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## Impact of Rural Financial Institutions Building Program (RUFIN) on the Productivity of Women-Owned Farms and Non-Farm Enterprises in Northern Nigeria

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## **Impact of Rural Financial Institutions Building Program (RUFIN) on the Productivity of Women-Owned Farms and Non-Farm Enterprises in Northern Nigeria**

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and Usman Shaba Mohammed<sup>4</sup>

### **Abstract**

This study was undertaken to determine the impact of the Rural Financial Institution Building Program (RUFIN) on the productivity of women-owned farms and non-farm enterprises in Northern Nigeria. The study utilized primary data collected through a questionnaire administered to 390 beneficiaries and an equal number of non-beneficiaries selected through a multi-stage sampling procedure. The productivity of women-owned enterprises was determined using Total Factor Productivity (TFP), which was measured as a ratio of the total annual output of the enterprise to the product of capital input, labor input, and total material input. The propensity score matching approach was used to analyze data because of its aptness for overcoming selection bias in an intervention project like RUFIN. Four matching algorithms were tried, which include Nearest Neighbour Matching, Radius Matching, Epanechnikov Kernel Matching, and Stratification methods. Results showed the treatment (RUFIN) had a significant effect on the productivity of women-owned enterprises at 1% probability level, irrespective of the matching method. For the selected stratification matching method, the Average Treatment Effect on the Treated (ATT) was 1.673, indicating participation in RUFIN increases the enterprise productivity of a given beneficiary by 1.673. The study concludes that RUFIN had positive impacts on the productivity of beneficiaries. It is recommended that institutionalized development programs that mirror the design and implementation approach of Rural Financial Institution Building Program (RUFIN) should be promoted across national and sub-national governments of Nigeria as a means

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of scaling the productivity of rural entrepreneurs and harnessing other benefits that accompany rural financing.

*Keywords:* Rural enterprise, Quantitative data, Economic productivity, Women-owned Enterprises, Farming, Northern Nigeria, RUFIN

## **Introduction**

### *Background to the Study*

Non-farm enterprises are abundant in rural Africa as complements of agricultural production which constitutes the dominant livelihood of the rural populace. According to Nagler and Naudé (2014), about 42% of rural households in Africa operate non-farm enterprises. In Nigeria, the scenario is not significantly different. There are empirical pieces of evidence to support that both farm and non-farm enterprises contribute significant proportions of rural household incomes and employment, hence the need for optimal productivity of these enterprises (Rijkers & Costa, 2012; Haggblade et al., 2010).

Unfortunately, low productivity characterizes the majority of Nigerian rural livelihood activities. For instance, there is a consensus that the productivity of Nigerian agriculture which is chief among rural enterprises is not reaching its potential and is low compared to that of other countries (Manyong, et al., 2005; Akpan et al., 2014; Adebayo et al., 2015). Clearly, the country maintains a leading position in the production of selected crops, like cassava, yams, and cowpeas (Oni, et al., 2009). However, productivity is below potential with farmers' yields of most crops being less than half of the yield potential (Igbenaeze & Okojie-Okiedo, 2010). Most unfortunately, when low productivity is analyzed according to a gender basis, statistics show that women are worse off (Nagler & Naude, 2014). This is in spite of their potential to match their male counterparts when given equitable access to productive assets and opportunities, and when they are empowered to make decisions on production activities (Peterman et al., 2011; Kilic et al., 2013). Productivity has also been shown to vary across spatial dimensions. Nagler and Naude (2014) affirmed that rural non-farm enterprises are less productive than their urban counterparts.

Development interventions are considered sustainable solutions to the empowerment of women beneficiaries (Bushamuka et al., 2005). The Rural Finance Institution Building Program (RUFIN) is one of Nigeria's loan agreements with the International Fund for Agricultural Development (IFAD). The overall development goal of RUFIN focuses on creating and enabling a microfinance environment for enhanced rural enterprise productivity and poverty reduction by restructuring and strengthening microfinance institutions (MFI) through capacity building and technical support. These programs are intended to facilitate MFIs so they can efficiently increase the supply of appropriate financial services to rural clients. RUFIN focuses on facilitating improved policy, supervision, and research to create a conducive environment for rural financial inclusion (RUFIN, 2017). In particular, it aims to enhance access to financial services for rural poor households, particularly women-led households, physically challenged people, and rural youth (RUFIN, 2013). RUFIN was implemented in 12 states of the Federation, with two states per geopolitical zone. However, this study was conducted in three states, namely Bauchi, Katsina, and Benue States, representing North-East, North-West, and North-Central geo-political zones, respectively.

