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Unpacking Policies for the Development of Agricultural Growth Poles

Emma Tyrou, Guillaume Soullier & Mamadou Coulibaly

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Abstract:	This paper investigates what national policies are implemented to foster the development of agricultural growth pole model in West Africa. We hypothesize this model is applied through national public policies centred on market allocation. We conducted case studies in Burkina Faso, Cote d'Ivoire, Mali and Senegal. Results show governments implement regulation, fiscal exoneration, business facilitation measures, or reform land tenure and invest in irrigation infrastructure to attract private investments. Measures supporting smallholders inclusion are less common. The ongoing development of the agricultural growth pole model therefore raises concerns regarding both family farmers' land rights and inclusion through vertical coordination.

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Unpacking Policies for the Development of Agricultural Growth Poles in West Africa

This paper investigates what national policies are implemented to foster the development of agricultural growth pole model in West Africa. We hypothesize this model is applied through national public policies centred on market allocation. We conducted case studies in Burkina Faso, Cote d'Ivoire, Mali and Senegal. Results show governments implement regulation, fiscal exoneration, business facilitation measures, or reform land tenure and invest in irrigation infrastructure to attract private investments. Measures supporting smallholders inclusion are less common. The ongoing development of the agricultural growth pole model therefore raises concerns regarding both family farmers' land rights and inclusion through vertical coordination.

Key words: Policies; Land; Value Chain; Africa; Contract Farming

INTRODUCTION

The 2008 price crisis highlighted food security risks due to sub-Saharan Africa's dependence on global food markets. In this context, governments launched national policy plans for the main staple crops, specifically rice (Demont, 2013). International organizations have called for public-private partnerships to upgrade agrifood value chains and fund a modern, industrial agricultural sector (Moorsom et al., 2020).

In the framework of the *Feed Africa strategy*, the World Bank and the African Development Bank (AfDB), have been particularly active in supporting the implementation of the agricultural growth pole model (hereafter 'agropole'). In the definition enshrined in national legislations, 'agropoles are a set of companies located in a given geographical area that maintain functional

1
2 relationships in their activities of producing, processing and marketing of a given animal, plant,
3
4 fish or forest product' (Jamart et al., 2016, p. 19). This model is rooted in the literatures on
5
6 industrial clusters and spatial economics (Perroux, 1950) and more recent updates build on
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8 transaction costs economics and on the literature on value chain upgrading. The model
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10 promoted by development banks foresees that attracting private investments in areas with
11
12 agricultural potential will result in economies of scale and agglomeration, technical change and
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14 vertical coordination (African Development Bank, 2016). The underlying rationale is reducing
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16 market failures and transaction costs in agrifood markets with positive spillover effects for
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18 family farmers through contract farming or wage-earning activities.
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23 Several African states have made this model a priority for agriculture in their economic
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25 emergence plans (Gabas et al., 2020). To date, a dozen countries have developed agropoles,
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27 mainly in West Africa. They target areas with high agricultural potential, such as the Senegal
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29 River Valley or the Niger Office in Mali. Projects are today in different stages of advancement,
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31 and are continuing to emerge. However, international organizations that promote agropoles
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33 present them as technical toolboxes that may materialize differently according to national
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35 contexts, and remain elusive as to the types of policies that may accompany their development
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38 (Picard et al., 2017).
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41 The present contribution stems from the need to investigate how the agropole development
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43 strategy has materialized in national policies. Scientific knowledge is limited on which public
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45 policies support the implementation of agropole projects, their target actors and their level of
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47 operationalization (Jamart et al., 2016; Picard et al., 2017). Our research question is therefore:
48
49 what types of national policies are implemented to foster the development of agropoles in West
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51 Africa? By addressing this issue, this article documents changes in the role of states in the
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53 development of West African countries. Drawing namely on the literature on PPPs and
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55 (agricultural) value chain upgrading, we hypothesise the agropole model is applied through
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1 national public policies centred on market allocation (Bayliss and Waeyenberge, 2018). The
2 contribution of this article is therefore twofold. It (i) analyses the underpinnings of agropoles
3 as promoted by development banks, and (ii) documents which national policies are
4 implemented to support this model in West Africa.
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10 This paper focuses on public policies, defined as actions carried out by the state in centralized
11 and decentralized levels, and which are implemented to achieve macro-social development
12 objectives in targeted territories (adapted from Daviron et al. (2004). The effects of agropoles
13 on agricultural productivity, family farmers' inclusion, access to land and territorial
14 development are not the direct focus of this article. Different strands of literature on value chain
15 upgrading, PPPs, inclusive business models and land grabbing critically examine some of these
16 issues using case studies that go beyond agropoles (Chamberlain and Anseeuw, 2019; Poulton
17 and Macartney, 2012; Wolford et al., 2013). In our discussion, we specifically connect this
18 literature to our results to highlight policy implications of the different paradigms of state action
19 for agricultural development.
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34 We use a public economics approach and provide evidence on four agropoles: the Niger Office
35 (Mali), the Senegal River Valley (Senegal), Bagrepole (Burkina Faso), and the agropole of
36 Belier (Cote d'Ivoire). To answer the research question, we conducted a literature review,
37 gathered secondary quantitative data on public expenditures and conducted semi-directed
38 interviews with key informants on agropole-related policies. The empirical material is analysed
39 through a typology of public policies.
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48 **METHODOLOGY**

