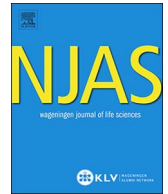




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# Institutional diagnostics for African food security: Approaches, methods and implications

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## ABSTRACT

Securing access to affordable and nutritious food is an urgent topic on the agenda for development strategies in Africa. Intervention strategies targeting food security triggered a long lasting debate whether science and technology driven interventions could be the panacea for hunger eradication. However, contextual factors are extremely important in determining food security, as it is a location specific outcome of how biophysical, geographical, societal and political factors combine. Recent studies emphasize the important role of institutions to understand the persistence of food insecurity or to explain how different actors address food security. This article introduces a special issue that investigates approaches and methods, anchored in different institutionalisms, diagnosing how institutions influence food security levels in diverse African contexts. We draw two main lessons from this special issue. Firstly, there is a clear need for localized ex-ante institutional diagnostics to understand developments in food security in Africa. This can inform and guide decision-makers in designing locally appropriate interventions. Secondly, developing institutional diagnostics in view of sustainable food security requires theoretical triangulation; food insecurity is typically a problem emerging from a configuration of distinct processes. To develop a contextual and precise understanding of how institutions work and to identify what an institutional context 'is good at', the special issue argues in favour of an interdisciplinary approach in the social sciences that is strongly rooted in evolving practices (re)arranging institutions affecting food security.

## 1. Introduction: the need for institutional diagnostics

Securing access to affordable and nutritious food remains a topic high on the agenda for development strategies in Africa. Growing and urbanizing populations, low average yields, limited market access and competing claims on natural resources might induce a looming scenario of a food insecure continent (Hilderink et al., 2012; FAO 2016; AUC et al., 2013; World Bank, 2008; Huisman et al., 2016). Similar looming scenarios were drawn by for example the Nobel prize winning author Myrdal in the 1960s, when Asia was scourged by famines (Myrdal, 1968). However, the results of the introduction of the Green Revolution technology packages in Asia contradicted these projections. The yield increases in specific areas, and for particular farmers that came with the Asian Green Revolution technology, has been interpreted as a sign that science and technology could be a panacea for hunger eradication. However, it was much more than a technological fix alone, since it required a specific economic and policy environment (Hazell, 2009). So far, the technical and social transformation that occurred in parts of

Asia was not replicated in Africa, although the conditions of relative land abundance and resource richness would suggest otherwise (Frankema, 2014; InterAcademy Council, 2004; World Bank, 2008). Nevertheless, in policy debates the example of the Green Revolution in Asia is often used as benchmark for projecting the future of food provision in Africa (Hazell, 2009).

One of the pitfalls of framing food insecurity by comparing Africa to Asia, and the resulting generalizations at the level of continents, is the neglect of context specific complexities behind food insecurity, both in biophysical terms (InterAcademy Council, 2004), but also in how societies are organized and evolve over time (Berendsen et al., 2013; Booth et al., 2015; Frankema, 2014). This pitfall is further illustrated by considering the consequences of the definition food security as agreed upon at the World Food Summit in 1996, which states that "food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for a healthy and active life" (FAO, 1996). Based on this definition, the Food and Agriculture Organization of the United

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Nations (FAO) defined four dimensions that must be fulfilled simultaneously to reach objectives of food security: 1. physical *availability* of food; 2. economic and physical *access* to food; 3. food *utilization*; and 4. *stability* of the other three dimensions over time. These dimensions immediately show that focussing on technical dimensions affecting food production and distribution alone is indeed not enough.

Hence, contextual factors are extremely important for understanding whether and how food becomes available, how people access food, how food is utilized and how stable these factors are over time. For example, the evolution of food security in different regions is suggested to have a strong relationship with specific agricultural policies, which in turn are shaped by local societal factors, international relations and changing conditions in urbanized areas (Koning, 2017). Actual food security thus appears to be a location specific outcome of how biophysical, geographical, societal and political factors combine (Huisman et al., 2016; Sheahan and Barrett, 2014). This calls for a more thorough contextual understanding of how evolving social orders and the related institutions configured in the state, market and civil society, (Dubbink, 2003) direct and condition the ways societies arrange the provision of food. This contrasts with debates focusing on the enabling or constraining conditions for the adaptation of technological packages or juxtaposing organisational preferences reflected in either public or private-led strategies.

The discussion in this special issue therefore shifts attention to the role of institutions, which is examined in a variety of fields in the social sciences. In general, institutions can be defined as “systems of established and prevalent social rules that structure social interactions” (Hodgson, 2006, p. 2). Given macro characteristics like demography and scarcity, institutions set ‘the rules of the game’ (North, 1995) that guide and steer society in its collective behavior. Institutions are difficult to manage or direct towards societal purposes, such as food security. This is partly because institutions are intertwined with societal histories, values and dominant discourse and are therefore known to be persistent (Scott, 1987; Struik et al., 2014) and slow to change (Mahoney and Thelen, 2010; North, 1990; Peters et al., 2005).

