



Policy Brief 2023-01

Understanding the Drivers of Successful and Inclusive Rural Regional Transformation: Sharing Experiences and Policy Advice in Bangladesh, China, Indonesia and Pakistan (ACIAR Project ADP/2017/024)



Are Gender Inclusiveness and Rural Transformation Interlinked? The Case of Bangladesh

Maria Fay Rola-Rubzen¹, Mohammad Jahangir Alam², Jon Marx Sarmiento¹, Ismat Ara Begum², Al Amin Al Abbasi², and Subrata Saha²

¹ *University of Western Australia, Crawley, Western Australia 6009 Australia*

² *Bangladesh Agricultural University, Mymensingh, 2202 Bangladesh*

Gender inclusiveness is important in the rural transformation process of Bangladesh as rural women play key roles in both agricultural and non-agricultural sectors. We consider three rural transformation indicators: high-value commodities' share in total agricultural output values, non-farm employment's share in total rural labor employment, and non-agricultural GDP's share in total GDP. Analyzing 128 district-level observations from 32 districts in Bangladesh across four time periods (2000, 2005, 2010 and 2016), we use both ordinary least squares and fixed effects panel regression models. We find that female land and asset ownership and access to education and healthcare are robust determinants of rural transformation. Our results suggest that improving women's ownership of land and assets and investing in women's education and healthcare will likely contribute to a more inclusive rural transformation.

Introduction

Poverty is an essential indicator of the socio-economic development of a nation and society, making poverty reduction a major focus of governments and international development organizations. In recent years, attempts to reduce poverty in Bangladesh have progressed significantly due to the combined efforts of the government and non-government sectors. Poverty rates in Bangladesh have decreased significantly from the 2000s with the latest figure in 2016/17 at 24.3% (World Bank 2022). Furthermore, the Bangladesh Economic Review (2022) revealed that the rate of poverty had further declined to 20% in 2019.

One approach to reducing poverty is to provide more opportunities to the poor through rural transformation. Rural transformation refers to a broad shift in a society whereby rural communities diversify their income and rely less on agricultural production as their main source of livelihood, and increasingly depend on small and medium-sized cities for employment, trade opportunities, and goods and services (Berdegué et al. 2014).



In the past couple of decades, rural transformation has been occurring in Bangladesh. For instance, Sen et al. (2021) found that there has been a transformation occurring in the country from 2000 to 2013, with an increasing trend in non-farm orientation by previously farming households. This shift is particularly rapid for younger households. Changes in the relative production values of different agricultural outputs have also been observed in recent years in the country.

The impacts of rural transformation, however, vary by age group, by region and by gender. For equitable poverty reduction, rural transformation must be inclusive across many dimensions, including gender, age, and abilities. In this policy brief, we focus on gender inclusiveness because of women's critical role in the agricultural sector.

Women in Bangladesh participate in both agricultural and non-agricultural economic pursuits to secure food and financial resources for their families. Their labor and knowledge of livestock and crop types, biodiversity, and agricultural techniques contribute to rural economies. Participation in rural transformation, and the opportunities to profit from transformations, however, may differ significantly between women and men due to inherent structural conditions and historical socio-cultural norms. Gender norms are patriarchal in Bangladesh, where young men continue to outnumber young women in formal employment in the rural sector. Compared to men, women possess lower levels of physical and human capital, and married women are typically tasked with household duties. As a result, young women in rural areas experience lower rates of employment than their male counterparts.

This policy brief aims to understand the role of gender equity in rural transformation. Specifically, we address whether improved gender equity, as measured by factors such as incomes of male and female, female employment participation rates, access to education and healthcare,

land and asset ownership, and investments in women programs leads to increased rural transformation.

Methods

In this research, we collected 128 district-level observations of rural transformation, gender, and control variables from 32 districts of Bangladesh. These observations were collected across four time periods—2000, 2005, 2010, and 2016, the latest available data at the time of the study. Data were sourced from various sources including the Household Income and Expenditure Survey (HIES), the Yearbook of Agricultural Statistics, Statistical Yearbook of Bangladesh, and the Labor Force Survey (LFS) (Bangladesh Bureau of Statistics 2018; 2019; 2020; World Bank 2022).

The HIES and LFS were collected by the Bangladesh Bureau of Statistics (BBS), Ministry of Planning. The research group sourced the dataset from BBS. The number of households in each district was not equal throughout the surveys. For this study, we chose districts with at least 100 households to generate the district-wise average. Based on this criterion, 32 districts were selected from eight divisions of Bangladesh. We used the district-wise average of the variables to examine regional effects.

We modelled rural transformation as a function of gender inclusiveness, their lagged value, and control variables using ordinary least squares (OLS) and fixed effects (FE) panel regression to minimize unobserved heterogeneity across years (Li et al. 2014).

Rural transformation

Huang (2018) defined rural transformation as a process of transforming the rural economy through three stages. These stages are characterized as shifting agricultural production from cereal to non-cereal production, increasing non-farm employment, and integration of urban-rural economies, which can be proxied by non-agricultural GDP's share of the total GDP. These stages can be considered as indicators of rural transformation.

An overview of rural transformation trends from 2000-2016 in Bangladesh, in terms of our three indicators—high-value commodities' percentage share in agriculture output value; non-farm employment's percentage share in total rural labor employment; and non-agriculture GDP's percentage share in total GDP, is presented in Figure 1. The figure shows that all three indicators of rural transformation have been increasing over time.

