Title: Measurement Properties of the Pro-WEAI and Initial Guidance for a M&E-WEAI

Introduction: Women’s empowerment is the process by which women claim human, economic, and social resources to enhance agency. Agency is a multidimensional, latent construct with intrinsic, instrumental, and collective domains pertaining, respectively, to a woman’s perceived capabilities; her enacted choices; and women’s capacity for collective action. We discuss the challenges of measuring women’s empowerment in agriculture and suggest modifications to the project-level Women’s Empowerment in Agriculture Index (pro-WEAI) to strengthen its measurement properties and alignment with empowerment theory.

Methods: We used baseline data from 5,040 women 15-28 years participating in the Targeting and Realigning Agriculture for Improved Nutrition (TRAIN) project in Bangladesh. We performed principal components analysis to derive observed scores for women’s human, economic, and social resources for empowerment. We applied item-response-theory (IRT) methods to assess the measurement properties of intrinsic and instrumental agency-related questions and to inform the development of a M&E-WEAI for project monitoring and evaluation.

Findings: Principal component scores adequately captured women’s resources for empowerment. These scores were associated differently with women’s participation (or not) in types of agricultural production. IRT models confirmed that participation (or not) in types of agricultural production was an important aspect of women’s intrinsic and instrumental agency. IRT models identified survey questions that did not discriminate between more and less agentic women or did not provide information on women’s agency beyond that available from other survey questions.

Conclusion: This study was the first to apply IRT methods to assess the measurement properties of the pro-WEAI to capture women’s empowerment in agriculture in multiple, correlated domains. Findings reveal that scale validation should be a routine step in research on women’s empowerment. Validation of the pro-WEAI across contexts and time is warranted. When measuring women’s empowerment in agriculture, the ‘choice’ to participate in types of agricultural production should be considered jointly with intrinsic and instrumental agency in production-related decisions. Classifying women as ‘adequately empowered’ is useful for policy, but may hide more refined overall trends and variation in how sub-scales evolve and relate to other outcomes of agricultural-development programs. Measures of women’s collective agency require further development in the agricultural and non-agricultural sectors.