49 A typology of public policies informed by public economics theory was used to examine
50 different fields of state intervention. This strand of literature offers theoretical insights into
51 policies related to the agropole model. It draws on the macroeconomic theory of public sector
52 intervention, according to which responses to incomplete markets, imperfect competition and
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1 externalities in public economics include both (i) direct public investments to provide public
2 goods and (ii) improvements to the business environment to favour investments by private
3 actors (Stiglitz and Rosengard, 2015). This approach allows to examine different areas of state
4 intervention and is relevant to understand market failures specific to the agricultural sector in
5 West-Africa (Daviron et al., 2004). Failures include for instance, lack of transport
6 infrastructure, pollution, the inability of the formal land market to include informal land
7 transactions, or the monopoly position of a firm.
8

9 We adapted the typology of Daviron et al. (2004), based on the distinction between the
10 attributive, distributive and stabilizing functions of public policies (Stiglitz and Rosengard,
11 2015) and that identifies three types of public policies: (1) public transfers, (2) the provision of
12 goods and services, and (3) regulation. This allows to take into account that the scope of policies
13 goes beyond the agricultural sector, to trade and industry. We amended this typology to
14 highlight the specificities of policies related to agropoles through subsections and indicators.
15 Transfers include (1.1) fiscal transfers (1.2) direct transfers and (1.3) stabilization measures. To
16 assess the provision of public goods and services, we distinguished (2.1) infrastructure, known
17 as hard public goods such as transportation or irrigation, and (2.2) 'mediating' measures
18 specific to public services, known as soft services such as agencies and human resources to
19 promote investment, funding, and technical and vocational advice. Among the regulatory
20 measures, (3.1) land tenure and (3.2) socio-economic and environmental areas were deemed to
21 be the most relevant for agricultural development. This analytical grid allowed to compare
22 national agricultural public policies in four case studies. Particular attention was paid to policies
23 related to rice since (i) the agropole model aims to contribute to food security in West Africa,
24 where rice is a major staple food (Soullier et al., 2020) (ii) the territories targeted by agropole
25 projects studied here are historical rice production areas, and (iii) the rice sector captures a large
26 share of public expenditure on agriculture.
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We provide evidence on the Niger Office (Mali), the Senegal River Valley (Senegal), Bagrepole (Burkina Faso), and the agropole of Belier (Cote d'Ivoire), based on 70 semi-directed interviews with key informants, a literature review, and secondary quantitative data on public expenditures. The four agropoles were selected among the dozens projects in West Africa because states started first to implement related policies at the scale of the region there. Policies and agribusiness investments are more advanced here than in other regions (Jamart et al., 2016). Respondents in the semi-directed interviews were identified using the snowball sampling method (Table 1). The issues discussed were the design and implementation of policies related to agropoles; public and private investments; coordination between agribusinesses and family farmers; the living conditions of family farmers.

Table 1. Key informants in each agropole

Key informants	Bagre (Burkina Faso)	Belier (Cote d'Ivoire)	Niger Office (Mali)	Senegal River Valley (Senegal)
Officials and development agents	2	9	8	13
Private actors	4	7	7	7
Researchers	5	2	2	5
Total per pole	11	18	17	24
Total informants	70			

Source: The authors

A review of peer-reviewed and non-peer-reviewed literature was conducted to inform and complement the typology (Table 2). Academic research was retrieved from the following scientific databases: Agris, Agritrop, Cairn, JStore, Scopus and Web of Science which include academic publications in English and French. The main keywords used were 'growth+poles', 'agropoles' and the names of the four countries and poles (in both French and English). We also drew on reports and policy documents from national and international institutional sources and development organizations. These documents were identified on the organizations'

websites or during the semi-directed interviews. We used the 'shades of grey' typology of (Adams et al., 2017), to identify the most reliable sources of information in the grey literature.

Table 2. References in the literature review

Literature sources	Bagre (Burkina Faso)	Belier (Cote d'Ivoire)	Niger Office (Mali)	Senegal River Valley (Senegal)	Transversal references	Total per type of reference
Academic	4	3	10	8	57	82
Institutional	10	11	9	11	2	43
Development	11	6	7	11	38	73
Total per case/transversal	25	20	26	30	97	/
Total	198					

Source: The authors

RESULTS

In this section, we first analyse the agropole model promoted by development banks by highlighting its theoretical underpinnings and stages. We then document which national policies were implemented in the four West African countries, following the instruments identified in the typology.

Theoretical foundations and specificities of the agropole model

The model of agricultural growth pole is at the interface of spatial and institutional economics. It builds on Perroux's (1950) 'growth poles,' which explored the role of the state in spurring growth through the planning of economic space. Another key source is the literature on industrial clusters of Marshallian inspiration, whereby the aim of spatial concentration of agro-industrial activities is to generate economies of agglomeration, that is, reduce production costs per unit (Becattini, 2002). Such theoretical bases sustained the implementation of growth poles and industrial clusters in the developing world from the 1960s on (Gálvez Nogales and Webber,

1
2 2017). However, studies of such developments in Africa were rare until the turn of the 21st
3
4 century (McCormick, 1999).

5
6 The development models reactivated for agrifood value chains in sub-Saharan Africa after the
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8 2008 price crisis combine spatial organization references with a focus on institutional and new
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10 institutional economics (NIE). Emphasis is placed on the role of institutions such as contracts,
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12 firms, and property rights. NIE identify solutions to the asymmetry of information, uncertainty
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14 and failing legal enforcement institutions (North, 1990; Williamson, 1985). Considering that
15
16 markets for inputs, credit and output in the agrifood sector in several developing countries face
17
18 such challenges, NIE is called upon to suggest that vertical coordination can contribute to
19
20 technical change, the inclusion of family farmers and the upgrading of value chains. Technical
21
22 change is expected to yield economies of scale, meaning the unit production cost decreases with
23
24 the increase in volume. Forms of vertical coordination recommended to overcome market
25
26 imperfection include contractual arrangement (Ton et al., 2018) and vertical integration (Van
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28 den Broeck et al., 2017).

