BBA 315

Business Forecasting

S1 Day 2017

Dept of Marketing and Management

Contents

Disclaimer

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General Information

Unit convenor and teaching staff
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Brenton Price
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Credit points
3

Prerequisites
((39cp at 100 level or above) or (6cp in BBA or BUS units at 200 level)) and (STAT150 or STAT170 or MKTG216)

Corequisites

Co-badged status

Unit description
This unit explores business forecasting by considering the planning process of the organisation, the environment in which business forecasts are made, prediction of key variables using qualitative and quantitative information, and the practical considerations of forecast implementation. Quantitative predictions will generally make use of spreadsheets and simple statistical procedures that can be easily applied in the business environment.

Important Academic Dates

Information about important academic dates including deadlines for withdrawing from units are available at https://www.mq.edu.au/study/calendar-of-dates

Learning Outcomes

On successful completion of this unit, you will be able to:

To gain an understanding of the need for, and uses of, forecasting in a business context

To gain an understanding of both simple quantitative and qualitative forecasting techniques used in business

To learn the application of a number of forecasting techniques using Spreadsheets and other statistical programs

To understand the critical role of group synergies, dynamics and processes in determining the quality of group project output and overall learning outcomes

Assessment Tasks

Name	Weighting	Hurdle	Due
Quizzes	20%	No	Weeks 6, 10
Case Study/Report	30%	No	Part 1: 18/4, Part 2: 2/6
Final Examination	50%	No	University Examination Period

Quizzes

Due: **Weeks 6, 10**
Weighting: **20%**

There will be two within-semester quizzes held in tutorials in weeks 6 and 10. The first test will cover all material from weeks 1 - 4 inclusive while the second quiz will cover all material from weeks 5 to 8 inclusive. Both within-semester quizzes will consist of 30 multiple-choice questions. Each quiz will be worth 10% of the total mark in this unit.

Students need to sit the test in the tutorial in which they are officially enrolled. Failure to sit the test in the officially enrolled tutorial (unless permission has been obtained prior to the test week from the unit co-ordinator) will lead to zero marks for the quiz.

On successful completion you will be able to:

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of both simple quantitative and qualitative forecasting techniques used in business

Case Study/Report

Due: **Part 1: 18/4, Part 2: 2/6**
Weighting: **30%**

This assessment will be a written report based around a comprehensive business forecasting project. You will need to determine and find suitable empirical data which will be then be used as the basis of relevant business forecasts and associated recommendations.

This is, in general, a group assignment although there will be a separate individual component within the group assessment framework. Groups will be of either three (3) or four (4) participants with members in each group required to be enrolled in the same tutorial. You may not do this case study report individually. The number of people in the group will not be a consideration for the awarding of marks in the case study report. Groups will be formed in the tutorials in Week 2 of the semester.

The Case Study report submissions will be divided into two distinct components; Each component will be worth 15% of the total Case Study report mark.

Part 1 consists of some preliminary data identification,analysis and provision of basic forecasts and will be done **individually** by each member of the group. Each student is required to submit their response to Part 1 through Turnitin on the unit website by 11 pm,Tuesday 18th April.

Part 2 will involve the development of further forecasts for relevant business variables based on the empirical data and analysis in Part 1. This is to be done as a **group** and the analysis required may involve development of scenarios,strategies and provision of suitable recommendations. Each group is required to submit their response (**one response only per group**) to Part 2 through Turnitin on the unit website by 11 pm, Friday 2nd June.

For both Parts 1 and 2:

- No extensions will be granted.
- There will be a deduction of 10% of the total available marks made from the total awarded mark for each 24 hour period, or part thereof, that the submission is late (for example, 25 hours late in submission – 20%, 6 marks, penalty). This penalty does not apply for cases in which an application for disruption of studies is made and approved. No submission will be accepted after solutions have been posted.
- More details on the exact nature of the tasks required will be distributed in the early weeks of the semester.

