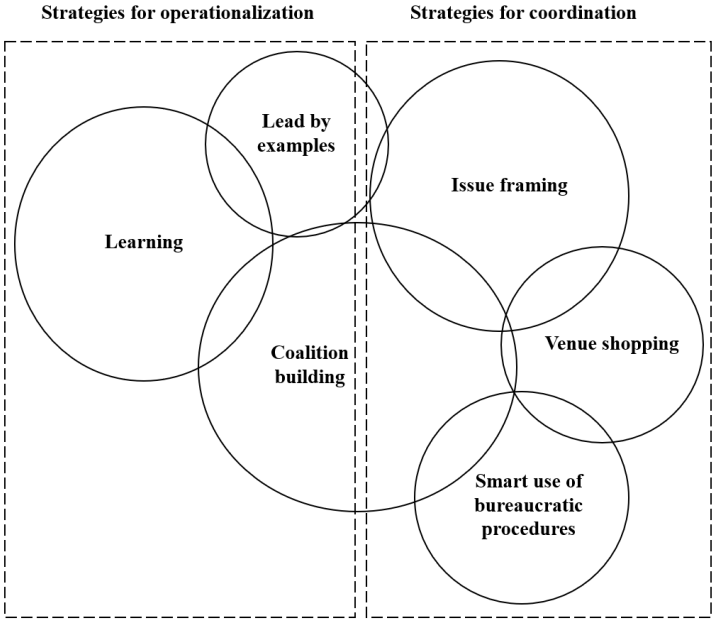
2.3.3. Entrepreneurial strategies

Coupling the local parallel streams with national policy ultimately relies on the adoption of entrepreneurial strategies. As indicated above, the coupling process during policy implementation includes both the operationalization of national policies and local coordination within the policy network, based on which I characterize two types of entrepreneurial strategies: strategies for operationalization and strategies for coordination. Here I synthesize six crucial strategies identified by previous studies, including: learning, coalition building, leading by example, issue framing, venue shopping, and manipulating institutions. As Figure 2.2 presents, learning acts as an important source of operationalization for issue framing and venue shopping, whereas manipulating institutions is a crucial strategy for coordination. Two salient strategies—coalition building and leading by example—cut across the two categories.

First, learning is crucial for ensuring the desired change takes place in practice. Expertise and intellectual capital are both essential for developing operational specifications before putting policy into practice (Arnold, 2015). In order to obtain necessary knowledge for catalyzing policy implementation, implementational entrepreneurs must learn from a variety of sources, ranging from domain knowledge to lived experiences. Through scientific learning related to knowledge specific to a policy domain, entrepreneurs must develop a better understanding of the efficacy of individual policy instruments. By learning from lived experiences, implementational entrepreneurs

become more aware of the feasibility of policy instruments in specific local contexts. In reality, there is a variety of "devices" that can facilitate policy learning at the middle and lower echelons of the administrative system, such as professional networks, training, formal sharing, and site visits (Teets and Hasmath, 2020; Lavee and Cohen, 2019; Arnold, 2015, 2020).

Figure 2.2. Entrepreneurial strategies in implementation



Source: the Author.

Second, implementational entrepreneurs may undertake policy operationalization by forming an intellectual coalition, in which intellectual capital from policy collaborators complements that of implementational entrepreneurs (Meijerink and Huitema, 2010). Such an intellectual network may encompass a variety of policy actors, enabling implementational entrepreneurs to maximize the power of learning. Aside from facilitating learning, coalition building can also span across boundaries and improve the level of coordination among all stakeholders.

Third, leading by example refers to a strategy of setting up pilots (Mintrom and Norman, 2009). Piloting allows implementational entrepreneurs to explore appropriate policy solutions, test the effectiveness of policy instruments, and investigate potential hurdles for policy implementation. Leading by example thus strengthens policy operationalization. Moreover, positive outcomes yielded by pilots can demonstrate the feasibility of the policy solution in question, thereby enabling implementational entrepreneurs to convince more policy actors to strengthen collaborations within the policy network. In this sense, this strategy serves coordination too.

Fourth, reframing the issue is a useful strategy to facilitate collaboration. As many policy actors in the implementation process have varying or even conflicting perceptions of policy issues, the smart reframing of an issue can potentially help create a shared understanding that will connect policy actors. Defined as "the use of narratives and stories to make sense of an issue by selecting particular relevant aspects, connecting them into a sensible whole and delineating issue boundary" (Failing et al., 2020, p. 406), reframing is represented by two strategies in practice related to policy. The first involves delegitimizing the current situation and highlighting the benefits of the policy solution (Aviram et al., 2018). The second involves connecting the issue with other policy problems so a problematic situation can be identified (He, 2018; Oborn et al., 2011).

Fifth, venue shopping is a crucial strategy for changing an unfavorable environment in which to enact policy implementation. Here, a policy venue refers to "the institutional locations where authoritative decisions are made concerning a given issue" (Baumgartner and Jones 1993, p. 32). Most policy issues are associated with more than one policy venue. Therefore, when implementational entrepreneurs encounter opposition,

alternative venues may provide an additional chance to build an alliance, which increases the likelihood of successful policy implementation.

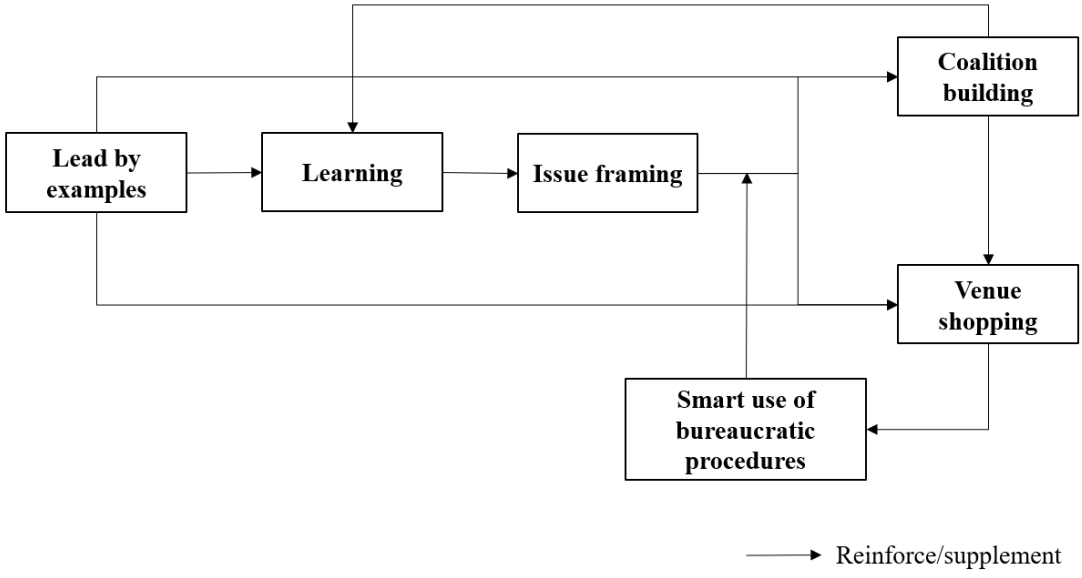
Finally, the smart use of bureaucratic procedures offers implementational entrepreneurs the opportunity to mitigate bureaucratic fragmentation by exploiting procedural policy instruments. In policy formulation, the smart use of bureaucratic procedures—or so-called "institutional rule manipulation" (Zahariadis and Exadaktylos, 2016)—is regarded as a crucial entrepreneurial strategy. Strategically planning ways of influencing the policy process, policy entrepreneurs may adopt "salami tactics" (Ackrill et al., 2013; Zahariadis, 2003), disseminate information (Zhang and Van Der Schaar, 2013), or use symbols and rhetoric (Zahariadis, 2016, 2007) to encourage policy-makers to buy into their ideas.

With limited formal power and less substantive tools at their disposal, implementational entrepreneurs within localities have to rely more on procedural tools to influence policy outcomes (Cohen and Aviram, 2021; de Vries, 2021). Previous studies have indicated that entrepreneurs may strategically use bureaucratic procedures in various ways. For example, implementational entrepreneurs may disseminate their reframing of policy issues through work reports or direct meetings (Aviram et al., 2021; Huang and Chen, 2020). In the meantime, placed in a favorable position within the bureaucracy, some entrepreneurs use their authority to remove implementation barriers, such as by amending the administrative framework and establishing technical standards (Lu et al., 2019). Moreover, they may seek opportunities to set aside additional funding to motivate street-level bureaucrats (Arnold, 2020; Lu et al., 2019). Finally, implementational entrepreneurs can establish new bureaucratic organizations to better

steer the implementation process (Aviram et al., 2018; Arnold, 2015). I categorize previous findings about the smart use of bureaucratic procedures into four subcategories: (1) the use of information devices; (2) the exploitation of authority; (3) the adoption of treasure schemes; and (4) steering implementation via organizations.

These six strategies do not exist in isolation; there is potential for synergetic effects. For example, leading by example and building up intellectual networks both facilitate learning, which in turn enriches intellectual capital and benefits the reframing of policy issues. In the meantime, effective issue framing may strengthen coalition building and venue shopping. More importantly, as implementational entrepreneurs strongly rely on procedural instruments, the smart use of bureaucratic procedures often creates institutional opportunities for entrepreneurs to shift the policy arena toward a favorable space and forge new alliances. These dynamic interactions between entrepreneurial strategies are presented in Figure 2.3.

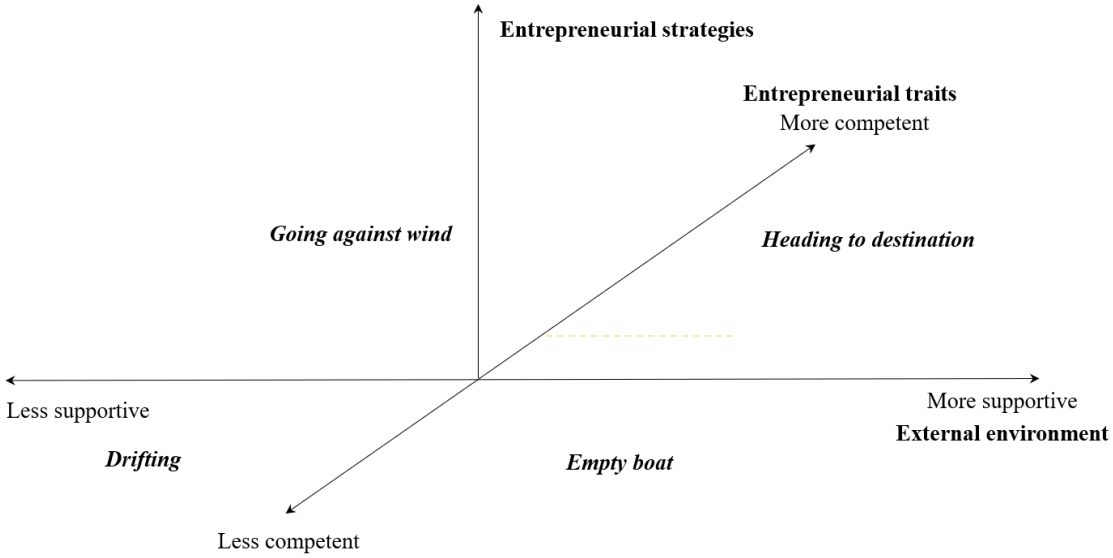
Figure 2.3. Interactions between entrepreneurial strategies



Source: the Author.

The three variables noted above collectively impact the effectiveness of implementational entrepreneurship. Here, I use a metaphor of sailing to describe the causal dynamics involved. In this metaphor, the process of policy implementation is similar to a boat sailing on the sea. Heading toward the correct destination relies on the efforts of both a skilled crew and the impetus of wind in the same direction. Similarly, to achieve desired policy outcomes, the adopted policy (the boat), should be steered by competent implementational entrepreneurs in a supportive environment. In this context, entrepreneurial traits and the supportive environment involve four distinctive types of implementational entrepreneurship: heading toward the destination, drifting, an empty boat, and sailing against the wind (see Figure 2.4). Previous studies have provided some preliminary wisdom to illustrate these four modes of implementational entrepreneurship.

Figure 2.4. The causal dynamics of implementational entrepreneurship



Source: the Author.

In the most ideal situation, the boat heads toward the destination smoothly, as both competent and enthusiastic entrepreneurs and a supportive environment exist in policy implementation. If both the endogenous and exogenous impetuses of

implementational entrepreneurship are favorable, the adopted policy is more likely to be successful on the ground. This "heading toward the destination" mode of implementational entrepreneurship can be observed in Aviram and colleagues' (2018) work. In their case study, the environment of network governance granted competent local officials convenient access to their political principals, and the policy implementation yielded remarkable achievements.

In contrast, in the "drifting" mode, the boat deviates from the given route, as impetus from both the implementational entrepreneur and the external environment is absent, resulting in sluggish implementation or outright policy failure. For instance, Arnold (2015) observed that, as far as the implementational entrepreneur in charge is incapable, subversive tactics adopted by the opponents against the policy ultimately lead to sluggish implementation.

Moreover, in the "empty boat" mode, despite the supportive environment at the national level, there is no competent implementational entrepreneur to couple the policy with local streams. Under these circumstances, sluggish implementation is more likely to occur. Ridde (2009) observed a case of the "empty boat" mode of implementational entrepreneurship in Burkina Faso Although central authorities worked hard to champion health reform, the policy implementation failed because there was no implementational entrepreneurs to realign the values of the national policy with the problems of the local health system. As a result, local governments in this case held a reluctant attitude toward the policy program promoted by the state, which fostered failed outcomes on the ground.

Finally, in the "sailing against the wind" mode, in spite of competent

entrepreneurs, opposition from the external environment is so strong that implementational entrepreneurs cannot overcome severe difficulties. As such, policy implementation resembles a boat sailing against the wind. In this condition, implementational entrepreneurs need to "row" harder by strategically maneuvering within the bureaucracy. For example, Lu and colleagues' (2019) showed how esoteric features can prevent a policy program from obtaining firm institutional support from the outset, leading to numerous implementation barriers on the ground, despite the existence of a competent and enthusiastic implementational entrepreneur.

2.4. Propositions

Based on the theoretical discussion presented above, I put forth four propositions to characterize implementational entrepreneurship in China, which steer the empirical inquiry in this dissertation. First, as discussed in Chapter 4, China is a unitary country, but its vast territory and huge population result in significant regional disparities in socioeconomic conditions, leaving a one-size-fits-all type of governance largely unviable. Furthermore, the Chinese government maintains a prominent tradition of experimentalism in policy-making. The Central Government usually sets clear objectives but leaves concrete policy design ambiguous (Zhao et al., 2016). This intrinsic ambiguity in the political system yields necessary flexibility in governance, but also makes policy deviation or goal displacement possible at the local level (Zhou, 2010). Situated in such a complex political ecology, local officials in China are expected to play a more entrepreneurial role in coupling national policies with local problem, policy, and political streams. This leads to the first proposition.

Proposition #1: Situated within a complex political ecology, implementational

entrepreneurs in China can accelerate policy implementation by coupling national policies with local problem, policy, and political streams.

Second, as noted above, implementational entrepreneurship is motivated by the desires of advancing individuals or organizational interests. Similar phenomena are observed in the Chinese context. Specifically, the tournament for career promotion creates a strong incentive for local officials, prompting them to earn a competitive margin by accelerating policy implementation (Huang and Chen, 2020; Ahlers and Schubert, 2014; Heimann, 2008a). At the same time, some local officials have a strong commitment to resolving local problems by accelerating the policy implementation process (Fewsmith, 2013; Chen and Yang, 2009). Moreover, the innate desire to share ideas may act as another important incentive for implementational entrepreneurship, as officials find fulfilment in this process (Lu et al., 2020). Overall, these factors are found to motivate implementational entrepreneurs in China to undertake more innovative strategies in policy implementation, distinguishing them from ordinary bureaucrats who tend to "do the job as instructed". Therefore, I posit the following.

Proposition #2: Motivated by ambitions to advance their careers, the desire to share ideas, or the ambition to facilitate good governance, implementational entrepreneurs in China are likely to take more aggressive action in putting national policy on the ground, which distinguishes them from ordinary implementers.

Third, compared with other policy actors, mid-rank officials and street-level bureaucrats in China usually operate in the same local system for a long period of time. As a result, they enjoy a great deal of expertise in both the policy domain and under local

conditions. In the meantime, familiar with bureaucratic procedures, these frontline troops enacting policy implementation acquire deep understandings of procedural policy tools. These advantages in terms of knowledge enable local officials to play a more crucial role in coupling national policy with local conditions. Yet, limited intellectual capital may bottleneck the capacity of local officials to carry out innovative initiatives. In this context, these officials need to acquire both professional and political knowledge related to the policy at hand. They rely on their professional networks to do so (Teets et al., 2017; Shin, 2017; Ma, 2017). I thus propose the following.

Proposition #3: Strong domain expertise and knowledge of local conditions offer entrepreneurs greater room to catalyze the policy implementation process. Notably, implementational entrepreneurs in China rely on professional networks to facilitate learning.

Coupling national policy with political streams is not an easy task. The vertical conflicts between national priorities and local interests may lead to sluggish implementation in practice. Given the hierarchical structure of the Chinese political system, institutional support or endorsement from political principals is crucial to engaging the variety of policy actors in collaboration. As a result, a favorable external environment normally acts as an important factor of successful implementational entrepreneurship in China (Zhang and Wang, 2021; Huang and Chen, 2020). Hence, I propose the following.

Proposition #4: Given the hurdles brought about by bureaucratic fragmentation, implementational entrepreneurs in China must obtain firm support from institutions or

political leaders.

Their lack of formal power and resources is a defining characteristic of implementational entrepreneurs (Cohen and Aviram, 2021). It is difficult for these policy actors to directly design the mix of substantive policy instruments. However, mid-rank officials and street-level bureaucrats can usually make use of bureaucratic procedures to promote entrepreneurial initiatives. In the Chinese bureaucratic system, a host of procedural policy instruments is at the disposal of these policy actors to use in order to catalyze policy implementation, such as enforcing accountability (Li and Zhou, 2005), site inspections (Chen, 2015), writing policy memos (Li, 2013; Wu, 1995), model demonstration conferences (Teets and Hasmath, 2020; Ma, 2017), and so on. This leads me to propose the following.

Proposition #5: Experience of working in the government enables implementational entrepreneurs in China to become familiar with bureaucratic procedures. By intelligently using procedural policy instruments, they can overcome challenges brought about by their inferior status, and effectively accelerate policy implementation.

Overall, these propositions summarize the complex causal dynamics behind effective implementational entrepreneurship. They are tested by two cases in Guizhou in Chapter 5 and Chapter 6.

Chapter 3. Research Design and Methodology

This chapter presents the methodological orientation and research design of this doctoral dissertation. The first section establishes the methodological orientation and its epistemological basis. Taking a post-positivist approach, this study seeks to test the propositions raised in Chapter 2 with qualitative empirical data. The second section discusses the choice of research design. Adopting a comparative case study design, this dissertation compares two flagship health care reforms in Guizhou, a province in southwestern China. The findings are interpreted against the central conceptual framework formulated in Chapter 2. The last two sections report the methods used for data collection and analytical procedures, respectively.

3.1. Methodological orientation

I adopt a qualitative approach in my doctoral research. In the social sciences, qualitative research traditionally refers to a form of inquiry that emphasizes the way in which people interpret and make sense of their experiences, in order to understand the social reality of individuals (Mohajan, 2018; Zohrabi, 2013). Although qualitative methods are associated with a moderate capacity in terms of generalization, their strength lies in the ability to provide insider insights and grant researchers access to rich details about social phenomena (Creswell, 2014; Hammersley and Atkinson, 1993).

Two dominant approaches underpin social science inquiries: positivism and interpretivism (Porta and Keating, 2008). These two competing paradigms contrast each other in terms of their ontological and epistemological bases (see Table 3.1). Ontological issues are related to what people can know about the objective world, while epistemology

refers to how people obtain knowledge. Conventional positivism regards society as an entity that exists outside the observers' minds (Durkheim, 1982). Therefore, researchers can study social phenomena from an objective perspective and explore the causality behind them (Hay, 2002). In contrast, advocates of interpretivism believe that "reality" is inherently a social construct influenced by competing value paradigms and associated belief systems; therefore, even experienced researchers cannot understand social phenomena objectively, making it very difficult to reveal causality in a fully value-free way (Giddens, 1993; Porta and Keating, 2008). Therefore, instead of establishing a causal explanation, interpretivists prefer to appreciate the meaning behind human behaviors in given contexts and do not seek unconditional generalizations (Flyvbjerg, 2001; Lin, 1998; Bourdieu, 1977).

Table 3.1. Positivism vs. interpretivism

Ontological & methodological issues		Positivism	Interpretivism
Ontological issues	Does social reality exist?	Objective, critical realism	Objective and subjective as intrinsically linked
	Is reality reliable?	Yes, but not easy to capture	Somewhat, but not as separate from human subjectivity
Epistemological issues	Relationship between scholar and her objective	Relative dualism: research objects are relatively separated from their observers, but knowledge construction is influenced by the scholar	Aiming at understanding subjective knowledge
	Forms of knowledge	Probabilistic laws (causal links)	Contextual knowledge
Methodological differences	How can scholar obtain the knowledge?	Inductive from specific observations from a large number of cases/deductive-empirical procedures	Bottom-up inductive/interpretative procedures

Source: Adapted from Porta and Keating (2008).

This distinction between epistemologies determines whether research places more emphasis on the exploration of causal relationships or causal mechanisms. Lin (1998) defines causal relationships as "the systematic conjunctions of two factors, one of which, all things being equal, is argued to follow logically from the other" (p. 164). In

other words, causal relationships are answers to "what" questions in research. A causal mechanism refers to explanations for processes through which relationships between cause and effect take place, but only in given conditions or contexts (Lin 1998, p. 165; see also George and Bennett, 2005). In other words, causal mechanisms respond to "how" questions. Lin (1998) stressed that positivism brings about benefits in terms of the exploration of causal relationships, but does not seek to uncover why such links exist. In contrast, intending to explore how contextual factors result in the human behaviors under investigation, interpretivism is much more effective in regard to exploring causal mechanisms.

Yet, these two epistemological paradigms are not completely mutually exclusive. Post-positivism, which emerged later on, attempts to reconcile interpretivist and positivist approaches. Admitting that researchers are indeed influenced by culture, values, and existing theories, post-positivists contend that knowledge can be constructed in a hypothetical deductive way. In the hypothetical part of this process, the rich literature on related issues and abundant empirical observations provide researchers with a substantial basis for preliminary conceptualizations of causal dynamics. Next, the explanatory power of the propositions can be tested through systematically analyzing empirical evidence (Collier et al., 2004; Corbetta, 2003; Wildemuth, 1993; Fischer, 1998). In this way, post-positivism enables policy research to identify answers to both "what" and "how" questions (Lin, 1998). This dissertation represents this type of methodological leaning. Synthesizing the related literature, Chapter 2 establishes the conceptual framework of this study and formulates theoretical propositions. In Chapter 5 and Chapter 6, two flagship health care reforms in Guizhou province are investigated to test the causal dynamics proposed in Chapter 2.

3.2. Research design

A comparative case study design is adopted in this dissertation. Yin (2014) defines case studies as a research method based on the investigation of a contemporary phenomenon (the "case") in its real-world context, especially when the phenomenon has blurred contextual boundaries. A case study in the social sciences can be used in both inductive and deductive empirical approaches, and is able to cope with technically distinctive situations in which multiple variables exist (Campbell and Yin, 2018; Lin, 1998). In order to improve analytical rigor, data should be collected from multiple sources of evidence and corroborated. A case study can be used for three purposes. It may serve the exploration of probabilistic variables and provide directions for future research (Yin, 2014). It can be purely descriptive, aiming to present an interesting example of a particular social phenomenon (Stake, 1995; Creswell, 2014). Moreover, a case study can also act as a tool for exploring causal links through a variety of research designs (George and Bennett, 2005; Yin, 2014).

Using comparative cases is important in demonstrating probabilistic causal relations. Yin (2014) suggests that the strength of a comparative case study in exploring causality stems from theoretical replication. That is, important results are found in one case, while adverse findings are observed in another case where contextual conditions are similar with the former case, except for the variables of interest. Causal explanations can be established as changes in the independent variables that highlight the variance. Comparative case studies, on the other hand, can be carried out between multiple cases, and can also be used within a case in which the process of events spans a long period of time. When the process of events shifts as a result of changes in certain conditions, the longitudinal cases permit researchers to carry out a "before and after" comparison, in

which the period before the change in conditions and that afterward constitute two independent cases for comparison (George and Bennett, 2005; Ragin, 2014).

The power of the replication logic in exploring causality can be further strengthened by selecting cases carefully. For example, researchers can choose "most likely" or "least likely" cases for analysis. "Most likely" cases assume that a certain consequence does not occur, even though the contextual factors predict its presence, according to theory. "Least likely" cases, in contrast, present the occurrence of probabilistic causality even though the contextual factors indicate adverse results (Eckstein, 1975; George and Bennett, 2005; Gerring, 2017). Therefore, "most likely" cases are typically used to disprove propositions, whereas "least likely" cases are used to demonstrate the assumed causal relationships.

This dissertation adopts the logic of theoretical replication to verify the assumed links between implementational entrepreneurship and the independent variables. The two cases—the Telemedicine Program and the County Medical Alliance Reform—in Guizhou province were selected as "least likely" cases against the backdrop of public sector innovations in China. Aviram and colleagues (2018) maintained that implementational entrepreneurship is more likely to occur in a governmental system with a flatter structure. Ratigan (2015) also revealed that, compared to coastal regions, central and western provinces in China are much less likely to observe entrepreneurial reforms in the public sector. She explained this discrepancy using the conservative mentality toward innovation held by government officials in the hinterland. The likelihood of public sector innovation is further reduced due to the weak policy capacity of local governments in this part of China. For instance, Wu et al. (2013) noted that the

geographic distribution of local policy innovations in Chinese appears to be unequally distributed across regions, with western China registering a significantly small number of such cases. Located in China's southwestern corner, Guizhou has long been known for its poor socioeconomic conditions, greatly constraining the government's capacity for policy implementation (Zhang et al., 2020; Sun et al., 2016; Wu et al., 2013). As a result, one may reasonably expect this province to represent one of China's subnational regions least likely to initiate innovative policy reforms.

Because this study investigates local policy innovations in the same province and the same sector (i.e., health care) during largely the same period of time, major contextual factors have been controlled for, leaving a favorable condition in which to undertake a comparative case study. Furthermore, both forms of local innovation in Guizhou sought to reintegrate the health service delivery system—albeit through different ways. Although the central government did put forth general policy goals for the integration, no specific policy guidelines were issued until 2010 (telemedicine) and 2019 (medical alliance), respectively. As the central policy-makers also did not have clear policy instruments available with which to defragment the health system, they instead encouraged local governments to try out various possibilities in an experimental manner (Yip et al., 2019; Husain, 2017). Against this backdrop, reformers in Guizhou enjoyed considerable discretion in designing their own pilots. As discussed in Chapter 5 and Chapter 6, both cases were associated with evident implementational entrepreneurship, leading to their success.

Despite these remarkable similarities, the two cases differ from each other considerably, thus offering necessary variance to explain the causal dynamics. First, the

Telemedicine Program attempted to use technological innovation and regulatory tools to break down the barriers within the health system, while the Medical Alliance Reform sought to defragment the system through organizational consolidation and streamlining service delivery. Second, implementational entrepreneurship manifests in distinctive ways across the two cases. In terms of the telemedicine innovation, mid-rank officials in the provincial health commission took the leading role. The medical alliance innovation, in comparison, was associated with "richer" dynamics. First established in a few pioneer counties, the innovation was significantly accelerated after central government endorsement arrived. As such, the second case combined bottom-up entrepreneurial implementation with a certain top-down intervention. Both street-level and mid-rank entrepreneurship took place in the second case. Third, although both reforms achieved commendable outcomes, the County Medical Alliance Reform was "less" successful than the Telemedicine Program. Telemedicine innovations were scaled up to all county hospitals and primary health centers within three years. In contrast, although the vast majority of county governments announced their plans for the Medical Alliance Reform, some did not take substantial actions to in local implementation.

Finally, as the flagship programs of the province, these two reforms offer longitudinal cases for in-depth investigation. Launched in 2010, the Telemedicine Program went on for about eight years. In contrast, initiated in 2016, the medical alliance reform has been carried out for more than five years, and is still ongoing at the time of writing. During the implementation process, the implementational entrepreneurs shifted their reform approach and used alternative strategies to cope with the environment. As a result, the two reforms enabled a "before and after" comparison within each case.

3.3. Data collection methods

Research data used in this study were derived from three sources: 1) secondary qualitative and quantitative materials available from the open domain; 2) archival records provided by informants during fieldwork; and, most importantly, 3) a series of in-depth interviews. Data collected from the first source mainly include policy documents, speeches made by key government officials, statistical yearbooks, and news reports. The second source offered access to internal administrative documents, statistical reports, professional guidelines, and operational protocols.

This study draws extensively on in-depth interviews that were conducted in a semi-structured fashion. Fieldwork was conducted between December 2020 and April 2022. Informants were selected through purposive and snowball sampling, in order to not miss any key individual. A total of 15 informants were recruited, including government officials from health departments at both provincial and county levels, and frontline hospital managers. Ethical approval was obtained from the Human Research Ethics Committee of The Education University of Hong Kong. Some interviews were conducted online, due to rigid pandemic control measures in informants' workplaces. Verbal consent was obtained from informants prior to each interview. Each interview lasted for approximately 30 to 120 minutes. Informants were reassured of confidentiality. The profile of informants is summarized in Table 3.2, with key personal identifying information anonymized. Table 3.3. presents the key questions asked in the interviews.

Table 3.2. Interviewee profiles

Informants	Position	Frequency	Interview method
Mr Y	Former Director of *Health Information Center of Guizhou Provincial Health Commission*	1	Telephone
Mr Z	Former Vice Director of *Guizhou Provincial Development and Reform Commission*	Several	Face-to-face, telephone & online
Mr Q	Official of *Guizhou Health Information Center*	1	Face-to-face
Mr C	Director of *Liuzhi Health Department*	Several	Face-to-face, telephone & online
Mr. R	Official of *Administration of Primary Care of Guizhou Provincial Health Commission*	1	Telephone & online
Mr M	Section Chief in *Liuzhi Health Department*	1	Face-to-face
Mr X	Section Chief in *Liuzhi Health Department*	1	Face-to-face
Dr L	Director of *Administration of Primary Care of Guizhou Provincial Health Commission*	1	Face-to-face & online
M A	Director of a tertiary hospital	1	Face-to-face
Ms J	Administrator of a tertiary lead hospital in Guizhou	1	Face-to-face & online
Mr D	Administrator of a county hospital in Anshun	2	Telephone, face-to-face
Mr K	Administrator of a lead hospital in Qiandongnan	1	Telephone
Ms CX	A "sent-down" doctor	1	Telephone & online
Mr XH	A "sent-down" doctor	1	Telephone & online
Dr RS	Local expert in health informatics	Several	Informal communication

Source: the Author.[4]

Table 3.3. Key interview questions

Purposes	Example Questions
General inquiry	☐ Could you please introduce the entire/current process of the implementation? ☐ Is there any event that leaves you with the strongest impression during the implementation?
Identify implementational entrepreneurs	☐ Who do you think taking a lead part in the implementational process? ☐ What kind of role did XXX (name of the candidate entrepreneurs) play in the implementation? ☐ What was the role of your department in the implementation? ☐ Do you think provincial departments are crucial to the implementation? If so, what are their roles?
Identify influences of entrepreneurial traits	☐ For Identified Implementational Entrepreneurs: ☐ Why and how did you participate in the implementation process? Had the motives and/or ideas undertaken any change? ☐ For other Informants: ☐ Can you describe the personalities of XXX (name of the identified implemental entrepreneur)? What traits of him/her impressed you the most?
Identify influences of external Environment	☐ Is there any coordinating institution and/or organization established at the provincial level? ☐ Did you obtain political support from any political leader? If so, how did you get it? ☐ What kinds of difficulties did you encounter in the implementation process?
Identify entrepreneurial strategies	☐ For Identified Implementational Entrepreneurs ☐ How did you overcome the inhibitors? ☐ How did you steer the implementation process? What kinds of strategies did you adopt? ☐ How did you negotiate with other departments? What did you do to persuade other actors? ☐ For Other Actors ☐ What did the provincial department do to promote the implementation process?
Identify reform outputs	☐ How do you think of the implementation? Does the program take effect in practice? ☐ Does your hospital benefit from the implementation?

Source: the Author.

[4] Pseudonyms are used to refer the informants in accordance with the academic ethic.

3.4. Data analysis methods

Thematic analysis was used as the primary method of data analysis in this dissertation. Causal dynamics appear when the congruence between propositions and empirical evidence appears to be high (George and Bennett, 2005). The five propositions formulated in Chapter 2 outline the causal dynamics between entrepreneurial traits and the level of support received from the external environment in regard to implementational entrepreneurship. Therefore, empirical findings in each case were collected to examine whether the policy implementation at a given period of time was influenced by these endogenous and exogenous factors. Furthermore, as the fifth proposition assumes the adoption of strategies is the intermediary factor leading to the shift between different modes of implementational entrepreneurship, I pay due attention to the congruence between conceptual causal dynamics and empirical evidence.

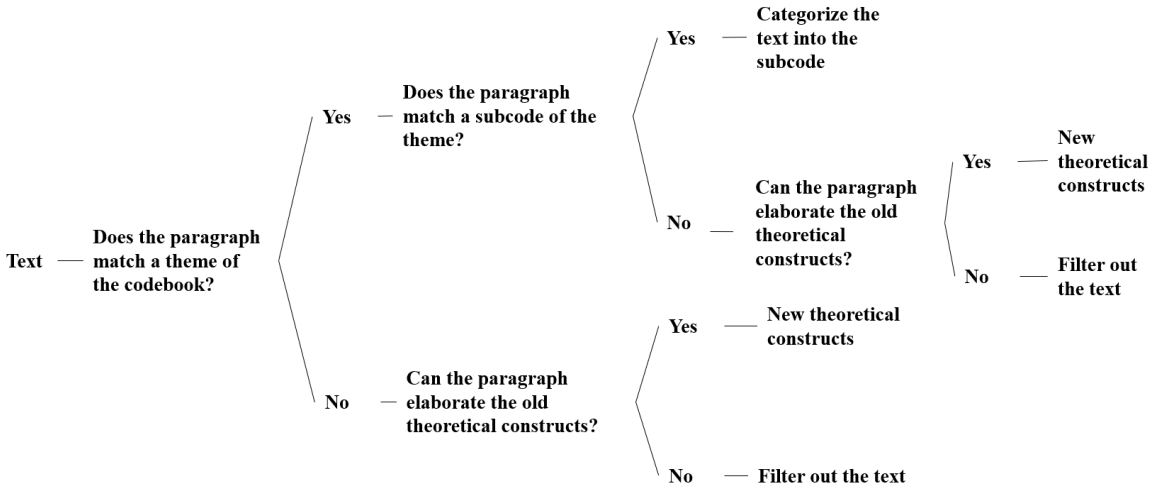
Pattern matching (or, the congruence method) was used as the primary method for within-case data analysis. This technique enables me to examine whether the outcomes of each case are consistent with theoretical predictions. George and Bennett (2005) underlined that, to carry out pattern matching, the researcher needs to first establish a theory that posits certain outcomes from the independent variables, thus generating predicted patterns. Then, the researchers can analyze a case and ascertain the existence of the independent variable. Later on, the researcher examines consequences created by the independent variables (i.e., the empirical patterns). If the empirical findings and predicted patterns demonstrate a high level of congruence, the results are believed to strengthen the causal dynamics posited by theoretical propositions (Yin, 2014).

Following this pattern-matching logic, I raised five propositions in Chapter 2. To construct the theoretical patterns, five propositions underscore that the variance in entrepreneurial traits and support from the external environment contribute to different types of implementational entrepreneurship. The fifth proposition posits that suitable entrepreneurial strategies lead to variance in the endogenous and exogenous variables and, therefore, result in changes in outcome. To construct the empirical patterns, I first examined the occurrence of implementational entrepreneurship in the Telemedicine Program and the County Medical Alliance Reform, respectively, and then investigated their entrepreneurial traits and external conditions, especially the institutional and political dynamics. Next, I compared the endogenous and exogenous variables at different phases of each case to identify the variance, based on which a further exploration was carried out to examine whether concurrent changes in the effectiveness of implementational entrepreneurship were observed. In the last step, I analyzed the actions taken by implementational entrepreneurs at different phases to explore whether entrepreneurial strategies were adopted and influenced implementational entrepreneurship by initiating variance in entrepreneurial traits and support from the external environment.

Provisional coding and elaborative coding were used to elicit qualitative themes in support of the pattern matching. Provisional coding requires the researcher to develop a starting codebook; the codebook is then modified based on empirical findings (Miles and Huberman, 1994; Creswell, 2014). In contrast, elaborative coding is a coding method used to compare evidence with existing coding—if the evidence does not match the codes, it may indicate a new finding in the theoretical development process (Auerbach and Silverstein, 2003). In this study, a provisional codebook was developed based on the

conceptual framework, which was subsequently modified during the data analysis process. When analyzing the qualitative data, I adopted a line-by-line strategy to read the text. If the paragraph was related to a given theme in the codebook, it was then selected and categorized using the related subcode. If a paragraph contradicted the subcodes or indicated emerging findings, it was noted as a form of elaborative theoretical construct. In this way, the elaborate coding was developed based on the provisional codebook. The entire coding procedure is presented in Figure 3.1. NVivo 12 was used to develop the codebook and for qualitative coding.

Figure 3.1. Analytical procedure in within-case coding

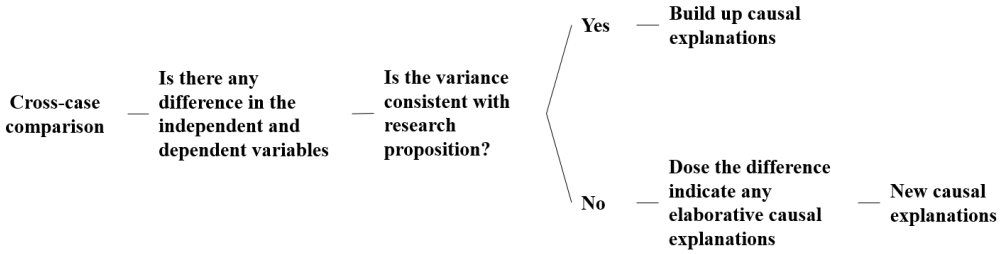


Source: the Author.

After analyzing the data for each case, I compared the findings between them. In this phase, the codes of the two cases were compared. In Chapter 5 and Chapter 6, I compare the characteristics of implementational entrepreneurship in different cases and explain the similarities and differences in their implementation strategies. Later on, the exogenous conditions in each case were compared with each other to illustrate whether officials in different cases received the same degree of support from the external environment. Finally, I included the reform process of the two cases in the same

analytical diagram to visualize their differences and similarities. The logic of the cross-case comparison is exhibited in Figure 3.2.

Figure 3.2. Analytical procedure in cross-case coding



Source: the Author.

Chapter 4. Research Background

This chapter offers an overview of the research contexts, setting the scene for the two case studies. The first section discusses the ecology of implementational entrepreneurship in China. Under the Chinese political system, implementational entrepreneurs work in an environment in which policy ambiguity and bureaucratic fragmentation are widely present. In particular, coordination problems are critically salient in the health sector. The second section reviews the history of the Chinese health care system. While China had once established an integrated health service delivery system, market-oriented reforms led to its dramatic deterioration. Systemic fragmentation was responsible for a plethora of problems in the health care system, resulting in vast public dissatisfaction. The Chinese government launched a series of reforms to reintegrate the health service system, beginning in 2009, which are summarized in the third section of this chapter. The last section illustrates the socioeconomic conditions within the study sites and delineates the micro context in which the two reforms took place.

4.1. Ecology of the Chinese bureaucracy

This section presents the political environment in which Chinese implementational entrepreneurship operates. Policy ambiguity and bureaucratic fragmentation widely exist in most political systems, but are particularly salient in China. The country's unique political institutions result in the wide use of ambiguous and experimental policies, and a highly fragmented bureaucracy has existed for more than seven decades. Both factors profoundly influence policy reforms at the subnational level. As seen in other policy domains, bureaucratic fragmentation is particularly rigid in the

health sector, which often requires concerted policy coordination (Ramesh et al., 2014; He, 2012). Unfortunately, the weak political power and inferior status of the health bureaucracy has long made it incapable of coordinating in this way. These factors constrain implementational entrepreneurs but also leave them necessary spaces through which they can maneuver to push local policy innovations.

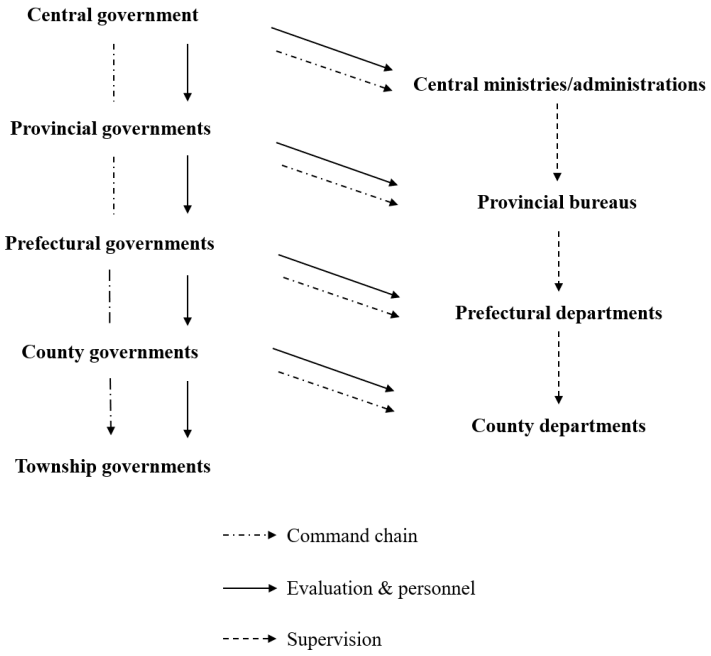
4.1.1. Central–local relations

China is a unitary state governed by the Communist Party of China (CPC). The State Council is the executive branch of the government at the central level. Four levels of local authorities comprise the subnational governments: provinces, prefectures, counties, and townships. The CPC party committee exists at every level of the governmental system, assuming the role of political leadership. In every region, the administrative chief (the governor, mayor, magistrate, etc.) is positioned below the party secretary in terms of political authority, as the party secretary is assumed to take overall responsibility for the governance of local affairs. This power relationship is, of course, fluid, depending on personality, seniority, and other factors (Mertha, 2005; Landry et al., 2017). In many cases, administrative chiefs do dominate local policy-making and implementation, especially in regard to socioeconomic affairs. The power of the party committee primarily lies in its personnel authorities through cadre management. The vast majority of party and government officials are appointed by the organizational department of the CPC party committee at various levels.

Modelled on the Soviet *nomenklatura* system, the cadre management system in China enables the CPC to tightly control the incentives of government officials. The central committee wields power over the appointments, removals, and transfers of

ministerial and provincial leaders (Zhou, 2011; Brødsgaard, 2012). This system is further replicated at subnational levels of administration, in which the local party committee can make personnel decisions regarding subordinate government officials and those of the functional bureaus/departments at the same level. This institutional arrangement ensures the compliance of subordinate governments to decisions made by higher-level authorities, and thereby establishes a rigid top-down chain of command (see Figure 4.1).

