

# Economics Learning Standards for Australian Higher Education

Prepared by the Economics Learning Standards Working Party, sponsored by the Office of Learning and Teaching and the Australian Business Deans Council, and supported by the Economics Society of Australia.

*More information on the project can be found at*  
[www.economiclearningstandards.com](http://www.economiclearningstandards.com)

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## **Forward**

The Australian Government has commissioned the development of learning standards in economics under the auspices of an Office for Learning and Teaching (OLT) Fellowship. The development of these learning standards has the support of the Australian Business Deans Council and the Economics Society of Australia.

So far learning standards in Australia have been developed collaboratively under various auspices for a number of disciplines, including accounting, marketing, law, engineering, geography, history and chemistry.

A working party of academic economists has been appointed to develop the learning standards for Australian programs of study in economics at Bachelor and Masters (Coursework) level. The Economics Learning Standards Working Party is consulting extensively with the academic and practitioner community of economists. It is receiving high level advice from an expert advisory group.

# LEARNING STANDARDS FOR ECONOMICS

## 1. INTRODUCTION

Under the Tertiary Education Quality Standards Agency (TEQSA) legislation, all higher education institutions are required to be able to demonstrate: (i) that their internal processes for design and approval of each degree take account of external standards, (ii) that the standards achieved by their students are benchmarked against external standards. Learning standards such as those provided in this document, developed through extensive consultation with the discipline community, provide a reference point for benchmarking. The learning standards here are guidelines and do not preclude institutions developing their economics programs using alternative reference points.

## 2. BACKGROUND<sup>1</sup>

Under the Act, TEQSA is charged with evaluating the performance of higher education providers against five domains of standards: Provider Standards, Qualifications Standards, Teaching and Learning Standards, Information Standards and Research Standards. Only the first two of these standards have been specified, as at 30 April 2013, and are collectively known as the Threshold Standards.

One primary requirement of the Threshold Standards is that degree programs must demonstrate that they meet the specifications of the Australian Qualifications Framework (AQF).<sup>2</sup> Threshold Standards also include a number of other requirements in relation to learning standards that are relevant for the economics curriculum. For example, “the academic standards intended to be achieved by students and the standards actually achieved by students in the course of study are benchmarked against similar accredited courses of study offered by other higher education providers” (Australian Government, 2011, p.17).<sup>3</sup>

Although not distinguished in the current TEQSA Act, it appears that learning standards will be separated from teaching standards. The Government has defined learning standards as: “the explicit levels of attainment required of and achieved by students and graduates, individually and collectively, in defined areas of knowledge and skills” (DEEWR, 2011, p.3).<sup>4</sup>

The Higher Education Standards Panel (HESP) is a body established under the same legislation as TEQSA but is independent of TEQSA. The HESP’s primary role is to recommend to the Minister any new standards (e.g. Teaching and Learning Standards) or variations in existing ones. The HESP is required to review the existing Threshold Standards by the end of 2013. Indications from HESP suggest that while their review may identify

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<sup>1</sup> This section draws on Guest (2013) ‘Towards Learning Standards in Economics in Australia’, *Economic Papers*, 32, 1, 51-66.

<sup>2</sup> Paragraph 1.1 of Provider (Course Accreditation) Standards and Qualifications Standards point to <http://www.aqf.edu.au>

<sup>3</sup> Paragraph 5.5 of Provider (Course Accreditation) Standards

<sup>4</sup> Teaching standards relate to the process or delivery of education, while learning standards relate to student outcomes: what students know and can do (DEEWR, 2011, p.2).

specific learning standards, they will not attempt to develop learning standards for particular disciplines such as economics, nor are they explicitly required to do so under the TEQSA Act. Nevertheless, the Act requires a course of study to “take account of external standards and requirements, e.g. published discipline standards” (Australian Government, 2011, p. 14)<sup>5</sup>. Hence a number of disciplines in Australia have chosen to proactively and collaboratively develop their own learning standards, referencing the generic AQF specifications and, where available, international standards.

### **International learning standards in economics**

The OECD’s Assessment of Higher Education Learning Outcomes (AHELO)<sup>6</sup> Feasibility Study is a pilot project which is close to completion (early 2013). It aims to assess the feasibility of developing an internationally accepted framework for measuring final-year bachelor students’ capacity to use, apply and act on the knowledge and reasoning they have gained from their degrees. The economics strand of this project is being managed by the Australian Council of Educational Research (ACER), in collaboration with the Education Testing Service, on behalf of the OECD. A related project - Tuning Educational Structures in Europe (or simply “the Tuning project”) – has arisen to complement the European Bologna Process<sup>7</sup>. The Tuning project does not refer to “standards”. Rather it seeks to define “intended, expected or desired learning outcomes” in economics through subject-specific competencies, where competencies are demonstrated abilities to apply knowledge and skills. The Tuning and AHELO projects have been harmonised to some extent through the work of the Tuning-AHELO Experts Group (OECD, 2009). See Appendix D for the Tuning-AHELO learning outcomes in economics.

The UK’s Subject Benchmark Statements have been developed since 2000 and the economics benchmark statement was revised in 2007 for bachelor degrees. The economics statement specifies skills and “transferable” (or “key”) concepts. Threshold standards are specified in addition to typical learning outcomes. The UK Benchmark Statements are produced under the auspices of the Quality Assurance Agency (QAA) (the British counterpart to TEQSA).

In the U.S.A., quality assurance in higher education is not nationally regulated, instead operating through six regional accrediting bodies. Hence there are neither national discipline-based learning standards, nor national qualifications frameworks.<sup>8</sup>

The development of Australian Economics Learning Standards is informed by prior international work. The above-referenced UK and AHELO standards are outlined in Appendices C and D, respectively.

