Testing Long-run Productivity for the Canadian and U.S. Agricultural Sectors

Measuring Productivity in African Agriculture

First published in 1995. Based on a detailed adjustment for the quality of inputs and outputs, this study develops state-level measures for total factor productivity growth in US agriculture which are used to determine (i) the presence and determinants of
convergence across states; (ii) the contribution of individual factors of production to productivity growth; (iii) the importance of spillovers across states; (iv) the economic effects of, returns to, and factor biases of research and extension. This title will be of great interest to students of economics and agriculture.

**Firm Productivity in Bangladesh Manufacturing Industries**

The year 2018 marks 40 years of reform and development in China (1978–2018). This commemorative book assembles some of the world’s most prominent scholars on the Chinese economy to reflect on what has been achieved as a result of the economic reform programs, and to draw out the key lessons that have been learned by the model of growth and development in China over the preceding four decades. This book explores what has happened in the transformation of the Chinese economy in the past 40 years for China itself, as well as for the rest of the world, and discusses the implications of what will happen next in the context of China’s new reform agenda. Focusing on the long-term development strategy amid various old and new challenges that face the economy, this book sets the scene for what the world can expect in China’s fifth decade of reform and development. A key feature of this book is its comprehensive coverage of the key issues involved in China’s economic reform and development. Included are discussions of China’s 40 years of reform and development in a global perspective; the political economy of economic transformation; the progress of marketisation and changes in market-compatible institutions; the reform program for state-owned enterprises; the financial sector and fiscal system reform, and its foreign exchange system reform; the progress and challenges in economic rebalancing; and the continuing process of China’s global integration. This book further documents and analyses the development experiences including China’s large scale of migration and urbanisation, the demographic structural changes, the private sector development, income distribution, land reform and regional development, agricultural development, and energy and climate change policies.

**Agricultural Productivity**

Agricultural Productivity in Africa: Trends, Patterns, and Determinants presents updated and new analyses of land, labor, and total productivity trends in African agriculture. It brings together analyses of a unique mix of data sources and evaluations of public policies and development projects to recommend ways to increase agricultural productivity in Africa. This book is timely in light of the recent and ongoing growth recovery across the continent. The good news is that agricultural productivity in Africa increased at a moderate rate between 1961 and 2012, although there are variations in the rate of growth in land, labor, and total factor productivities depending on country and region. Differences in input use and capital intensities in agricultural production in the various farming systems
and agricultural productivity zones also affect advancements in technology. One conclusion based on the book’s research findings derives from the substantial spatial variation in agricultural productivity. For areas with similar agricultural productivity growth trends and factors, what works well in one area can be used as the basis for formulating best-fit, location-specific agricultural policies, investments, and interventions in similar areas. This finding along with others will be of particular interest to policy- and decisionmakers.

**Production Frontiers**

**Agricultural Productivity Growth in the United States**

Agricultural productivity growth in Chinese provinces during the 1994-2005 period is examined using two alternative approaches: a parametric stochastic frontier and a non-parametric Malmquist index. These models are suitable to the Chinese situation due to the existence of procurement prices, quotas, and other interventions that have distorted prices. Results show that there is high but declining productivity growth rates in the mid 1990's with productivity growth decreasing in the late 1990's but with a reversal of the trend around 1998 when growth rates start accelerating. A stochastic frontier translog production function is estimated to obtain an alternative measure of total factor productivity growth. Results are compared across these two models. Although average growth in technical change is similar in the two models, the regional rates are dissimilar. A model that includes three variables hypothesized to explain the difference in performance across regions is also estimated. The three variables included in the model are irrigation ratio, illiterate ratio and agriculture expenditure level. These variables make allowance for the difference of land and labor quality and the effect of public inputs. The irrigation ratio and agriculture expenditure are found to positively relate to the technical efficiency change and the illiterate ratio is found to negatively relate to the technical efficiency change. The results are consistent with expectations.