Figure 4.1. The *nomenklatura* system in China



Source: the Author.

Aside from appointments and removals, the appraisal of the vast population of cadres is also managed by the CPC party committee. In particular, the evaluation of principal local leaders is of great importance because numerous studies have found that the performance appraisal system powerfully orients the behavior of Chinese local leaders, which in turn determines the socioeconomic development of a region in profound ways (Zhou, 2010; Li and Zhou, 2005). Notwithstanding a couple of variants, the cadre evaluation system typically consists of several key domains, such as economic

growth, social stability, and party construction; each domain carries a set of specific items in regard to which local cadres are evaluated on an annual basis. Gaining a higher score significantly increases one's chance of promotion, while a "black mark" may effectively veto a cadre's prospects in the "promotion tournament" (Brødsgaard, 2012; Li and Zhou, 2005).

The structure of the evaluation scheme is not static, as political superiors may modify it as appropriate to serve their policy priorities. In the past decades, economic growth held the greatest prominence in the evaluation system, providing strong motivations to promote economic development on the part of local leaders. However, many scholars have noted the salient rise in the weight given to other policy domains in recent years, especially social welfare and environmental protection. Once marginalized on local leaders' priority lists, these policy domains are now given much greater attention by local leaders (Zhang, 2020; Chen and Jia, 2021).

Despite the unitary nature of the state, the political system in China embraces some elements of federalism. Its vast territory and huge population, compounded by significant subnational disparities in socioeconomic conditions, have made a one-size-fits-all type of governance largely unviable. Thus, it is difficult for the central government to apply a unified policy instrument across all regions. In recognition of the tremendous drawbacks of the centralized planned economy, China has taken a robust approach to decentralization since 1980s, granting subnational governments a great deal of autonomy in terms of making decisions concerning economic and social affairs. In particular, various waves of fiscal reforms in the 1980s enabled local governments to keep a substantive proportion of revenue, which in turn further encouraged their

enthusiastic pursuit of local economic growth (Lin and Liu, 2000; Oi, 1995). Subsequent fiscal reforms also strengthened administrative decentralization, giving rise to the stronger economic bargaining power of wealthy local governments. This unitary political structure, combined with fiscal decentralization, has been referred to by some scholars as "fiscal federalism" with Chinese characteristics (Montinola et al., 1995; Jin et al. 2005; Tsai, 2004).

Yet, central–local relations in China are remarkably dynamic. Despite the empowerment of local governments through waves of decentralization, the yardstick is ultimately in the hands of the central political masters. For example, there has been evident recentralization since the CPC 18th National Congress. Centralized authority has been viewed as being of utmost importance to political rule since then (Teets and Hasmath, 2020; Bulman and Jaros, 2021).

4.1.2. Experimentalism

Frequent and extensive use of policy experimentation has been a hallmark of policy-making in contemporary China. Inheriting a tradition dating back to the revolutionary era, the CPC has long held various forms of policy pilots as a "default" way of making national policies. Given the vast interregional disparities and huge uncertainties involved in policy reforms, effective policy solutions may not be readily available; even assuming the availability of a potential solution, adopting it nationwide is inevitably associated with tremendous risks. Hence, experimentalism has epitomized China's tradition of "crossing the river by feeling for the stones" since the reform era (Teets and Hasmath, 2020; Mei and Liu, 2014; Heilmann, 2008a, 2008b). It not only

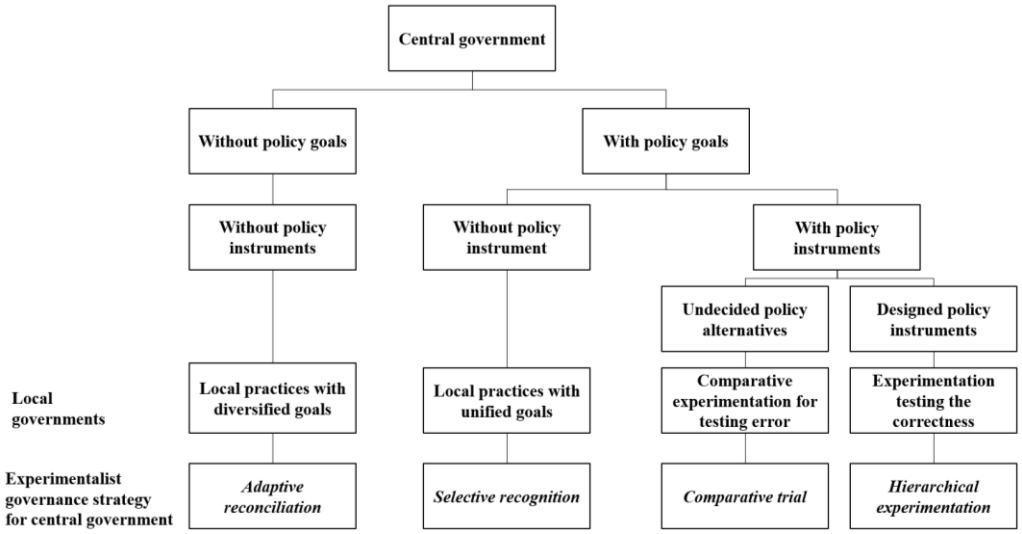
helps policy-makers minimize vast risks in the face of uncertainties, but also vigorously facilitates policy learning through a "learning by doing" pathway.

In China's experimentalist policy process, policy formulation typically starts with a number of subnational pilots. These pilots are either instructed to test the "correctness" of novel policy instruments in which central policy-makers are interested, or are encouraged to explore innovative policy solutions through open-ended trial-and-error (Zhu and Zhao, 2021; Mei and Liu, 2014; Teets and Hasmath, 2020). Notably, in both circumstances, local governments are granted a certain degree of autonomy, ranging from designing the calibration of policy instruments to mapping out policy goals (Shi, 2012). Pilots considered successful by the Central Government are usually scaled up nationwide through policy diffusion, commonly referred to as "from point to surface" (Zhu, 2014; Heilmann, 2008a). Despite the considerable discretion given to local governments, however, central policy-makers hold the ultimate power over deciding several critical issues, such as replicating successful models or terminating the experimental process. As such, Heilmann (2008b) termed this unique policy-making process in China as "experimentation under hierarchy" (p. 29).

It must be noted that policy experimentation in the governance of China does not only serve purely "experimental" purposes in the sense of trial-and-error, but is often given the mission of "model demonstration" (Heilmann, 2008b). Successful pilots demonstrate the effectiveness of new policy instruments to other regions that may harbor a conservative stance, and thus help dispel opposition. In this way, model demonstration catalyzes interregional policy learning (Mei and Liu, 2014).

Synthesizing the sizable literature and Chinese practice, Zhu and Zhao (2021) argued that the wide practice of policy experimentation has fostered "experimentalist governance" in China, under which central policy-makers and local governments interact through different mechanisms in order to make effective national policies. They articulated a highly penetrative conceptualization of four models of experimentalist governance prevalent in China: hierarchical experimentation, adaptive reconciliation, comparative trial, and selective recognition (see Figure 4.2).

Figure 4.2. The experimentalist governance system in China



Source: Adapted from Zhu and Zhao (2021).

Under the mode of adaptive reconciliation, the subnational government is allowed to carry out policy experiments without specific requirements regarding objectives or instruments. As the diversity of local pilots may create inconsistency, the central government may take measures to reconcile differences after determining a national goal. This model is similar to the "experimentation under hierarchy" defined in Heilmann (2008b). The mode of selective recognition offers subnational governments a huge amount of leeway to choose and calibrate policy tools to meet the policy goals set

by central policy-makers. When the central government decides to make a national policy, it can learn lessons from local reforms. Even assuming that the policy objective is clear, central policy-makers sometimes have several options of different policy instruments. As the efficacy of these alternative instruments is unclear, the Central Government tends to select several regions as pilots, which provide comparative trials of different tools. Finally, the central government can gain clear expectations of both policy goals and instruments, but fall short in terms of information about the effectiveness of the policy itself. In circumstances such as this, the government may launch local pilots to verify the efficacy of the policy instruments through the mode of hierarchical experimentation (Zhu and Zhao, 2021).

This seminal conceptual framework suggests the versatility of policy experiments in China, ranging from conventional "trial and error" types of problem-solving, to "testing the correctness" of possible policy instruments. Among the four models, selective recognition is frequently used by the central government as an effective strategy to reconcile conflicts of interest with subnational agents. After deciding on policy objectives, the central policy-makers will encourage local governments to launch pilots. These regional pilots are granted substantive autonomy with which to select policy instruments that best fit local circumstances (Zhao et al., 2016). If local pilots do succeed, the central government can either scale them up nationwide through policy mandates or encourage other localities to learn from successful pilots. As such, the implementation of national policies is diffused to more localities.

4.1.3. Bureaucratic fragmentation

Bureaucratic fragmentation is widely found in most political systems, but is particularly prominent in China. In their pioneering work, Lieberthal and Oksenberg (1988) denoted it as a form of "fragmented authoritarianism" that is shaped by two key factors. First, functional specialization creates horizontal fragmentation in the Chinese bureaucracy. Each line of bureaucratic functions is grouped into a "portfolio" headed by a deputy executive chief. At each level of the government, a portfolio includes several ministries, bureaus, offices, and departments.[5] However, varying organizational pursuits and sectoral interests aggravate the fragmentation, making policy coordination even more difficult. For instance, the Ministry of Health (MoH) and the Ministry of Human Resources and Social Security (MHRSS), two major ministries in health affairs, had long held contradictory views regarding the design of China's health care reform. The former was keen to obtain greater financial subsidies for public hospitals—its key political constituency (Hsiao, 2007). The latter's principal concern was to find a balance between social health insurance funds and minimizing financial risks. The social security bureaucracy enthusiastically promoted the integration of all health insurance programs under its custodianship, but this view was boycotted by health bureaucracy, which wishes to gain a bigger say in health care reforms (He, 2012)

Second, a rigid vertical administrative system was created to govern the country following the foundation of the People's Republic of China. Five layers of administrative division are associated with complex dynamics in intergovernmental relations. Since the marketization reforms commenced, waves of fiscal and administrative decentralization

[5] For example, the Health Commission, National Center of Disease Control and National Administration of Traditional Chinese Medicine belongs to the health portfolio.

have granted subnational governments a great deal of autonomy in local affairs. There is considerable local policy discretion that allows subnational governments to translate national policy guidelines into local practices in accordance with their own circumstances. Abundant research has found faithful implementations of national policies if they are in line with local interests but, in the meantime, local governments may engage in a variety of opportunistic behaviors if national policies are perceived to undermine local interests (Zhou, 2020; Mei, 2020; Li, 2015; Ahlers and Schubert, 2015). Sluggish implementation, intergovernmental collusion, and target replacement are among the oft-observed strategies used (Waterman and Meier, 1998; O'Brien and Li, 1999; Zhou et al., 2013).

Horizontal and vertical fragmentation has created a dual leadership system in which most local functional departments are subject to two lines of the chain of command: the local government as territorial superior, and the corresponding central ministry as the functional superior (He, 2018). Local departments are often trapped in contradictory mandates unless the priorities of both superiors are aligned in a perfect way, which is rare. As a result, local reformers must learn how to strike a skillful balance within these two lines of leadership. In the health care arena, for example, provincial and sub-provincial health commissions often have to abide by the directives of the MoH while also seriously considering the interests of the local government (He, 2012).

These problems arising from systemic fragmentation have been further complicated by the peculiar administrative rank system in China. Rooted in communist cadre management rules, the system confers a specific rank to all cadres managed by the CPC, ranging from the level of section chief/township all the way up the hierarchy to

national leaders. Each rank is associated with a distinct salary point, welfare package, and political prestige (Lieberthal and Oksenberg, 1988). Although rank is closely geared toward the formal position held by a cadre, there is considerable variation, because an official appointed to a senior position may temporarily hold a slightly lower rank incommensurate to this particular position. The *de facto* rule of policy coordination often emphasizes the equivalence of the ranks of various parties involved, as lower-ranking officials may be put in an inferior position to their counterparts during the negotiation process. This peculiar administrative ranking system is pertinent to the health sector because it covers not only government and party officials, but also the lead cadres of public schools, universities, public hospitals, state-owned enterprises (SOEs), and other government-funded institutions (He and Liu et al., 2022). In a very "Chinese" situation, managers of key public hospitals in a locality usually enjoy equivalent or even slightly higher ranks than directors of government departments in the same place, including chiefs of the local Health Commission. As a result, local health departments have to deal with not only the (sometimes) conflicting mandates of two masters, but also rival departments, especially the social security bureaucracy (He, 2012). Even worse, seeking "buy-ins" from powerful big hospitals constitutes another challenge in the policy process.

4.2. Health care reform in China

Reforming the health care system is arguably one of the most daunting challenges faced by policy-makers. Both extraordinary complexities and deeply vested interests often serve to deter major policy changes, as can be vividly seen in the arduous trajectory of health care reform in the US. Roberts et al. (2004, p. 68) have insightfully elucidated:

> "Fixing the health care sector is not easy. Many parts and pieces are interrelated and many consequences occur. Designing a comprehensive health care reform is a complex technical process. Reformers often seek to improve many parts of the system at the same time, making both the details and the overall impact of the program difficult for non-experts to grasp."

Health care reforms in China epitomize this complexity. By the end of the 1990s, the strategic policy vision at play aimed to build up a basic but widespread social health insurance system that was able to offer essential financial protection to the vast population of China. Despite impressive progress made in expanding the coverage of social health insurance in the past two decades, however, policy-makers have increasingly recognized that universal health coverage is not merely universal health insurance coverage, as cost inflation remained rapid while patients continued to face major financial risks when catastrophic diseases occurred (He and Wu, 2017). It has become increasingly clear that reform must be capable of realigning the multitude of incentives in the entire health system—financing, delivery, payment, regulation, and pharmaceuticals (He, Bali, and Ramesh, 2022).

The National Health Commission (NHC) and its subnational agencies are expected to take a leading role in health policy. Unfortunately, the inferior status of the health bureaucracy in China constrains its capacity to do so (Hsiao, 2007). The former MoH[6] historically constituted a weak bureaucracy and its status has further deteriorated

[6] The organization of the health authorities in China has been changed for three times. The central health authority had been named as the Ministry of Health since the foundation of the People's Republic of China. In 2013, the MoH was consolidated with the National Family Planning Commission into the National Health and Family Planning Commission. As the one-child policy was abolished, the NHFPC was renamed into the National Health Commission in 2018.

since the 1980s. Since the economic reform began in the 1980s, social welfare policies were given lower priority by both central and local governments, which instead concentrated on industrialization and infrastructural development (Hsiao, 1995). The Chinese government essentially adopted a laissez-faire attitude toward health care policy, resulting in a myriad of problems that are summarized in Section 4.2.2.

4.2.1. Health care in Mao's era

The Chinese health system in Mao's era was deeply embedded within its communist planned economy. Public hospitals, urban health stations, and hospitals funded by SOEs were the chief providers of health services in the cities. Services provided by SOE hospitals were available not only to employees and retirees, but also their family members, as a manifestation of communist welfare superiority (Yip and Hsiao, 2001; Hsiao, 1995). Government-funded urban hospitals were responsible for providing care to the rest of the urban population. A wide range of public organizations, such as universities, the military, and the railway system, also established their own hospitals and clinics. These sectoral health facilities formed a relatively independent mini health system, but referrals to government hospitals were possible if a patient's condition required higher levels of care (Jamison et al., 1984).

Both types of urban health facilities charged nominal fees that were regulated by the government. Public hospitals mainly earned income from recurrent subsidies from the local government, while sectoral health facilities were directly funded by their own institutions. Under the planned economy, medical fees were paid by patients mainly through social health insurance programs and nominal copayments (Wang, 2009; Liu et al., 1995). The Government Insurance Scheme insured civil servants, teachers in public

schools and universities, and similar public institutions. As the chief social health insurance program in the cities, the Labor Insurance Scheme covered SOE workers and their dependents.

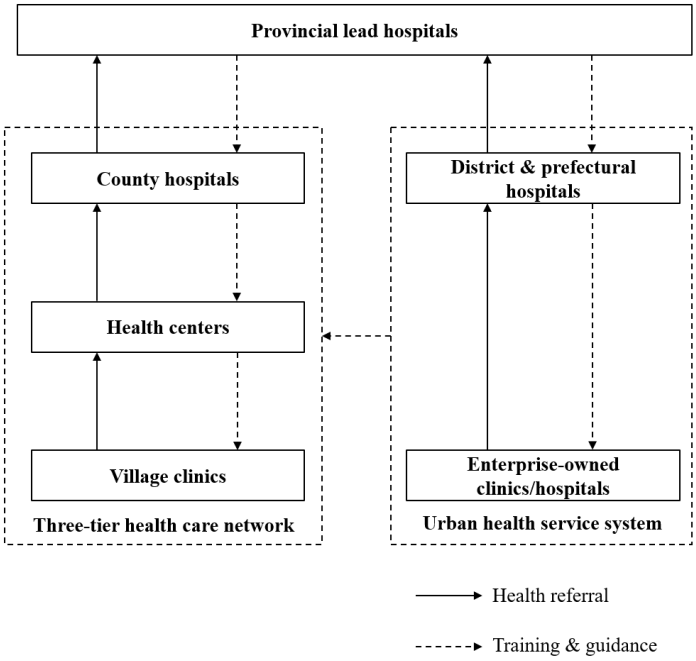
Health care in rural China was financed jointly by the local government and communist communes through an organizational form of village-level collective agricultural production. Staffed by doctors and nurses with moderate levels of medical training, township health centers were the main providers of secondary care. They were typically able to perform not only outpatient care, but also basic ambulatory and inpatient services. Patients with severe conditions would be referred to county hospitals, or even to major cities (Meessen and Bloom, 2007; Sidel and Sidel, 1975). Village clinics were at the bottom of the pyramid and were primarily staffed by the barefoot doctors. They were typically farmers who held basic educational credentials, such as primary education, and were chosen by their production brigades to receive short-term medical training in township health centers or county hospitals. Sent back to villages afterward, these barefoot doctors were able to render basic medical services. Local health departments used to provide continuing education to upgrade their professional skills from time to time. The vast majority of rural residents were insured by the Cooperative Medical Scheme, a basic community risk-pooling program from which their medical fees were paid.[7]

The arrangements outlined above underpinned a three-tier health service network that achieved a fairly impressive level of integration (Sidel and Sidel, 1975). As shown

[7] Shaoguang Wang (2009)'s research indicated that the Cooperative Medical Scheme had been adopted by 92.8% of production brigades nationwide and covered 85% of the rural population by 1976.

in Figure 4.3 below, this network was associated with the clear division of labor among health facilities at three levels. The scope of the services and responsibilities of each type of service providers were properly defined. Primary, secondary, and tertiary facilities were connected through two-way referral mechanisms, and cross-level collaboration was further reinforced through training and capacity building. For example, lead hospitals in cities and counties were required to not only host continuing education for health workers from low-tier facilities and barefoot doctors, but also assign specialists for temporary services at grassroots clinics.

Figure 4.3. The health service system in Mao's era



Source: the Author.

Until recently, China was an agrarian nation. The majority of people lived in the countryside and serving the vast rural population was the primary responsibility of the health system. County hospitals were assigned a key role, acting as a hub of secondary and tertiary care. Staffed by health professionals with formal medical educations, they

not only provided most types of specialist care, but were also able to perform major surgeries (Sidel and Sidel, 1975). Provincial lead hospitals were in charge of administering treatment to patients referred by both county and prefectural hospitals.

This high degree of integration was arguably achieved through administrative rationing, the rigid planning of the workforce, and the centralized allocation of resources, all of which were embedded into the communist planned economy (Meessen and Bloom, 2007). This integrated health care system provided basic but cost-effective care to the vast population when China remained a poor country. Excellent records of population health indicate its performance. The average life expectancy at birth increased from 35 years in the late 1940s to 68 years by the end of the 1970s. The infant mortality rate dropped from 250‰ in 1949 to 50‰ within 40 years (Sidel and Sidel, 1975). The three urban and rural health insurance programs offered essential financial protection to most citizens; therefore, financial accessibility to health care was remarkably high under the planned economy. These excellent achievements were lauded by international organizations and governments of many low-income countries. China's rural health care network in particular inspired the World Health Organization to put forth a primary care mode of service provision in the 1978 Alma-Ata Declaration (Jamison et al., 1984).

4.2.2. Deterioration of the old health care system

The old health care system has unfortunately deteriorated since the start of China's market-oriented reforms. The Household Responsibility System instituted in the late 1970s replaced the communist communes that were deemed responsible for low agricultural productivity and poor rural livelihoods. While the communes collectivized agricultural production and provided little incentive to farmers to work harder, the

Household Responsibility System realigned economic incentives by decollectivizing production. The economic outcome was immediate. From 1980 to 1985, the annual grain production per hectare increased from 2.7 tons to about 3.5 tons.[8] It is estimated that the Household Responsibility System contributed to approximately half of China's agricultural growth during the period of 1978–1984 (McMillan et al., 1989; Lin, 1992). This increase in productivity led to astounding improvements in household incomes and living standards. In 1980, the rural per capita household disposable income was 191 yuan, but the figure soon doubled in just five years following the rural economic reform.[9]

However, economic reforms in the countryside also dismantled the CMS that was embedded into the commune system, resulting in detrimental consequences in health care. On the one hand, essential financial protection evaporated for the majority of rural residents, who suddenly found themselves uninsured against health risks. On the other hand, village clinics and barefoot doctors were no longer able to earn the bulk of their incomes from the CMS. These key workforces for primary care in rural China were soon forced to switch to private practice (Hsiao, 1995). Operating according to market economy rules, they were no longer motivated by the provision of cost effective care, but had to survive by earning their own revenues from private pockets.

Changes were equally dramatic in the cities. The SOE sector, the backbone of China's economy, was suffering from a significant productivity deficit due to the incentive failures inbuilt in the planned economy. The mushrooming private and foreign enterprises in the 1980s constituted a stark contrast with the bulky non-performing SOEs

[8] See data from the National Bureau of Statistics, available at https://data.stats.gov.cn.
[9] Ibid

that were quickly marginalized in the market economy. Most SOEs had to significantly cut down subsidies to their own public hospitals. In the meantime, government revenues also declined, due to the financial loss of SOEs—their key source of tax contributions. Governments also soon found that they were no longer able to offer sufficient fiscal subsidies to public hospitals (Gu, 2001). Most health facilities in urban China faced critical financial hardships in the 1980s and 1990s. These drastic economic changes shook the foundation of the health care system.

Underpinned by the notions of autonomization and marketization, the urban economic reforms yielded encouraging outcomes in the 1980s that led Chinese policy-makers to posit that the same formula could be replicated in regard to the struggling health system. Unable to fully fund hospitals and clinics, the government instead granted them considerable leeway to earn revenue (Gu and Zhang, 2006). For a long time, government subsidies barely covered the basic salaries of health workers in public facilities and nominal capital investment. Hospitals had to earn 90% of their incomes independently to break even. The quality of care and affordability of services became secondary concerns.

A defective pricing system adopted by the government in the 1980s also resulted in long-term consequences. Under the planned economy, the prices of health services and drugs were intentionally set below their actual costs in order to ensure affordability for the poor and uninsured (Yip and Hsiao, 2001). The financial gap on the part of hospitals was largely filled by regular subsidies from the government or SOEs. From the 1980s onward, however, policy-makers had to respond to mounting outcry from hospitals that were facing great financial hardships due to the withdrawal of government funding.

In the end, the central government instituted a problematic fee schedule that allowed health facilities to charge a 15% price mark-up on retail drugs (Hsiao, 1995; Yip and Hsiao, 2001). A similar practice was adopted in the pricing of high-tech diagnostic tests, leading to a fierce medical arms race among big hospitals (Qian et al., 2019). The defective pricing system severely distorted incentives for numerous health facilities, which were motivated to overuse high-tech tests and drugs to earn profits (Hsiao, 1995; Hu, 1995). Drug sales used to account for about half of hospitals' incomes (Liu et al., 1999; Meng et al., 2005).

These severe consequences were further exacerbated by a perverse bonus scheme that was used to incentivize millions of health workers. From the 1980s onward, various bonus schemes were introduced by hospitals to encourage greater productivity and efficiency on the part of doctors (Zheng and Hiller, 1995; Meessen and Bloom, 2007). However, this powerful incentive also created unintended consequences. As "productivity" was often evaluated by the sheer quantity of services and revenue earned for the hospital, this bonus scheme essentially rewarded doctors for making money from patients and penalized them for failing to do so (Liu and Mills, 2002; Qian and He, 2018). Ultimately, this perverse practice resulted in the vast provision of unnecessary services in Chinese hospitals (He and Qian, 2016; He, 2014).

These undesirable changes had a huge impact on the delivery of health services in China. Struggling to survive, health facilities became profit-minded, while the cost-effectiveness of care and cost containment were largely ignored (Ramesh et al., 2014; Hsiao, 1995). Earning the bulk of their incomes from user charges, neither major hospitals nor their lower-tier peers had financial incentives to make referrals, even when

necessary (Yip and Hsiao, 2008; Eggleston et al., 2008). Dwindling government funding was particularly fatal for primary care facilities, some of which found it difficult to pay basic wages to their health workers (Liu et al., 1995). A sweeping "brain drain" hit the primary care system in the 1980s and 1990s, as qualified doctors were lured away by major public hospitals that were able to offer better pay, while many less qualified doctors gave up their medical careers. For example, township health centers in China lost more than 80% of their medical staff within two decades once labor market restrictions were relaxed (Gong and Wikes, 1997; Meessen and Bloom, 2007).

By the end of the 1990s, the vast majority of primary care facilities in China were poorly staffed by qualified professionals and equipped with dated infrastructure. The majority had neither the capacity nor the momentum to play the role of gatekeepers. Even worse, the weak health bureaucracy had virtually no effective policy instruments with which to maintain the functioning of the two-way referral system. With little trust in the quality of primary care, most residents preferred to seek care directly at tertiary hospitals, even for very minor illnesses, and there was no rule to stop them because the provision of health services was essentially operating as a free market at the time (Eggleston et al., 2008). As Table 4.1 shows, in 1985, more than three quarters of patients treated village clinics and township health centers as their primary point of care for outpatient services, but this percentage declined to 82% within three years. Outpatient visits to county hospitals doubled in the same period.

The influx of patients caused tertiary hospitals to become overcrowded in most parts of China, creating a prosperous "industry". In the meantime, however, essential gatekeeping mechanisms were nearly non-existent, as primary care was severely

underutilized. For instance, the year 2014 recorded 260 million patient visits to Chinese hospitals, 46% of which took place in tertiary hospitals.[10] A 2014 national survey indicated that 92% of doctors in tertiary hospitals suffered from excessive workloads.[11] Long queues and big crowds led to extremely poor clinical encounters in major hospitals. Consultations were typically conducted in a rushed manner, with doctors spending barely a couple of minutes with each patient (He and Qian, 2016). Patient satisfaction and doctor–patient relationships deteriorated in China as a result (He and Qian, 2016; He, 2014).

Table 4.1. The distribution of hospital visits in the 1980s

	Proportion of Hospital Visits (%)			
	1985		1988	
	Outpatient	Inpatient	Outpatient	Inpatient
Village	37.8	2.5	28.2	0.7
Township	38.2	49.6	33.8	37.1
County	11.7	34.2	23.7	47.1
Prefectural and Above	2.2	13.6	5.3	15.1
Total*	89.9	99.9	91.0	100.0

* The columns are not all-inclusive

Source: Yu (1992).

4.3. Reintegrating health services in China

The myriad of problems outlined above prompted Chinese policy-makers to initiate a series of reforms aiming to reintegrate the health service system in the late 1990s. This section begins by reviewing the importance of care integration. China's

[10] National Health Commission. (November 5, 2015). *Bulletin on 2014 Statistics of Health and Family Planning in China (2014 nian woguo weisheng he jihuashengyu shiye fazhan tongji gongbao),* available at http://www.nhc.gov.cn/guihuaxxs/s10742/201511/191ab1d8c5f240e8b2f5c81524e80f19.shtml, accessed on September 11, 2022.
[11] Chinese Doctor Association. (July, 2017). *White Paper on Medical Practice of Chinese Doctors (zhongguo yisheng zhiye zhuangkuang baipishu)*, available at http://www.cmda.net/u/cms/www/201807/06181247ffex.pdf, accessed on September 11, 2022.

reform efforts in this regard are then summarized.

4.3.1. The importance of care integration

Health care consists of a complex set of services, involving a wide range of specializations performed by various types of professionals. Modern medicine increasingly requires close collaboration among specialties, in light of rapid aging and the rising prevalence of multiple morbidities. Seamless collaboration among diagnostic services, rehabilitative care, and nursing services is vital for clinical outcomes (World Health Organization, 2015; Nolte and McKee, 2008). Modern medicine is also typically associated with the vertical division of labor among primary, secondary, and tertiary care, with each assuming a pre-defined set of responsibilities. In a properly structured health care system, primary care providers act as the gatekeepers of the entire system, as well as patients' first point of contact. Predominantly staffed by general practitioners, these facilities should be able to treat common conditions. Referral to secondary and tertiary care providers becomes necessary in cases of critical conditions or complications.

Integration is remarkably important to the development of health care systems. The growing population of elderly people usually suffers from multiple chronic conditions, and thereby has complex medical and non-medical needs (Chen et al., 2018; Tey et al., 2016; Ambigga et al., 2011). The old fragmented health care systems in most countries impede the provision of comprehensive, coordinated, and continuous care, and also fuel the skyrocketing inflation of medical costs caused by over-reliance on curative services. These problems underline an urgent need to integrate health services, as the collaboration across different service sectors and between different service providers is conducive to the provision of more cohesive and cost-efficient care (World Health

Organization, 2015, 2008).

The World Health Organization (2008) defines integrated care as "the organization and management of health services so that people get the care they need, when they need it, in ways that are user-friendly, achieve the desired results and provide value for money". In practice, the degree of integration varies from building up loose connections in a basic form to full organizational consolidation between service providers (Kodner and Spreeuwenberg, 2002; Curry and Ham, 2010). Care integration cements collaboration between different specialties and levels of care, thus creating synergistic effects in care provision. Rapidly aging populations pose tremendous challenges to health care systems in most parts of the world, resulting in a remarkable epidemiologic transition from infectious to non-communicable chronic diseases and mental illnesses. This transition requires not only better curative care, but also appropriate long-term and social care. Unfortunately, most health care systems remain characterized by their concentration on expensive curative care. The use of expensive pharmaceuticals, diagnostic technologies, and treatment procedures in the curative system has powerfully inflated health care costs worldwide, making health care itself increasingly cost ineffective and placing a strain on financing in many health systems (Curtis and Hordin, 2009; Dudley and Garner, 2019). Without the smart integration of health services, most health systems will become even more fragmented, cost inefficient, and financially unsustainable (He and Tang, 2021). There is wide agreement that care integration intrinsically requires the strengthening of primary care, empowering it to play a central role in the provision of care.

The integration of health services can occur in different forms. Fulop et al. (2005)

categorized four types of integrated care: organizational, functional, service, and clinical integration. Organizational integration refers to the synergy of health care organizations through the building up of formal alliances or through the virtual coordination networks of service providers. In the meantime, the application of information and communication technologies (ICTs) and reform in administration may result in the consolidation of non-clinical functions, such as electronic health records (EHRs) and electronic medical records (EMRs). Moreover, health services can be horizontally integrated through the building up of designated organizations, such as multi-specialty groups, in which professionals from multiple disciplines cooperate to provide treatment. Finally, clinical integration synergizes health services of different levels into a coherent process through appropriate referral mechanisms.

These four integration models may be adopted both individually and in combination. Curry and Ham (2010) pointed out that organizational and functional integration may occur in the absence of clinical and service integration. Despite the creation of a bigger organization, this integration may remain a façade unless new rules and incentives are structured to favor collaboration at the operational level. Ultimately, care integration should seek to reorient the behaviors of health professionals toward better coordination. On the other hand, different providers may still be fully motivated to coordinate even in the absence of a united organizational structure. Therefore, the coordination of care, including clinical synergy, is as important as organizational consolidation.

Initiatives regarding integrated care are widely observed around the world. For instance, Shortall et al. (2014) found five key modes of integrated care in the US:

integrated delivery systems, multi-specialty groups, physician hospital organizations, independent practice associations, and virtual physician organizations. The study suggested that integrated care led to substantive improvements in the quality of care, especially for patients with multiple chronic illnesses. Several other similar studies have shed light on key factors of success in care integration programs, such as the wide application of ICTs, the establishment of effective leadership, and the development of collaborative culture (Curry and Ham 2010; Hofmarcher et al., 2007).

4.3.2. The reintegration of health services in China

The continuous escalation of health care costs and expensive access to care became burning social issues between the late 1990s and early 2000s, eroding the performance-based legitimacy of the state in China (Liu et al., 2002). In 1997, the CPC Central Committee and the State Council initiated a health care reform ("the 1997 Reform") that set integrating health services as one of the key policy objectives. Since then, the Chinese government has issued a number of guidelines articulating the policy framework. A highly ambitious national health care reform was launched in 2009 ("the 2009 Reform") to revamp China's health system. Again, the integration of the fragmented health service delivery system gained prominence in the Central Government's agenda. For example, the 2009 Reform promised to integrate rural and urban health care resources based on the appropriate division of labor. In an official document issued in 2015, the State Council explicitly stated:

> "Building up an integrated health service system based on the appropriate division of labor is a fundamental measure for ensuring the optimal distribution of health care resources, which is in turn crucial for the establishment of an

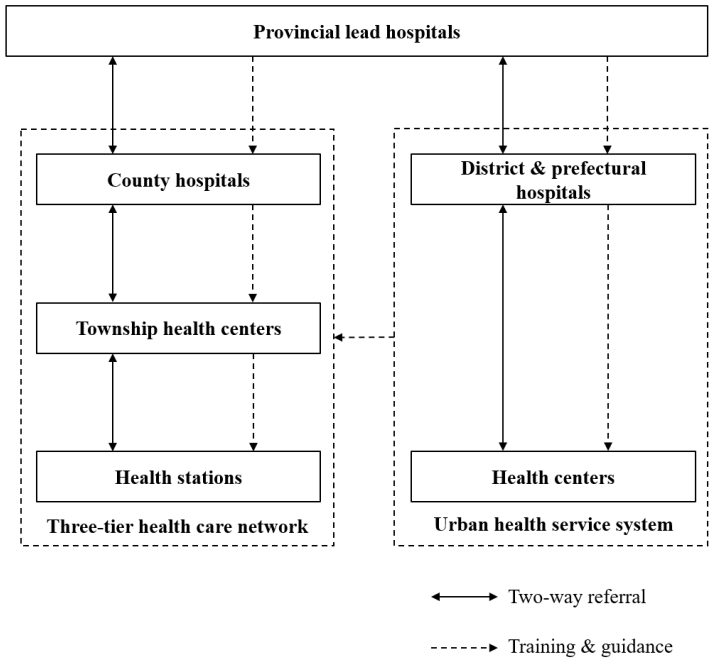
> equitable health system. Improving the integration of health services can bring about long-term benefits, and it is essential for improving the health status and livelihood of the Chinese population. Therefore, this reform is a cornerstone for initiating fundamental changes in the health care system of China." [12]

All of these policy initiatives ultimately seek to revamp the current hospital-centered system to one built on a strong foundation of primary care. The policy vision is illustrated in Figure 4.4 below. GPs and primary care facilities, such as community and township health centers, are envisioned to play a more active role in health service delivery. Policy-makers expect primary care providers to offer ambulatory services for minor conditions and to play a bigger role in long-term care and people's health management (World Bank and World Health Organization, 2019). In the policy-makers' vision, public hospitals should be relieved from treating common illnesses but should serve as the hub for specialist care. Building up a functioning two-way referral system was seen as the key to connecting health facilities across three levels. Inspired by practices under the planned economy, policy-makers also expect health facilities at different layers of the pyramid to build up multiple forms of collaboration beyond the clinical realm. For example, lead hospitals are asked to host more training programs for health workers from secondary and primary facilities. Senior specialists are also encouraged to participate in multi-site practice, especially in community and township health centers, which may help to reduce the caseloads of lead hospitals. However, addressing fragmentation in the health care system is not an easy task. As Yip et al. (2019) emphasized, market-oriented health care reform in the past decades created far-reaching

[12] Office of State Council. (September 8, 2015). *Guidance on Accelerating Development of Integrated Care System (guanyu tuijin fenji zhenliao zhidu de zhidao yijian)*, available at http://www.gov.cn/zhengce/content/2015-09/11/content_10158.htm, accessed on September 9, 2022.

influences on health professionals, and it may take decades to "normalize" their behaviors. Furthermore, to realign the perverse incentive system, it is vital for the government to adopt comprehensive reforms in financing, provider payment, governance, and regulation.

Figure 4.4. A vision of the reintegrated health care system in China



Source: the Author.

As the reforms went on, several key strategies were adopted to accelerate care integration (see Table 4.2). First, the central ministries generously invested in upgrading the infrastructure and medical equipment of primary care facilities. Second, local governments were instructed to undertake "scientific" regional health planning by allocating more resources to strengthening primary care and the integration of services. This requirement was reiterated in several key policy documents, such as *The Plan on Development of Rural Health Care* ("the 2006 Rural Health Plan") and *Guidelines on Development of the Integrated Health Services* ("the 2015 Integration Guidelines"). Third, given the lack of qualified doctors at the primary level, the State Council initiated

a scheme in 2018 ("the 2018 Integration Scheme") to train GPs and motivate qualified doctors to practice at primary health centers. Fourth, since social health insurance has become the main purchaser of health services in China, policy-makers have introduced new payment methods to offer incentives to promote the utilization of primary care. For instance, many local health insurance agencies set up a descending scheme of reimbursement rates for primary, secondary, and tertiary services, which essentially rewards the utilization of primary care through a financial lever. Fifth, some recent policies highlight the significance of ICTs to care integration and strive to accelerate the development of health informatics (for example, see *Guidelines on Development of Health Informatics*, "the 2012 Health Informatics Guidelines"). Finally, the central government announced a policy in 2017 to encourage the pilot of medical alliances ("the 2017 Medical Alliance Policy").

Table 4.2. Major strategies for reintegrating health care

Strategies	Definition	Source(s)
Improve infrastructure	Update housing conditions and equipment	• The 1997 Health Reform
Optimize health planning	Make allocation of health resources more rational	• The 2006 Rural Health Plan • The 2009 Health Reform • The 2015 Integration Scheme
Reinforce primary care	Train more GPs for primary care facilities	• The 1997 Health Reform • The 2006 Rural Health Plan • The 2009 Health Reform • The 2018 GPs Reform
Use social health insurance	Use payment of social health insurance to alter behaviors of service providers and patients	• The 2009 Health Reform • The 2015 Integration Scheme • The 2017 Medical Alliance Scheme
Develop health informatics	Apply health informatic technologies, such as e-record and telemedicine, to strengthen the collaboration	• The 2009 Health Reform • The 2015 Integration Scheme • The 2012 Health Informatics Guidelines
Encourage formation of medical alliances	Encourage service providers to form medical alliances in various modes	• The 2015 Integration Scheme • The 2017 Medical Alliance Scheme

Source: the Author.

Telemedicine represents a useful technology that can be used to consolidate fragmented health services. World Health Organization (2010) defines telemedicine as "the delivery of health care services, where distance is a critical factor, by all health care

professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interest of advancing the health of individuals and their communities" (p. 8). Able to break down the geographic barriers between health service providers, this technology is particularly useful in connecting rural and remote areas with medical hubs in major cities, significantly easing access to quality care for rural residents. In addition, telemedicine also offers a conducive virtual platform for the delivery of multi-specialty care in multi-locality settings (World Health Organization, 2010). The expansion of telemedicine programs has been accelerated in China, as the National Health Commission and the Ministry of Finance encourage local governments to set up pilots. Three provinces stand out as national achievers in this respect: Zhejiang, Guizhou, and Ningxia. Key features of the Ningxia model are exhibited in Box 4.1 below.

Box 4.1. Telemedicine in Ningxia

Telemedicine in Ningxia was initiated in 2014. Progress so far includes:

- Building up a comprehensive service network covering all five levels of care, including 30 prestigious hospitals in China, 7 provincial hubs, 22 public hospitals in cities and counties and 196 township health centers.
- Synergizing information systems of curative medicine, preventive medicine and social health insurance. The database gathers more than 10,000,00 pieces of medical records and 1.1 billion pieces of information on social health insurance.
- Providing consultative services to more than 900,000 cases in 2017.
- Helped regulatory framework that creates healthier environment for the development of telemedicine.

Source: Ningxia Health Commission[13]

[13] Health Daily (*Jiankang bao*). (May 29, 2019). *Ningxia Successfully Established a Five-layer Service System of Telemedicine (ningxia jiancheng wuji yuancheng yiliao fuwu tixi)*, available at http://www.nhc.gov.cn/xcs/s7847/201906/c5b05322e68248f394911ea00b3180c3.shtml, accessed on August 1, 2022.

Some preliminary evaluations have noted the improvement of service quality and cost-effectiveness brought about by telemedicine programs. For example, Wang et al. (2016) traced the medical records of telemedicine services in Sichuan for a period of 12 years, and found that the use of telemedicine resulted in a marked increase of diagnostic accuracy. Furthermore, as it was no longer necessary for patients to make long-distance travels for high-quality health services, the telemedicine networks created an estimated net saving of more than 2.3 million US dollars over the decade. Other studies underlined the crucial role of telemedicine services in encouraging communication and collaboration between general practitioners and specialists, thus improving both satisfaction and efficiency on the part of health professionals (Xu et al., 2020; Liu et al., 2021; Ma et al., 2022).

Medical alliances emerged as another crucial approach toward care integration in China. A medical alliance refers to a real organization or virtual network consisting of different health facilities (Curry and Ham, 2010). Within a medical alliance, different service providers may stress organizational or curative integration, based on which two types of conglomeration have emerged in China: the closely-integrated model and the loosely-integrated model. In the first model, service providers at different levels of care normally form a uniform board of directors in charge of making decisions in regard to operational, financial, and personnel affairs. By creating shared interests, closely-integrated alliances are expected to create closer cooperation between all health facilities. In comparison, health facilities in loosely-integrated models largely keep their independence in decision-making, but collaborative arrangements bring them together in service delivery, training, and research. [14]

[14] See Footnote 12.

The effectiveness of some early trials of medical alliances appeared to be mixed. As Yip et al. (2019) noted, most existing alliances are barely loose networks that do not integrate responsibilities, management, patient care, or economic interests across the different levels of care. Without aligning administration and interests with primary health facilities, large hospitals predominantly take advantage of their dominate positions and use medical alliances as channels for absorbing patients (World Bank and World Health Organization, 2019). Notwithstanding the mixed outcomes in early trials, several prominent models have thrived through in the past decade, yielding remarkable outcomes in care integration (see Box 4.2 below).

