Performance Measurement Using Stochastic Frontier Analysis

- Efficiency measurement
- Evaluation of the drivers of performance
- Productivity measurement
- Modelling using dedicated performance measurement software

Overview
The aim of this course to provide an understanding of performance measurement and performance management with advanced tools such as Stochastic Frontier Analysis (SFA) using Stata software. The focus is on applications in both private and public sectors, providing delegates with the tools to enable them to both estimate and interpret the models.

Presenters
This course will be led by world-renowned experts in SFA, who have developed many of the theoretical models, practical applications and software. Professor Subal Kumbhakar, State University of New York at Binghamton, and Alan Horncastle, Partner and Dr Srini Parthasarathy, Senior Consultant. Professor Subal Kumbhakar and Alan Horncastle are developers of SFA software and co-authors of A Practitioner’s Guide to Stochastic Frontier Analysis using Stata Software (with Professor Hung-Jen Wang).

Who should participate?
Those interested in assessing performance of organisational units, such as banks, hospitals, retail companies, energy companies, water companies, hotels, schools, government departments.

How is the programme delivered?
The teaching is based on short interactive lectures with small-group working and hands-on use of software. Course material is provided.
Why should you attend?

- Learn about methods for efficiency and productivity measurement.
- Understand the principles behind performance measurement.
- Get hands-on experience of the SFA software from the developers.
- See how to improve the efficiency and productivity of decision-making.
- Gain an understanding of how to apply SFA in your organisation.

What to learn?

- The concept of relative efficiency and its measurement by Stochastic Frontier Analysis.
- Basic SFA models for measuring efficiency.
- Illustrative assessments by SFA, carried out by course participants.
- Introduction to recent developments in SFA.
- Using advanced features of the SFA software.

Illustrative full-day programme

Session 1
- An introduction to SFA.
- Understand the principles behind performance measurement and benchmarking using SFA.
- An overview of different parametric approaches.

Session 2
- An illustrative assessment using SFA.
- Hands-on session using the SFA software.

Session 3
- Introducing recent developments in SFA.
- Panel data (observations for the same firms or individuals over several time periods).
- Productivity measurement.

Session 4
- Direct application of SFA.
- Advanced features of SFA.
- What SFA can do for you.
- Open discussion: Applications and issues at work.

About Oxera...

We advise companies, policymakers, regulators and lawyers on any economic issue connected with competition, finance or regulation. We have been doing this for more than three decades, gathering deep and wide-ranging knowledge as we expand into new sectors. We have a reputation for credibility and integrity among those we advise, and among key decision-makers, such as policymakers, regulators and courts.

Our expertise...

As a decision-maker you need to understand what drives company performance in terms of costs, revenues and profits. But to do this properly in a modern and complex business world often involves going beyond the simple metrics and KPIs available to an organisation. Our expertise in this environment identifies priorities and locates the areas where improvements can be made. Our performance assessment team is widely regarded as having pioneered efficiency analysis in regulated sectors. In particular, its recommendations made during UK Competition Commission cases regarding alternative approaches to assessing companies’ relative efficiency have had a significant impact.

About SFA...

The course is based around chapters from the book *A Practitioner’s Guide to Stochastic Frontier Analysis using Stata* by Subal Kumbhakar, Hung-Jen Wang and Alan Horncastle. The hands-on sections of the course are based on the empirical examples in the book and use the Stata codes written by the authors for estimating stochastic frontier models using both cross-sectional and panel data. The book covers a number of areas, including: the estimation of technical inefficiency in production, cost and profit frontier models; cost and profit frontier models using system models; and the estimation of technical and allocative inefficiency in cost and profit frontier models, single equation panel models, and productivity and profitability decomposition.