

## Envy holds back agricultural development

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Agricultural innovation in developing countries can be hampered and discouraged by envy, according to research published today by academics at the University of East Anglia (UEA).

Researchers found that <u>envy</u> reduced adoption of innovations such as <u>fertilizers</u> and improved seeds, and modernisation can be discouraged out of fear of a negative reaction from others, sometimes manifesting itself in the form of the 'evil eye' - the belief that a look can cause injury or bad luck for the person at whom it is directed - and similar attitudes.

The study focused on four rural villages in Ethiopia, the aim being to understand the impact of envy or related motivations on economic development, in particular investment in agricultural innovations. The findings have implications for rural development, with envy being a "formidable obstacle" to it and having a destructive impact.

The paper, entitled Envy and Agricultural Innovation: An Experimental Case Study from Ethiopia, is published by the Centre for Behavioural and Experimental Social Science (CBESS) at UEA. It is believed to be the first study that attempts to capture the negative effect of envy in a real-life setting such as agriculture and in a developing country context.

To identify the level of envious behaviour and destructive aspect of envy, Dr Bereket Kebede and Prof Daniel Zizzo conducted money burning experiments with 240 people in the villages. The games allowed participants to 'burn', or decrease, the money of others at their own cost. They then examined the impact of this on agricultural innovation by



combining the experimental data with results from household surveys.

"We found that the greater the level of money burning behaviour by others, the measure of social envy, the more people didn't engage in agricultural innovation," explained Prof Zizzo, professor of economics and head of the School of Economics. "People fear the evil eye and this had a real effect in discouraging innovation in this context."

Envy can be constructive if people positively respond by emulating those who are more successful than themselves; but it can also be a destructive force if people destroy others' resources because of envious motivations.

"People willing to burn others' money are probably more aggressive and competitive and therefore expected to be more innovative," explained Prof Zizzo. "The money burning behaviour of others, social money burning, is also expected to affect individual innovation behaviour, but in a negative way. A farmer in a community with high social money burning will be discouraged to invest as some of the returns from investment will be destroyed by others."

Dr Kebede, a development economist and senior lecturer at the School of International Development, said that while changing social preferences and attitudes may be difficult, there may be institutional changes than can be made to help channel such behaviour in a productive rather than a destructive way.

"The impact of negative feelings such as envy may be minimised if innovations are adopted at an early stage by a significantly large number of people in the community," he said.

"The usual model of a small number of adopters and innovators followed by the majority later may not be effective. A big push of innovation may be required to break the cycle created by negative social preferences. If



you engage a very small number of farmers in the community they will experience huge pressure from other people in the community. If you introduce it on larger scale it will diffuse the tensions."

The researchers found that envy or related motivations, such as competitiveness and social conformism, were widespread in the villages, with envy considered by most as an automatic consequence of success and achievement. Sociological reports produced for the study included anecdotal evidence of the destructive nature of these social attitudes on innovation, even among close family members. In one of the study villages, a man was reported to have set fire to his brother's farm when his brother started cultivating a more profitable cereal.

It was also found that overall, individuals with the highest subjective well being seem to innovate more.

Dr Kebede and Prof Zizzo suggest the underlying motivation for envious behaviour is likely to be retaliation and/or reciprocity, either directly or as a way of making the expression of envy legitimate. People may burn other people's money because they expect other people to be burning theirs, or because they have a fear of envy.

Dr Kebede said there were implications for non-agricultural innovations that farmers may also be involved in. In the long-term, since dependence on agriculture is expected to decline with growth, non-agricultural innovations are expected to become more important.

"Some of the anecdotal evidence indicates that envy becomes even stronger in relation to activities that are very different from their main farming activities, particularly if they are very novel," explained Dr Kebede. "If true, this has a significant implication for future rural development. The development of non-agricultural sectors is crucial in the structural transformation of economies and the negative consequence



of envy can become a formidable obstacle against rural development."

## Provided by University of East Anglia

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