### **Discipline-specific learning standards in Australia**

The Australian Government funded the Learning and Teaching Academic Standards (LTAS) project in 2009. The LTAS project developed a set of threshold learning outcomes for 11

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<sup>5</sup> Paragraph 1.2 Provider (Course Accreditation) Standards

<sup>6</sup> The AHELO website:

[http://www.oecd.org/document/22/0,3746,en\\_2649\\_35961291\\_40624662\\_1\\_1\\_1\\_1,00.html](http://www.oecd.org/document/22/0,3746,en_2649_35961291_40624662_1_1_1_1,00.html)

<sup>7</sup> Bologna Process Web site: [www.ond.vlaanderen.be/hogeronderwijs/bologna/](http://www.ond.vlaanderen.be/hogeronderwijs/bologna/)

<sup>8</sup> However the Tuning USA project arose from the European Tuning project and has similar objectives. See <http://tuningusa.org/About/The-Five-Components-of-Tuning.aspx>

disciplines<sup>9</sup>, mostly at bachelor degree level but some at masters degree level. From the discipline cluster of Business, Management and Economics, the discipline of Accounting was chosen in February 2010 as the first discipline to produce a set of learning standards, which were published in December 2010 (Hancock et al., 2010). The LTAS project was completed in July 2011. The Australian Business Deans Council (ABDC) is extending the work of the LTAS project<sup>10</sup> through a discipline scholar<sup>11</sup> to guide the gradual development of standards in other business disciplines. The first of these disciplines was marketing for which the final standards statement was released in September 2012<sup>12</sup>.

The ABDC decided in August 2012 to sponsor the development of standards for economics. This decision was made in part to leverage parallel work that is being done in 2013 under the auspices of the Office of Learning and Teaching<sup>13</sup> through a National Senior Teaching Fellowship<sup>14</sup>, the purpose of which is to begin and lead the process of developing learning standards in economics. This work has been endorsed by the Economics Society of Australia (ESA).

Discipline-specific learning standards need to be consistent under the TEQSA legislation with the Australian Qualifications Framework (AQF), which “provides the standards for Australian qualifications”<sup>15</sup>. The AQF specifies generic descriptors of learning outcomes in terms of knowledge, skills and application abilities for ten levels of post-secondary qualifications including bachelor and masters degree graduates. These are generic descriptors and, although first introduced in 1995, were substantially revised in 2011 and became mandatory in January 2012 for all higher education providers and full compliance by 1 January 2015 (see Appendix B). A second edition was released in January 2013<sup>16</sup>.

### **The meaning of “learning standards”**

Learning standards describe the minimum learning outcomes that graduates are expected to have attained. They are not, however, intended as a detailed curriculum guide.

“Standards” do not imply “standardisation”. A statement of learning standards does not preclude other learning outcomes that providers may specify to differentiate their offerings - indeed diversity among academic programs is desirable. The TEQSA Act 2011 states: “Diversity in Australia’s higher education system, both within and between higher education providers, is important to meet diverse and changing student, employer and community expectations” (Australian Government, 2011, p. 8).

### **The process for developing economics learning standards**

Extensive consultation with the economics discipline community has occurred and will continue to occur at every stage of the process of developing economics learning standards.

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<sup>9</sup> Available at <http://disciplinestandards.pbworks.com/w/page/52657697/FrontPage>

<sup>10</sup> Details of the ABDC standards agenda is at <http://www.abdc.edu.au/3.74.0.0.1.0.htm>

<sup>11</sup> The Discipline Scholar is Mark Freeman.

<sup>12</sup> See “Academic Standards for Marketing in the Australian Higher Education Context at <http://www.marketinglearningoutcomes.com>

<sup>13</sup> The OLT is an office of the Department of Industry, Innovation, Science, Research and Tertiary Education.

<sup>14</sup> The Fellowship is held by Ross Guest, the chair of this working party.

<sup>15</sup> Australian Qualifications Framework July 2011, page 9, available at [www.aqf.edu.au/AbouttheAQF/AQFQualifications/tabid/98/Default.aspx](http://www.aqf.edu.au/AbouttheAQF/AQFQualifications/tabid/98/Default.aspx)

<sup>16</sup> All qualifications offered by a provider must fully comply with the AQF by 1 January 2015.

The process and outcomes are being guided by an Expert Advisory Group (Appendix F). A Working Party, consisting primarily of academic economists, is developing the standards through collaboration and wide consultation. Membership of the Working Party (Appendix E) was determined through an expression of interest process and appointed by a selection panel.

### **3. AIMS AND SCOPE OF LEARNING STANDARDS IN ECONOMICS**

In addition to assisting institutions in satisfying TEQSA requirements (including AQF compliance), these learning standards provide guidance to a range of stakeholders:

- academics designing new degree programs or majors with substantial economics content
- academics who want to benchmark their existing economics programs
- employers who want to know the set of skills and knowledge that have been attained by prospective employees with an economics qualification
- prospective students and secondary school course advisors who want to know what economics is about and the core learning outcomes that students can expect to attain
- the wider discipline community in order to provide assurance that economics learning outcomes reflect the evolving skills required for professional practice and further learning.

#### **What constitutes an economics program?**

These learning standards apply to a program of study badged as an economics program. An economics program to which these standards apply should specify knowledge content at progressive levels of depth in the fields of microeconomics, macroeconomics and related data analysis. This would typically be the case for a Bachelor (or Master) of Economics or other bachelor (or masters) degree with a major in economics. These programs may carry a reference to economics in the degree nomenclature, such as Bachelor of Commerce (Economics). Other degree programs may include a number of economics units of study which may constitute a minor rather than a major. Typically the depth and breadth of knowledge in an economics minor would not warrant coverage by the learning standards in this document.

Learning standards are provided at both bachelor level (AQF Level 7) and masters (coursework) level (AQF Level 9). “Masters level” applies to both entry-level masters degrees and advanced masters degrees. Entry-level masters degrees are typically taken by students who do not have a first degree in economics. The standards presented here do not apply to research masters degrees or honours degree programs in economics.

## 4. GUIDING PRINCIPLES IN DEVELOPMENT OF LEARNING STANDARDS

The Working Party agreed upon the following five principles guiding the development of these learning standards:<sup>17</sup>

1. Learning standards will reflect the learning outcomes that all graduates are expected to have attained. Additional learning outcomes and those of an aspirational nature are outside the scope of the learning standards.
2. Learning standards will not provide guidance about assessment of student learning outcomes.
3. Learning standards will recognize both diversity among economics programs and the need to allow learning outcomes to be compared across institutions and student cohorts.
4. Learning standards will be consistent with AQF standards and will be informed by international standards.
5. The process will be collaborative, evidence-based, transparent and iterative, incorporating feedback from the discipline community including academics and other professional economists from the private and public sectors.