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Final Examination

Due: **University Examination Period**
Weighting: **50%**

- The final examination will be a three-hour examination
- The exam will consist of Multiple Choice (10%) and Short Answer Questions (40%)
- All material in the unit is examinable
- *Most complex formulae, and statistical tables, will be provided with the examination. Simpler formulae will not be provided*
- *Students may bring into the examination*
  - *a non-programmable calculator (not a smart-phone) and*
  - *a single A4 page of notes on both sides in any format.*

Further details about the final examination will be given later in the semester.

The Macquarie university examination policy details the principles and conduct of examinations at the University. The policy is available at: http://www.mq.edu.au/policy/docs/examination/policy.htm

On successful completion you will be able to:
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Delivery and Resources

Classes

Number and length of classes: 3 hours face-to-face teaching per week, consisting of 1 x 2 hour lecture and 1 x 1 hour tutorial. The timetable for classes can be found on the University web site at: http://www.timetables.mq.edu.au/

Prizes

Prizes for this unit (if applicable). http://www.businessandeconomics.mq.edu.au/undergraduate_degrees/prizes_scholarships

Recommended Texts and/or Materials

You do *not* need to buy these books. Occasionally, handouts thereof might be distributed in class.

Hanke, John E & Wichern, Dean W, (2013), _Business Forecasting,_ (International Edition) Pearson, (9th Edition) ISBN: 9781292023007, ISBN 10: 1292023007

Also available as a Kindle book.

Additional readings

Hyndman, Rob J and Athanasopoulos, George (2014), _**Forecasting: principles and practice**_, OTexts Online: https://www.otexts.org/fpp/

Technology Used and Required

Students will learn to use spreadsheets (*MS-Excel*) and *MINITA*B.

Unit Web Page

The web page for this unit can be found at: _**iLearn**_ http://ilearn.mq.edu.au

Teaching and Learning Strategy

This unit is lecture- and tutorial-based. Typically, the class-time structure will be like this:

- **Lectures**: Business Forecasting theory and concepts will be discussed. We will establish links between theory and your personal knowledge in a business strategic planning setting during class discussions.
- **Tutorials**: students are required to work on some tasks of business forecasting solutions using several models and techniques. Student participation and meaningful contribution are essential to understand business forecasting concepts and calculations.

Lecture notes will be posted before each lecture on _**iLearn**_

Unit Schedule

Lecture/ Date	Lecture Topics Covered	Chapter(s)	Other Information

1 (1st Mar)	**Introduction to Forecasting in Management** • Explaining the unit outline. • The meaning and philosophy of forecasting. • Organisations, planning and budgeting.	Hanke & Wichern (H & W) Ch. 1 Hyndman & Athanasopoulos (H & A) Ch. 1	
2 (8th Mar)	**The Forecasting Environment** • Evaluation of forecasting tasks. • Definition of time series. • Sources of data for prediction. • Analysing components of Time Series. • Stationarity	H &W Ch. 2, 3, 5 H & A Ch. 2	**Tutorial 1** – Introduction to Forecasting **Group Formation**
3 (15th Mar)	**Introduction to Quantitative Forecasting Techniques** • Errors of prediction, Costs of errors • Simple predictor models • Naïve, MA, SES	H &W Ch. 4, 5 H & A Ch. 2, 7	**Tutorial 2** – Introduction to the Data Environment

4 (22nd Mar)	**Incorporating Steps and Trends**
	
	 • ARSSES model
	 • Prediction of trends
	     • Holts smoothing model
	     • Trend extrapolation
		H &W Ch. 4, 5
		
		 H & A Ch. 7
			Tutorial 3 – Elementary smoothing

5 (29th Mar)	**Exploring Seasonality** • Seasonal models • De-seasonalising data • Decomposition • Winters Smoothing Model	H &W Ch. 4, 5 H & A Ch. 6, 7	**Tutorial 4** – Trend smoothing and extrapolation
6 (5th Apr)	**Regression Models (I)** • Introduction to Regression models. • Ways to Evaluate Models • Diagnosing Regression Models	H &W Ch. 6, 7 H & A Ch. 4, 5	**Quiz 1 in Tutorials (covers weeks 1-4 inclusive, 30 MC questions)**
7 (12th Apr)	**Regression Models (II)** • Dummy Variables • Trends in Regression • Autoregressions, VAR	H &W Ch. 7, 8 H & A Ch. 4, 5, 9	**Tutorial 5** – Seasonal Models

