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Research paper

Multi-scale governance in agriculture systems: Interplay between national and local institutions around the production dimension of food security in Mali

Amadou Sidibé^{a,b,*}, Edmond Totin^{a,c}, Mary Thompson-Hall^d, Oumar T. Traoré^e,
Pierre C. Sibiry Traoré^a, Laura Schmitt Olabisi^f

^a International Crop Research Institute for the Semi-Arid Tropics (ICRISAT), P.O. Box 320, Bamako, Mali

^b Institut Polytechnique Rural de Formation et de Recherche Appliquée (IPR/IFRA) de Katibougou, BP. 06, Koulikoro, Mali

^c Université Nationale d'Agriculture du Bénin, BP. 43, Kétou, Bénin

^d International START Secretariat, 1440 G Street N.W., Washington, DC 20009, USA

^e Cabinet Malien d'Expertise et de Gestion Intégrée (CAMEGI), Bamako, Mali

^f Department of Community Sustainability, Michigan State University, 151 Natural Resources, East Lansing, MI 48824, USA

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ABSTRACT

Enforcement of rules and laws designed at the national level is still one of the dominant institutional mechanisms for effective multiscale governance in most countries. At times, such blanket regulations are not only unable to meet practical needs at local levels, but they may conflict with local institutional logics, thereby creating new challenges. This study looks at three institutional arrangements in the agriculture and food security sector in the district of Koutiala, Mali to analyse the institutional variety across scale and the underlying institutional logics. On one side, the Cooperative Law as well as the Seed Law both designed at national level to enable farmers' access to agriculture services and improved seeds have yielded mixed results with regard to anticipated outcomes. The cooperative law is believed to degrade the social cohesion and the mutual support on which vulnerable farmers rely when facing climatic and non-climatic risks whereas the new seed system is found onerous and unaffordable for farmers. On the other side, the local convention for the management of natural resources established as part of ongoing decentralised governance policy seems to resonate with local culture but challenged by other stakeholders. Through exploring these cases, this paper tests bricolage as an analytical framework for doing an institutional diagnostic. It aims at contributing to methodological and theoretical insights on the way sustainable institutions can be generated in conflicting institutional logics in the context of multi-scale governance

1. Introduction

Achieving food security and improved nutrition is at the heart of the sustainable development goals (Herbel et al., 2012). If there is a consensus on the importance of food security as substrate for development, the critical steps for achieving this goal in developing countries are still under debate. Some proponents advocate for expansion of technologies and more intensive use of agricultural inputs and equipment, reminiscent of the Asian green revolution (Ejeta, 2010). Other scholars stress the need to have an enabling institutional environment in place to support the uptake of agricultural technologies (Glover, 2011;

Houkonnou et al., 2012). They warn against the de-contextualized blueprint approach of one-size-fits all solutions as the remedy for strengthened food security in the highly diversified agriculture systems of Africa. In this regard, most studies associate food insecurity with structural causes (Gregory et al., 2005). It is believed that political commitment, effective institutions, and a system approach of innovation and adequate investments can improve the living conditions of smallholder farmers.

In Mali, crop production has traditionally formed the basis for pursuing food security. This has been a long standing priority of successive governments since the country's independence, in 1960.

* Corresponding author at: International Crop Research Institute for Semi-Arid Tropics (ICRISAT), P.O. Box, Bamako, Mali.
E-mail address: sidibe.amadou@gmail.com (A. Sidibé).

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Structural responses to food insecurity in Mali have primarily consisted of policy reforms to enable increased agricultural production. Such reforms include the *Loi d'Orientation Agricole* (LOA), a comprehensive agricultural development framework enacted in 2006 that aims to promote sustainable and competitive agriculture in the country (Bélières et al., 2008). This framework advocates for land reform that encourages ownership right to secure long-term investments on agricultural lands. The LOA was also designed to support the management of natural resources and to facilitate farmers' access to inputs (fertilizer and seeds), equipment and government subsidies (Mercoiret, 2006).

Overall, ensuring food security may require a synergy of interventions both with the use of innovative agricultural technologies and with the creation of an enabling institutional environment. In this paper, we are interested in understanding the *mechanism* through which conducive institutional conditions are created that enable increases in productivity (Glover, 2011). Many approaches have been sought for creating an enabling environment for agricultural innovation. One of these came from the Convergence of Sciences – Strengthening Innovation Systems (CoS-SIS) program, which tested a collaborative approach – Innovation platforms- for institutional changes. It took a group of stakeholders through a process of learning and interaction, with the explicit aim of building synergy among them to enhance their innovative performance (Hounkonnou et al., 2012; Kilelu et al., 2013). The 'Innovation platform' approach takes into account limiting factors, mostly institutional, that may hinder the increased use of technologies (Hounkonnou et al., 2012; Nederlof and Pyburn, 2012). While innovation platforms have revealed valuable insights into institutional change, there has been less understanding of whether and how the position, interests, and commitments of facilitating agents may interfere with the platform agendas and outcomes (Turner et al., 2016).