## 5. THE NATURE OF ECONOMICS AS A DISCIPLINE

Economics has been defined as “the study of the factors that influence income, wealth and well-being. Its aim is to analyse and understand the allocation, distribution and utilisation of resources and their consequences for economic and social well-being.”<sup>18</sup>

More broadly economics provides analytical methods to address problems and issues in society. Analytical methods refer to theoretical models and empirical tools for explaining and predicting both microeconomic and macroeconomic behaviour. Microeconomics is concerned with the behaviour of consumers, firms, markets and industries, the way each of these groups interacts with the others, and the role of government regulation and institutions in moderating those interactions. Macroeconomics refers to the analysis of the behaviour of economy-wide phenomena such as unemployment, inflation, economic growth, the distribution of income and wealth, fiscal and monetary aggregates, exchange rates and a country’s international trade in goods, services and capital.

As a social science, economics draws on and contributes to a range of disciplines including psychology, politics, sociology, geography, history, law, environmental science and public health. It provides foundational principles for business and commerce disciplines. Economic models are stylized and simplified versions of reality. They are generally based on the premise that people respond to incentives when faced with alternatives, thereby allowing for analysis and prediction. Choosing the appropriate model is often a matter of judgment, and recognising its limitations in addressing a given problem is very important.

Much of public policy is informed by economic analysis – microeconomic and/or macroeconomic. Examples include, but are not limited to: environmental policy, public infrastructure policy, health policy, education policy, competition policy, taxation policy and

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<sup>17</sup> These principles were adapted from the guiding principles used in the development of learning standards for the Marketing discipline, available at [www.MarketingLearningOutcomes.com](http://www.MarketingLearningOutcomes.com).

<sup>18</sup> UK Benchmark Statement in Economics (2007, p.1).

<http://www.qaa.ac.uk/Publications/InformationAndGuidance/Documents/Economics.pdf>

welfare policy. In policy decision making, much of economic analysis is predicated on value judgment, implicitly or explicitly. The identification of value judgments is important in economic analysis and policy applications.

New economic principles emerge as society itself changes, as analytical methods improve and new knowledge is discovered. The behaviour of agents and groups in society are studied in light of the evolution of culture, social norms, institutions and laws. Alternative schools of economic thought coexist and the future of economics remains open to new approaches and developments.

## 6. LEARNING STANDARDS

Learning Standards for Economics are defined in terms of a set of minimum learning outcomes. Bachelor and Masters learning standards are distinguished in terms of knowledge and skills and their application. Compared with Bachelor graduates, Masters graduates are expected to have attained knowledge that is more complex, integrated and includes the understanding of recent developments in the discipline. They should be able to analyse more critically and reflectively, communicate to wider audiences, and be able to plan and execute a research-based project, capstone experience or piece of scholarship.

The five domains of learning standards are: knowledge, application, analysis, communication, and discipline awareness.

Although the learning outcomes are numbered separately, there is overlap in practice. For example, in order to discuss trends in housing markets graduates must demonstrate knowledge of concepts of supply and demand, they must apply this knowledge to housing markets, they must collect and analyse data, and they must coherently communicate their results. Hence the minimum learning outcomes should be interpreted as an integrated whole.

### i. Knowledge

**Bachelor** graduates will be able to identify, coherently explain and integrate core economic concepts.

**Masters** graduates will be able coherently explain the theoretical basis of core economic concepts, and synthesise advanced concepts with reference to recent developments in economics.

Appendix A provides a suggested list of core economic concepts. It is an indicative rather than an exhaustive list of economic concepts that could be addressed in an economics program, and the list may evolve over time.

#### **Example (microeconomics):**

**Bachelor** degree graduates will be able to explain how the incidence of an increase in the rate of a tax depends on the elasticity of demand and supply. At **Masters** level graduates will be able to synthesise an understanding of the incidence of an increase in a tax with concepts of economic welfare and economic efficiency, and be able to illustrate with reference to recent changes in the tax system.

**Example (macroeconomics):**

**Bachelor** degree graduates will be able to explain the theoretical impact of active fiscal policy in an open and closed economy. At **Masters** level, graduates will be able to investigate and reflect on the debate about active fiscal policy in an open and closed economy.

**ii. Application**

**Bachelor** graduates will be able to frame problems that are typically encountered in the private and public sectors in terms of core economic concepts and principles. They will be able to apply analytical reasoning in order to make informed judgments and decisions.

**Masters** graduates will be able to critically analyse and compare alternative models to form informed judgments and decisions given complex problems. They will also be able to plan and execute a substantial research-based project.

**Example (microeconomics):**

**Bachelor** degree graduates should be able to identify and evaluate the effects of a merger between two firms on the extent of competition in the market(s) in which they operate.

**Masters** degree graduates should be able to evaluate these effects by demonstrating deeper understanding of economic theory and practice in relation to market competition, and an ability to synthesise complex information about existing and potential market dynamics.

**Example (macroeconomics):**

**Bachelor** degree graduates should be able to identify and evaluate possible causes of a change in the rate of unemployment, including proximate causes such as changes to labour force participation, and broader economic influences such as government policy and macroeconomic aggregates. **Masters** degree graduates should be able to evaluate possible causes of a change in the rate of unemployment by applying and integrating a deeper understanding of economic models, with reference to a wider knowledge of related existing literature.

**iii. Data analysis**

**Bachelor** graduates will be able to identify and collect appropriate economic data to address typical problems faced by professional economists. They should be able to demonstrate awareness of appropriate analytical techniques, apply standard computer software to implement those techniques, and be able to interpret empirical results.

**Masters** graduates will be able to independently design a data analysis methodology to address a given question. They should have advanced data analytical skills and be capable of critical evaluation of the results of their analysis.

**Example (microeconomics):**

**Bachelor** degree graduates will be able to collect appropriate data in order to analyse the demand for housing; then enter the data into an appropriate software package, conduct appropriate procedures and interpret the results. **Masters** level graduates will be able to independently design a methodology to analyse data on the demand for housing. They should be able to justify the choice of a particular analytical technique and critically evaluate the results.

**Example (macroeconomics):**

**Bachelor** degree graduates will be able to analyse trends in inflation in Australia and internationally over the past 30 years. To do this they will be able to collect appropriate time series data from relevant statistical agencies, enter the data into an appropriate software package, run appropriate procedures and interpret the results. At **Masters** level graduates will be able to independently choose a methodology for analysing international inflation trends. They should be able to apply and critically evaluate the results of more advanced analytical techniques in analysing these trends.