**Valuing UC Agricultural Research and Extension**

**Agricultural sector review in Lebanon**

By 2050, we will have ten billion mouths to feed in a world profoundly altered by environmental change. How will we meet this challenge? In How to Feed the World, a diverse group of experts from Purdue University break down this crucial question by tackling big issues one-by-one. Covering population, water, land, climate change, technology, food systems, trade, food waste and loss, health, social
Access Free Comparing Agricultural Total Factor Productivity Between buy-in, communication, and equal access to food, the book reveals a complex web of challenges. Contributors unite from different perspectives and disciplines, ranging from agronomy and hydrology to economics. The resulting collection is an accessible but wide-ranging look at the modern food system.


Productivity Growth in Polish Agriculture

Hofman, a researcher with the Chile-based Economic Commission for Latin America and the Caribbean, uses growth accounting methods and previously unavailable long-term series data to assess the economic performance of the region during the century from a comparative and historical perspective. In particular he compares Latin American economies to those of advanced capitalist economies, to newly industrialized economies, and to Spain and Portugal because of the historical ties. He looks at the reasons for the poor or negative growth during the 1980s and the apparent recovery in the 1990s and at such problems as debt, income inequality, high inflation, cyclical instability, and political and policy instability. Annotation copyrighted by Book News, Inc., Portland, OR

Chinese Regional Agricultural Productivity: 1994-2005

'Action is needed to fight poverty by sustaining the environment and the use of natural resources. Land Quality, Agricultural Productivity, and Food Security explores a range of factors driving food security. The book offers an assessment to link quality of the available land resources with productivity of land and the ability to ensure food security. It offers a mixture of broad-scale assessments across the globe, with detailed case studies, deepening our understanding of economics and decision-making mechanisms. It is recommended to researchers, as well as actors in the private and public domain, who are keen to improve their understanding of the appropriate actions that ensure food security in the decade to come.' - Floor Brouwer, Agricultural Economics Research Institute (LEI), The Hague, The Netherlands

Land quality and land degradation affect agricultural productivity and food security, but quantifying these relationships has been difficult. Data are extremely limited and outcomes are sensitive to the choices that farmers make. The contributors to this book - including soil scientists, geographers, and economists - analyse data on soils, climate, land cover, agricultural inputs and outputs, and a variety of socio-economic factors to provide new insights into three key issues: * the extent to which differences in land quality generate differences in agricultural productivity across countries * how farmers' responses
to differences or changes in land quality are influenced by economic, environmental, and institutional factors, and whether land degradation over time threatens productivity growth and food security at local, regional, and global levels.

World Scientific Reference On Asia And The World Economy (In 3 Volumes)

IFPRI’s flagship report reviews the major food policy issues, developments, and decisions of 2018, and considers challenges and opportunities for 2019. This year’s Global Food Policy Report highlights the urgency of rural revitalization to address a growing crisis in rural areas. Rural people around the world continue to struggle with food insecurity, persistent poverty and inequality, and environmental degradation. Policies, institutions, and investments that take advantage of new opportunities and technologies, increase access to basic services, create more and better rural jobs, foster gender equality, and restore the environment can make rural areas vibrant and healthy places to live and work. Drawing on recent findings, IFPRI researchers and other distinguished food policy experts consider critical aspects of rural revitalization.

Total Factor Productivity Growth in the Chilean Crop Sector

The Shifting Patterns of Agricultural Production and Productivity Worldwide

The productivity slowdown of the 1970s and 1980s and the resumption of productivity growth in the 1990s have provoked controversy among policymakers and researchers. Economists have been forced to reexamine fundamental questions of measurement technique. Some researchers argue that econometric approaches to productivity measurement usefully address shortcomings of the dominant index number techniques while others maintain that current productivity statistics underreport damage to the environment. In this book, the contributors propose innovative approaches to these issues. The result is a state-of-the-art exposition of contemporary productivity analysis. Charles R. Hulten is professor of economics at the University of Maryland. He has been a senior research associate at the Urban Institute and is chair of the Conference on Research in Income and Wealth of the National Bureau of Economic Research. Michael Harper is chief of the Division of Productivity Research at the Bureau of Labor Statistics. Edwin R. Dean, formerly associate commissioner for Productivity and Technology at the Bureau of Labor Statistics, is adjunct professor of economics at The George Washington University.

