

SACE Subject Consultation – Economics Renewal

Submission to the SACE Board

July 2018

1. The Decline in the Study of Economics¹

1.1 The Interests of the Reserve Bank of Australia

As an economic agency and policymaker, the Reserve Bank of Australia takes an interest in developments affecting Economics students and educators and has recently put in place a public education program designed to support them. The Reserve Bank is committed to this program because it has observed a significant decline in the size and diversity of the student population in Economics – both at a secondary and tertiary level.

Teaching Economics has many social benefits. First, there are the benefits of economic literacy in the wider community, with teaching Economics at secondary schools exposing a potentially large group of citizens to economic ideas. Second, there needs to be a talented and diverse pool of economists from which organisations can recruit, particularly those organisations that make public policy decisions. Third, the analytical and problem solving skills acquired in the study of Economics are well suited to the changing nature of work.

The renewal of the South Australian Economics subject outline presents an opportunity to expose secondary school students in South Australia to the key principles of economics and the relevance of the subject – both in their daily lives and as a field of study. However, an important issue for consideration in the subject renewal is whether the proposed changes are sufficiently well aligned with student capability and interest, along with teacher proficiency. Should this not be so, there is the risk of further falls in Economics enrolments or disengagement with the subject among students in South Australia, a state where Economics enrolments are already unusually low.

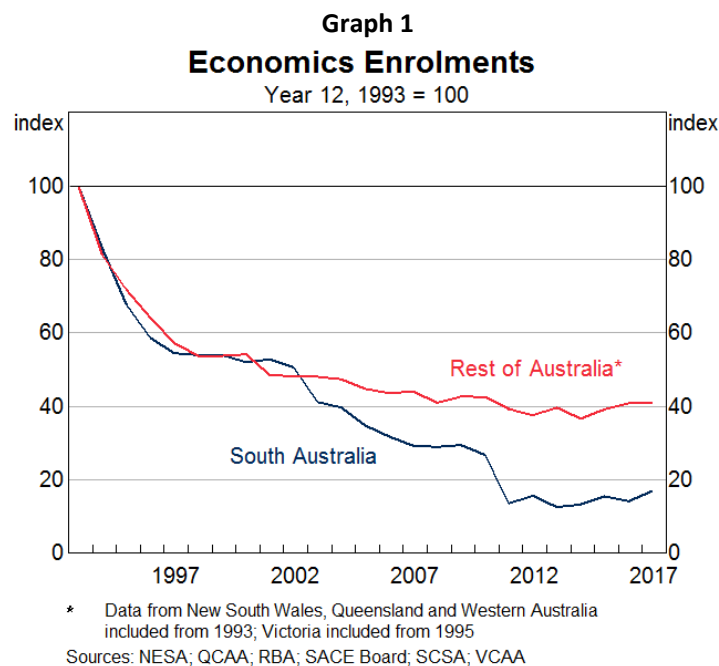
1.2 Trends in Economics Enrolments in South Australia

The Reserve Bank has conducted analysis of the landscape of Economics enrolments in Australian secondary schools, including a case study for New South Wales that used detailed unpublished data. The theme of this analysis is that, over the course of a generation, there has been a dramatic fall in the size and diversity of the Economics student population at secondary schools (with similar trends evident

1 This submission draws on the research of economists in the Reserve Bank's Public Access & Education Team, Tim Atkin and Tanya Livermore, and those on secondment to the team, Richard Evans and Melissa Wilson. Aspects of this work can be found in speeches delivered by Jacqui Dwyer in 2017, [Studying Economics: The Decline in Enrolments and Why it Matters](#) and in 2018 [What Happened to the Study of Economics?](#).

at university). Using less detailed, publicly available data for South Australia, we are able to draw similar conclusions about Economics enrolments in that state.

