

Food for Thought: Nutrition and Agricultural Technology

Florian Blum*

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Abstract

Over the past twenty years nutritional intake in India has decreased across the income spectrum. This paper tests the hypothesis that the marginal product of calories has changed with the introduction of labour saving agricultural technologies, so that caloric intake has decreased because households receive a lower return to calorie consumption. I first estimate a demand function for calories, relating calorie intake to prices and mechanized tubewells, which is a wide-spread labour saving technology. I achieve a causal identification of the effect of mechanized tubewells by using hydrogeological structures as an instrumental variable for tubewell adoption. The results suggest that the introduction of tubewells has indeed caused calorie intake to decline. To further support the notion of a strong substitution effect between calories and labour-saving technology, I adopt a sufficient statistics approach to measure the marginal product of calories at the household level and relate this measure to mechanized tubewell adoption. Preliminary results suggest that the adoption of labour-saving technologies indeed reduced the marginal product of calories.

*F.M.Blum@lse.ac.uk, London School of Economics and Political Science and STICERD, Houghton Street, London, WC2A2AE. I wish to thank Oriana Bandiera, Henrik Kleven, Michel Azulai and Stephan Maurer for helpful comments.