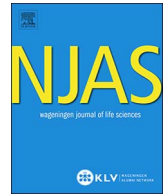




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Research paper

An institutional diagnostics of agricultural innovation; public-private partnerships and smallholder production in Uganda

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ABSTRACT

This paper presents and discusses a diagnostic framework to identify institutional processes in the creation of public-private partnerships (PPPs) for agricultural innovation. The diagnostic framework proposed here combines a conceptualisation of institutions with a conceptualisation of technology. We argue that a performative notion of institutions provides a better tool for institutional diagnostics than the common understanding of institutions as 'rules of the game'. The paper furthermore proposes to conceptualise technology as affordance, in contrast to a more common understanding of technology as an input. We explore the value of our diagnostic framework by analysing the literature on PPPs for agricultural innovation and unpublished data from a PPP initiative for smallholder sorghum production, based on an agreement between Uganda's National Agricultural Research Organisation (NARO) and Nile Breweries Limited (NBL). In the discussion and conclusion section we evaluate the benefits of our diagnostic framework and discuss how the empirical issues it brings forward create important lessons for analysis of innovation for African smallholder farming and institutional diagnostics more generally.

1. Introduction

There is no single best way to turn research results into useful products. In the agricultural sector the task is typically taken up by governments. Agricultural education and extension provide farmers with research-based information and demonstrate and support the uptake of new technologies. In recent decades many governments have reduced these services and increasingly rely on private companies for the implementation and distribution of innovations (Klerkx and Nettle, 2014). Rather than fully privatized services, involvement of the private sector in agricultural extension is often established through Public-Private Partnerships (PPPs). Such partnerships change the rules and procedures among the parties developing and introducing agricultural innovations (Spielman et al., 2010). This paper presents and discusses a diagnostic framework for understanding institutional change related to agricultural innovation. In particular we focus on initiatives and discussions about agriculture in sub-Saharan Africa. An important motivation of PPPs for agricultural innovation is to enhance market integration of smallholder farming and therewith increase food security and reduce rural poverty.

Institutional factors have been central in recent studies focusing on

agricultural innovation. By and large these studies address institutions as the organisational arrangements, rules and routines that guide the behaviour of the actors involved in the innovation process. In fact, changing the organisational arrangements is considered a core element of innovation in agriculture, as a condition for successful introduction of new agricultural technologies and improved production (Hall, 2004; Hounkonnou et al., 2017). As this paper will argue, conceptualising institutions as sets of rules and related normative guidelines for behaviour provides a useful but limited understanding for institutional change. As we will argue, a performative notion of institutions, focusing on patterned operational practices of a particular society or group in society, provides a more useful understanding of institutions. A performative understanding of institutions helps to trace different responses to introduced innovations. Such an approach to institutions also helps policy makers and development agencies to deal with local responses more adequately, in particular when facing seemingly misplaced and dismissive responses from smallholder farmers.

A second component of our diagnostic tool for institutional change related to agricultural innovation is technology. In most literature on agricultural innovation, technology is considered an input. Agricultural technologies typically consist of a package of technical objects,

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guidelines and instructions for (improved) farm-management practices. This understanding of technology tallies with a rule-based understanding of institutions. As elaborated in the next section, this is problematic as it assumes a single best way of technology use. A proper institutional diagnostics requires a perception of technology as an affordance, anticipating unforeseen adjustments and (partial) rejections of introduced technology, affecting the change process (Glover et al., 2017). Conceptualising technology as an affordance opens up questions about multiple groups benefitting in different ways from an introduced technology. Technology as an affordance complements a performative understanding of institutions.

In the next section we further underpin our diagnostic framework for understanding institutional change related to agricultural innovation. We will illustrate the usefulness of the framework by analysing cases of Public-Private Partnerships in the context of smallholder agriculture in Africa. After explaining our methods we present results from a brief literature analysis for, firstly, PPPs aimed at smallholder farming more generally and, secondly, PPPs for agricultural innovation. In a following section we further zoom in on a PPP initiative in Uganda that connected smallholder sorghum production to the beer industry. Our exploration is based on a review of literature on PPPs for smallholder production and agricultural innovation. The sorghum beer case is primarily based on unpublished data collected by the first author. In the discussion and conclusion section we will evaluate the benefits of our diagnostic framework and discuss how the empirical issues it brings forward, create important lessons for analysis of innovation for African smallholder farming and institutional diagnostics more generally.

2. A diagnostic framework for institutions and innovation

Inviting private sector partners to help realize development goals for the agricultural sector has a background in the policy changes known as the Washington Consensus. Private sector partners can increase effectiveness, it is argued, for the delivery of public goods and services to the rural poor (Kydd and Dorward, 2001). For all ministries and government services, including the agricultural sector, the main problem the Washington consensus was supposed to address is institutional failure. PPPs and similar solutions are typically presented as prepackaged solutions rather than sorting out what institutional problems have to be addressed for the issue at hand (Rodrik, 2010).

