



THE SOCIAL SCIENCES SHAPE THE NATION



ACADEMY OF THE SOCIAL SCIENCES
IN AUSTRALIA

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ISBN: 978-0-9925829-2-0 (print)

ISBN: 978-0-9925829-3-7 (online)

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FOREWORD

The opening piece in this volume, entitled “Hiding in Plain Sight”, presents a few graphs that herald a tone heard quietly throughout the other chapters: the oft understated but really quite impressive salience of the social sciences.

The social science qualifications of those who work in the Australian Public Service and leading ASX companies is one indicator featured there. The other indicator throughout this report is the contributions from social scientists to national policy. Such contributions are the predominant focus of the volume - which features cases where major policy advance has come from social science research and efforts. In critical aspects of Australian life, social science has helped change how we do things, for the better.

Beyond curiosity-driven research and beyond the transmission of knowledge, this volume encompasses engagement and impact. The volume presents a selection of what could be many examples of this. Indeed selection for the report is so invidious that we apologise to the many not

represented. We will be encouraging our Academy Fellows and other colleagues to provide more and help us further document what has been achieved.

Matters having to do with business and high finance, the governance of health, taxation, education, transport, international trade, security, immigration, wages and conditions, essential services, communities and just about everything else that affects the living standards and wellbeing of Australian people, is grist for the mill in social sciences. Perhaps it is the sheer commonness of what social sciences achieve across such a vast portfolio that makes them easy to take for granted.

But not always. One primary function of the social sciences is to provide socially critical analysis. This means asking sometimes uncomfortable and challenging questions about the standing of our ways. Engagement in serious debate of this kind is one clear hallmark of an open, liberal democracy in contrast to coercive, closed authoritarian systems.

Most social science is, nevertheless, a quiet achiever in going about what it is and does. Social science is systematic development of logic and evidence to help understand human behaviour in its social setting, including the nature of economic, political and community activity and institutions.

Social science also works with colleagues in the natural and physical sciences, technology and engineering, and arts and humanities, in these tasks and in their areas of concern too. Indeed pursuit of such 'holistic' knowledge is becoming a major task of modern scholarship alongside increasingly reflecting on the process of engagement and impact that is of most concern here.

For the present, I commend this volume to you as a sample of what professional Australian social scientists, and those with social science backgrounds, have been doing for many years, working for the public and national benefit, even if not always in plain sight, and if not always in the headlines.

The contributions ranging from health-care to water-management, from competition policy to equal pay and participation, and from immigration to education and more are expositied. These should help convince any doubters in this era of "fiscal consolidation" and "post-fact decision-making" that we must as a nation support enhancement of the knowledge base in our society.

The production of this volume owes much to those who gave generously of their time. Contributors and others are listed on the preceding pages and deserve our thanks.

PROFESSOR GLENN WITHERS
Academy President



The advancement of the Australian economy relies on robust research from physical science and social science alike. The social sciences have been instrumental in assisting government to design public policy. They also provide valuable insight into how to turn a scientific discovery into an informed policy for the nation, and how to implement that policy to ensure effectiveness.

Innovation is most successful when it further integrates social and scientific knowledge.



Senator The Hon Arthur Sinodinos AO
Minister for Industry, Innovation and Science

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*Innovation is the implementation of
invention. The social sciences turn research
into policy and policy into impact.*

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SOCIAL SCIENCE - BY THE NUMBERS

All of these achievements owe some credit to social science research, programs or systems.

To find out more, turn the page ...

1ST

Australia ranked 1st in the 2013 OECD Better Life Index.



The RBT Program has directly contributed to a **33%** reduction in alcohol related fatalities on Australian roads.



Australian farmers produce enough food to feed 60 million people, with 60% of produce exported to Asia.

**\$18.24
BILLION**

HECS has generated \$18.24 billion in Government revenue in 25 years.

3RD

Australia is ranked 3rd in world's best retirement incomes.

Australia's superannuation fund assets are **3rd** largest in the world.



Public health programs saved per year

\$2.7 billion in taxes

1,000 lives

5,000 hospital cases averted



\$20 BILLION

The National Competition Policy has added \$20 billion (2.5%) to GDP, stemming from 13 years of economic growth.



