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Competing Narratives for Sustainability: Is Less More or Must We Do More With Less?

Neil Conklin
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USDA Agricultural Outlook Forum
Can Sustainable Agricultural Intensification Feed
the World?
February 23, 2012

The Problem

- The Sufficiency Narrative: Less is More
 - world population 9.2 billion people in 2050
 - dramatic environmental problems
 - consumption outstrips Earth's capacity
 - current food systems produce waste and overconsumption => health problems
 - destruction of important ecosystems will have dramatic feedback effects that undermine the foundations of our food systems => more poverty and conflict.
- The Productivity Narrative: Doing more with less.
 - world population 9.2 billion in 2050
 - agricultural productivity slowing down
 - rising income levels shift diets to more protein rich food and will increase energy demand
 - serious threat that food demand will not be met => hunger and political instability
 - resource constraints and climate change limit the world's capacity to expand food production.

Based on: Sustainable Food Consumption and Production in a Resource-Constrained World, Erik Mathijs, K.U.Leuven OECD, Paris, 12 September 2011

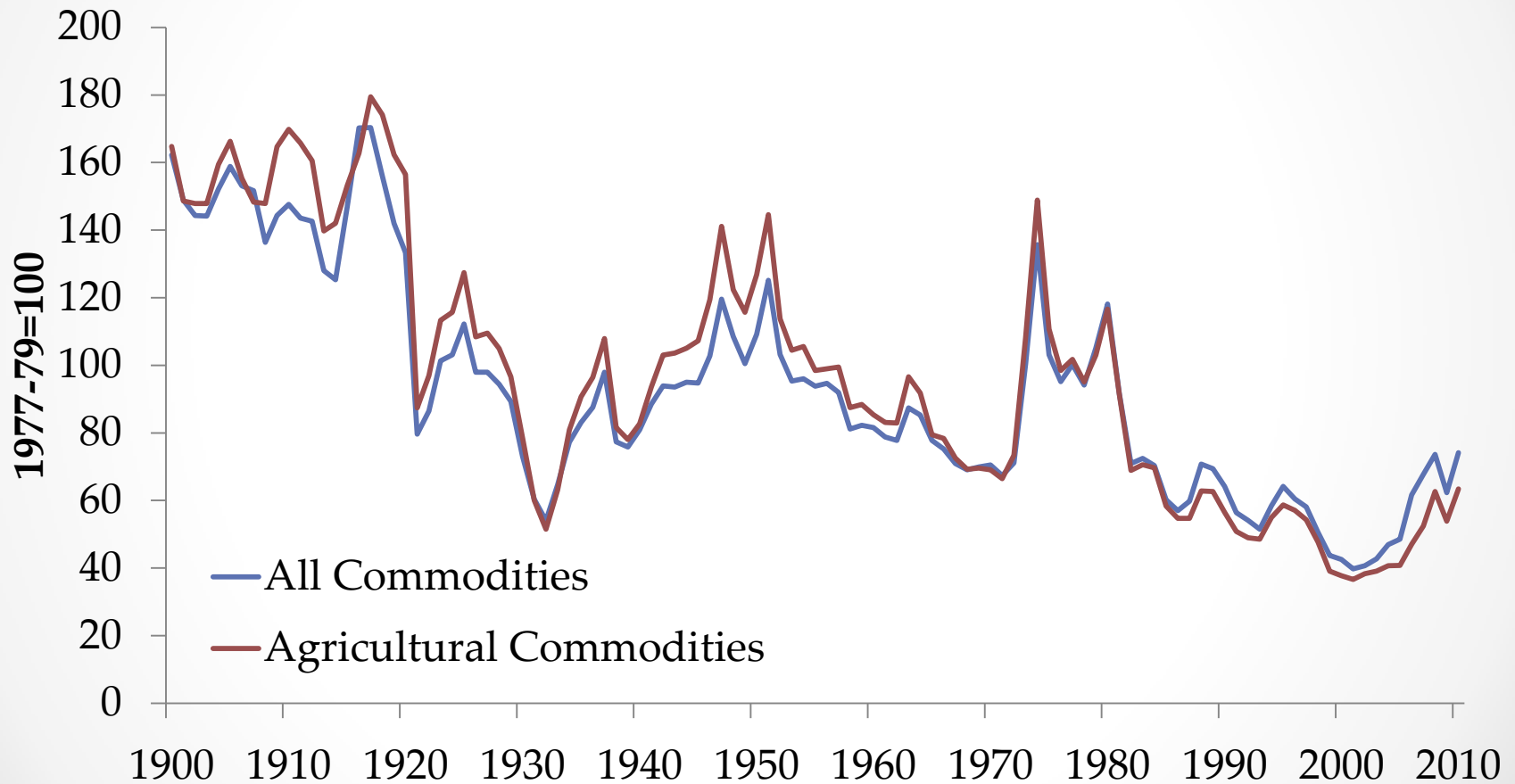
The Solutions

- Less is More: The Sufficiency Narrative
 - demand increases need to be mitigated through behavioral change
 - scientific advances have the potential to bring forward agro-ecosystems that are both productive, respectful of ecosystems and resource saving
 - environmental externalities need to be internalized in markets - appropriate governance structures that address disruptive effect of trade.
- Doing More With Less: The Productivity Narrative
 - scientific advances have the potential to bring forward technologies that boost productivity and take into account both resource scarcities and environmental problems
 - massive investments in both public and private R&D
 - removal of barriers to technology adoption by farmers, such as infrastructure, trade barriers and access to markets.

Common Ground?

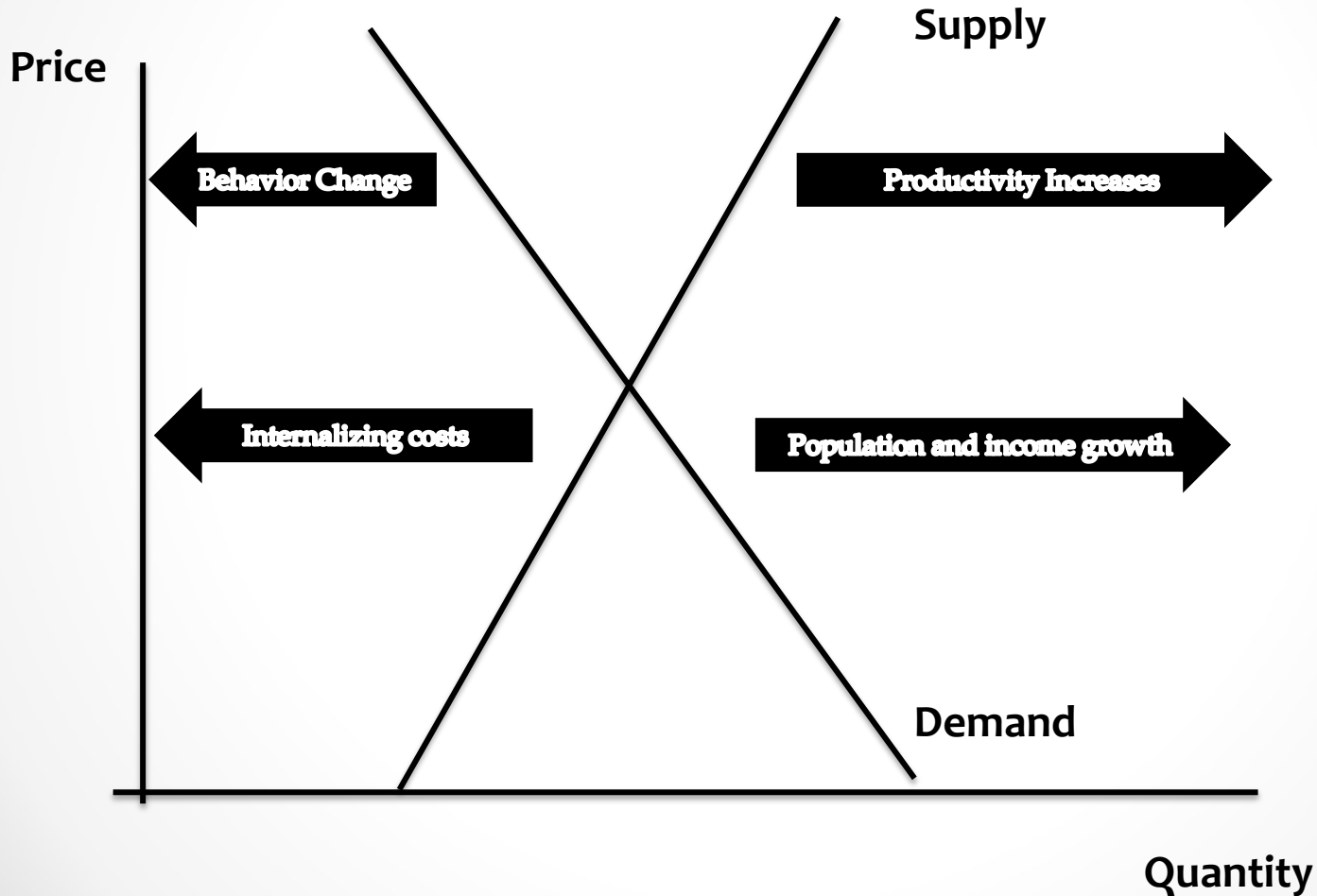
- The Problem
 - population growth
 - resource constraints
 - poverty, hunger and instability
- The Solution
 - need to increase productivity
 - a role for science
 - institutional and policy change

Is the Era of Declining Real Agricultural Prices at an End?