29
30 Drawing on these strands of literature, several variants of Special Agro-Industrial Processing
31
32 Zones (SAPZs) have appeared in development bank publications. The border between these
33
34 territorial models for the development of agrifood value chains is not necessarily clear cut
35
36 (figure 1), and the agropole model implemented in the western part of sub-Saharan Africa
37
38 includes geographic scope and development mechanisms that call for further study. Agropoles
39
40 target strategic areas within national borders to concentrate and upgrade firms. They were
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42 adopted more recently than the agricultural corridors that have been documented in South and
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44 East Africa since the 2000s (Gabas et al., 2020). The role envisioned for the state is less
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46 precisely identified than in other models and may include the provision of transfers, good and
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48 services, and regulations.
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Figure 1. Territorial models for the development of agrifood value chains in publications by development institutions

	Main development mechanism	Geographic scope	Main role envisioned for the state
Agropole	Increase production and productivity through economies of agglomeration and scale.	Hundreds of hectares, delimited (high potential) area within national borders	Transfers: smart subsidies? Goods and services: emphasis on infrastructure (in and around the production area?) Regulation?
Growth corridor	Integration through infrastructure and development of (agro)industries	Hundreds or thousands of kilometres, regional or supranational scope	Supranational infrastructure, regulation (trade)
Agro-industrial park	Added value through processing and innovation	A few hectares around accessible production areas	Infrastructure and services in and around the area
Agricultural cluster	Competitiveness through agglomeration and networks	Hundreds of hectares regional agglomeration around the production area	Services (support for collective organization)
Special Economic Zone	Promotion of export, Foreign direct investment (in the agricultural sector but not only)	A few hectares neighbouring transportation hubs	Transfers (lower taxes), infrastructure limited to the area
Agribusiness incubator	Development of entrepreneurship	A few hundred square metres mostly in urban areas	Targeted transfers (subsidies) and services

Source: adapted from Gálvez Nogales and Webber (2017)

Grey area: identified need for further study of agropole specificities.

Identifying the theoretical successive steps of implementation of the agropole model in publications by development institutions (African Development Bank, 2013; Gálvez Nogales and Webber, 2017; Speakman and Koivisto, 2013) helps grasp which public policies are envisioned (Figure 2).

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2 The targeted area (stage 1) corresponds to a territory with potential in terms of agricultural
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4 resources, but where the environment is not attractive for private investment. It may also be a
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6 cluster – a group of companies located geographically close together and interconnected.
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9 Development banks refer to traditional value chains comprised of numerous smallholders with
10
11 little capital, who produce limited volumes of agricultural products and generate little value.
12
13 The lack of appeal for private investments may be due to poor quality infrastructure (roads,
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15 electricity supply, irrigation), constraining regulations, uncertainty or the absence of market
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17 incentives.
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20 Development banks recommend creating an enabling environment for business (phase 2). This
21
22 involves adapting and enforcing legislation which favours private investment by encouraging
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24 companies involved either in the production, processing, or trading segment of agrifood chains.
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26 Infrastructure for transport, electricity, and irrigation, and storage facilities may also improve
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28 the ‘business environment’ (Gálvez Nogales and Webber, 2017, p. 281). Policies entail ‘mixed
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30 soft and hard investments in place of subsidies’, although smart subsidies can be used to
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32 leverage specific constraints (Ibid:19).
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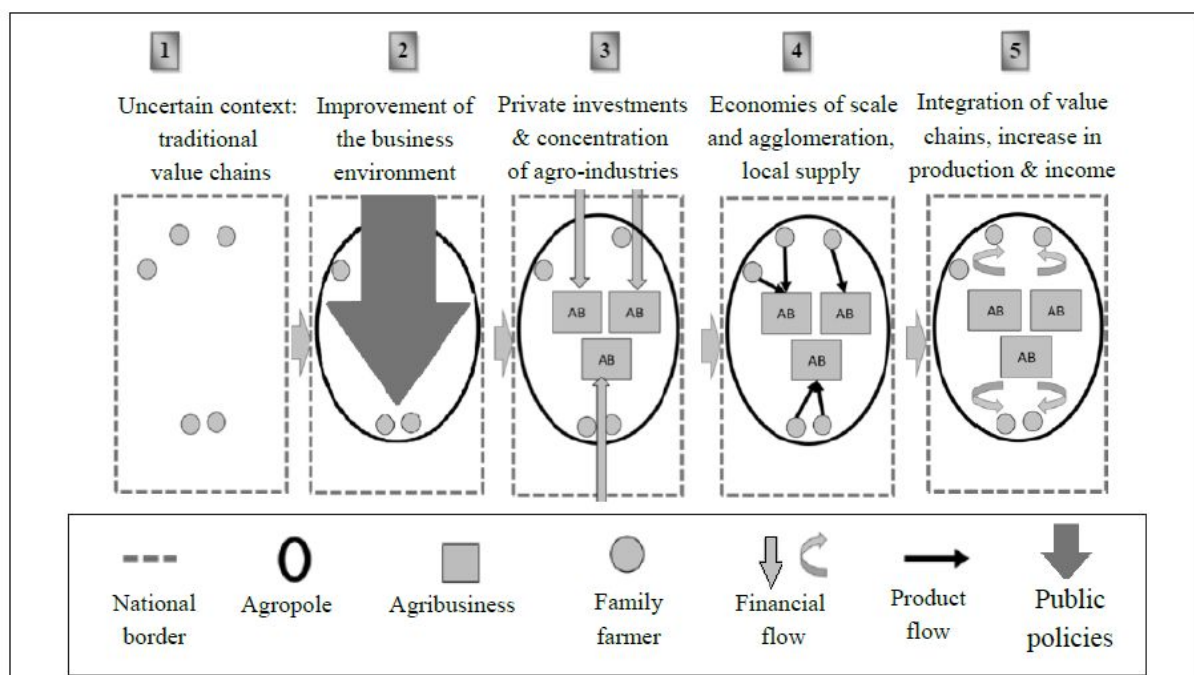
35
36 Such measures aim to encourage foreign and domestic private companies to invest in agrifood
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38 chains in the target area (phase 3). Agribusinesses are identified as prime targets for public
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40 policies. The geographical concentration of private investments is aimed at reducing the
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42 production cost per unit. This assumes that the state favours access to land through enforcing
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44 private property rights.
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47
48 The investing companies are expected to fuel value chain development and improve
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50 competitiveness through technical change, economies of scale and vertical coordination modes
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52 to guarantee the required volume and quality of supplies (phase 4). The model hypothesizes the
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54 inclusion of family farmers. Contract farming is deemed particularly suitable for large-scale
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56 investments in agropoles on the grounds that it reduces transaction costs. A second
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transformation envisioned is vertical integration, when an agribusiness directly manages crops and creates employment opportunities for neighbouring rural households.