The tobacco plain packaging legislation and campaign resulted in 108,228 fewer smokers in its first three years.



Violent offenders assigned to diversionary conferencing reoffend **38% less** than those assigned to traditional court sentencing.

INTRODUCTION

THE SOCIAL SCIENCES

Accounting
Anthropology
Demography
Economics
Economic History

Education
Geography
History
Law
Linguistics

Management
Marketing
Philosophy
Political Science
Psychology

Social Medicine
Sociology
Statistics

This volume seeks to provide a response to the question *“Just what is it that the social sciences do?”*

The social sciences are a group of like-minded academic disciplines that share the common instincts of understanding the human behaviour of individuals, their wider social groupings and networks, and the institutions they have contrived to govern and provide for the national population and their place in the wider world.

The social sciences take up extraordinary challenges that affect people through the full course of their lives. Some disciplines, such as psychology, sociology and education can focus with precision on the needs of individuals while keeping track of the social and physical context of the lives those individuals lead. Other disciplines such as demography, economics, social medicine, statistics, and anthropology may find their strengths best exercised and utilised in addressing the pressing issues facing

entire populations. Still other disciplines such as political science, law and management may concern themselves mostly with institutions, those structures at the heart of how Australians govern themselves. The disciplines also blend and mix in multidisciplinary collaborations to develop solutions and innovations for these challenges.

Above all, the social sciences work for the public. They do so by providing information that is based in rigorous research and which lends itself to the formation of wise and effective public policy. High quality research in support of public policy is crucial. No government or instrumentality can do its best in the absence of the detailed knowledge that it needs in order to best serve its mission and its people. That research, with its data and analyses, is the basis for the utility of the social sciences in service to the national interest. In addition, the social sciences do more than try to assist government and its institutions - they also strive to inform business, community groups, and the wider public.

The contribution of the social sciences to our lives often exists in the background,

rarely acknowledged, but its utility and impact are highly significant to the everyday lives of the Australian public. Who doesn't feel the security of our superannuation system, take comfort from our accessible healthcare, or enjoy the opportunities provided in our education policies? All are examples of social science designed systems.

The contributors to this volume are a select but incomplete sample of the Fellowship of this Academy. The case study examples provided here are far too few to describe the breadth and depth of the contributions of the social sciences, and social scientists directly. But it is our intention that this volume be the first of many which provide continuing examples of how the social science disciplines enhance our lives. Business, industry, government, non-governmental institutions, and the public need to know who social scientists are and what they do day-in and day-out to make Australia a good place to live. One might then ask, just what does a "good place to live" constitute?

Australia has a superannuation system arguably better than any other, our health policies seek to exclude no-one, our education system is one of the best in the world, and then there are government policies to protect consumers, stable financial systems, the promotion of safety in the workplace and on our roads, support for equal wages for equal work, and allowances for people out of employment while caring for the next generation, and provisions for the disabled, the unemployed, and the ageing. Think too of the management of a strong economy, a transparent

immigration system, and the governance of precious water and threatened landscapes. All of this is understood and substantially managed through the social sciences.

The case-studies detailed in these pages are just a quick glance into how social science research and understanding can and usually does lead to important government policies, those instruments where well-understood fact-laden knowledge is critically important. Even the most cursory review of who generated the supporting data and provided the understandable analyses will quickly uncover social scientists in their element. The reader will probably be surprised to learn in these pages that the upper management of government and business alike are populated disproportionately by persons with social science backgrounds. We believe there is a synergy between providers of social science based knowledge and those who require such information. It is with social science evidence that policy makers can best predict the impact of policy decisions. Without the informative research and knowledge, the probable effects of new policies would be difficult to imagine at best, and dangerously opaque at worst.

Social science has a role too in the grand world-wide challenges of our time, such as climate change. Thanks to the efforts and skills of science and technology we are all aware of the potential impact of climate change on our environment. Climate shifts, rising seas, altered rainfall regimes and other factors could combine to disorder the ways and means by which we live. What we are unclear about

is how we can minimise disruption to our lives. Is there a technological fix to mitigate the incursion of seawater on our coastlines? If not, then we have but one option - adaptation - and that is where understanding human behaviour, and the nature of social and political institutions will be the knowledge most needed in addressing the inexorable impact of climate change.

