Contract farming and agricultural financing
Evidence from the domestic rice value chain in Senegal

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Objective

The benefits of farmers' being included in contracts are documented by studies on high value export chains. Yet family farmers commonly participate in domestic grain chains, where contracts are little evidenced.

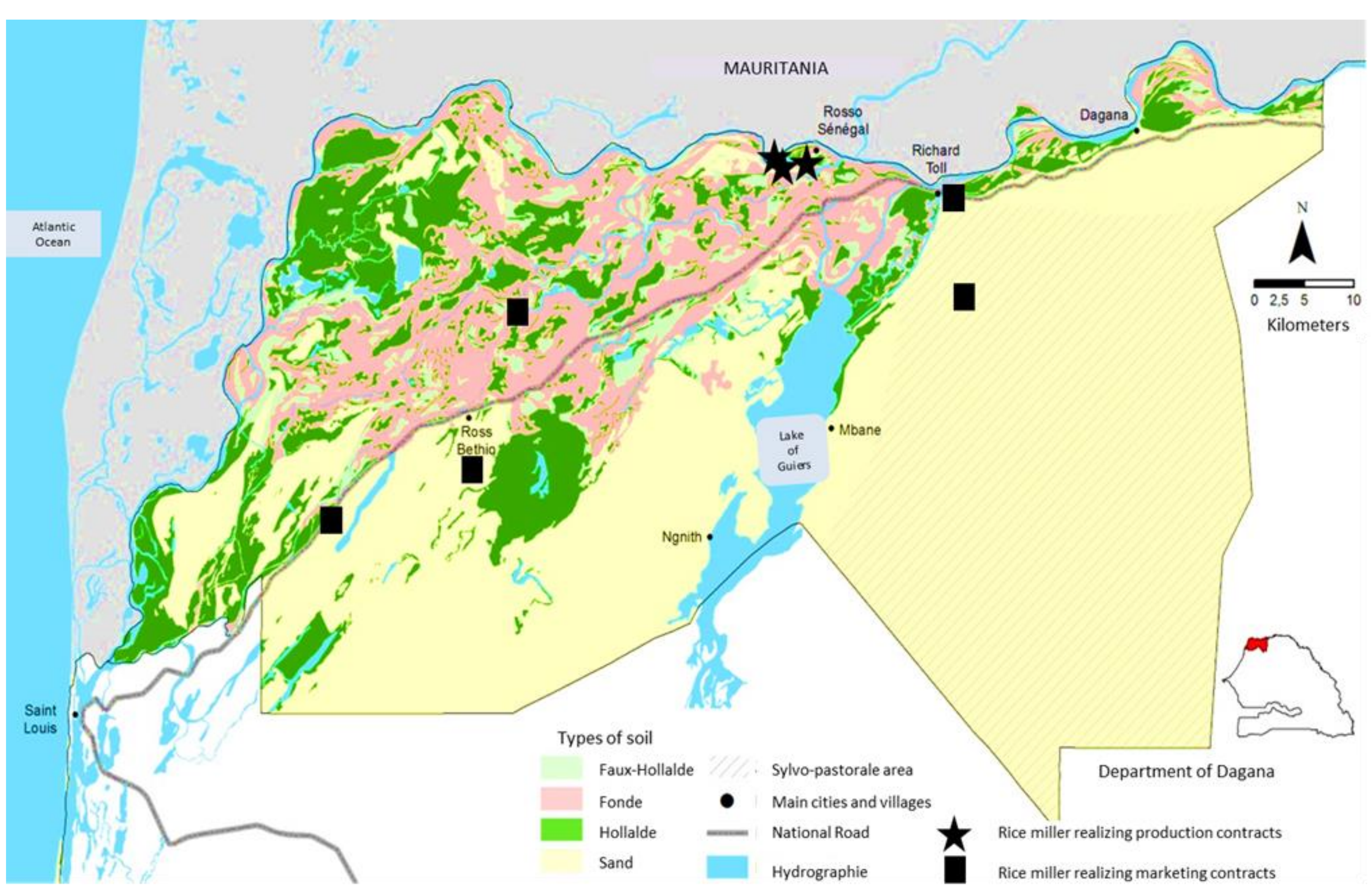
This study aims at understanding the drivers of participation of family farmers in contracts in domestic grain chains.

Empirical context

We study the rice value chain from the Senegal River Valley. This value chain is traditional: hundreds of small-scale processors use simple techniques to husk paddy that they get from family farmers through spot transactions. The national agricultural bank, that supports rice growing through campaign credit, faces low reimbursement rates.

However, since the world price crisis, some rice millers invest in machines that husk, grade and clean the rice. They use contracts to secure their supplies.