How to Feed the World
Agricultural Productivity: Measurement and Sources of Growth
dresses measurement issues and techniques in agricultural productivity analysis, applying those techniques to recently published data sets for American agriculture. The data sets are used to estimate and explain state level productivity and efficiency differences, and to test different approaches to productivity measurement. The rise in agricultural productivity is the single most important source of economic growth in the U.S. farm sector, and the rate of productivity growth is estimated to be higher in agriculture than in the non-farm sector. It is important to understand productivity sources and to measure its growth properly, including the effects of environmental externalities. Both the methods and the data can be accessed by economists at the state level to conduct analyses for their own states. In a sense, although not explicitly, the book provides a guide to using the productivity data available on the website of the U.S. Department of Agriculture/Economic Research Service. It should be of interest to a broad spectrum of professionals in academia, the government, and the private sector.

The Economic Development of Latin America in the Twentieth Century

Between the 1930s and the 1950s rural life in Europe underwent profound changes, partly as a result of the Second World War, and partly as a result of changes which had been in progress over many years. This book examines a range of European countries, from Scandinavia to Spain and Ireland to Hungary, during this crucial period, and identifies the common pressures to which they all responded and the features that were unique to individual countries. In particular, it examines the processes of agricultural development over western Europe as a whole, the impact of the war on international trading patterns, the relationships between states and farmers, and the changing identities of rural populations. It presents a bold attempt to write rural history on a European scale, and will be of interest not only to historians and historical geographers, but also to those interested in the historical background to the Common Agricultural Policy of the European Union, to which the changes discussed here provided a dramatic prologue.

Regional Productivity Growth In China's Agriculture

While technological developments are evolving at a rapid pace, employee workplace skills are falling behind. This rate of change will continue to accelerate, and it is the responsibility of businesses to provide their employees with a solid foundation for keeping pace with the technology surrounding them. Technology-Driven Productivity Improvements and the Future of Work: Emerging Research and Opportunities provides a comprehensive discussion of the latest strategies and methods for creating harmony between the workplace
population and their technological environments. Featuring coverage on relevant topics such as STEM skills, economic complexities, and social programs, this is an informative resource for all business owners, professionals, practitioners, and researchers who are interested in discovering new methods that will enable humans and technology to work together.

2019 Global food policy report

The year 2017 was marked by increasing uncertainty amid mixed signs of progress. The world enjoyed a strong economic recovery, but global hunger increased as conflicts, famine, and refugee crises persisted. With the withdrawal of the United States from major international agreements, Britain's “Brexit,” and rising anti-immigration rhetoric in many countries, the world began to step away from decades of global integration that have yielded unprecedented reductions in poverty and malnutrition. This synopsis of the 2018 Global Food Policy Report reviews the events of 2017, including the impact of rising antiglobalism, and looks at how global integration—through trade, investment, migration, open data, developed country policies, and governance—can be harnessed to benefit our global food system.

Total Factor Productivity Growth in the Chilean Crop Sector

This paper argues that partial productivity measures are inappropriate and at times misleading for assessing the performance of agricultural production technologies and systems. This is especially true where substantial changes in resource stock and flows accompany the production process. Superlative-index based total factor productivity measures are a more appropriate technique to compare production efficiency and sustainability of alternative systems. Mathematical formulations of intertemporal and interspatial total factor productivity measures with and without considering changes in resource stock and flows are shown. Then three case studies from sub-Saharan Africa in which this approach was applied are reviewed. These studies show that total factor productivity measures are biased if changes in resource stock and flows are not appropriately accounted for in intertemporal comparisons, and differences in input intensity are not accounted for in interspatial comparisons.

