## **Abstract**

This study examined the economic and financial benefits and costs of farming bamboo as a crop substitute of tobacco in four (4) districts in South Nyanza, Kenya. The World Health Organization Framework Convention on Tobacco Control was developed in response to the globalization of the tobacco epidemic and Article 17 requires signatories to provide support for economically viable alternative activities to tobacco farming. Farmers, who depend on tobacco production for their livelihood, will therefore need other alternative crops to produce. A multistage and stratified random sampling was used to select 210 tobacco farmers. One administrative location with the highest location of tobacco farmers was selected from each of the district through stratification where we used a proportional sample which was selected randomly for the study. Afterwards, a survey was carried out using a standard questionnaire with both structured and unstructured questions that was relevant for the study. Using the primary data, the study applied the framework of cost benefit analysis to analyze the cost and benefits of both tobacco and bamboo. Results of the base scenario showed that bamboo farming is financially and economically beneficial to tobacco farming since the incremental benefits are positive. A sensitivity analysis showed no change in the sign of the net incremental benefit. Results indicate the Net Present Value at the end of the project will be KShs 155,444.51 for tobacco farmers and KShs 663,272.10 for bamboo farmers. Bamboo farming therefore, if well managed can meet the objective of alternative livelihood to tobacco farming.