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Drivers of Household Participation in the Rural Non-Farm Labor Markets in the Post-War Rwanda

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Introduction & Study Objective

- Rwanda's farm sector has recorded low and declining labor productivity owing to increasing number of people engaged in subsistence farming.
- The low agricultural labor productivity has led the public and private sectors to shift attention to the development of rural non-farm sector (RNFS) to ease the pressure on agriculture.
- Initiatives aimed at increasing opportunities in the RNFS include creation of agro-industries, fisheries, and labor-intensive employment activities.
- Theoretically, the low labor productivity in the agricultural sector and the presence of employment opportunities in the RNFS are expected to increase household participation in the RNFS.
- However, recent studies find much lower rate (i.e. 20%) of participation in the RNFS than in other developing countries.
- Such studies attributed this low rate of participation in RNFS to the 1994 civil war and genocide.
- This study examines the role of socio-economic factors, namely human, physical and social capital, on the participation of farm households in RNFS in Rwanda.



Fishermen in Gisagara, Rwanda

Methodology

- The study is based on labor supply theory of household time allocation.
- It uses primary data collected via personal interviews from a stratified random of 241 farm households in Gisagara district of Rwanda in 2009.
- A double hurdle regression technique is used to test the effect of household and farm characteristics and also social capital endowment on decision and intensity of participation in RNFE.
- A dummy variable (defined as 1 if at least one adult in the household has participated in RNFS, and 0 Otherwise) is used to capture household's participation decision
- The intensity of participation in RNFE is proxied by the amount of time (hours) allocated by household's adult workers to nonfarm activities.



A farmer in Umugudugu settlement tilling her land



Rural nonfarm employment center

Double-Hurdle Regression Results

Variable	First hurdle: Probit Model		Second Hurdle: Truncated Model	
	P-Value	Direction of effect	P-Value	Direction of effect
Household characteristics				
Female headedness	0.042	+	0.326	-
Mean age of an adult	0.522	-	0.001	-
Number of adults	0.000	+	0.236	+
Mean years of education	0.000	+	0.083	+
Farm characteristics				
Number of crops grown	0.366	+	0.467	-
Size of landholding	0.501	-	
Size of landholding squared	0.046	+	
Value of non-land assets	0.000	+	
Net farm income	0.072	-	0.386	-
Social capital variables				
Group membership	0.004	+	0.148	+
Level of trust	0.509	-	0.554	+
Conditioning variables				
Distance to the market	0.345	-	0.090	-
Distance to the microfinance	0.023	-	
Population density of the cell	0.000	+	0.003	+
Electricity provision	0.270	+	0.051	+

Discussion

- The study finds that household characteristics, farm characteristics and the social capital factors affect the decision and intensity of participation in RNFE.
 - ✓ Households headed by women and having more workers are more likely to participate in RNF employment.
 - ✓ Education (proxy for job market skills) increases both the likelihood and intensity of participation in RNFS.
 - ✓ Asset endowment (e.g., land and non-land) increase the likelihood of participation in non-farm labor markets.
 - ✓ The extent of participation in local community organizations (a proxy for social capital) increases the probability of participation in RNFE.
 - ✓ The study also finds that access to rural infrastructure (e.g., electricity, good roads) influence participation in RNFE

Conclusion & Policy implication

- This study concludes that household and farm characteristics as well as social capital explain decision and intensity of participation in RNFE.
- The findings imply that attention should be given to these factors when designing and implementing development strategies.
- They underscore the importance of the directing more attention on the promotion of education and social cohesion and networking among communities.
- The latter result supports the ongoing effort by the government of Rwanda to implement social networks through agglomeration settlement schemes popularly known as *umudugudu* program.