

## 論文の内容の要旨

### A STUDY OF LIVELIHOOD SUSTAINABILITY OF RURAL HOUSEHOLD IN SUB-SAHARA AFRICA: EMPIRICAL APPROACH IN RURAL GHANA

(サブ・サハラアフリカ農村部における家計の持続可能性に関する研究：ガーナ共和国を対象とした実証的接近)

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Poverty is generally regarded a rural phenomenon. Rural poverty is estimated at 51% in agricultural based sub-Saharan Africa countries, 28% in transitional Asia economies, and 13% in developing urbanized economies. The quest to reduce poverty is not new, as it has topped global development agenda for ages. As a consequent, however, lots of major anti-poverty policy frameworks have emerged over the past several decades, and a well-illustrated example is the recent Sustainable Development Goals (SDGs) by the United Nations. Out of the seventeen outlined goals, poverty reduction is the number one target. But the ambitious goal of ending poverty in all its forms by 2030, presupposes that special attention needs to be given to the poor, especially what they do to earn a living. This is especially true as evidence suggests that effective poverty alleviation hinges on improvement in all sources of rural income generating activities. In this sense, however, improving rural livelihoods towards sustainability could be likened to sustainable poverty reduction. This implies that rural livelihood improvement needs major concern, since it has the potential to accelerate the attainment of SDG 1.

It is posited that a livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its assets, while not degrading the natural resource base. Previous studies on sustainable livelihood have concentrated largely on analytical and theoretical frameworks, with empirical applications taken reductionist forms and often limited to thematic areas such as livelihood strategies, asset and vulnerability. Till date, no attempt has been made to comprehensively operationalize the concept, let alone measuring it. The question, however, is how can the sustainability of rural livelihood activities be assessed in an integrated manner? Drawing insights from literature, and using different techniques, this study aimed to develop and test a conceptual model of livelihood sustainability, which in addition to

allowing for measurement, offers integrated understanding. The study test the model through empirical application to quantify livelihood sustainability at the household level in the Fanteakwa district of Eastern Ghana.

The study establishes and argues that for a livelihood to be sustainable, four critical conditions are necessary. The first is the viability of the activities. The argument here is that economic viability is critical for the long term sustenance of any livelihood activity as well as households. The second condition is the asset base of the activities. It is argued that having adequate and diverse assets is critical for mitigating against stresses and shocks, which are endemic in rural environments. The third condition is the vulnerability level of the activities. The underlying argument here is that to achieve long term sustainable livelihood, activities that households' engage in must be less susceptible to both internal and external shocks. The fourth condition is the ecological impacts of the activities. From the definition of sustainable livelihood, a livelihood considered sustainable must be in harmony with the natural environment. Thus the environmental impacts of the activities has to be minimal.

Modelling the above conditions, which double as indicators, the study made significant contributions in each assessment. The viability assessment found that the livelihood activities in the applied study communities are least viable, with a greater percentage of the households depending on three or more livelihood activities for survival. It was revealed that livelihood priority is not the same as economic viability, meaning that the mere participation of households in a particular livelihood activity does not in any way suggest that the activity is viable. This phenomenon was explained by three non-economic incentives; (1) households' immediate food security needs (2) non-restricted entry to prioritized activities and (3) limited options due to barriers to participate in profitable ventures.

The assessment suggests that interventions aimed at improving rural livelihoods need to clearly distinguish between the two; assuming homogeneity, the study argued, could render promising policies either counter-productive or non-starter. The asset assessment results showed medium level of endowment. While natural, social and financial assets in that order were the most endowed assets, those of human and physical were the least endowed. The overall assessment demonstrated an unbalanced and unstable asset situation among the households, indicating that to enhance livelihood sustainability, attention needs to be focused on improving the levels of human and physical assets, at least to a minimum level in order to facilitate asset switching or substitution.

The vulnerability assessment presented a high livelihood vulnerability situation in the study communities. From the seven assessed major components, households were found to be least vulnerable only in two components; socio-demographic profile and livelihood strategies. The remaining sub components, including health, food, water, institutional influence, and natural disasters and climate variability recorded high vulnerability scores, with institutional influence being the sub component with the highest score. The assessment evidently suggests that to improve the livelihood conditions of the households', interventions need to target issues related to institutional operations, water and food accessibility, health as well as natural disasters and climate variability.

Also, the ecological impacts assessment showed moderate environmental impacts. Farming, gari processing, other activities and soap making in that order were the activities with the highest ecological impacts, while labour work and petty trading recorded the least ecological impacts. The assessment highlighted the criticality of rural ecological perception in designing local level natural resource conservation policies.

Overall, the model application showed a moderate level of livelihood sustainability among households' in the study communities. It demonstrated that vulnerability, ecological impacts and assets in that order are the critical factors, which need to be considered in livelihood sustainability thinking. This indicate that viability (monetary returns) does not have much influence in determining the sustainability of livelihood activities.

This study, in addition to factor identification and conceptual model, has provided a readily tool, not only to guide policy makers and development agents in the design and implementation of sustainable livelihoods, but also to monitor their transitions as well as rural systems towards sustainability. And since it captures multiple issues relevant to understanding poverty, the model offers an alternative way to think and analyse rural poverty and sustainability in any context. Although the model has strengths such as universal applicability and ability to illustrate multifunctional rural system, it also has shortcomings, including its complicated nature and lack of proper optimization attribute.

The study recommends application of the model in different contexts, using larger sample size and taking into consideration the highlighted weaknesses. Also, since it is the first of its kind, the study further recommends refinement, where necessary.