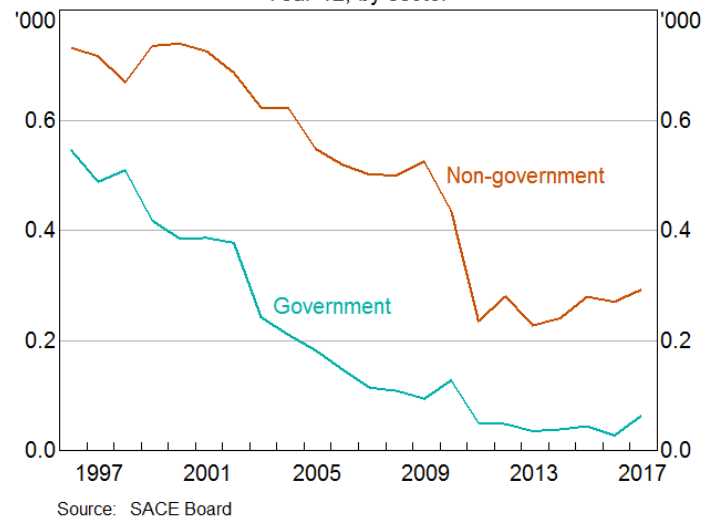
Graph 1 shows Year 12 Economics enrolments in South Australia and the rest of Australia from 1993 to 2017, expressed as an index.² It highlights the sharp fall in Economics enrolments that has occurred nationally and was most pronounced in the first half of the 1990s, when vocationally oriented business subjects were introduced. However, Economics enrolments in South Australia have fallen by proportionately more than those in the rest of Australia. The fall in South Australian enrolments hastened in the early 2000s and again in 2011 when changes to the total number of credits required to achieve an ATAR, combined with the introduction of the compulsory Research Project, encouraged more Year 12 students to study four rather than five subjects; fewer students choose Economics.



Graph 2 shows the number of Economics enrolments in government and non-government schools in South Australia (since 1996). With Economics once being readily available as a subject at government and non-government schools, enrolments were reasonably high at schools in both sectors – albeit higher at non-government schools. There has since been a general fall in Economics enrolments, but the fall in enrolments in government schools has been more pronounced. In 2017, Economics was offered at only four government schools in the state, significantly reducing the subject’s availability to a large part of the student population in South Australia.

2 The rest of Australia grouping excludes Tasmania, the Northern Territory and the Australian Capital Territory, for which we were unable to obtain the relevant time series of Economics enrolments data.

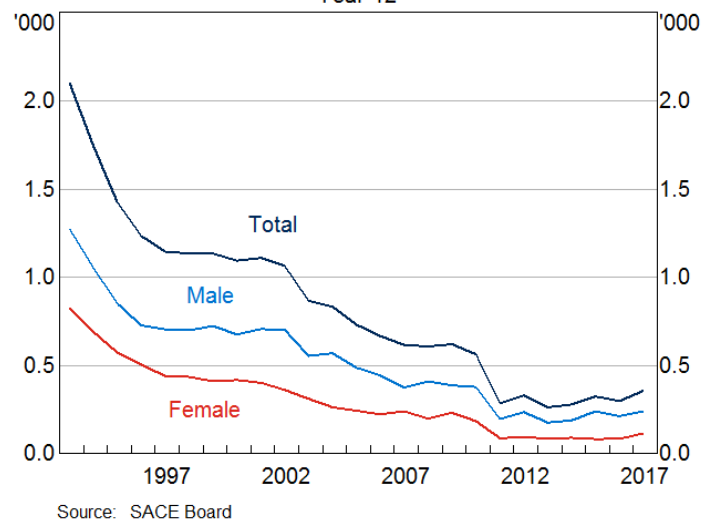
Graph 2
Economics Enrolments in SA
 Year 12, by sector



Graph 2 also shows that while the absolute number of Economics enrolments in non-government schools exceeds that for government schools, there was an abrupt fall in the late 2000s. This followed the changes to credit requirements for an ATAR and introduction of the Research Project, with non-government schools displaying a proportionately greater response than government schools to the change in incentive to offer Economics. These sectoral trends in enrolments have weighed on both the size and the diversity of the Economics student population in South Australia.

Another dimension of diversity is gender. Graph 3 shows that enrolments in Economics by female students in South Australia have fallen significantly over the past two decades. The decline broadly mirrors the pattern throughout Australia, although the ratio of female to male Economics students in South Australia has been consistently lower than the ratio nationally.