Part of the problem is the use of the term institutions. A rather common interpretation is to equate institutions with organisational arrangements, in particular arrangements set up and maintained by governing bodies. From this interpretation institutional analysis would primarily address the effectiveness of political institutions and the organisational capacity of government services or other organisations, such as farmers' organisations and NGOs. Clearly these organisations, although important, are not the only actors involved in market transactions and other forms of social interaction (Scott, 1995; Schouten et al., 2017). A more comprehensive definition is to consider institutions as 'the rules of the game in a society'. This notion is derived from the work of the economist Douglass North (1990). He makes a distinction between 'formal' rules, as stipulated in laws, contracts and similar arrangements, and 'informal' rules, referring to 'codes of conduct, norms of behaviour, and conventions'. For North, the combination of formal and informal rules provides an explanation of particular forms of behaviour. Rules, therefore, enable or constrain change and (economic) development. Although rules are created by a society or groups in practice, they act like an external factor upon the behaviour of people and the development of new technology (see Fig. 1). From a rule-based notion of institutions, agricultural innovation is about change in the 'rules of the game' that directs technology designers, and technology users, mainly farmers, to turn natural resources into food and other goods.

The Northian definition is sometimes explicitly referred to in analyses of institutional change related to agricultural innovation

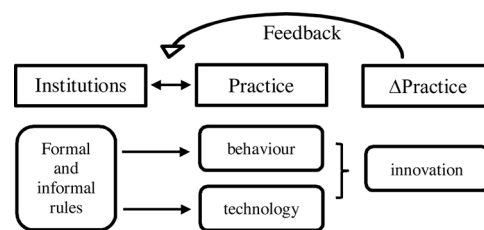


Fig. 1. Institutions as 'rules of the game'.

(Spielman, 2005; Hounkonnou et al., 2016; Hermans et al., 2017). As a rather broad and inclusive understanding of institutions, North's definition seems to offer enough analytical scope to understand the way particular rules and routines enable or constrain innovation. However, the rules-of-the-game definition has several problematic features. First of all, where formal rules can be traced from documents and stated agreements, informal rules are less easily grasped, in particular when it comes to locally-specific 'rules of the game' (Hollingsworth, 2000). Because hard to pin down, informal rules, as a concept, becomes a residual explanatory category for a wide variety of behavioural phenomena. As Greif and Kingston (2011: 24) put it: "if behavior does not conform to formal rules, by default it is attributed to – and assumed to be governed by – unobserved informal rules." Moreover, deviating behaviour, and therewith informal rules, tend to be portrayed negatively. Informality requires personal ties and trust and therefore is assumed to be functional only within small groups and close communities. This easily leads to a patronizing position towards informal rules, seen as a barrier to economic expansion and scaling up innovations that are assumed to work only in larger organisational settings (Douglas, 2004). Development in this way means the replacement of inferior informal rules by superior formal agreements, contracts and legislation.

For these reasons it makes sense to exchange a rule-based perception for a performance-based notion of institutions. A performance-based notion shifts the attention to collective activities. Rather than following rules, people act upon 'expected behaviour' by their group peers (Greif and Kingston, 2011). Such behavioural patterns or 'behavioural equilibria' emerge from the society itself, doing things in a way considered meaningful and adequate. Within and between societies, different groups may have developed different patterns. The multiple patterns function as interpretive filters for how to deal with particular situations and events. Proposed changes, for example by introducing new agricultural technologies or new production guidelines, thus can lead to different outcomes (Fig. 2). Rules are not unimportant but institutions act upon rules, they are not made by rules. For example, the overall behavioural pattern of drivers is to slow down in response to speed limits whereas teenagers may do the opposite because their age group may have a different idea about authority and risk.

What constitutes an institution is a recurrent theme in the work of the anthropologist Mary Douglas. Central in her work is to understand why, within a society, there exist multiple collective notions about how society should be organised and how to act in it (Douglas, 1986). In a recent overview work, Douglas' notion of an institution is defined as 'a

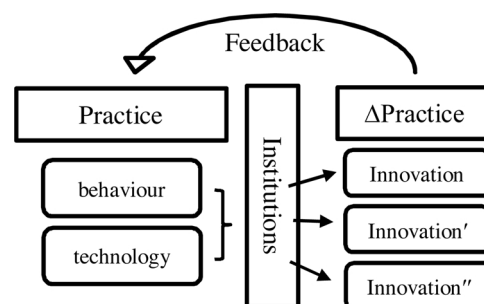


Fig. 2. Institutions as 'patterns of performing operations'.

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