Fig. 1: Rice millers in Dagana department



Method

Following an exploratory work, we carried out a cross-sectional survey with 372 farmers. The producers were stratified according to their marketing modes:

Fig. 2: Sample

Marketing modes	Spot transaction	Marketing contract	Production contract
Number of observations	194	105	73

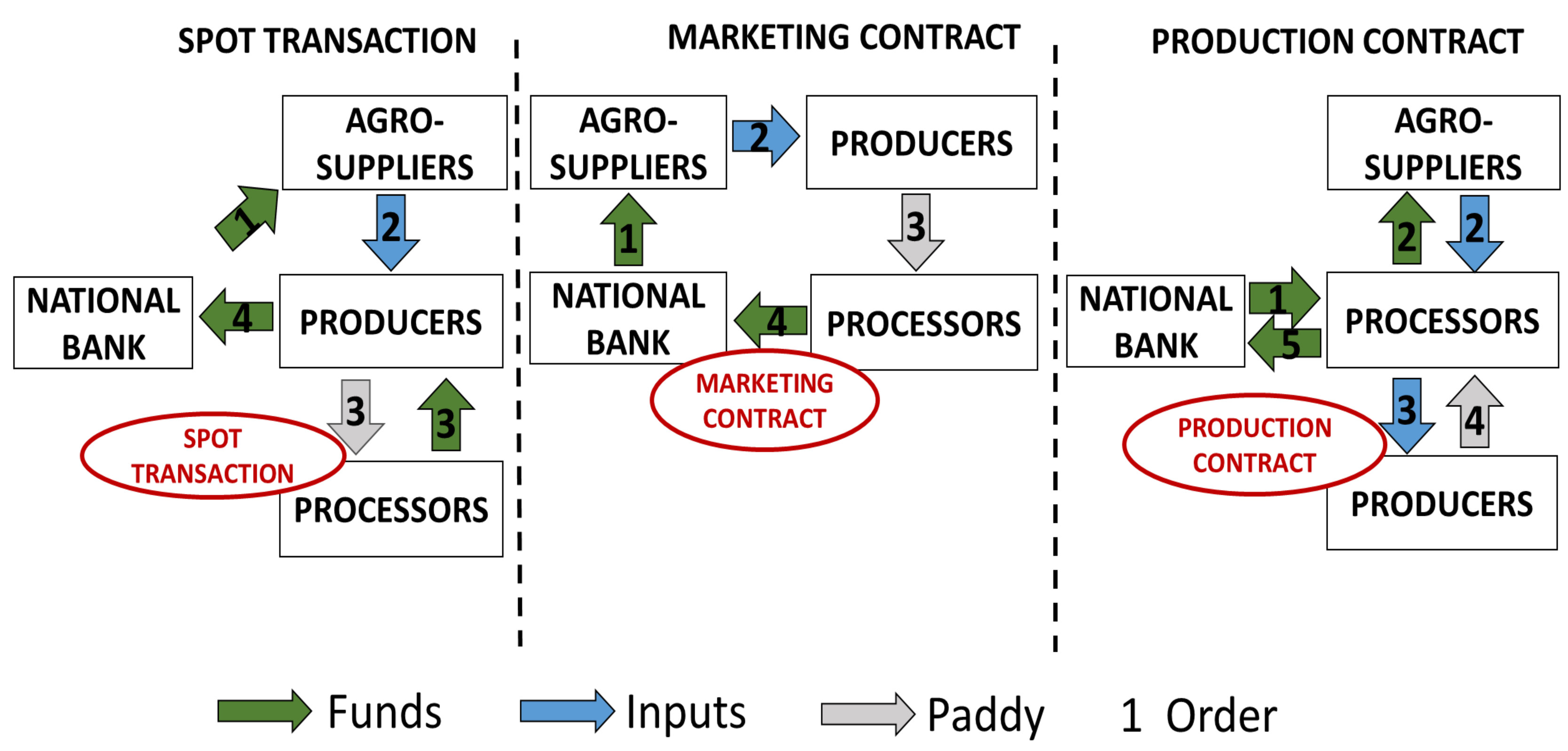
The questionnaire queried farm livelihoods, rice production (including financing and inputs), uncertainties and the marketing of paddy.

A multimodal logit model was applied to this dataset.