Local households, including the poorest, should therefore benefit from spillover effects. The postulate is that family farmers, including those whose farms are located outside the immediate vicinity of agropoles, will benefit from higher income under contract farming schemes or wage employment than they do in traditional value chains (stage 5).

Figure 2. Stages in the development of agropoles in the model identified in the literature



Source: The authors

Agropoles in practice: Presentation of the case studies

The sub-national scale of agropoles makes it appropriate to study public policies in a single state. The four case studies we describe here were conducted in Burkina Faso (Bagrepole), Cote d'Ivoire (agropole of Belier), Mali (Call for Capital in the Niger Office) and Senegal (project for the inclusive and sustainable development of agribusiness in Senegal, French acronym PDIDAS). Historically, these areas have been favoured by public agricultural development policies. Most recently, projects amounting to US\$ 80 to 136 million per agropole were funded

10

by loans from the World Bank or the African Development Bank, except for the Call for Capital in Mali for which funding is still pending (Coulibaly and Soullier, 2020). Table 3 summarizes their main characteristics, which we detail below.

Table 3. Characteristics of the four agropoles studied here

	Bagre (Burkina Faso)	Belier (Cote d'Ivoire)	Niger Office (Mali)	Senegal River Valley (Senegal)
Agency governing the area	Bagrepole	Aderiz ⁱ	Office du Niger	SAED ⁱⁱ
Date of creation	2012	1974	1932	1965
Potential irrigated area (in ha)	493 000	7 500	1 907 406	240 000
Actual irrigated area (in ha)	3 380	2 170	131 000	60 000
Main crops grown on irrigated land	Rice	Rice	Rice and shallots	Rice and vegetables
Number of family farmers	13 400	10 000	71 368	45 000
Main agropole project	Bagre Growth Pole Project (2011-20)	2PAIB (2017-22)	Call for Capital (2009-present)	PDIDAS (2013-19 extension to 2021)
Total amount in millions of US\$ⁱⁱⁱ	133.7	136	404	80
Funding, in millions of US\$ (share of total amount)				
Expected funding through Development Bank including grants, loans and fees.	115 (86%) (World Bank)	112 (82.5%) (African Development Bank)	0	80 (100%) (World Bank)
Expected funding through participation of borrower/recipient country	8.70 (6%)	24 (17.5%) ^{iv}	0	n/a
Expected funding through participation of private investors	10 (8%)		404 (100%)	n/a
Amount and per cent of total expected funding disbursed in December 2020	101.4 (76%)	39 (29 %)	19%	32.35 (40%)

Main sources	(Daré et al., 2019; PNDES, 2016; World Bank, 2021)	(SNDR, 2014; Soullier et al., 2019; World Bank, 2020)	(Coulibaly and Soullier, 2020; Government of Mali, 2010; PNISA, 2014)	(PRACAS, 2014; Soullier et al., 2018; World Bank, 2020)
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n/a: not applicable or not available

Source: the authors

In Burkina Faso, hydro-agricultural investments in the Bagre department started in the 1980s with support from French cooperation. Land development then progressively increased to 3,380 hectares in 2015, thanks to funding from consortia in Western and Arab countries, and international organizations (Sirdey et al., 2018). The 13,400 family farmers living in this territory mainly grow rice on irrigated land. Paddy production reached 30,000 tons in 2017 (Ibid). The most recent Bagre growth pole project (2011-20) has three main goals: (i) creating an enabling institutional environment for investment; (ii) developing public infrastructure, particularly for irrigation and roads; and (iii) supporting private investment in agro-supplies through partial financing, with the expected participation of private investors set at 8 per cent of the total amount (World Bank, 2021). In 2012, a semi-private agency named Bagrepole SEM was created to manage this project worth US\$ 133.7 million.