### *Problem Statement and Objectives*

The low productivity of rural enterprises, especially among women, has been linked to the precarious imbalance created by the neglect of rural development, which is worsened by restrictive gender norms. Despite the preponderance of poor communities in rural areas, the resources and policies continue to be biased in favor of urban development. This creates an imbalance in regional development, with detrimental effects on both rural and urban people, although the former feel the impact more. With the low level of development to support livelihood in rural areas, there is increased migration of rural men to urban areas. This leaves an unbalanced family structure which tends to make married women more vulnerable with the burden to sustain the household weighing more on them. This situation causes women to have less time to devote to sourcing information, building capacity, joining networks, and accessing linkages that will help them in scaling their enterprise productivity.

The restrictive gender norms that have been established can be traced to both colonial agriculture and grassroots culture. Male dominance was entrenched in colonial processes of agricultural development, which is patterned after Western patriarchy. The colonial era was fraught with gender-blind and male-biased interventions that largely excluded women. According to Boomgaard and Hart (2011), in the design of programs for developing agriculture from subsistence to commercial on a commodity basis, colonial administrators prioritized men's access to land for cash crop cultivation and farming inputs. This gender-blind approach tends to consistently undervalue the productive role of women farmers.

There are also established social norms at the grassroots levels that create barriers for women to participate in certain agricultural value chains and value chain activities. In some contexts, women are engaged in farm labor-related activities—such as planting, weeding, harvesting, and primary post-harvest handling—without ownership of the enterprise. Similarly, in livestock, women mainly handle milk extraction, processing, and sales without the necessary entitlement to the assets (the animals). Non-farm rural enterprises are no exception when it comes to barriers that women face in scaling productivity. The inability of women to own land or other productive assets and their lack of access to basic education, finance, and technology creates a wide gap between the potential and the actual productivity of women. This has made them more vulnerable to poverty compared to their male counterparts (World Bank, 2012; Oseni et al., 2015).

There is empirical evidence of disproportionate differences in productivity and its correlates based on geography and gender in Nigeria. One of the key correlates of productivity is financial inclusion. Financial inclusion improves ownership patterns, helps people to diversify or increase the income stream in the house, and provides liquidity/cash flow. It also absorbs the shock of adversity by building assets, which enables clients to cope with loss through consumption smoothing, thus avoiding the sale of productive assets (World Bank, 2012; Clark, 2013). Meanwhile, there is an imbalance in the financial inclusion status of women based on geography and gender in Nigeria. For instance, the average financial exclusion in Northern Nigeria stood at 48%, compared to 21.67% in Southern Nigeria (EFInA, 2021). Further, 40% of adult women were financially excluded, compared to 32% of their male counterparts in 2020, leaving the gender gap in terms of financial inclusion at 8% (EFInA, 2021).

Similarly, there is an established nexus between poverty and productivity. Byerlee et al. (2009) reviewed case studies of 12 countries and used bivariate analysis (analysis of two variables through comparison) to compare agricultural growth per worker across the countries. The result showed that countries with the highest agricultural growth per worker experienced the greatest rate of rural poverty reduction. In Ethiopia, Diao and Pratt (2007) found that growth in staple crop

productivity has a greater potential for poverty reduction than any other agricultural or non-agricultural sector in the model adopted.

However, poverty has consistently been higher in Northern Nigeria compared to the southern part of the country (NBS, 2018). Meanwhile, Oseni et al. (2015) established that women in Northern Nigeria recorded less productivity in their farm enterprises compared to the national mean of productivity. Against this background, this study's objective is to provide answers to the following research questions:

- Did RUFIN have an effect on the productivity of the women-owned farm and non-farm enterprises in the study area?
- What is the magnitude of the effect of RUFIN on the productivity of the women-owned farm and non-farm enterprises?
- What lessons can be learned by governments, policymakers, development partners, and researchers in leveraging the success of RUFIN to create a sustainable impact among women-owned enterprises in the study area?

