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Title: Goal-oriented hope and sustainable technology adoption by smallholder farmers

Abstract: Significant impacts of climate change are expected to be felt among smallholder farmers in developing countries, who produce a major share of the global food supply, and paradoxically also contribute to climate change. Technologies promise to play a significant part in creating a sustainable future in the agriculture sector. Clearly, however, for benefiting from technologies they have to be adopted. Why are most smallholders not using proven, modern cultivation technologies and best practices? Rather than focusing on socio-economic geography-related factors and information gaps, we offer a new perspective, suggesting that cognitive goal-oriented hope prompts the adoption of sustainable technologies. The case study selected to represent this theoretical approach is drip irrigation adoption in Senegal. Data were collected by means of a face-to-face questionnaire. Binary logistic regression analysis of the collected data from 335 plots in Senegal, showed a significant connection between drip irrigation adoption and hope. The relative effect of hope on drip irrigation adoption proved greater than the effect of other previously studied factors. The contribution of the study is threefold: From a theoretical perspective, the study proposes new theoretical connections between positive psychology literature and literature on sustainable technology adoption, filling certain existing gaps in the understanding of technology implementation rates. Empirically, the study tests the theoretical hypotheses based on recent data. In addition to its theoretical and empirical contribution, the importance of this study lies in its practical value: The study focuses on hope, that is a malleable variable which is likely to be influenced by policy tools, communication, and education. This model expands the extant literature, offering practical recommendations aimed at enhancing the diffusion of sustainable technology.