The challenge of knowing what a national population wants, and what it needs, calls on what the social sciences provide. For example, imagining what constitutes a good Australia is only too easy. Wealth for all, fair taxation, excellent health care and quality education for all, efficient communication systems, untroubled transportation means, welcoming and unpolluted cities, healthy rural communities and the rest. Seeing the end of the rainbow is not the challenge, it's getting to it before it evaporates that is the game. So who do we call upon to help guide us there? Are all the solutions to be found in science and technology? We certainly need their greatest contributions, but it is our behaviour that has to also be understood and managed in efficient and beneficial ways. That takes us back to the social sciences and our self-governance of institutions, societies, and communities, our families and finally - ourselves. So, just what is it that the social sciences do?

The Social Sciences Shape the Nation.

DR JOHN BEATON
Academy Executive Director

SOCIAL SCIENCE CONTRIBUTIONS IN AUSTRALIA

Australian of the Year

- Manning Clark AC (history, 1980)
- Sir John Crawford (economics, 1981)
- Sir Edward Williams KCMG, KBE, QC (law, 1982)
- Fiona Stanley AC (social medicine, 2003)
- Mick Dodson AM (law, 2009)
- Patrick McGorry AO (psychology, 2010)
- Simon McKeon AO (management, 2011)

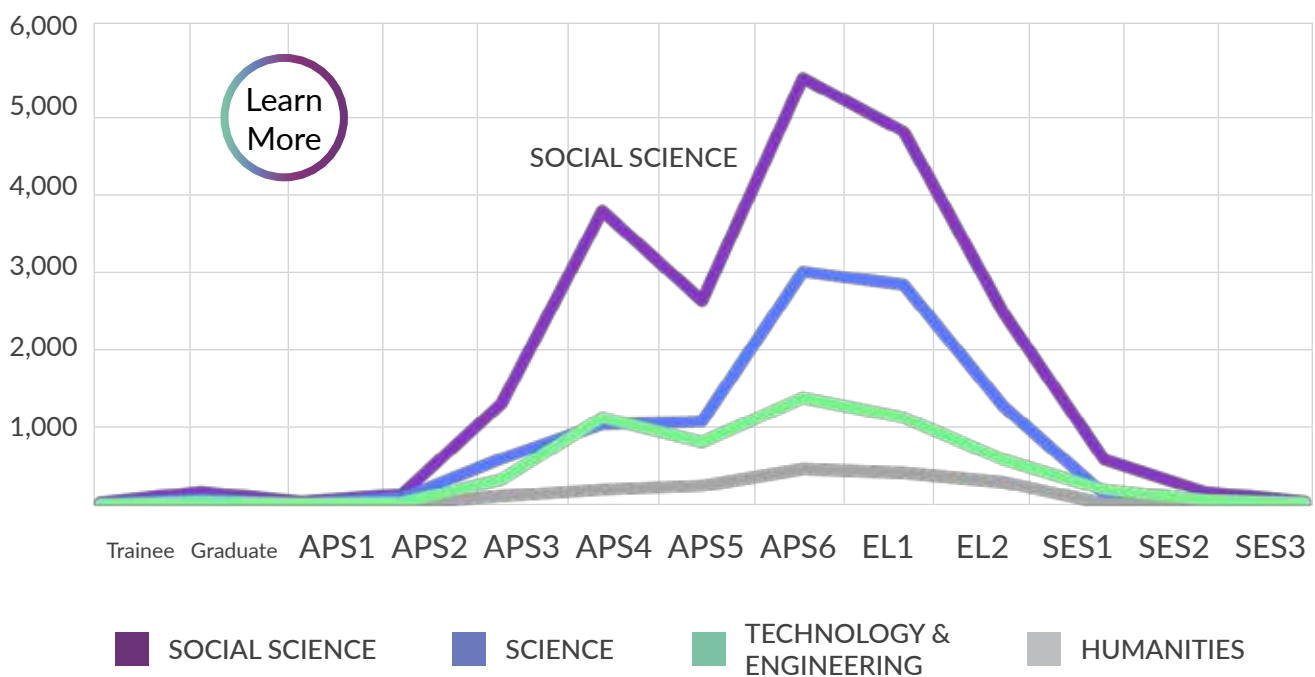
Governors-General

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- Sir William Deane (law)
- The Honourable William George Hayden AC (economics)
- Sir Ninian Stephen KG, AK, GCMG, GCVO, KBE, QC (law)
- Sir Zelman Cowen AK, GCMG, GCVO, QC (law)
- Sir John Robert Kerr AK, GCMG, GCVO, QC (law)
- Sir Paul Hasluck KG, GCMG, GCVO (history)
- Rt Hon William Shepherd Morrison GCMG, MC, QC, PC (law)