Box 4.2. Lead examples of medical alliances in China

1. Zhenjiang Model

The medical alliance reform in Zhenjiang city was launched in 2010 with three highlights:

- Two medical alliances: one adopts the closely-integrated model and the other adopts the loosely-integrated one
- The closely-integrated medical alliance is led by a board encompassing directors from hospitals and health centers
- Notable policy outcome: the volume of outpatient services increased from 39.5% to 52% after one year of the reform and the closely-integrated medical alliance yielded better performance

2. Luohu Model

Luohu initiated a medical alliance reform in 2015 and it has three characteristics:

- One closely-integrated medical alliance is established
- GPs are motivated by competitive salaries
- The central government highly praised the Luohu model

3. Tianchang Model

The health reform in Tianchang offers a lead example for county medical alliance in three aspects:

- Two closely-integrated medical alliances
- Each medical alliance is led by a board of directors
- The policy outcome is mixed: 90% of hospital services to local citizens were rendered by county health facilities, yet this number was slightly decreased next year

Source: Guangming Daily[15]; Yuan (2018); Yue et al. (2019); Shen et al. (2018); Yu et al. (2020).

[15] Guangming Daily. (Janurary 9, 2019). *Jiangsu Zhenjiang: the Health Reform Remarkably Improved People's Accessibility to Health Care (Jiangsu zhenjiang: 'sanyi liandong' changtong baixing jiuyilu)*, available at http://www.scio.gov.cn/32344/32345/39620/40079/40086/Document/1650497/1650497.htm, accessed on August 1, 2022.

The outperformance of these models has inspired the Chinese government, who perceived the medical alliance as a main form of policy innovation in the national health care reform. As the State Council underlined:

> "[The Medical Alliance Reform] can improve the optimal distribution of health care resources and enhance the transition from a hospital-centric model of care to a primary-centric model. Remarkably, by encouraging cross-level collaboration, this reform will improve service capacity of primary care, and thereby provide more cost-efficient health services to the people."[16]

Putting the reform at the center of the government's agenda, the central ministries encouraged the development of medical alliances in both urban and rural areas (State Council, 2017). To cement closer cooperation between health facilities at primary and secondary levels, the National Health Commission issued a policy in 2019 encouraging counties to undertake medical alliance pilots based on the closely integrated model. This dissertation pays due attention to the Medical Alliance Reform in Guizhou counties.

4.4. The socioeconomic and health system conditions of Guizhou

Located in southwestern China, Guizhou province consists of nine prefectural divisions, including three ethnic minority autonomous prefectures (locations indicated in Figure 4.5). A total of 88 counties are under the jurisdiction of the nine prefectures. The population of Guizhou was 38.58 million in 2020 and around half of the population lived in rural areas. Well known for its ethnic diversity, this province is home to various minority groups.

[16] Ibid

Figure 4.5. The geographic location of Guizhou

Source: the Author.

With more than 90% of its land covered by mountains and hills with steep slopes, Guizhou features a rather harsh geography. Until recent years, transportation had long been a severe obstacle for the livelihood and economic growth of the province. The Karst landscape in the province results in severe problems related to rock-desertification. Unfavorable geography was the key factor related to socioeconomic underdevelopment and wide poverty in Guizhou for centuries. As an old saying goes: “The sky is not clear for three days; the land is not flattened for three miles; and people have no three cents of silver.”

Guizhou is one of the most deprived provinces in China. Its economic status constantly places this province in the bottom strata nationally (see Table 4.3) and it had

the largest presence of absolute poverty in China until 2017.[17] The Nationwide Poverty Elimination Campaign commencing in 2015 yielded impressive outcomes in this province. Now, its gross domestic product (GDP) places Guizhou in the middle of China's 31 provincial administrative divisions. Nonetheless, Guizhou still lags behind on many economic indicators, compared with other regions. For instance, its per capita disposable income and GDP per capita remain lower than the national average (see Table 4.3). Significant intra-provincial disparities are widely found in Guizhou, as shown in Table 4.4.

Table 4.3. Economic development in Guizhou (2000–2020)

	2000		2010		2020	
	Guizhou	% of national average	Guizhou	% of national average	Guizhou	% of national average
Urban unemployment population	102,000	1.7	122,000	1.3	195,000	1.7
Average wage of urban employees (yuan)	7,468	79.7	31,458	84.7	94,276	93.8
Per capita disposable income (yuan)	2,290	61.5	7,226	57.7	21,795	67.7
GDP (billion yuan)	1,030	1.0	4,519	1.1	17,863	1.6
Per capita GDP (yuan)	2,759	34.7	12,882	41.8	46,267	64.4

Source: National Bureau of Statistics of China.[18]

Guizhou's economic status has inevitably affected its health system. The poor remuneration it can offer is often perceived as being unattractive to medical school graduates and senior doctors. Even worse, Guizhou suffers from severe "brain drain", as many qualified doctors move away to coastal China to attain better financial prospects. As illustrated in Figure 4.6, the percentage of health professionals holding postgraduate degrees is much smaller in Guizhou, compared to the national average. The proportion of experienced doctors in primary care facilities is even lower, bottlenecking the

[17] National Bureau of Statistics, available at http://www.stats.gov.cn/, accessed on February 7, 2022.
[18] Ibid.

capacity-building of primary care in this province. According to official statistics, approximately 60% of doctors at primary care facilities of Guizhou do not possess a bachelor's degree. Moreover, merely 7% of health workers at township health centers hold middle or senior rank professional qualifications.

Table 4.4. The variance in prefectural-level development (2010)

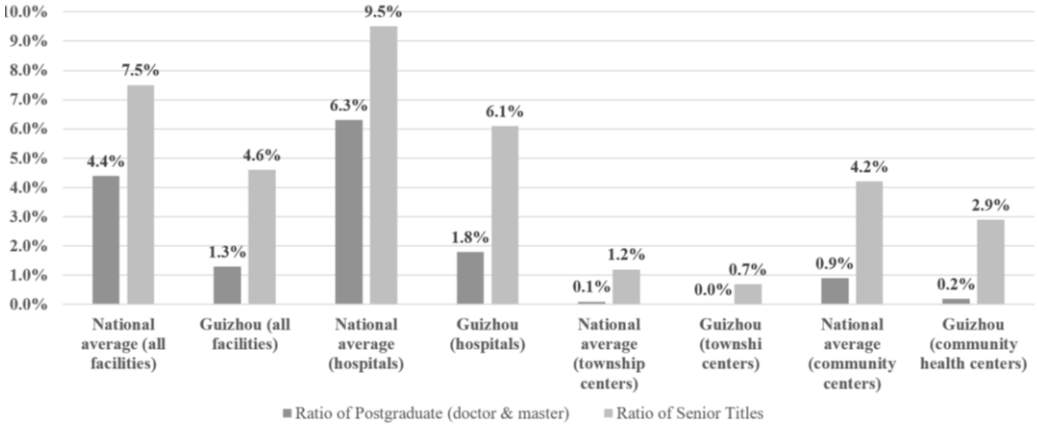
Prefectures	Population		GDP		Per Capita GDP		Rank in Per Capita GDP
	Data	Ratio to Provincial Average (%)	Data (billion yuan)	Ratio to Provincial Average (%)	Data (yuan)	Ratio to Provincial Average (%)	
Guiyang	4,320,000	12.45	1121.82	24	26,209	196	1
Liupanshui	2,850,000	8.21	500.63	11	17,462	131	2
Zunyi	6,120,000	17.63	908.76	20	14,650	110	3
Qiannan	3,230,000	9.30	356.68	8	10,861	81	4
Qianxinan	2,810,000	8.08	307.13	7	10,839	81	5
Anshun	2,300,000	6.61	232.90	5	10,014	75	6
Tongren	3,090,000	8.90	293.62	6	9,304	70	7
Bijie	6,540,000	18.81	600.85	13	9,113	68	8
Qiandongnan	3,480,000	10.02	317.57	7	8,839	66	9
Guizhou	34,740,000	100	4639.96	100	13,356	100	NA

Source: 2011 Guizhou Statistic Yearbook.[19]

At the same time, the uneven socioeconomic development in Guizhou has left a clear mark on the intra-provincial distribution of health care resources. In 2014, for example, Guiyang, the provincial capital, had more than two doctors per 1,000 people, whereas, in Bejie, the ratio was just over one doctor per 1,000 people (see Figure 4.7). As can be seen in Chapters 5 and 6, these socioeconomic and health system conditions form the ultimate context of the two local reforms in Guizhou. Implementational entrepreneurship has to operate within grave constraints.

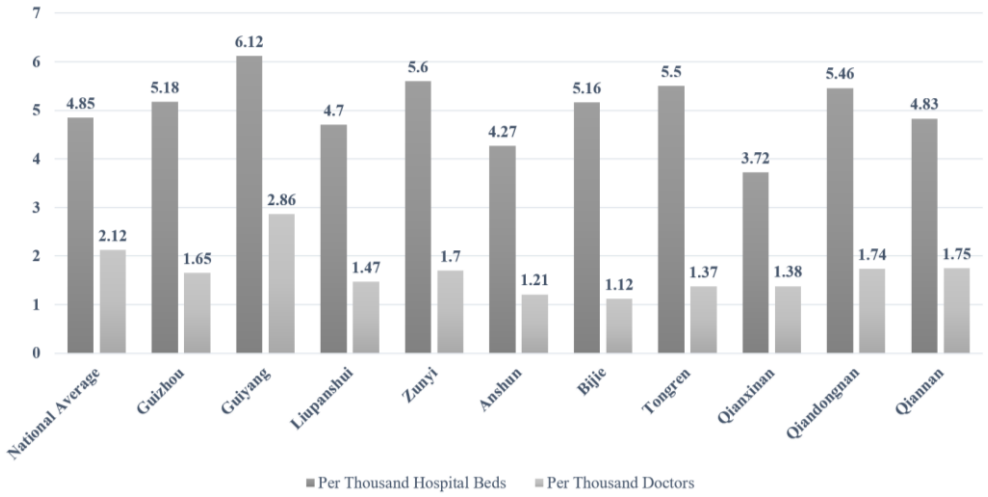
[19] Guizhou Statistic Bureau. (2012). *2011 Guizhou Statistic Yearbook.* (*guizhou tongji nianjian)*, available at https://navi.cnki.net/knavi/yearbooks/YGZTJ/detail, accessed on May 6, 2022

Figure 4.6. The ratio of highly educated medical staff (2014)



Source: The 2015 China and Guizhou Statistic Yearbooks.[20]

Figure 4.7. The distribution of medical resources (2014)



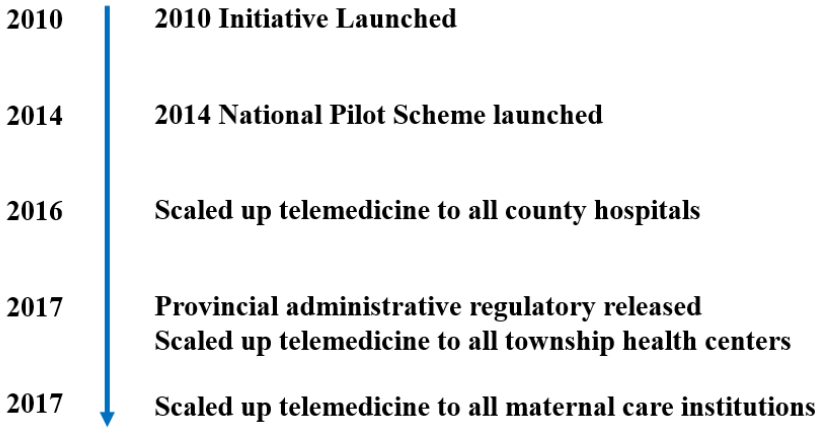
Source: The 2015 China and Guizhou Health Statistic Yearbook.[21]

[20] Guizhou Statistic Bureau. (2016). *2015 Guizhou Statistic Yearbook.* (*guizhou tongji nianjian)*, available at https://navi.cnki.net/knavi/yearbooks/YGZTJ/detail, accessed on May 6, 2022.
[21] Ibid

Chapter 5. The Implementation of a Telemedicine Program in Guizhou

This chapter analyzes the Telemedicine Program in Guizhou in a chronological manner. Launched in 2010, this provincial program was undertaken in response to an ambitious national policy set out in *The Initiative on Development of Telemedicine* ("the 2010 Initiative"). The implementation process was accelerated after 2014, when Guizhou was selected as one of the national pilots for the program. Thus far, the province has made remarkable achievements in establishing a comprehensive telemedicine network. Figure 5.1 exhibits the timeline of the program.

Figure 5.1. Timeline of the Telemedicine Program



Source: the Author.

A core team of technocratic officials within the provincial health commission and the provincial development and reform commission are key implementational entrepreneurs in this program. Those from the former initiated the Telemedicine Program, whereas those from the latter have formally participated since 2014, after the central government launched the national pilot scheme.

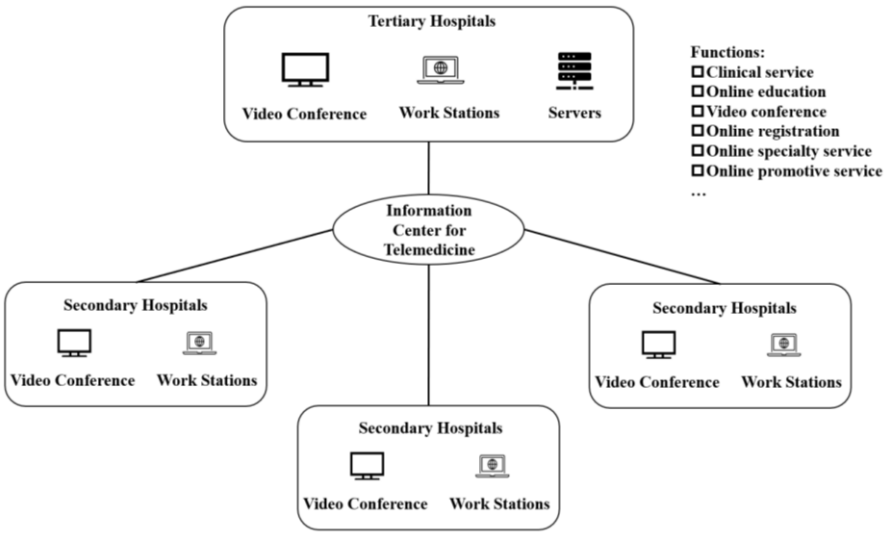
5.1. Launching telemedicine in Guizhou (2010–2013)

The 2009 National Health Care Reform accelerated the development of health informatics in China, with significant fiscal investments made. The Ministry of Health and the Ministry of Finance jointly launched the "2010 Telemedicine Initiative" to encourage the local adoption of telemedicine. According to the initiative, central and western provinces were required to set up an online platform to offer patients virtual consultation services provided by doctors of major urban hospitals. This network was also expected to strengthen the collaboration between health facilities at various levels. Technically, this form of telemedicine entailed the installation of basic virtual functions into the system, particularly video conferencing and online workshops, both of which required service integration. The central government initiative also required provincial governments to establish a dedicated information center for telemedicine. Local health departments were further asked to develop a regulatory framework to govern this emerging form of health care services. Furthermore, the Ministry of Health provided substantive funding for local governments to initiate the program.

Figure 5.2 below depicts the design of the telemedicine system according to the 2010 Telemedicine Initiative. In this framework, the telemedicine system is expected to integrate seven major functions online in order to strengthen connections between health service providers: (1) the provision of tertiary care; (2) diagnostic consultations based on medical images; (3) two-way referrals; (4) registration for tertiary care; (5) video conferences; (6) online training; and (7) the sharing of digital resources, such as databases of medical journals. To perform these functions, each hospital was instructed to develop an internal information system, composed of a subsystem for video conferencing and virtual workstations for clinical services. Given their better financial

conditions, tertiary hospitals are responsible for the maintenance of the servers. Secondary and tertiary hospitals are connected through the designated information center, which is responsible for data transmission and technical support.

Figure 5.2. The telemedicine framework



Source: the Author.

In response to the national policy, the provincial health commission designated the Division of Health Administration and the Health Information Center as lead agencies. Working out an operational protocol, they initiated two pilot projects: the "5+1" scheme and the "3+24" scheme. The former integrates one provincial lead hospital and five county-level hospitals through the online platform, while the latter builds up connections between three tertiary hospitals and 24 secondary hospitals. These two schemes use different methods to connect service providers. Specifically, in the "5+1" scheme, service providers at different levels of care build up direct connections through a local virtual network, in which the provincial lead hospital is not only responsible for providing telemedicine services, but also for the maintenance of the digital platform. In contrast, the "3+24" scheme follows the national initiative, and a designated information center

was established to manage the digital platform.

5.1.1. Domain expertise and operationalization

As Director of the Provincial Health Information Center, Mr. Y was automatically involved. Mr. Y is a typical technocrat. Having graduated from a prestigious university in southwestern China, he specializes in computer sciences. After graduation, Mr. Y joined the government, working as an ICT technician. He took part in the establishment of the Health Information Center in 2004, and thereby witnessed the development of health informatics in Guizhou. His expertise in ICT soon enabled Mr. Y to contribute to this new initiative. Prior to his engagement in the Telemedicine Program, he was responsible for several major projects, such as the promotion of hospital information system and building the electronic system for the New Cooperative Medical Scheme (NCMS) in Guizhou.

These rich experiences made Mr. Y a competent implementer of the Telemedicine Program. Leveraging his expertise in health informatics, he drafted a local action plan for the national telemedicine initiative, which spelled out detailed parameters for both digital infrastructure and its operation. During the process, Mr. Y recognized two major implementation problems. First, the lack of experts bottlenecked the development of health informatics in Guizhou. At the time, Mr. Y was the only official in the entire provincial health commission who had earned a degree related to ICT. This remarkable capacity deficit made it extremely difficult for Guizhou to meet the central policy mandates related to telemedicine. Furthermore, constrained by their poor fiscal capacity, local governments there could not afford major investments in digital infrastructure.

To overcome these constraints, Mr. Y adopted cloud computing technology as the solution. As an emerging data processing technology, simply put, cloud computing is "the delivery of computing services—including servers, storage, databases, networking, software, analytics, and intelligence—over the internet ('the cloud') to offer faster innovation, flexible resources, and economics of scale".[22] By streamlining all necessary clinical data into a central server, cloud computing technology enables the Health Information Center to act as a hub for telemedicine services, while hospitals and health centers can simply use terminal devices in the course of actual service delivery. This design essentially minimized the demand for ICT expertise because a small number of technicians are sufficient to sustain its daily operation. Moreover, centralizing the data processing work in the province not only made the whole project much more affordable because of the economy of scale, but also relieved the concerns of local governments about the considerable recurrent cost of system maintenance. Mr. Y clearly demonstrated his ability as a mid-rank official to fully appreciate local circumstances in the conversion of general central guidelines into a viable local approach to implementation. Furthermore, echoing Proposition #1, this part of the case demonstrates that local officials can use their domain expertise to find out appropriate solutions for addressing local problems, thereby coupling national policies with local policy streams.

5.1.2. Drifting of the 2010 Initiative

Although Mr. Y as the implementational entrepreneur demonstrated his domain expertise in health informatics by working out the operationalizable action plan, implementation of the 2010 Telemedicine Initiative encountered two major difficulties.

[22] Microsoft Azure. *What Is Cloud Computing? A Beginner's Guide,* https://azure.microsoft.com/en-us/resources/cloud-computing-dictionary/what-is-cloud-computing/#:~:text=Simply%20put%2C%20cloud%20computing%20is,resources%2C%20and%20economies%20of%20scale.

First, although a few frontline doctors and hospital administrators were aware of the importance of telemedicine to improving quality of primary care (Interview with Mr. D, 20210205), a suspicious stance was also held by many frontline doctors and even hospital administrators, who were conservative about this new technology, as they thought that their "old ways of doing things were okay". (Interview with Mr. M 20201103; Interview with Mr. Y 20201105; Interview with Ms. J 20210225).

Second, perhaps more importantly, coordination was absent when putting the 2010 Telemedicine Initiative on the ground. A technocratic mindset prevented the health bureaucracy from seeking cooperation from other departments. The Ministry of Health and its local agencies considered telemedicine to be the application of innovative technology in the clinical setting, but paid little attention to the host of essential incentives and administrative arrangements that would accompany it. While the Action Plan for the 2010 Telemedicine Initiative of Guizhou made a seven-step plan for policy implementation, none of them mentioned about the incentives and administrative arrangements for telemedicine services.[23] Compared with lengthy paragraphs on details of technical parameters, there was only one paragraph related to the development of the regulatory framework:

> "After gaining sufficient experience of providing telemedicine services, the provincial health commission, prefectural and county health departments and hospitals joined in the pilot program shall work together on developing a suitable regulatory framework on telemedicine for local contexts in Guizhou.

[23] The seven steps are (1) designing technical parameters, (2) biding for the software and hardware, (3) building up the digital network for the telemedicine system, (4) developing and modifying the software for telemedicine services, (5) piloting the application of the software (6) scaling up the application of the software and (7) evaluating the outcomes.

> The regulatory framework includes rights and responsibilities of different service providers, distribution of malpractice accountability, protection on patients' privacy and other issues related to the telemedicine services."[24]

The technocratic mindset of the health bureaucracy negatively affected the reform progress, as it exerted the officials unaware of the significance of interdepartmental coordination in creating such a policy framework. For example, setting a reasonable fee schedule is crucial to a sustainable telemedicine system, because health facilities would otherwise have no economic incentive to engage such services. In the meantime, setting the fees too high would raise grave concerns about the financial risk of social health insurance. The task of setting fees belonged to the Provincial Development and Reform Commission, whereas the Social Security Bureau managed social health insurance. The participation of social security departments in the telemedicine scheme is most crucial, because most patients will be unable to use telemedicine services outside the coverage of their social health insurance. However, neither of these departments was invited to discuss policy coordination in 2010.

Even internal coordination was largely absent in the health bureaucracy itself. Although Guizhou Provincial Health Commission did set up a steering group for the 2010 Telemedicine Initiative, the Deputy Director in charge considered the involvement of multiple divisions in this program to be unnecessary. As a result, he only enlisted the Health Information Center and the Division of Health Administration. In the end, limited bureaucratic coordination prevented the provincial health commission from developing

[24] Guizhou Provincial Health Commission. (October 12, 2012). *The Action Plan for the 2010 Telemedicine Initiative*.

proper administrative guidelines to facilitate the implementation of telemedicine. All of these hurdles could not be easily overcome without a strong commitment on the part of technocratic implementers and certain entrepreneurial strategies. Mr. Y candidly acknowledged that his original motivation was to fulfill the task assigned by the Ministry of Health (interview with Mr. Y 20201105). In this way, the implementational entrepreneurship of the 2010 Telemedicine Initiative fall into the "drifting" category. This part of case also echoes Proposition #1 and demonstrates that national policy may fail in coupling with local problem and political streams without the participation of enthusiastic and capable implementational entrepreneurs.

The absence of other provincial departments in policy implementation in particular resulted in the failure to create an effective incentive system. Consequentially, both doctors and patients in secondary hospitals had little momentum to use the services, although the demand for remote virtual health services was actually rather high in this particular province. Some observations on outcomes of the 2010 Telemedicine Initiative demonstrated this point. For example, Ms. J, an administrator of a lead provincial hospital, the local implementation was a "failure":

> "In 2010, my hospital was required to join the Telemedicine Program and I was delegated as the person in charge. At that time, the *provincial health commission* instructed us to establish connections with three county hospitals and provided assistance to them. My hospital gave each secondary hospital a sum of financial aid of 300,000 yuan to upgrade their digital infrastructure. Despite the large investment, the outcome was rather disappointing. Only one county hospital asked for our clinical assistance for one case (patient) through telemedicine.

> Even in that case, the telemedicine system did not perform very well—the consultation was frequently interrupted due to the poor internet connection. Since then, the service has been totally left untouched in our hospital." (Interview with Ms. J 20210225)

Mr. Y shared the same viewpoint. He acknowledged that this policy initiative did not achieve the desired outcome:

> "We [the Health Information Center] developed a '5+1' scheme to implement the 2010 Telemedicine Initiative, which included a tertiary hospital and five secondary hospitals. In 2011, we expanded the scale of the initiative and launched a '3+24' scheme. In this new scheme, we set up a designated information center and used it to provide technical support to the entire system. However, when putting the two schemes into practice, we sadly found that few hospitals utilized this telemedicine system; therefore, neither the '5+1' nor the '3+24' scheme achieved its initial purpose." (Interview with Mr. Y, 20201105)

Clearly, the 2010 Initiative failed to yield notable effects in integrating health services and building primary care capacity.

5.1.3. Social learning and shift of entrepreneurial motivations

Although the 2010 Initiative did not achieve the desired goals, the experience of policy implementation enabled Mr. Y to elaborate his understandings of values of the telemedicine services for addressing various issues of health care in Guizhou.

> "I was engaged in the program by chance. In 2011, I took charge of the program as the chief of the Health Information Center. At the time, I just wanted to complete the task assigned by the Ministry of Health. Yet, I observed that this technological innovation provided doctors at different levels with a highly efficient tool with which to share knowledge. Before the launch of the Telemedicine Program, specialists from lead provincial hospitals were also required to train doctors in county hospitals and primary health centers through lectures. They had to either physically visit the counties or summon students to Guiyang. Either way, it took people a really long time to travel, given the poor transportation in Guizhou. As such, telemedicine is more cost efficient than traditional modes of communication." (Interview with Mr. Y 20201105)

Mr. Y was well aware that telemedicine may serve as an important way to improve the quality of primary care, which is not only a key objective of the 2009 Reform, but is also a critical necessity in Guizhou. He added:

> "As the program went on, I thought that telemedicine may offer a regular mechanism in regard to capacity building for numerous primary care facilities. For example, the health commission can require doctors in lead urban hospitals to spend several hours every day providing guidance to lower-level facilities. They may select some cases from the telemedicine system and discuss them with doctors at county hospitals. During this process, senior doctors from lead hospitals may reflect on the treatment for these cases, and tell their junior colleagues at the grassroots level what to do in the future when they encounter similar cases. In this way, the professional skills of primary care providers can

be substantively improved." (Interview with Mr. Y 20201105)

These views suggest that Mr. Y's was elevated from a merely technocratic "do the job as instructed" type to one with a higher level of policy acuity. His recognition of the value of telemedicine in regard to integrating China's health service system inspired Mr. Y's devotion to the program. In particular, Mr. Y believed that he was making a difference to local health care in Guizhou, his hometown. These motivations prompted Mr. Y to be proud of his work and to become committed to the Telemedicine Program. While Aviram and coauthors' (2018) argued that "ideological entrepreneurs" are motivated by a sense of satisfaction derived from policy implementation, Mr. Y provided a vivid example of this in the Chinese context. This part of the case also demonstrates that learning plays an important role in changing motivations and arousing commitment of implementational entrepreneurship.

5.2. Going against wind (2013–2014)

In the second half of 2013, Mr. Y learned that the National Health Commission (then named the National Health and Family Commission and Ministry of Health) and the National Development and Reform Commission were about to launch a nationwide pilot program for telemedicine innovations. Four renowned lead hospitals in Beijing[25] would be matched with counterparts in hinterland regions to provide telemedicine services to patients from remote areas. The lead hospitals were expected to not only offer online clinical services, but also help local governments there design the digital network and operational standards. The pilot selection was on a competitive basis, as provincial

[25] The four lead hospitals are the General Hospital of the People's Liberation Army, the Peking Union Medical College Hospital, the Peking University People's Hospital, and the China-Japan Friendship Hospital.

health commissions were asked to submit an application together with a pilot proposal to the central ministries. With dedicated fiscal package of RMB 50 million, the pilot program was certainly attractive to local governments, particularly those in central and western China.

Leading the implementation of the 2010 Initiative, Mr. Y realized that the lack of interdepartmental coordination is a crucial factor underlying the implementation failure. As a mid-rank official in the government, he displayed a high level of political sharpness and considered the national pilot scheme to be an invaluable opportunity to put policy innovation onto the Provincial Government's agenda, and thus overcome bureaucratic fragmentation. He intuitively felt that gaining a certain status regarding the pilot would help him gain a breakthrough in Guizhou's Telemedicine Program. He elaborated:

> "In the second half of 2013, officials in Beijing occasionally disclosed that they were planning to set up telemedicine pilots in western provinces. I kept wondering why the project initiated in 2010 had not produced the desired outcomes. I increasingly realized that the development of telemedicine was not a simple application of technology. Instead, it inherently relies on innovation in regard to certain mechanisms. If this program could be designated as a 'key work' of the provincial government, the chance of success can be increased, because this status requires all related provincial departments to engage in the project. As I had been working in the province for so many years, I knew that the national pilot can attract provincial leaders' attention. If we let this opportunity go, it would be difficult to push the program forward any further. Therefore, I must seize it. I think devoting

myself to the national pilot was the most important decision that I had made since my participation in this program began." (Interview with Mr. Y 20201105)

Overall, as Mr. Y identified the National Pilot Scheme as a chance to "revive" the halted program, he devoted all effort in promoting the application for this pilot opportunity between 2013 to 2015. This pilot opportunity prompted him to take a more aggressive stance in regard to reinvigorating the halted program in Guizhou. At the time, Mr. Y, as a mid-rank official in the government, was not entirely certain about the frontline factors underlying the failure of the 2010 attempt, but he displayed a high level of political sharpness and considered the national pilot scheme to be an invaluable opportunity to put policy innovation onto the Provincial Government's agenda.

5.2.1. Hurdles of bureaucratic fragmentation

The first step taken by Mr. Y in regard to the application was to build up cooperation with lead national hospitals. After several trips to Beijing, he decided to seek a breakthrough from the General Hospital of the People's Liberation Army (PLAGH), a pioneer in China's telemedicine innovations. With its first telemedicine program launched in 1997, the PLAGH spearheaded the entire country in this area. Its unique status as the medical hub of the Chinese military system has put PLAGH in a favorable position to extend its telemedicine network from Beijing to the rest of China. More than two decades of development in this area have nurtured a professional team of both administrators and senior specialists excelling in telemedicine services.[26] As a result, the

[26] See Zhang Meikui's presentation at the 5th Industrial Conference for Mobile Health Care of China, available at http://www.mhealthchina.org/wp-content/uploads/2015/08/20150819055409 80.pdf., accessed on February 7, 2022.

PLAGH became the natural candidate for health policy officials in Guizhou to reinforce their own program.

While Mr. Y was keen to promote cooperation with the PLAGH, the change in the provincial health administration brought about unexpected difficulties. In 2014, the central government initiated another round of organizational restructuring that merged the Ministry of Health and the National Commission of Family Planning into the National Commission of Health and Family Planning. This change was duplicated at all levels of the administrative system. The newly formed Guizhou Provincial Commission of Health and Family Planning was no longer headed by Professor U, the previous Director of the health department, who was appointed with a directorship of the provincial food and drug administration. Instead, Mr. W, the former Director of the family planning commission started to head the restructured provincial health commission.

With a professional degree from the West China Medical University, an elite medical school in China, Professor U had practiced in a lead provincial hospital in Guizhou for about 10 years. His eminent reputation soon established him as a full professor and, later, as the President of a local medical university in 2002. Professor U was appointed as the Director of the provincial health bureau in the early 2010s, kicking off his political career. As an "expert leader",[27] he understood the essential role of telemedicine in reintegrating China's fragmented health system, and endorsed Mr. Y's

[27] Expert leader is a concept created by Amanda Goodall (2012). An expert leader has three salient characteristics. First, she should acquire adequate technical knowledge of the core-business activity, which can be obtained through education or practice. Second, an expert leader ought to work in the core-business area for a relevantly long time, and thereby accumulate rich experience in that industry. Finally, it is better for that person to possess leadership capabilities that includes management and leadership experience and training, acquired during the leader's earlier career.

engagement with the PLAGH. In contrast, the lack of necessary knowledge about medicine and health services on the behalf of Mr. W, the new Director, soon turned out to be an obstacle for the initiative. As Mr. Y remarked:

> "As far as I can see, Mr. W was unfamiliar with the Telemedicine Program as a form of health system innovation. To earn his support, I briefed him, thoroughly explaining what telemedicine is and how it may contribute to the integration of health care. Mr. W offered his feedback: 'I cannot fully understand how telemedicine can benefit health care services. Although the central government will grant RMB 50,000,000 to the pilot provinces, it may not be worthwhile for us to spend so much time and resources for such a modest amount of funding.' When reporting to Professor H, the Deputy Governor, Mr. W also admitted that he could understand the purpose and content of all of the health reform initiatives, except for the Telemedicine Program." (Interview with Mr. Y 20201105)

Within the provincial health commission, most divisions held a lukewarm stance in regard to the Telemedicine Program. Mr. Y therefore had to rely on himself to break the impasse. He sighed emotionally when recalling this difficult situation:

> "From the end of 2013 to early 2014, I had a really tough time. Both Mr. W and other divisions were unwilling to support me. They did not believe that the vision portrayed by me was an attainable one. The division heads even doubted whether telemedicine could truly bring benefits to local health care. As a result, I was struggling to push forward the Telemedicine Program." (Interview with

Mr. Y 20201105)

As the external environment set obstacles to implementational entrepreneurship, the early attempts at applying for the National Pilot Scheme fell into the "sailing against the wind" category.

5.2.2. Maneuvering within the bureaucracy

Changing unfavorable circumstances requires skillful adoption of entrepreneurial strategies. Three key strategies were employed by Mr. Y to gain more support for the Telemedicine Program: issue framing, smart use of bureaucratic procedures, and venue shopping. I will elaborate on these three entrepreneurial strategies in the next sections, especially how implementational entrepreneurs use their domain expertise and knowledge of inner workings of the governmental system to accelerate the reform.

As discussed in Chapter 2, collaboration is essentially a process of creating a shared form of cognition among actors by reframing the issue. To arouse Mr. W's awareness of the value of telemedicine, Mr. Y constructed new persuasive narratives. In his narrative, Mr. Y attributed the variety of local health care problems—especially the expensive access to care—to the poor transportation infrastructure, and highlighted the value of telemedicine in resolving these problems. He depicted the reform as an effective tool not only for overcoming coordination difficulties across various levels of the health care system, but also for easing the access to quality care for millions of people living in poor and remote areas. Furthermore, he emphasized that telemedicine is capable of cementing the connections between health service providers, which would greatly improve the quality of primary care in Guizhou. At the same time, Mr. Y associated the

application for the national pilot with other ongoing projects of the Health Information Center, creating the impression that the Telemedicine Program would bring advanced health informatics to the poor province. Mr. Y recalled how he yoked different issues into one compelling narrative package:

> "In the health commission, we [division chiefs] need to report the progress [of our own divisions] to the Commission leadership every month. I used this opportunity to reiterate the fundamental role of telemedicine in the development of health informatics. When making my reports to Mr. W, I told him that the Telemedicine Program could accelerate the process. For instance, I shared how we purchased equipment for lower-level hospitals. I also underscored that the [2010] implementation of telemedicine encouraged primary health centers to upgrade their electronic systems, which significantly improved their managerial capacity. If we go down this path, the successful application of the national pilot can push forward this progress." (Interview with Mr. Y 20201105)

This strategy worked. Although Mr. W still harbored doubts as to the effectiveness of telemedicine in reintegrating health services, he did recognize its value in advancing Guizhou's health informatics, which appeared to be high on his policy priority list. In the end, he offered to join the bid for the National Telemedicine Pilot. Mr. Y's case demonstrates how mid-rank officials can skillfully improve their harsh working conditions by intelligently coupling the national vision for policy with local needs in reality. In particular, owning legitimate "domain authority" in health informatics, this mid-level entrepreneur successfully aroused interest in innovation by linking it with other issues related to health informatics. Echoing Proposition #3, this part of the case

demonstrates how mid-rank entrepreneurs can take advantage of their domain knowledge to catalyze policy implementation.

The smart use of authority and information devices stood out as another useful strategy when Mr. Y was striving to soften the unfavorable environment inside the provincial health commission. Owing to their inferior position in the hierarchy, mid-rank entrepreneurs typically lack adequate political resources to make major policy changes (Cohen and Aviram, 2021); instead, their position in the technocratic echelon of the bureaucracy offers them ample space to exploit bureaucratic rules and procedures to amass political capital for a breakthrough. This entrepreneurial strategy manifested itself clearly in Guizhou's application for the national pilot, during which time Mr. Y made smart use of several bureaucratic procedures to reinforce the legitimacy of the Telemedicine Program.

Written comments—a distinctive type of informal document in the Chinese political system, in which senior leaders mark their opinions on internal reports submitted by subordinate agencies—were one effective procedural tool exploited by Mr. Y. Senior officials may offer endorsements of a proposal, make comments on ongoing policies/programs, or highlight important issues to follow up. According to Chinese administrative custom, endorsement through written comments indicates senior officials' positive stance toward a reform or proposal, which grants the lead department with considerable legitimacy to continue (Meng and Chen, 2016). In the midst of the 2010 Telemedicine Initiative, the provincial health commission invited a research institute to evaluate the program. The evaluation report was subsequently submitted to the Provincial Governor. In his written comments, the Governor instructed the Health Commission to

scale up the Telemedicine Program. Although written comments are typically not considered to be politically binding formal documents, they still offered Mr. Y a symbolic source of support to strengthen the legitimacy of the Telemedicine Program. After all, very few peer bureaucrats could negate an endorsement from the Governor, the top administrative chief in the province. In Mr. Y's own words, he was essentially "waving a chicken feather as a token of authority".

Writing policy memos served as another useful method employed by Mr. Y. Before the provincial government promulgates important policy documents, it usually encourages subordinate departments to submit policy memos to inform the formulation of these provincial policy documents. Departmental directors usually further assign the task to division heads, who are technocratic experts in specific policy areas. This mechanism grants mid-rank officials a precious "fast lane" to let their views be heard by provincial leaders. Because some of these memos may eventually be developed into provincial-level policy plans, division chiefs, who are responsible for drafting the memos, can make use of this opportunity to promote their initiatives. Mr. Y took full advantage of this mechanism to amass political capital. In 2013, the provincial government was preparing a strategic planning document, which was about to spell out the direction of socioeconomic reforms in Guizhou. His great political acuity prompted Mr. Y to seize this opportunity to increase the legitimacy of the Telemedicine Program. Nonetheless, the process was rather demanding, since all divisions wanted their memos to be accepted by the provincial government. Mr. Y described the fierce competition inside the health commission:

"In 2013, the provincial commission was invited to submit policy memos to the

provincial government for consideration. The Director asked us to submit a memo representing our division. I knew that this opportunity was precious. If I missed it, I wouldn't get another one in the short term. Therefore, I drafted the memo on behalf of the Health Information Center, in which I called for the provincial government's attention to telemedicine, emphasizing that this reform could speed up the integration of health services in Guizhou. My suggestion, however, was rejected twice, because the senior management of the commission considered the policy issues raised by other divisions to be of higher priority. In this difficult situation, I decided to request a meeting with Mr. W, in which I reiterated the significance of telemedicine to Guizhou's health care reform. I even showed him the written comments of the Provincial Governor as a proof of his enthusiasm about this project." (Interview with Mr. Y 20201105)

His efforts worked. Eventually accepted by the Director, Mr. Y's policy memo was later on incorporated into the provincial planning paper, which marked the elevation of this program from a departmental initiative to a provincial policy. The smart use of bureaucratic procedures granted the mid-rank entrepreneur a powerful tool with which to increase the legitimacy of issue framing. Furthermore, the entrepreneur made intelligent use of his familiarity with the decision-making rules within the governmental system, which stems from his experience of working in the government. This part of the case reinforces Proposition #3, suggesting that implementational entrepreneurship can benefit from officials' knowledge about the inner workings of a governmental system.

Finally, Mr. Y attempted to shift the venue from health care to other professional sectors. As discussed earlier on, venue shopping is an effective strategy for

implementational entrepreneurs to use to gain backing, especially when too many opponents exist in the policy arena. Entrepreneurial officials can create a favorable environment for the policy program by convincing stakeholders across organizational boundaries or carrying the proposal to another administrative level (He and Ma, 2020). In this case, his application for the National Pilot offered Mr. Y a perfect opportunity to find a more appropriate venue in order to accelerate the implementation of telemedicine.

Since the national pilot scheme was launched by both the National Development and Reform Commission and the National Health and Family Planning Commission, the Provincial Development and Reform Commission was assigned as the lead department in the province. Mr. Y hence had a chance to work with Ms. Z, the Deputy Director of the development and reform commission. Although Ms. Z did not have much experience in health care per se, she was fairly familiar with technological innovations; Ms. Z had worked in the metal smelting industry for decades, making her a qualified technocratic expert. Her expertise in science and technology impressed provincial leaders, who later on appointed Ms. Z as the head of a research institute. During that period, she led numerous successful projects. Given her extensive experience in technological innovation, Ms. Z had held a very positive stance toward the Telemedicine Program since she took office at the development and reform commission in 2011.

With a wide portfolio consisting of the planning and formulation of strategically important policies, the development and reform commission is the most powerful bureaucracy in the Chinese administrative system. In Mr. Y's analysis, an unbeatable alliance could be formed if he was able to secure Ms. Z's interest in the reform. He requested a meeting with Ms. Z and managed to formally present his telemedicine

blueprint. Mr. Y analyzed how the Telemedicine Initiative could help reintegrate the fragmented health care system, presenting a bright future related to technological innovation. Knowing Ms. Z's specialization in science and technology, he even explained to her the nuts and bolts of telemedicine and its feasibility in Guizhou.

While this presentation did impress Ms. Z, Mr. Y also "led by example" to strengthen her appreciation of the reform. In early 2014, the child of Ms. Z's colleague developed a severe disease and was sent to an intensive care unit. Even specialists in the provincial hospital failed to improve the child's critical condition. Learning about this situation, Mr. Y sought the PLAGH's urgent assistance through the Pilot Telemedicine Network. Specialists in Beijing soon came up with a clinical protocol. This unexpected incident bolstered Ms. Z's recognition of the value of telemedicine. She remarked:

> "At that time, the PLAGH and the provincial health commission had just signed an MoU, and no medical equipment had been installed yet. However, the hospital in Beijing still sent a team to Guiyang on the same night for an on-the-spot service, which was headed by their top specialist. In the meantime, Mr. Y called the partner company, which was responsible for operating the information system, for technical assistance. The Beijing doctors used their telemedicine system to work out a clinical protocol and guided the curative process. I am really grateful to both Mr. Y and doctors from the PLAGH for saving the child's life. This incident also made me appreciate the strong commitment of the central government to addressing the expensive access to care. Furthermore, I personally witnessed how telemedicine brought about convenience to doctors and patients. I was also thinking that, if the program could be scaled up to the

whole province, more patients would benefit from it." (Interview with Ms. Z 20210523)

Ms. Z then recommended the program to Professor H, the Deputy Provincial Governor overseeing health affairs. As a distinguished expert in engineering, he is an open-minded senior official and always receptive to novel knowledge. Ms. Z recalled her encounter with the Deputy Governor:

"Professor H is a modest leader. As the Deputy Governor, he is always willing to learn from subordinate colleagues and experts. I remember that he once had some questions related to my research area and invited me to give him a lecture in his office. I was a little nervous at the beginning. However, when I entered his office, Professor H greeted me and we shook hands. He said, 'You are a renowned expert in this area so I should seek enlightenment from you.' Professor H is so smart that he could quickly grasp what we were talking about, even when the topic was beyond his scope of expertise." (Interview with Ms. Z 20210523)

Knowing Professor H's open-mindedness, Ms. Z invited Mr. Y to introduce the Telemedicine Program to the Deputy Governor. The presenter used plain language to establish both the necessity and the feasibility of the reform, supported by statistical data and empirical evidence. For example, Mr. Y compared the ratio of qualified doctors in Guizhou with the national average to demonstrate the critical shortage of human resources in primary care. He also presented the prefectural number of physicians per thousand population as proof of the inequality in health care. Professor H quickly grasped the ideas conveyed by the mid-rank officials. He agreed that this reform could bring

benefits to millions local people and telemedicine would indeed have great value for Guizhou, given its harsh geography and the shortage of quality health resources.