	SEMESTER BREAK		**Group Project (Part 1) due Tuesday, 18th April, 11pm Sydney time)**
8 (3rd May)	**Business Indicators** • Leading Indicators • Cycles • Anticipatory Surveys		**Tutorial 6** – Regression (1)

9 (10th May)	**Judgmental Forecasting (I)**
	
	• Judgmental methods
	
	  • Subjective probability assessments.
	
	  • The role of judgmental prediction in the organisation
		H &W Ch. 10
		
		H & A Ch. 3
			Tutorial 7 – Regression (2), Leading Indicators

10 (17th May)	**Judgmental Forecasting (II)** • Scenario development methods • DELPHI approaches • Analogy methods	H &W Ch. 10 H & A Ch. 3	**Quiz 2 in Tutorials (covers weeks 5-8 inclusive, 30 MC questions)**
11 (24th May)	**Judgmental Forecasting (III)** • Other types of Judgmental Forecast Methods • Judgmental Forecast Examples • Combining Forecasts	H &W Ch. 10 H & A Ch. 3	**Tutorial 8** – Group Project (Part 2) Direction and Assistance
12 (31st May)	**Judgmental Forecasting (IV)** • Using all the information to forecast. • Putting it all together. • Forecasting in practice. • The future of forecasting	H &W Ch. 10, 11 H & A Ch. 3	**Tutorial 9** – Judgmental Forecast Methods **Group Project (Part 2) due Friday, 2nd June, 11pm Sydney time)**
13 (7th Jun)	**Revision, Exam Preparation**		**No tutorial this week**

Policies and Procedures

Macquarie University policies and procedures are accessible from Policy Central. Students should be aware of the following policies in particular with regard to Learning and Teaching:

Academic Honesty Policy http://mq.edu.au/policy/docs/academic_honesty/policy.html

Assessment Policy http://mq.edu.au/policy/docs/assessment/policy_2016.html

Grade Appeal Policy http://mq.edu.au/policy/docs/gradeappeal/policy.html

Complaint Management Procedure for Students and Members of the Public http://www.mq.edu.au/policy/docs/complaint_management/procedure.html

Disruption to Studies Policy (in effect until Dec 4th, 2017): http://www.mq.edu.au/policy/docs/disruption_studies/policy.html

Special Consideration Policy (in effect from Dec 4th, 2017): https://staff.mq.edu.au/work/strategy-planning-and-governance/university-policies-and-procedures/policies/special-consideration

In addition, a number of other policies can be found in the Learning and Teaching Category of Policy Central.

Student Code of Conduct

Macquarie University students have a responsibility to be familiar with the Student Code of Conduct: https://students.mq.edu.au/support/student_conduct/

Results

Results shown in *iLearn*, or released directly by your Unit Convenor, are not confirmed as they are subject to final approval by the University. Once approved, final results will be sent to your student email address and will be made available in eStudent. For more information visit ask.mq.edu.au.

Student Support

Macquarie University provides a range of support services for students. For details, visit http://students.mq.edu.au/support/

Learning Skills

Learning Skills (mq.edu.au/learningskills) provides academic writing resources and study strategies to improve your marks and take control of your study.

- Workshops
- StudyWise
- Academic Integrity Module for Students
- Ask a Learning Adviser

Student Services and Support

Students with a disability are encouraged to contact the Disability Service who can provide appropriate help with any issues that arise during their studies.

Student Enquiries

For all student enquiries, visit Student Connect at ask.mq.edu.au

IT Help

For help with University computer systems and technology, visit http://www.mq.edu.au/about_us/offices_and_units/information_technology/help/.

When using the University's IT, you must adhere to the Acceptable Use of IT Resources Policy. The policy applies to all who connect to the MQ network including students.