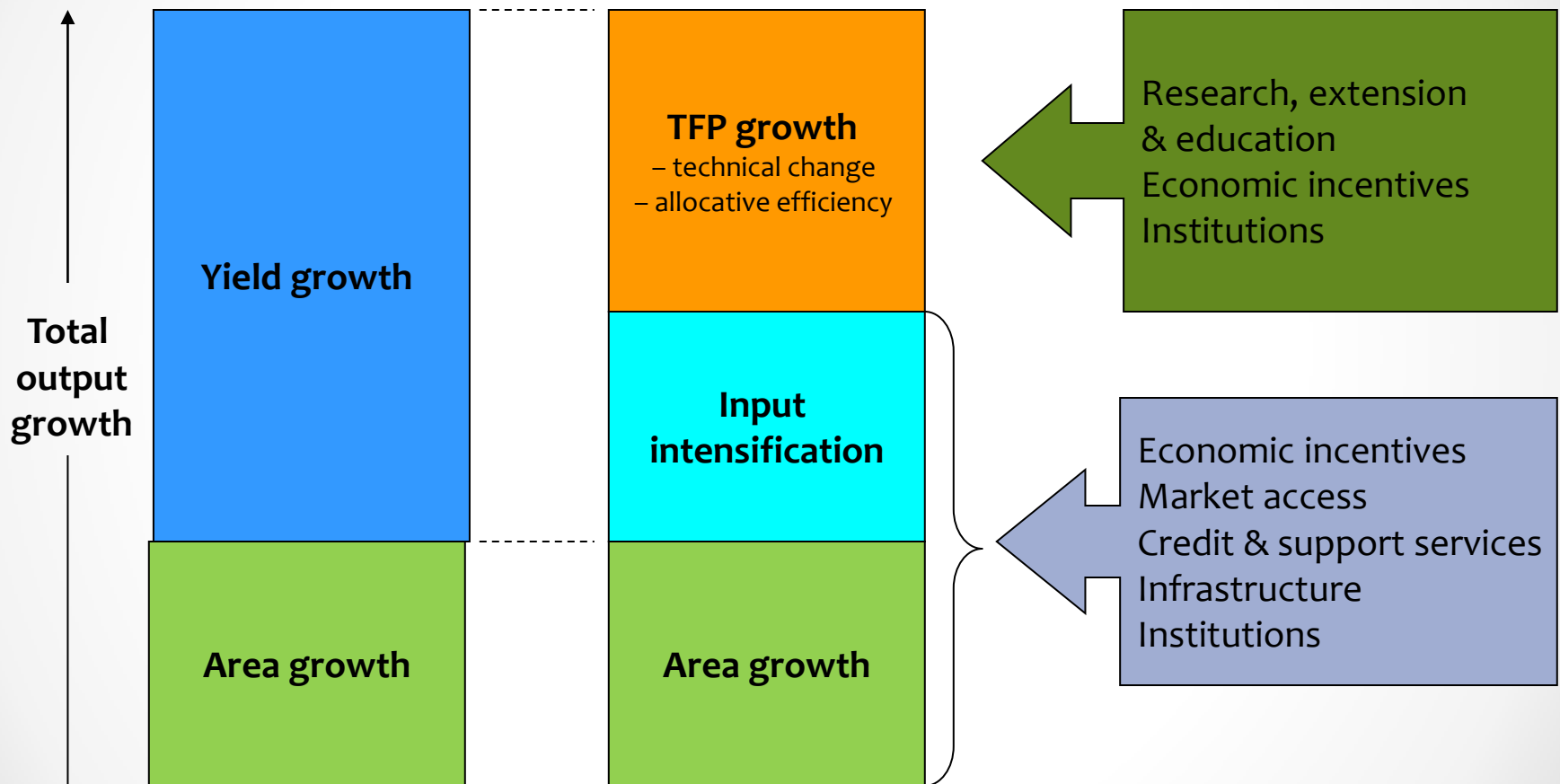


Original source: Grilli, Enzo, and Maw Cheng Yang (1988). "Primary Commodity Prices, Manufactured Goods Prices, and the Terms of Trade of Developing Countries: What the Long Run Shows." *World Bank Economic Review* 2, 1: 1-47
Updated data, data sources and series descriptions are in S.Pfaffenzeller, P. Newbold, and A. Rayner (2007) "A Short Note on Updating the Grilli and Yang Commodity Price index," *World Bank Economic Review* 21, 1: 151-163.

