

JUDGEMENT AND DECISION MAKING FOR MANAGEMENT (MG110)

Course duration: 53 hours lecture and class time (Over three weeks)

LSE Teaching Department: Department of Management

Lead Faculty: Dr Barbara Fasolo and Dr Valentina Ferretti

Pre-requisites: None

Course level: Introductory, tailored for undergraduates, or new graduates.

Executives and more experienced professionals are welcome instead to apply to the executive course “Strategic Decision Making” taught by Dr Fasolo and Dr Montibeller in the [LSE Executive Summer School](#)

Prerequisites: None, although some basic quantitative skills would be an advantage

How to choose in tough situations where stakes are high, and there are multiple conflicting objectives? What are the common ‘decision traps’ we fall into? Why do projects often take us longer and cost more than planned, and how should we get rid of this problem? How do we perceive risk, and how to act when there are risks and uncertainties involved in a decision? How can we create options that are better than the ones originally available? How can we avoid decision traps and become better decision makers? Decision making is a central aspect of virtually every management and business activity, including marketing, strategic planning, marketing management, resource allocation, operations management, and investment. Moreover, important decisions are not only made by managers and entrepreneurs, but also by the consumers of their goods and services, and by their business rivals, partners and employees. The ability to understand how decisions are made, and to predict, guide and improve those decisions, will be an invaluable part of every manager’s toolbox. It is this ability that will be developed in this course, which introduces students to principles of behavioural decision making, decision analysis and its application to management.

Course structure:

The course consists of 35 hours of lectures and 18 hours of classes where students will be divided into seminar groups to discuss their class assignments and topics covered in the lectures, as well as revise the material before the exams. In the morning you will have a lecture for 3.5 hours, followed by a 1.5 hours class in the afternoon. There will also be an interactive session in our Behavioural Research Lab and 2 ‘Formative assessment’ sessions that will prepare you for the exam. In total, there will be 53 hours of contact time spread over the three-week period. Expect the course to be interactive and to use the reading, so come prepared before class. Please note that the lecture starts at 9:30 and ends at 13:00 (which is slightly longer than other courses, but over a smaller number of days).

Assessment:

You will be assessed on two exams: a mid-term examination and a final examination. Your final mark will be made up of your score on both exams as outlined below. The material for these exams will be the material from the lectures. To prepare you for these exams, we have planned 2-hour **Formative Assessment** sessions on the day before each exam. In the sessions, we will discuss a number of mock exam questions with you. You will also be able to ask us questions about the practicalities of sitting an exam at LSE.

- i. Formative assessment I (Lecture 1-5)
- ii. Midterm examination (Lecture 1-5). (50%)
- iii. Formative assessment II (Lecture 6-10)
- iv. Final examination (Lecture 6-10). (50%)

Lectures and readings:

The outline below describes the topics we expect to cover in each lecture. The first five lectures are taught by Dr Valentina Ferretti, the last five by Dr Barbara Fasolo. For each lecture topic we recommend a reading or chapter(s). Readings will be provided at the beginning of the course (electronically, on ‘Moodle’, or in course packs). You can buy the books in advance on Amazon or other online

bookstore, or in the campus bookstore Waterstones. If you do not want to buy them, you can borrow them at the LSE library (Library Course Collection).

Bazerman, M. and Moore, D A (2013). *Judgment in Managerial Decision Making*. New York: Wiley. 8th edition [Library Course Collection, HD30.23 B36]

Goodwin, P and Wright, G. (2009) *Decision Analysis for Management Judgment*. Chichester, Wiley, 4th Ed. [Library Course Collection, HD30.23 G65].

