

## **Notes on the Decomposition of Malmquist Productivity Indexes**

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A paper by Caves, Christensen and Diewert (*Econometrica* 50,1393-1414, 1982) led to much interest in what they called the “Malmquist index”; a distance function method for representing technology in order to define families of input, output and productivity indexes. Since then there have been attempts to decompose the Malmquist productivity index into technical change, efficiency change and scale change components. Determining the appropriate way to do this has led to a healthy debate. This paper revisits this debate of how to decompose a Malmquist productivity index, with a focus on extracting technical progress, technical efficiency change, and returns to scale components.