In the end, Professor H wrote notes instructing provincial departments to do their best in the application for the national pilot. [28] In particular, all related departments were asked to cooperate with the two commissions in charge. Once again, Professor H showed his amiability; he allowed Mr. Y to directly report work to him, which is rather exceptional according to informal customs in China's government hierarchy. As Mr. Y remarked:

> "To be honest, as a chu-rank official, I have no right to meet the Deputy Governor directly. Yet, I was granted exceptional access to his office. Professor H is really an easy-going person. It is no exaggeration to say that I went to the Deputy Governor's office as frequently as I went to the garden in my own house." (Interview with Mr. Y 20201105)

Despite the unsupportive environment within the provincial health bureaucracy at the beginning, Mr. Y effectively carried the Telemedicine Program forward to more powerful arenas, where he obtained precious support from mid-rank officials of other departments and the provincial leader, who was enthusiastic about the reform. As illustrated below, these entrepreneurial strategies significantly changed the environment for the reform. Consequently, the implementational entrepreneurship was shifted from an "against the wind" mode, in which the entrepreneurial official was stifled by

[28] Deputy Director H. (March, 2015). *A Speech at the Provincial Working Conference on the National Pilot Scheme for Telemedicine (zai yuancheng yiliao shidian gongzuohui shang de jianghua).*

unsupportive external circumstances, to a "heading toward the destination" mode, where the conditions became favorable. Furthermore, the unfailing efforts of Mr. Y demonstrate that competent entrepreneurs can change their environment by skillfully adopting various strategies to initiate the shift from one implementational entrepreneurship mode to another.

5.3. Turning the tide (2014-2015)

In March 2014, the National Health Commission and the National Development and Reform Commission issued a notice, launching the National Pilot Scheme. Maintaining the technical framework prescribed in the 2010 Telemedicine Initiative, the National Pilot Scheme had three major differences (see Table 5.1). First, drawing lessons from the 2010 Telemedicine Initiative, the central authorities admitted that the development of telemedicine services in China faced "hurdles of insufficient policy provision".[29] Therefore, the national pilot program set the development of regulatory framework as a priority for the Telemedicine Program. Second, in the 2014 Pilot, the central government granted local governments greater room for discretion by requiring them to develop an action plan suitable for local conditions. Third, the central ministries instructed local authorities to ensure the interdepartmental coordination by establishing steering groups.

Apparently, by granting local governments with greater autonomy and instructing them to establishing steering groups, the central ministries endorsed the national pilots at the institutional level. Such a policy design further improved the external

[29] The National Health Commission and the National Development and Reform Commission. (March 25, 2014). *Notice on Arranging the National Pilot Scheme on Telemedicine,* available at http://www.gov.cn/xinwen/2014-03/25/content_2645258.htm, accessed on February 7, 2022.

circumstances of the reform in Guizhou, where the Ms. Z and Professor H had already provided unconditional support. As a result, the implementational entrepreneurs were enabled to work in a very favorable environment when applying for the National Pilot Scheme.

Table 5.1. The 2010 Initiative vs. the 2014 Pilot Scheme

	The 2010 Initiative	The 2014 Pilot Scheme
Priority works	The purpose of the initiative is to primarily build up a data center for telemedicine services.	The national pilots shall stress on the development of regulatory framework and gain experience for the scaling-up process in future.
Local discretion	The central government sets up technical parameters for the local authorities.	The central government grants greater room for local authorities to work out the action plan.
Steering group	No steering group is formed in the provincial government; within Guizhou Provincial Health Commission, there is a small steering group formed by two divisions.	Governments of pilot provinces should establish steering groups for the telemedicine program. Headed by the provincial leaders, the steering group takes the major responsibility for making major decisions.

Source: the Author

5.3.1. Formation of collective entrepreneurship

Changes in external environment significantly accelerated the formation of collective entrepreneurship, which is not rare in practice. Meijerink and Huitema (2010) describe two of its advantages in the policy process. First, actors coming from different arenas may draw on strategies from their respective fields, enabling collective entrepreneurship to influence the reform through diverse approaches. Second, participants may have different skills and capacities, irrespective of their positions. Therefore, the shortcomings of one implementational entrepreneur can be made up for by the complementary characteristics of others, creating a synergetic effect. While the individual role of Mr. Y was salient in the early stages of the application, collective

implementational entrepreneurship was formed later on when he was joined by two additional mid-rank officials, Ms. Z and Mr. W. Although Mr. W was the Director of Guizhou Health Commission between 2014 and 2018, he had neither a medical background nor prior work experience in the health sector before his inauguration. Limited in domain knowledge, he was not appreciative of the Telemedicine Program at the beginning. Yet, his mentality was gradually changed by Mr. Y, who linked telemedicine with other issues related to health informatics in Guizhou. During this process, Mr. W proved himself to be an open-minded senior official. Mr. Y recalled:

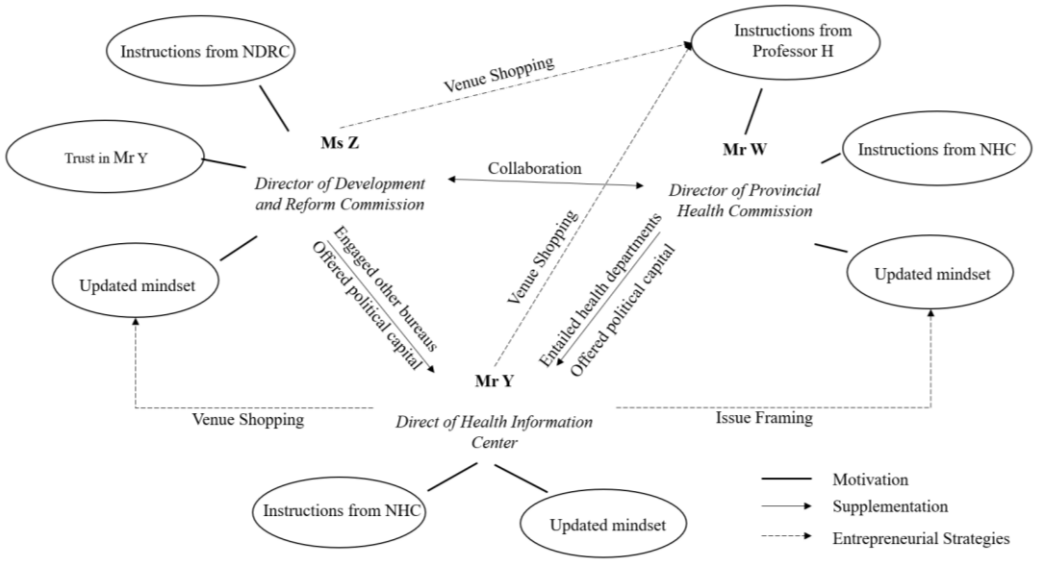
> "As the reform went on, Mr. W gradually adopted a supportive attitude to telemedicine and granted us with considerable autonomy to carry it out. In particular, he was impressed by my enthusiasm and commitment to the reform. Mr. W told me that he has no expertise in health care, but he now understood the potential value of telemedicine. If there is not potential in this program, I wouldn't have expended so much effort trying to persuade him. As a result, Mr. W said that he was willing to support it." (Interview with Mr. Y, 20201105)

Mr. W formally joined the collective entrepreneurship team in early 2011, after he was entrusted to co-lead the steering group. Since then, his endorsement has removed most of the hurdles encountered within the provincial health commission. Under Mr. W's instruction, a departmental steering group was established to strengthen division-level coordination. Unsurprisingly, he appointed the Health Information Center as the lead division, which placed Mr. Y at the center of steering the policy implementation. Furthermore, he granted Mr. Y with several privileges to ensure his continuous leadership in the Telemedicine Program. For example, the Health Information Center enjoyed

privileged access to various resources. In the meantime, Mr. Y and his team were exempted from performing other "key work". This significantly reduced their workload and allowed the team to concentrate on the Telemedicine Program.

Overall, the collective implementational entrepreneurship created a marked "chemistry" among the mid-rank officials involved. They were then able to complement each other in the coalition, facilitating the implementation process. The motivations, interactions, and complementary roles within the collective implementational entrepreneurship are illustrated in Figure 5.3. The newly forged collective entrepreneurship was soon engaged in working out an action plan and coordinating the fragmented bureaucracy.

Figure 5.3. Collective entrepreneurship of the Telemedicine Program



Source: the Author.

5.3.2. Social learning and professional networks

Although the National Development and Reform Commission and the National

Health and Family Planning Commission had identified several candidate regions, the number of national pilots was limited. The central ministries were to make the final decision, based on the feasibility of the action plans submitted by candidate regions. Therefore, Guizhou needed to draw up a high-quality proposal. In the meantime, drafting the action plan also provided implementational entrepreneurs a chance to operationalize the national guidelines. Yet, while mid-rank officials had gained considerable experience from the 2010 Telemedicine Program, they had not attempted to conduct such a program on a full scale at the provincial level. As a result, the implementational entrepreneurs did not have clear ideas about how to carry out the national pilot. Mr. Y's explanation epitomizes the vagueness the government officials were confronting:

> "When drafting the action plan, we did not have a clear idea about what the telemedicine network in Guizhou should look like. Some thoughts came to my peers and myself through extensive discussion, but they were too ambiguous to guide the operation. For example, although we knew that the government should encourage hospitals to use telemedicine, how exactly could we do that? More importantly, should we give priority to building up the administrative guidelines or to the installment of hardware and software? To be honest, we were 'crossing the river by feeling for the stones' at that time." (Interview with Mr. Y 20201105)

Learning was used as an effective strategy to cope with the pervasive ambiguity. This strategy can either help implementational entrepreneurs accumulate intellectual capital, or lead them to find an effective way to overcome hurdles. The implementational entrepreneurs in this case learned from three major sources during the process of formulating an action plan. They first learned from past experiences, especially the gains

and pains of the 2010 program. Recognizing the power of cloud computing in the pilots, Mr. Y reassured his colleagues that this technology was suitable for Guizhou and should be scaled up in the national pilot. In the meantime, the unpleasant ending of the 2010 program led them to realize that such a reform would not succeed with technology alone; a conducive policy framework is of utmost importance.

Site visits and information sharing served as other useful mechanisms for learning. Headed by Ms. Z, a research team visited Zhejiang and Xinjiang, two outperforming provinces in telemedicine. The trips turned out to be fruitful, as the implementational entrepreneurs gained a valuable understanding of the design of a pilot program. They also attended several briefing sessions hosted by the central ministries. For example, in one of the meetings in June 2014, central government officials advised local governments to establish a local regulatory framework before pursuing the installation of technology. [30] This advice usefully answered the puzzle faced by Mr. Y regarding why the 2010 attempt failed. He realized that a telemedicine program is by no means a form of technology installation per se, but involves a great deal of "connection work" that align all incentives and mechanisms in a coherent manner. In the end, the advice offered by the central ministries was set up as a key principle guiding the telemedicine innovation in Guizhou.

Fieldwork was the third source of learning for implementational entrepreneurs in this case. Although they knew that the poor transportation infrastructure inhibited communication between health service providers, they did not have an exact picture of

[30] CN-Healthcare. (December 4, 2017). Guizhou is Advanced in the Development of Telemedicine Services (*yunshang Guizhou zhulu yuancheng yiliao*), available at https://www.medsci.cn/article/show_article.do?id=480a122259b2, accessed on February 7, 2022.

the severity and scope of such problems, nor did they fully understand to what extent rural residents were in need of telemedicine, or the interest of hospitals in providing such services. Thus, Ms. Z asked provincial departments to do "homework" through several field trips. This fieldwork furnished the implementational entrepreneurs' abundant fresh observations of the difficult access to care faced by numerous rural residents, many of whom had to spend several days in Guiyang when unwell with catastrophic diseases. The rich empirical evidence collected during the course of the fieldwork was subsequently incorporated into the action plan:

> "In recent years, health services in Guizhou have made remarkable achievements, with assistance from the central government and sister provinces. However, the underdeveloped economy creates various problems at the local level, such as the big gap in hospital funding, poor health infrastructure, and the lack of qualified health professionals. All of these problems severely constrain the advancement of health care in Guizhou. In this context, doctors in Guizhou can seek guidance from leading medical experts by using telemedicine."[31]

Building up an intellectual coalition was another key strategy for implementational entrepreneurs to cope with the ambiguity and uncertainty of policy programs. The participation of scholars and practitioners can provide additional support and further strengthen the legitimacy of the reform. During the operationalization stage, the provincial government set up an advisory panel composed of leading scholars and senior hospital administrators. The panel reviewed the draft plan and offered useful

[31] Guizhou Development and Reform Commission and Guizhou Provincial Health Commission (May, 2014) *The Operational Protocol for the National Pilot of Telemedicine in Guizhou*.

feedback. For instance, Ms. J, a hospital administrator who participated in the 2010 Telemedicine Program, also sat on the advisory panel this time. She described the heated debate between advisors and government officials:

> "I was invited by Mr. Y to join the advisory panel in 2014. We held a number of meetings to fine-tune the draft plan. The government officials shared their thoughts about the provincial guidelines for telemedicine. They said the framework should be as detailed as possible. Otherwise, county hospitals may not know what to do unless explicit guidance is given. However, I knew this proposal would stifle creativity at the county level, even though it sounds reasonable. I met many smart people at prefectural and county hospitals. They wanted to promote the local development of health informatics and had innovative thoughts about how to do that. What they were expecting was merely an opportunity granted by the upper-level government. Therefore, I suggested the government officials leave considerable autonomy [in the plan] to hospitals. To dispel their concerns about the lack of capacity on the ground, I submitted a compromised proposal. That is, we could establish a loose policy framework, but still provide relatively detailed guidelines for the sake of smooth operation." (Interview with Ms. J 20210225)

Ms. J's suggestion was accepted in the end. Apparently, the advisory panel was not a matter of routine formality, put in place to simply endorse a plan that had already been decided; instead, it did actually help substantially in the proper operationalization of the plan. Echoing proposition #3, this part of case demonstrates how professional networks provide implementational entrepreneurs in China a useful tool for accumulating

valuable knowledge for operationalization.

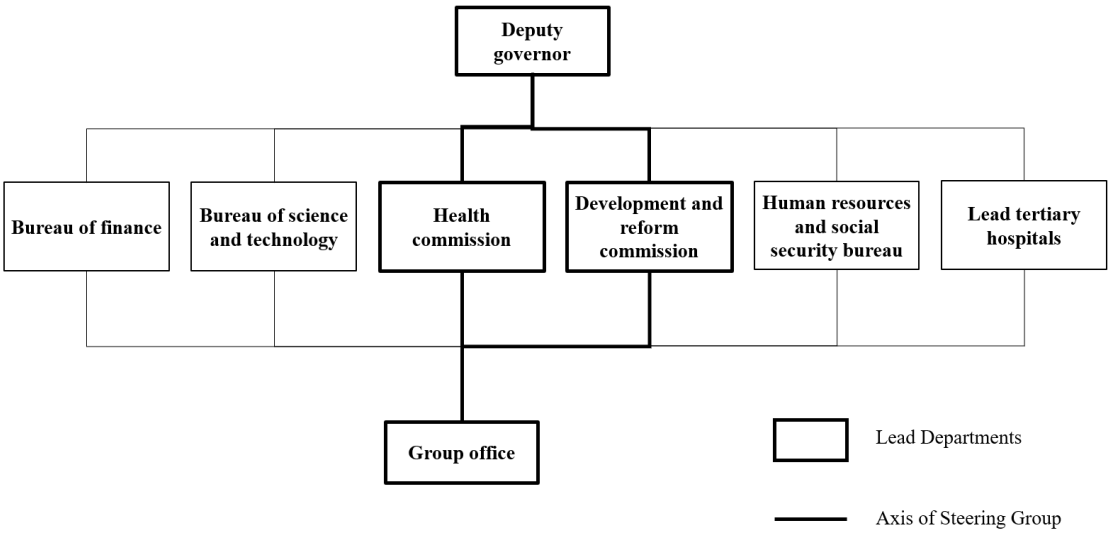
5.3.3. Using procedures to mitigate fragmentation

Bureaucratic fragmentation again became another hurdle at the operationalization stage. In particular, the development of administrative guidelines governing telemedicine entailed the participation of several provincial departments, which may have divergent views and interests in regard to this issue. For instance, the provincial social security department and the health commission held different opinions about whether telemedicine services should be included in the benefit package provided by social health insurance and to what extent individuals should be reimbursed for such services. Implementational entrepreneurs took advantage of bureaucratic organizations to enhance coordination. Following central instructions, the government of Guizhou launched a steering group in May 2014. Headed by Professor H, this interdisciplinary and interdepartmental team stands at the center of the reform. Figure 5.4 presents the structure of the steering group.

The steering group brought two major benefits to implementational entrepreneurship in regard to bureaucratic coordination. First, government officials from lead departments could assign necessary tasks to other agencies through the steering group. Therefore, it provided an efficient mechanism through which entrepreneurs could manage the implementation. Second, the steering group offered a mechanism through which to consolidate the same mindset across departmental directors. It worked as a useful platform for different parties to exchange opinions about the reform. Government officials were asked to formally explain the views of their respective departments and strengthen their arguments with supportive evidence. This was a useful way to mitigate

bureaucratic tension across government departments due to their respective sectoral interests, because participants at the meeting were able to deliberate in regard to the reform in a rational manner. Moreover, the group leader held the ultimate power over making final decisions. As a result, when different provincial departments held contradictory viewpoints, Ms. Z could submit the issue to Professor H and ask him to settle the debate. The result of this "arbitration" was usually binding; hence, this steering group enabled implementational entrepreneurs to cope with bureaucratic fragmentation more efficiently. Echoing Proposition #5, this part of case demonstrates how implementational entrepreneurs smartly use bureaucratic organizations as a procedural tool for enhancing interdepartmental coordination.

Figure 5.4. Structure of the steering group



Source: the Author.

In the end, the provincial government worked out an action plan in mid-2014, which integrated the central expectation of developing telemedicine within local contexts. The plan spelled out the necessity and urgency of telemedicine, as well as the use of cloud computing that would be involved, as mentioned above. This plan was assessed as

being feasible. For instance, experts from the PLAGH evaluated the action plan highly, stating that both the technical design and administrative framework envisioned by Guizhou were in accordance with their thoughts about the Telemedicine Program. Therefore, they recommended Guizhou's action plan to the National Development and Reform Commission, as it was far stronger than those by other candidate provinces (interview with Mr. Y 20201105).

5.4. Translating telemedicine into practice (2015–2018)

Its successful designation as the national pilot province reactivated Guizhou's pursuit of telemedicine innovation, at a faster pace and on a larger scale this time. Implementational entrepreneurs continued to play an active role in this process. The change in provincial leadership also accelerated the scaling-up process, as the new Governor was a health policy expert. Guizhou made remarkable achievements in developing a comprehensive health service delivery system within three years. This section first reviews the transformation that resulted from the shift in provincial leadership, and then presents how implementational entrepreneurs make use of favorable environments in scaling up.

5.4.1. The shift in provincial leadership

In October 2015, Dr. S was inaugurated as the new Governor of Guizhou province. As a veteran political leader, he had extensive work experience in both central and local authorities. During his earlier tenure as the Deputy Governor of Anhui province, Dr. S had launched an ambitious health care reform that was recognized by the central government. Much of the "Anhui experience" was subsequently scaled up to the rest of the country. As a result of his talent and achievements in health affairs, Dr. S was

appointed as the inaugural Director of the State Council Health Care Reform Office in 2010, and held this position until 2015. His office was the policy hub coordinating China's ambitious national health care reform.

As a distinguished expert, Dr. S was certainly aware of the value of telemedicine, especially in regard to integrating China's fragmented health service delivery system. Even before his arrival in Guizhou, Dr. S had already been an enthusiastic advocator of telemedicine when serving in the State Council Health Care Reform Office. In August 2015, just two months before he took office as the Governor in Guizhou, Dr. S attended an information session in Beijing, where he reiterated the significance of telemedicine. He stressed:

> "County hospitals provide services to more than nine hundred million people in China. They are hubs of the three-tier medical network. In the meantime, these lead hospitals in rural areas serve as the bridge between primary care and secondary as well as tertiary care. Therefore, local governments must pay attention to the reform of county hospitals. Specifically, local governments should strategically plan the distribution of medical resources and advance the integration of health services. In particular, health departments should explicitly define the roles of county hospitals, township health centers, and village clinics in terms of service delivery, and encourage cooperation between them. Furthermore, county hospitals should invest more resources in health informatics and use telemedicine technology to provide better services to patients in the countryside."

Being appointed as Provincial Governor offered Dr. S an excellent chance to translate his policy vision into practice. Soon after his arrival, he lifted the national pilot of telemedicine up to the "key health care reform task" of the entire provincial government.[32] This shift in provincial leadership significantly accelerated the reform progress. When meeting directors of provincial departments, Dr. S instructed them to accelerate county hospital reform. While the action plan regarding telemedicine expected the launch of a few pilots at township health centers first, Dr. S set an ambitious goal of including all primary care facilities in the Telemedicine Program. He also offered mid-rank officials a great deal of support. In his annual government work report delivered at the Provincial People's Congress, Dr. S underscored that the Telemedicine Program could improve the livelihoods of local people, placing it at the top of his work agenda.[33] The Governor instructed the provincial finance bureau to allocate an additional fund of 15 billion RMB to install necessary technologies. Mr. Y attributed the success of the Telemedicine Program to Dr. S's enthusiastic support:

> "Given Dr. S's leadership at the [National] Health Care Reform Office, he is an expert in this area [health policy] compared to his predecessor. He showed great passion for the reform soon after he took office. As Dr. S made the Telemedicine Program a high priority, local governments knew that they must gear up. As a result, it became easier for us to seek assistance from prefectural and county leaders. Moreover, after Dr. S became the Governor, fiscal investment in the program increased too. Even now [the time of the interview; 2020], it is still exceptional for a provincial government to invest such a huge amount of money

[32] Guizhou Daily. (December 29, 2018). Major Events of Guizhou in 2018: Milestones of the Telemedicine Program *(guizhousheng 2018 nian yuancheng yiliao dashiji)*, available at http://szb.gzrbs.com.cn/gzrb/gzrb/rb/20181229/Articel08003JQ.htm, accessed on June 15, 2020.
[33] Ibid

in health informatics. When we acquired both political and financial support, building an integrated health service delivery system became an easier task." (Interview with Mr. Y 20201105)

This view was shared by Ms. Z, who argued that the progress would have been much slower had Dr. S not been the Governor of Guizhou (interview with Ms. Z 20210523). The extraordinary enthusiasm of the Governor also inspired mid-rank officials to devote more efforts to the implementation. They wanted to seize this precious opportunity to translate the ambitious plan into practice. Several strategies were used to do so. Echoing proposition #3, this part of case demonstrates how professional networks provide implementational entrepreneurs in China a useful tool for accumulating valuable knowledge for operationalization.

5.4.2. Entrepreneurial strategies for accelerating the program

Notwithstanding the endorsement of the Governor, the implementational entrepreneurs still needed to cope with issues around ambiguity. In particular, there was no precedent in China of a provincial regulatory framework governing telemedicine. Vertical bureaucratic fragmentation also impeded the implementation of the program. The motivations of local governments and hospitals varied remarkably, with some gaining genuine momentum and others taking a rather passive stance. Mr. D's hospital belonged to the first category. His county hospital in Anshun was very keen to enhance their collaboration with other health facilities through ICT. Mr. D's explanation reflects the strong momentum of some hospitals in this program:

"The new technologies installed by the provincial health commission are not the

only form of telemedicine [doctors actually use]. Actually, doctors at lower-level facilities sometimes contact those at big hospitals through instant messaging or mobile apps. For instance, as early as the mid-2000s, doctors in my hospital had already learned how to send diagnostic images to their colleagues in Guiyang through multimedia messages, seeking their advice. You know, smartphones were not very common at that time. These informal relations demonstrate that the need for collaboration between different levels of hospitals has always been there. In 2015, we cooperated with several township health centers to develop an information system for online registration. Although the system soon lost its value, as WeChat launched a similar module, the experience reinforced hospital directors' appreciation of telemedicine. Therefore, when the provincial government launched the reform, we considered it to be a valuable opportunity for the hospital." (Interview with Mr. D 20210205)

In contrast, other local governments and hospitals regarded the reform as constituting an additional workload, and behaved passively as a result (interview with Ms. Z 20210523; interview with Mr. Y 20201105; interview with Mr. M 20201113). An official of the provincial health commission remarked during a meeting:

"Although the Telemedicine Program made remarkable progress, there are still several problems. Some local governments and hospital directors were not aware of the necessity and urgency of the reform. Therefore, they were reluctant to adopt this technological innovation. Some of them even tried to boycott this program. For example, some hospitals left the telemedicine equipment purchased by the *provincial government* unused. The sluggish implementation

severely impeded the reform process."[34]

This speech made by the provincial health official indicated considerable passivity at the county level. Clearly, although the fragmentation within the provincial government had been largely mitigated, the national pilot scheme was not fully coupled with local problem, policy, and political streams. Further entrepreneurial strategies became necessary at this stage, including small-scale pilots, the use of information devices, the exploitation of authority, and steering implementation via organizations.

Pilots provide implementational entrepreneurs with an effective tool to test the efficacy of policy solutions. In Guizhou, collective entrepreneurs initiated a series of small-scale pilots to try out various telemedicine models. For example, a trial run was launched across 69 hospitals to explore the optimal collaborative mechanisms between lead hospitals and county-level hospitals. In this experimental model, the provincial health commission was responsible for the purchase and installment of necessary technologies, whereas most telemedicine services were provided by county hospitals under the guidance of lead hospitals. Nested within the National Pilot, these small-scale pilot runs were used to improve the operability of the reform. They facilitated policy learning on the part of implementational entrepreneurs, as these mid-rank officials were able to solicit real-world lessons and recalibrate their policy plans. For example, Ms. J found out that hospital doctors had little incentive to practice telemedicine. Therefore, at an advisory meeting held by the Provincial Health and Family Commission, she proposed connecting doctors' performance in this regard to their career promotion:

---

[34] Deputy Director H. (March 22, 2016). *Accelerating Implementation of the Telemedicine Program in Guizhou by Defining Targets and Accountabilities: A Speech at the Provincial On-site Demonstration Conference in Zunyi (mingque mubiao, luoshi zeren: zai quansheng yuancheng yiliao fuwu tixi jianshe xianchang huiyi shang de jianghua).*

> "Monetary rewards alone could not effectively encourage doctors to provide a service. I considered how to improve the incentive system. After chatting with several doctors, I found they were more concerned about their career advancement. In 2016, I was invited to an advisory meeting held by the Guizhou Health and Family Planning Commission. In that session, I shared my observations and argued that the absence of effective incentives hampered the progress of the [telemedicine] reform. Furthermore, I suggested that doctors' performance in telemedicine services should be adopted as a necessary condition for awarding professional qualifications. The government officials accepted my proposal and wrote it into the administrative framework." (Interview with Ms. J 20210225)

This strategy indeed took effect. Mr. J noted that many doctors who used to be passive in regard to telemedicine services even asked her for more opportunities in practice. Furthermore, the small pilots facilitated learning across local health departments. Latecomers were able to draw useful lessons from pioneers. The provincial health commission selected outperforming counties and hospitals as models and invited their representatives to formally share their experiences in the peer network. Site visits were organized from time to time, through which the forerunners inspired and even coached latecomers. As such, the learning process accelerated implementation.

Once again, bureaucratic procedures played a pivotal role in championing policy implementation at the locality. Three types of procedural instruments were primarily used in this process: information devices, authority, and organizations. First, information

sessions and rankings were adopted by implementational entrepreneurs to nudge local officals performing better in policy implementation. Aside from facilitating collective learning, as noted above, information-sharing sessions also provided a useful channel for provincial principals to deliver instructions and communicate with local implementers. To encourage local championship, provincial supervisors morally persuaded implementers and aroused their awareness. *Ting*-rank officials tended to reiterate the significance of the reform by linking the local necessity with the ideologies of the CPC and national policies:

> "The 18th National Congress of the CPC raised an ambitious goal of creating a moderately prosperous society in all respects 全面建成小康社會 by 2020. In the meantime, the central authorities promised that the government would do their best to develop health informatics and improve the service quality of primary care. These proposals are in accordance with General Secretary Xi Jinping's announcement that the state will provide better health care to meet people's increasing demands. Launching the reform in telemedicine provides our province with an opportunity to translate these grand visions into practice. The 2009 Health Reform in particular underscored the significance of attaining integrated care. As a result, this program will bring benefits to local people. In recent years, Guizhou has made remarkable progress in the development of medical care, which has significantly improved people's health. However, the service delivery system in our province is still less developed in many respects. The national pilot provides us with a perfect opportunity to catch up to advancements in health care in other provinces as a late mover."[35]

[35] Professor H. (September 16, 2015). *A Speech at Provincial Conference on Implementation of the*

In contrast, conversations conducted by *chu*-rank officials were oriented by the need to resolve hurdles in practice. For example, to assuage hospitals' doubts about the Telemedicine Program, Mr. Y held a series of sessions and invited hospital administrators to voice their concerns about the operational protocol. On these occasions, Mr. Y patiently explained the reasons behind the decisions made, and frontline workers were encouraged to voice their opinions. Furthermore, he asked the attendants of information sessions to hold similar open discussions upon their return to their hospitals. These conversations forged shared perceptions about telemedicine services, and thereby improved vertical coordination between provincial departments and local implementers.

Ranking was another important procedural tool adopted by the implementational entrepreneurs. The Chinese administrative system has been adept at using such "naming and shaming" tools to encourage good policy implementation. To accelerate the construction of the telemedicine system at the township level, county health departments were asked to regularly report their work on a daily basis. Mr. Y was then able to gain a timely grasp of the process on the ground, and to benchmark the performance of the health departments based on the rankings. The results of rankings were released in a WeChat group consisting of local officials from all counties in Guizhou. County officials perceived a good ranking as a recognition from the provincial government (Interview with Mr. C 20220409; interview with Mr. X 20201121). In contrast, a poor ranking often ignited embarrassment on the part of county leaders that, in turn, could encourage greater efforts (communication with Dr. S; interview with Mr. Q 20200209; interview with Mr.

National Pilot Scheme of Telemedicine (zai quansheng yuancheng yiliao shidian gongzuo huiyi shang de jianghua).

Y 20201105).

Second, located at the middle echelon of the bureaucracy, implementational entrepreneurs held certain authority that enables them to catalyze the policy implementation process. Site supervision (督導) was employed as one important method for engaging local implementers. During site supervisions, provincial health officials attended prefectures or counties in-person, similar to a site visit, but focused on monitoring local implementation processes. The supervisors listened to the presentation of local work progress and checked pertinent administrative records. Furthermore, they traveled to hospitals and township health centers for onsite inspections. At the end of each site supervision, provincial health officials made comments about local implementation, providing guidance for frontline implementers. In this way, site supervision was combined with the learning process. Local implementers' enthusiasm for learning can be aroused as a result of site supervisions. For example, Ms. J remarked on the change in frontline staff members' attitudes toward learning brought about by a site supervision:

> "Mr. Y invited me to participate in a site supervision in late 2015, during which we found out that the reform had not achieved the desired progress. Some local governments and hospitals were not aware of the necessity and urgency of the program, so they were slow in terms of implementation. Others were unable to resolve problems encountered in practice. Next, I suggested Mr. Y let me give a lecture to the frontline staff. He agreed and invited me to organize a workshop. During the workshop, I was disappointed to see many attendants would rather play with their smartphones than listen to me. After that meeting, the provincial

health commission organized additional site supervisions. In 2016, Mr. Y asked me to organize another workshop. I was pleasantly surprised that the attendants were listening to my lecture carefully. Many of them even took photos of my presentation slides. They raised their hands during the session, asking me questions about how to resolve problems in practice." (Interview with Ms. J 20210225)

Accountability was another important authority-based mechanism. From 2016 to 2018, the provincial health commission included the performance of implemented telemedicine as a major indicator in performance appraisals of local governments.[36] This accountability system was further reinforced by the participation of prefectural and county leaders. As noted below, the firm endorsement of Dr. S granted provincial health officials access to ways of alleviating bureaucratic fragmentation between the health bureaucracy and local leaders. Provincial health officials could thereby raise local implementers' awareness by stressing their accountability to local leaders. Mr. Y's recollection epitomized this point:

"I was unsatisfied with the performance of the local health departments and hospitals. To make them aware of the issue, I told the attendants, 'We are accountable to the provincial leader, and you are accountable to prefectural and county leaders. This reform is priority work determined by the Governor and, therefore, we must accomplish it on schedule. If the progress is delayed, you will cause the prefectural mayor in your prefecture or the magistrate in your

[36] Guizhuo Health Commission. (March 1, 2017). *Guizhou Initiated the Program of Expanding Telemedicine to Township Health Centers* (*guizhou qidong xiangzhen weishengyuan yuancheng yiliao quanfugai xiangmu*), available at https://www.sohu.com/a/127600193_120967, accessed on August 18, 2022.

county to be criticized by the Provincial Government. You should think about the consequences afterward.' The next day, Mr. W gave another speech to the attendants. His words were even harsher than mine." (Interview with Mr. Y 20201105)

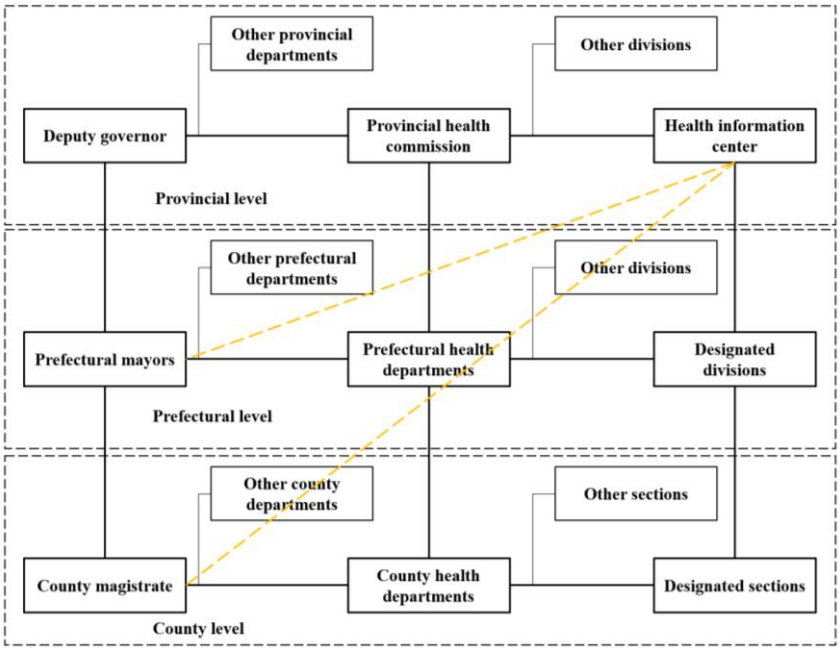
Third, steering groups play a pivotal network management role in accelerating the implementation process. After Dr. S positioned the Telemedicine Program as constituting priority work for the provincial government, prefectures and counties replicated the steering group for their governments, headed by local leaders and participated in by related departments. Prefectural and county health departments were selected as lead agencies. Forming an integrated framework of command, these steering groups granted officials of the provincial health commission privileged access to prefectural mayors and county magistrates (see the dashed line in Figure 5.5).

For example, the provincial health commission organized an implementation acceleration conference in Zunyi in 2016, during which Mr. W gave a speech to increase local health officials' awareness of the importance of telemedicine. Mr. Y also offered technical guidance on how to carry out the policy.[37] Later on, leaders of some prefectural governments also held similar meetings and instructed county magistrates and health officials to gear up. Ultimately, the implementational entrepreneurs were able to wield influence over county leaders through the command chain mentioned above. While this finding demonstrates how bureaucratic organizations acted as catalysts of implementational entrepreneurship, it further echoes the fourth proposition

[37] Affiliated Hospital of Zunyi Medical University. (March 22, 2016). *The on-site-visiting meeting of the telemedicine program in Guizhou was held in Zunyi (guizhousheng yuancheng yiliao fuwutixi jianshehui zai woyuan nongzhong zhaokai)*, available at https://www.zmuhospital.com/Article/Show.asp?id=7140., accessed on August 18, 2022.

in Chapter 2, as the entrepreneurs could even integrate the intrinsic bureaucratic fragmentation across both functional and territorial lines.

Figure 5.5. The network of steering groups



Source: the Author.

5.4.3. Policy outcomes

The three-year advancement in telemedicine enabled Guizhou to spearhead the process across provinces. It is the first region in China to expand telemedicine to all community and township health centers. At the same time, it also became a forerunner in establishing a provincial regulatory framework for the delivery of health services.[38] The telemedicine system has brought about remarkable benefits for numerous patients. According to official statistics, more than one million people were granted access to

[38] People's Government of Guizhou. (December 25, 2017). *Guizhou Held a Press Meeting on Progress of the Telemedicine Program (guizhousheng jvxing yuancheng yiliao quanfugai qingkuang fabuhui)*, available at http://www.scio.gov.cn/xwfbh/gssxwfbh/xwfbh/guizhou/Document/1614209/1614209.htm, accessed on June 17, 2022.

telemedicine services by 2019. In particular, more than one third of patients use the system to share diagnostic images with lead hospitals through the electronic system, greatly facilitating the provision of consultations and care.[39] Some observations from the frontline have reflected on the way in which the Telemedicine Program attained its original goal of improving the service capacity for primary care. For example, Mr. D, the administrator of a county hospital in Anshun, described the transformation brought about by the Telemedicine Program:

> "Telemedicine now has improved collaboration across different levels of the health system. The video conferencing function was tremendously helpful in our COVID-19 response. Telemedicine is frequently used to share medical images, especially between lead hospitals and township health centers. It helps us build a close connection with the [township] health centers, which are now more willing to refer patients to hospitals." (Interview with Mr. D 20210205)

This view was shared by Mr. M, a government official from a county in Liupanshui. He underscored the important role of telemedicine in improving the quality of primary care:

> "Since the telemedicine system was built up in my county, the service capacity of both county hospitals and primary centers has significantly improved. At the county level, the telemedicine system enabled lead hospitals to transfer [lab]

[39] People's Government of Guizhou. (December 6, 2019). *Guizhou Held a Press Meeting on Achievements of the Telemedicine Program (guizhousheng jvxing "jiankang guizhou, wei renmin baojia huhang fabuhui")*, available at http://www.scio.gov.cn/xwfbh/gssxwfbh/xwfbh/guizhou/Document/1669677/1669677.htm, accessed on June 17, 2022.

sample data to doctors at provincial hubs or even lead hospitals in coastal provinces, seeking their advice. As for primary care, telemedicine brings about benefits in two respects. First, it offers an excellent chance for township health centers to update the information infrastructure. Second, it improves the quality of primary care. After primary care doctors finish the medical imaging of patients, they can immediately send it to lead hospitals with the primary diagnosis. Then, specialists [in the cities] can review the results and give feedback, in which they highlight pathology that may have been overlooked. In the next encounter, primary care doctors will pay more attention when coming across similar cases. This interaction helps primary care staff strengthen their professional skills. The notable decrease in malpractice cases in our county provides a convincing piece of evidence for its success. We used to receive quite a few malpractice complaints about primary care but, in recent years, this hasn't happened." (Interview with Mr. M 20201113)

Guizhou's Telemedicine Program is generously recognized by the central government as a national model. The National Health Commission organized an onsite demonstration conference in the city of Zunyi, inviting officials from other local health departments to learn from the Guizhou experience.[40] Professor Ma Xiaowei, Minister of Health, offered recognition of the achievements made by Guizhou at the National People's Congress in 2019:

"Integrating the fragmented health service delivery system is a crucial mission of the 2009 National Health Care Reform. China's health care reform will not

[40] See Footnote 37

> be successful unless an integrated health service system is built up. Developing health information technology is an effective tool for doing so. Telemedicine is one of the information technologies adopted in the health sector. This technological innovation makes a great contribution to rebalancing the distribution of medical resources and improving the quality of primary care. At present, most provincial lead hospitals have launched telemedicine services, serving patients in impoverished regions. Some provinces, such as Guizhou, have even extended the system to the village level, granting all residents access to high-quality health services. I am impressed by their remarkable progress, because these provinces have accomplished goals that the National Health Commission pursued for many years but failed to achieve in the end."[41]

Basically, the Telemedicine Program in Guizhou proved to be successful. In addition, the implementation process indicated that this achievement would not have been possible without the series of entrepreneurial activities carried out by mid-rank officials. These implementational entrepreneurs not only adopted strategies to change the unfavorable environment, but also made good use of opportunities to engage various actors closely in the implementation process. They adeptly coupled the three local streams with the national policy and opened a new local window for significant progress that eventually benefited millions of people in a poor province. As such, this case reinforces propositions regarding causal mechanisms between entrepreneurial traits, external environment, entrepreneurial strategies, and the effectiveness of implementational entrepreneurship.

---

[41] See Chinanews. (March 8, 2019). *Ma Xiaowei: The Achievement in Integrated Care Marks the Success of Health Reform in China (Ma Xiaowei: fenji zhenliao shixian zhiri, shi zhongguo yiliao tizhi gaige chenggong zhishi)*, available at https://www.chinanews.com.cn/gn/shipin/cns/2019/03-08/news806731.shtml, accessed on June 15, 2020.

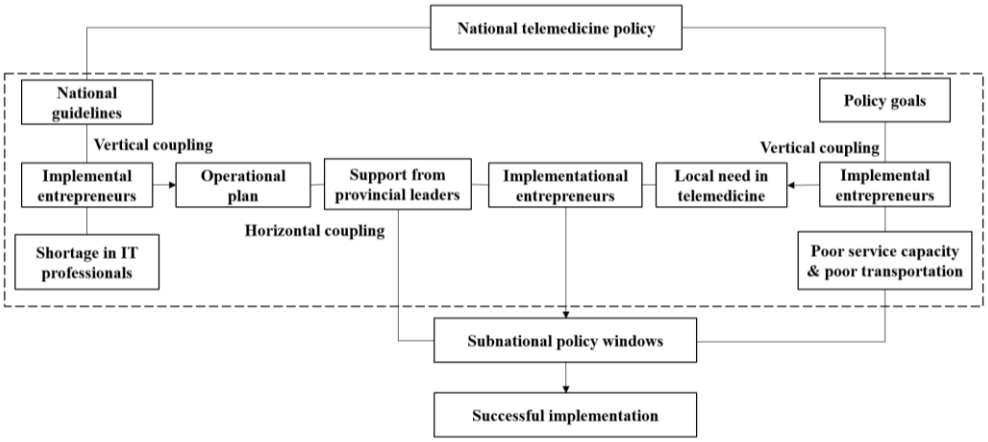
5.5. Summary

By investigating the Telemedicine Program in Guizhou, this chapter examines how implementational entrepreneurship acts as a catalyst for policy implementation in China. This case study finds that, motivated by a variety of incentives, implementational entrepreneurs in China are willing to use aggressive strategies and devote themselves to putting central policies into local practice. These salient attributes distinguish them from rank-and-file technocrats. Huang and Chen (2020) argued that the innovation activities of street-level bureaucrats stem from the interaction of multiple motives, and empirical evidence in this study further shows that this conclusion is similarly applicable to the implementational entrepreneurship of mid-rank officials. Despite the variety of incentives, implementational entrepreneurs in the Telemedicine Program presented a genuine intention for "making contributions" to their hometown. This observation echoes Teets and Hasmath (2020)' argument that the desire to enhance local good governance often serves as the primary incentive for local officials in China to carry out innovations. Holding a stance of accelerating policy implementation, these officials are willing to use aggressive strategies and devote themselves to putting central policies into local practice. These salient attributes distinguish them from rank-and-file technocrats.