Day	Morning	Reading	Afternoon
1 20/06/2016	Lecture A1 – Introduction – Dr Valentina Ferretti Complexities in Making Decisions. Approaches in decision sciences. Introduction to Decision Analysis	Keeney (1982)	Class 1 Complexities in decision processes
2 21/06/2016	Lecture A2– Decision Making with Multiple Objectives I– Dr Valentina Ferretti Framing decisions; alternative versus value-focused thinking; decision with multiple objectives under certainty – multi-attribute value functions; structuring a value tree, properties of a value tree, evaluation of performances.	Keeney (1996) Keeney & Gregory (2005)	Class 2 Case study – decision making with multiple objectives (structuring)
3 22/06/2016	Lecture A3 – Decision Making with Multiple Objectives II – Dr Valentina Ferretti Eliciting trade-offs, multi-criteria evaluation of alternatives, sensitivity analysis & robustness of results.	Montibeller & Franco (2007) Keeney (2002)	Class 3 Case study – decision making with multiple objectives (evaluation – part 1)
4 23/06/2016	Lecture A4 – Decision Making under Uncertainty I – Dr Valentina Ferretti Structuring influence diagrams; structuring decision trees; modelling sequential decisions; calculating expected value.	Mcnamee & Celona (2007) Chapter 2 & 3	Class 4 Case study – decision making with multiple objectives (evaluation – part 2)
5 24/06/2016	Lecture A5 – Decision Making under Uncertainty II – Dr Valentina Ferretti Modelling risk attitude, utility functions, multi-attribute utility functions, scenario planning. Conclusions: validating decision analytic models, facilitated decision modelling.	Mcnamee & Celona (2007) Chapter 2 & 3 Franco & Montibeller (2011)	Class 5 Case study - decision making under uncertainty (structuring & evaluation)
6 27/06/2016	Session F1: Formative assessment I		
7 28/06/2016	Exam (TBC)		Exam (TBC)
8 29/06/2016	Lecture B1 – Introduction to Behavioural Decision Making – Dr Barbara Fasolo Decision quality and decision. What is a ‘good’ decision? Surveys.	Bazerman & Moore (2013) Ch. 1	Class 6 Quality of decisions

Day	Morning	Reading	Afternoon
9 30/06/2016	Lecture B2 – Deciding with conflicting objectives – Dr Barbara Fasolo Repertoire of choice strategies—from those with little thinking to those which require systematic analysis. Accuracy vs. effort framework: When to use which approach? Application to consumer decisions, particularly online	Schoemaker & Russo (1993) mainly p.26-31; Ranyard (2005)	Class 7 Choice strategies in action
10 1/07/2016	Lecture B3 – Preferences and values – Dr Barbara Fasolo How preferences are constructed by the context, reference point, question asked, frame imposed, and problem structure. Brief history of utility. Prospect Theory (Mis)predicting future utility. Applications to many domains, including public policy and marketing.	Read & Airolidi (2005)	Class 8 Preference construction in action
11 4/07/2016	Lecture B4 – Risk and Group Decision Making – Dr Barbara Fasolo What is 'risk'. Risk Perception and Risk-taking by individuals and managers. Risk assessment by groups, group polarisation. When many heads are better than one. Group-think.	Slovic (1987)	Class 9 Behavioural Lab Experience
12 5/07/2016	Lecture B5 – Deciding with uncertainty – Dr Barbara Fasolo Heuristics we use and traps we fall into in the presence of uncertainty. Overconfidence and other biases. 1/N heuristic for capital allocation. Planning fallacy. Applications to financial, legal and medical domains.	Hammond, Keeney & Raiffa (1998); Lovallo & Kahneman (2003); Bazerman & Moore (2013) Ch. 6 (pp. 106-110) and Ch. 12 (pp. 222-225); Shapira (1995)	
13 6/07/2016			Session F2: Formative assessment II
14 7/07/2016			
15 8/07/2016	Exam (TBC)		Exam (TBC)

Full reference list by lecture:

A1. Introduction

Required

Keeney, R.L. (1982) Decision Analysis: An Overview. *Operations Research*, Vol. 30, No. 5, 803-838.

Bell, D.E., Raiffa, H., Tversky, A. (Eds.) (1988) *Decision-Making: Normative, Descriptive and Prescriptive Interactions*. Cambridge: Cambridge University Press – chapter 1.

A2. Decision Making with Multiple Objectives I – Structuring Value Models

Required

Keeney, R.L. (1996) Value-focused thinking: Identifying decision opportunities and creating alternatives. *European Journal of Operational Research*, Vol. 92, No. 3, 537-549.

Keeney, R.L and Gregory, R.S. (2005). Selecting Attributes to Measure the Achievement of Objectives. *Operations Research*, Vol. 53, No. 1, 1–11

Recommended

Keeney, R.L. (1992) *Value-Focused Thinking: A Path to Creative Decision-making*. Cambridge: Harvard Univ. Press.