The Belier pole is located in the centre of Cote d'Ivoire 250 kilometres north of Abidjan. Rice is the main irrigated crop in the region (2,170 ha), where the national agency in charge of rice development (French acronym ADERIZ) has been managing projects since its creation in 1974. Since only one third of the hydro-agricultural potential of just over 7,500 ha has been developed, of which only 1,000 hectares is currently used for production, the National Rice Sector Development Strategy (2012-20) plans to extend both the hydro-agricultural infrastructure and processing facilities for rice (African Development Bank, 2020). The Belier pole should also receive at least one of the 30,000 industrial units being built in Cote d'Ivoire as part of the national strategy for rice development. In line with this development strategy, the

1
2 2PAIB project (2017-22) aims to develop an agro-industrial pole in the Belier region. The total
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4 cost of US\$ 136 million is to be covered by a loan from the African Development Bank (82.5
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6 per cent), and 'own beneficiaries' resources' (17.5 per cent, composed of direct government
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8 resources and the equivalent from private investors). The main goals of this project are
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10 expanding infrastructure, securing land access, and encouraging private investments through
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12 technical and financial support (Ibid).
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16 The Niger Office is located in the centre of Mali 250 kilometres from the capital Bamako. Since
17
18 the creation of an eponymous parastatal agency in 1932, the Niger Office has benefited from
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20 public policies and development projects funded by international organizations. This enabled
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22 the development of 133,000 ha of irrigated land in 2017, out of a potential 1,907,406 hectares,
23
24 the biggest irrigated agricultural area in West Africa (Coulibaly and Soullier, 2020). The land
25
26 is mainly used by 71,368 family farmers who grow rice in small-scale irrigated plots (Ibid). In
27
28 response to the 2008 crisis, the Call for Capital was launched to encourage PPPs and the
29
30 development of rice value chains in the area. This is intended to attract foreign and domestic
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32 investment to overcome capital shortfalls and develop multiple projects for infrastructure and
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34 production such as roads and irrigation (Brondeau, 2018). In 2014, a note was drawn up for the
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36 continuity and scaling up of the Call for Capital under the agropole model. Although funding
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38 targets are only partially met, large areas of land have been transferred (Coulibaly & Soullier,
39
40 2020). Most recently, an emphyteutic (long-term) lease transferred 11,288 hectares to the West
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42 African Economic and Monetary Union (WAEMU) in the frame of the Niger Office project in
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44 order to 'legal security for investments' in irrigated rice.
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51 The Senegal River Valley is located in the north of Senegal at the border with Mauritania. It is
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53 a major agricultural region, of which 240,000 hectares has irrigation potential (Soullier and
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55 Moustier, 2018). In 1965, the state created a national agency in charge of agricultural
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57 development (French acronym SAED) that extended the irrigated area from 600 hectares in
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1965 to 60,000 ha in 2014. Rice is the main crop grown by the 45,000 family farmers who live in the Senegal River Valley, and it received 73 per cent of the total funds dedicated to the 2014-19 agricultural development plan. Following the world price crisis, several grain self-sufficiency projects were implemented in the Senegal River Valley. One key strategy is agricultural intensification through foreign or local agribusinesses. Given that the 1964 land code, which is still in force, stipulates that land on the national estate cannot be transferred, land reform was entrusted to a national land commission between 2012 and 2017. The PDIDAS (2013-19) is the main pilot project following a model of intensive agricultural development aimed at allocating land to investors through tripartite sub-rental arrangements (between the state, rural communities, and investors). PDIDAS is implemented by the Ministry of Agriculture and the SAED thanks to a World Bank loan of US\$ 80 million of which only 40 per cent had been disbursed by the last quarter of 2019 (World Bank, 2020).

Policies implemented to foster agropoles

We account for national policies for the development of agropoles according to the three main types of public policies we identified using our typology (transfers, public goods and services, and regulation). The main results are presented in Figure 3.

Figure 3. Characterization of public policies

Main public policies for each type of policy reviewed	Bagre (Burkina Faso)	Belier (Cote d'Ivoire)	Niger Office (Mali)	Senegal River Valley (Senegal)
1. Public transfers				
1.1 Fiscal transfers: <u>tax exemptions</u>				
Maximum reduction of corporate taxes	100%	100%	100%	100%

Maximum duration of tax exemption	7 years	15 years	30 years	25 years
Actors targeted (investing above, in millions of FCFA)	Agribusinesses (100)	Agribusinesses (500)	Agribusinesses (12.5)	Agribusinesses (100)
1.2 Direct transfers: subsidies for inputs				
Main product(s) targeted	Rice	Rice	Rice	Rice, vegetables
Types of inputs	Seeds, fertilizers, mechanisation	Seeds, fertilizers, mechanisation	Seed, fertilizers, credit and mechanisation	Fertilizers, credit
Maximum share of input price subsidized	42%	73%	100%	60%
1.3 Stabilization measures				
Price incentives	Yes, but decreasing	No	Yes, but decreasing	Yes
Development of insurance through PPPs	n/a	Pilot project 2018	n/a	Yes since 2009
2. Public goods and services				
2.1 Infrastructure				
Infrastructure (renovated, constructed)	Hydro-agricultural, other types limited	Hydro-agricultural and milling plants	Hydro-agricultural, other types limited	Hydro-agricultural, other types limited
2.2 Mediating measures				
<u>Business facilitation</u>	Yes	Yes	Yes	Yes
Name of agency in charge	APEX	CEPECI	API	APIX
Actors targeted	Agribusinesses	Agribusinesses	Agribusinesses	Agribusinesses
Technical support for family farmers	Yes	Yes	Yes	Yes

Name of the agency in charge	Bagrepole	ADERIZ ⁱ	Niger Office	SAED ⁱⁱ
3. Regulations				
3.1 <u>Land tenure reforms</u>	Domanial code Administrative reforms to ease access to land for agribusiness	Administrative reforms to ease access to land for agribusiness	Administrative reforms to ease access to land for agribusiness	Administrative reforms to ease access to land for agribusiness
3.2 Socio-environmental control	<i>ex ante</i> selection of investors	n/a	n/a	Support for marketing contracts (stable prices)

n/a.: not applicable or information not available

Source: the authors

Transfers: Fiscal exemptions for agribusinesses and subsidies on inputs

In the typology, transfers are divided into (1.1) fiscal transfers (1.2) direct subsidies and (1.3) stabilization transfers. Among fiscal transfers, corporate tax exemptions for agribusiness are the most frequent. During the study period, all four countries amended their investment codes to attract the agro-industrial sector by including exemptions of up to 100 per cent of corporate taxes. National legislation provides for tax exemptions targeting large investments and exports, with conditions linked to geographical areas (Senegal, Cote d'Ivoire) and job creation (in all four cases). Agro-industrial exports benefit from the most advantageous fiscal regimes in all four countries, but differ in duration, which ranges from five to 30 years. These exemptions are supported and made more visible abroad through reforms of administrative institutions and procedures related to trade and investment.