### **Justification for the Study**

Several programs have been implemented to improve financial inclusion, increase the productivity of rural enterprises, and reduce poverty in Nigeria. But there has been limited progress on these issues. RUFIN was originally designed to expand production and improve the productivity of agriculture and micro-small rural enterprises through appropriate credit linkages between the formal financial system and rural communities in the program area. The objective was to develop rural financial services and enhance the accessibility of these services for poor rural people (RUFIN, 2013). RUFIN prioritized women as target beneficiaries on the premise *inter alia* that (a) the increased ability to tap financial resources independently enhances women's contacts, their influence in the household decision-making processes, and their status; (b) engaging in microenterprises opens up an important social platform for women to interact in markets and other economic institutions outside the home, enabling them to gain useful knowledge and social capital (IFAD, 2006). There are limited available independent studies that evaluate the impact of RUFIN within the public domain, and none of those studies reviewed by this project's authors applied the use of inferential statistics to determine the impact of the program on the productivity of women.

This absence prompts the need to perform an independent review to determine the level of contributions of RUFIN to beneficiaries' productivity based on empirical evidence and to identify possible success factors in the achievement of the program goals. It provides some guidance to key stakeholders including government, policymakers, and donor institutions, who may be desirous of piloting, scaling, and replicating interventions for women-owned enterprises in rural areas. The findings from the study contribute to social improvement knowledge, which will benefit students and researchers who will carry out further related research.

### **Methodology and Theoretical Framework**

This study hinges on the theory of assessment of the effect of interventions as a basis for recommending improvement in parallel situations. Measuring any concept or phenomenon not only aids the process of inquiry but also promotes clarity and precision through standardization (Web et al., 2006). There are two approaches to assessment which are ex-ante and ex-post approaches. This study is an ex-post assessment of the effects of RUFIN on the productivity of

the women-owned farm and non-farm enterprises in Northern Nigeria. It focuses on productivity as the measure of the outcomes of the RUFIN intervention in Northern Nigeria.

The study adopted the Total Factor Productivity (TFP) model to measure enterprise productivity. This model is used to complement the deficiency with the use of a single factor measure. In a single factor measure, productivity levels are affected by the intensity of use of the excluded inputs. For instance, even though two producers may use the same production technology, they may have quite different labor productivity levels. This outcome can occur if one uses capital more intensively because, for example, they face different factor prices. Different authors have used the TFP model, such as Goksel and Ozden (2007) who applied the TFP with the Cobb-Douglas production function in Aydin-Turkey and as well as Syverson who applied the TFP in a 2011 study.

Generally, in order to infer the impact of an intervention on individual outcomes, it is necessary in project design to create a suitable comparison group among a large group of non-participants, which is identical to the participating group, except in the attitude of treatment assignment (Caliendo & Kopeinig, 2005; Raitzer & Kelly, 2008). Given that all women in the study area had access to RUFIN, a problem arises regarding possible selective placement. Voluntarily participating women might be, for example, more productive than those who did not participate in RUFIN activities (Godtland et al., 2004). To overcome the problem of selection bias, this study applied the Propensity Score Matching (PSM) approach. With this method, a meaningful counterfactual can be formulated and causality of potential outcomes, i.e. the difference in the productivity scores between the treatment group and the control group of RUFIN, can be established (Caliendo & Kopeinig, 2005).

### *Bauchi State*

Bauchi State covers a total area of 49,119 km<sup>2</sup>, representing about 5.3% of Nigeria's total land mass with the location at latitude N 9<sup>0</sup> 30' and longitude E 8<sup>0</sup> 50' and 11<sup>0</sup>, and an estimated population of 8,308,783 persons disaggregated into 4,148,535 men and 4,160,248 women (NPC, 2020). Bauchi State has abundant human and material resources, with huge potential for economic development and productive agriculture by virtue of its vegetation type. The vast fertile soil provides a healthy area to grow crops, such as maize, rice, millet, groundnut, guinea corn, etc. Irrigation farming is practiced and supported by the use of dams, like the Balanga dam. Cattle and other livestock are also reared in the state.

Bauchi State is noted for a high imbalance in gender development and female vulnerability based on key gender indices that were computed from the UNDP human development report of 2016. The maternal mortality ratio (death per 100,000 live births) was 593.8. The adolescent fertility ratio (births per 1000 for women ages 15-19) stood at 186. Seats held in parliament were 2.8% for women compared to 97.2% for men. The population of women with at least secondary education for ages 25 years and older was 9.5% for women compared to 22.6% for men. The labor force participation rate was 79% for women compared to 41.4% for men. All these indices resulted in a high Gender Inequality Index (GII) of 0.698 for the state (NBS, 2018).

