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Assessing the Effects of Credit Access on the Profitability of Farms in Rural Sudan: An Empirical Study from North Kordofan State

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Abstract

Although serious attention has been given to support the process of development in developing countries, poor people in rural areas remain largely marginalised. In Sudan as an example, several factors are contributing to that. Poor people in rural Sudan have limited access to credit, information, and agricultural inputs. In addition, they are forced to irrationally allocate their available resources due to inefficient policy processes. This study focuses on the access to credit as a problem that persists in North Kordofan State, where several NGOs and governmental institutions implemented packages of microfinance service. The provision of microfinance to the small farmers was a major strategy employed by central bank of Sudan and other institutions to increase farmers' productivity and reduce poverty. Accordingly, this paper aims at investigating the factors affecting credit constraints conditions for credit users and non-users. In addition, it tries to determine the factors influencing the profit to farmers from agriculture. The study relies on a survey conducted in 2009 in North Kordofan State, using structured questionnaire. It surveyed 200 farm households, which were selected through a multi-stage random sampling technique.

Descriptive statistical tools and Heckman selection model (two-step estimates) were applied to analyse the data. Results show that, farm profits for all categories in the study area were SDG 1768 (100 Sudanese pound $\approx$ 18 €). The credit users were better off with a profit of SDG 2022 compared to SDG 1513 for non-users. The results of the probit model show that value of assets, savings and annual incomes are significant variables determining the credit constrained conditions. In addition, the results of Heckman model show the significance of several factors. These include household size, savings, labour used, land owned, distance of MFIs, off-farm income and extension services. Methodologically, the study found that using of OLS, for testing the parameters produces a bias in sample data. Therefore, the study uses of the Heckman selection model to correct the expected biasness. The study suggests that in order for the farm profits to be improved, first the agricultural investment should be improved, particularly the adoption of efficient and sustainable technology.

Keywords: Credit, farm profitability, gross margin, Heckman model, poverty, selection bias

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