

The state of rice value chain upgrading in West Africa

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Introduction

Following the food price crisis in 2008, the rice price increased threefold, and remained steady at a higher level than prior to the crisis (Fig. 1). To improve local rice value chain, African governments implemented policies aiming at crowding in investment in rice value chain upgrading to help domestic rice compete with imports. We assess the state of rice value chain upgrading in West Africa by reviewing evidence on rice millers' investment in semi-industrial and industrial milling technologies, contract farming and vertical integration during the post-crisis period 2009-2019. We also assess the opportunities and challenges encountered in rice VC upgrading.

Our assessment may help policy makers at national and regional levels and VC actors revisit and refine upgrading strategies and policies during the revision of the NRDS under the CARD Phase 2, which aims at doubling rice production in Sub-Saharan Africa from 28 million tons in 2019 to 56 million tons by 2030 (CARD, 2019).

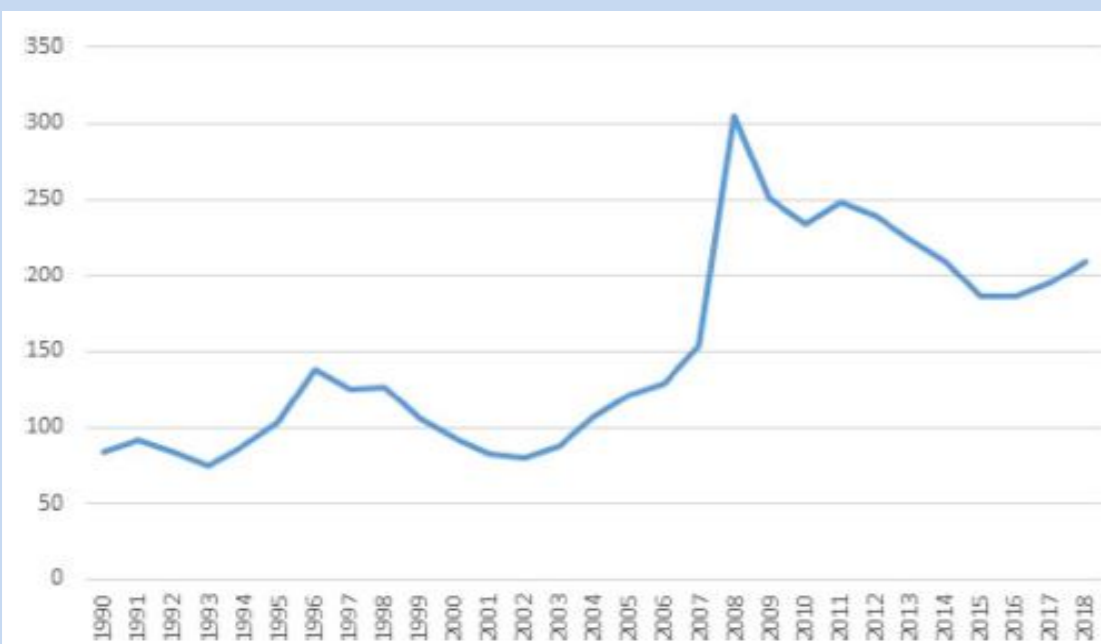


Fig. 1. Average global rice price (US\$/t f.o.b.)

Methodology

Study area

15 West African countries over the last decade 2009-2019 (Fig. 2).

Methodological approach

The methodology is based on three stages:

- A non-systematic review of peer-reviewed and non-peer reviewed literature in the 15 West African countries.
- We drew on personal expertise and consultation of experts through the authors' professional network of partners established under the CGIAR Flagship Project on "Upgrading Rice Value Chains" (<http://ricecrp.org>).
- The evidences were presented and validated by 48 participants representing public and private sectors from nine African countries at the regional workshop on "Leveraging small and medium rice millers for rural transformation and investment in the rice sector in Africa" (Arouna, 2019).

Data analysis

The analysis was done as follows:

- We measured the dynamism of rice VC upgrading through four outcome indicators: (i) number of investments in semi-industrial and industrial mills that were operational in 2019; (ii) aggregate upgraded milling capacity; (iii) the number of farmers involved in contract farming; and (iv) the area under vertical integration.
- OLS linear regression was used to identify the main factors that explain heterogeneity of rice VC upgrading among the 15 West African countries.

Results

- ❖ The regression analysis identifies three factors that jointly explain 89% of heterogeneity in aggregate upgraded milling capacity in the 15 countries: (i) the 2008 import bill (total value of rice imports, expressed in million US\$); (ii) the average annual domestic milled rice production in 2009–2019; and (iii) cultural (preference) import barriers (Table 1).

Table 1. Determinants of aggregate upgraded milling capacity in 15 countries in West Africa (linear regression)

Variable	Coef.	SE	P-value
2008 import bill	0.058	0.030	0.077*
Average annual milled rice production (2009–2019)	0.032	0.007	0.001***
Cultural import barriers	-24.660	9.613	0.028**
Physical import barriers	-2.769	11.251	0.811
Constant	-1.780	8.169	0.832

Evidence of rice value chain upgrading in West Africa

Based on the outcome indicators, three groups were identified: (Fig. 2).