Agricultural Productivity In The Socialist Countries

Productivity Growth and Convergence in Agriculture and Manufacturing

U.s. Agricultural. 1960-96 a Multilateral Comparison of
Total Fector Productivity

Fostering Productivity and Competitiveness in Agriculture

Agricultural productivity in Africa

Increasing food prices have renewed concerns about long-term agricultural demand and supply in the global economy. This book looks at results, methods, and data on international agricultural productivity for a better understanding of long-run trends and the policies that determine them. By presenting an international assessment of total factor productivity growth in agriculture, including up-to-date empirical analysis for developed and developing countries and regions, it provides a response to the rising global scarcity of agricultural production. It is essential reading for researchers, poli.

Productivity Growth in Agriculture

The Agricultural Outlook 2019-2028 is a collaborative effort of the Organisation for Economic Co-operation and Development (OECD) and the Food and Agriculture Organization (FAO) of the United Nations. It brings together the commodity, policy and country expertise of both organisations as well

Harvesting Prosperity

This study by Shenggen Fan makes three important and original contributions. It is the first study to report regional patterns of productivity growth in Chinese agriculture. There have been dramatic differences in output and productivity growth among Chinese regions. The second contribution is to measure the separate effects of technical change and institutional reform on productivity growth. Much of the rapid growth in agricultural production and in productivity since the late 1970s has been a consequence of an important series of institutional reforms. The third contribution is the first test of the induced innovation hypothesis against experience in a centrally planned economy. Regional patterns of productivity growth are consistent with the hypothesis that the path of technical change has been responsive to regional differences in resource endowments.

OECD Food and Agricultural Reviews Innovation, Agricultural Productivity and Sustainability in Brazil

In this book we assemble a range of evidence from a range of sources with a view to developing an improved understanding of recent trends
in agricultural productivity around the world. The fundamental purpose is to better understand the nature of the long-term growth in the supply of food and its principal determinants. We pursue this purpose from two perspectives. One is from a general interest in the world food situation in the long run. The other is from an interest in the implications of U.S. and global productivity patterns for U.S. agriculture.

An Analysis of the X-Efficiency and Total Factor Productivity in the U.S. Farm Credit System Using Longitudinal Data

Analyses how various political and economic factors have interacted to prevent Japan achieving high agricultural productivity at the same time that it was experiencing remarkable growth in its industrial productivity.

Japanese Agriculture

This report reviews economic concepts of innovation, research and development (R&D), productivity and competitiveness, and their linkages in agriculture.

OECD-FAO Agricultural Outlook 2019-2028

The dynamism in modern Asia, especially with the current revival in Japan, stands in sharp contrast to the situation in Europe. An in-depth understanding of what is happening in contemporary Asia is key to grasping opportunities that this dynamism creates for all. This multi-volume reference work consists of three up-to-date and comprehensive volumes on Asia and the world economy. It covers the most important aspects of the world economy as they pertain to Asia in the increasingly accelerating globalization process and is a must-have for anyone keen to understand Asia and the contemporary world. The three-volume set covers the climate change challenges and solutions from the Asian perspectives, focusing on both domestic arrangements and trade-based options, and discusses scenario analyses for future climate regimes; the sustainability of growth in the Indian economy determined by analyzing the role of economic, technological and environmental factors and lastly, the growth experiences and prospects of India and China.

New Developments in Productivity Analysis

The relative contribution of a sector to poverty reduction is shown to depend on its direct and indirect growth effects as well as its participation effect. The paper assesses how these effects compare between agriculture and non-agriculture by reviewing the literature and by analyzing cross-country national accounts and poverty data.
from household surveys. Special attention is given to Sub-Saharan
Africa. While the direct growth effect of agriculture on poverty
reduction is likely to be smaller than that of non-agriculture
(though not because of inherently inferior productivity growth), the
indirect growth effect of agriculture (through its linkages with
nonagriculture) appears substantial and at least as large as the
reverse feedback effect. The poor participate much more in growth in
the agricultural sector, especially in low-income countries,
resulting in much larger poverty reduction impact. Together, these
findings support the overall premise that enhancing agricultural
productivity is the critical entry-point in designing effective
poverty reduction strategies, including in Sub-Saharan Africa. Yet,
to maximize the poverty reducing effects, the right agricultural
technology and investments must be pursued, underscoring the need for
much more country specific analysis of the structure and
institutional organization of the rural economy in designing poverty
reduction strategies.