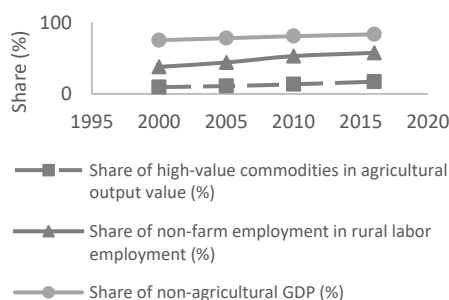


Figure 1. Rural transformation in Bangladesh, 2000-2016

High-value commodities' share in agricultural output value had slightly increased from a share of approximately 10% in 2000 to 17% in 2016. In terms of non-farm employment's share in rural labor employment, a dramatic increase from 38% in 2000 to 57% in 2016 was observed. Beginning in 2010, non-farm activities accounted for more than half of rural employment.

Moreover, since 2000, non-agricultural activities had been propelling the economy of Bangladesh, contributing over three-quarters of GDP. This further increased to 83% by the end of 2016. The increasing trend of the three indicators of rural transformation suggests that Bangladesh is transforming towards becoming a predominantly non-agricultural country. For areas that remain agricultural, there is evidence of the increasing contribution of high-value commodities.



Gender and share of high-value commodities

The lagged value of per capita rural income of males, lagged value of the difference of rural income of males and females, and female land ownership together with its lagged values are significant determinants of rural transformation. These variables are positively associated with high-value commodity production, particularly land ownership and its lagged values where the effects are robust across the OLS model.

In the FE model, the gender variables positively associated with higher shares of high-value commodity production include the difference of rural income of males and females, lagged value of female land ownership and female asset ownership.

Gender and share of non-farm employment

Three gender variables have a positive effect on non-farm employment in OLS models: lagged value of female access to education, female access to healthcare and its lagged value, and female land ownership. In the FE model, female land ownership and the lagged value of female access to healthcare are also significantly influencing non-farm employment.

Although female land ownership has been found to have a robust positive association with the share of non-farm employment in the FE models, it is not always synonymous with an improvement in land ownership patterns in favor of women.

Gender and share of non-agricultural GDP

In the OLS model, the lagged value of females' access to education is robustly associated with a higher share of non-agricultural GDP as suggested by all OLS models. Female participation in employment and the lagged value of female access to healthcare are also positive determinants of the share of non-agricultural GDP. We also found that female asset ownership robustly increased the share of non-agricultural GDP in all FE models.



Conclusion

Our findings indicate a positive association between gender inclusiveness and rural transformation. We find that female land ownership is a robust positive determinant of the share of high-value commodities; female land ownership and access to education and healthcare are strong predictors of the share of non-farm employment; and female asset ownership and access to education are consistent determinants of the share of non-agricultural GDP in Bangladesh.

Other gender indicators such as per capita rural income of males, the difference in rural income of males and females, and female participation in employment also positively influence rural transformation. Overall, improving land and asset ownership of women and investing in women's education and healthcare are found to robustly contribute to rural transformation. Thus, gender inclusiveness, generally, is positively associated with rural transformation.

Recommendations

Government initiatives such as the National Women Development Policy 2011, which focuses on the rights of women to wealth and resources such as land assets acquired through income, inheritance, loans, credit, property ownership, and market management (Ministry of Women and Children Affairs 2011), and the National Industry Policy of 2016, which aims to facilitate women's

access to institutional finance and enhance women's empowerment, are critical for an inclusive rural transformation. While some policies such as the above are already in place, it is also critically important to build strategies to hasten the translation of these policies into action.

Alongside furthering rural transformation, investing in women and girls' education and healthcare will also promote a range of other outcomes including reducing child marriage rates, delaying childbearing, and reducing infant and mortality rate, factors that are also critical in poverty alleviation.

Ultimately, investing in women and girls, through education and healthcare and improvements in access to productive resources such as land and assets would likely lead to hastening rural transformation and promoting lasting effects that would improve gender equity, help the fight against poverty, and improve the lives of future generations in Bangladesh.

References

- Bangladesh Bureau of Statistics. 2018. Report on labour force survey (LFS) 2016-17. Statistics and Informatics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Bangladesh Bureau of Statistics. 2019. Report on the household income and expenditure survey 2016. Statistics and Informatics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Bangladesh Bureau of Statistics. 2020. Yearbook of agricultural statistics of Bangladesh 2020. Statistics and Informatics Division, Ministry of Planning, Government of the People's Republic of Bangladesh.
- Bangladesh Economic Review. 2022. *Chapter 13: Poverty alleviation*. Ministry of Finance, Government of the People's Republic of Bangladesh.
- Berdegúe J A, Rosada T, Bebbington A J. 2014. Chapter 27: The rural transformation. In: Currie-Alder B, Kanbur R, Malone D M, Medhora R, eds., *International development: ideas, experience, and prospects*. Oxford University Press, Oxford, England.
- Huang J. 2018. Facilitating inclusive rural transformation in the Asian developing countries. *World Food Policy*, 4, 31-55.
- Li Y, Chen C, Wang Y, Liu Y. 2014. Urban-rural transformation and farmland conversion in China: the application of the environmental Kuznets Curve. *Journal of Rural Studies*, 36, 311-317.
- Ministry of Women and Children Affairs. 2011. National women development policy 2011. Government of the People's Republic of Bangladesh.
- World Bank. 2022. Employment in agriculture, female (% of female employment) (modeled ILO estimate) - Bangladesh. World Bank.

For further information, please contact:

Dr. Mohammad Jahangir Alam, Professor, Department of Agribusiness and Marketing, Bangladesh Agricultural University
Email: mjahangir.alam@bau.edu.bd

or

Dr Maria Fay Rola-Rubzen, Deputy Director and Associate Professor, Centre for Agricultural Economics and Development, School of Agriculture and Environment, The University of Western Australia
Email: Fay.Rola-Rubzen@uwa.edu.au