

## Introduction to the symposium of presentations from the Plenary Sessions of the 2010 North American Productivity Workshop

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The Plenary Sessions of the 2010 North American Productivity Workshop (NAPW) were particularly noteworthy as they brought together a remarkable collection of scholars whose contribution to productivity and efficiency has been seminal and classic as well as modern and innovative. The presentations were first rate. This symposium is composed of the presentations given in the Plenary Sessions. The idea of such a symposium was not only sparked by the presentations of remarkably gifted scholars, but also by the large number of conference participants whose conversations with us after the presentations indicated that something special was going on in the Plenary Sessions: that the participants were struck by the singular quality and uniqueness of the scholarship but also by the reverence the presenters commanded and the awe in which they were held by the participants.

The first Plenary Session was meant to frame the conference and to set its tone. The title of the session was “Unresolved Research Topics in Productivity” and the

presenters were Professors Erwin Diewert and Dale Jorgenson. Professor Jorgenson began his talk, “Information Technology and U.S. Productivity Growth: Evidence from a Prototype Industry Production Account” by pointing out that the NAPW’s long time friend and participant John W. Kendrick, to whom the 2010 NAPW was dedicated in memoriam, had been a proponent and strong advocate of the data collection protocols that Professor Jorgenson was able help put in place and which currently provide researchers with disaggregated production data that seamlessly links productivity analysis to the National Accounts. Professor Jorgenson’s presentation and the paper in the symposium co-authored with Mun S Ho and Jon Samuels presented the new data set on U.S. productivity growth covering 70 industries for the period 1960–2007 based on the North American Industry Classification System (NAICS), providing much greater detail on the service industries. The second presentation in the first Plenary Session was given by Erwin Diewert and was entitled “Measuring Productivity in the Public Sector: Some Conceptual Problems.” Professor Diewert pointed out a number of issues that have perplexed productivity researchers when attempting to measure the contribution of government services, which are either free or provided at highly subsidized prices, to the many sectors of the economy. Not only were the problems detailed in his presentation but general methods to measure the price and quantity of nonmarket government outputs were provided. Specifically, if quantity information on nonmarket outputs is available then either price valuations relying on purchaser based valuations or on cost based valuations can be used. If nonmarket outputs quantity information is not available then growth accounting procedures can be used to indirectly control for the contribution of government services in productivity growth.

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The second Plenary Session, “A History Lesson on Efficiency and Productivity Analysis,” provided an historical overview of the field of efficiency research, one of the major components of productivity. The two presentations were given by W. W. Cooper and by C. A. Knox Lovell. The presentation by Professor Cooper was made possible by the wonderful world of IT and the video conferencing technology that it has spawned and allowed Professor Cooper to give his presentation from the University of Texas at Austin while a rapt audience was listening and watching from the conference venue, the James A. Baker III Institute for Public Policy at Rice University. Their separate presentations were combined into the single and singular contribution to this symposium, modestly titled, “History Lessons.” Their objective was to trace some of the brief history of efficiency modeling, focusing on Data Envelopment Analysis (DEA) and on Stochastic Frontier Analysis (SFA), while at the same time providing personal and professional anecdotes that rekindle memories and provided learned instructions for future readers and researchers. Their “History Lessons” also touches on how developments in efficiency modeling were significantly impacted by differing intellectual perspectives, methodologies, and modes of invention, by the innovative and fresh perspectives often unique to graduate students who made fundamental contributions, by substantial

interactions that occurred during the course of international travel and collaborations, and by a number of influential but under-appreciated scholars. We hope that their contribution shines a bright light on these oftentimes overlooked scholars and their works.

The third Plenary Session focused on a particular topic that highlights the important intellectual divides that have been bridged as the DEA and SFA traditions have found common ground as well as the intellectual chasms that still exist: “Two Stage Methods in Efficiency and Productivity Analysis.” Presentations by Peter Schmidt, William Greene, Paul Wilson (joint with Léopold Simar), and Timo Kuosmanen (joint with Andrew Johnson) gave the audience a well grounded overview of the pitfalls of some current approaches to two stage modeling of the impact of environmental variables on efficiency measurement, as well as solutions or potential solutions for researchers. The session has prompted a substantial amount of interest in refining approaches to two stage type analysis of the determinants of efficiency in both linear programming (DEA) and regression-based approaches (SFA).

We hope that this short introduction has given the reader enough to delve deeper into the material in this symposium. We thank all of the contributors for their hard work and excellent scholarship.