Goodwin, P and Wright, G. (2004) *Decision Analysis for Management Judgment*. Chichester, Wiley, 3rd Ed.

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A3. Decision Making with Multiple Objectives II – Evaluating Options

Required

Montibeller, G. and Franco, A. (2007) 'Decision and risk analysis for the evaluation of strategic options'. In: O'Brien FA and Dyson RG (eds.) *Supporting Strategy: Frameworks, Methods and Models*. Chichester: Wiley, pp. 251-284.

Keeney, R.L. (2002) Common mistakes in making value trade-offs. *Operations Research*, Vol. 50, No. 6, 935–945.

Recommended

Keeney, R. L. and Raiffa, H. (1993) *Decisions with Multiple Objectives: Preferences and Value Trade -offs*. Cambridge: Cambridge University Press, 2nd ed.

Belton, V. and Stewart, T. (2002) *Multiple Criteria Decision Analysis*. London, Kluwer.

A4. Decision Making under Uncertainty I Structuring Uncertainty Models

Required

Mcnamee, P. and Celona, J. (2007). *Decision Analysis for the Professional*. Menlo Park, SmartOrg, 4th Ed. Chapter 2 &

3

Recommended

- Clemen, R.T and Reilly, T. (2001). Making Hard Decisions. Pacific Grove, Duxbury. – Chpt. 3 & 4
- Howard, R.A. and Matheson, J.E. (2005) Influence Diagrams. Decision Analysis, Vol. 2, No. 3, pp. 127-143.
- Howard, R.A. and Matheson, J.E. (2005) Influence Diagram Retrospective. Decision Analysis, Vol. 2, No. 3, pp. 144-147.

A5. Decision Making under Uncertainty II – Evaluating Options & Conclusions

Required

- Franco, A. and Montibeller, G. (2011) "On-the-spot modelling and analysis: The facilitated modelling approach. In Cochran, J.J. (Ed.) Wiley Encyclopedia of Operations Research and Management Science, .
- Chichester, Wiley. McNamee, P. and Celona, J. (2007). Decision Analysis for the Professional. Menlo Park, SmartOrg, 4th Ed.

Recommended

- Clemen, R.T and Reilly, T. (2001). Making Hard Decisions. Pacific Grove, Duxbury. – Chpt. 12, 13 & 15.
- Phillips, L.D. (1984) A theory of requisite decision models. Acta Psychologica, Vol. 56, 29-48.

B1. Introduction to Behavioural Decision Making

Required:

- Bazerman, M. and Moore, D A (2013). Judgment in Managerial Decision Making. New York: Wiley. 8th edition, Chapter 1.

B2. Deciding with conflicting objectives

Required:

- Schoemaker, PJH, & Russo, JE, (1993) A pyramid of decision approaches. *California Management Review*, 36(1): 9-31. (mainly p. 26-31)

- Ranyard R (2005) Decision Making Strategies. in BS Everitt and DC Howell (Eds) *Encyclopedia of Statistics in Behavioral Science*, John Wiley & Sons Ltd, Chichester, vol. 1: 466-471;

B3. Preferences and values

Required:

- Read, & Airoldi (2005) "Utility Theory" in BS Everitt and DC Howell (Eds) *Encyclopedia of Statistics in Behavioral Science*, John Wiley & Sons Ltd, Chichester, vol. 4: 2098-2101

B4. Risk and Group Decision Making

Required

Slovic, P. (1987). Perception of Risk. *Science* 236(17 April): 280-285.

B5. Deciding with uncertainty

Required

Hammond, JS, Keeney, R., Raiffa, H. (1998) The Hidden Traps in Decision Making. *Harvard Business Review*. 47-58.

Lovallo, D. and Kahneman, D. (2003) Delusions of success - How optimism undermines executives' decision. *Harvard Business Review*, 81:7, 56-63

Book reference

Bazerman and Moore (2013), Ch. 6 (pp. 106-110) and Ch. 12 (pp. 222-225);

Shapira, Z. (1995). Risk Taking: A managerial perspective. New York: Russell Sage Foundation (available from LSE Library).

