Land Use Policy xxx (xxxx) xxx–xxx

Contents lists available at ScienceDirect

Land Use Policy

journal homepage: www.elsevier.com/locate/landusepol

Large-scale land investments and forests in Africa

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ARTICLE INFO

JEL classification:
F210
O130

Keywords:
Beta regression
Land grabbing
Large-scale land acquisitions
Forests
Africa

ABSTRACT

Recent years have witnessed an increasing interest in land-based investments for food, feed, fuel, and fibre, driven by the volatility in commodity prices, economic growth of emerging economies, policy drivers of biofuel demand, and investor strategies in the wake of the global economic crisis. This interest has led to a surge of foreign and local investments in developing countries, where land can be obtained at a lower cost, and it has led to fears of land grabbing. In this paper, we consider the problem of identifying the determinants of large-scale land acquisitions in Africa and employ a unilateral beta regression to explore the link between investments and a number of indicators related to both land supply and institutional features. The results on the resource-seeking nature of investments and the impact of the land governance indicators are mostly in line with the findings of other studies. On the contrary, the results on forest land being a driver for large-scale land acquisitions, especially from international investors in Africa, differ from previous findings and indicate commercial pressure on African forests that may lead to accelerating degradation and deforestation.

1. Introduction

The last few years have seen a surge of large-scale land acquisitions in developing countries, which has triggered a considerable policy debate and led to fears of 'land grabbing' (Anseeuw et al., 2012a, 2012b; Deininger and Byerlee, 2011). Literature concerning case studies on large-scale land acquisitions (LSLA) (Anseeuw et al., 2012a; Cotula et al., 2009; Deininger and Byerlee, 2011; FAO, 2009; GTZ, 2009; Oxfam, 2011) has concentrated essentially on deals by international investors targeting developing countries, i.e. on foreign direct investments (FDI) in land, and on the concern that investments are often taking place in contexts where many people have only insecure land rights.

Quantitative studies, however, have been comparatively few (Arezki et al., 2015; Giovannetti and Ticci, 2016). Indeed the phenomenon of LSLA emerged mainly since the 2007–8 commodity price boom through media reports. Timely and reliable data on investment in agriculture and land were not available and are hard to find for several reasons.[1] The successive efforts of collecting data systematically, especially by GRAIN (2010) and International Land Coalition (Anseeuw et al., 2012b), have improved the availability of data.

In this paper, we use the Land Matrix database (Land Matrix, 2017)[2] to analyse the determinants of large-scale land deals in Africa and employ unilateral beta regression (Ferrari and Cribari-Neto, 2004) to explore the link between investments, both domestic and transnational, and a number of indicators related both to land supply and to institutional features. Reference papers for our analysis are by Arezki et al. (2015) and Giovannetti and Ticci (2016), who have also used data from Land Matrix, with some important differences. First, these two studies concentrate on FDI whilst we discuss the determinants of acquisitions by both national and transnational investors; i.e. we investigate the determinants of commercial pressure on land. Second, these two studies employ bilateral gravity models and assume the number of deals as the dependent variable without consideration of their size. Instead, we take into account the size of the contracts, which we believe is a very important point given that a crucial feature of the current wave of investments has been the scale of the deals.

In particular, we concentrate on two different response variables. The first one, that we refer to as an index of investment, is the ratio

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[1] First, investments which do not go through multinational enterprises (MNEs) are difficult to trace, and in the case of agriculture, there are many new non-MNEs actors, often private equity or State-owned funds, sometimes specifically established for investing in land (UNCTAD, 2009). Second, a recent trend, such as land grabbing, may not be reflected in FDI data for a substantial length of time because a transaction appears in FDI data only when it has been fully paid (UNCTAD, 2009). Other limitations include deals not being reported if host governments see them as politically sensitive and existing reports and databases having very different coverage (Cuffaro et al., 2013).

[2] In partnership with several research centers (CDE, CIRAC, GIZ, GIGA), International Land Coalition has published Land Matrix (Anseeuw et al., 2012b; Land Matrix, 2017), which, in its second version, launched in July 2013, it includes deals (purchase, lease, or concession) at different stages of negotiation (intended, concluded, failed), both transnational and domestic, initiated since the year 2000, and covering an area of 200 ha or more (and publishes data sources).

https://doi.org/10.1016/j.landusepol.2018.02.005
Received 6 February 2017; Received in revised form 1 February 2018; Accepted 7 February 2018
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between the overall actual size of the deals in a country and the country land.[3] The second one is an index of investment at a single deal level; i.e. it compares the actual size of each deal to the country land. Notice that the analysis of the index of investment at a country level enables to find the determinants of the share of the country land obtained by international and domestic investors, while the analysis at a single deal level concerns the determinants of the individual deals' size.

Our results show that the agro-potential of land and the share of forest land are attractive factors, and that land investments are more directed to countries with a high share of rural land under traditional systems and high diversity of land tenure system (and weak procedures for land tenure formalization), confirming that these systems with complex structure of property rights and widespread insecurity of land tenure are under strong commercial pressure. Notice that the results on the impact of the land governance indicators are mostly in line with the findings of other studies on the determinants of LSLA (Arezki et al., 2015; Giovannetti and Ticci, 2016). On the contrary, the result on forest lands as an attractor of LSLA in Africa—especially in the case of international investments and also when excluding investments in forestry or forestry-compatible activities—does not emerge from other studies. We believe these are noticeable results for two reasons: first, they indicate commercial pressure on African forests that may lead to accelerating degradation or deforestation; second, they indicate a potential land use change, a topic on which there is very limited evidence available for Africa so far.