Results (Soullier, 2017)

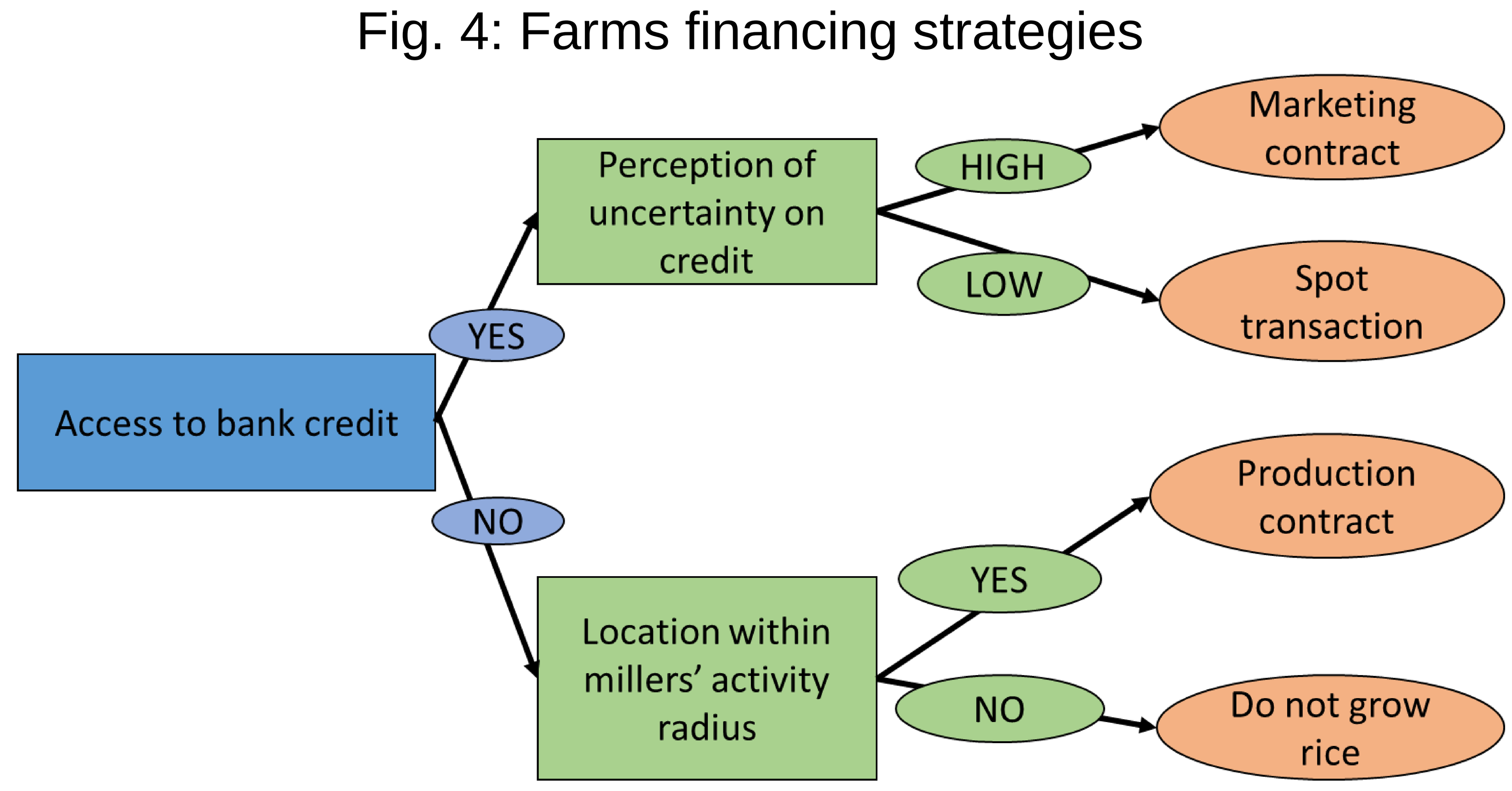
Marketing contracts were introduced by policies to support the supplies of large millers and to guarantee reimbursement of farmers' loans to the national bank. On the contrary, production contracts were introduced by rice millers only.

Fig. 3: Marketing modes



The logit model shows the key variables for participation in contracts. They are: farmer's financial capital, perception of credit uncertainty and farm location.

Fig. 4: Farms financing strategies



Producers participate in marketing contract to reimburse the credit at the national bank in order to get future credit. The production contract is a second best option to fund rice growing for producers that are excluded from the credit at the national bank. It is used by farmers within millers' activity radius.

Producers involved in contracts market also paddy through spot transactions because they provide quick cash payments, outlets for lower quality products and higher income than production contracts.

Conclusion

Producers participate in contracts to secure agricultural financing. The segmentation of the credit market is linked to the indebtedness of producers to the national agricultural bank.

References

Soullier, Guillaume. « Modernization of Domestic Food Chains in Developing Countries: What Effects on Small-Scale Farmers? The Rice Value Chain in Senegal ». Thèse de doctorat: sciences économiques, Université de Montpellier, 2017.

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