Additional research on institutions has tended to emphasize how organizational processes are shaped by institutional forces that reinforce continuity and reward conformity (Garud et al., 2007). A body of literature has recently emerged that examines "institutional entrepreneurship" through which organized actors leverage resources to create new institutions or to alter the existing ones (Leca, 2009). In spite of their valuable contributions, this research faced criticism for overemphasizing the heroism of powerful entrepreneurs while ignoring the context and the agencies of these actors (Leca, 2009). The gaps in these approaches to studying institutional change show that there is still much to do in understanding institutions and how they operate in practice. As Rodrik (Rodrik, 2010) proposes in his macroeconomic analysis to diagnose what an economy "is good at", this paper aims to contribute to the diagnostic of institutional variety across scales. It aims at understanding what institutional logics at different scales are "good at" in terms of creating and sustaining enabling institutional environment for food production and subsequent food security.

The paper documents the institutional logics of three case studies. The first case study focuses on farmer cooperatives and analyses the rules and routines enforced by new national legislation in replacement of traditional village associations. The argument behind this new arrangement was to better facilitate members' access to agricultural inputs and services to enhance food production. The second case is about the institutional arrangement of seed systems in Mali. The new agricultural development framework includes a Seed Law aimed at facilitating farmers' access to high quality seed. Seed is considered a major driver of production increase and the government has devoted significant effort to improve access of farmers. The third case, offering another example of a cross-scalar institutional divide, relates to the institutional arrangement established through the local convention for the management of natural resources. This case highlights the process

of the devolution of tasks and responsibilities to local communities through the decentralization policy. The reactions and controversies relating to these three examples of institutional arrangements are analyzed below to bring insights on diagnosing institutions.

The next section describes the context of the three cases and highlights the key elements relevant for understanding the embeddedness of institutional logics (Section 2). The theoretical framework of institutional bricolage against which the empirical data are analyzed is described in Section 3. The research methods used to generate data are captured in Section 4, followed by the findings which consist of the contextualized analysis of the three case studies (Section 5). The discussion and conclusion are presented in Section 6, as well as an analysis of the way institutional bricolage plays out in different contexts.

2. Description of the context of the studies

Mali is a landlocked country of West Africa that spreads over 1,241,000 square kilometers. Mali belongs to many organizations, at sub regional, African and international levels including OHADA (*Organisation pour l'harmonisation du droit des affaires en Afrique*). Since its independence in 1960, different ideologies on governance have been applied as those in power have changed over the years. From 1960–1968 the first governing body ruled the country under soviet socialist influences (Amselle, 1978). This first government was overthrown in 1968 by a military coup, and the single-party military regime that followed lasted 23 years. Since 1991, a new era of democracy has opened the political and administrative systems to decentralization governance. The decentralization is aimed at encouraging the transfer of responsibility over resources from the state onto local authorities at the level of municipalities (Fay, 2000).

The country is divided into 10 regions (two new regions have been recently created in the North and the North-East of the country) and Bamako the capital city. The administrative decentralization created 703 municipalities of which 666 are rural. The total estimated population of the country in 2009 was over 14,000,000 inhabitants of which 50.4% were women. Nearly 65% of the total population is under 25 years of age. About 70% of the population live in rural areas and base their livelihoods on agriculture. Agriculture makes up 45% of the gross domestic product (Anderson and Masters, 2009).

The farming system includes cotton as the main cash crop, alongside with millet, rice, maize; herding cattle, sheep, goats and fishing. In the South (Sikasso Region), the farming system is organized around cotton. In areas crossed by the Niger and Senegal rivers and their tributaries, the farming is organized around irrigated rice production, with greater or lesser control over water depending on the irrigation scheme in place. Similarities in the organization of extension staff around these two farming systems can be seen with the overall importance allocated to different forms of farmers' organizations as a means of channeling services between extension offices and producers. Along with the specific extension organization around rice and cotton, a central extension office providing rural advice and farm guidance to producers is in charge of crops that fall outside the rice and the cotton farming systems. Overall, these approaches to the farming system in Mali are aimed at the diversification of activities to minimize risks. This diversification also includes natural resources management, seed production, and off-farm activities.

3. Theoretical framework

In this article, we draw on institutional theories of polycentricity—the relationships among multiple authorities with

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