Direct support mainly consists in subsidies for inputs. Subsidies for fertilizer and seeds that existed in all four countries before the states started developing agropoles now play a central role, since national plans aim to scale up the use of inputs. Governments envision a reduction in the proportion of input subsidies in agricultural expenditure through the development of

1
2 agrifood companies that could instead supply inputs to family farmers – who would thus
3
4 become producers under contract. States remain the main provider of direct support through
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6 subsidies for inputs. These account for between 40 and 60 per cent of public agricultural
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8 expenditure.

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11 Transfers for stabilization are limited. To promote stabilization, states are increasingly calling
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13 on the private sector, particularly to cover agricultural risks through PPPs in the insurance
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15 sector. Senegal is currently the most advanced in the process. Since 2009, the state has had a
16
17 50 per cent share in the National Agricultural Insurance Company of Senegal CNAAS (Ndiaye,
18
19 2012), and similar plans have been announced in Burkina Faso and Cote d'Ivoire. In contrast,
20
21 price regulations are not prioritized, although national situations differ in the case of rice. In
22
23 Cote d'Ivoire, international prices apply, whereas in Senegal, public action supported the
24
25 development of an interprofessional association to improve price stability. In Burkina Faso and
26
27 Mali, measures taken after 2008 (suspension of import tariffs on rice, pro-consumer price
28
29 ceilings) reduced domestic price incentives.

30 31 32 33 34 35 *Public goods and services: Infrastructure and calls for private investments*

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37 In our typology, public goods and services are divided into (2.1) infrastructure and (2.2)
38
39 'mediating' measures specific to public services. The supply of (hard) infrastructure, public
40
41 goods, is limited to land development through irrigation funded by loans and their equivalent
42
43 from the private sector. Public investment in infrastructure mainly targets the rice sector and
44
45 hydro-agricultural facilities, except in Cote d'Ivoire, where state funding includes a processing
46
47 component. Other types of infrastructure are not prioritized. Investments are enabled through
48
49 loans from development banks to governments (amounting to between US\$ 80 and 136
50
51 million), which, in public policy discourse, are often described as grants. Ambitious public
52
53 funding of infrastructure announced in public policies and development projects are intended
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55 to leverage complementary private funding. Funds partly go to the construction of irrigation
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1
2 infrastructure to be subsequently transferred under different PPP arrangements. In Cote
3
4 d'Ivoire, processing units are to be operated by a private company (Soullier et al., 2019). In
5
6 Bagrepole, plot beneficiaries are expected to take over the secondary irrigation canals for an
7
8 estimated US\$ 8,000/ha (Daré et al., 2019, p. 34). In Mali the construction of infrastructure is
9
10 to be financed entirely by private actors in exchange for fiscal exonerations, including on water
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12 and energy (Coulibaly & Soullier, 2020).
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16 In the area of services, policies focus on promoting investment, marking a relative shift away
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18 from training, access to funding, or technical assistance. Trade and investment-related services,
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20 intended to act as a catalyst for tax exemptions, are a priority in all four case studies. Measures
21
22 detailed in the World Bank's normative 'Doing Business' indicator (Doing Business, 2020)
23
24 serve as a blueprint for reforms: constant references in national agency publications and
25
26 discourses epitomize the trend. The reinforcement of parastatal agencies (APEX in Burkina
27
28 Faso, CEPECI in Cote d'Ivoire, and APIX in Senegal, and the newly created API in Mali)
29
30 represent a single window to facilitate administrative procedures linked to investment and trade
31
32 (Doing Business, 2020). Technical assistance is also provided by parastatal agencies, SAED in
33
34 Senegal, ADERIZ in Cote d'Ivoire and Niger Office in Mali. In Burkina Faso, the joint venture
35
36 Bagrepole, created as part of the growth pole project in 2011, is responsible for providing
37
38 training in technical itineraries (Sedogo, 2014). In all four cases, services focus strongly on
39
40 accompanying family farmers use of inputs and implementing improved technical itineraries.
41
42 Measures to increase access to funding are limited. Public support for rural financing is most
43
44 advanced in Senegal –the state has long contributed to the national agricultural credit fund
45
46 which offers better interest rates than mutual insurance companies (Soullier and Moustier,
47
48 2020). Even in that case, family farmers' access to credit remains low. The few measures put
49
50 in place by states are mainly accessible to actors who already have the most resources: those
51
52 who can be classified as agribusiness entrepreneurs (Tyrou et al., 2019).
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1
2 *Regulation primarily targets tenure reforms*
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5 In our typology, regulation is divided into land tenure and socio-economic and environmental
6 actions. Land regulation aims at improving the business environment: the main rationale is
7 providing agribusiness with access to land, be it through contract farming, rental, or ownership.
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10
11 The key pillars are (i) state-centred tenure formalization – that, to some extent, recognize
12 customary tenure arrangements such as the notable case of Malian 2017 tenure law (CTFD,
13 2020) – and (ii) administrative reforms encouraging long-term rental tenancy. Domanial codes
14 dating from the post-colonial period have been amended in Burkina Faso and Mali. Yet
15 legislation imposing the condition of being a national to access land ownership on rural land
16 estates that depend on the state is still in force. Bypassing this condition is encouraged by
17 governments and investment promotion agencies. In all four countries, administrative reforms
18 have been implemented, such as speeding up the issuance of property titles or the abolishment
19 of the tax on property transfer. Such reforms have improved states' ranking in the World Bank
20 quality of land administration index, which measures the ease with which companies can obtain
21 property rights. In comparison, little attention is paid to subsequent phases of agricultural
22 development such as mechanisms of conflict resolution, or compensation for displaced
23 populations (Adamczewski et al., 2013; Boone et al., 2020).
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41 Policies linked to regulation in socio-environmental areas prioritize the arrival of
42 agribusinesses. Measures to guarantee their coordination with family farmers, or to limit
43 projects' social and environmental impacts are weak. The Bagrepole strategy has been the *ex-*
44 *ante* selection of investors, but criteria do not include whether the expected output of the
45 selected project would compete with existing family farms (Tapsoba et al., 2018). Assessments
46 of social and environmental impacts are in some cases announced, but subsequently not
47 enforced. Such is the case in Mali with the 2008 Decree associated with Call for Capital
48 (Coulibaly and Soullier, 2020, p. 51). In Senegal, part of the Ndiael natural reserve was
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transformed into cultivated areas to support investments from an agribusiness (Soullier et al., 2018).