Graph 3
Economics Enrolments in SA
 Year 12



1.3 Attitudes to Economics

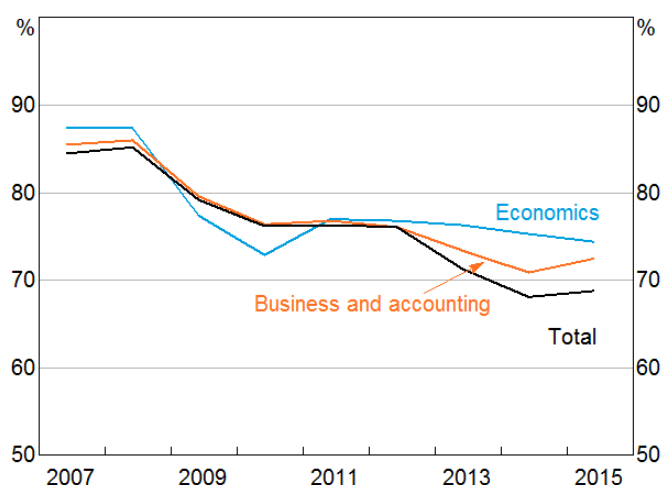
Since the establishment of its public education program two years ago, the Reserve Bank has consulted widely with educators, education authorities and students (including in South Australia). Feedback suggests that student engagement with economics is relatively low. One contributing factor has been the largely benign economic environment in Australia for the past 25 years or so. There has not been the same scale of national debate about economic issues as in the 1980s and early 1990s, when recession was a lived experience for households, and when financial deregulation, labour market deregulation and tariff reform were part of national conversations.

However, it is also the case that economics has an ‘image problem’. Many students do not understand what economics is and how it might be relevant to them. As an analytical subject with a quantitative element, Economics is often perceived as being difficult to learn. It is also described as difficult to teach – especially given the limited teaching resources with an Australian context and the challenge of incorporating changing economic conditions into lesson plans. In contrast, business-oriented subjects are widely perceived as more employable, easier for students to learn and easier for educators to teach, especially those teaching out of field (as they have fewer concepts to explain and more readily available content). In addition, there are deterrents to female students who see a lack of diversity in economic role models and textbook examples. There is also the suggestion that female students are more risk-averse than their male peers in considering the returns to studying Economics. Together, these attitudes have been associated with a displacement of economics by business subjects.

1.4 How the Labour Market Values Economics

Decisions about subject choices at school are influenced by the returns to studying a given subject. Labour market outcomes for Economics graduates suggest that perceptions about the returns to studying Economics are not well founded. Employment rates and starting salaries for Economics graduates have been at or above average in recent years (Graphs 4-5). Furthermore, compared with business graduates, Economics graduates have similar employment rates but higher wage outcomes, with the analytical skills that are acquired from studying Economics being rewarded by employers.

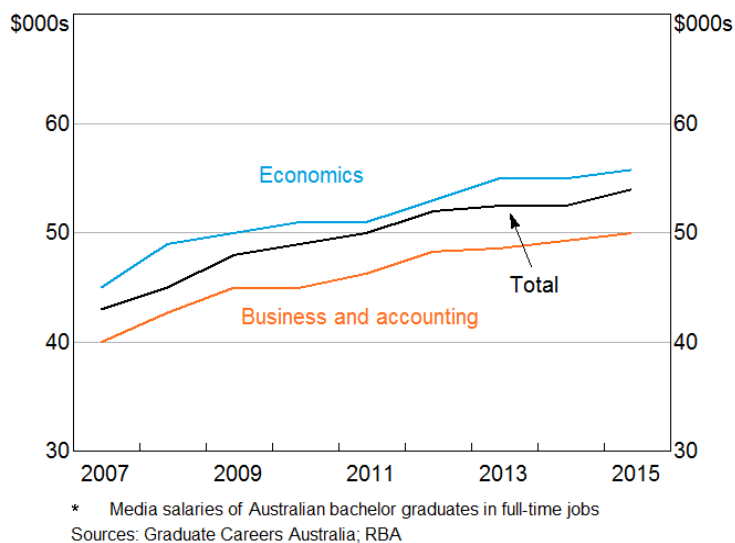
Graph 4
Full-time Employment*



* Per cent of Australian bachelor degree graduates available for full-time work

Sources: Graduate Careers Australia; RBA

**Graph 5
Graduate Starting Salaries***



The actual returns to students who study economics, and its wider social benefits, speak to the merit of ensuring that the Economics subject renewal fosters greater student participation.