Proposition #1 in this dissertation underlines the importance of coupling national policies with local policy, problem and political streams for successful implementation. This case study indicates how implementational entrepreneurship plays a significant intermediate role in linking policy-makers with frontline implementers (see Figure 5.6). In the Telemedicine Program, local technocrats in health informatics combined their domain knowledge with frontline know-how, and smartly used their expertise to translate the broad central guidelines into operationalizable specifications. In the meantime, while

the failure of 2010 Initiative stemmed from decoupling of national policies with local problem and political streams, the success of the National Pilot Scheme presented how mid-rank entrepreneurs accelerate the implementation by refreshing mindset of local actors, aligning their perspectives with national strategic objectives, and coordinating the fragmented bureaucracy.

Figure 5.6. The role of implementational entrepreneurship in telemedicine reform



Source: the Author.

Moreover, this case study demonstrates how “small” policy windows open at the local level (e.g. Exworthy and Powell, 2004; Oborn, et al., 2011; He, 2018). Although these subnational policy windows were rooted in local problem or political streams, local political windows (e.g. the shift of provincial leadership) appeared to play a more crucial role in catalyzing policy implementation. Given the short duration of political windows, implementational entrepreneurs must timely seize the opportunities and gain support from powerful policy actors.

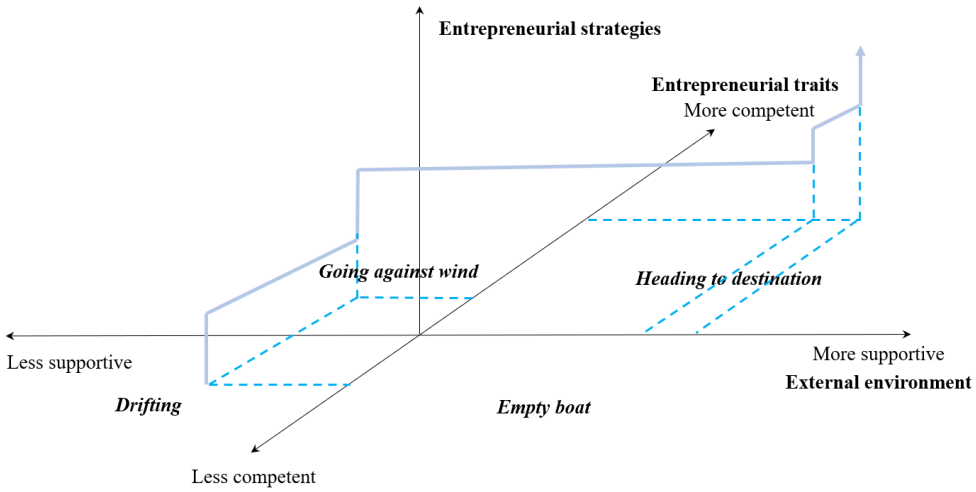
Situated between 2010 and 2018, this case study also presents an evolving process of implementational entrepreneurship and explores the causal dynamics

underlying it (see Figure 5.7). Despite their expertise in regard to professional knowledge, it appears that Mr. Y lacked strong commitment and political acuity in the 2010 Telemedicine Initiative. Perhaps as a result, this initiative received less support from the external environment, resulting in the policy's failure. However, his participation in the program gradually changed Mr. Y's mindset, and he became motivated to play a more entrepreneurial role in policy implementation. Strong opposition within the health bureaucracy prevented implementational entrepreneurs from attaining their ambitious goals. Therefore, these enthusiastic implementers had to put forward the program "against the wind". This study reinforces He's (2018) observation regarding local policy entrepreneurship; the fragmentation within the bureaucracy in China offered implementational entrepreneurs ample room to build coalitions. The newly forged collective entrepreneurship demonstrated outstanding characteristics of tenacity, persistence, and political acuity. The implementational entrepreneurs successfully obtained political endorsements from provincial leaders. With unconditional support from critical policy actors, the Telemedicine Program ultimately continued smoothly. In this way, this case study sheds light on how entrepreneurial traits and external environment jointly influence implementational entrepreneurship.

The effective adoption of entrepreneurial strategies resulted in the development of implementational entrepreneurship. This case study highlights three crucial strategies in this respect. First, learning is vital for amassing the intellectual capital necessary for successful implementation, which strengthens implementational entrepreneurs' policy acuity and ability in regard to operationalization. This finding is in line with previous studies that underscore the significance of learning to foster local innovation (see Teets and Hasmath, 2020; Teets et al., 2017; Ma, 2017). Furthermore, this case study sheds

fresh light on the way in which, through strengthening mid-rank officials' appreciation of the value of reform, learning can also increase mid-rank officials' devotion to policy implementation. Consequently, learning enables competent implementational entrepreneurs to accelerate local innovation, thus increasing the likelihood of reform success on the ground. In addition, the empirical findings cohere previous studies, which underscored that learning of implementational entrepreneurs usually take place through professional networks comprising professionals from both inside and outside of the government (Teets and Hasmath, 2020; Teets et al., 2017). For example, while workshops held by the central ministries changed the technocratic mindset of the mid-rank officials, feedback from hospital administrators provided valuable information about the practice.

Figure 5.7. The development of entrepreneurship (Telemedicine Program)



Source: the Author.

Second, when confronting fierce opposition in an old arena, venue shopping provides an effective tool for implementational entrepreneurs to use to make breakthroughs in terms of collaboration. In particular, the Telemedicine Program in Guizhou provides an example of "upward" venue shopping, in which entrepreneurs promote the policy to their political principals. As can be seen in this case study,

intervention from higher parts of the hierarchy can lead to a change in the "direction of the wind", thereby clearing hurdles that previously impeded policy implementation. Third, this case study indicates that, positioned within the technocratic echelon in the local government, implementational entrepreneurs in China rely on a multiplicity of procedural policy instruments to catalyze policy implementation. These tools largely fit into Bali and colleagues' (2021) categories, whereas information devices, authority, and bureaucratic organizations play a significant role in specifically putting the Telemedicine Program into practice in this case study. As noted above, meetings, work reports, and other mechanisms offer implementational entrepreneurs effective tools with which to disseminate their ideas, communicate with other policy actors, and nudge frontline implementers to perform better. Moreover, the Telemedicine Program in Guizhou highlights ranking as a typical tool in China based on the "naming and shaming" mechanism. Some authority-based instruments, especially written comments, can also provide legitimacy for entrepreneurial activities. Implementational entrepreneurs can use the accountability system to create stronger incentives for local officials. In terms of bureaucratic organizations, the steering group consolidates administrative authorities and places the provincial department at the center of the policy network. This institutional arrangement enables implementational entrepreneurs to better engage stakeholders and realign the interests of both the health bureaucracy and leadership at different layers of governance.

Chapter 6. The Implementation of County Medical Alliance Reform in Guizhou

This chapter presents the case of the County Medical Alliance Reform in Guizhou province in a chronological manner. Compared with the Telemedicine Program, the County Medical Alliance Reform was pursued through both bottom-up and top-down approaches. From 2016 to 2019, some counties commenced the reform as local initiatives, without explicit central or provincial instructions, and soon became pioneers in Guizhou. In the meantime, little effort was exerted in regard to policies within the provincial government until the National Health Commission announced a nationwide policy in 2019, which encouraged the wider establishment of medical alliances across China. The timeline of Guizhou's Medical Alliance Reform is illustrated in Figure 6.1.

Figure 6.1. The timeline of medical alliance reform

Source: the Author.

The process portrayed above indicates the coexistence of two types of implementational entrepreneurship in the reform, including that of both street-level

bureaucrats in the county health department and mid-rank officials in the provincial health commission. Each type of entrepreneurial officials took a leading role in the respective phases of the reform. The first section of this chapter analyzes how implementational entrepreneurs carried out local experimentation in regard to establishing medical alliances in the county of Liuzhi before 2019. The second section illustrates how implementational entrepreneurs in the Guizhou Provincial Health Commission pushed forward policy implementation after national policy was released.

6.1. Setting up pilots in Liuzhi (2016-2018)

Located in the west of Guizhou province, Liuzhi is a county under the administrative jurisdiction of Liupanshui, a prefectural city. Covering an area of about 1,800 square kilometers, Liuzhi had a population of 536,873 in 2020, two thirds of whom live in the countryside. Elderly people account for more than 20% of the local population, imposing the increasing pressure of an aging population on both the health care system and local finance.[42] These demographic characteristics are associated with increasing demands for primary care. Unfortunately, Liuzhi suffers from a remarkable shortage of medical resources. A research report prepared by the Liuzhi Health Department in 2010 noted the limited service capacity at the level of primary care:

> "The decrease of revenue in township health centers resulted in a shortage of qualified doctors in Liuzhi. Approximately 84% of doctors at township health centers do not have a bachelor's degree (in 2009). Moreover, merely 7% of

[42] Liuzhi Statistic Bureau. (2021). *Bulletin on the 7th Demographic Census in Liuzhi County (liuzhi tequ diqici renkou pucha gongbao)*, available at https://www.liuzhi.gov.cn/newsite/zwgk_5753282/zfxxgk/fdzdgknr_5759066/tjxx_5759073/tjgb_5759075/202106/t20210617_68583572.html#:~:text=%E5%85%A8%E5%8C%BA%E5%B8%B8%E4%BD%8F%E4%BA%BA%E5%8F%A3%E4%B8%BA536873%E4%BA%BA%EMean3%80%82, accessed on June 20, 2022.

> health workers at primary care facilities hold middle- or senior-rank professional qualifications. Furthermore, there are barely 0.56 doctors per one thousand people in rural areas, which is far lower than the national criteria of 0.8 to 1.4 doctors per thousand people. At the same time, although the infrastructure at the level of primary care has been remarkably improved since 2006, diagnostic equipment remains outdated. About one third of the township health centers still rely on stethoscopes, sphygmomanometers, and thermometers. Lacking professional training, doctors at township centers are prone to errors in diagnosis and treatment. In addition, aside from treating minor diseases, about 60% of township health centers in Liuzhi are unable to perform surgeries, which prevents people from receiving good health services."[43]

In addition, the poor capacity of township health centers further reduces access to quality health services for numerous local residents. Mr. X, a section chief of the Liuzhi Health Department, recalled the poor conditions before the reform:

> "Before the county government launched the Medical Alliance Reform, access to care was limited and the problem of medical impoverishment was rather widespread. Most health centers lacked the capacity to provide basic services and villagers did not trust them. Therefore, patients had to travel to county lead hospitals for proper treatment. They spent a lot of money on both travel and accommodation. As a local saying goes, 'Calling an ambulance service exhausts your savings earned from raising a pig'. Therefore, rural residents often had to

[43] Liuizhi Health Department. (2010). *Survey and Thoughts on Development of Health Care in Rural Areas in Liuzhi (guanyu liuzhi tequ nongcun gonggong weisheng tixi jianshe de diaocha he sikao)*, available at http://jjyj.gzlps.gov.cn/jjyj/2010nd4q/dybg_50099/201705/t20170510_12825415.html, accessed on June 20, 2022.

delay necessary treatment in order to save for hospital expenses." (Interview with Mr. X 20201021)

These health care issues captured attention of street-level entrepreneurs. Mr. C, Deputy Director of the Liuzhi Health Department, determined to change this grave situation. As a native of Liuzhi, Mr. C graduated from a medical school in Guiyang, and then returned to his hometown, working in the county health department for decades before his appointment as the deputy director. His rotation around various administrative offices within the department equipped him with a deep understanding of local health management, and made him a versatile official. Although Mr. C certainly understood the importance of a strong primary care system in addressing the local health care problems, he realized that the Health Department itself did not have the capacity to do so:

"I wanted to help the health centers, but I have little professional knowledge of medicine. I can neither tell them how to read electrocardiographs, nor teach them how to improve their clinical skills. Even if I were a medical professor, it would be unrealistic for me to visit the centers one by one. Therefore, I was thinking about asking county hospitals to provide guidance, as they are more professional. However, lead hospitals in our county had few connections with township health centers; they were even competing with each other for patients. The competition between hospitals and health centers actually further weakened primary care, as the hospitals used higher salaries to attract qualified doctors away from the latter. In this context, I was considering engaging the two parties together." (Interview with Mr. C 20220409)

As a result, after his appointment as the Deputy Director, Mr. C planned to explore an effective tool to rebuild cooperation between county and township health facilities after his appointment. A provincial directive on primary care issued in 2016 gave him some direction. Mirroring policy expectation of the central government[44], this plan encouraged local governments to establish collaborative mechanisms based on shared resources. The plan also suggested medical alliances as a promising model for the integration of health service delivery.[45] Under these circumstances, Mr. C decided to take several entrepreneurial strategies to engage the initiative of medical alliances for the local government's agenda and put it on the ground.

Similar to implementational entrepreneurs in the Telemedicine Program, his experience of working in the government taught Mr. C the importance of local leaders' support for reforms. Therefore, he submitted an initial proposal to county government leaders in late 2016, seeking endorsement. Being familiar with the field is a defining characteristic of street-level entrepreneurs (Lavee and Cohen, 2019), Mr. C's offered a good example of how they smartly use the frontline know-how in issue framing. When proposing the County Medical Alliance Reform for the government's agenda, Mr. C shared his observations in the practice and highlighted that the limited capacity of township health centers was a major factor contributing to the expensive access to care and medical impoverishment. He supported this view through concrete evidence:

"I went to the county leaders' office and tried to convince them to support the

[44] Office of State Council. (March 6, 2015). *Outline of National Plan for Health Care: 2015-2020 (quanguo weisheng fuwu tixi guihua gangyao: 2015-2020)*, available at http://www.gov.cn/zhengce/content/2015-03/30/content_9560.htm, accessed on August 28, 2022.
[45] Office of People's Government of Guizhou. (October 8, 2016). *The Three-Year Plan for Improving Service Capacity of Primary Care in Guizhou*: *2016-2018 (guizhousheng jiceng yiliao weisheng fuwu nengli sannian tisheng jihua: 2016-2018)*.

proposal. I even calculated the average medical bill of patients to demonstrate the inefficiency of the health service system. If a patient decided to seek care from county hospitals rather than township centers, he or she should be escorted by at least two other family members on the trip. Three of them need to spend 180 yuan on transport. If the patient is lucky enough to get an empty hospital bed, companion family members still need to stay in hotels. Even the most economical accommodation would cost them 80 yuan per day. Meanwhile, they would have to spend a minimum of 90 yuan on meals. Moreover, the income loss due to leave should also be taken into account. For an ordinary family living in the countryside, this is a huge expense. As I explained these reasons behind the vast medical impoverishment in our country, I told the leaders that launching the Medical Alliance Reform could mitigate these problems." (Interview with Mr. C 20220409)

The county leaders were convinced. Although they had no prior knowledge about care integration, Mr. C's explanation made them believe that the reform was a promising endeavor on which to embark. What impressed them most was the potential effect of the reform on poverty alleviation. This was a particularly salient issue in poverty-stricken Guizhou and, more importantly, the CPC Central Committee was committed to eradicating absolute poverty in China by 2020 and a national campaign was underway. Addressing poverty was high on local governments' agendas across the province. Given that medical impoverishment was the principal cause of poverty in Liuzhi, local leaders naturally appreciated the proposal of medical alliances as a promising way to solve this longstanding problem.

6.1.2. Forging collective entrepreneurship

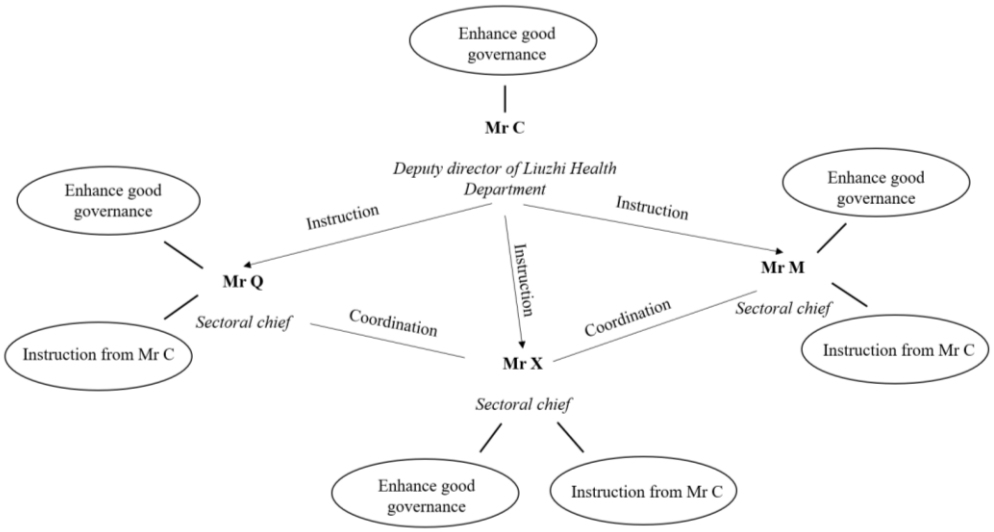
As discussed in Chapter 5, collective entrepreneurship is crucial to successful reform, because multiple members can forge a "battle squad" by leveraging their respective resources and skills. Collective entrepreneurship in the Liuzhi Reform was forged by technocrats from the local health department. As the Deputy Director, Mr. C took advantage of his acquaintance with other officials when forming his reform team. Having worked together at the NCMS office, Mr. C found that Ms. Q was a reliable colleague with whom to work. Therefore, he recommended she draft the action plan. Some other officials had worked at health centers for a long time, and they were familiar with the primary care system; they were invited to join the team too. The team membership was expanded to include officials beyond the health sector, as they were able to complement existing members in their own ways. Mr. X, an executive of the local CPC Propaganda Department was also invited to be a core member of the reform team:

> "When Mr. C invited me to join this reform, I was an absolute rookie in the health care domain. I learned everything from my new colleagues. During the reform, I found coordination to be the most important aspect of building up a medical alliance. You need to frequently communicate with hospital directors, administrators, and officials from other departments and seek their support. Therefore, I used my previous experience of communication. Later on, I also made my own contribution to the reform. Mr. C knew I was a good writer. Therefore, he asked me to draft publicity materials. Then, I started to promote the reform through mass media. Moreover, my previous work in the Propaganda Department had enabled me to make friends with some journalists. I invited them here to Liuzhi to report on our reform. Some of these reports appeared in

mainstream provincial media later on." (Interview with Mr. X 20201021)

Mr. X's experience illustrates how individuals used their skills and resources to contribute to policy implementation as a group (see Figure 6.2). While most officials followed Mr. C's leadership, they were also motivated by the desire to help local people. With extensive work experience on the frontline, these street-level officials had genuine sympathy for the underprivileged and an understanding of medical impoverishment. They wanted to make a change. As analyzed below, the engagement of enthusiastic and competent implementational entrepreneurs in the reform acted as a critical factor leading to its success.

Figure 6.2. Collective entrepreneurship in Liuzhi



Source: the Author.

6.1.3. Entrepreneurial strategies for launching the pilot

Notwithstanding the political support granted by local leaders, Mr. C still faced two major challenges. First, because no sister localities in Guizhou had ever carried out medical alliance reforms or other reforms of this sort, there was virtually no precedent to

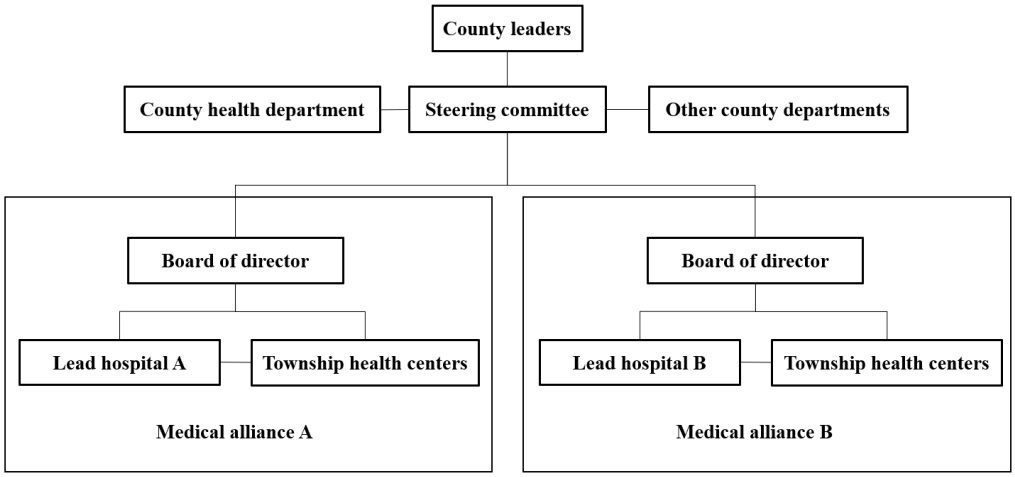
which he could refer. Second, the lack of references cast serious doubt on the feasibility of the reform program. The Tianchang model emerged as a key source of learning for Mr. C. As indicated in Chapter 4, Tianchang has been an outperformer in terms of integrating health services. While the lack of incentive was the key hurdle to cooperation between health care providers, the Tianchang model overcame this deep-seated problem through systemic policy change. In its reform, a medical alliance was formed by bringing together a major lead hospital and several satellite township facilities. Within the conglomeration, all health service providers work based on a high degree of synergy in both organizational structure and actual operation. This successful reform has been widely recognized as a key policy "template" for local health policy reformers in China, particularly those in less developed regions.

Keen to learn from the Tianchang model, Mr. C led an official delegation to visit Tianchang at the end of 2016. They met local officials and visited the medical alliance there. Members of the Liuzhi delegation were impressed by the reform in terms of both policy design and outcomes. This trip greatly broadened their horizons. The Tianchang model enlightened Mr. C and his colleagues about how to restructure the governance of hospitals and strengthen connections between lead hospitals and township health centers.

In the new governance system (see Figure 6.3), the two health conglomerations are placed under the leadership of the same steering committee, which is formed by county leaders, health department officials, and representatives of other stakeholders. The steering committee not only provides a platform to enhance horizontal coordination between local government departments, but also acts as the steward of the local health system. The committee enjoys a broad level of power in terms of hospital funding,

appointment decisions regarding hospital directors, major investments, and planning. The board of directors is granted managerial autonomy in day-to-day operations. This reengineered structure led to a clear separation between regulation and administration in health care.

Figure 6.3. The governance structure of medical alliances in Liuzhi



Source: the Author.

Mr. C's previous appointment at the NCMS Office of the Health Department made him aware of the role that social health insurance can play in the integration process. He modified the Tianchang model in several respects, based on local circumstances. For example, while both Tianchang and Liuzhi fund medical alliances through global budgets, Liuzhi offers health facilities greater autonomy in allocating the fund surplus. The financial autonomy realigned providers' incentives. Health facilities in Liuzhi's medical alliances have stronger motivation to deliver services in a more cost-efficient way.

Later on, Mr. C and his team submitted a policy memo to county leaders after their trip to Tianchang. The county magistrate was convinced that undergoing a similar reform in Liuzhi was feasible. Furthermore, the county leaders appreciated Mr. C's

suggestion in regard to modifying the Tianchang model. The policy deliberation eventually led to the official launch of the Medical Alliance Reform in Liuzhi in March 2017. Echoing Proposition #2, this part of the case demonstrates how implementational entrepreneurs take advantage of the professional networks to improve their skills for coping with ambiguity in policy implementation.

Smartly using bureaucratic procedures is another important type of strategies adopted by street-level entrepreneurs in Liuzhi for catalyzing the reform. In March 2017, the county government officially launched the Medical Alliance Reform and assigned the health commission to lead the process. Similar to their mid-rank counterparts in the telemedicine case, implementational entrepreneurs in Liuzhi faced many challenges in regard to coordination, despite the political support gained from local leaders. First, most county hospitals considered the reform as increasing their workload without substantial benefits. Furthermore, with the same administrative rank, hospital directors were reluctant to follow Mr. C's instructions. In order to facilitate integrated administration with the medical alliance, doctors and hospital administrators were instructed to take up the directorship of township health centers. However, most of them declined the appointment due to the poor living conditions in the countryside. Second, the reform was fiercely opposed by township centers, which would have to hand over the control of their revenues to the medical alliance. The reform was therefore seen as being detrimental to their financial autonomy because the new rules required township centers to submit all revenues to the medical alliance for centralized reallocation. Third, township governments were concerned about their loss of control over health centers. As a result, they also adopted a lukewarm, if not entirely negative, stance toward the reform.

No major stakeholder was supportive of the reform. Trapped in such a difficult situation, implementational entrepreneurs demonstrated remarkable persistence to soften resistance, moving the reform forward by using three types of procedural policy instruments. First, information-based procedures provided a mechanism for implementational entrepreneurs to extensively engaging stakeholders and changing their mindsets. Several rounds of meetings were organized, to which Mr. C invited county government leaders. Mr. C remarked:

> "The two lead hospitals were instructed to send doctors and administrators to township health centers. In the meantime, they needed to pay duty trip allowances to these staff members. However, as the medical alliance had only just been launched, very few tangible benefits had materialized. Therefore, hospitals were reluctant to carry on. In this context, I invited county government leaders to communicate with the hospitals. At one of the meetings, the county magistrate promised to offer additional subsidies to hospitals. He also told the directors that the medical alliance could effectively resolve the problem of medical impoverishment and thereby serve the interests of the local people. As government employees and party members, we should overcome all difficulties in the implementation of this reform." (Interview with Mr. C 20220409)

This speech elevated the significance of the reform to a political and moral high ground, over which few stakeholders could possibly cast doubt. This political mobilization was effective. Hospital directors gradually shifted their mindsets, knowing that their career advancement was ultimately determined by local government leaders. The ensuing years saw greater efforts expended by lead hospitals in the reform. A similar

strategy was employed to boost the momentum of doctors and administrators who were "sent down" to the grassroots.

> "Doctors from county hospitals were appointed as directors of township centers, but some of them could not stand the poor living conditions there. They expressed a strong desire to return. Many of them said they would rather perform operations in their urban hospitals than take the directorship. I organized informal meetings with these doctors, telling them that taking office at the health centers was an unusual but worthwhile experience. Furthermore, as party members, they should honor their promise of serving the people. If they did not take the positions offered, their career prospects might be negatively affected." (Interview with Mr. X 20201021)

The reluctance gradually diminished, as both "carrots" and "sticks" had been explicitly presented to these health workers. The reluctant doctors shifted their mindsets after the conversations, as they were aware of the negative consequences of poor performance. As they presented an increasingly keen interest, the doctors worked hard to promote the development of the health centers as directors. In the midst of this process, they established acquaintances and even friendships with the medical staff, which stimulated the reform process. Ms. CX, a medical specialist sent down to the township health center, shared her observations regarding the changing relationships with local doctors:

> "I was appointed as the Deputy Director of a township center in Luobie in 2017. As a specialist from a secondary hospital, I wanted to help local doctors to

improve their medical skills by teaching them standard clinical procedures. However, my proposal received fierce resistance, because local doctors thought that the standardization of medical procedures imposed too many requirements and increased their workload. Furthermore, we did not know each other's characters. Therefore, we had arguments in the early stages. However, after working together for a period of time, we became gradually familiar with each other. More importantly, the improved quality of health services notably increased the volume of outpatient visits at the township health center, and increased the incomes of medical staff. These remarkable achievements changed local doctors' attitudes and significantly improved our relationships. At present, we are like a family—we send greeting messages to each other on holidays and have dinner together occasionally. Moreover, when they want to refer patients to our hospital, the doctors at the township centers just need to give me a phone call." (Interview with Ms. CX 20220819)

Stakeholder engagement was further strengthened through transparency and collective learning and competition. The implementational entrepreneurs held quarterly meetings to update colleagues and staff members about the progress achieved and problems encountered. Directors of the two medical alliances were also invited to report to county government leaders, who would offer comments on their work. As such, the regular meetings not only offered a platform for sharing experiences, but the two medical alliances were also able to set benchmarks with each other, which in turn encouraged them to improve their performance. In this way, these meetings essentially served the purpose of "nudging".

A defining characteristic of implementational entrepreneurs is their lack of resources (Cohen and Aviram, 2020; Aviram et al., 2018). As bureaucrats sitting at the bottom of the hierarchy, they need to seize every available opportunity to amass political support and administrative resources in order to push reforms. Steering the committee was another crucial technique the implementational entrepreneurs could use to facilitate coordination because it granted them formal and convenient access to local government leaders. Ms. G, the deputy magistrate, also served as the group leader. She was a pivotal source of support for Mr. C and the team when critical difficulties arose in regard to coordination. Mr. C recalled:

> "As the deputy magistrate in charge of the health portfolio, Ms. G was keen to reform. She encouraged me to do my best and promised to offer unconditional support. After the reform was launched, every time I was in need of help, Ms. G would hold a [steering committee] meeting, calling directors of all related departments to attend, during which we discussed issues that needed to be resolved. Without a formal platform such as this, the departmental directors would not have listened to me because we are of the same administrative rank and I had no authority over them. Moreover, Ms. G gave us substantial assistance in communicating with township governments. In some instances, she even visited the townships and met local officials in person. As the county leader showed her enthusiasm, the township governments started to gear up in the implementation. Some of them even offered an earmarked fund of 500,000 yuan to the health centers as a special form of support." (Interview with Mr. C 20220409)

The same view was shared by other health officials, who attributed the success of the reform to local leaders' enthusiastic interest in it (interview with Mr. X 20201021; interview with Mr. M 20201113). Overall, echoing Proposition #5, this part of the case indicates that procedural policy instruments are significant in reconciling perspective of local stakeholders with central strategic goals and mitigatingbureaucratic fragmentation.

6.1.4. Reform outcome in Liuzhi

The Medical Alliance Reform yielded remarkable outcomes in Liuzhi. The quality of primary care services saw considerable improvement. The remarks of directors of township centers indicated that, with limited capacity for health services in the past, township centers can now not only cure chronic and ordinary illnesses, but also perform some basic forms of surgery.[46] Under guidance from the lead hospital, one health center was even able to help perform an emergency delivery through cesarean section on a pregnant woman.[47] The improvement in service quality set a solid foundation for the effective operation of the two-way referral system. In 2018, lead hospitals in Liuzhi referred more than 400 patients to township centers for rehabilitative care after operations,[48] and this number had tripled one year later.[49]

Patients' perceptions have been gradually changed, as they now tend to place

[46] Also see other remarks of other health center directors. Sohu. (March 197, 2019). *Alleviation of Medical Impoverishment in Liuzhi (sanceng wenluan hujiankang: kan liuzhi tequ jiankang fupin de juti shijian),* available at https://www.sohu.com/a/301817252_120093412, accessed on August 10, 2022.
[47] Guizhou Daily. (October 10, 2017). *Health Reform in Liuzhi: Using Medical Alliances to Benefit People (liuzhi yigai: yong yigongti zaofu renmin)*, available at http://szb.gzrbs.com.cn/gzrb/gzrb/rb/20171007/Articel01008JQ.htm, accessed on August 10, 2022.
[48] Wumeng News (January 17, 2019) *The County Medical Reform in Liuzhi Made Outstanding Achievements (meihua xiangzi kuhan lai: liuzhi tequ yigongti qude xianzhu chengxiao)*, available at https://www.sohu.com/a/289537288_100196203, accessed on August 10 2022.
[49]Liuzhi Health Department. (November 5, 2020). *Report Submitted to Guizhou Health Commission on Progress of Medical Alliance Reform in Liuzhi.*

higher levels of trust in primary care providers. The utilization rate of primary care has been increased thus far. Specifically, the volume of outpatient services at township health centers increased about 43% in Liuzhi from 2016 to 2019, and inpatient volume has witnessed a 57% increase.[50] A well-functioning two-way referral system has taken shape in Liuzhi. The majority of local patients do not have to undertake long journeys to seek care in big cities, thanks to the strengthened capacity of the integrated health system. By 2019, 97% of hospital visits by local residents occurred within medical alliances.[51]

The reform also brought about substantial benefits to doctors. Official statistics suggest that the average salary of health workers at primary centers registered a six times increase from 2016 to 2019. The average annual performance-based bonus increased from 5,000 yuan to 33,000 yuan during the same period.[52] The implementational entrepreneurs' observations capture the positive outcomes of the reform:

> "Now, the service capacity of primary care facilities in Liuzhi has been remarkably improved. Before the reform, the average revenues health centers earned from services were less than 100,000 yuan a year. Yet, since they joined the medical alliance, their average annual revenues have climbed to 500,000–600,000 yuan. Furthermore, some ambitious directors have been sponsoring doctors for further training at big urban hospitals, seeking to build up a stronger professional team. In another lead health center, the influx of patients forced staff to set up additional sickbeds in the corridor outside one of the wards. We don't dare to imagine all of these changes several years ago." (Interview with

[50] Ibid
[51] Ibid
[52] Ibid

Mr. X 20201021)

These impressive outcomes speak volumes of the reform in Liuzhi, whose performance in care integration was recognized from the provincial government. The held a model demonstration conference in 2018 to disseminate the Liuzhi experience. The conference was attended by local officials of sister cities and counties. Liuzhi was also officially established as an exemplar in health service reforms in the province.

6.2. Scaling up the Medical Alliance Reform to the province (2017-present)

Notwithstanding the above accomplishments, key officials of Liuzhi harbored bigger ambitions. They wanted their reform formula to spread to other parts of the province, seizing every possible opportunity to promote the Medical Alliance Reform, particularly to bureau heads and division chiefs in provincial departments. Mr. C visited Guiyang several times, presenting the reform progress and achievements to officials of the provincial health commission. He recalled:

> "In late 2017, I accompanied Ms. G, the vice magistrate, on her duty trip to Guiyang. We met the Director of the Division of Primary Care Administration (of the provincial health commission). I introduced the Medical Alliance Reform and highlighted its innovativeness. The Director showed enthusiastic interest in the reform and asked me to update him with necessary information. Therefore, every time I attended provincial conferences in Guiyang, I sent a message to the Director. She met me in her office and I reported the recent progress and outcomes of our reform to her." (Interview with Mr. C 20220409)

Several motivations were at play behind the zealous promotion of local reform. First, the keen interest shown by officials in the provincial government essentially served as a testament of good local leadership. From a purely utilitarian point of view, promoting the reform was perceived to be beneficial to the political careers of not only local leaders, but also the technocrats who were instrumental to the reform (interview with Dr. L 20210219; communication with Mr. C; interview with Mr. X 20201021). Second, gaining attention from upper-level governments enabled implementational entrepreneurs to access a wider range of resources—including financial support and favorable policies—that are necessary for sustainable reform. Third, reporting work to senior leaders gives implementational entrepreneurs an opportunity to collect feedback and guidance. Both are useful sources of policy learning.

All of these promotional efforts worked. The provincial government later decided to scale up the Medical Alliance Reform to encompass the whole province. However, the success of local pilots was not the only factor that the upper-level health authorities took into consideration. In particular, mid-rank officials were worried about the uncertainty and risk of mandating all counties to adopt the innovation. For instance, Dr. L, the Director of the Division of Primary Care Administration, expressed her concerns about the medical alliance reform:

> "Indeed, some counties in Guizhou had already launched local medical alliance reforms in 2017. In 2018, Mr. I was appointed as the new Director of the provincial health commission. He showed an extraordinary interest in this program as soon as he took office. Yet, lacking central instructions, the provincial government did not have a clear idea about how the reform should

be carried out in Guizhou. Therefore, we organized an information session in Liuzhi in 2018. After that meeting, Mr. I instructed the provincial health commission to set up pilots in all counties in the next year. In the meantime, I was asked to issue operational guidelines on the reform. However, I knew that Mr. I's ambitious goal could not be achieved at once. In my view, the operational guidelines should be released after the central government release instructions, for three reasons. First, building up a medical alliance in all of the counties is not an easy work. Many parties whose material interest may be affected would certainly boycott the process. Second, as only a few counties have launched local pilots, there is little experience to which to refer. Third, under the aforementioned circumstances, the provincial health commission should be very careful even with the wording of the operational guidelines. In this consideration, the basic principles of the provincial guidelines should remain in accordance with central instructions." (Interview with Dr. L 20210219)

After Dr. L explained this to Mr. I, the latter agreed to delay the promulgation date of the provincial guidelines. In this way, aside from setting up pilots in 15 counties, the provincial health commission did not take substantial actions to promote the policy change in practice. As such, the medical alliance reform in Guizhou was implemented in an incremental way until mid-2019.

6.2.1. The 2019 Policy: opportunities and hurdles

The 2019 Medical Alliance Policy issued by the National Health Commission accelerated the reform in Guizhou. As mentioned in Chapter 4, this policy required

provincial governments to select national pilots for the Medical Alliance from counties where local leaders were keen to pursue such reforms. Moreover, the 2019 Policy also indicated some guidelines to local governments on how to carry out the reform on the ground (see Table 6.1). Stressing on the government's leading role in the reform, the central ministry instructed local governments to establish one or several medical alliances formed by hubs and township health centers. Collaboration within these conglomerations could be strengthened through various mechanisms. For example, the 2019 Policy encouraged county the hubs "to send doctors down to the township health centers and improve their capacity for service provision".[53] In the meantime, to improve efficiency, medical alliances should integrate administration and management of informatics of different levels of care.[54]

Table 6.1. Contents of the 2019 County Medical Alliance Policy

Area of reform	Proposal on
Organization	✓ Building up medical alliances ✓ Establishing steering committees ✓ Integrating the administration
Service provision	✓ Developing the two-way referral system ✓ Enhancing vertical collaboration between different curative levels ✓ Completing the general practitioner system
Finance	✓ Reforming payment methods of social health insurance ✓ Securing the finance for medical alliances
Personnel	✓ Reforming the personnel management system ✓ Improving salary of the medical staff
Performance	✓ Assessing the reform outcomes

Source: the Author

[53] National Health Commission and National Bureau of Traditional Chinese Medicine. (May 15, 2019). *Notice on Accelerating the Scaling-up of County Medical Alliance Reform (guanyu zuzhi kaizhan shengyuan hezuo yuancheng yiliao zhengce shidian gongzuo de tongzhi)*, available at http://www.nhc.gov.cn/jws/s3580/201905/833cd709c8d346d79dcd774fe81f9d83.shtml, accessed on February 7, 2022

[54] Ibid

As the central policy offered explicit guidelines, mid-rank officials of the Guizhou Provincial Health Commission finally had the opportunity to carry out the full-scale implementation of the Medical Alliance Reform in the entire province. Their efforts began in June 2019.

Compared to the Telemedicine Program and the Liuzhi Reform, the provincial level Medical Alliance Reform was promoted by collective entrepreneurship from the outset. Mr. I, the successor of Mr. W, took up the directorship of the provincial health commission. He has been a firm supporter of the Medical Alliance Reform. Although he had no prior experience of working in the health sector, Mr. I demonstrated exceptional enthusiasm about the reform. In his view, the Telemedicine Program implemented earlier had laid a good foundation for integrating the health service system in Guizhou, but policy-makers should not be content with this program alone. Instead, he perceived the Medical Alliance Reform as a crucial step toward further integrating the health service system.[55] Therefore, Mr. I wanted to kick off another round of innovation to consolidate the positive outcomes attained thus far.

Mr. I's interest created a favorable environment for implementational entrepreneurs, with Dr. L being the key person involved. As a medical doctor by training, Dr. L had worked in the provincial health commission for decades. Heading the Division of Primary Care Administration, she observed the lack of incentive on the part of primary care facilities. In the past, the Chinese government had allowed a 15% price mark-up for

[55] CN-Healthcare. (January 14, 2019). *Liqi Yong: Drawing up Blueprint of Healthy Guizhou (liqiyong: bohua jiankang guizhou lantu)*, available at https://www.cn-healthcare.com/article/20190112/content-513580.html, accessed on June 25, 2022.

pharmaceutical products procured by public health care facilities, as a de facto measure to compensate under-funded hospitals. However, the central government officially abandoned the controversial price mark-up in 2009, as it was responsible for rapid cost inflation in China. While this policy move was widely lauded, the removal of the price mark-up also took a vital source of income away from the vast majority of township health centers, many of which slipped into financial troubles (Yu et al., 2010; Wang et al., 2012). The situation was particularly severe in poor Guizhou.[56] Dr. L recalled:

> "In the 2010s, a provincial leader shared his concerns about the primary care reform at a conference. He thought that the cancellation of the 15% price mark-up would de-incentivize primary health centers in regard to service provision, unless an alternative financial incentive was provided. After I joined the Division of Primary Care Administration, I found out that his worries had come true. In my field trips, I discovered that the township health centers, which had been crowded with patients in the past, had few patients. Some of them even locked the door at the night, because doctors were not paid for their overtime work. As such, I was looking for new incentives for primary care facilities. The Medical Alliance Reform is one promising solution." (Interview with Dr. L 20210219)

The 2019 County Medical Alliance Policy opened a window of opportunity for mid-rank entrepreneurs to scale up the reform. Yet, unfortunately, the policy itself provided little assistance to integrating the fragmented bureaucracy within the provincial government like the Telemedicine Program. Focusing on county pilots, the National

[56] See Footnote 43

Health Commission required local governments to establish steering committees for improving intergovernmental coordination.

> "Pilot counties should establish steering committees based on principles of coordination and efficiency. The steering committee should be led by local Party Committee and the government and formed by representatives from relevant stakeholders, such as the development and reform commission, the social security bureau, the finance department, the health commission, the personnel office, lead hospitals and township health centers. The steering committee is responsible for strategic planning, finance, personnel management, performance review of medical alliance."[57]

In contrast, the 2019 Policy had no similar requirement on provincial governments, despite their significant role in developing operationalizable plans and scaling up the reform. Consequentially, bureaucratic fragmentation again stood out as a major impediment to implementation of the 2019 Policy. In particular, the Social Security Department refused to get on board. The social security bureaucracy had authority over health affairs because they were the custodian of two flagship social health insurance programs. Any big health care reform would face formidable prospects if the social security departments were not supportive. Dr. L described the difficult situation faced by the implementation entrepreneurs:

> "In mid-2019, I met Mr. U, the Director of the newly established Guizhou Provincial Healthcare Security Administration [the successor organization of the

[57] Ibid

> provincial social security department], seeking his support for the Medical Alliance Reform. In particular, we invited his administration to co-sign the policy document. Although Mr. U had worked for the provincial health commission for more than 10 years, he thought that the Medical Alliance Reform would bring about no benefits to social health insurance. Therefore, Mr. U said that he had contacted the National Healthcare Security Administration for advice, and they advised him to decline my proposal. I knew this was an excuse because the central ministries rarely intervene in interdepartmental coordination at the provincial level." (Interview with Dr. L 20210219)

When implementational entrepreneurs sought cooperation from other provincial departments, they were confronted with a similar situation. In principle, provincial departments are allowed to ask the provincial government to release policy documents that are perceived as being highly crucial. It is common practice in the Chinese political system for line departments to highlight the strategic importance of its new policies and to gain greater compliance from sub-provincial governments. Unfortunately, this pathway was closed to the implementational entrepreneurs in the present case because the central government was leading another round of a "red tape cutting" campaign. Required to minimize the number of policy directives, the provincial government had declined to issue the Medical Alliance Policy document. This awkward situation is similar to the health care reform in Fujian province at the end of the 2000s, where the provincial health commission was left to lead a hard reform on its own due to the absence of support from other key provincial departments (He, 2012). The weak bureaucratic power of the Health Commission made it difficult to implement the Medical Alliance Reform without inter-departmental collaboration. What made it even worse was the

lukewarm response of provincial leaders. Consequentially, implementational entrepreneurs in this case needed to “go against the wind”.

