

DETERMINING ECONOMIC EFFICIENCY OF CASSAVA PRODUCTION IN  
BOMI AND NIMBA COUNTIES, LIBERIA

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## ABSTRACT

The overall objective of the study was to determine economic efficiency, analyze the determinants and the meta-frontier of cassava production in Bomi and Nimba Counties. Using an output-oriented Stochastic frontier models, of Translog production and revenue functions with joint MLEs, and the double-stochastic Metafrontier model (Huang *et al.*, 2014), a sample of 303 cassava famers from Bomi and Nimba were assessed.

From the stochastic frontier models, farmers in both regions were found to be economically inefficient; indicating that there is substantial potential of 67.8% (for Bomi) and 99.07% (for Nimba) to increase economic efficiency. The significant determinants increasing and decreasing economic efficiency are the farmer's age and cassava farming experience respectively. From the Metafrontier analysis on the use of available inputs in the sub-sector, there is a significant potential (resources) available to farmers at 0.9985. However, the average meta-technical efficiency of the sub-sector is at 40.45%; with the cassava input-use efficiency by famers in Bomi (62.49%) higher than those in Nimba farmers (31.57%).

To realize improvement of efficiency across regions, agriculture policies should be pointed to encourage young people's involvement to get involve into cassava farming or incentivize young farmers (age 25yrs and younger). Also, agriculture mentorship/internship programs should be considered so as to spill-over the experiences of older famers to younger farmers to improve economic efficiency in the region. On resource use in the sub-sector, cassava farm managers in Nimba should consider peer-learning from their counterparts in Bomi to learn and incorporate best practices in order to boost technical efficiency and increase economic viability of their farms.