2. Considerations for the Economics Subject Renewal

2.1 Engagement and Capability

The renewed Economics subject outline provides an opportunity to demonstrate the relevance of Economics and encourage engagement with it by students and educators. The Bank's interpretation of the intention of the new subject outline is that it seeks to develop students' analytical skills so that they can undertake economic enquiry, pose economic questions, and consider the answers to these questions in terms of both economic theory and data-based evidence. The Bank supports the notion expressed by SACE to educate Economics students so that they 'think like an economist'.

However, given the critically low level of enrolments in Economics in many secondary schools (particularly government schools and less well-resourced non-government schools), an important question is whether the new subject outline is consistent with: the capabilities of most students and teachers; an appropriate coverage of topics; the ability of these topics to be reasonably assessed; and the need for student engagement.

On matters of curriculum and pedagogy, the Reserve Bank takes strategic advice from its [Educators Advisory Panel](#). The Bank's public education team meets with the Panel and discusses a broad range of issues of relevance to the Bank's support of the economics student and teaching body, including noteworthy changes to curricula. At a recent meeting, the renewal of the South Australian Economics subject was discussed. The Panel noted that the proposed Economics subject outline introduces:

- econometrics
- applied statistics
- game theory
- a significant increase in the range of capabilities that students are required to demonstrate and that teachers are required to assess

- a substantial increase in the range of possible lines of economic enquiry.

In this submission, the Reserve Bank offers high-level collective feedback from the Panel as well as its own perspective as an economic agency with an interest in the health of the economics student and teaching body. (The South Australian Panel member has provided their own submission to SACE, and other Panel members have also made submissions or responded to SACE's survey about the subject.)

The collective view of the Panel is that the shift in focus in the proposed South Australian Economics subject outline towards econometrics, statistics and game theory would adversely affect engagement and exceed the capabilities of most students and teachers (especially those teaching out of field). These components would introduce content that is typically taught at university, and typically taught separately from those subjects that establish foundation knowledge in economic principles. Furthermore, Year 12 students would be expected to grasp this content having only been exposed to 5-week blocks of economics, business and accounting, intermittently during Years 7-10. The new elements of econometrics, statistics and game theory are not included in Stage 1 of the subject, yet are named as foundation knowledge and skills for the economic thinking to be developed in Stage 2. While quantitative methods like econometrics are important tools for professional economists and those undertaking economic research, of greater value to the secondary school student is foundation knowledge in economic concepts and their application to the world around them.

The Panel is of the view that the additional quantitative and theoretical subject content would significantly exceed the readiness and capability of most students to learn and the proficiency of most secondary school teachers to deliver. This would be likely to deter students from taking, or successfully completing, Economics in South Australia at a time when enrolments are already at a critically low level.

The Panel is also concerned about the extent of choice in economic content and limited context and direction for managing that choice. It considers that this situation would be difficult for teachers to navigate (including inexperienced teachers and those teaching out of field). Similarly, it would be difficult for students to undertake self-directed learning. This extent of choice could result in wide disparities in course coverage and approach, rather than ensure that students graduate with a common core of knowledge in economics.

In addition, the Panel does not consider the learning requirements in the new subject outline to be adequately explained, creating ambiguity as to how they will be assessed. Regarding the assessment instruments, the Panel is concerned that they require students to complete many short exercises in response to tasks that are ambitious in their requirements for meaningful completion.