6.2.2. Entrepreneurial strategies for scaling up medical alliances

Trapped in an arduous situation in which neither provincial government nor peer departments were willing to lend support, the implementational entrepreneurs of the health commission shifted their strategy in order to break the impasse. The success of the Medical Alliance in Liuzhi inspired them; county government leaders may be a group of reliable allies. As explained earlier, this group of local officials typically have stronger incentives to embark on reforms not only for the purpose of solving local health care problems, but also because of their strong motivation for career advancements. Therefore, the Medical Alliance Reform offered them a precious opportunity to make tangible achievements in the name of policy innovation. Moreover, the Medical Alliance Reform was considered an easy one because there was no significant vested interest involved. Eager to move the reform arena to the county level, the implementational entrepreneurs adopted three strategies, including social learning, “downward” venue shopping, and the use of bureaucratic procedures.

To operationalize the central guidelines, provincial health officials resorted to policy learning. Once again, professional network played an important role in learning. First, implementational entrepreneurs frequently attended information sessions organized by central ministries, during which they could seek useful pointers from policy-makers and learn about practices adopted by other provincial governments. Second, the provincial health commission built up an intellectual network formed by officials from pioneer counties and domain experts. Dr. L asked the forerunners to submit

their action plans to her division to enable them to learn from the plans. These collective implementational entrepreneurs drew lessons from both the achievements and drawbacks of each pilot and analyzed the factors behind the varying levels of progress in regard to the implementation. Dr. L's remarks on the county protocols epitomize this learning process:

> "As the division in charge of the reform, we were very careful about the operationalization process. We first held several meetings and invited professors and officials from pioneer counties to join. We asked the health department directors [of these counties] to share their experiences with peer officials. Next, we required them to submit their action plans and drew lessons from them. The change in payment method of the NCMS provided a good example.

As a result, the health commission announced the provincial policy guidelines governing medical alliance that combine central government requirements and lessons learned from local pilots. The reform concerning the payment method of the NCMS provided a good example. Although the central instructions required us to use global budgets as the payment method, the technical specifications were unclear. For instance, if a medical alliance has overspent, who is supposed to cover the deficit? In contrast, if a heath facility has saved money for social health insurance funds, how are we to cope with the surplus? The county plans gave us many useful clues. In this context, the county plans provided many useful clues to the mid-rank entrepreneurs. As Dr. L admitted,

> "We also learned lessons from unsuccessful pilots. For example, although Jinping County worked out an excellent protocol, it established only one

> medical alliance. Health workers there also showed weak levels of motivation as there was virtually no competition. As a result, we encouraged the counties to set up more than one medical alliance in order to promote necessary competition between them. In short, the pilot counties provided us with excellent examples when we were preparing the operational guidelines." (Interview with Dr. L 20210219)

Overall, it appears that in this case, examples set by pioneer counties act as a preliminary source for implementational entrepreneurs to accumulate necessary knowledge for operationalization.

While implementational entrepreneurs in the Telemedicine Program conveyed implementation issues "upward" to the provincial government, the mid-rank entrepreneurs in this case shifted the venue "downward" to the county government. To lobby local officials, the mid-rank entrepreneurs in particular linked the Medical Alliance Reform with local people's livelihoods. In this way, they managed to shift the rhetorical space away from the domain of health care alone to much more significant local governance mandates. The poverty alleviation campaign was the flagship social policy program in President Xi's second term. Eliminating absolute poverty was a political task of utmost political salience in poor Guizhou. County government leaders in particular had the greatest responsibility to deliver in regard to the poverty alleviation targets. This rhetorical strategy was certainly appealing to county government leaders. The speech made by Mr. I at a provincial health conference in 2020 offered a good example of this strategy:

> "General Secretary Xi Jinping reiterated that winning the poverty alleviation campaign by 2020 was a crucial objective in attaining good governance. As Guizhou is the main battlefield in the battle against poverty, we must overcome all difficulties caused by the COVID-19 pandemic to earn a victory. Developing the health service system is an important approach to reducing poverty. From 2015 onward, the advancement of health services has improved the livelihoods of about 520,000 people in Guizhou, making a valuable contribution to the war against absolute poverty. Whereas the health reform resulted in this success, we should keep on working hard. All prefectural and county health departments should accelerate the process of the Medical Alliance Reform in order to provide affordable care to the people."[58]

The implementational entrepreneurs took advantage of field trips in the poverty-alleviation programs to lobby with these officials. Dr. L shared her observations of this process:

> "Last year, we had more field trips to different counties for the poverty alleviation campaign. Every time we were visiting a county, Mr. I met the county magistrate in person and told him or her that the Medical Alliance Reform was an effective way of integrating the health service system. Furthermore, this program could benefit local people by easing their access to health services and reducing medical impoverishment. As such, effective implementation could

[58] Guizhou Health Commission. (March 15, 2021). *Guizhou Health Commission Held the 2020 Conference of Health Care (quansheng jiankang xitong tongchou tuijin yiqing fangkong, tuopin gongjian ji 2020 niandu weisheng jiankang huiyi zhaokai)*, available at https://www.guizhou.gov.cn/ztzl/fkxxgzbdgrdfy/gzbs/202110/t20211009_70805235.html, accessed on August 10.

help the counties to better accomplish the political task of poverty alleviation." (Interview with Dr. L 20210219)

These observations demonstrate how implementational entrepreneurs exploited rhetorical space across different policy domains, and coupled the benefits of the Medical Alliance Reform with policy issues about which local leaders were most concerned.

Aside from strategies discussed above, procedural policy instruments were significant again in regard to implementational entrepreneurs seeking cooperation from local leaders. They moved policy implementation forward in three ways. First, extensive engagement with county leaders was undertaken through collective learning. From 2019 to 2021, the National Health Commission held a series of video conferences on the County Medical Alliance Reform, during which senior officials in Beijing provided guidance on policy implementation. For instance, Professor Wang Hesheng, Associate Director of the National Health Commission, encouraged local governments to take a leading role in the Medical Alliance Reform in one of the national video conferences.[59] The implementational entrepreneurs from Guizhou Provincial Health Commission invited local leaders to attend. Dr. L explained why:

"The National Health Commission held numerous video conferences on the County Medical Alliance Reform in 2019. After receiving notice from the central government, we invited county government leaders to attend the meetings. In my opinion, the video conferences grant local leaders access to the

[59] Health Daily (*Jiankang bao*) (2019-06-19). *Wang Hesheng Instructed that the County Medical Alliance Reform should Focus on the Facet of Integration (wang heheng: xianyu yigongti jianshe yaozai 'gong' zi shang zuowenzhang)*, available at https://www.sohu.com/a/321683339_464387, accessed on August 10, 2022.

vision of central policy-makers. Once the mindset of local leaders is updated, they are more willing to provide firm support for the reform." (Interview with Dr. L 20210219)

Second, Dr. L and her colleagues used supervision as an effective procedural tool based on authority. In some circumstances, supervision was undertaken through reviewing local work reports. County health departments were asked to report their work on a monthly basis. In addition, the implementational entrepreneurs conducted site supervisions in the field. When traveling to different counties, Dr. L and her colleagues asked directors of county health departments to present their progress during the field supervision, and held meetings with frontline staff to collect their views about the implementation. Dr. L preferred to visit hospitals and health centers in person:

"County officials may exaggerate the facts when they report to me. Therefore, I still need to visit hospitals and health centers on site. I will make my own judgments by seeing how many patients are there. A larger number of patients in the outpatient department usually reflects a satisfactory quality of service. In contrast, few outpatient visits to primary care facilities typically tells me that the local implementation is not as successful as the local officials describe. I also chat with medical staff during the site supervisions. For example, I ask them about whether their incomes have improved or not since the reform." (Interview with Dr. L 20210219)

As a result of this wide stakeholder participation, senior supervisors developed a better grasp of the real progress of reform. Recognition from the officials of provincial

departments notably increased local leaders' confidence in the reform. As Mr. C recalled:

> "We presented the progress of the Medical Alliance Reform in Liuzhi when senior leaders from the provincial health commission came here. We acted as tour guides if they wanted to conduct field visits at hospitals and health centers. County government leaders normally attended the meetings and site visits. In both circumstances, a high appraisal given by the provincial officials can provide the county leaders with the impression that we have made remarkable achievements. Consequently, they are more confident to the reform, and are thereby more willing to offer us firm support." (Interview with Mr. C 20220409)

Implementational entrepreneurs' strategy of engaging county governments turned out to be very effective. The vast majority of county governments in Guizhou have announced their plans for medical alliances by the end of 2021. A total of 35 counties were selected as national pilots in August 2019. Initially assuming a passive stance toward the reform, the social security bureaucracy has since become supportive (interview with Dr. L 20210219). Since then, the provincial health commission has been able to engage other departments to promote medical alliances. These changes of the external environment indicate that the implementational entrepreneurship gradually shifted from the "going against wind" mode to a more promising "heading to the destination" mode.

6.2.5. Reform outcomes in Guizhou

The Medical Alliance Reform promoted commendable changes in the health care service system of Guizhou province. Official statistics indicate that, by 2020, 93% of

hospital services provided to local citizens were rendered by county hospitals, indicative of their strengthened capacity in regard to providing a good service.[60] County hospitals can now perform 37% of major surgeries.[61] The integrated health service network also yielded remarkable effects in regard to cost containment. The total payment amount from social health insurance to county hospitals and township health centers decreased from 62.2% and 17.8% in 2019 to 58.5% and 14.8% in 2020, respectively.[62] Moreover, the income of health workers saw impressive increases, which boosted their productivity and job satisfaction. Table 6.2 summarizes the major changes brought about by the reform.

Table 6.2. Outputs of medical alliance reform in Guizhou

Indicators		Data in Guizhou			National data (2020)
		2019	2020	Variation	
Improvements of service capacity	Ratio of health services rendered at county level or below	89.9%	93.2%	+3%	90.4%
	Ratio of inpatient services rendered at county level or below	80.2%	78.2%	-2%	75.1%
	Ratio of outpatient services rendered at county level or below	54.4%	55.6%	+1.2%	55%
	Ratio of major surgeries performed in county hospitals	34.3%	37.1%	+2.8%	41.9%
Cost saving	Ratio of social health insurance payment (to hospitals)	62.2%	58.5%	-3.7%	65.4%
	Ratio of social health insurance payment (to township health centers)	17.8%	14.8%	-3%	21.6%
Medical staff's revenue	Ratio of county hospitals' expense on salaries	45.4%	45.6%	+0.2%	39.7%
	Ratio of government subsidies in medical staff's salaries	36.5%	52.9%	+16.4%	45.7%
Satisfaction	Patients' satisfactory ratio	93.2%	94.6%	+1.4%	NA
	Medical staff's satisfactory ratio	89.6%	93.3%	+3.7%	NA

Source: Guizhou Health Commission[63]

The scaling-up of the Medical Alliance Reform has resulted in impressive improvements in the service capacity of primary care facilities. Since 2020, the National Health Commission has been organizing annual performance reviews of primary health

[60] Guizhou Health Commission. (September 7, 2021). *Work Report on Progress of the County Medical Alliance Reform in Guizhou.*
[61] Ibid
[62] Ibid
[63] Ibid

centers, in which 111 township centers in Guizhou were rated outstanding in health service provision.[64] By 2021, close to 60% of outpatient services in the province were provided by township health centers.[65] Impressed by the stunning achievements of some prefectures, the National Health Commission organized a model demonstration conference in Guizhou to disseminate its experience of medical alliances to the rest of the country.[66]

At the same time, the relatively weak support from provincial leaders and powerful departments constrained the provincial health commission's capacity for further scaling up medical alliances to all counties. As the health commission noted in an internal work report, bureaucratic fragmentation had resulted in the absence of provincial initiatives for accelerating the reform. As a result, some county governments made no substantial progress towards the goal of integrated care, even though they had announced local plans for establishing medical alliances. [67] Furthermore, the lack of interdepartmental coordination also created problems of insufficient policy provision concerning service pricing, personnel management, and provider payment reforms.[68]

Despite certain deficiencies in the reform progress, the provincial leaders were

[64] National Health Commission. (March 18, 2021). *Notice on Praising Primary Health Centers Making Outstanding Performance in Health Services*, available at http://www.nhc.gov.cn/cms-search/xxgk/getManuscriptXxgk.htm?id=22b87f70053c44af91757a9030b3aec8, accessed on August 10, 2022.
[65] Guizhou Daily. (July 30, 2022). The County Medical Alliance Reform in Guizhou Made Remarkable Achievements, available at https://baijiahao.baidu.com/s?id=1739725642605879237&wfr=spider&for=pc, accessed on August 10, 2022.
[66] Guizhou Daily. (September 28, 2022). The National Health Commission Held a Model Demonstration Conference in Zunyi, Guizhou, available at https://baijiahao.baidu.com/s?id=1679089881093334625&wfr=spider&for=pc, accessed on August 10, 2022.
[67] See Footnote 60
[68] Ibid

satisfied with the remarkable success achieved thus far and they decided to offer greater support to the reform. At a provincial conference on health care in 2022, Mr. B, the newly inaugurated Governor of Guizhou, instructed local governments to "improve the accessibility and affordability of health services for people by sparing no effort to develop medical alliances in counties."[69] It can be expected that the provincial government will provide more support to the County Medical Alliance Reform in future.

6.3. Summary

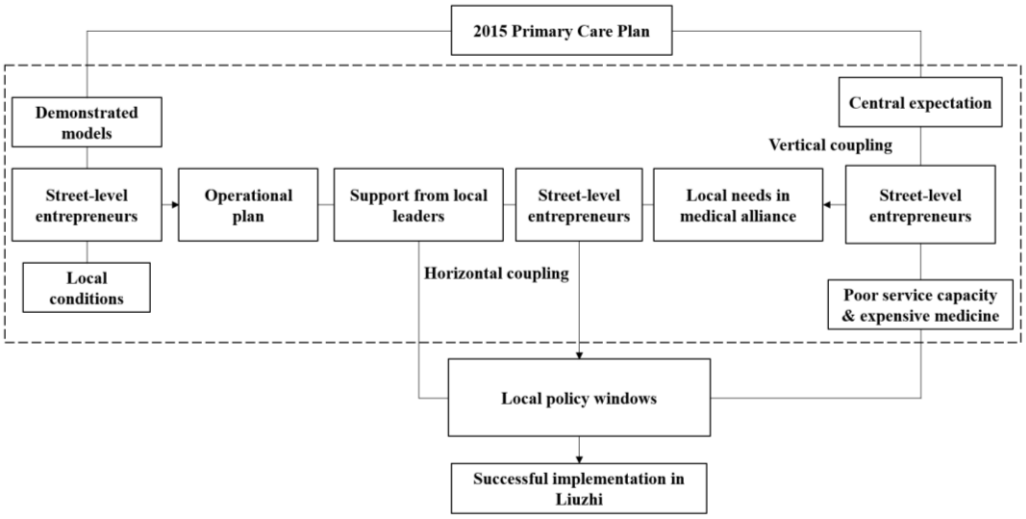
This chapter investigates the County Medical Alliance Reform in Guizhou. Once again, this ongoing policy scheme indicates that implementational entrepreneurship is pivotal for reinforcing the effectiveness of national policies on the ground. In particular, both street-level and mid-rank entrepreneurship took place in this case study, and they mutually reinforced each other in regard to accelerating the Medical Alliance Reform. The pioneering program in Liuzhi highlights the role of street-level entrepreneurship in bottom-up implementation (see Figure 6.4).

In this case study, although the central authorities had not issued explicit guidelines, they still exerted a notable influence at the local level by championing medical alliances as an innovative concept, and encouraged localities to explore action plans. As indicated above, medical alliances enlightened Mr. C and his team, providing a solution to acute local problems. Therefore, street-level entrepreneurs managed to couple the problem stream with local needs. In the absence of clear policy guidelines, street-level entrepreneurs further sought inspiration from innovative models in other

[69] People's Government of Guizhou. (October 29, 2021). The Provincial Health Conference was Held in Guiyang (*quansheng weisheng jiankang gaozhiliang fazhan dahui zai guiyang zhaokai)*, available at https://www.guizhou.gov.cn/home/tt/202110/t20211009_70816127.html. accessed on June 27, 2022.

areas with similar contexts and made local adaptations. In these processes, street-level entrepreneurs' frontline know-how enables them to sort out acute local problems and modify examples learned from other areas based on local conditions.

Figure 6.4. The role of street-level entrepreneurship in Liuzhi

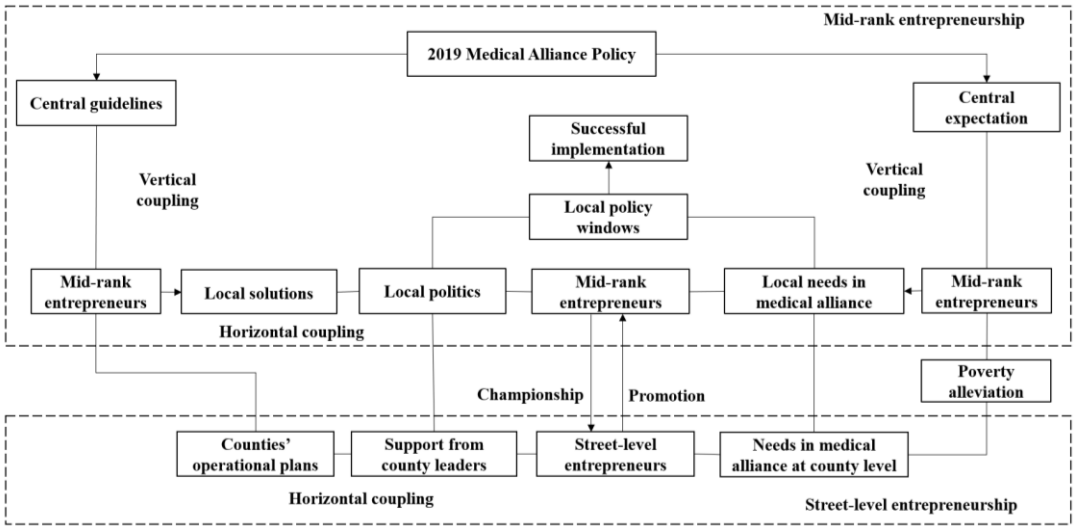


Source: the Author.

At the same time, the model motivated local officials in Liuzhi to promote the reform to provincial authorities, activating the scaling up of medical alliances to the whole province through a bottom-up approach (see Figure 6.5). Yet, the incremental scaling-up process suggested that mid-rank officials took an advantageous position vis-à-vis street-level entrepreneurs; they could therefore determine the timing to accelerate the policy implementation. Exworthy and Powell (2004) argued that significant policy change is likely to occur only when "big" windows in the center match "small" windows at the local level, especially within multi-layered governance systems. This case study provides evidence of Exworthy and Powell's argument, as the announcement of the national medical alliance policy opened the "big" window at the center and cleared concerns within the provincial government. Mid-rank officials then started to take more aggressive actions to accelerate the scaling-up process.

Similar to the Telemedicine Program, mid-rank entrepreneurs in this case study played a significant intermediate role between national policy and frontline implementers (see Figure 6.5). The previous pilot programs made it evident that medical alliances are an effective tool that can be used to reintegrate fragmented health services; therefore, implementational entrepreneurs in the provincial health commission focused on operationalization. Again, lessons learned from pioneering counties provided entrepreneurs an important source of inspiration regarding the most suitable form of policy calibration. In the meantime, the need for poverty alleviation and county leaders' keen interest in adopting policy innovation fostered "small" local windows. Demonstrating strong policy acuity, the mid-rank entrepreneurs successfully lobbied county leadership to participate in policy implementation. With backing from local leaders, the political stream at the county level was largely coupled together. Consequently, the provincial health commission successfully championed the County Medical Alliance Reform on the ground.

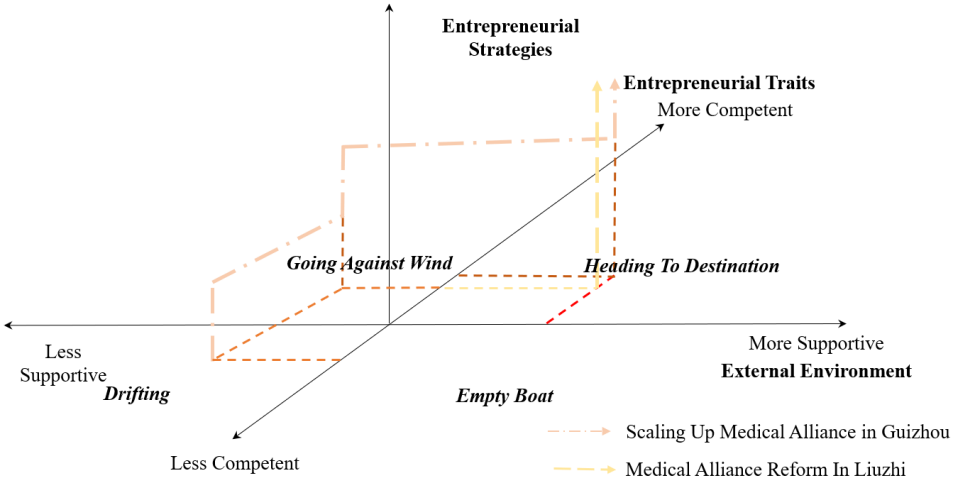
Figure 6.5. The role of mid-rank entrepreneurship in scaling up medical alliances



Source: the Author.

In this case study, implementational entrepreneurs in both county and provincial health commissions clearly demonstrated their enthusiasm, persistence, and domain expertise. In particular, similar to the Telemedicine Program, achieving good local governance acted as a common motivation of entrepreneurs. Yet, contextual factors resulted in variance in coordination—the supportive environment enabled the Medical Alliance Reform in Liuzhi to sail toward its policy objectives, yielding outstanding outcomes in practice; in contrast, limited endorsement from both leadership and the institutional framework significantly increased difficulties in coordination, and compelled the provincial health commission to move forward "against the wind". These difficulties were overcome in the end, to a certain degree, after the implementational entrepreneurs successfully engaged a wider range of counties in the program. In this way, the Medical Alliance Reform in Guizhou highlighted the significance of endorsement from higher-level authorities to accelerating the implementation progress. Figure 6.6 presents the development of implementational entrepreneurship at different levels of governance.

Figure 6.6. The development of entrepreneurship (Medical Alliance Reform)



Source: the Author.

Once again, the adoption of entrepreneurial strategies was crucial for explaining changes in implementational entrepreneurship. Chapter 5 illuminates the role of learning, venue shopping, and the smart use of bureaucratic procedures in accelerating policy implementation; the pivotal role of these tactics was observed in this case study too. Learning clearly represents an effective tool that can be used to amass necessary intellectual capital for operationalization. Compared with the Telemedicine Program, lead examples acted as the most important source of learning in this case study, as there were a number of successful pioneering pilots available for implementational entrepreneurs to refer to.

The scaling up of medical alliances in Guizhou shed fresh light on the way in which, aside from shopping a venue "upward" to provincial leadership or powerful provincial departments, implementational entrepreneurs can also lobby "downward" at lower-level governments. The lukewarm stances of provincial leaders notably constrained the health commission's capacity for hierarchical coordination. Although implementational entrepreneurs in this case showed different patterns in utilizing procedural tools, they actually had few coercive tools at their disposal. Therefore, even though they established diagonal coordination with local leadership in some counties, these entrepreneurs could not compel other non-compliant counties to "buy in to" their policies. In this context, if county leaders refuse to cooperate, implementational entrepreneurs have few means through which to push the process forward.

Finally, the qualitative findings show that the smart use of bureaucratic procedures is a critical catalyst for policy implementation, and implementational

entrepreneurs of different layers of governance may exploit similar procedural tools, including information devices and authority. Similar to the Telemedicine Program, meetings offered implementational entrepreneurs a platform for lobbying other policy actors and enhancing collective learning. In this case study, mid-rank entrepreneurs did not use accountability or other rigid tools to push frontline troops, but rather tended to enact more persuasive means, such as supervision, to nudge implementers. As noted above, supervision enabled implementational entrepreneurs to closely steer the implementation through the timely grasp of information on the ground and provide guidance to grassroots rank-and-file bureaucrats.

Chapter 7. Conclusion

For decades, implementation research has sought answers to a simple question: Why do some policies yield notable outcomes in practice, while others don't? While many previous studies have explored a variety of factors, such as political structure at the macro level, and policy design and networks at the meso level, this dissertation discusses the influences of micro individual behaviors. Specifically, I focus on the significant role of mid-rank officials and street-level bureaucrats. Most previous studies consider these local officials as merely implementing policies "by the book", or manipulating the discretionary power granted by the central government to protect their own interests. The literature has overlooked the possibility that they might actively shape the implementation process as creative and innovative policy actors. This dissertation engages the notion of "policy entrepreneurship" from John Kingdon's (1985) Multiple Streams Framework and develops the concept of "implementational entrepreneurship".

Some recent studies have shown a keen interest in the entrepreneurial role of mid-rank officials and street-level bureaucrats. In China, the political ecology in which local officials work differs from that of many other political systems. The complex bureaucratic system results in severe fragmentation within the bureaucracy, whereas the hierarchical structure makes it extremely difficult for implementers to amass political capital and resolve coordination problems. However, the rich rewards brought about by the "promotion tournament" offer strong incentives to local officials, and thus encourage them to undertake local innovation. China's tradition of experimentalist governance grants local governments ample opportunities to calibrate the mix of policy instruments in innovative ways. These intrinsic features of the bureaucracy offer fertile ground for

implementational entrepreneurship in China. This dissertation is dedicated to examining the rich dynamics at work in this context.

The previous chapters analyze how implementational entrepreneurship acts as a catalyst of policy implementation and the causal dynamics underlying this process. Chapters 5 and 6 comprehensively investigate the entrepreneurial activities of local officials in policy implementation on the ground, demonstrating that entrepreneurial traits, support from the external environment, and the adoption of various strategies have multiple impacts on effective implementational entrepreneurship. To conclude this dissertation, this chapter first summarizes the key findings from the main chapters and then concludes with limitations and my future research agenda.

7.1. Major findings

Mid-rank officials and street-level bureaucrats have been described as reluctant policy actors by traditional implementation research. Why are they willing to devote themselves and even risk their careers to catalyze policy implementation? This dissertation demonstrates a variety of motivations underlying implementational entrepreneurship in China, including earning a competitive edge for the sake of career promotion, the innate desire to share ideas, and the genuine momentum related to enhancing good local governance. Teets and Hasmath (2020) observed that the institutional incentives in the Chinese bureaucracy are actually inadequate, as the majority of local officials do not participate in the “promotion tournament”. They argued that most entrepreneurial officials at the local level are motivated by a genuine desire to resolve local problems. Their argument is mirrored in the qualitative findings of this dissertation, as most implementational entrepreneurs in the two case studies devote

themselves to accelerating implementation because they believe that national policies can benefit numerous local people. Furthermore, when national policies yielded positive changes in practice, these entrepreneurs developed a strong sense of fulfillment. Once local officials became implementational entrepreneurs, their ambition and enthusiasm often distinguished them from conventional rank-and-file bureaucrats.

John Kingdon (1985) conceptualized influential factors of agenda-setting into problem, policy, and political streams, and suggested that the coupling of the three streams results in the adoption of a policy. This dissertation, however, demonstrates that the coupling process is still necessary at the implementation stage, since local conditions foster another set of problem, policy, and political streams. As technocrats within local governments, implementational entrepreneurs play a significant intermediate role in joining up national policies with local streams, which encompass both operationalization and coordination. Operationalization includes activities related to specifying policy goals and calibrating the mix of policy instruments. In both cases, implementational entrepreneurs intelligently used their domain expertise and familiarity with local conditions to develop action plans. In the meantime, coordination requires implementational entrepreneurs to maneuver within the fragmented bureaucracy and realign conflicting interests in both horizontal and vertical directions.

The most important finding in this dissertation is the illumination of the causal dynamics underlying implementational entrepreneurship. Specifically, the two case studies suggest that the intrinsic traits of entrepreneurs, external circumstances, and the adoption of entrepreneurial strategies commonly influence the effectiveness of implementational entrepreneurship, which yields four distinctive categorizes: “heading

toward the destination", "drifting", "sailing against the wind", and "empty boat". Chapters 5 and 6 demonstrate these causal dynamics. First, the "drifting" mode was observed in both cases. The empirical evidence demonstrates that local officials show little persistence and risk-taking when lacking enthusiasm. Furthermore, with limited policy acuity, they lack the ability to clear hurdles set up by bureaucratic fragmentation. As a result, sluggish implementation or outright policy failure is more likely to occur as a result of the lukewarm stances of other policy actors.

Second, learning notably increases the willingness of local officials to engage in policy implementation, and thus become implementational entrepreneurs. In the meantime, learning serves as an effective tool for implementational entrepreneurs to cope with intrinsic ambiguity embedded in policy implementation, as they gain domain expertise and frontline know-how that are essential for developing the operationalizable plan for implementation. Empirical findings of this dissertation demonstrate that professional networks are crucial sources for mid-rank and street-level entrepreneurs to accumulate intellectual capital. As the two cases showed, the professional networks comprise of experts from both inside and outside of the government, who provide diverse and valuable insights that enlighten implementational entrepreneurs. For example, guidance from central ministries can point out the direction for better policy implementation; peers in other areas offer good examples for implementational entrepreneurs to refer to; feedback from frontline operators enable the officials to modify their action plans to fit local conditions.

Although learning from professional networks can notably arouse local officials' commitment to policy implementation and improve their capacity of operationalization,

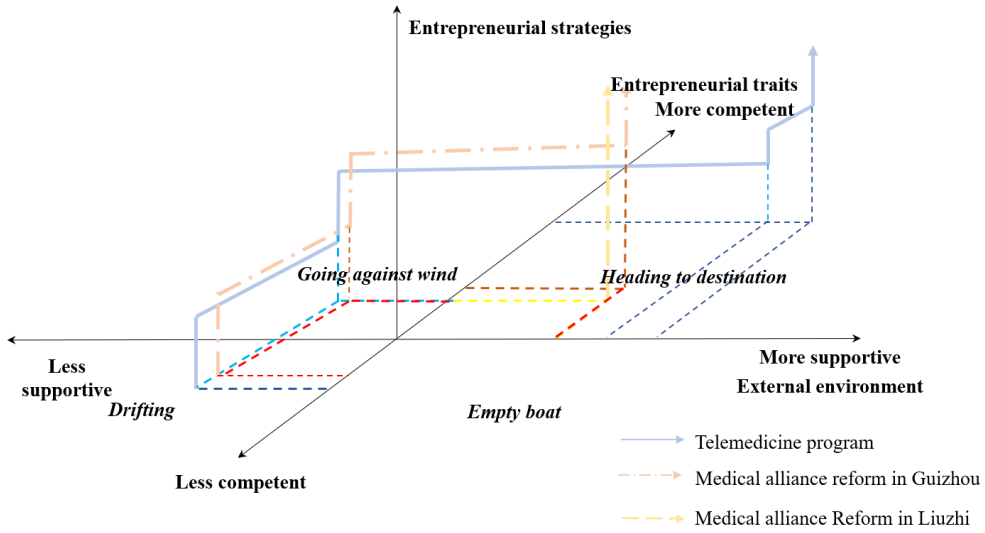
entrepreneurial officials may still encounter severe obstacles stemming from bureaucratic fragmentation, resulting in the "sailing against the wind" mode of implementational entrepreneurship. While Kingdon (1995) characterized policy entrepreneurs as "surfers waiting for the big wave", He (2018) suggested they do not always passively wait for the occurrence of opportunities; rather, this process actively entails more stakeholder participation and creatively reshapes the context based on the established framework. Indeed, similar phenomena can be seen in implementational entrepreneurship too. As the two case studies show, implementational entrepreneurs must "row" harder against the wind by using a variety of strategies to amass political capital and realign different interests.

Third, once strategies adopted by implementational entrepreneurs take effect, the external environment will provide favorable conditions for competent entrepreneurial officials, such as placing them at the center of policy networks. In this context, implementational entrepreneurs can take full advantage of their extensive domain expertise and familiarity with local conditions, develop operational plans, and better steer the process of carrying out policies in practice. Consequently, this "heading toward the destination" mode of implementational entrepreneurship yields outstanding outcomes on the ground.

Aside from unfolding variables related to effective implementational entrepreneurship and the causal dynamics underlying it, this dissertation also underlines that contextual factors have significant impacts on strategies adopted by implementational entrepreneurs. Notably, national policy granted sufficient legitimacy to implementational entrepreneurs in the Telemedicine Program to enable "upward"

venue shopping with powerful departments and local political principals, who offered mid-rank officials sufficient political capital to maneuver within the bureaucracy. Furthermore, with unconditional support from the political principals, implementational entrepreneurs in this case study were allowed to use more coercive tools to push forward the implementation process. In contrast, inadequate institutional support in county medical alliances fostered failure in seeking assistance from powerful policy actors and partial change in practice. Mid-rank officials eventually decided to lobby "downward" at street-level governments, which resulted in less effective coordination compared with that in the Telemedicine Program. Figure 7.1 presents the divergent trajectories of implementational entrepreneurship in different contexts.

Figure 7.1. Varying trajectories of implementational entrepreneurship



Source: the Author.

Table 7.1 highlights the variance of contextual factors, entrepreneurial strategies, and reform outcomes.

Table 7.1. Telemedicine Program vs. County Medical Alliance Reform

	Telemedicine Program	County Medical Alliance Reform
Institutional Support	**The 2010 Initiative**: ✓ Had no instruction on setting up mechanisms for interdepartmental coordination at the provincial level **The 2014 Pilot Scheme**: ✓ Instructed the provincial government to set up mechanisms for interdepartmental coordination	**Early trial in Liuzhi** ✓ The county government set up a steering committee **The 2019 Policy**: ✓ Had no instruction on setting up mechanisms for interdepartmental coordination at the provincial level
Political Support	**The 2010 Initiative**: ✓ Only the National Health Commission initiated the reform ✓ Provincial leaders offered no support **The 2014 Pilot Scheme**: ✓ A powerful central ministry joined in ✓ Provincial leaders offered unconditional support	**Early trial in Liuzhi** ✓ The initiative was supported by county leaders **The 2019 Policy**: ✓ Only the National Health Commission initiated the reform ✓ Provincial leaders offered no support
Main entrepreneurial strategies	✓ Learning from central ministries and peers ✓ Issue framing ✓ Coalition building ✓ Venue shopping upward ✓ Use more coercive procedural policy instruments	✓ Learning from central ministries, peers and pioneering pilots ✓ Issue framing ✓ Coalition building ✓ Venue shopping downward ✓ Use less coercive procedural policy instruments
Reform outcomes	✓ The program was scaled up to the whole province in three years (2015-2018) ✓ A comprehensive regulatory framework was established	✓ The program was scaled up to the vast majority counties within three years (2019-2022), yet some county governments made no substantial progress towards the goal of establishing medical alliance ✓ The policy provision was insufficient

Source: the Author

Another important finding in this dissertation is that implementational entrepreneurs rely on bureaucratic procedures to yield positive outcomes on the ground. The empirical evidence highlights the use of three types of procedural instruments: information devices, authority, and coordinating organizations. Table 7.2 summarizes the main procedural instruments used in the cases. As noted in Chapters 5 and 6, the smart use of bureaucratic procedures significantly reinforces other entrepreneurial strategies adopted. However, comparison between the two cases also illuminates that implementational entrepreneurs may adopt different strategies. As shown in Table 7.2, compared with the Telemedicine Program, officials in the provincial health commission depended "less" on coercive instruments to accelerate the reform. For instance, they neither ranked the reform progress of the local governments, nor linked the performance of policy implementation with accountability. Furthermore, the implementational entrepreneurs enacted few mechanisms for enhancing interdepartmental coordination like the steering group in the Telemedicine Program. Two factors lead to such variance.

First, as mentioned above, the selection of bureaucratic procedures is associated with individual preference of implementational entrepreneurs. Second, the lack of institutional and political support constrains the officials' ability to use more powerful procedural instruments (see Table 7.1).

Table 7.2. Procedural policy instruments

	Procedural Policy Tools			
	Information	**Authority**	**Treasure**	**Organization**
Telemedicine Program	work report, policy memo, meeting, ranking	written comments, accountability, site supervision	no observed	network of steering groups
County Medical Reform in Liuzhi	work report, meeting, ranking	site supervision	no observed	steering committee
County Medical Reform in Guizhou	work report, meeting	supervision	no observed	no observed

Source: the Author.

Additionally, this dissertation explores implementational entrepreneurship in both top-down and bottom-up implementation across the two cases. In regard to top-down implementation, mid-rank entrepreneurs taking a leading role in policy implementation impose explicit policy targets at the street level. Therefore, street-level entrepreneurs have less room to innovate as a result of their lack of discretion. Bottom-up implementation, in contrast, encompasses "richer" dynamics between street-level and mid-rank entrepreneurship—while the former enables reform at the local level and offers lead examples, the latter handles the implementation process and champions policy change on the frontline. Furthermore, these two groups of policy actors largely play a similar role in carrying out national policy and use the same kit of procedural policy tools.

Although this study sets the research context in China, its findings may be generalizable to other states. First, despite differences in political systems,

implementational entrepreneurs in multi-level governance systems are located at the mid-rank or street-level echelon of the bureaucracy. This similarity makes local officials across national contexts play a similar intermediary role in coupling national policy with local problem, policy, and political streams.

Second, innovations championed by implementational entrepreneurs are often technical, possessing relatively low political salience and visibility. Therefore, having extensive expertise in a particular policy domain and frontline know-how often act as the most important factor for these individuals to accelerate policy implementation. Some previous studies observed that similar to those in China, implementational entrepreneurs in other parts of the world also rely on professional networks to facilitate learning (Arnold, 2020; Oborn et al., 2011; Lavee and Cohen, 2019). These studies highlighted the significant role of learning through professional networks in implementational entrepreneurship.

Third, lacking formal authority represents a defining characteristics of mid-rank officials and street-level bureaucrats in many parts of the world. Therefore, they must smartly use bureaucratic procedures to reinforce their capacity for influencing policy outcomes. Some previous studies underlined the role of organization-based instruments in improving the effectiveness of implementational entrepreneurship (Oborn, et al., 2011; Arnold, 2015, 2020; Goyal et al., 2020; Arnold, 2020). These works suggested that bureaucratic procedures provide implementational entrepreneurs not only in China, but also in other states effective tools for accelerating policy implementation.

7.2. Limitations and future research

This dissertation is not without limitations, including those related to the research design and data availability. One significant limitation concerns the selection of cases. As a preliminary study, I selected two policy programs focusing on the reintegration of health services in the same province. This research design largely ensured similarities in the contextual factors of the cases, but also created problems concerning generalization. That is, given the regional differences across China, to what extent can findings in one province be replicated in others? While this dissertation addressed this problem by focusing on Guizhou as a critical case, further studies focusing on cases in other provinces or even other countries is still necessary in order to be able to generalize the conclusions in this dissertation.

Another limitation of this dissertation is related to the data collection. As both cases took place a number of years ago, many informants cannot remember all of the details of events accurately. This potential inaccuracy may have a negative influence on the credibility of the data. The solution to this problem is to locate more sources of data—I use data from documents issued by the government and online news as supplementary evidence; if data from other resources indicate the same findings, information provided by the interviewee can be proved to be accurate.

Moreover, the COVID-19 pandemic negatively affected the data collection process from 2020 onward. Compulsory quarantine policies notably increased the costs of face-to-face interviews and fieldwork. More importantly, most informants in this study work in the health sector. Therefore, they became too busy to participate in interviews when outbreaks occurred. Unfortunately, a severe outbreak of COVID-19 took place in

Guizhou in early 2022, which delayed my schedule for carrying out another round of data collection. To cope with this difficult situation, I relied on numerous second-hand materials and drew some of my data from these materials.

The aforementioned limitations provide valuable opportunities for future research. Using this doctoral dissertation as a starting point, there are two major research areas on which future research could focus. First, I intend to carry out research in regard to a larger landscape and study implementational entrepreneurship in other provinces, especially those in central and costal China. As such, future studies I conduct will explore whether regional differentiation will influence implementational entrepreneurship. Furthermore, I will compare implementational entrepreneurship in China with that in other counties, which can improve the theoretical replicability of this dissertation. Second, research findings in this dissertation underline several interesting research areas. For instance, the concept of procedural policy instruments provides a useful framework for recategorizing entrepreneurial strategies. Moreover, it would be insightful to compare implementational entrepreneurship with other types of human agency that exist in the policy process.

References

Ackrill, R., Kay, A., & Zahariadis, N. (2013). Ambiguity, multiple streams, and EU policy. *Journal of European Public Policy*, *20*(6): 871-887.

Ahlers, A. L., & Schubert, G. (2015). Effective policy implementation in China's local state. *Modern China*, *41*(4): 372-405.

Ambigga, K. S. et al. (2011). Bridging the gap in ageing: Translating policies into practice in Malaysian Primary Care. *Asia Pacific Family Medicine. 10*(1): 1-7.

Arnold, G. (2015). Street-level policy entrepreneurship. *Public Management Review, 17*(3): 307-327.

Arnold, G. (2020). Distinguishing the street-level policy entrepreneur. *Public Administration*, *99*(3): 439-453.

Atkinson, P., Delamont, S., & Hammersley, M. (1993). Qualitative research traditions. *Educational Research, London, Paul Chapman*, *58*(2): 231-250.

Auerbach, C., & Silverstein, L. B. (2003). *Qualitative data: An Introduction to Coding And Analysis*. New York: New York University Press.

Aviram, N., Beeri, I., & Cohen, N. (2021). From the Bottom-Up: Probing the Gap Between Street-Level Bureaucrats' Intentions of Engaging in Policy Entrepreneurship and Their Behavior. *The American Review of Public Administration*, *51*(8): 636-649.

Bakir, C. (2009). Policy entrepreneurship and institutional change: Multilevel governance of central banking reform. *Governance*, *22*(4): 571-598.

Bali, A. S., He, A. J., & Ramesh, M. (2022). Health policy and COVID-19: path dependency and trajectory. *Policy and Society*, *41*(1): 83-95.

Bali, A. S., Howlett, M., Lewis, J. M., & Ramesh, M. (2021). Procedural policy tools in theory and practice. *Policy and Society*, *40*(3): 295-311.

Banks, J. S. (1995). The design of institutions. In Weimer, D.L. (ed.). *Institutional Design.* Boston: Kluwer: 17–36.

Bardach, E. (1998). *Getting Agencies to Work Together: The Practice and Theory of Managerial Craftsmanship*. Washington DC: Brookings Institution Press.

Baumgartner, F. R., & Jones, B. D. (2010). *Agendas and Instability in American Politics*. Chicago: University of Chicago Press.