**iv. Communication**

**Bachelor** graduates will be able to present a coherent exposition of economic knowledge and ideas, both orally and in writing, to a professional audience. They will also be able to communicate effectively, both orally and in writing, as a member of a team.

**Masters** graduates will be able to communicate interactively in multiple formats with a wide range of audiences including non-specialist economists, such as government decision makers, a board of directors, and the general public through the mainstream media. They will also be able to communicate complex ideas and concepts at an abstract level, both orally and in writing, as a member of a team.

**Example (microeconomics):**

**Bachelor** degree graduates will be able to contribute, as part of a team, to a written economic evaluation for a government department of a proposal to deregulate the taxi industry in a capital city. They will be able to clearly and coherently present this assessment orally to a team of public sector managers in a transport agency. **Masters** degree graduates will be able to provide such an assessment for multiple audiences ranging from professional economists to government ministers to the general public. They will also be able to provide a persuasive oral exposition to specialist and non-specialist audiences.

**Example (macroeconomics):**

**Bachelor** degree graduates will be able to contribute, as part of a team, to a professional written assessment of the likelihood of interest rate increases in the next six months and the effects that these would have on various industries and types of households. They will be able to present this assessment orally to professional audiences such as managers from the real estate, manufacturing and retail industries, as well as relevant government ministers. **Masters** degree graduates will be able to provide such a written assessment for multiple audiences ranging from professional economists to the general public. They will also be able to provide a persuasive oral exposition to specialist and non-specialist audiences.

**v. Nature of the discipline**

**Bachelor** degree graduates will be able to:

- identify the role and limitations of alternative assumptions in economic modelling, including implicit value judgments;
- explain the role of both evidence and theory in the evolution of economic thought; and
- demonstrate an understanding of the ethical dimensions of an economist's role in society.

**Masters** graduates will be able to:

- critically reflect on the role and limitations of alternative assumptions in economic modeling, including implicit value judgments;
- demonstrate awareness that economic problems may be amenable to more than one analytical approach and may have their roots in different schools of economic thought;
- appreciate that the economics discipline evolves with developments in theory, empirical evidence and the lessons learned from economic history; and
- demonstrate an understanding of the ethical dimensions of an economist's role in society.

### **Tasks of professional economists**

It is important to recognise that the tasks of professional economists often draw on more than one, and sometimes all, of the five domains of learning standards above. This is illustrated in the following types of tasks that professional economists do, often as part of teams. These tasks require knowledge, application, data analysis, communication and critical awareness of assumptions and value judgments. Hence new graduates should have the essential training to contribute to this type of work with appropriate guidance from experienced economists in a team:

- Conduct a social cost-benefit analysis of a government-funded bicycle path along a river of a major city and provide a consultancy report to a government agency.
- Analyse and report on the prospects for the housing market in a city, region or country.
- Provide qualitative and quantitative analysis of the effects of a given change in the value of the Australian dollar on the export earnings of the Australian mining industry.
- Contribute to an economic impact study of a decision to deregulate the taxi industry in a major Australian city, including a report explaining the effects on various stakeholders as well as the net social impact.
- Provide a written critical commentary on Commonwealth and State government budgets.
- Conduct and report economic analysis to inform an environmental impact assessment of a new deep water marina on a popular tourist location.
- Provide an assessment of the prospects for the major macroeconomic indicators for the Australian economy over the next 12 months.

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## **Appendix A. Economic Concepts for Learning Standards**

While these concepts are commonly thought of as core knowledge as the discipline currently stands, such a list may evolve over time. Many of these concepts are described in the existing international learning standards statements which are provided in Appendices C and D.

### **Generic economic concepts**

1. opportunity cost
2. incentives
3. market forces, equilibrium and disequilibrium
4. strategic thinking
5. expectations and shocks
6. marginal analysis
7. the potential gains from voluntary exchange
8. systems and dynamics
9. quantitative concepts
10. framing, abstraction and model building
11. the evolutionary nature of Economics

### **Microeconomic concepts**

1. decision-making and choice
2. production and exchange of goods
3. comparative advantage and gains from trade
4. the interdependency of markets
5. prices and market structure
6. types of market failures
7. economic welfare

### **Macroeconomic concepts**

1. employment and unemployment
2. national accounting aggregates
3. exchange rate determination
4. international trade, capital flows and the current account balance
5. interest rate determination
6. distribution of income
7. inflation, economic growth and business cycles

## Appendix B. AQF Levels Summaries and Learning Outcomes Criteria

	Level 7 (Bachelor)	Level 9 (Masters – coursework)
<b>Purpose</b>	The Bachelor Degree qualifies individuals who apply a broad and coherent body of knowledge in a range of contexts to undertake professional work and as a pathway for further learning.	The Masters Degree (Coursework) qualifies individuals who apply an advanced body of knowledge in a range of contexts for professional practice or scholarship and as a pathway for further learning.
<b>Knowledge</b>	Graduates of a Bachelor Degree will have a broad and coherent body of knowledge, with depth in the underlying principles and concepts in one or more disciplines as a basis for independent lifelong learning.	Graduates of a Masters Degree (Coursework) will have <ul style="list-style-type: none"> <li>• a body of knowledge that includes the understanding of recent developments in a discipline and/or area of professional practice</li> <li>• knowledge of research principles and methods applicable to a field of work and/or learning</li> </ul>
<b>Skills</b>	Graduates of a Bachelor Degree will have: <ul style="list-style-type: none"> <li>• cognitive skills to review critically, analyse, consolidate and synthesise knowledge</li> <li>• cognitive and technical skills to demonstrate a broad understanding of knowledge with depth in some areas</li> <li>• cognitive and creative skills to exercise critical thinking and judgement in identifying and solving problems with intellectual independence</li> <li>• communication skills to present a clear, coherent and independent exposition of knowledge and ideas</li> </ul>	Graduates of a Masters Degree (Coursework) will have: <ul style="list-style-type: none"> <li>• cognitive, technical and creative skills to investigate, analyse and synthesise complex information, problems, concepts and theories and to apply established theories to different bodies of knowledge or practice</li> <li>• cognitive, technical and creative skills to generate and evaluate complex ideas and concepts at an abstract level</li> <li>• communication and technical research skills to justify and interpret theoretical propositions, methodologies, conclusions and professional decisions to specialist and non-specialist audiences</li> <li>• technical and communication skills to design, evaluate, implement, analyse and theorise about developments that contribute to professional practice or scholarship</li> </ul>
<b>Application of knowledge and skills</b>	Graduates of a Bachelor Degree will demonstrate the application of knowledge and skills: <ul style="list-style-type: none"> <li>• with initiative and judgement in planning, problem solving and decision making in professional practice and/or scholarship</li> <li>• to adapt knowledge and skills in diverse contexts</li> <li>• with responsibility and accountability for own learning and professional practice and in collaboration with others within broad parameters</li> </ul>	Graduates of a Masters Degree (Coursework) will demonstrate the application of knowledge & skills: <ul style="list-style-type: none"> <li>• with creativity and initiative to new situations in professional practice and/or for further learning</li> <li>• with high level personal autonomy and accountability</li> <li>• to plan and execute a substantial research-based project, capstone experience and/or piece of scholarship</li> </ul>