2018 Global food policy report: Synopsis

The growth of agricultural productivity is widely believed to be low.
But this study finds the productivity rate in agriculture to be
higher than that in manufacturing, both on average and for groups of
countries at different stages of development. This suggests that a
large agricultural sector need not be a disadvantage for growth
performance, and may be an advantage.

The Role of Agriculture in Poverty Reduction

With the emergence of collectivization, the communal movement, and
the food crisis, the development of agriculture in socialist
countries has become a topic of great interest to economists.
Focusing on productive efficiency, Dr. Wong estimates an agricultural
metaproduction function for nine countries--China, Bulgaria,
Czechoslovakia, East Germany, Hungary, Poland, Romania, Yugoslavia,
and the Soviet Union--and computes both the partial productivities
and total productivity in comparable units. Using the growth
accounting procedure, the author performs a quantitative comparative
analysis of the differences and the sources of differences in
agricultural productivity among socialist countries. Methods of
analyzing productivity measures are described, revealing the
contribution of land, labor, education, and other factors in
agricultural growth. Dr. Wong concludes by discussing the policy
implications for development strategy and the effects on the world
food market.

War, Agriculture, and Food

Back cover blurb Rising agricultural productivity has driven
improvements in living standards for millennia. Today, redoubling that effort in developing countries is critical to reducing extreme poverty, ensuring food security for an increasing global population, and adapting to changes in climate. This volume presents fresh analysis on global trends and sources of productivity growth in agriculture and offers new perspectives on the drivers of that growth. It argues that gains from the reallocation of land and labor are not as promising as believed, so policy needs to focus more on the generation and dissemination of new technologies, which requires stepping up national research efforts. Yet, in many of the poorest nations, a serious research spending gap has emerged precisely at the time when the challenges faced by agriculture are intensifying. The book focuses on how this problem can be redressed in the public sector, as well as on reforms aimed at mobilizing new private sector actors and value chains, particularly creating a better enabling environment, reforming trade regulations, introducing new products, and strengthening intellectual property rights. On the demand side, the book examines what recent research reveals about policies to reduce the barriers impeding smallholder farmers from adopting new technologies. Harvesting Prosperity is the fourth volume of the World Bank Productivity Project, which seeks to bring frontier thinking on the measurement and determinants of productivity to global policy makers. “As rightly argued by the authors, growth in agricultural productivity is the essential instrument to promote development in low-income agriculture-based countries. Achieving this requires research and development, upgrading of universities, reinforcement of farmer capacities, removal of constraints to adoption, and the development of inclusive value chains with interlinked contracts. As important, such efforts also need to be placed within a context of comprehensive agricultural, rural, and structural transformations. However, in many countries implementation of the requisite policies has been lagging. This book, with contributions from many top experts in the field, provides the most up-to-date presentation of this argument and explains in detail how to successfully put its ideas into practice. Governments, the private sector, and civil society organizations need to study it carefully to turn the promise of agriculture for development into a reality.” Alain de Janvry and Elisabeth Sadoulet Professors of the Graduate School, University of California at Berkeley

A Comparative Analysis of Agricultural Productivity Growth Among Socialist Countries

The Agricultural Sector Review aims to provide an up-to-date picture of the current socio-economic situation of the agricultural sector in Lebanon and to identify key challenges and evidence-based strategies for policy-making. The first part provides a detailed overview of Lebanon's agricultural and food systems, including a section focused on the governance the overall policy framework and the specific policies currently governing the sector. The second part of this
study consists of an identification of the challenges and issues that are currently affecting and constraining the development of the Lebanese agricultural sector to its full potential. Once identified these challenges, the study proposes several potential strategies and recommendations that could be applied at the policy-making level to drive the improvement of the sector. Finally, we provide a discussion towards a renewed national agricultural strategy; in which we reviewed some lessons learned from previous success stories in the agricultural sector in Lebanon and compile the strengths, weaknesses, opportunities and threats of the agricultural sector.