Bourdieu, P. (1977). The economics of linguistic exchanges. *Social Science Information*, *16*(6): 645-668.

Brødsgaard, K. E. (2012). Politics and business group formation in China: the Party in control? *The China Quarterly, 211*: 624-648.

Bulman, D. J., & Jaros, K. A. (2021). Localism in retreat? Central-provincial relations in the Xi Jinping era. *Journal of Contemporary China*, *30*(131), 697-716.

Campbell, D. T., & Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods*. Thousand Oaks, CA: Sage.

Campbell, J. L. (2004). *Institutional Change and Globalization*. Princeton: Princeton University Press.

Cashore, B., & Howlett, M. (2007). Punctuating which equilibrium? Understanding thermostatic policy dynamics in Pacific Northwest forestry. *American Journal of Political Science*, *51*(3): 532-551.

Chen, C. Y., Gan, P., & How, C. H. (2018). Approach to frailty in the elderly in primary care and the community. *Singapore Medical Journal*, *59*(5): 240-245.

Chen, J. J. (2015) Supervision mechanism: the channel for bureaucracy mobilization (dudao jizhi: kecengzhi dongyuanhua de shijian qudao). *Journal of Public Administration.8*(2). 5-21

Chen, S., & Jia, K. (2021). How local governments prioritize multiple conflicting goals:

Beyond the sole-goal perspective. *Public Administration*: 1-17. DOI: 10.1111/padm.12807.

Chen, X., & Yang, X. (2009). The innovative model of local government: Local cadres' perspectives and considerations. *Public Administration*, *6*(3): 1-11.

Cohen, N. (2016). Policy entrepreneurs and agenda setting. In Zahariadis, N. (ed). *Handbook of Public Policy Agenda Setting*. Cheltenham: Edward Elgar Publishing: 180-199.

Cohen, N., & Aviram, N. F. (2021). Street-level bureaucrats and policy entrepreneurship: When implementers challenge policy design. *Public Administration*, *99*(3): 427-438.

Collier, D., Mahoney, J. & Seawright, J. (2004). 'Claiming Too Much: Warnings about Selection Bias.' In H. Brady & D. Collier (eds). *Rethinking Social Inquiry.* Lanham, MD: Rowman & Littlefield: 3-20.

Cooper, S., & Kitchener, M. (2019). The role of middle managers in the implementation of national public policy. *Policy & Politics*, *47*(2): 309-329.

Corbetta, P. (2003). *Social Research: Theory, Methods and Techniques*. Thousand Oaks, CA: Sage.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Method Approaches*. Thousand Oaks, CA: Sage.

Currie, G., Humphreys, M. et al. (2008). Entrepreneurial leadership in the English public sector: paradox or possibility? *Public Administration*, *86*(4): 987-1008.

Curry, N. & Ham, C. (2010). *Clinical and Service Integration: the Route to Improve outcomes.* London: The Kings Fund. https://www.kingsfund.org.uk/sites/default/files/Clinical-and-service-integration-Natasha-Curry-Chris-Ham-22-November-2010.pdf.

Curtis, J. & Hordin, W. (2009). Special delivery: how coordinated care programs can improve quality and save costs. *A Series of Community Catalyst publications*. Available at https://www.communitycatalyst.org/doc-store/publications/special_delivery_care_coordination_may_2009.pdf.

Davis, K. C. (1969). *Discretionary Justice: A Preliminary Inquiry*. Baton Rouge, LA: Louisiana State University Press.

De la Porte, C. & Natali, D. (2018). Agents of institutional change in EU policy: the social investment moment. *Journal of European Public Policy*, 25(6): 828-843.

De Savigny, D. & Adam, T. (eds.). (2009). *Systems thinking for health systems strengthening*. World Health Organization. https://apps.who.int/iris/handle/10665/44204.

Della Porta, D. & Keating, M. (2008). How many approaches in the social sciences? An epistemological introduction. In Della Porta, D. & Keating, M. (Eds) *Approaches and Methodologies in The Social Sciences: A Pluralist Perspective.* Cambridge: Cambridge University Press.

DiMaggio, P. (1988). Interest and agency in institutional theory. In Zucker, L. G. (ed.). *Research on Institutional Patterns: Environment and Culture Ballinger Publishing Co.*: 3-21.

Dopson, S., & Stewart, R. (1990). What is happening to middle management? *British Journal of Management*, *1*(1): 3-16.

Dowding, K. (1995). Model or metaphor? A critical review of the policy network approach. *Political studies*, *43*(1):136-158.

Dudley, L., & Garner, P. (2011). *Strategies for Integrating Primary Health Services in Low- and Middle-Income Countries at the Point of Delivery*. Cochrane Database of Systematic Reviews. doi: 10.1002/14651858.

Durkheim, E. (1982). *The Rules of Sociological Method*. New York: The Free Press.

Eaton, S. & Kostka, G. (2014). Authoritarian environmentalism undermined? Local leaders' time horizons and environmental policy implementation in China. *The China Quarterly*, *218*: 359-380.

Eckstein, H. (1975). Case Study and Theory in Political Science, in Greenstein, F. I. & Polsby, N. W. (eds.). *Handbook of Political Science*. Reading, Massachusetts: Addison Wesley: 79–138.

Eggleston, K., Ling, L. et al. (2008). Health service delivery in China: a literature review. *Health Economics*, *17*(2): 149-165.

Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of Management Review*, *14*(1), 57-74.

Ellig, J. & Lavoie, D. (1995). The principal–agent relationship in organizations. In Foss, P. (ed.). *Economic Approaches to Organizations and Institutions: An Introduction*. Aldershot: Dartmouth: 267–295.

Exworthy, M. & Powell, M. (2004). Big windows and little windows: implementation in the 'congested state'. *Public Administration*, *82*(2), 263-281.

Faling, M., Biesbroek, R., Karlsson-Vinkhuyzen, S., & Termeer, K. (2019). Policy entrepreneurship across boundaries: A systematic literature review. *Journal of Public Policy*, *39*(2): 393-422.

Feldman, M. S., & Khademian, A. M. (2007). The role of the public manager in inclusion: creating communities of participation. *Governance*, *20*(2): 305-324.

Fewsmith, J. (2013). *The Logic and Limits of Political Reform in China*. New York and Cambridge: Cambridge University Press.

Fischer, F. (1998). Beyond empiricism: policy inquiry in post positivist perspective. *Policy Studies Journal*, *26*(1): 129-146.

Flyvbjerg, B. (2001). *Making Social Science Matter: Why Social Inquiry Fails and How It Can Succeed Again*. Cambridge: Cambridge university press.

Fowler, L. (2019). Problems, politics, and policy streams in policy implementation. *Governance*, *32*(3): 403-420.

Fowler, L. (2022). Using the multiple streams framework to connect policy adoption to implementation. *Policy Studies Journal*, *3*: 615-639

Francis, J. G. (1993). *The Politics of Regulation: A Comparative Perspective*. Oxford: Blackwell.

Fulop, N., Mowlem, A. & Edwards, N. (2005). *Building Integrated Care: Lessons from the UK and elsewhere*. London: The NHS Confederation. https://www.rchnfoundation.org/wp-content/uploads/2015/07/Building-integrated-care.pdf/.

Gatenby, M., Rees, C. et al. (2015). Managing change, or changing managers? The role of middle managers in UK public service reform. *Public Management Review*, *17*(8): 1124-1145.

George, A. L., & Bennett, A. (2005). *Case Studies and Theory Development in the Social Sciences*. Cambridge, Massachusetts: MIT Press.

Gerring, J. (2016). *Case Study Research: Principles and Practices*. Cambridge: Cambridge University Press.

Giddens, A. (1979). *Central Problems in Social Theory: Action, Structure, and Contradiction in Social Analysis*. Berkeley: University of California Press.

Giddens, A. (1993). *New Rules of Sociological Method: A Positive Critique of Interpretative Sociologies*. California: Stanford University Press.

Glasby, J., Dickinson, H. & Peck, E. (2014). *Partnership Working in Health and Social Care: What Is Integrated Care and How Can We Deliver It?* Bristol: Policy Press.

Goggin, M. L., Bowman, A. O. M. & Lester, J. P. (1990). *Implementation Theory and Practice: Toward A Third Generation*. Northbrook: Scott Foresman & Company.

Gong, Y. & Wilkes, A. (1997) Health human resources, in Bloom, G. & Wilkes, A. (eds) Rural China. health in transition: reforming China's rural health services. *IDS Bulletin*. *28*(1): 71-79. https://bulletin.ids.ac.uk/index.php/idsbo/issue/view/106.

Goodall, A. H. (2012). A theory of expert leadership. *IZA Discussion Papers No. 6566*, Institute of Labor Economics (IZA). https://nbn-resolving.de/urn:nbn:de:101:1-201301213282.

Gouglas, A. (2015). Greek ministerial advisers: Policy managers, not experts? *International Journal of Public Administration*, *38*(1): 15-27.

Goyal, N., Howlett, M. & Chindarkar, N. (2020). Who coupled which stream (s)? Policy entrepreneurship and innovation in the energy–water nexus in Gujarat, India. *Public Administration and Development*, *40*(1): 49-64.

Gu, E. (2001). Market transition and the transformation of the health care system in urban China. *Policy Studies*, *22*(3-4): 197-215.

Gu, E., & Zhang, J. (2006). Health care regime change in urban China: unmanaged marketization and reluctant privatization. *Pacific Affairs*, *79*(1): 49-71.

Gu, W. F. (2006). *Extraordinary Accounts: The Hopes and Troubles of A Township Party Secretary. (yige xiangzhen shuji guanyu nongcun pinfu chajv de sikao)*. Beijing: Xinhua Press

Guo, Y., He, A. J. & Wang, F. (2021). Local policy discretion in social welfare: explaining subnational variations in China's de facto urban poverty line. *The China Quarterly*: 1-25. doi:10.1017/S0305741021001168.

Hammond, D. R. (2013). Policy Entrepreneurship in China's Response to Urban Poverty. *Policy Studies Journal*, *41*(1): 119-146.

Hargrove, E. C. (1975). *The Missing Link: The Study of The Implementation of Social Policy*. Washington DC: Urban Institute Press.

Hay, C. (2002). *Political Analysis: A Critical Introduction*. London: Macmillan International Higher Education.

He, A. J. & Ma, L. (2020). Corporate policy entrepreneurship and cross-boundary strategies: How a private corporation champions mobile healthcare payment innovation in China? *Public Administration and Development*, *40*(1): 76-86.

He, A. J. & Qian, J. (2016). Explaining medical disputes in Chinese public hospitals: the doctor–patient relationship and its implications for health policy reforms. *Health Economics, Policy and Law*, *11*(4): 359-378.

He, A. J. & Tang, V. F. (2021). Integration of health services for the elderly in Asia: A scoping review of Hong Kong, Singapore, Malaysia, Indonesia. *Health Policy*, *125*(3): 351-362.

He, A. J. (2012). Is the Chinese health bureaucracy incapable of leading healthcare reforms?: the case of Fujian Province. *China: An International Journal*, *10*(1), 93-112.

He, A. J. (2014). The doctor–patient relationship, defensive medicine and overprescription in Chinese public hospitals: evidence from a cross-sectional survey in Shenzhen city. *Social Science & Medicine*, *123*: 64-71.

He, A. J. (2018). Manoeuvring within a fragmented bureaucracy: policy entrepreneurship in China's local healthcare reform. *The China Quarterly*, *236*: 1088-1110.

He, A. J., Liu, P. et al. (2022). Sending professors to the field: does faculty-practitioner exchange narrow the theory-practice gap in China's MPA programs?. *Journal of Asian Public Policy*: 1-18.

Heilmann, S. (2008a). From local experiments to national policy: the origins of China's

distinctive policy process. *The China Journal, 59*: 1-30.

Heilmann, S. (2008b). Policy experimentation in China's economic rise. *Studies in Comparative International Development, 43*(1): 1-26.

Hill, M. & Hupe, P. (2003). The multi-layer problem in implementation research. *Public Management Review*, *5*(4): 471-490.

Hill, M. & Hupe, P. (2014). *Implementing Public Policy: Governance in Theory and in Practice.* Thousand Oaks, CA: Sage.

Hjern, B. & Porter, D. (1981). Implementation Structures: A New Unit of Administrative Analysis. *Organization Studies*, *2*(3): 211-227.

Hofmarcher, M. M., Oxley, H., & Rusticelli, E. (2007). *Improved Health System Performance through Better Care Coordination.* OECD Library. https://www.oecd-ilibrary.org/social-issues-migration-health/improved-health-system-performance-through-better-care-coordination_246446201766.

Honig, M. I. (2006). Street-level bureaucracy revisited: Frontline district central-office administrators as boundary spanners in education policy implementation. *Educational Evaluation and Policy Analysis*, *28*(4): 357-383.

Hood, C. (1986). *The Tools of Government*. Chatham, NJ: Chatham House.

Hood, C. (1991). A public management for all seasons?. *Public Administration*, *69*(1): 3-19.

Howlett, M. & Ramesh, M. (2003). *Studying Public Policy: Policy Cycles and Policy Subsystems* (2nd edition). Oxford: Oxford university press.

Howlett, M. (2005). What is a policy instrument? Policy tools, policy mixes and policy implementation styles. In Eliadis, P. Hill, M. & Howlett, M. (eds.), *Designing Government: from Instruments to Governance*. Montreal: McGill-Queen's University Press: 31-50.

Howlett, M. (2009). Governance modes, policy regimes and operational plans: a multi-level nested model of policy instrument choice and policy design. *Policy Sciences*, *42*(1): 73-89.

Howlett, M. (2019). Moving policy implementation theory forward: a multiple streams/critical juncture approach. *Public Policy and Administration, 34*(4): 405-430.

Howlett, M., McConnell, A. & Perl, A. (2015). Streams and stages: reconciling Kingdon and policy process theory. *European Journal of Political Research*, *54*(3): 419-434.

Hsiao, W. C. (1995). The Chinese health care system: lessons for other nations. *Social Science & Medicine*, *41*(8): 1047-1055.

Hsiao, W. C. (2007). The political economy of Chinese health reform. *Health Economics, Policy and Law*, *2*(3): 241-249.

Huang, Y., & Chen, T. X. (2020). How do street-level bureaucracy promote policy innovation? case study of innovation in the field of basic-level health services (jietou guanliao ruhe tuidong zhengce chuangxin: jiceng weisheng fuwu lingyu Zhong de chuangxin anli yanjiu). *Journal of Public Management*. *17*(4): 74-86

Husain, L. (2017). Policy experimentation and innovation as a response to complexity in China's management of health reforms. *Globalization and Health*, *13*(1): 1-13.

Jamison, D. T., Evans, J. R. et al. (1984). *China: the Health Sector*. Word Bank. https://agris.fao.org/agris-search/search.do?recordID=XF2016025280.

Jin, H., Qian, Y. & Weingast, B. R. (2005). Regional decentralization and fiscal incentives: Federalism, Chinese style. *Journal of Public Economics*, *89*(9-10): 1719-1742.

Kapucu, N. (2009). Interorganizational coordination in complex environments of disasters: The evolution of intergovernmental disaster response systems. *Journal of Homeland Security and Emergency Management*, *6*(1): Article 47.

Katsamunska, P. (2016). The concept of governance and public governance theories. *Economic Alternatives*, *2*(1): 133-141.

Kennedy, J. J. (2007). From the tax-for-fee reform to the abolition of agricultural taxes: the impact on township governments in north-west China. *The China Quarterly*, *189*, 43-59.

Kingdon, J. W. (1985). *Agendas, Alternatives, and Public Policies*. Boston: Little, Brown.

Knaggård, Å. (2015). The multiple streams framework and the problem broker. *European Journal of Political Research*, *54*(3): 450-465.

Kodner, D. L. & Spreeuwenberg, C. (2002). Integrated care: meaning, logic, applications, and implications–a discussion paper. *International Journal of Integrated Care*, *2*: 1-6

Landry, P. F., Lv, X. & Duan, H. (2018). Does performance matter? Evaluating political selection along the Chinese administrative ladder. *Comparative Political Studies*, *51*(8): 1074-1105.

Lavee, E. & Cohen, N. (2019). How street-level bureaucrats become policy entrepreneurs: The case of urban renewal. *Governance, 32*(3), 475-492.

Lecy, J. D., Mergel, I. A., & Schmitz, H. P. (2014). Networks in public administration: current scholarship in review. *Public Management Review*, *16*(5): 643-665.

Li, H. & Zhou, L. A. (2005). Political turnover and economic performance: the incentive role of personnel control in China. *Journal of Public Economics*, *89*(9-10): 1743-1762.

Li, L. C. (2007). Working for the peasants? Strategic interactions and unintended consequences in the Chinese rural tax reform. *The China Journal*, (57): 89-106.

Li, L. Z. (2013). The Documentary Politics of Local Government: A Case Study of County Government (jiceng zhengfu de wenjian zhili: yi xianji zhengfu

weili). *Sociological Studies*, *4*: 101-128.

Li, X., Fan, S. G. et al. (2009). Community poverty and inequality in western China: a tale of three villages in Guizhou Province. *China Economic Review*, *20*(2): 338-349.

Lian, H. (2016). Competing for Attention in the Chinese Bureaucracy (in Chinese). *Sociology Studies, 31*: 1-26

Lieberthal, K. G. & Lampton, D. M. (1992). Bureaucracy. *Politics, and Decision Making in Post-Mao China.* Berkeley: University of California Press.

Lieberthal, K., & Oksenberg, M. (1988). *Policy Making in China: Leaders, Structures, and Processes.* Princeton: Princeton University Press.

Lin, A. C. (1998). Bridging positivist and interpretivist approaches to qualitative methods. *Policy Studies Journal*, *26*(1): 162-180.

Lin, J. Y. & Liu, Z. (2000). Fiscal decentralization and economic growth in China. *Economic Development and Cultural Change*, *49*(1): 1-21.

Lin, J. Y. (1992). Rural reforms and agricultural growth in China. *The American Economic Review*, *82*(1): 34-51.

Lipsky, M. (2010). *Street-level bureaucracy: Dilemmas of the individual in public service*. New York: Russell Sage Foundation.

Liu, D. (2019). Punish the dissidents: The selective implementation of stability preservation in China. *Journal of Contemporary China*, *28*(119): 795-812.

Liu, J., Liu, S., Zheng, T., & Bi, Y. (2021). Physicians' perspectives of telemedicine during the COVID-19 pandemic in China: qualitative survey study. *JMIR medical informatics, 9(6)*, e26463.

Liu, X., & Mills, A. (2002). Financing reforms of public health services in China: lessons for other nations. *Social Science & Medicine*, *54*(11): 1691-1698.

Liu, X., Liu, Y. & Chen, N. (2000). The Chinese experience of hospital price

regulation. *Health Policy and Planning*, *15*(2):157-163.

Liu, Y., Hsiao, W. C. et al. (1995). Transformation of China's rural health care financing. *Social Science & Medicine*, *41*(8): 1085-1093.

Lu, H., Mayer, A. L. et al. (2020). Can the dual identity of policy entrepreneur and policy implementer promote successful policy adoption? Vertical greening policymaking in Shanghai, China. *Journal of Asian Public Policy*, *13*(1): 113-128.

Ma, L. (2017). Site visits, policy learning, and the diffusion of policy innovation: evidence from public bicycle programs in China. *Journal of Chinese Political Science*, *22*(4): 581-599.

Ma, Q. et al. (2022). Usage and perceptions of telemedicine among health care professionals in China. *International Journal of Medical Informatics*, 166, 104856.

Mahoney, J. & Thelen, K. (eds.). (2009). *Explaining Institutional Change: Ambiguity, Agency, and Power*. Cambridge: Cambridge University Press.

Matland, R. E. (1995). Synthesizing the implementation literature: the ambiguity-conflict model of policy implementation. *Journal of Public Administration Research and Theory, 5*(2): 145-174.

May, P. J. & Winter, S. C. (2009). Politicians, managers, and street-level bureaucrats: influences on policy implementation. *Journal of Public Administration Research and Theory*, *19*(3), 453-476.

Maynard-Moody, S. & Musheno, M. (2003). *Cops, Teachers, Counselors: Narratives of Street-Level Judgment*. Ann Arbor: University of Michigan Press.

McMillan, J., Whalley, J., & Zhu, L. (1989). The impact of China's economic reforms on agricultural productivity growth. *Journal of Political Economy*, *97*(4): 781-807.

Meessen, B. & Bloom, G. (2007). Economic transition, institutional changes and the health system: some lessons from rural China. *Journal of Economic Policy*

Reform, *10*(3): 209-231.

Mei, C. Q. & Liu, Z. L. (2014). Experiment-based policy making or conscious policy design? The case of urban housing reform in China. *Policy Sciences, 47*(3): 321-337.

Mei, C. Q. (2020). Policy style, consistency and the effectiveness of the policy mix in China's fight against COVID-19. *Policy and Society*, *39*(3): 309-325.

Meijerink, S. & Huitema, D. (2010). Policy entrepreneurs and change strategies: lessons from sixteen case studies of water transitions around the globe. *Ecology and society*, *15*(2).

Meng Q G, Chen S C. (2016). Written directive in Chinese political operation: definition，nature and institutional constraints (*zhongguo zhengzhi yunxing zhong de pishi: dingyi, xingzhi yu zhidu yueshu*). *Journal of Political Science.* (5): 70-82+126-127.

Meng, Q., Chen, G. et al. (2005). The impact of China's retail drug price control policy on hospital expenditures: a case study in two Shandong hospitals. *Health Policy and Planning*, *20*(3): 185-196.

Mertha, A. C. (2005). China's "soft" centralization: shifting tiao/kuai authority relations. *The China Quarterly*, *184*: 791-810.

Miles, M. B. & Huberman, A. M. (1994). *Qualitative Data Analysis: An Expanded Sourcebook*. Thousand Oaks, CA: Sage.

Mintrom, M. & Norman, P. (2009). Policy entrepreneurship and policy change. *Policy Studies Journal*, 37(4): 649-667.

Mohajan, H. K. (2018). Qualitative research methodology in social sciences and related subjects. *Journal of Economic Development, Environment and People*, *7*(1): 23-48.

Montinola, G., Qian, Y. & Weingast, B. R. (1995). Federalism, Chinese style: the political basis for economic success in China. *World politics*, *48*(1): 50-81.

Nolte, E. & McKee, M. (eds). (2008). *Caring for people with chronic conditions: a health system perspective.* Maidenhead: Open University Press.

O'Toole Jr, L. J. (1997). Implementing public innovations in network settings. *Administration & Society, 29*(2): 115-138.

Oborn, E., Barrett, M., & Exworthy, M. (2011). Policy entrepreneurship in the development of public sector strategy: the case of London health reform. *Public Administration*, 89(2): 325-344.

O'Brien, K. J., & Li, L. (1999). Campaign nostalgia in the Chinese countryside. *Asian Survey*, *39*(3): 375-393.

Oi, J. C. (1995). The role of the local state in China's transitional economy. *The China Quarterly*, *144*: 1132-1149.

Paquet, M. (2015). Bureaucrats as immigration policy-makers: The case of subnational immigration activism in Canada, 1990–2010. *Journal of Ethnic and Migration Studies*, *41*(11): 1815-1835.

Parsons, W. (1995). *Public Policy: An Introduction to the Theory and Practice of Policy Analysis*. London: Edward Elgar.

Penning de Vries, J. (2021). *Are We on The Same Page? Understanding Shared Perceptions of People Management: A Multilevel Multimethod Study in Schools*. Doctoral dissertation, Utrecht University.

Perry, J. L. (1996). Measuring public service motivation: An assessment of construct reliability and validity. *Journal of Public Administration Research and Theory*, *6*(1): 5-22.

Petchey, R., Williams, J. & Carter, Y. H. (2008). From street-level bureaucrats to street-

level policy entrepreneurs? Central policy and local action in lottery-funded community cancer care. *Social Policy & Administration*, 42(1): 59-76

Peters, B. G. (2015). *Pursuing horizontal management: The politics of public sector coordination*. Lawrence: University Press of Kansas.

Peters, B. G. (2018). The challenge of policy coordination. *Policy Design and Practice, 1*(1): 1-11.

Pierson, P. (1994). *Dismantling the welfare state? Reagan, Thatcher and the politics of retrenchment*. Cambridge University Press.

Powell, M. A. (1997). *Evaluating the national health service*. Open University Press.

Pressman, J. L. & Wildavsky, A. (1984). *Implementation: How Great Expectations in Washington Are Dashed in Oakland; Or, Why It's Amazing That Federal Programs Work at All, This Being A Saga of The Economic Development Administration as Told by Two Sympathetic Observers Who Seek to Build Morals on A Foundation* (2nd edition). Berkley University of California Press.

Qian, J. & He, A. J. (2018). The bonus scheme, motivation crowding-out and quality of the doctor-patient encounters in Chinese public hospitals. *Public Organization Review*, *18*(2): 143-158.

Qian, J., He, A. J & Yin, J. D. (2019). The medical arms race and its impact in Chinese hospitals: implications for health regulation and planning. *Health Policy and Planning*, *34*(1): 37-46.

Ramesh, M., & Bali, A. S. (2021). *Health Policy in Asia*. Cambridge: Cambridge University Press.

Ramesh, M., Wu, X., & He, A. J. (2014). Health governance and healthcare reforms in China. *Health policy and planning*, *29*(6): 663-672.

Rao, N. (2015). Administrative collusion: how delegation diminishes the collective

congress. *New York University Law Review.*, *90*: 1463.

Ratigan, K. (2015). Too little, but not too late? Health reform in rural China and the limits of experimentalism. *Journal of Asian Public Policy*, *8*(1): 69-87.

Ridde, V. (2009). Policy implementation in an African state: an extension of Kingdon's Multiple-Streams Approach. *Public Administration*, 87(4): 938-954.

Roberts, M. J., Hsiao, W. C. et al. (2004). *Getting Health Reform Right: A Guide to Improving Performance and Equity.* Oxford University Press. the United Kingdom

Roosevelt, E. (1949). Making human rights come alive. *The Phi Delta Kappan*, *31*(1): 23-33.

Ryan, M. P. (1995). USTR's implementation of 301 policy in the pacific. *International Studies Quarterly*, *39*(3), 333-350.

Sabatier, P. & Mazmanian, D. (1980). The implementation of public policy: A framework of analysis. *Policy Studies Journal*, *8*(4): 538-560.

Saich, T. (2017). *Governance and politics of China*. Bloomsbury Publishing.

Scase, R., & Goffee, R. (1989). *Reluctant Managers: Their Work and Lifestyles*. Routledge.

Scharpf, F. W. (1978). Interorganizational policy studies: Issues, concepts and perspectives. in Hanf, K. I. & Scharpf, F. W, (eds). *Interorganizational Policy Making: Limits to Coordination and Central Control*. London: Thousand Oaks, CA: Sage: 345–70.

Schneider, A. & Ingram, H. (1990). Behavioral assumptions of policy tools. *The Journal of Politics*, *52*(2): 510-529.

Schubert, G. & Alpermann, B. (2019). Studying the Chinese policy process in the era of 'top-level design': the contribution of 'political steering' theory. *Journal of Chinese Political Science*, *24*(2): 199-224.

Shadbegian, R. J. (1999). Fiscal federalism, collusion, and government size: evidence from the states. *Public Finance Review*, *27*(3): 262-281.

Shearer, J. C. (2015). Policy entrepreneurs and structural influence in integrated community case management policymaking in Burkina Faso. *Health policy and planning, 30*(suppl_2): ii46-ii53.

Shen, L.J., Huang, C.F. et al. (2018). Exploration and practice of county medical community model: taking Tianchang city, Anhui province as an example (xianyu yigongti moshi de tansuo yu Shijian: yi anhuisheng tianchangshi weili). *Health Economics Research, 12*: 7-11.

Shi, S. J. (2012). Social policy learning and diffusion in China: the rise of welfare regions? *Policy & Politics*, *40*(3): 367-385.

Shin, K. (2017). Mission-Driven Agency and Local Policy Innovation: Empirical Analysis from Baoding, China. *Journal of Chinese Political Science*, *22*(4): 549-580.

Shortell, S., Casalino, L. & Fisher, E. (2010). Achieving the vision: structural change. In Crosson, F. & Tollen, L. (eds) *Partners in Health: How Physicians and Hospitals Can Be Accountable Together*. San Francisco: Jossey-Bass.

Sield, V. & Sield, R. (1975). The health delivery system in the People's Republic of China. In Newell, K. W. (eds). *Health by the people*. World Health Organization. 1-12

Smith, A. (2000). Policy networks and advocacy coalitions: explaining policy change and stability in UK industrial pollution policy? *Environment and Planning C: Government and Policy*, *18*(1): 95-114.

Smith, G. (2010). The hollow state: rural governance in China. *The China Quarterly*, *203*: 601-618.

Stake, R. E. (1995). *The Art of Case Study Research*. Thousand Oaks, CA: Sage.

Stavins, R. N. (2008). A meaningful US cap-and-trade system to address climate change. *Harvard Environmental Law Review*, *32*: 293.

Sun, W., Lin, X. et al. (2016). Regional inequality in underdeveloped areas: A case study of Guizhou province in China. *Sustainability*, *8*(11): 1141.

Teets, J. C. & Hasmath, R. (2020). The evolution of policy experimentation in China. *Journal of Asian Public Policy, 13*(1): 49-59.

Teets, J. C. (2015). The politics of innovation in China: Local officials as policy entrepreneurs. *Issues and Studies*, *51*(2): 79.

Tey, N. P., Siraj, S. B. et al. (2016). Aging in multi-ethnic Malaysia. *The Gerontologist*, *56*(4): 603-609.

Tsai, K. S. (2004). Off balance: the unintended consequences of fiscal federalism in China. *Journal of Chinese Political Science*, *9*(2): 1-26.

Tsai, W. H. & Zhou, W. (2019). Integrated fragmentation and the role of leading small groups in Chinese politics. *The China Journal*, *82*(1): 1-22.

Van Meter, D. S. & Van Horn, C. E. (1975). The policy implementation process: A conceptual framework. *Administration & Society*, *6*(4)" 445-488.

Vedung, E., Rist, R. C. & Bemelmans-Videc, M. L. (eds.). (1998). *Carrots, Sticks & Sermons: Policy Instruments And Their Evaluation*. New Jersey: Transaction Publishers.

Wang, G., Xu, H. et al. (2003). Evaluation on comprehensive quality of 456 doctors in township hospitals. *(456 ming xiangzhen weishengyuan yisheng zonghe sushi pingding)*. *Journal of Health Resources. 6*(3): 72–74 .

Wang, H., Tang, Y. et al. (2012). Effect evaluation of national essential medicine system in China: based on survey data from Shandong, Hubei and Sichuan. *Chinese Journal of Health Policy, 5*(4): 30-34.

Wang, S. (2009). Adapting by learning: the evolution of China's rural health care financing. *Modern China*, *35*(4): 370-404.

Wang, T. T. et al. (2016). Assessment of utilization and cost-effectiveness of telemedicine program in western regions of China: a 12-year study of 249 hospitals across 112 cities. *Telemedicine and e-Health, 22(11)*, 909-920.

Waterman, R. W., & Meier, K. J. (1998). Principal-agent models: an expansion?. *Journal of Public Administration Research and Theory*, *8*(2): 173-202.

Wildemuth, B. M. (1993). Post-positivist research: two examples of methodological pluralism. *The Library Quarterly*, *63*(4): 450-468.

Wilson, J. Q. (1968). Dilemmas of police administration. *Public Administration Review*, *28*(5): 407-417.

World Bank & World Health Organization. (2019). *Healthy China: Deepening Health Reform in China: Building High-quality And Value-based Service Delivery.* World Bank & World Health Organization. https://openknowledge.worldbank.org/handle/10986/31458.

World Health Organization. (2002). *The World Health Report 2002: Reducing Risks, Promoting Healthy Life*. Geneva: World Health Organization. https://www.who.int/publications/i/item/9241562072.

World Health Organization. (2008). *Integrated Health Services: What and Why?* Geneva: World Health Organization. https://www.who.int/teams/integrated-health-services.

World Health Organization. (2010). *Telemedicine: Opportunities and Developments in Member states. Report on The Second Global Survey on E-Health*. Geneva: World Health Organization. https://apps.who.int/iris/handle/10665/44497.

World Health Organization. (2015). *WHO Global Strategy on People-centred And Integrated Health Services: Interim Report*. Geneva: World Health Organization.

https://apps.who.int/iris/handle/10665/155002.

Wu, G. (1995). "Documentary Politics": Hypotheses, process, and case studies. In Hamrin, C. L. & Zhao, S. (eds) *In Decision-making in Deng's China: Perspectives from Insiders*. 24-38. Routledge.

Wu, J., Ma, L. & Yang, Y. (2013). Innovation in the Chinese public sector: Typology and distribution. *Public Administration*, 91(2): 347-365.

Wu, Y. (2007). *Uproar in a Small Town: Interpretation of a Township's Political Operation. (xiaozhen xuanxiao: yige xiangzhen zhengzhi yunzuo de yanyi yu chanshi)*. Beijing: Joint Publishing

Xu, W., Pan, Z., Lu, S., & Zhang, L. (2020). Regional heterogeneity of application and effect of telemedicine in the primary care centres in rural China. *International Journal of Environmental Research and Public Health, 17(12)*, 4531.

Xun, L., & Bao, Z. (2007). Government-driven environmental policies and local implementation. *Social Sciences in China*, *5*: 114-128.

Yin, R. K. (2014). *Case study research: Design and methods* (5th edition). Thousand Oaks, CA: Sage.

Yip, W. & Hsiao, W. C. (2001). Economic transition and urban health care in China: impacts and prospects. In the Conference on Financial Sector Reform in China. Havard University.

Yip, W. & Hsiao, W. C. (2008). The Chinese health system at a crossroads. *Health affairs*, *27*(2): 460-468.

Yip, W., Fu, H. et al. (2019). 10 years of health-care reform in China: progress and gaps in universal health coverage. *The Lancet*, *394*(10204): 1192-1204.

Yu, D. (1992). Changes in health care financing and health status: the case of China in the 1980s, *Innocenti Occasional Papers, Economic Policy Series 34.*

https://www.unicef-irc.org/publications/155-changes-in-health-care-financing-and-health-status-the-case-of-china-in-the-1980s.html.

Yu, F.H., Meng, Q.Y. et al. (2010). Analysis on the measuring method of financing for township health center within the framework of National Essential Medicines System: a case study in S county (guojia jiben yaowu zhidu kuangjia xia de xiangzhen weishengyuan chouzi cesuan fangfa yanjiu: yi S xian wei anli). *Chinese Journal of Health Policy, 3*(1): 29-33

Yu, J. X., Tu, X. Y. & Wu, C. (2020). Exploration a Chinese protocol for integrated health service: a survey on the county medical alliance in Anhui, Shanxi and Zhejiang (tansuo zhenghexing yiliao weisheng fuwu tixi de zhongguo fangan: jiyu anhui, shanxi yu Zhejiang xianyu yigongti de diaocha). *Governance Studies, 1*: 5-15

Yuan, S. S., Wang, G. W. et al. (2018). Research on patient perception on quality of care in primary medical institutions in medical group: a case study of Zhenjiang city, Jiangsu province (yiliao jituan xia jiceng yiliao jigou bingren ganzhi zhiliang yanjiu: yi jiangsu zhenjiangshi weili). *Chinese Journal of Health Policy, 11*(10): 29-33.

Yue, J. L., Hui, Y. & Wang, C. X. (2019). Why the "Luohu Model" is favored? A perspective of policy innovation diffusion (luohu moshi heyi dedao qinglai? Jiyu zhengce chuangxin kuosan de shijiao). *Nanjing Journal of Social Sciences, 3*: 57-63.

Zahariadis, N. & Exadaktylos, T. (2016). Policies that succeed and programs that fail: ambiguity, conflict, and crisis in Greek higher education. *Policy Studies Journal*, *44*(1): 59-82.

Zahariadis, N. (2003). *Ambiguity and Choice in Public policy: Political Decision Making in Modern Democracies*. Georgetown University Press.

Zahariadis, N. (2007). The multiple streams framework: structure, limitations, prospects.

In Sabatier, P. A. & Weible, C. M. (Eds) *Theories of The Policy Process*. 65-92. Oxfordshire: Routledge.

Zhang, R., Chen, Y. et al. (2020). Progress of equalizing basic public health services in Southwest China---health education delivery in primary healthcare sectors. *BMC Health Services Research*, *20*(1): 1-13.

Zhang, X., Feng, Z. & Zhang, L. (2003). Analysis on quality of prescription of township hospitals in poor areas. *Journal of Rural Health Service Management*, *23*(12): 33-35.

Zhang, Y. (2020). "Promotion tournament 2.0": why local cadres expand health-care provision in China. *Governance*, *33*(4): 897-914.

Zhang, Y., & Van Der Schaar, M. (2013, October). Strategic information dissemination in endogenous networks. In 2013 51st Annual Allerton Conference on Communication, Control, and Computing (Allerton). IEEE. 389-396

Zhang, Y., & Wang, S. (2021). How does policy innovation diffuse among Chinese local governments? A qualitative comparative analysis of River Chief Innovation. *Public Administration and Development*, *41*(1): 34-47.

Zhao, H., Zhu, X.F., & Qi, Y. (2016). Fostering local entrepreneurship through regional environmental pilot schemes: The low-carbon development path of China. *China: An International Journal, 14*(3): 107-130.

Zheng, X., & Hillier, S. (1995). The reforms of the Chinese health care system: county level changes: the Jiangxi study. *Social Science & Medicine*, *41*(8): 1057-1064.

Zhou, X. G, Lian, H. et al. (2013). A behavioral model of "muddling through" in the Chinese bureaucracy: The case of environmental protection. *The China Journal*, (70): 120-147.

Zhou, X. G. (2010). The institutional logic of collusion among local governments in

China. *Modern China*, *36*(1): 47-78.

Zhou, X. G. (2011). Authoritarian system and good governance: institutional logics behind contemporary governance of China (quanwei tizhi yu youxiao zhili: dangdai zhongguo guojia zhili de zhidu luoji). *Open Time,10*: 67-85.

Zhou, X. G. (2020). Organizational response to COVID-19 crisis: Reflections on the Chinese bureaucracy and its resilience. *Management and Organization Review*, *16*(3): 473-484.

Zhu, X. F. & Zhao, H. (2021). Experimentalist governance with interactive central–local relations: making new pension policies in China. *Policy Studies Journal*, *49*(1), 13-36.

Zhu, X. F. (2014). Mandate versus championship: Vertical government intervention and diffusion of innovation in public services in authoritarian China. *Public Management Review*, *16*(1): 117-139.

Zhu, Y. P. & Xiao, D. W. (2015). Policy entrepreneur and social policy innovation in China. *The Journal of Chinese Sociology*, *2*(1): 1-17.

Zhu, Y. P. (2013). Policy entrepreneurship, institutional constraints, and local policy innovation in China. *China Review*, *13*(2): 97-122.

Zohlnhöfer, R., Herweg, N., & Huß, C. (2016). Bringing formal political institutions into the multiple streams framework: an analytical proposal for comparative policy analysis. *Journal of Comparative Policy Analysis: Research and Practice*, 18(3): 243-256.

Zohrabi, M. (2013). Mixed method research: instruments, validity, reliability and reporting findings. *Theory and Practice in Language Studies*, *3*(2): 254-396.