Teaching Team

Dr Barbara Fasolo – Lecturer of Part B (Behavioural Decision Making) and Course Leader



Dr Barbara Fasolo is Associate Professor in Behavioural Science in the Department of Management of the London School of Economics and Political Science. She currently serves as Head of the Behavioural Research Lab, Director of the Executive Master in Behavioural Science, and on the Department of Health Behavioural Insights Expert Advisory Panel. Barbara is an expert in behavioural decision-making, behavioural change, behavioural public policy, with a specific interest in digital nudging and choice architecture. Her background is inter-disciplinary: Economics (BSc, Distinction, Bocconi University, Italy), decision sciences (MSc, Distinction, London School of Economics, UK), and experimental psychology (PhD, University of Colorado at Boulder, USA).

She was Visiting Professor at IESE Business School (2012/13, Barcelona), Expert-in-Secondment for the European Medicines Agency (2009-12, London) and Post-Doctoral Fellow at the Max Planck Institute of Human Development (2002-04, Berlin). Barbara's research has been published in more than 50 outlets, including leading academic journals, (PNAS and the Annual Review of Psychology), books and invited chapters, and has been covered in media outlets such as The Harvard Business Review. She is a member of the Behavioural Science and Policy Association, the Society of Judgment and Decision Making and the European Association of Decision Making. Her lab, online and field research studies choices faced by patients, consumers, and professionals in the public (e.g., for the European Medicines Agency, the King's Fund, and the European Commission) and private sector. Barbara consults individuals and organisations keen to study and improve their decision behaviour, and design smart and kind choice architecture.

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Dr Valentina Ferretti – Lecturer of Part A (Decision Analysis) and Class Leader



Valentina is a Fellow in Decision Science in the Department of Management of the London School of Economics and Political Science. Her areas of expertise encompass (i) decision aiding, (ii) Urban planning and Environmental Impact Assessment procedures and (iii) policy analytics. Her research, which focuses mainly on the study of methodologies, techniques and tools (e.g. indicators' frameworks, Multicriteria- Spatial Decision Support Systems, economic evaluation) designed to support sustainability assessments of projects, plans and programs in the field of territorial transformation processes, has been published in Journals such as *European Journal of Operational Research*, *Land Use Policy*, *Ecological Indicators*, *Environment, Development and Sustainability* and *Journal of Multi-Criteria Decision Analysis*. One of her papers, concerning the integration of Multicriteria Analysis and Geographic Information Systems for locating undesirable facilities, was awarded the Wiley Practice Prize in 2011. Her Ph.D. thesis got the Giorgio Leonardi's prize (best Ph.D. thesis award) in 2012 within the XXXIII Annual Scientific Conference of the Italian Association on Regional Sciences. Valentina has held research visiting positions at the London School of Economics (UK), at the University of Pittsburgh (US), at the LAMSADE – CNRS Laboratory, at the Faculty of Geo-Information Science and Earth Observation - ITC, University of Twente, Enschede (The Netherlands) and at Ecole Centrale Paris.

Dr. Shweta Agarwal – Class Leader



Shweta completed her Ph.D. in Decision Sciences at the London School of Economics in 2014 as an AXA Research Fund scholar. Her research is on how conceptions of ‘uncertainty control’ can be modelled and their effect on risk attitudes. Currently, she is leading a team of data scientists on a decision science project for a large travel company. Since 2014, she has also been a part-time behavioural and data science consultant for various start-ups. From 2008 to 2013, Shweta worked periodically as a Quantitative and Behavioural Finance Consultant at Barclays, conducting research for global strategic and tactical asset allocation models as well as building wealth simulation and risk rating tools. She also worked as a quantitative analyst for Decision Technology. Shweta holds an MSc in Decision Sciences from the London School of Economics and a M.A. in Mathematics from the University of Cambridge.

Credit Transfer: If you are hoping to earn credit by taking this course, it is advisable that you confirm it is eligible for credit transfer well in advance of the start date. Please discuss this directly with your home institution or Study Abroad Advisor.

As a guide, our LSE Summer School courses are typically eligible for three credits within the US system and 7.5 ECTS in Europe. Different institutions and countries can, and will, vary. You will receive a digital transcript and a printed certificate following your successful completion of the course in order to make arrangements for transfer of credit.

If you have any queries, please direct them to summer.school@lse.ac.uk