Direction of Prices?

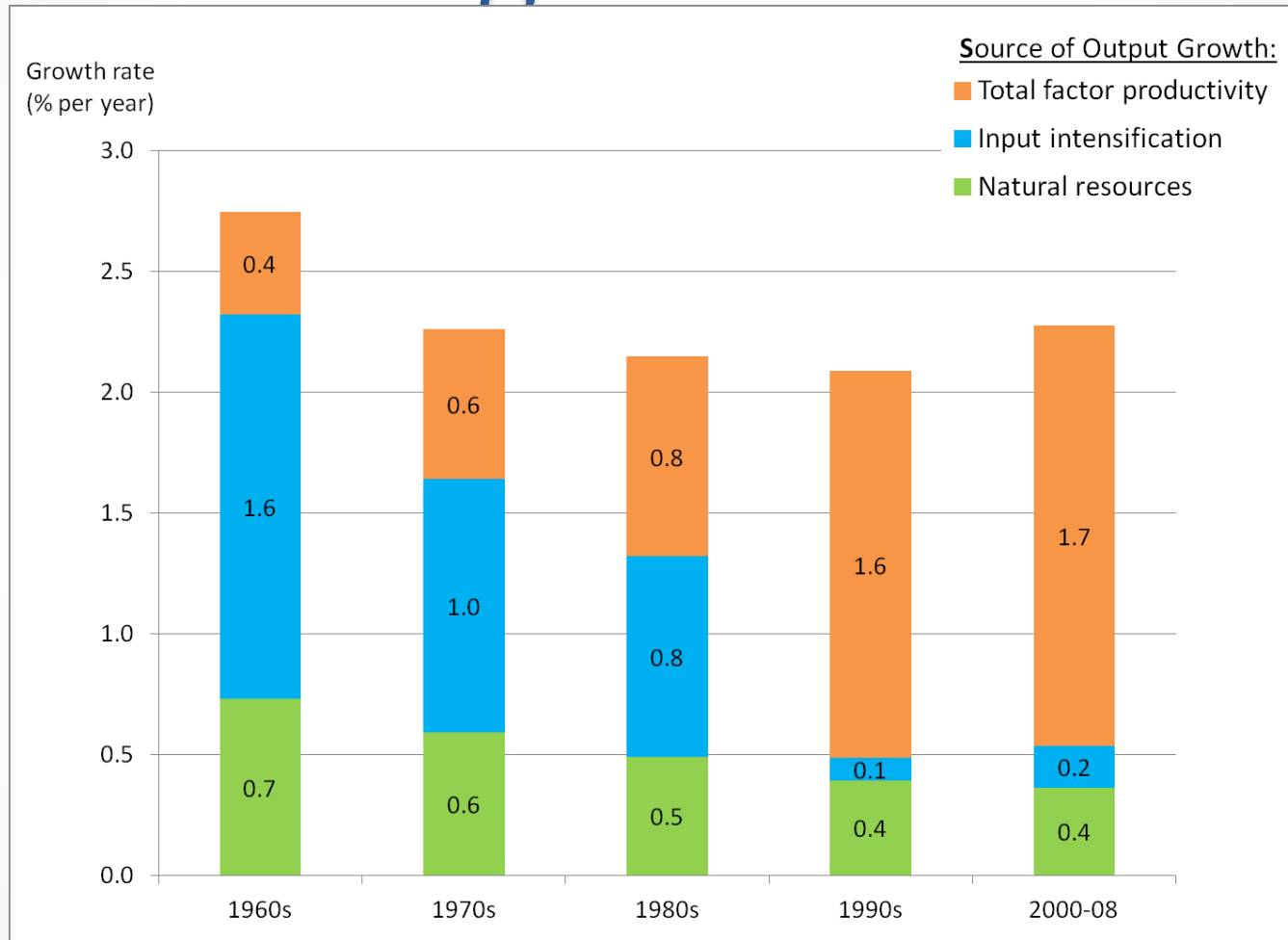


Understanding Total Factor Productivity



Source: Fuglie, Keith O. (2012). Productivity Growth and Technology Capital in the Global Agricultural Economy. In, Productivity Growth in Agriculture: An International Perspective (Keith O. Fuglie, Sun Ling Wang and V. Eldon Ball, eds.) Oxfordshire, UK: CAB International (forthcoming).

TFP Replaces Input Intensification as the Engine of Growth



Source: Fuglie, Keith O. (2012). Productivity Growth and Technology Capital in the Global Agricultural Economy. In, Productivity Growth in Agriculture: An International Perspective (Keith O. Fuglie, Sun Ling Wang and V. Eldon Ball, eds.) Oxfordshire, UK: CAB International (forthcoming).