- Rt Hon Sir William John McKell GCMG, PC (law)
- Rt Hon Sir Isaac Alfred Isaacs GCB, GCMG, PC (law)
- Rt Hon Hallam Tennyson GCMG, PC (law)

HIDING IN PLAIN SIGHT

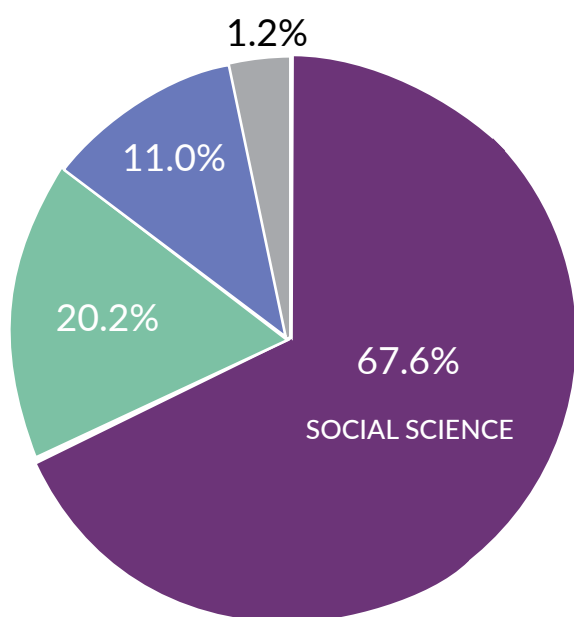
55% of employees in the Australian Public Service (APS)
have a social science background.
(62% of SES1 and above)

AUSTRALIAN PUBLIC SERVICE EMPLOYEES BY EDUCATIONAL DEGREE



Source: APSED, Australian Public Service Commission, 30 June 2016.

CEOs OF ASX200 COMPANIES BY FIRST EDUCATIONAL DEGREE



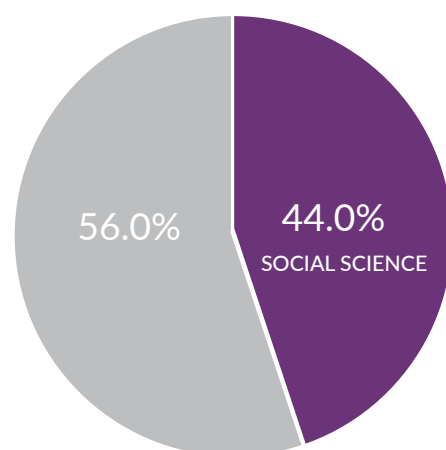
67.6% of CEOs of ASX200 companies undertook a social science degree as their first educational qualification.



Source: Academy of the Social Sciences in Australia, April 2015.

EDUCATIONAL PATHWAYS OF WORLD LEADERS

44% of world leaders hold a social science degree.



Source: British Council, June 2015.

THE VALUE OF THE NATIONAL CENSUS

The core function of the Australian Census of Population and Housing (the Census) collected by the Australian Bureau of Statistics (ABS) is to provide updated population counts to support redistribution of financial allocations to state and local governments. It is also an unmatched resource for social science researchers on the nature of the Australian community. This information is vital for governments and policy makers to govern responsibly and predict where resources will need to be directed in the future.

Another primary function of the Census is to “provide an accurate count of the Australian population, and identify areas of greatest population growth and decline, which is essential information for urban planning and for the provision of crucial public services such as education and health”.²

The Census is also our most important source of information about housing, employment, immigration patterns, birth and death rates, and equity in socio-economic outcomes.