## Appendix C. UK Benchmark Statement for Economics<sup>19</sup>

A graduate in economics who has attained the threshold level should:

- demonstrate knowledge of economic concepts and principles
- demonstrate knowledge of economic theory and modelling approaches
- demonstrate awareness of quantitative methods and computing techniques appropriate to their programme of study, and show an appreciation of the contexts in which these techniques and methods are relevant
- display knowledge of the sources and content of economic data and evidence and appreciate what methods might be appropriately applied to the analysis of such data
- know how to apply economic reasoning to policy issues
- demonstrate knowledge in an appropriate number of specialised areas in economics
- display awareness of the possibility that many economic problems may admit of more than one approach and may have more than one solution.

### “Transferable”<sup>20</sup> concepts

- **opportunity cost** - a problem solver or decision-maker must routinely ask 'what would have to be given up if...', where the answer does not always involve a simply calculated financial cost. It is often the case that actions are proposed that fail to recognise forgone alternatives. Opportunity cost allows the economist to think about the costs in terms of all resources. Also, there are many examples of economic policies which enhance efficiency yet reduce equity and vice-versa. There are also many examples where gains in one time period involve costs in other time periods. All of these examples encourage an appreciation of inevitable trade-offs
- **incentives** - economists are trained to recognise and evaluate the incentives implied by particular rules, and how to establish sets of rules that actually lead people to react in ways that give rise to some intended outcome. The ability to think logically about these issues is essential in the effective design of both policy and strategy
- **equilibrium, disequilibrium and stability** - these are concepts that economists make heavy use of and the typical graduate will have seen these deployed in economic argument with great regularity. The concept of equilibrium is a state where no participant has any incentive to change behaviour. The ability to recognise disequilibria and appreciate their stability properties, and to think coherently about reactions to this, are essential ingredients of good decision-making
- **strategic thinking** - economists learn the importance of strategic thinking, and the roles of opportunities, strategies, outcomes, information and motivation in the analysis of strategic actions, including conflict, bargaining and negotiation

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<sup>19</sup> The Quality Assurance Agency for Higher Education (2007). Available at: <http://www.qaa.ac.uk/Publications/InformationAndGuidance/Pages/Subject-benchmark-statement-Economics.aspx>

<sup>20</sup> The citation in the UK Benchmark Statement for this concept is (p.4): “This idea can be found in J Craven (1993), The Skills of an Economist, 'Royal Economic Society Newsletter', 4-5 April.”

- **expectations and surprises** - economists learn that behaviour partly depends on experience and partly on people's perceptions of what is expected to happen. Thus behaviour may change when unanticipated events occur. Effective decision-making requires the skill of reacting in a context where people's behaviour is based on expectations that may be confounded by subsequent surprises. Students in economics will have been exposed to these issues and this will enhance their potential effectiveness as decision-makers
- **the relevance of marginal considerations** - economists are trained to recognise that important decisions often relate to small variations in key variables and parameters. An action is worth undertaking if the additional benefit that accrues is greater than the additional cost incurred. The typical student in economics will be fully aware of the importance of the margin relative to the average
- **the possible gains from voluntary exchange** - economists study and measure the net gains that people, institutions and countries can obtain from economic interaction in the form of specialisation, employment, exchange and trade. The identification and measurement of gains relative to costs and the barriers to maximising net gains are important in devising appropriate policies to optimise the use of scarce resources with respect to various individual, institutional, political, social and environmental objectives
- **systems and dynamics** - many economic decisions or events can start a complex chain of events. Economists gain an understanding of the interrelationships between economic phenomena and how effects can accumulate or die away. The ability to see beyond the direct or short-term effects is a crucial insight that economists can bring to analysing the effects of both deliberate decisions and external shocks.

### Subject-specific skills

Economics graduates also possess other, subject-specific but highly transferable, rigorous skills. This transferability is evidenced by the wide range of careers into which graduates in economics move. The development of these skills is particularly emphasised in the course of an undergraduate degree through the study of economic principles and economic methods. These skills may be summarised as follows:

- **Abstraction.** From the study of economic principles and models, students see how one can abstract the essential features of complex systems and provide a useable framework for evaluation and assessment of the effects of policy or other exogenous events. Through this, the typical student will acquire proficiency in how to simplify while still retaining relevance. This is an approach that they can then apply in other contexts, thereby becoming more effective problem-solvers and decision-makers.
- **Analysis, deduction and induction.** Economic reasoning is highly deductive, and logical analysis is applied to assumption-based models. However, inductive reasoning is also important. The development of such analytical skills enhances students' problem-solving and decision-making ability.
- **Quantification and design.** Data, and their effective organisation, presentation and analysis, are important in economics. The typical student will have some familiarity with the principal sources of economic information and data relevant to industry, commerce, society and government, and have had practice in organising it and presenting it informatively. This skill is important at all stages in the decision-making process.

- **Framing.** Through the study of economics, a student should learn how to decide what should be taken as given or fixed for the purposes of setting up and solving a problem, i.e. what the important 'parameters' are in constraining the solution to the problem. Learning to think about how and why these parameters might change encourages a student to place the economic problem in its broader social and political context. This 'framing' skill is important in determining the decision-maker's ability to implement the solutions to problems.