Global Productivity

This book presents a mathematical programming approach to the analysis of production frontiers and efficiency measurement. The authors construct a variety of production frontiers, and by measuring distances to them are able to develop a model of efficient producer behaviour and a taxonomy of possible types of departure from efficiency in various environments. Linear programming is used as an analytical and computational technique in order to accomplish this. The approach developed is then applied to modelling producer behaviour. By focusing on the empirical relevance of production frontiers and distances to them, and applying linear programming techniques to artificial data to illustrate the type of information they can generate, this book provides a unique study in applied production analysis. It will be of interest to scholars and students of economics and operations research, and analysts in business and government.

Land Quality, Agricultural Productivity, and Food Security

The COVID-19 pandemic struck the global economy after a decade that featured a broad-based slowdown in productivity growth. Global Productivity: Trends, Drivers, and Policies presents the first comprehensive analysis of the evolution and drivers of productivity growth, examines the effects of COVID-19 on productivity, and discusses a wide range of policies needed to rekindle productivity growth. The book also provides a far-reaching data set of multiple measures of productivity for up to 164 advanced economies and emerging market and developing economies, and it introduces a new sectoral database of productivity. The World Bank has created an extraordinary book on productivity, covering a large group of countries and using a wide variety of data sources. There is an emphasis on emerging and developing economies, whereas the prior literature has concentrated on developed economies. The book seeks to understand growth patterns and quantify the role of (among other things) the reallocation of factors, technological change, and the impact of natural disasters, including the COVID-19 pandemic. This book is must-reading for specialists in emerging economies but also provides deep insights for anyone interested in economic growth and
productivity. Martin Neil Baily Senior Fellow, The Brookings Institution Former Chair, U.S. President’s Council of Economic Advisers This is an important book at a critical time. As the book notes, global productivity growth had already been slowing prior to the COVID-19 pandemic and collapses with the pandemic. If we want an effective recovery, we have to understand what was driving these long-run trends. The book presents a novel global approach to examining the levels, growth rates, and drivers of productivity growth. For anyone wanting to understand or influence productivity growth, this is an essential read. Nicholas Bloom William D. Eberle Professor of Economics, Stanford University The COVID-19 pandemic hit a global economy that was already struggling with an adverse pre-existing condition—slow productivity growth. This extraordinarily valuable and timely book brings considerable new evidence that shows the broad-based, long-standing nature of the slowdown. It is comprehensive, with an exceptional focus on emerging market and developing economies. Importantly, it shows how severe disasters (of which COVID-19 is just the latest) typically harm productivity. There are no silver bullets, but the book suggests sensible strategies to improve growth prospects. John Fernald Schroders Chaired Professor of European Competitiveness and Reform and Professor of Economics, INSEAD

An Annotated Bibliography of Selected Productivity Literature

Agriculture and the agro-processing sector in Brazil have shown impressive growth over the past two decades. This has largely been driven by productivity improvements and structural adjustment resulting from broad economic reforms, as well as new technologies developed by agricultural science.

China’s 40 Years of Reform and Development: 1978–2018

Technology-Driven Productivity Improvements and the Future of Work: Emerging Research and Opportunities

"The author studies the determinants of total factor productivity (TFP) for manufacturing firms in Bangladesh using data from a recent survey. She obtains TFP measures by making use of firm-specific deflators for output and inputs. Controlling for industry, location, and year fixed effects, she finds that: (1) firm size and TFP are negatively correlated; (2) firm age and TFP exhibit an inverse-U shaped relationship; (3) TFP improves with the quality of the firm's human capital; (4) global integration improves TFP; (5) firms with research and development activities and quality certifications have higher TFP, while more advanced technologies improve TFP only in the presence of significant absorptive capacity; (6) power supply
problems cost firms heavily in terms of TFP losses; and (7) the presence of crime dampens TFP. "--World Bank web site.

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