



Department of Economics

MBE5206: Firm Performance Evaluation

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Short description:

For SMEs and new innovative ventures like startups the ability to quantify productivity is invaluable in providing a control mechanism to monitor the performance of production units. To this end, this course will develop appropriate tools to facilitate a broad understanding of performance evaluation and productivity measurement. Students will use empirical tools and real datasets to perform on-hands measurement of performance indicators analyzing the role of technological innovations in productivity growth.

Objective and Learning Outcomes:

Arguably, the most important function of the effective leader is to increase productivity and to maintain the highest standards of performance for his/her organization. In that way the firm is operating to its full potential and guarantees to the stakeholder that the organization is operating in a profitable way. Indeed, motivating leadership plays an important role in this. However, organizations also need to have robust performance measurement systems in place that clearly express objectives, indicators and success criteria. This course focuses on both these aspects of improving performance; exploring how leaders can develop their own skills by reviewing and explaining the three complementary dimensions of leadership: strategic leadership, tactical leadership and operational leadership. Ideal for the established or aspiring leader, this course is designed to assist future innovators in giving effective performance appraisals that help motivate managers and employees to achieve higher efficiency and productivity levels.

The goal of this course is for students to effectively implement and manage a performance management system in support of the strategic goals of the organization. Specifically, students will learn

- the essential skills and competences to improve productivity and performance within the organization
- how to comprehensively review and measure performance improvement
- to employ relevant case studies and team based exercises to establish a strategic plan and operational model to ensure performance improvement
- to establish a robust and continuous performance monitoring and evaluation system for critical functions, processes and projects
- to employ effective decision making and problem solving to ensure continuous improvement and to support the successful completion of established performance targets

Performance appraisals often raise the anxiety levels of both managers and employees alike. Thus, special emphasis will be placed on how to prepare for and conduct performance discussions that are objective, complete, and defensible. Students will share experiences and participate in various

exercises to ensure that they fully understand ways to get the best possible performance from production units.

Materials and Reading:

Course textbook:

- Bogetoft, P. and L. Otto. *Benchmarking with DEA, SFA and R*. Springer, New York, 2010. **(BO)**
- Coelli, T., Prasada Rao D.S. and G. Battese (2005). *An Introduction to Efficiency and Productivity Analysis*. Kluwer Academic Publishers, New York **(CPB)**

Optional reading:

- Balk, B.M. (1998). *Industrial Price, Quantity and Productivity Indices*. Kluwer Academic Publishers, New York.
- Cooper, W.W., Seiford, L.M. and K. Tone (2006). *Data Envelopment Analysis: A Comprehensive Text with Models, Applications, References, and DEA Solver Software*. Springer, New York.
- Kubhakar, S. and C.A.K. Lovell (2000). *Stochastic Frontier Analysis: An Econometric Approach*. Cambridge University Press, Cambridge
- Sherman, D.H. and J. Zhu (2006). *Service Productivity Management: Improving Service Performance using Data Envelopment Analysis*. Springer, New York.
- Thanassoulis, E. *Introduction to the Theory and Application of Data Envelopment Analysis: A Foundation Text with Integrated Software*. Norwell, Mass: Kluwer Academic Publishers, 2001.

These readings provide a more general contextual overview of the literature and they may be useful for understanding class lectures and for answering exercises and questions.

Requirements and Assessment:

Students are expected to attend class and actively participate in discussions and activities associated with the course. Repeated absences from the class may affect your grade. If a student is unable to attend a class session they are asked to inform their instructor either in person or via email. Two or more consecutive absences, without notifying the instructor, may result in a recommendation to drop you from the class. Student behavior involving cheating, copying other's work, and plagiarism are not tolerated and will result in disciplinary action.

Course grades will be based on participation and completion of assignments as follows:

- 20% Class Participation
- 30% Performance Evaluation Project
- 50% Final Examination

Schedule and Content:

The course is taught in block teaching consisting of four lectures (three hours each) and two class tutorials (three hours each). The detailed lecture schedule is shown below

Lectures

- **Benchmarking and Technology**

- Optimizing behavior and performance evaluation: learning, coordination and motivation of firms and managers
- Ideal internal evaluations and benchmarking
- Key Performance indicators
- Production and technology: Technology set, free disposability, convexity, and alternative descriptions of Technology

Reading material: **BO**-Chapters 1 and 3

- **Efficiency Measurement**

- Efficient production and *Farrell* technical efficiency indices: using efficiency to rank firms
- The reference set and improvements of efficiency over time: structural and network efficiency
- Efficiency measures using output and input prices: cost, allocative, revenue and profit efficiency indices
- The rationale of efficiency and the choice between alternative efficiency indicators
- Non-discretionary inputs and outputs, categorical variables, most productive scale size and scale efficiency

Reading material: **BO**-Chapter 2

- **Productivity Measurement**

- Quantity and Price Index Numbers
- Productivity Indices: *Fisher* and *Tronqvist*
- The *Malmquist* productivity indices

Reading material: **CPB**-Chapters 4 and 5

- **Using DEA for Performance Evaluation**

- DEA technologies and programs
- Interpreting the Solution of a DEA model
- Allocative and Scale efficiency
- Units of measurement, non-discretionally variables, and missing prices

Reading material: **BO**-Chapters 4 and 5

- **Tutorial 1: Introduction to R-Benchmarking Library**

Reading material: **BO**-Appendix

- **Tutorial 2: Empirical Applications**