

## ABSTRACT

TOYIMI GODFRID ERASME IBIKOULE

### Critical Issues Related to Cooperative Roles in the Maize Sector of the Republic of Benin

—Performance analysis and collective marketing challenges—

ベナン共和国のトウモロコシ生産をめぐる協同組合の役割と課題

-農協の経済効果と共同販売事業が抱える問題を中心に-

In recent decades, Benin has undergone significant economic progress, with agriculture playing a pivotal role. Notably relying on the cotton sector, successive governments in Benin have promoted the diversification of agriculture beyond cotton by encouraging the production of staple grains, especially maize—to meet rising domestic food demand. This has led to a significant expansion of maize cultivation, largely involving smallholder farmers seeking additional income. However, the performance of Benin's developing maize sector remains suboptimal and continues to be constrained by persistent challenges like low yields, difficulties accessing inputs, and obstacles accessing profitable markets.

Against this backdrop, agricultural cooperatives have gained prominence, with 48.6% focused on grain production and marketing. Nevertheless, the roles and efficacy of these maize producer cooperatives (MPCs) remain unclear owing to the lack of data and the absence of studies. Therefore, this dissertation uses an integrated analysis combining qualitative and quantitative methods to investigate MPCs in northern Benin's Alibori area, where maize production and marketing have grown substantially, mainly driven by market orientation. This dissertation encompasses 5 chapters—Chapter 1 is the general introduction setting the background and justification of the overall research. Chapters 2, 3, and 4 are the respective studies performed, and lastly, Chapter 5 is the general conclusion summarizing the main findings and implications.

Firstly, we evaluate if MPC membership enhances farmers' access to productive services and improves farm performance in Alibori (Chapter 2). Using propensity score matching analysis to compare randomly selected members and non-members, findings show that MPC membership facilitates access to improved seeds and services such as credit and grain storage facilities. However, no significant difference in maize yields and agricultural income was observed between coop members and non-members, suggesting that cooperative activities may not necessarily enhance productivity and profitability.

Secondly, Chapter 3 aims to clarify the reasons behind MPCs' underperformance based on practitioners' experiences. Using case studies across two districts, It examines MPCs organizational structures, governance, and business execution of six MPCs—including their unions. Results from the comparative analysis show that MPC outcomes vary by district. Those in the more supportive Djidja outperform less facilitated Kandi cooperatives constrained by conflict, ineffective organizational structures, and poor governance. As a result, there are significant variations in member participation in joint selling, particularly in Kandi, where many farmers thrive individually in maize marketing.

Thirdly, Chapter 4 examines the transaction mechanism used by various marketing channels in competition with cooperatives. Through stakeholder interviews, it identifies the main marketing channels and their characteristics. Further, factors influencing the choice of maize sales channels are identified using probit regression analysis. Results indicate that incentives like pre-harvest payments offered by collectors and assistance in post-harvest transportation provided by private brokers significantly influence maize producers to opt for marketing channels other than cooperatives.

Lastly, although MPCs facilitate valuable services for smallholder maize farmers, realizing meaningful economic benefits remains a work in progress. Strengthening organizational governance and developing financing and logistics mechanisms tailored to farmer needs emerge as priority areas if MPCs are to sustainably boost production.