While institutions do never account for all the variance of human-environment interactions, there is a general agreement that institutions are important determinants of the trajectories of socio-ecological systems (Young, 2002). Given the larger context of biophysics and demographics, institutions are considered important for understanding how innovation, agricultural development, food processing, and access to food get shape (Acemoglu et al., 2012; Booth et al., 2015; Frankema, 2014; Rodrik et al., 2004; Ruttan and Hayami, 1984). In building a proper understanding of food security in Africa, institutions need to be taken seriously, both in terms of their rule setting nature in societies’ attempt to manage food production, as well as their persistent and slow to change characteristics.

In this special issue, we argue that better diagnostics of institutional contexts in Africa is necessary if we want to make sense of the variety of developments in food security. Ostrom and Cox (2010) call for a diagnostic approach that supports policy makers, practitioners and analysts to move beyond panaceas, such as idealised property regimes, for responding to disturbances in environmental or, in our case, food systems. They recognise the need for a diversity of working institutions that fit local contexts and match the scale and nature of the problem. With diagnostics, we do not mean the identification of a problem, or the classification of its severity in the way doctors diagnose a patient’s disease. We refer to diagnostics in its fundamental sense; the precise description and analysis of how institutions work, what institutional contexts are ‘good at’ (Rodrik, 2010), and where they show opportunities to stabilize interventions or invoke innovation (Jiggins, 2012; Röling et al., 2012).

## 2. Aim of the special issue

For developing institutional diagnostics related to food security in

Africa, the special issue finds its inspiration in the work of economist Dany Rodrik who argues that:

“development economists should stop acting as categorical advocates (or detractors) for specific approaches to development. They should instead be diagnosticians, helping decision-makers choose the right model (and remedy) for their specific realities, among many contending models (and remedies)” (Rodrik, 2010, p.35).

In his work on economic growth, Rodrik (2010) suggests that a diagnostic approach entails the identification of the most binding constraints in a given context and remove these with *locally* suited remedies. Such “diagnostics requires pragmatism and eclecticism, in the use of both theory and evidence. It has no room for dogmatism, imported blueprints, or empirical purism” (Rodrik, 2010, p. 174). Although focussing on macroeconomics, institutional context does play a role in most of Rodrik’s work. Rodrik contrasts diagnostics with (economic) blueprint thinking that followed from the Washington Consensus at the end of the 1980s. Similarly to how Rodrik and others (Hausmann et al., 2006; Rodrik, 2010) propose to diagnose what an economy ‘is good at’, the contributions in this special issue evaluate, discuss and develop approaches and methods that enable us to diagnose what each institutional context ‘is good at’ in view of increasing food security.

In our view, Rodrik’s perspective does not only apply to development economics, but also to other fields in the social sciences that tend to concentrate on organisational fixes or treatments. In this special issue, we try to further the institutional part of Rodrik’s diagnostic approach by: 1) going beyond a pure macroeconomic perspective, and 2) highlighting the variety of institutional contexts and what they imply for food security and 3) addressing the methodological side of diagnosing institutional contexts in view of food security. We argue that institutional diagnostics is a necessary step for imagining and implementing intervention strategies tailored to the context-specific ways of producing, distributing and accessing food. We therefore ask the general question: how to perform institutional diagnostics to understand processes regarding food security in Africa better?

Institutions influencing food security are present in different societal domains (state, market and civil society) and can be found at different levels and scales. In the public domain, this includes for example international and national laws and regulations, administrative traditions, and state traditions. In the societal domain, this refers to norms, values, culture, family and clans among other things. In the economic domain, we can think of institutions related to property rights and contracts. At a fundamental level, institutional diagnostics is concerned with questions on: which type of institutions affect food security; how do different types of state organization, administrative tradition, or state business relations conditions food security; or what degree of decentralization allows for what types of interventions to achieve food security (Helmsing and Vellema, 2012; Hyden et al., 2010; North, 1990). At an operational level, this also concerns the question of how to diagnose what contexts are good at. For example, a diagnostic approach suggest to look for pockets of effectiveness in a state bureaucracy (Bierschenk and de Sardan, 2014), to assess how different types of bureaucracies or decentralization encourage development of context-specific knowledge, innovation or extension (Adjei-Nsiah et al., 2013; Muilerman and Vellema, 2016; Vellema and van Wijk, 2015), or to analyse tenure systems in view of interventions to increase food production (Adjei-Nsiah et al., 2008).

In its diagnostic focus, the special issue emphasizes the relevance of interdisciplinary approaches and aims at analysing how different development related disciplines diagnose institutions in the organization of food security. In line with the vision of the NJAS journal, the societal and technical challenges in addressing persistent problems such as food insecurity, requires research that integrates scientific disciplines and is able to find novel combinations of methodologies and conceptual frameworks. The concept of institutions seems to be suitable in this regard,

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