Figure 4 summarizes the distribution of the public policies documented according to each of the stages of agropole development in the model of development banks (presented in Figure 1). Figure 4 further highlights the fact that states play an important role in the stage preceding private investment to improve the business environment (stage 2). Public policies mainly concern tax exemptions, the construction of irrigation infrastructure, business facilitation through mediating measures and formalization of the land market to provide access to land by large companies. In contrast, public policies are much less present in the final stages of the process: for instance, stabilization measures are limited or delegated to the private sector. Coordination between newly arrived investors and local family farmers – on which arguably rest the expected increase in production and income – is not supported by public policies.

Figure 4. Public policies documented at each stage of the development of agropoles

Types of public policies	Stages of development of agropoles in the model			
	2 Improvement of the business environment	3 Private investment and concentration of agro-industries	4 Economies of scale and agglomeration, local supply	5 Integration of value chains, increase in production and income
Transfers	Tax exemptions		Input subsidies	Stabilization measures (prices) limited or delegated to the private sector (insurance)
Public goods and services	Infrastructure projects under PPPs Trade and investment-related services	Technical services and access to funding less prevalent		

Regulation	Reform of tenure laws and administration	Tenure arrangements (sub-renting practices)	Socio-environmental regulation with weaker enforceability (including marketing contracts)
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In bold: most common measures.

Source: The authors

DISCUSSION

Agrifood policies and market allocation: Contributions and directions beyond neoliberalism

This article captures the pattern of public policies through which the agropole model, designed by development banks to upgrade agrifood chains, is implemented at national level. Our results show that policies associated with agropoles are clearly oriented towards measures applied prior to private investment. Policies that encourage agribusinesses to support family farmers, such as non-market organizations or contractual arrangements, are less prevalent. Our hypothesis, drawing namely on the literature on PPPs and (agricultural) value chain upgrading, was that the model's application through national public policies centres on market allocation. We provide more qualified evidence since in the framework of agropoles, state's legal and regulatory frameworks, agencies, as well as investments through loans play key roles in allowing the creation and expansion of markets. The adoption of agropoles and their implementation through the public policies we document here have complex causes. We point to three important determinants closely intertwined with state dynamics; these cannot be grasped through the lens of the strict state vs market dichotomy that often underlies references to neoliberalism. First, the participation of private actors in funding the agrifood sector is encouraged by productionist discourses in both international arenas and national policy circles. This paradigm emphasizes the need to increase agricultural production through mechanization, intensification and larger-scale farms (Moorsom et al., 2020). This helped legitimize the idea of a 'funding gap' for African agriculture, that is, a gap that could allegedly not be bridged by formal banking

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2 institutions (World Bank, 2018). Second, participation of the private sector does not necessarily
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4 entail a lessening of state action. In a context of increased concentration of the agrifood sector
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6 (Clapp and Purugganan, 2020), the influence exerted by powerful actors may crystallize during
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8 the formulation of policies, as documented by Huggins and Mastaki (2020) in the case of the
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10 land law and policy reform in the Democratic Republic of Congo. Third, beyond the commonly
11
12 referenced private sector-led development, literature on financialization increasingly
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14 recognizes that foreign aid and parastatals are key in the 'de-risking of investment in 'frontier'
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16 markets' (Mawdsley, 2018, p. 8). This points to the need to further uncover PPP financial
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18 schemes in the developing world, by investigating the political dynamics between development
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20 banks and national governments, but also between public and private intermediaries (Ducastel
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22 and Anseeuw, 2017). Scholars could find in agropoles – from the pages of banks' blueprints to
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24 national-scale implementation through parastatals – a relevant point of entry in their attempt to
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26 shed light on how agrifood policies are shaped according to how public actors engage with
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28 actors of private and institutional finance (Knuth, 2015).
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34 **Policy implications: agropoles' risky implications for West African agriculture**