### *Katsina State*

Katsina state is located between latitude N 11<sup>0</sup> 7' 49" and 13<sup>0</sup> 2<sup>0</sup> and longitude E 6<sup>0</sup> 52' 3" and 9<sup>0</sup> 2' 40", with a total area of 24,192 km<sup>2</sup>. Katsina State has an estimated population of 10,368,483 persons disaggregated into 5,165,079 men and 5,203,404 women (NPC,2020) and a total of 34 local government areas (LGA) with 2 major ethnic groups, namely Fulani and Hausa.

The state capital Katsina is the center of an agricultural region producing groundnuts, cotton, hides, millet, and guinea corn and also has mills for producing peanut oil and steel.

Katsina State is equally noted for a high imbalance in gender development and women's vulnerability based on key gender indices that were computed from the UNDP human development report of 2016. The maternal mortality ratio (death per 100,000 live births) was 214.2. The adolescent fertility ratio (births per 1000 for women ages 15-19) stood at 218. Seats held in parliament were zero for women and 100% for men. The population of women with at least secondary education for ages 25 years and older was 7.7% compared to 23.1% for men. The labor force participation rate was 57.9% for women while for men it stood at 31%. All these indices resulted in a high Gender Inequality Index (GII) of 0.779 for the state (NBS, 2018).

### *Benue State*

Benue State lies within the lower river Benue trough in the middle belt region of Nigeria. Its geographic coordinates are longitude E 7° 47' and 10° 0' and latitude N 6° 25' and 8° 8'. Benue occupies a landmass of 34,059 km<sup>2</sup> and has an estimated population of 6,141,284 persons, disaggregated into 3,036,178 men and 3,105,106 women (NPC, 2020). Agriculture is the mainstay of the economy, engaging over 75% of the state farming population. The state also boasts one of the longest stretches of river systems in the country, with great potential for a viable fishing industry, dry season farming through irrigation, and an inland water highway.

Benue State also has an imbalance in gender development and women's vulnerability. However, it fares relatively better in the gender inequality index compared to other states that were selected for this study. The maternal mortality ratio (death per 100,000 live births) was 809.6. The adolescent fertility ratio (births per 1000 for women ages 15-19) stood at 79. Seats held in parliament were 6.5% for women compared to 93.5% for men. The population of women with at least secondary education for ages 25 years and older was 40% compared to 59.5% for men. The labor force participation rate was 66.6% for women while for men stood at 69.8%. All these indices resulted in a high Gender Inequality Index (GII) of 0.64 for the state (NBS, 2018).

### **Data Collection and Sampling Procedure**

Primary data were collected using a structured questionnaire with the aid of well-trained enumerators while secondary data were sourced from RUFIN.

In this project, a multistage sampling technique was adopted. In the first stage, the North-East, North-West, and North-Central Geopolitical Zones of the country were purposely selected to ensure coverage of all the geo-economic zones within the northern region of the country. The second stage involved the selection of three states out of the six states where RUFIN intervened in the zones. By design, the intervention of RUFIN was limited to 12 states with two states selected in each geo-political zone. The selected states include Bauchi, Katsina, and Benue representing the eastern, western, and central zones of Northern Nigeria. All the women groups in the three participating LGAs in each State were purposely selected in the third stage. The sample size was determined using Yamane (1967) and a proportionate sampling technique was used to select the number of respondents in the communities in each LGA. A total of 390 beneficiaries and an equal number of non-beneficiaries were selected.