- **Group 1** includes countries where rice VC upgrading was found to be most dynamic among all countries, i.e. Nigeria and Senegal.
- **Group 2** includes West African countries that faced rice import bills below 500 million US\$ in 2008 and where VC upgrading was slowly emerging between 2009 and 2019, i.e. Ghana, Mali, Côte d'Ivoire, Burkina Faso, Liberia, Niger, Sierra Leone, Benin and Togo
- **Group 3** includes countries for which we did not find any evidence of investment in rice VC upgrading in the 2009–2019 period, i.e. Guinea, Mauritania, The Gambia and Guinea-Bissau

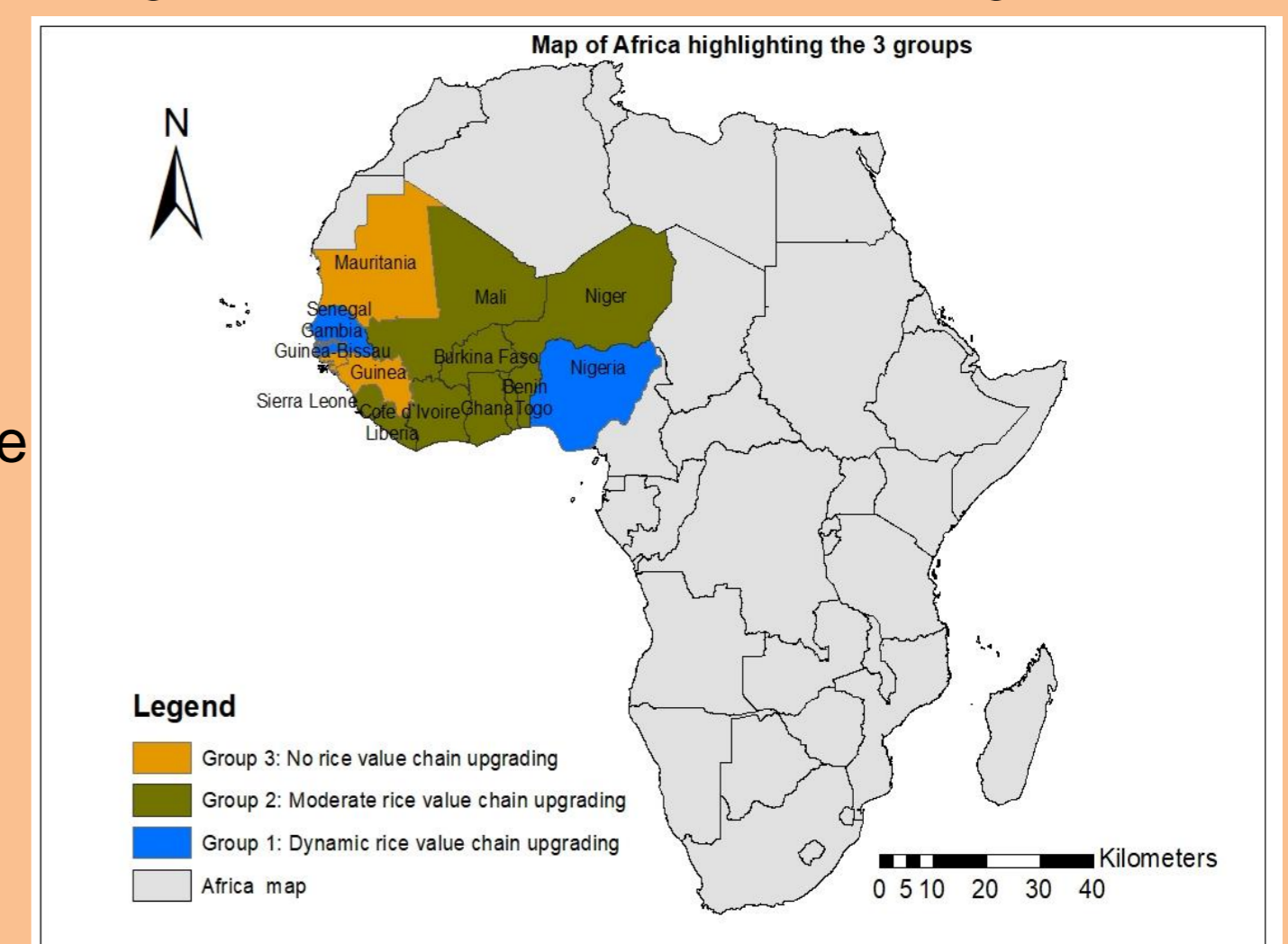


Fig. 2. Study countries and groups of countries

Challenges in rice value chain upgrading in West Africa

The evidence suggests that upgrading faces several challenges in terms of vertical coordination, technology, finance and policies.

Conclusion

- Using aggregate upgraded milling capacity as an outcome indicator, we observe heterogeneity in rice VC upgrading among the 15 countries, 89% of which can be explained through three factors.
- Evidence suggests that productivist policies aiming at increasing paddy production also indirectly contribute to VC upgrading. Investment in breeding, agronomic and post-harvest therefore needs to go hand in hand with investment in VC upgrading to scale up production of quality rice that is able to compete against imported rice and, hence, integrate domestic rice VCs in global markets.

References

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