In trying to equip Year 12 students to 'think like an economist', the subject outline appears to be introducing a truncated version of most core topics that a student would undertake when studying Economics at university. Given the dramatic fall in size and diversity of the Economics student population, and the social returns to teaching economics, the Reserve Bank considers it important that a renewed Economics subject outline establishes foundation knowledge in economics at an appropriate level for the students' stage of learning and the teachers' economic knowledge and teaching proficiency. Doing so would help support economic literacy in the community and increase engagement with economics, yielding longer-term gains for the health of the Economics student and teaching body.

The Reserve Bank understands that the inclusion of new quantitative elements in Stage 2 Economics is designed to enhance the relevance of the subject by providing practical ways in which students can

interpret and assess 'everyday' economic events. The Bank does, however, query whether SACE has interpreted the proposed new elements differently to practitioners. (Econometrics, for example, has a particular meaning to practitioners that is likely to exceed the intent of SACE.) If so, this matter could be easily resolved through different 'labels' being assigned to some of the new subject elements. The Bank welcomes the opportunity to discuss this possibility and work towards a common understanding of terms, so that the objectives of SACE and the issues raised in this submission can be reconciled.

2.2 Recommendation

The Reserve Bank supports the intent of the proposed South Australian Economics subject outline and values the opportunities for consultation. However, the Bank's Educators Advisory Panel has raised a number of concerns about the subject. Given this, and the Bank's own research into Economics enrolments at secondary schools, it recommends that SACE reviews the proposed subject outline so that it better aligns with the conditions required for the effective renewal of Economics as a field of study in South Australia.

Recommendation:

- **Clarify the economic concepts to be taught in Stages 1 and 2 of the renewed Economics subject.**
- **Clarify the learning criteria in both Stages.**
- **Refocus the Economics subject outline on foundation knowledge in economics.**
- **Remove econometrics, applied statistics and game theory from Stage 2.**
- **Explore alternative descriptions of the quantitative subject elements so that they better describe the intent of the subject renewal.**

Appendix: The Reserve Bank's Public Education Program

The Reserve Bank has recognised the importance of supporting Economics educators and students, as well as the general public. The Public Access & Education team coordinates a program that includes the elements listed below.

Educators Advisory Panel

The Reserve Bank has established a group of external education experts to provide feedback and guidance on the Bank's initiatives in support of Economics education. The [Panel](#) comprises presidents of the national and state associations for Economics educators, the president of the national careers advisory body, two academics and two 'best practice' teachers.

Professional Development

Professional development activities for Economics educators have been provided. The annual [Teacher Immersion Event](#) is accredited as Registered Professional Development (addressing 6.2.2, 6.3.2 and 7.4.2 from the Australian Professional Standards for Teachers) towards maintaining Proficient Teacher Accreditation in New South Wales.

Ambassador Program

An Ambassador Program has been established, with a group of Reserve Bank economists being equipped to [deliver talks](#) to teachers and students and act as advocates for economics who exemplify what an economist does.

Educational Talks

The Reserve Bank Ambassadors give talks to students and educators on economic concepts, economic conditions and the roles and functions of the Reserve Bank. These talks are delivered at the Bank, large forums and conferences, lectures at universities and include incursions to schools.

Resources

Curriculum-relevant content is being developed to meet the needs of Economics educators and students. It is available on the [Education section](#) of the Bank's website. Current content includes:

- Explainers, In a Nutshell, Snapshots – various short guides that contain information with different levels of detail. They cover key economic concepts, economic developments, economic statistics and responsibilities of the Reserve Bank.
- Chart pack – graphs summarising macroeconomic and financial market trends in Australia (updated monthly).
- Standard presentations – slide presentations on the Bank's roles and functions, monetary policy formation and recent economic trends in Australia.
- Videos – videos that explain what economics is and its relevance. In one video entitled [What is Economics?](#), Bank economists explain what economics is, the skills that economists use and the issues to which they are applied. In another entitled [The Future of Work](#), a

senior Bank economist talks about the changing nature of the Australian workforce and the skills that will be highly valued in the future.

Scholarship

The Reserve Bank sponsors a Premiers' Teaching Scholarship devoted to developing a more inclusive approach to teaching Economics to women and girls.

Reserve Bank of Australia
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