The Yamane formula for determining sample size:

$$n = \frac{N}{1 + N(e)^2} \tag{1}$$

Where:

n = sample size

N = finite population

e = limit of tolerable error

Proportionate sampling technique

$$Sh = (n * Nh) / NT \tag{2}$$

Where:

Sh = Number of women to be selected in an LGA

n = Total number of women for the survey

Nh = RUFIN beneficiary/ non-beneficiary women in an LGA

NT = Sum of the women RUFIN beneficiaries/ non-beneficiaries in the three states

**Table 1: Sampling Design for the Study**

<b>Geo-Political Zone</b>	<b>STATE</b>	<b>LGA</b>	<b>Communities</b>	<b>No. of Groups</b>	<b>Sample Frame (No. of Beneficiaries)</b>	<b>Proportionate Sample size</b>
North-Central	Benue	Apa	6	167	3,340	85
		Gwer-West	4	96	1,920	49
		Logo	8	163	1,120	83
North-West	Katsina	Sandamu	16	56	1,120	29
		Funtua	29	56	1,120	29
		Dutsin Ma	14	42	840	21
		Bauchi	42	101	2,020	51
North-East	Bauchi	Katagum	10	37	740	19
		Ningi	21	47	940	24
						<b>15,300</b>

Source: Computed from data available from RUFIN

**Model Specification**

Total Factor Productivity: The model for Total Factor Productivity is specified as:

$$TFP_t = A_t = Y_t / K_t^{\alpha} L_t^{\beta} M_t^{\gamma} \tag{3}$$

To construct the output-input ratio that measures the TFP, the Cobb-Douglas correct weighing option is specified as:

$$TFP_t = A_t = \frac{Y_t}{K_t^{\alpha} L_t^{\beta} M_t^{\gamma}} \tag{4}$$

Where TFP = Total Factor Productivity (unit of output produced per unit of aggregate inputs used)

A<sub>t</sub> = Factor Neutral Shifter



$Y_t$  = Total Annual Output of the Enterprise (measured in terms of real revenue from annual sales)  
 $K_t$  = Capital input (which include depreciation on all assets of the enterprise, rent on land and interest on borrowed capital in Naira)  
 $L_t$  = Labor Input (measured in terms of total wage to family and hired labor)  
 $M_t$  = Total Material Inputs (measured in terms of total expenditure on input less labor and capital inputs). The application of equation 2.4 gives the productivity score for each enterprise.

### Propensity Score Matching (PSM)

This was measured using the Average Treatment Effect on the Treated (ATT), which is defined as:

$$ATT = E(Y_1 - Y_0 | P = 1) - (Y_1 | P = 1) \quad (5)$$

The propensity score is the probability of the participation for the individual,  $I$  given a set  $X = x_i$  of characteristics. Following Pufahl and Weiss, (2009):

$$P(X) = \Pr(P = 1 | X = x_i) \quad (6)$$

The propensity scores were derived from the regression models in which these characteristics were compared. The impact of treatment on the treated (causal effect of project participants) was estimated by computing the differences across both groups:

$$ATT = \frac{1}{N_1} Y_1 - Y_0 \quad (7)$$

Where:

- ATT = Average treatment effect on the treated
- $Y_1$  = Productivity index by participant
- $Y_0$  = Productivity index by non-participant
- $N_1$  = Number of matches from the regression model

### Results

Table 2 presents the result of the analysis of treatment (RUFIN) on women-owned farm and non-farm enterprises. The coefficient value is positive and significant at 0.01. The F-statistics were significant at 0.01, indicating a strong causal effect of treatment on productivity.

**Table 2: Analysis of the Effect of Treatment on the Productivity of Women-owned Farm and Non-farm Enterprises**

Productivity score	Coefficient	Standard Error	t-value
Constant	3.3265	0.3914	8.50
Treatment	1.8473***	0.5536	3.34

F-Stat = 11.13\*\*\*; R-squared = 0.0141; Adj R-squared = 0.0128 \*\*\* = significant at 0.01

Source: Field Survey, 2019

Table 3 presents the average treatment effect on the productivity of women-owned farm and non-farm enterprises using nearest neighbor, radius, kernel, and stratification algorithms. The coefficient of average treatment effect on the productivity of the women-owned farm and non-farm enterprises (t-values) for the four algorithms was positive and significant at 0.01. The result also shows that standard error estimates were generated after bootstrapping for the four algorithms as against incomplete estimates before bootstrapping. This makes it easier to make inferences. The

values of Average Treatment on the Treated (ATT) for the nearest neighbor, radius, kernel, and stratification methods were 1.59, 1.755, 1.617, and 1.673, respectively.