## Numeracy

It is worth emphasising further the issue of numeracy. Economists frequently use information that is presented in some numerical form, and students should be appropriately trained in this regard. The raw data are often in tables, the processed data as a graph, an average, a correlation and so on. Numeracy, statistical and computing skills are necessary to handle this sort of information. Presentation skills are needed to communicate such quantitative information in usable ways, and particularly to give critical and coherent summary representations of data that cannot be readily absorbed raw. As well as formal manipulative and presentation skills required to deal with statistical data, economists learn not to be misled by numbers. They question whether the numbers represent what they claim (e.g. unemployment, price indices), they understand statistical significance (e.g. the margin of error in a poll or survey) and they are aware of at least some of the difficulties in sampling a population. In addition, with some understanding of econometrics, they recognise that conclusions drawn from data might be ambiguous.

## Appendix D. Economics Assessment Framework: AHELO Feasibility Study<sup>21</sup>

### Learning Outcome I: Students should be able to demonstrate subject knowledge and understanding

Subject knowledge and understanding can be measured by asking students to demonstrate:

- consistent and coherent command of the language of economics, including the ability to clearly define standard terms and explain basic concepts in both microeconomics and in macroeconomics; with recognition given to controversies;
- consistent and coherent command of the principles of economics, both microeconomics and macroeconomics, and the ability to structure economic arguments in a coherent and convincing way;
- the ability to explain how economic agents (individuals, households, firms, governments, etc.) make decisions and make choices, and the ability to use this understanding to solve problems related to economic decisions;
- the ability to explain the basic workings of an economic system and the role of policy in such a system; and
- the ability to articulate critical features and shortcomings in an economic model or in a method of analysis.

While actual course requirements and content within specific courses vary widely across and within countries, some of the common concepts that are covered in this assessment are listed below.

#### *A - Key economic concepts*

**i. Opportunity cost:** By asking and answering the question, “*what is given up when one alternative is selected?*”, economists can think about the costs of an action in terms of all resources. An assessment of what is given up may involve a comparison of alternatives at different times. Present value calculations are used to compare alternatives with different cash outflows and inflows at different times to reflect the time value of money and other factors such as risk.

**ii. Incentives and expectations:** People often react in predictable ways to incentives. Being able to predict how people will respond to incentives is critical in evaluating policies and strategies. The use of expectations in decision-making requires an understanding of probability and the notion that there can always be unexpected shocks or surprises. How agents form expectations and use expectations is debated in economics and forms the bases for alternative model formulations.

**iii. Equilibrium and disequilibrium:** A stable equilibrium describes a state in which there is a tendency for prices and output to remain the same. Equilibrium does not always result in full employment or optimal allocation of resources. Disequilibrium indicates at least some economic agents have an incentive to change behaviour. The ability to identify disequilibria is important in policy-making.

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<sup>21</sup> OECD (2012) Group of National Experts (GNE) on the AHELO Feasibility Study. Economics Assessment Framework. Paper prepared by the ACER Consortium, presented at the 8th meeting of the AHELO GNE, Paris, 28-29 November 2011

**iv. Strategic thinking:** This type of thinking involves the roles of opportunities, outcomes, information, and motivation in the analysis of actions, including conflict, bargaining and negotiation, and inter-temporal decision-making. Game theory techniques are sometimes used to model this behaviour.

**v. The relevance of marginal considerations:** Decision-making sometimes involves the analysis of small variations in inputs for which small changes in outputs can be expected. Unfortunately, continuous incremental analysis is not always possible. However, when the additional benefit of an action is greater than the additional cost, the action should be taken.

**vi. The possible gains from voluntary exchange:** Voluntary exchange takes place when parties expect to gain from that trade. The identification and measurement of gains relative to costs and the barriers to maximizing net gains are important in devising appropriate policies to optimise the use of scarce resources.

**vii. Systems and dynamics:** Many economic decisions or events can start a complex chain of reactions. The ability to see beyond the direct or short-term effects of a decision can contribute to analysing the effects of both deliberate decisions and external shocks.

**viii. Numeracy:** Economic analysis requires the use of numbers, mathematical concepts and methods, logical thinking, and reasoning in order to evaluate issues and solve problems.

### ***B - Microeconomic concepts***

**i. Decision-making and choice:** Economic agents are required to make choices because resources are scarce. Choices involve considerations of opportunity costs, marginal analysis, production trade-offs (production possibilities frontiers), relationships between goods (substitutes versus complements), elasticity, and substitution and income effects. Risk and uncertainty affect choices of economic agents.

**ii. Production and exchange of goods:** In some economic systems decisions about what to produce and how to produce are determined by markets, and in other economic systems such decisions are made by government agents. Economic activity, including the production of goods and services, may also occur outside of markets. Some economic decisions may be made through cooperation and bargaining.

**iii. The interdependency of markets:** Firms use scarce resources to produce goods and services for consumers, businesses, and governments. The demand for labour and other scarce resources is a derived demand and depends on the demand for the goods and services that those resources produce.

**iv. Prices and market structure:** In economic systems that rely on markets, consumer demand, costs, and the interaction of firms within specific market structures, determine price and output. The structure of costs, the conditions for entry and exit, product differentiation, and government regulations affect market structure. Government regulations, taxes, and subsidies also affect prices and output.

**v. Market failures:** Externalities, asymmetric information, moral hazard, adverse selection, the strategic behaviour of firms in imperfect markets, and public goods may lead to inefficiency or market failure. Market failure may lead to government intervention in markets. Differentials in power among firms and between firms and workers may also affect the allocation of resources.

**vi. Economic welfare:** Welfare economics evaluates how alternative economic arrangements affect economic efficiency and income distribution. One basic concept used to evaluate

alternative economic arrangements is Pareto optimality, but other criteria, including equity, equality, and the provision of a minimum standard of living are also important.

### ***C - Macroeconomic concepts***

**i. Employment and unemployment:** Full utilisation of resources (land, labour, capital) yields maximum production of goods and services with fixed technologies, social norms, and market and government structures. The unemployment of resources in an economy reduces that country's output to below its potential production (gross domestic product, GDP) level. Market forces need not automatically eliminate unemployment. There are many different types of unemployment (e.g., frictional, structural, cyclical). There is also a discouraged-encouraged worker phenomenon associated with changes in reported unemployment.

**ii. National income:** The value of a nation's production can be used to measure the nation's growth and make cross country comparisons. National income, also referred to as GDP, can be reported in real and nominal values.