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37 Our results also need to be put into perspective with the development objectives of the model
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39 and associated mixes of investment. We aim to contribute agropoles' policy implications by
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41 synthesizing debates on two of the most acute risks associated with such developments: the
42
43 expected positive spillover effects of vertical integration and tenure formalization.
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47 The current implementation of the agropole model as defined by development organizations
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49 hypothesizes that vertical coordination will improve the living conditions of family farmers and
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51 will secure the supplies required by agribusinesses (figure 2 stages 4 and 5). Win-win
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53 mechanisms between family farmers and agro-industrial companies through contract farming
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55 or wage contracts depend on higher yields, higher margins, as well as better access to credit,
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57 improved technologies, and high value quality markets. Most case studies with an institutional
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1
2 approach documented such effects, however one systematic review warned they may be upward
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4 biased since the contracts only included the most endowed farms, implying increased inequality
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6 (Ton et al., 2018). Furthermore, in the case of agricultural intensification, the increase in costs
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8 generated by the use of additional inputs is not always offset by an increase in yields or in the
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10 sales price of the resulting product, especially in the case of low-value products like cereals
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12 (Ragasa, Lambrecht, and Kufoalor 2018). Previous work in the Senegal River Valley also
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14 documented how the oligopolistic position of rice millers in the rice value chain enabled them
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16 to impose lower purchase prices in production contracts than those paid in spot transactions
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18 (Soullier and Moustier, 2018). There are thus arguments for caution before taking positive
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20 spillover effects for family farmers for granted in the agropole model. This article highlights
21
22 the need to assess the impact of agropole-related public policies in domestic rice value chains,
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24 by conducting complementary studies based on quantitative and qualitative data.
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29 In that sense, approaches of Marxian inspiration, which depict contracts as win lose devices
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31 used by agribusiness to extract rent from family farmers (Scoones et al., 2018; Vicol, 2019),
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33 highlight the need to articulate the understanding of contract farming and tenure relations (Oya,
34
35 2012). Highlighting the role of tenure relations is relevant to understanding the broader
36
37 implications of the role of states in agropoles. With the stated objective of countering the
38
39 negative impacts of large-scale farmland transfers to investors, agropole-related policies call
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41 for accelerated tenure formalization and administrative reforms. Investors' access to land is
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43 facilitated through land-rental or commercialization contracts instead of title transfer.
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45 Agropoles rationale is inspired from a mainstreaming of new institutional economics'
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47 framework adopted in development economics, whereby formal property rights can be used as
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49 collateral and entail investment, productivity and growth (De Soto, 2000). Detrimental effects
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51 on agricultural growth and dispossession of local family farmers have however been
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53 documented in similar development projects – including the World Bank funded Irrigation
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2 Development Support Project (IDSP) in Zambia (Rémy and Cochet, 2020). We argue that the
3
4 implications of agropoles should be scrutinized against the backdrop of scholarly discussion on
5
6 effects of tenure securization on pro-poor development (Boone, 2019; Bromley, 2009), its
7
8 contours (Doss and Meinzen-Dick, 2020) and its state vs customary character. The broader
9
10 study of land-use policies for agricultural intensification in Africa cannot be separated from (i)
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12 the role of states in 'governing' land grabs (Wolford et al., 2013) and, conversely (ii) the
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14 implication of land redistribution for state-building (Schlimmer, 2019). Agropoles should be
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16 reevaluated in light of recent evidence provided by scholars on how titling programmes feed land
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18 conflicts and dispossession, focusing on the role of political determinants within the state
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20 system (Boone et al., 2020).
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25 CONCLUSION

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27 This paper investigates what national policies are implemented to foster the development of
28
29 agricultural growth pole model in West Africa. We questioned the theoretical foundations and
30
31 specificities of the model adopted in national plans. Agropoles appear as a variant of territorial
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33 development models which combine spatial organization references with a focus on
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35 institutional and new institutional economics. In the blueprints, emphasis is placed on the role
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37 of institutions such as contracts, firms, and property rights. The role envisioned for the state is
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39 less precisely identified than in other models and may include the provision of good and
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41 services, transfers, and regulations. The second aim of this article was to document the different
42
43 types of national public policies implemented for the development of agropoles, using a
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45 comparative analysis based on a typology informed by theory in public economics to examine
46
47 different areas of state intervention (Daviron et al., 2004). Results show that national policies
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49 mainly aim to foster the 'business environment' to attract large-scale foreign investments
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51 through tax exemptions and regulatory changes. Agribusinesses benefit from lower taxes,
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53 simplified administrative procedures for investments, and favoured access to land through long-
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1
2 term legal leasing practices. Investment in infrastructure is virtually limited to land
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4 development through irrigation funded by loans from development banks and depends on the
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6 participation of the private sector for completion. Few public policies directly support agrifood
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8 activities or coordination between the actors of the value chains. Public spending dedicated to
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10 technical support, training, research, and insurance development has not played a central role
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12 in accompanying the development of agropoles. Few measures are being implemented to foster
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14 family farmers' inclusion in such poles. We highlight the fact that policies associated with
15
16 agropoles are oriented towards improving the general business environment while support to
17
18 specific arrangements between value chain actors are less prevalent.
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22 The ongoing development of the agropole model raises serious concerns regarding both family
23
24 farmers' land rights and expected positive spillover effects through vertical coordination. In
25
26 term of policy implications, this contribution invites scholars and policy-makers to look beyond
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28 a technical, depoliticized portrayal of the model that currently dominates the institutional
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30 literature.
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10 National Agency for Rice Development).

11 ⁱⁱ SAED : Society for Land Development in the Senegal River Valley

12 ⁱⁱⁱ Total project amounts and the share disbursed vary over time as (i) the expected private
13 funding may materialize or not (in Mali for instance), (ii) further loans can increase the original
14 amount (as was the case of Bagrepole, with an extra 50 million euros announced in 2018), or
15 (iii) project duration may be extended, as was the case for PDIDAS, extended until June 2021.
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18 ^{iv} The total cost of US\$ 136 million is to be paid by a loan from the African Development Bank
19 (82.5%), and 'own beneficiaries' resources' (17.5%, composed of direct government resources
20 and an undetermined share by private investors) (African Development Bank, 2020)
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