**Table 3: Average Treatment Effect before and after Bootstrap on Productivity of Women-owned Farm and Non-farm Enterprise**

Matching Algorithm	ATT	Standard Error Before Bootstrap	Standard Error After Bootstrap	Bias	t-Value
Nearest Neighbour	1.59	0.617	0.615	-0.0394	2.598***
Radius	1.755	0.564	0.608	-0.0365	2.885***
Kernel	1.617		0.636	-0.0322	2.543***
Stratification	1.673	0.588	0.586	0.0169	2.854***

\*\*\* = significant at 0.01

Source: Field Survey (2019)

## Discussion

The positive value of the coefficient of treatment on productivity as shown in Table 2 indicates that RUFIN had positive effects on the productivity of the women-owned farm and non-farm enterprises. This is further corroborated by the results in Table 3 when near neighbor, radius, kernel, and stratification algorithms were tried to remove possible biases. These ATT values of 1.59, 1.755, 1.617, and 1.673 represent the impact score of RUFIN on the productivity of the women-owned farm and non-farm enterprises. The lowest ATT of 1.59 in the case of the near neighbor match method indicates that participation in RUFIN increased the productivity of women-owned enterprises by at least 1.59.

Since all the matching algorithms had positive ATT, it was important to select the algorithm with the best result for the purpose of drawing inferences in this study. The stratification matching method was therefore selected because it had the lowest standard error after bootstrapping. Specifically, for the selected stratification matching method, the impact score of 1.673 implies that participation in RUFIN increases the enterprise productivity of a given beneficiary by 1.673.

The findings about the impact of RUFIN on the productivity of women-owned enterprises are a testament to the effectiveness of the RUFIN model. It implies that when intervention models properly align with the needs of target beneficiaries and the implementation approach is not undermined, the impact is strong. This assertion is corroborated by Umar (2019) in the study titled “Assessment of the Effect of Fadama III Project on Women Farmers in Shelleng Local Government Area, Adamawa State, Nigeria.” Umar affirmed that participation in the Fadama III project increased the productivity of beneficiary women farmers compared to their non-beneficiary counterparts. He concluded that the effectiveness of the Fadama III project hinged on the Community Driven Development approach which gave voice to the people in the conceptualization of projects. Needs identification and development of feasible solutions in the form of business plans under the Fadama III project were bottom-up and not top-down.

## Conclusion

This study concludes that RUFIN had a significant impact on the productivity of the women-owned farm and non-farm enterprises in Northern Nigeria. In the case of RUFIN, women groups were strengthened and their capacity for saving was built before linkage to financial services. The linkage to financial services (otherwise termed as financial inclusion) has been established to raise productivity (Clark, 2013). In essence, a participatory approach to project design and inclusiveness has to be the underlying principle in formulating and implementing policies and programs that will benefit women. Further, an impact score of 1.673 denotes over a 100% increase in the productivity of women beneficiaries of RUFIN. This can engender scalable enterprise among rural women when they are organized into networks for value chain development using profitable business models. This study underscores the untapped potential of women in rural areas that is constrained by restrictive gender norms.

## Recommendations

Based on the findings of this study, the following recommendations have been made for government, donor institutions, and researchers.

### *Government and Policymakers*

- Government ministries, departments, and parastatals that are saddled with the promotion of small and medium enterprises and gender development need to increase advocacy on addressing restrictive gender norms so that women are enabled to develop and deploy their potential for rural economic development. The advocacy should escalate to the parliament for legal frameworks focused on the development of women-owned farm and non-farm enterprises in the study area.
- Women-focused institutionalized federal and state-sponsored development programs that mirror the design and implementation approach of RUFIN should be promoted across the country as a means of replicating and scaling the benefits of the program in improving the productivity of rural women entrepreneurs.

### *Donor Institutions*

- Donor institutions need to continuously recognize the gender imbalance in Northern Nigeria and purposefully ensure gender inclusion and women's participation in development intervention. Women must be given a voice in all stages of every program, including formulation, implementation, and evaluation.
- Donor institutions should co-design and co-fund scalable enterprises that are owned by individual women's start-ups or cooperatives of women's enterprises. As more women emerge to defy the norms, the restrictive barriers will give way gradually.
- The International Fund for Agricultural Development (IFAD) should consider additional financing of RUFIN to expand the scope of the project so that more women-owned enterprises can benefit.

### *Researchers*

- Researchers can further investigate the sustenance of women groups that were created by RUFIN, along with the financial linkages forged through this government program. Where there has been a collapse or deterioration of these synergies, future studies can identify the determinants and make recommendations for sustainability.

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