Cross-National Analysis of Food Security Drivers

Background
• Biofuels – including cellulosic biofuels – have often been criticized because of perceived exacerbation of food insecurity due to competition for land.

Approach
• We carried out the most comprehensive evaluation to date of the impact of various drivers on food insecurity at a national level.
• Two previously-established metrics were considered: the Global Food Security Index (GFSI) and the Food Insecurity Experience Scale (FIES).

Outcome
• Household spending (HFCE) was by far the most important driver of food security using both metrics.
• Drivers of intermediate importance included per-capita cereal production, per-hectare cereal yield, an aggregate governance metric, logistics performance, and extent of paid employment.
• The quantity and quality of agricultural land were not predictive of either food security metric.

Significance
• Poverty is the main driver of food insecurity at a national level.
• Since land quality and quantity is not a significant driver of food insecurity, the dominant expected impact of biofuel production on food security is expected to arise from impacts on livelihoods, which can be large and positive.