Appendix A: Work Report for the National Pilot Scheme of Telemedicine

贵州省发展和改革委员会
贵州省卫生和计划生育委员会 文件

黔发改高技〔2014〕882号　　签发人：张晓萍
花继明

关于申请省院合作远程医疗政策试点的报告

国家发展改革委、国家卫生计生委：

根据《国家发展改革委 国家卫生计生委关于组织开展省院合作远程医疗政策试点工作的通知》（发改高技〔2014〕410号）要求，贵州省同解放军总医院积极开展了省院合作远程医疗政策试点项目的相关前期工作。

贵州省地处西南云贵高原，由于经济发展、区位、交通等因素，医疗资源匮乏和城乡医疗卫生事业发展不均衡的问题更为突出，贵州省开展国家远程医疗政策试点的需求更为迫切。国家发展改革委、国家卫生计生委组织实施国家远程医疗政策试点项目，是提高贵州省医疗救治能力和服务质量的重大政策机遇，对加快贵州省基层医疗卫生服务体系建设，推动城乡医疗卫生服务均等化，有效缓解群众看病难问题具有重大意义。同时，在贵州省开展远程医疗政策试点非常具有典型性和代表性。

- 1 -

目前，贵州省政府成立了以分管副省长任组长的省院合作远程医疗政策试点工作协调推进小组，贵州省政府已批准《贵州省院合作远程医疗政策试点工作方案》，并出具了贵州省地方配套资金承诺。现将《贵州省院合作远程医疗政策试点工作方案》报来，恳请国家发展改革委、国家卫生计生委继续予以大力支持，将贵州省列入2014年省院合作远程医疗政策试点，并予以专项资金支持。

附件：《贵州省院合作远程医疗政策试点工作方案》

贵州省发展和改革委员会　　贵州省卫生和计划生育委员会

2014年5月20日

贵州省发展和改革委办公室　　2014年5月20日印发

共印10份

-2-

Appendix B: Operational Plan of the Medical Alliance Reform in Liuzhi

中共六枝特区委员会办公室文件

六特办通字〔2017〕36 号

中共六枝特区委办公室
六枝特区人民政府办公室
关于印发六枝特区组建“医共体”
实施方案的通知

各乡镇党委、政府，各社区党委、服务中心，特区党委各部门，特区国家机关各部门，特区人武部，各园区党工委、管委会，各人民团体，省、市属驻区有关单位，区属企事业单位：

《六枝特区组建“医共体”实施方案》已经特区党委、政府

同意，现印发你们，请认真遵照执行。

中共六枝特区委办公室

六枝特区人民政府办公室

2017 年 3 月 1 日

六枝特区组建“医共体”实施方案

为进一步深化医药卫生体制综合改革，着力解决全区医疗卫生资源总量不足、分布不均、结构不合理、人才资源缺乏、服务能力不高、体制机制不活以及群众“看病远、看病难、看病贵”等问题，让群众就近享受优质医疗服务，早日建成“基层首诊、上下联动、急慢分治、双向转诊”的就医新格局。根据《中共贵州省委贵州省人民政府关于大力推动医疗卫生事业改革发展的意见》（黔党办发〔2015〕18号）、《省人民政府办公厅关于印发<贵州省基层医疗卫生服务能力三年提升计划（2016—2018）>的通知》（黔府办函〔2016〕210号）、《中共六盘水市委六盘水市人民政府关于大力推动医疗卫生事业改革发展的意见》（六盘水党发〔2015〕40号）、《中共六枝特区委六枝特区人民政府关于大力推动医疗卫生事业改革发展的意见》（六特发〔2016〕1号）等精神，结合我区实际，制定本方案。

一、指导思想

全面贯彻落实中央、省、市医药卫生体制改革精神，以创新运行机制为核心，通过整合区域内医疗卫生服务资源，建立六盘水市第二人民医院、特区人民医院与基层医疗机构组建区域医疗卫生服务共同体的长效工作机制，优化医疗卫生资源，形成整体合力，实现县、乡、村三级医疗机构管理体制和运行机制联动改革、协同推进、同步完善。组建医共体，通过整合区域医疗卫生

服务资源，建立分工协作机制、医保基金对医共体实行按参保人头总额预算支付等综合改革，整体提高区域医疗资源的配置和使用效率，同步提高县、乡两级医疗服务能力，减少住院病人外流现象，努力实现“区域内就诊率提高到90%以上”的医改目标。

二、基本原则

（一）纵向合作、横向竞争、双向选择。由特区卫生计生局统筹规划，以六盘水市第二人民医院和特区人民医院两家医院为牵头单位组建两个区域医共体，服务范围覆盖全区城乡居民。各医共体根据需求和现状，兼顾已经形成的合作基础，各牵头医院与成员单位互尊意愿，双向选择，建立纵向合作的区域医共体，各区域医共体之间形成横向竞争机制。

（二）稳妥起步，先易后难，循序渐进。六盘水市第二人民医院和特区人民医院分别与全区19个乡（镇）卫生院、社区卫生服务中心建立纵向合作关系，实现区域医共体组建全覆盖。各区域医共体早期可以以对口帮扶、技术合作等方式起步，逐步深化合作，形成紧密型医共体，实现“一个深化、四统一”，即深化人事制度改革、统一调配人力资源、统一核算医疗服务成本、统一成员单位的绩效考核办法、统一管理和分配医疗收入以及医保资金。

（三）统分结合，权责廓清，强化监督。区域医共体各成员单位按照行政隶属关系不变、单位法人不变、产权归属不变、法律责任不变、基本职能不变、职工身份不变、监管机制不变、第

一名称不变的原则，增挂“XX 医院 XX 分院”牌子。各乡（镇）卫生院、社区卫生服务中心功能不变，继续承担基本医疗、公共卫生、计划生育技术服务、乡村一体化管理等卫生计生工作任务。各成员单位的财政补偿政策和政府投入方式不变，乡（镇）卫生院、社区卫生服务中心继续享受全额工资财政补助待遇。医疗收入和医保资金在成员单位之间的分配由医共体牵头单位拟定草案，在各区域医共体内部形成一致意见后，报医管委批准后实施，并报特区人民政府备案。

三、工作目标

（一）提高区域医疗服务体系的整体效率。建立县、乡两级医疗机构统筹协调和分工合作机制，共享医疗资源，逐步实现家庭医生签约服务，“基层首诊、分级诊疗、急慢分治、双向转诊”，有效控制医药费用，减少过度医疗和资源浪费，提高医疗服务体系整体运行效率，为群众提供就近分级、连续、节约、高效、优质的医疗卫生服务。

（二）提高区域医疗机构的技术水平和服务能力。不断优化医务人员学历和职称结构。截止 2016 年 12 月底，两家公立医院本科学历以上人员 487 人，占比约 54%，中级职称以上 269 人，占比约 30% 。通过组建医共体，促进六盘水市第二人民医院、特区人民医院加大对乡（镇）卫生院、社区卫生服务中心技术帮扶力度，提高乡（镇）卫生院、社区卫生服务中心诊疗水平、公共卫生服务水平、计划生育技术服务水平，引导住院病人向乡

（镇）卫生院、社区卫生服务中心流动，减少病人区外就医现象。

（三）实现医疗、医保、患者三方利益相容。新农合实行按人头总额预算包干、超支不补的原则向各区域医共体理事会预拨医保资金，结余的医保资金可以在各区域医共体内部进行再分配，促进医疗机构自动节约费用、节约医保资金，实行医疗与医保利益相容；在医保支付机制的驱动下，各区域医共体内医疗机构密切协作，以便捷的流程、最好的质量和最低的费用服务参合（保）病人，并为转诊提供跟踪服务，密切医患关系。

（四）提高医疗基金的使用效率。推广临床路径管理，确定各级医院的疾病诊治病种和规范，扩大按病种付费范围，在确保医疗质量的同时控制费用不合理上涨。通过基层卫生人员与居民签约服务，逐步培养居民理性就医、逐级转诊的习惯，为提高医保基金的保障效能建立长效机制。

四、管理模式与职责分工

（一）管理模式

1. 管理上“有收有放”。“收”就是统一政府办医决策权。成立由特区人民政府区长任主任的公立医院管理委员会，将财政、卫生、人社、物价、编办等部门办医权力收归医管委统一决策，负责公立医院重大项目实施、院长选聘、绩效考核等职责。“放”就是放开医院自主经营管理权。充分落实县级公立医院独立法人地位，按照“能放全部放”的原则，把人事分配、内部机构设置、副职推荐、中层干部聘任、收入分配、年度预算执行等

6 项权力全部下放到医院。比如，实行编制备案制管理，允许医院自主招聘备案制人员。

2. 在特区医共体工作领导小组办公室的领导下，各区域医共体牵头单位与各成员单位签订医共体组建协议书，同时分别成立六枝特区 XX 医院医共体理事会，作为医共体的决策机构，负责各区域医共体所属医疗机构的总体规划、运营方针、资产调配、财务预决算、收入分配、人力资源管理等重大事项。

3. 各区域医共体理事会设理事长 1 名，理事若干名，实行医共体理事会领导下的分院院长负责制。理事会定期召开会议，讨论和解决医共体运行中出现的问题。理事会领导下的分院院长具体负责上下联动、双向转诊、业务指导和人员培训等协调工作。

4. 各区域医共体理事会办公室分别设在六盘水市第二人民医院与特区人民医院，抽调专人负责医共体理事会的日常工作。

（二）职责分工

区域医共体理事会：负责联合区域内的医疗卫生服务机构，构建分工协作机制；制定区域医共体章程、双向转诊实施细则、医共体成员单位绩效考核实施办法和医共体医疗服务收入结算与分配的意见等规章制度，建立完善区域医共体组织架构和运行制度，并具体推进落实。

六盘水市第二人民医院与特区人民医院：负责组织制定各区域医共体内各项工作制度；加强急危重症和疑难病症的远程诊疗，承担对各自医共体内乡（镇）卫生院、社区卫生服务中心的

医疗业务、公共卫生服务、计划生育技术服务的技术指导，与医共体乡（镇）卫生院、社区卫生服务中心有效对接辖区病人的接、转诊等管理工作；统筹协调医共体内各乡（镇）卫生院、社区卫生服务中心床位的使用和管理，建立一体化管理机制，确保医疗服务顺畅高效；有效做好医务人员的上下交流和出诊工作；承担区域医共体日常工作，做好工作信息、数据收集、汇总等其他工作，并及时向特区卫生计生局报送。

乡（镇）卫生院、社区卫生服务中心：承担常见病、多发病诊疗、伤残康复和慢性病治疗管理等公共卫生任务；开展部分常规诊疗技术和康复、护理等治疗；完成区域医共体理事会规定的其他工作。

五、运行机制

（一）深化人事制度改革。建立区域医共体内部人才柔性流动机制，六盘水市第二人民医院与特区人民医院具有执业资质的人员可到各自医共体乡（镇）卫生院、社区卫生服务中心挂任相应职务和执业，乡（镇）卫生院、社区卫生服务中心编制内有资质人员可在牵头医疗机构进修、轮训和执业。加强中心乡（镇）卫生院、社区卫生服务中心内涵建设，打造至少2家中心乡（镇）卫生院、社区卫生服务中心达到二级综合医院创建标准。建立村医准入机制，并按照相关政策规定，将符合参保条件的乡村医生纳入职工基本养老保险。

（二）财务统分结合。区域医共体内各医疗机构财务实行统

分结合。乡（镇）卫生院、社区卫生服务中心财政工资由乡（镇）卫生院、社区卫生服务中心独立管理，医疗业务、公共卫生服务、计划生育技术服务等收入根据区域医共体理事会制定的分配办法进行核算和分配。运行上“有破有立”。“破”就是破除以药补医，“立”就是建立全新运行机制。明确了“定项＋专项”的财政补偿办法，将县级公立医院政策性亏损、离退休人员经费、重点专科建设和人才培养等列入财政预算；对基础建设、人才引进、院长年薪（指县级公立医院院长）等给予“专项”财政补助。

（三）业务统一管理。区域医共体内各医疗机构在规章制度、技术规范、人员培训、绩效考核等方面执行统一标准，并保持相对独立的医疗业务管理，承担相应的医疗责任；区域医共体内各医疗机构的药品、耗材等在各区域医共体理事会的领导下实行统一采购配送，同时由各医共体理事会按照国家医院等级用药标准统一制定医共体内部各医疗机构的用药范围；实行大型设备统一管理、共同使用，在统一质控标准、确保医疗安全的前提下，区域医共体内检验检查结果互认，减少重复检验检查；构建由六盘水市第二人民医院、特区人民医院、基层医疗卫生机构、专业公共卫生机构组成的健康管理网络。在医共体内设置健康管理中心，进行健康干预，并建立“双处方”制度，向就诊患者开具用药处方和个性化健康处方。

（四）统一绩效考核。进一步完善绩效考核制度，使基层卫生服务机构人员由被动服务向主动服务改变，提高服务效率，保

证基本公共卫生和基本医疗服务落实到位。医共体内各家医疗机构内部绩效考核的分配机制不与医务人员的创收挂钩。县级医院采取日常考核与半年、年终考核相结合等方法对区域医共体内基层医疗卫生机构进行考核，考核结果作为乡（镇）卫生院、社区卫生服务中心财政补助和绩效工资总额拨付的重要依据。乡（镇）卫生院、社区卫生服务中心对辖区内的村卫生室基本公共卫生服务数量及质量、基本药物制度、药品零差率执行情况进行考核，考核结果与当年补助总额和下年度补助经费预拨比例挂钩。

六、工作任务

（一）建立业务指导工作机制。建立区域医共体内乡（镇）卫生院、社区卫生服务中心医务人员到六盘水市第二人民医院与特区人民医院进修和培训机制。六盘水市第二人民医院与特区人民医院有计划地对乡（镇）卫生院、社区卫生服务中心的医务人员开展免费进修和专业技术培训，每年举办1—2期以乡（镇）卫生院、社区卫生服务中心技术骨干为对象的常见病诊断、鉴别诊断与临床治疗技能培训班，举办1—2期以村医为对象的慢性病防治知识和技能培训班；六盘水市第二人民医院与特区人民医院要定期委派骨干医生到乡（镇）卫生院、社区卫生服务中心进行技术指导或者兼任业务院长，针对乡（镇）卫生院、社区卫生服务中心收治能力短板进行帮扶，为乡（镇）卫生院、社区卫生服务中心培养一批能诊治常见病、多发病和诊断明确慢性病的医护人员，不断提升乡（镇）卫生院、社区卫生服务中心医疗技术

水平，大力培养全科医生。

（二）建立分级诊疗、双向转诊机制。按照基层首诊、急慢分治、双向转诊、连续服务的原则，各区域医共体内医疗机构实行分级诊疗管理，制定乡（镇）卫生院、社区卫生服务中心病人向六盘水市第二人民医院与特区人民医院转诊、六盘水市第二人民医院与特区人民医院病人向乡（镇）卫生院、社区卫生服务中心双向转诊工作程序。辖区内参合参保居民首诊应在乡（镇）卫生院、社区卫生服务中心，一般常见病留在乡（镇）卫生院、社区卫生服务中心诊治，轻度疑难复杂或急性期的常见病，由六盘水市第二人民医院与特区人民医院派出专家现场指导；在六盘水市第二人民医院与特区人民医院完成难度较大的诊治且病人病情平稳后，转回乡（镇）卫生院、社区卫生服务中心继续治疗，六盘水市第二人民医院与特区人民医院原经治医生跟踪病人至乡（镇）卫生院、社区卫生服务中心，指导后续治疗。受乡（镇）卫生院、社区卫生服务中心技术条件限制难以诊治的病人应转往六盘水市第二人民医院与特区人民医院诊治，六盘水市第二人民医院与特区人民医院确实无法诊治的疾病，出具转诊单向区外医保签约医院转诊。

（三）提升乡（镇）卫生院、社区卫生服务中心服务能力。将乡（镇）卫生院、社区卫生服务中心按一般和中心乡（镇）卫生院、社区卫生服务中心进行分类管理，促进人力资源和设备资源向中心乡（镇）卫生院、社区卫生服务中心集中，扶持实力较

强的中心乡（镇）卫生院、社区卫生服务中心创建二级综合医院，力争到2017年全区有2个中心乡（镇）卫生院、社区卫生服务中心达到二级综合医院的水平。鼓励和扶持乡（镇）卫生院、社区卫生服务中心发展特色专科，特色专科可以与县级以上医院开展合作共建。

（四）开展专科合作或联合病房。根据功能定位及各成员单位的业务特点，六盘水市第二人民医院、特区人民医院合理分类开展重点学科建设，避免恶性竞争；与乡（镇）卫生院、社区卫生服务中心选择部分科室形成一对一对口支持关系，开展合作专科或联合病房。

（五）实施医共体内医师多点执业。六盘水市第二人民医院与特区人民医院具有执业医师资格的人员可根据工作需要，选择各自区域医共体内具有相应诊疗科目的1—2个乡（镇）卫生院、社区卫生服务中心作为多点执业地点，注册2—3个执业地点，开展诊疗服务。

（六）加强医疗护理管理。六盘水市第二人民医院与特区人民医院要分别组织医务科、护理部和质控办每年对乡（镇）卫生院、社区卫生服务中心开展1—2次地毯式检查，对照《建设群众满意的乡镇卫生院》的指标要求，帮扶乡（镇）卫生院、社区卫生服务中心改进医疗护理管理，提升医疗护理质量。重点关注乡（镇）卫生院、社区卫生服务中心掌握入院指征和用药指征。

（七）规范医疗行为。乡村医疗机构门诊使用“标准处方集”，

住院服务推广临床路径管理。各区域医共体内成员单位的药品、耗材等进行统一采购、配送；统一建立完善以区域医共体为单位的医疗风险防范机制，全部购买医责险。开设检验影像绿色通道，在各自区域医共体内实现检验结果互认，统一质控标准，成员单位之间建立远程医疗合作关系，开展远程视频会诊、远程教学查房、远程专家门诊、远程病理及一些影像诊断等活动。

（八）实行区域信息联网。利用网络信息技术，促进六盘水市第二人民医院、特区人民医院与乡（镇）卫生院、社区卫生服务中心的合作，以医院管理和电子病历系统、远程会诊等服务为基础，推进医院信息化建设，全面优化整合区域医疗卫生资源，完善区域医疗共享信息平台，真正实现区域内医疗信息互联互通、资源共享和技术共享。

（九）开展签约服务。依托有资质的全科医生或基层医疗机构组建全科医生（或乡村医生）服务团队，采取签约服务模式，为辖区内居民提供常见病、多发病诊疗、双向转诊服务、基本公共卫生服务及健康管理等全科服务。落实包保责任制，推行网格化管理、团队化管理和家庭医生负责制。利用基本公共卫生服务项目经费，激励完善签约服务。

（十）改革医保付费模式。实行按人头总额预算包干、超支不补的原则，结余全部留用。根据现有的运行数据，统计出六盘水市第二人民医院、特区人民医院与乡（镇）卫生院、社区卫生服务中心三个层面各自的住院病人数、次均费用、实际补偿比、

基金支付额等数据，按照现有的资金支出分布结构，适当考虑住院人次和费用的合理上涨，以及开展签约服务等因素，预算安排下一年度（季度）全区参合人员新农合基金的支出总额，按不超过当年筹集资金总额提取风险基金后的95%作为总预算，并将总额换算成参合人头费用（对应辖区每个参合居民），交由各区域医共体牵头单位包干，负责承担辖区参合农民当年门诊和住院服务的直接提供、必要的转诊以及新农合补偿方案规定的费用报销。参合人员的区外住院病人（含大病保险享受者）的报销也从总预算中支付，结余资金由区域医共体成员单位合理分配、自主支配。

（十一）强化新农合、医保经办机构监管和服务职能。对区域医共体实行按人头总额预算管理后，新农合、医保经办机构继续履行并加强相应职责，加大监管力度，确保基金安全；继续做好经办服务工作，按季度预拨资金到各区域医共体，考核各区域医共体的临床路径执行率、病人实际补偿比、区外转诊率等，并与新农合基金年终结算挂钩，帮助各区域医共体做好各区域医共体外医疗机构的监管和区外住院病人的调查核实。

（十二）完善乡村卫生服务和管理一体化。特区卫生计生局和各区域医共体都要加强对村医的管理和技术培训，优化村医队伍，提高村医待遇，改善村医服务手段，推广村医签约服务，参合参保居民首诊原则上应在与之签约的区域医共体成员单位就医。健康一体机项目中的心电图、尿常规项目，需经物价部门核

准收费标准。其中，心电图必须与各自牵头医院心电诊断中心互通，由牵头医院帮助读图；尿常规项目必须与乡（镇）卫生院、社区卫生服务中心的检验科互通，由乡（镇）卫生院、社区卫生服务中心出具检验报告。严格防止过度检查，新农合报销结算时，可根据阳性率的最低限要求，打包支付给村医。通过签约服务和签约转诊，引导区域居民养成“有序就医、履约就诊”的习惯。

七、实施步骤

（一）确定组建对象。六盘水市第二人民医院组建单位为月亮河乡、郎岱镇、中寨乡、牂牁镇、木岗镇、落别乡、大用镇、关寨镇卫生院，九龙社区卫生服务中心、银壶社区卫生服务中心。特区人民医院组建单位为新窑镇、新场乡、牛场乡、岩脚镇、梭戛乡、新华镇、龙河镇卫生院，塔山社区卫生服务中心、那克社区卫生服务中心。

（二）稳步实施，全面铺开。2016 年，启动六盘水市第二人民医院与木岗镇卫生院完成医共体组建工作；特区人民医院与新场乡卫生院完成医共体组建工作。2017 年，六盘水市第二人民医院与银壶社区卫生服务中心，郎岱镇、关寨镇等卫生院，全面推进医共体组建工作；特区人民医院与岩脚镇、牛场乡、龙河镇等卫生院全面推进医共体组建工作。2018 年，六盘水市第二人民医院与特区人民医院全面完成医共体组建全覆盖工作。

八、工作要求

（一）加强组织领导。成立由特区政府主要领导任组长，常

务副区长、分管副区长任副组长，特区政府办公室、宣传部、卫生计生局、编委办、人资社保局、发展改革局、财政局、公安局、民政局、新农合办、医改办、市二医、人民医院、各乡（镇、社区）党委政府为成员单位的特区医共体工作领导小组，各区域医共体理事会要在领导小组领导下，统筹推进区域医共体建设，积极争取国家及省、市政策支持，协调解决运行中出现的困难和问题。

（二）明确工作职责。特区医共体工作领导小组各成员单位要根据各自的工作职能，深入研究，明确责任，建立信息沟通渠道，解决医共体实施中遇到的实际困难，共同推进医共体建设。特区卫生计生局牵头负责医共体实施工作，特区发改局负责医疗卫生资源配置的统一规划，特区财政局负责医共体原有的补偿和投入政策的落实，特区编委办按相关规定进行编制管理，特区人资社保局负责配合做好医共体所需人员的聘用和流动管理的落实，落实城镇居民医保纳入改革的相关工作，特区民政局负责配合做好“三无病人”等特殊困难群众的救治经费保障工作，特区公安局负责维护好医疗机构正常医疗秩序。各部门要通力协作，认真落实城乡居民基本医疗保险基层首诊、双向转诊的相关配套政策措施，建立起以基层首诊、分级诊疗、双向转诊的医疗模式，引导参合参保城乡居民就医模式的转变，促进医疗资源合理使用，逐步实现分级诊疗、双向转诊的就医格局。

（三）加强舆论宣传。由特区卫生计生局牵头，宣传部配合

组织新闻媒体充分利用多种宣传方式，加大对开展区域医共体工作目的、意义和政策措施的宣传力度，充分调动广大医务人员参与改革的积极性和主动性，全力争取广大群众和社会各界对区域医共体工作的理解与支持，为平稳顺利实施营造良好舆论氛围。

Appendix C: Operational Plan of the Medical Alliance Reform in Guizhou

贵州省卫生健康委员会
贵州省中医药管理局

黔卫健函〔2019〕115号

关于印发《全面推进紧密型县域医疗卫生共同体建设发展实施意见》的通知

各市、自治州卫生健康局，贵安新区卫生和人口计生局，仁怀市、威宁县卫生健康局：

为贯彻落实《国务院办公厅关于推进医疗联合体建设和发展的指导意见》（国办发〔2017〕32号）、《国家卫生健康委员会 国家中医药管理局关于推进紧密型县域医疗卫生共同体建设的通知》（国卫基层函〔2019〕121号）精神，结合我省实际，省卫生健康委、省中医药管理局制定了《全面推进紧密型县域医疗卫生共同体建设发展实施意见》，现印发给你们，请遵照执行。

省卫生健康委员会　　省中医药管理局

2019年6月25日

全面推进紧密型县域医疗卫生共同体建设发展实施意见

为进一步深化医药卫生体制改革，调整优化医疗资源结构布局，促进医疗卫生工作重心下移和资源下沉，加快提升基层服务能力，实现医疗资源上下贯通，推动构建分级诊疗，不断增强群众的健康获得感，按照《国务院办公厅关于推进医疗联合体建设和发展的指导意见》（国办发〔2017〕32号）精神，全省全面推进紧密型县域医疗卫生共同体（以下简称“医共体”）建设和发展，结合我省实际，制定本实施意见。

一、总体要求

（一）指导思想

以习近平新时代中国特色社会主义思想为指导，全面贯彻党的十九大和十九届二中、三中全会及省委十二届三次、四次全会精神，坚持新时期党的卫生与健康工作方针，坚持以人民为中心的发展思想，以促进基本医疗卫生服务公平性和可及性为目标，以优化医疗卫生资源配置、提升县域医疗卫生服务能力和效能为重点，逐步建立县乡村三级医疗卫生机构间目标明确、权责清晰的分工协作模式，推进分级诊疗制度建设。推动医共体由以治病为中心向以健康为中心的转变，努力为广大群众提供高质量的基

本医疗卫生服务。

（二）基本原则

政府主导，坚持公益。坚持政府主导，落实政府规划、指导、协调、监管、宣传等职能，根据区域内医疗资源结构与布局，统筹规划，顶层设计；坚持政府办医主体责任不变，落实财政投入，切实维护和保障基本医疗卫生事业的公益性。在保持基本功能定位不变的基础上，合理整合协作医共体内各个机构的职能分工，坚持基层医疗卫生机构医防并重的功能定位。

权责明确，利益共享。明确医共体内医疗卫生机构的功能任务，建立目标明确、权责清晰的分工协作机制。牵头医院重点承担急危重症病人的救治和疑难复杂疾病向上转诊服务，为基层健康管理提供技术保障，基层医疗卫生机构重点为诊断明确、病情稳定的慢性病患者、康复期患者、老年患者提供接续性医疗卫生服务。同步推进医保支付制度改革，通过医疗保障的杠杆作用引导患者有序就医，促进医共体内医疗卫生机构利益的均衡和共享。

资源整合，提升效能。坚持以人民健康为中心，整合县域医疗卫生资源，促进医疗卫生资源优化重组和共享。巩固完善县、乡、村三级基层医疗卫生服务体系，推进县乡一体、乡村一体管理，强化基层医疗卫生机构的居民健康“守门人”能力，推进慢性病预防、治疗、管理相结合，促进医共体内临床诊治与预防保健相衔接，不断提高县域医疗卫生服务体系整体效能。

创新机制，群众受益。鼓励各地的首创精神，在坚持医疗、医保、医药联动改革的基础下，既要勇于创新实践，逐步破除现有政策壁垒和障碍，进一步健全维护公益性、调动积极性和保障可持续的发展机制，又要稳慎把控方向，避免出现“虹吸基层”、“重医轻防”、“重卫轻医”等弱化基层的现象。以居民健康为中心，优化服务流程和体验，努力为群众提供方便、优质、经济的全方位全周期的连续型服务。

（三）工作目标

2019年8月底前，全省所有县（市、特区）启动医共体建设，制定符合本地实际的实施方案。2019年10月底前，初步建立起医共体运行和管理制度框架，2019年12月底前，构建起县乡村三级联动的县域医疗卫生服务体系，形成较为科学的分工协作机制和较为顺畅的联动机制。鼓励有条件的市辖区开展医共体建设。

2020年，所有县（市、特区）公立医疗卫生机构和基层卫生机构全部纳入医共体，逐步形成服务、责任、利益、管理的紧密型医共体，县域医疗卫生服务体系效能明显提高，力争基层医疗卫生机构就诊率达到65%，县域内就诊率达到90%，基层看病难、看病贵等矛盾进一步缓解，构建起分级诊疗、合理诊治和有序就医的新秩序。市辖区医共体建设取得成效。

二、优化重组县域医疗卫生资源

（四）整合县乡医疗卫生资源

每个县（市、特区）结合实际组建1-3个以县级公立医疗机构

为龙头、其他若干家县级医疗卫生机构及乡镇卫生院(含政府办社区卫生服务中心,下同)为成员单位的医共体,实现医共体内行政、人员、财务、业务、药械、绩效统一管理。原则上医共体内保留成员单位的法人资格,其法定代表人可以由牵头医疗机构负责人担任。医共体成员单位的原单位性质、人员编制、政府投入、职责任务、优惠政策等保持不变,纳入医共体整体调整分配管理。医共体牵头医院原则上为县级二级甲等以上公立医院,医疗服务能力达到二级医院水平的基层医疗卫生机构也可牵头组建医共体。纳入医共体成员单位的公益一类医疗卫生机构实行一类公益事业单位保障,二类公益事业单位管理。医共体统一规范命名为"××县××医院(医共体)总院",其下属分院统一规范命名为"××县××医院(医共体)××分院"。

(五)完善乡村一体化管理

村卫生室(含社区卫生服务站,下同)纳入医共体管理,作为乡镇卫生院派出机构,实行行政、人员、财务、业务、药械、绩效为主要内容一体化管理。进一步规范村卫生室设置、准入和审批,进一步规范村卫生室服务行为,提升服务能力和服务质量。对行政村暂无乡村医生的村卫生室,由乡镇卫生院按照派驻的方式予以解决,确保每个行政村均有1名合格村医。

三、改革县域医疗机构管理体制

(六)加强党的建设

充分发挥医共体党委的领导核心作用,全面落实党委领导下

的院长负责制，抓好对医共体的政治、思想和组织领导，把方向、管大局、保落实。加强党风廉政建设，确保党的卫生与健康工作方针和政策部署在医共体不折不扣落到实处。成员单位党组织和群众组织工作以及统战工作等可归口由牵头医院统一管理。全面加强医共体基层党建工作，坚持把医共体党的建设与现代医院管理制度建设紧密结合，同步规划，同步推进。加强和完善党建工作领导体制和工作机制，合理设置医共体党建工作机构，配齐配强党建工作力量，建立科学有效的党建工作考核评价体系，进一步落实管党治党主体责任，推进党组织和党的工作全覆盖，建立健全医共体内设机构党支部，选优配强党支部书记，充分发挥党支部的政治功能，把党支部建设成为坚强战斗堡垒。

（七）统一行政管理

组建县级医共体管理委员会。按照优化、协同、高效的原则，建立由县级党委、政府牵头组建，卫生健康、机构编制、发展改革、人力资源社会保障、财政、医保等部门参与的县级医共体管理委员会（以下简称“管理委员会”），加挂县级公立医院管理委员会，统筹医共体的规划建设、投入保障、人事安排和考核监管等重大事项。管理委员会日常工作机构设在县级卫生健康行政部门，负责管理委员会日常工作。对医共体领导班子实行任期目标责任制。

建立医共体理事会。建立由牵头医院主要负责人任理事长，其他县级医疗卫生机构和乡镇卫生院主要负责人、职工代表等人

员担任理事会成员的医共体理事会。理事会办公室设在牵头医院。充分赋予医共体内部事务由理事会负责自主运营的权力，落实医共体在人员招聘、用人管理、内设机构、岗位设置、中层干部聘任、内部绩效考核、收入分配、业务发展等方面的自主权，激发医共体运行活力、服务效率和发展动力。制定医共体章程，建立健全内部组织机构、管理制度和议事规则。

（八）统一业务管理

整合建立医共体公共卫生和健康管理服务、医学检验、放射影像、心电诊断、消毒供应、药品供应保障等业务中心，统一调配医共体医技资源，对基层医疗卫生机构的基本医疗和基本公共卫生业务工作进行统一管理。推动医共体内部和医共体之间床位、号源、设备的统筹使用，实现区域资源共享互认，提高现有资源的使用效率，为医共体内各机构提供一体化、同质化服务。推动医防融合，建立医共体内部对重点人群健康管理的分工协同，提供防治融合的高质量健康管理服务。有条件的地区，鼓励以县为单位，建立开放共享的影像、心电、病理诊断和医学检验等中心，推动基层检查、上级诊断、区域互认。

组建医共体人力资源、财务管理、医保管理、综合绩效评价、质量控制、后勤服务等管理中心，对所属医疗卫生单位相关工作实行统一管理。

（九）统一人员管理

实施编制备案制改革。医共体人员编制由卫生健康部门会

同机构编制部门，按县级医院和基层医疗卫生机构两种类型进行分类核定，编制总量由医共体统筹使用，编制总量内专业技术人员流动不受编制性质（差额和全额）的限制。根据“总量控制、动态调整、统筹使用”的原则，新增人员实行编制备案制管理，由医共体统一招聘、统一培训、统一管理、统一调配、统一考核、统一待遇，并与在编人员同工同酬同待遇。按照“县聘县管乡用”原则，为乡镇卫生院（政府办社区卫生服务中心）聘用合格的卫生技术人员。医共体要优先保障基层医疗卫生机构用人需要，设置基层医疗卫生机构编制池，确保基层医疗卫生机构实际使用编制数量不降低。

实施岗位管理制度改革。坚持“按需设岗、按岗聘用、竞聘上岗、以岗定薪”的原则，统一岗位设置，加强聘用管理，逐步取消县域所有医疗卫生机构行政级别、领导职数，打破行政职务、专业技术职务终身制，变身份管理为岗位管理。

（十）统一财务管理

医共体组建单独财务管理中心负责财务工作，落实专门岗位，加强医共体经济管理工作。财务管理中心具体承担医共体的财务管理、成本管理、预算管理、会计核算、价格管理、资产管理、会计监督和内部控制工作，对成员单位财务实行单独设账、统一管理、集中核算、统筹运营。加强医共体内审管理，自觉接受审计监督。根据医共体建设发展需要，加大财政投入力度，按照公立医院投入政策和基层医疗卫生机构的补偿政策，按原渠道足额安

排对医共体成员单位的财政投入资金。

（十一）统一药械管理

医共体组建单独药品供应保障中心负责药械管理工作，以医共体为单位药品采购严格执行“两票制”，设立唯一采购账户，以全面配备和优先使用基本药物为基础，鼓励采购使用中药产品，推进实行药品耗材统一管理，统一药品供应目录、统一议价、统一采购、统一配送、统一支付。统筹开展医共体药事管理，提升服务管理效能，促进药品耗材合理使用。医共体内统一施行牵头医院执行的用药及报销目录，满足双向转诊患者就医需求，通过延伸处方、集中配送等形式加强用药衔接，方便患者就近就医取药，确保下转病人等疾病诊治连续性用药需求，提升健康服务的质量和连续性。医共体坚持公立医疗机构药房的公益性，不得承包、出租药房，不得向营利性企业托管药房。

（十二）统一绩效考核

按照“允许医疗卫生机构突破现行事业单位工资调控水平，允许医疗服务收入扣除成本并按规定提取各项基金后主要用于人员奖励”的要求，认真落实《省人力资源社会保障厅等三部门关于完善基层医疗卫生机构绩效工资政策有关问题的通知》（黔人社发〔2019〕6号）等相关政策，加快建立符合医疗卫生行业特点和医共体发展要求的薪酬制度，合理确定医共体工资总额和薪酬水平，合理提高医疗卫生人员薪酬水平。医务人员收入由医共体自主分配，按照坚持公益性、群众满意、优绩优酬、多劳多得的原则，

以岗位为基础，以绩效为核心，打破单位、层级和身份区别，严禁与药品、耗材和检查检验收入等挂钩，与职责履行、医疗质量、费用控制、运行绩效、财务管理、家庭医生签约、健康促进、健康扶贫、医德医风和群众满意度等体现公益性因素挂钩。分配向全科、儿科等短缺和关键岗位、高风险和高强度岗位、高层次人才、业务骨干和作出突出成绩的医务人员倾斜，向基层医疗卫生机构和家庭医生签约服务的医疗卫生人员倾斜，使基层机构绩效工资水平与县级医院相衔接，逐步统一基层与县级医院同等年资和水平医务人员的薪酬，充分发挥绩效工资的激励导向作用。鼓励对医共体负责人和成员单位负责人实施年薪制。制定医共体绩效监测指标体系，以公益性为导向建立与医共体组织方式、运行模式相匹配的年度绩效评价考核办法，考核结果与财政投入、医保支付以及薪酬待遇、职称评聘、任免和奖惩等挂钩。

四、建立医共体资源和服务贯通机制

（十三）建立内部轮岗制度

建立健全医共体内人员定期轮岗长效机制，促进技术和管理人员上下双向流动，不断提升基层医疗质量和服务同质化水平。医共体牵头医院可将部分科主任或技术骨干派到乡镇卫生院担任主要负责人，或组成技术团队与乡镇卫生院开设联合病房、共建特色专科，以常见病、多发病和慢性病的诊治、康复为重点，进一步拓展乡镇卫生院尤其是中心乡镇卫生院的功能，提升医疗服务能力。促进优质医疗资源共享和下沉。

（十四）完善分级诊疗制度

完善医共体牵头医院和成员单位功能定位和责任分工，建立责任共担和利益分配机制。制订医共体县乡两级疾病诊疗目录，以及医共体内部、医共体之间和县域向外转诊管理办法。基层医疗卫生机构中确需转诊的患者，由医共体牵头医院为其提供优先接诊、优先检查、优先住院等服务。患者在牵头医院已完成难度较大的诊治且病情平稳后，转回基层医疗卫生机构，由牵头医院派原经治医生跟踪指导后续诊治工作。基层医疗卫生机构和专业康复机构、护理机构等为诊断明确、病情稳定的慢性病患者、康复期患者、老年病患者、晚期肿瘤患者等提供治疗、康复、护理服务。

（十五）做实做细家庭医生签约服务

充分利用医共体内技术资源整合共享的优势，将家庭医生签约服务工作提升纳入医共体整体推进的职能工作，将县级医疗卫生机构全科、专科医生等纳入家庭医生服务团队，组建县乡村三级人员分工协作的家庭医生服务团队。尤其以家庭医生签约服务重点人群健康管理密切相关的慢性病、老年病、产科、儿科等科室，要将落实家庭医生签约服务工作纳入科室重要职能职责。进一步落实医共体牵头医疗机构为签约居民开通转诊绿色通道、优化预约、优先接诊等便民机制，加强对乡村两级签约医生的技术支撑。医共体逐步建立以家庭医生为主体、全科与专科有效联动、医防有机融合的新型服务工作机制，从以治病为中心向以健

康为中心转变，使基层医疗卫生服务体系成为群众健康的“守门人”，提高签约居民获得感。

（十六）强化公共卫生服务工作

医共体要提高认识转变功能定位，紧抓基层医疗卫生机构基本公共卫生服务职能不放松，对医共体内承担的公共卫生工作要进行统一的管理，防止出现“重医轻防”。做实基本公共卫生服务项目，将基本公共卫生服务经费打包拨付医共体统一管理，以家庭医生签约服务模式为基础，以高血压、糖尿病等为突破口，以全面健康管理为核心，合理分工协作，实现医防融合，逐步推进牵头医院和其他县级医疗卫生机构参与基本公共卫生服务项目工作，开展对重点人群和重点疾病的诊断、检查、保健、用药指导、并发症处理及住院治疗等，并与基层医疗卫生机构的档案建立、随访、信息采集等有效结合，发挥中医药在基本公共卫生服务中的作用，全面提升对群众健康管理的水平和基本公共卫生服务的质量。扎实抓好重大公共卫生项目，整合医共体资源，提高技术水平，认真完成承担的疾病筛查等重大公共卫生项目。

（十七）加快推进医疗卫生信息化建设

加快建立完善区域全民健康信息平台，充分发挥信息化对医共体的支撑作用，实现对医疗服务、财务管理、人事管理和绩效管理等的技术支撑。推进电子病历在基层尤其在乡村医疗卫生机构的普及应用，实现医共体内各医疗卫生机构各项信息系统互联互通、信息共享，与区域全民健康信息平台实现全面对接，提高服

务效率。进一步完善县域内远程医疗体系，推动远程医疗服务体系纵向向村级延伸，明确县乡村三级具体职责分工，实现“乡村两级分类检查，县级诊断”，充分发挥远程医疗作用，促进医共体内医疗资源下沉到基层，方便患者看病就医，减少群众看病负担。提升医共体信息化水平，普遍提供分时段预约诊疗、检验检查（医学影像、心电、病理诊断、医学检验）结果互认共享和多元化支付等服务。全面推行“互联网+医疗健康”便民惠民服务，加快电子健康卡普及应用。

五、建立医共体内外利益均衡共享机制

（十八）推进医保支付制度改革

加强“三医”联动，同步推进医保支付制度改革，充分发挥医保的经济杠杆作用，合理引导医疗服务供需双方。医保资金对医共体实行总额付费等多种付费方式，建立结余留用、合理超支分担机制，引导医共体合理诊治，主动做好预防保健和健康管理，主动实行双向转诊和分级诊疗，加强成本控制，提高医保基金使用绩效，打破“虹吸”基层病源现象。合理拉开基层医疗卫生机构、县级医院和城市大医院间报销水平差距，增强在基层看病就医的吸引力，引导群众有序就诊，切实维护公益性，调动积极性，保障可持续。

（十九）健全医疗服务价格动态调整机制

按照总量控制、结构调整、有升有降、逐步到位的原则，动态调整医疗服务价格，逐步理顺医疗服务比价关系，并做好与医保

支付、医疗控费和财政投入等政策的衔接，确保医疗卫生机构良性运行、医保基金可承受、群众负担不增加。

（二十）提升县域医疗卫生服务能力

加强医共体牵头医院人才、技术、临床、专科等核心能力建设，提高规范化、精细化、信息化管理水平，提升急诊、儿科、麻醉科、重症医学科等薄弱专科能力。加强与上级医院的技术合作，用好东西部扶贫协作医疗卫生对口帮扶资源，加强城市三级医院对医共体的支援帮扶，组建多种形式的医联体，通过专科共建、临床带教、业务指导、教学查房、科研和项目协作等多种方式，重点帮扶提升牵头医院医疗服务能力与管理水平，并延伸到乡镇卫生院。引进推广适宜技术项目，提高内镜、介入治疗等微创技术临床使用比例，提升肿瘤、心脑血管疾病、感染性疾病等重大疾病诊疗能力。2020年，各县人民医院和中医医院（中西医结合医院）分别达到二甲标准，各县县级公立医院至少5个临床专科达到三级乙等医院诊治水平。以开展“优质服务基层行”活动为契机，乡镇卫生院对照国家标准加强服务能力建设，针对薄弱环节进行专项整改提升，提高服务水平，优化服务方式。

（二十一）强化公共卫生体系建设

疾病预防控制机构要加强与医共体的协作配合，强化技术指导、培训和业务管理，落实计划免疫、传染病及突发公共卫生事件报送等工作，做好疾病三级预防，促进重点疾病在专业公共卫生机构预防控制上与基层医疗卫生机构健康管理上的有效连接，形

成以健康为核心，防治服务并重的连续管理。医共体统筹管理获得的基本公共卫生服务项目和重大公共卫生服务项目资金，纳入医疗卫生收入项管理，结余按医共体内部绩效分配制度规定，用于奖励医共体内从事公共卫生人员。

（二十二）加强乡村医生队伍从业管理

县级卫生健康行政部门要按照《乡村医生从业管理条例》加强对乡村医生队伍的管理，按照村卫生室设置规划设置乡村医生岗位，配齐行政村卫生室村医，按规定做好考核和注册，加强对乡村医生的培训，不断提高村医水平，合理安排工作任务，按乡村医生收入保障政策落实好村卫生室人员待遇，确保乡村医生更好地为老百姓服务。

六、强化保障措施

（二十三）强化组织领导

各地各级党委、政府要进一步提高思想认识，把医共体建设作为深化医改的重要内容和强基层、增进人民健康福祉的有力举措，切实加强组织领导，落实政府推行医共体改革的责任主体，建立健全部门协调推进机制。要按照本意见结合本地实际认真制定细化实施方案，积极推进“三医”联动，加强制度保障，落实对医共体成员单位的财政投入，深化药品供应保障、医疗服务价格和医保支付方式等协同改革，创新人事、编制、职称、薪酬等管理方式，不断完善医共体的运行和发展机制，按时、保质完成工作任务。

（二十四）明确部门职责

各地各级相关部门要明确职责分工，在财政投入、基本建设、医保和价格政策、人事薪酬等方面完善支持政策，完善细化配套政策措施。卫生健康部门要强化组织协调，加强督导落实，建立督查、指导、考核和问责机制，完善考核机制，加强对医疗服务和公共卫生服务的监管考核，做好经验总结和推广工作。组织部门要逐步推进县级公立医院去行政化改革。编制部门要推进法人治理结构改革，实行编制动态管理。医保部门要完善医药价格改革政策和医保支付政策，建立医疗服务价格动态调整机制，确保医资金拨付到位。财政部门要落实财政补助政策，改革财政补助方式。人力资源保障部门要落实“两个允许”，加快建立适应医疗卫生行业特点的薪酬制度。

（二十五）稳定村医队伍

纳入医共体管理的村卫生室人员，按照“县聘院编乡管村用”原则，可对已获得执业（助理）医师资格的人员通过招考等方式落实乡镇卫生院编制，可对具有乡村执业资格证书的人员经乡镇卫生院考核合格后由乡镇卫生院统一实施备案制管理。

（二十六）落实综合监管

建立由卫生健康行政部门牵头、各有关部门参加的综合监管协调机制，负责统筹本行政区域综合监管的督促、指导、协调和医疗卫生服务重大案件查处等工作，将传统的对单一医疗机构的监管转变为对医共体的监管。在医共体内扎实开展督医工作。加

强对医共体内各类医疗卫生机构医疗质量安全、医疗费用以及大处方、欺诈骗保、药品回扣等行为的监管，重点监控门诊和住院次均费用、检验检查占比、医务性收入占比、医保自付费用占比等，坚持实时监控，建立定期分析、通报、公告制度，形成多元化的长效监管机制。强化对医共体及内部经济运行和财务活动的会计和审计监督。

（二十七）加强督查考核

县级医共体管理委员会要建立以公益性为导向的考核评价机制，定期组织医共体绩效考核以及理事会理事长年度和任期目标责任考核，突出基层医疗卫生能力提升、优质医疗资源下沉、县域就诊率、医疗质量、费用控制、医德医风和群众满意度等指标。加大基层医疗卫生机构基本公共卫生服务、家庭医生签约、健康扶贫等考核指标权重。考核结果与医共体财政补助、医保支付、绩效工资总量挂钩，与理事会成员薪酬、聘任、奖惩等挂钩。

（二十八）做好宣传培训

各地要开展针对医疗机构管理人员和医务人员的政策培训，统一思想认识，形成工作合力。充分发挥公共媒体作用，宣传推广医共体建设涌现出的新做法、新成效和新经验，广泛凝聚共识，引导社会各界大力支持医共体建设，加快形成推动改革的良好氛围。