**iii. International Trade and Finance:** Trade occurs between nations and is based on comparative advantage and the gains from trade. The trade in goods and services, financial transactions, and capital inflows and outflows determine the exchange rate (the international value of a country's currency) and are summarized in the balance of payments. The balance of payments consists of the current account (trade in goods and services and financial transactions between countries), the capital account (inflows and outflows of capital), and financial transfers which occur if the current account and capital account do not sum to zero. Changes in the international value of a country's currency may impact a country's interest rate and other macroeconomic variables. Trade barriers, such as tariffs and quotas, will impact both international trade and the international value of a country's currency.

**iv. International linkages and economies:** Internationalisation and globalisation are major economic trends leading to more trade and cooperation agreements and to greater economic integration among nations and within regions.

**v. Distribution of income:** While real GDP can measure a country's total production and GDP per capita looks at the average income of people in a country, neither addresses income differences. A Lorenz curve can be used to describe the degree of income inequality in a country and across countries. Discussion of poverty income levels and the percentage of the population below the poverty line add to an understanding of the distribution of income and its effects.

**vi. Inflation:** Decision makers who need to compare long-term costs and benefits to make decisions/recommendations can make better decisions if the price level is known and constant or if the change in the price level is known and constant. Unexpected price changes cause an unintended redistribution of income and lead to a misallocation of resources.

**vii. Economic Growth:** Economic growth can be measured by changes in real GDP or real GDP per capita. As a country grows, its citizens are generally better off economically. Growth can be increased through increased resources, increased education and training of workers, and changes in government policy. There are exogenous and endogenous theories of the determinants of long-run growth.

**viii. Business cycles:** Economic fluctuations do not occur in regular patterns, nor are they predictable. Changes in investment and employment decisions by producers can lead to changes in a country's total production. Reducing fluctuations in the business cycle can create a more stable economic environment.

**ix. Money, banking and finance:** Money eliminates the need for barter and makes the purchase of goods and services more efficient. Business, government, and consumer purchases are often financed through loans. Changes in a country's money supply and/or money demand impact other economic variables, such as interest rates, investment, consumption, value of the domestic currency, etc. These, in turn, affect a nation's production level.

**x. Economic policy:** Government, quasi-public, supranational, and international institutions formulate and implement policies that affect macroeconomic variables. Decisions of the central banks with respect to the money supply, and decisions of the government concerning taxation, spending, and regulation impact the decisions of other economic agents. These policies often have unintended, as well as intended, domestic and international consequences. Examination of normative and descriptive policies is included.

### **Learning Outcome II: Students should be able to demonstrate subject knowledge and its application to real world problems**

Subject knowledge and its application can be measured by asking students to demonstrate:

- effective application of economic reasoning and methods of analysis to specific topic areas (e.g. markets, public finance, environment, poverty, health, labour markets, international trade, economic development, etc.);
- recognition of assumptions and their implications for analytical results and economic debates; and
- use of economic reasoning to formulate and evaluate economic advice and policy in both the private and public sectors.

In demonstrating their mastery of subject knowledge and its application, students may be asked to use the economic concepts listed in Learning Outcome I in applying their economic knowledge to evaluate economic questions, issues, and policies. In contrast to Learning Outcome I, this learning outcome and the remaining learning outcomes focus more on multiple steps, multiple principles, and/or more sophisticated methods of analysis to address an issue.

### **Learning Outcome III: Students should be able to demonstrate the ability to make effective use of relevant data and quantitative methods**

The ability to make effective use of relevant data and quantitative methods can be measured by asking students to demonstrate significant knowledge of the sources of economic and social data, including an understanding of where and how to find such sources and the methods used to create or collect such data.

#### ***A - Knowledge and access to economic data***

Economic analysis may require the use of quantitative and qualitative data from primary and secondary sources and of historical information. It is necessary to know and be able to access different sources of national and international data provided by government, private sectors, and international organisations. It is also necessary to understand how data are collected as well as their limitations because conclusions of data-based research depend on the accuracy of such data.

### ***B - Methods for economic analysis***

Economic analysis may be done through the study of economic history and of other forms of data. Processing of data in different ways is needed in order to obtain information, statistics, and indicators that can help understand economic reality and economic problems and make it possible to test hypotheses. The knowledge and application of descriptive statistics, probability, hypothesis testing, correlation, and multivariate analyses can be considered as essential tools for assessing the application and relevance of economic theory and, hence, to determine if the evidence does not contradict economic assumptions and relationships.

### ***C - Interpretations and limitations of empirical economic analyses***

The ability to interpret results of data analyses and to draw the appropriate conclusions are essential skills. Equally important is the ability to recognize the limitations of the analytical method and data used.

### **Learning Outcome IV: Students should be able to demonstrate the ability to communicate to specialists and non-specialists**

The ability to communicate with specialists and non-specialists can be measured by asking students to demonstrate effective communication and explanation of economic arguments, both to those with disciplinary knowledge and to non-experts. Such communication should be both oral and written, and might involve the use of computer projection technology as well as the Internet.

Assessing students' ability to communicate to specialists and non-specialists requires the students to use several types of communication:

A - Sharing information, ideas, problems, and solutions

B - Using appropriate analytical tools, such as tables, charts, graphs, models, etc., to communicate with the audiences

C - Presenting quantitative information in usable ways

D - Summarizing data that cannot be readily absorbed raw

E - Explaining results to specialists and non-specialists

### **Learning Outcome V: Students should be able to demonstrate the ability to acquire independent learning skills**

The ability to acquire independent learning skills can be measured by asking students to demonstrate:

- the ability to think reflectively and critically about a range of issues in economics, as demonstrated through expression of and understanding of the history of economic thought, the capacity and limitations of alternative approaches to modelling economic behaviour, or other means of analysing or studying economic problems;
- the ability to pose and carry out the investigation of a specific problem in economics. This would involve (1) the formulation of a topic for study, (2) knowledge of previous research and results of the topic, (3) knowledge and choice of suitable methods for its investigation, and (4) the ability to draw conclusions from the investigation. Such conclusions might include areas for further investigation; and

- information literacy (the ability to identify, find, acquire, understand, evaluate, and use information and data about a specific economic problem). Demonstration of information literacy would involve (1) determining the extent of information needed, (2) accessing information effectively and efficiently, (3) critically evaluating information and its sources, (4) integrating selected information into the learner's knowledge base, and (5) using information effectively to accomplish a specific purpose .

