# Applied Econometrics for Managerial Decisions Course

4 – 8 January 2027
Lisbon

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## Overview

Applied Econometrics for Managerial Decisions Course is a one-week course for managers, economists, planners, and business analysts who leave with a Managerial Econometric Evidence Pack. Participants frame decision questions, prepare business and economic data, specify regression models, interpret coefficients and uncertainty, diagnose assumptions, test scenarios, and communicate implications. The course separates statistical evidence from managerial importance through a documented decision workflow. Agile Leaders Training Center develops applied econometrics for managerial decisions.

## Who Should Attend

- Management functions responsible for choosing among evidence-based operational or investment options
- Economic analysis functions responsible for estimating relationships and explaining uncertainty
- Planning functions responsible for testing assumptions, forecasts, and scenarios
- Business analysis functions responsible for preparing data and challenging model outputs
- Finance and strategy functions responsible for converting estimates into decision implications

The course assumes participants can use spreadsheets, interpret descriptive statistics, and work with business data; it leaves out proof-based econometric theory, advanced causal designs, and specialized software programming.

## Departments and Industries

The course supports departments and industries that use estimated relationships to compare managerial choices.

- Strategy, finance, planning, operations, and market analysis
- Retail, manufacturing, logistics, and hospitality
- Financial services, telecommunications, utilities, and infrastructure
- Healthcare, education, technology, and professional services

## Learning Objectives

By the end of this course, participants will be able to:

- Use a decision question map to define outcomes and explanatory factors.
- Build an auditable dataset and regression specification record.
- Analyze coefficients, uncertainty, and managerial significance.
- Diagnose residual, multicollinearity, and influence problems.
- Compare prediction scenarios and their limitations.
- Evaluate econometric evidence for a managerial recommendation.

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## Course Agenda

## Day 1: Frame the Evidence Question

- Managerial Decision Question and Outcome Map
- Variable Definition and Measurement Register
- Data Source, Unit, and Time Index Record
- Descriptive Distribution and Missingness Profile
- Correlation Pattern and Causality Caution Note

## Day 2: Specify the Regression Model

- Conceptual Relationship Diagram
- Dependent and Explanatory Variable Classification
- Ordinary Least Squares Baseline Specification
- Categorical Variable and Reference Group Encoding
- Model Specification and Assumption Log

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## Day 3: Estimate and Interpret Results

- Regression Coefficient Direction and Magnitude Table
- Confidence Interval and Estimation Precision Check
- Statistical and Managerial Significance Comparison
- Elasticity and Marginal Effect Interpretation Guide
- Model Fit and Prediction Error Summary

## Day 4: Diagnose and Test Scenarios

- Residual Plot and LINE Assumption Checklist
- Multicollinearity and Variance Inflation Review
- Outlier, Leverage, and Influence Case Register
- Alternative Specification Comparison Matrix
- Scenario Prediction and Interval Worksheet

## Day 5: Practice Evidence Decisions

- Exercise: Repair a Variable and Data Definition Record
- Exercise: Interpret Coefficients and Confidence Intervals
- Exercise: Diagnose Residual and Influence Evidence
- Exercise: Compare Managerial Prediction Scenarios
- Capstone: Managerial Econometric Evidence Pack

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## Practical Exercises

The course uses suggested activities based on pricing, demand, operating cost, service, and workforce datasets.

- Suggested activity: convert a managerial question into an outcome map, variable register, and auditable dataset.
- Suggested activity: specify a regression model and interpret coefficients, intervals, fit, and prediction error.
- Suggested activity: diagnose assumption, multicollinearity, outlier, and influence evidence before revising a model.
- Suggested activity: compare scenarios and write a recommendation that separates statistical evidence from managerial judgment.

## FAQs

### Who suits applied econometrics for managerial decisions, and what does it assume?

Managers, economists, planners, and business analysts suit the course. It assumes spreadsheet use, descriptive-statistics interpretation, and experience with business data.

### How does applied econometrics for managers differ from an academic econometrics course?

Applied managerial econometrics emphasizes question framing, model interpretation, diagnostics, scenarios, and decision communication, while an academic course gives more attention to mathematical derivations and theoretical proofs.

### How should managers interpret an econometric regression coefficient?

A coefficient describes the estimated change in an outcome associated with a change in an explanatory variable, conditional on the model specification, and should be read with its units, uncertainty, assumptions, and practical relevance.

### Why do econometric model assumptions matter for managerial decisions?

Model assumptions matter because violations can distort coefficient estimates, uncertainty, prediction intervals, or conclusions, so diagnostics are evidence about how much confidence a decision maker should place in the result.

## How are econometric scenarios used without overstating certainty?

Scenarios are used by stating input changes, model scope, prediction intervals, omitted influences, and the difference between an estimated association and a causal claim.

## Conclusion

Participants take back a Managerial Econometric Evidence Pack containing the question map, dataset record, model specification, estimates, diagnostics, scenarios, and recommendation. It changes model review from a coefficient-reading exercise into a traceable evidence decision. The pack supports challenge, comparison, uncertainty disclosure, and communication of managerial implications.