Graduate Capabilities

Creative and Innovative

Our graduates will also be capable of creative thinking and of creating knowledge. They will be imaginative and open to experience and capable of innovation at work and in the community. We want them to be engaged in applying their critical, creative thinking.

This graduate capability is supported by:

Learning outcomes

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To gain an understanding of both simple quantitative and qualitative forecasting techniques used in business
- To learn the application of a number of forecasting techniques using Spreadsheets and other statistical programs

Assessment task

- Case Study/Report

Discipline Specific Knowledge and Skills

Our graduates will take with them the intellectual development, depth and breadth of knowledge, scholarly understanding, and specific subject content in their chosen fields to make them competent and confident in their subject or profession. They will be able to demonstrate, where relevant, professional technical competence and meet professional standards. They will be able to articulate the structure of knowledge of their discipline, be able to adapt discipline-specific knowledge to novel situations, and be able to contribute from their discipline to inter-disciplinary solutions to problems.

This graduate capability is supported by:

Learning outcomes

- To gain an understanding of both simple quantitative and qualitative forecasting techniques used in business
- To learn the application of a number of forecasting techniques using Spreadsheets and other statistical programs

Assessment tasks

- Quizzes
- Case Study/Report
- Final Examination

Critical, Analytical and Integrative Thinking

We want our graduates to be capable of reasoning, questioning and analysing, and to integrate and synthesise learning and knowledge from a range of sources and environments; to be able to critique constraints, assumptions and limitations; to be able to think independently and systemically in relation to scholarly activity, in the workplace, and in the world. We want them to have a level of scientific and information technology literacy.

This graduate capability is supported by:

Learning outcomes

- To gain an understanding of the need for, and uses of, forecasting in a business context
- To understand the critical role of group synergies, dynamics and processes in determining the quality of group project output and overall learning outcomes

Assessment tasks

- Quizzes
- Case Study/Report
- Final Examination

Problem Solving and Research Capability

Our graduates should be capable of researching; of analysing, and interpreting and assessing data and information in various forms; of drawing connections across fields of knowledge; and they should be able to relate their knowledge to complex situations at work or in the world, in order to diagnose and solve problems. We want them to have the confidence to take the initiative in doing so, within an awareness of their own limitations.

This graduate capability is supported by:

Learning outcomes

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Assessment tasks

- Quizzes
- Case Study/Report
- Final Examination

Effective Communication

We want to develop in our students the ability to communicate and convey their views in forms effective with different audiences. We want our graduates to take with them the capability to read, listen, question, gather and evaluate information resources in a variety of formats, assess, write clearly, speak effectively, and to use visual communication and communication technologies as appropriate.

This graduate capability is supported by:

Learning outcome

- To understand the critical role of group synergies, dynamics and processes in determining the quality of group project output and overall learning outcomes

Changes from Previous Offering

There have been some changes from the previous offering in S1,2016:

The order of lectures has been slightly changed with lectures on ARIMA being deleted and an initial lecture on Judgemental Forecasting moved to later in the semester.

In terms of assessment components there have been some changes.

- There are now two Quizzes worth 10% each compared to one quiz worth 10%
- The Case Study report has two components with one component being assessed for each individual student while the second component is assessed for each group. The Case Study report total assessment is worth 30% and is divided equally between the individual and group components (15% each)
- The Final Examination is now worth 50% compared to 40% in the previous offering.
- The Reading Game assessment component has been deleted

Global Contexts & Sustainability

This unit teaches Business Forecasting principles that can be applied in a global context.

Sustainability issues are embedded in our discussions of equity, privacy and ethics throughout the progress of this unit.

Research and Practice

- This unit includes research by the unit convenor and other Macquarie University researchers
- This unit uses research from external sources. This unit gives you opportunities to learn how to critique current research at the frontiers of your discipline as a prelude to later conducting your own research.

- Journal of Forecasting

- Foresight: the international journal of applied forecasting

- International Journal of Forecasting

- Journal of International Business Studies

- Journal of Marketing Research