The assessment of these learning outcomes should require students to use the following four competencies:

### ***A - Abstraction***

From the study of economic principles and models, students should learn to see how one can (1) abstract the essential features of complex systems, and (2) provide a useable framework for assessment and evaluation of the effects of policy or other exogenous events. Through this, the typical student acquires proficiency in how to simplify models while still retaining relevance. This is an approach that the student can then apply in other contexts, thereby becoming a more effective problem-solver and decision-maker.

### ***B - Analysis, deduction and induction***

Economic reasoning is highly deductive, and logical analysis is applied to assumption-based models. However, inductive reasoning is also important. The development of such analytical skills enhances students' problem-solving and decision-making ability.

### ***C - Quantification and design***

Data and their effective organisation, presentation, and analysis are important in economics. The typical student has some familiarity with the principal sources of economic information and data relevant to industry, commerce, society, and government, and has had practice in the organisation and presentation of data. This skill is important at all stages in the decision-making process. It is a central and crucial skill for an economics graduate because an employer will reasonably expect an economics graduate to be able to structure, analyse, and explain information presented in some numerical form. The raw data are frequently presented as tables (or datasets with a tabular structure) and the processed data as a graph, an average, a correlation, and so on. Numerate, statistical, and computing skills are necessary to handle this sort of information.

Presentation skills are needed to communicate such quantitative information in usable ways and particularly, to give critical and coherent summary representations of data that cannot be readily absorbed raw. In addition to forming manipulative and presentation skills required to deal with statistical data, economists learn not to be misled by numbers.

Economists question whether the numbers represent what they claim (e.g., unemployment, price indices), understand statistical significance (e.g., the margin of error in a poll or survey), and are aware of at least some of the difficulties in sampling a population. In addition, with some understanding of econometrics, they recognize that conclusions drawn from data might be ambiguous.

### ***D – Framing***

Through the study of economics, a student should learn how to decide what should be taken as given or fixed for the purposes of setting up and solving a problem, i.e., what the important parameters are in constraining the solution to the problem. Learning to think about how and

why these parameters might change encourages a student to place the economic problem in its broader social and political context. This framing skill is important in determining the decision-maker's ability to implement the solutions to problems.

Economic principles apply not only to business and management, but also other social science fields such as government, history, psychology, sociology, geography, law, and anthropology. Economists depend on mathematical concepts and statistical analysis techniques to evaluate and solve problems. First-cycle or bachelor degree students should be able to use the economic way of thinking and other analytical tools to evaluate problems/issues covering a wide and diverse range.

## **Hansen's proficiencies**

### **1. Graduates can access existing knowledge.**

Retrieve information on particular topics and existing economic issues in economics. Locate published research in economics and related fields. Track down economic data and data sources. Find information about the generation, construction and meaning of economic data.

### **Graduates can demonstrate a command of existing economic knowledge.**

Explain key economic concepts and describe how these concepts can be used. Write a précis of a published journal article. Summarise in a two-minute monologue or a 500- word written statement what is known about the current condition of the economy and its outlook. Summarise the principal ideas of an eminent economist. Elaborate a recent controversy in the economics literature. State the dimensions of a current economic policy issue.

### **2. Graduates are able to interpret existing economic knowledge.**

Explain and evaluate what economic concepts and principles are used in economic analyses published in daily newspapers and weekly magazines. Describe how these concepts aid in the understanding these analyses. Do the same for nontechnical analyses written by economists for general purpose publications, (e.g. Challenge, Brookings Review, The Public Interest).

### **3. Graduates are able to interpret and manipulate economic data.**

Explain how to understand and interpret numerical data found in published tables such as those in the annual Economic Report data of the president. Be able to identify patterns and trends in published data such as the Statistical Abstracts of the US. Construct tables from already available data to illustrate an economic issue. Describe the relationship among three different variables (e.g. unemployment, prices and GDP). Explain how to perform and interpret a regression analysis that uses economic data.

### **4. Graduates can apply existing economic knowledge.**

Prepare an organised, clearly written five-page analysis of a current economic problem. Assess in a four-page paper the costs and benefits of an economic policy issue. Prepare a two-page memorandum that recommends action on an economic policy issue.

### **5. Graduates are able to create new knowledge.**

Conduct a senior project that includes: detailed proposal for research, a polished 20-page paper of the results and an oral presentation.

## **Appendix E. Membership of the Economics Learning Standards Working Party**

Ross Guest (Chair), Professor of Economics, Griffith Business School, Griffith University

Jeff Borland, Professor of Economics, University of Melbourne

Helen Cabalu, Head of School of Economics and Finance, Curtin Business School, Curtin University

Gigi Foster, Senior Lecturer, School of Economics, University of New South Wales

Mark Freeman, Associate Professor, University of Sydney Business School and Australian Business Deans Scholar

Cameron Murray, PhD candidate in Economics, University of Queensland

Roderick O'Donnell, Professor of Economics, University of Technology Sydney

Joanna Poyago-Theotoky, Professor of Economics, School of Economics, La Trobe University

Helen Scarborough, Senior Lecturer in Economics, Faculty of Business and Law, Deakin University

Tommy Tang, Associate Professor in Economics, School of Economics & Finance, QUT Business School, Queensland University of Technology

John Tisdell, Head of School Economics and Finance, University of Tasmania

## **Appendix F. Membership of Economics Expert Advisory Group**

Allan Layton (Chair), Professor of Macroeconomics, Dean, Faculty of Business and Law, University of Southern Queensland, and member of Australian Business Deans Council

Chris Bajada, Associate Professor of Economics and Associate Dean (Teaching and Learning), UTS Business School, University of Technology Sydney and nominee of the Australian Business Deans Council Teaching & Learning Network

Russell Ross, Associate Professor of Economics, University of Sydney, and nominee of The Economic Society of Australia, (nominated by President of the ESA, Professor Bruce Chapman of ANU)

Lisa Gropp, First Assistant Commissioner, Productivity Commission

Stephen Halmarick, Head of Investment Market Research at Colonial First State Global Asset Management, and Chairman, Australian Business Economists

Michael Kidd, Professor and Head of Economics and Finance, QUT, and nominee of the Australasian Standing Committee, Econometric Society

Michael Knox, Chief Economist and Director of Strategy, RBS Morgans

Brian Parmenter, Senior Consultant, ACIL Tasman (and, previous to that, Chair of QLD Competition Authority).