The paper is organised as follows. In Section 2, we briefly review the problem of large-scale land acquisitions and focus in particular on LSLA in Africa. In Section 3, we explain in details the different response variables and the different explanatory variables that we have employed in our analysis, with indications about the data sources. In Section 4, we introduce several models in order to find the determinants of both the number of deals and the size of the deals in Africa. The results of the econometric analysis differ from previous findings mainly as for the role of forests as a driver of land demand. The role of forests is examined in more detail in Section 5.

2. Large-scale land acquisitions

2.1. Overview

Fig. 1 reports the count of concluded deals, national and transnational, registered in Land Matrix since 2000. The large share of reported transnational acquisitions in Africa has been at the centre of the LSLA debate. Several reports (Anseeuw et al., 2012a, 2012b; Deininger and Byerlee, 2011) have shown that Sub-Saharan Africa has been the region most targeted by transnational investments, followed by East Asia and Latin America, with a strong tendency to intra-regional flows in Asia and South America, but not in Africa.

Notice that a variety of actors are involved in land acquisitions, both from the private and public sector; in fact, the largest share of investments comes from agribusiness, although governments and sovereign wealth funds (SWFs) have also been involved in the wake of the food price surge of the late 2000s. The number of private-public partnerships has also been rising in the last few years, and private sector finance has been increasingly interested in land (Cuffaro et al., 2013; Giovannetti and Ticci, 2016).

Many case studies have pointed out that these land acquisitions might have substantial negative implications, essentially because existing land uses and claims may go unrecognised (Anseeuw et al., 2012a; Cotula et al., 2009; Deininger and Byerlee, 2011; FAO, 2009; GTZ, 2009; Oxfam, 2011). On the other hand, because of neglected users' rights, land may appear more abundant, i.e. emptier than it actually is. In fact, in one of the first studies focusing on the recent wave of FDI in Sub-Saharan Africa, Cotula et al. (2009) observed that most, if not all, productive land targeted for potential investment was likely to be already claimed by farmers, herders, hunters, or foragers.

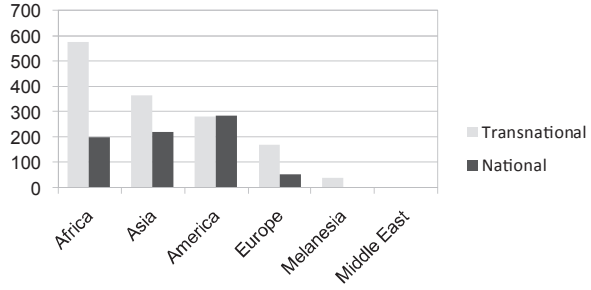

Fig. 1. Large-scale acquisitions (number of deals reported) by region.
Source: Land Matrix, accessed September 2017.

As will be discussed in details in Section 3, we use data on Africa from the Land Matrix database which includes large deals made since the year 2000 for agricultural production, timber extraction, carbon trading, industry, renewable energy production, conservation, and tourism in low and middle-income countries.

In particular, as shown in Table 1, we consider LSLA distinguishing among domestic, international, and mixed partnerships deals. Notice that although FDI play a huge role, domestic investors represent one-third of the total deals (both from the point of view of counts and area acquired). As we are interested in commercial pressure on land, our analysis includes all land acquisitions.

Table 2 reports some basic summary indicators concerning land deals in Africa, including the shares of transnational and domestic deals in terms of the area acquired, the sectors of investment, and their average size. Table 2 shows that wood and fibre are the intended purpose of about one-third of the total land acquired, with the same share in transnational and domestic acquisitions. Food crops and biofuels are the next most important sectors and, as expected, biofuels have a larger role for transnational than domestic acquisitions. Moreover, the average size of reported acquisitions is very large, and the average scale of transnational acquisitions for the most important sectors exceeds that of domestic acquisition.

2.2. The determinants of LSLA in the literature

The literature on the determinants of recent large-scale land acquisitions has concentrated mainly on FDI and consists of case studies and econometric models for explaining the count of international investments (number of projects reported in target country). Significant predictors of recent flows of FDI in land include price trends and the profitability of investments in agriculture, the increasing value of agricultural land, and the increasing involvement in land acquisitions of financial actors and investors from countries heavily dependent upon food imports. With regard to the choice of location, land acquisitions have privileged land-abundant, low-income countries, indicating that investments are mainly resource-seeking (Anseeuw et al., 2012a, 2012b; Arezki et al., 2015; Cuffaro et al., 2013; Giovannetti and Ticci, 2016).

Consider, for instance, the paper by Arezki et al. (2015). The authors examine large transnational land investment worldwide from three data sources (Land Matrix, Grain and A&C) and notice a boom of land investments after the 2008 food price spike and financial crises, highlighting the prevailing role of the state as a supplier of land in Africa. Their study focuses on the count of LSLA through a unilateral cross-country Poisson regression and a bilateral gravity model, for which they take into account physical, cultural, and geopolitical proximity (e.g., a past colonial relationship), with information on origin countries population and net food imports. Their results, both from the unilateral and the bilateral models, suggests that (i) the availability of suitable but uncultivated land for expansion is a key driver of land demand, while the value of potential output from forest land is significant only in some cases in the bilateral model; (ii)

[3] The country land variable is estimated from the Global Agro-Ecological Zones (Fischer et al., 2011) and described in Section 3.

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