Birth rates are especially important for predicting the medium and long-term needs of a growing population. As Australia’s population continues to boom, the data collected from the Census is a significant analytic tool for governments and the private sector which feeds into planning future investment in health, education and other essential services. “National and regional

population projections are also crucial to estimating the environmental impact of population growth, whether it is in relation to greenhouse gas emissions, allocation of water resources, infrastructure development, land use, or other factors”.³

The Census evolves to answer contemporary questions, while at the same time maintaining some core questions over more than 100 years. With this evolution, the use of the data evolves as well. Social scientists use the Census, and other longitudinal studies, to research and support recommendations on health infrastructure, educational needs, urban planning, public transport, resource management and social trends. Without this data, there would be no consistent and comprehensive source of the composition and trajectory of the Australian community. The Census is unique when compared with other surveys, in that it provides this data for small geographic areas and detailed groupings of the population.

By law, the Australian Census is conducted every 5 years. Most other countries conduct censuses less frequently. Australian censuses are relatively frequent because our population is more mobile than most other countries and we don’t have access to the registration and administrative data that exists in most European countries, or large scale surveys between censuses such as in the United States.

Australia has been at the forefront of the development of census methods, especially with the development of innovative ways of providing access to detailed census data. Our researchers have been some of the most active players in the international group that considers the development of census methods. One of the innovations in the most recent census was the development of an address register to support the mail out of census material and avoid the need for manual listing of dwellings by census collectors. This in turn facilitated the conduct of a mostly on-line completion of census forms, considerably reducing the cost of the census to taxpayers.⁴

In collaboration with public institutions, of which the ABS is a good example, the social sciences contribute to our understanding of ourselves and each other by exploiting the rich data collected through the Census and other means. Understanding how our education, health, taxation, welfare and other systems provide for personal and public wellbeing is critically important in building trust between all sectors of society. The social sciences contribute to this routinely and with effect; sometimes it might be said, by translating the thoughts and deeds of the people and government to each other through numbers .

Information is also critical to maximising the impact of research. What distinguishes scientifically rational knowledge is the combination of logic and evidence, communicated openly and transparently in the market-place of ideas. Industry, business, government and community organisations all have the need and opportunities to use such information. Modern computing technology provides for the rapid management of vast amounts of data to facilitate this.

Policy makers, business, industry and the community use data that has been provided largely by social scientists from the disciplines of management, demography, statistics, sociology, psychology, economics and political science, who routinely collect and analyse data relating to the behaviour of the Australian people and their institutions.

Research and analysis by the social sciences can therefore serve the needs of industry and business, but a further equal or greater principal benefit is also the public good through the provision of knowledge to policy development, including in education, industry and innovation policy, and beyond to the society itself.



EDUCATION

TOP MARKS FOR AUSTRALIA'S HIGHER EDUCATION FUNDING SCHEME

Australia has pioneered a higher education funding scheme that does what had once seemed impossible. It allows any Australian who qualifies, irrespective of financial circumstances, to undertake university studies, while reducing the cost to taxpayers.

THE PROBLEM

In the late 1980s, the Australian Government faced a dilemma – how could the nation provide higher education for the future that was both affordable and equitable? In 1974, the then Labor government led by Prime Minister Gough Whitlam abolished university fees. Whitlam argued that a student's merit, and not wealth, should determine who could benefit from what he described as "the community's vast financial commitment to tertiary education".⁵ For the next 14 years there were no upfront fees to attend university, but this system eventually proved unsustainable. Universities couldn't keep up with demand for places and the strain on the public purse became too much.

Australia was experiencing a significant rise in Year 12 completion rates, yet there was no corresponding increase of tertiary education places. Finding the funding to support increased places became a central consideration of the higher education reforms being explored by the Hawke government.

The government required the new system to:

- provide sufficient funding to further expand higher education places
- shift the financial burden from all taxpayers more to the beneficiary (user-pays)
- design a system that does not unfairly favour the wealthy
- encourage easier access for students to higher education.⁶

It also had to accommodate a growing number of prospective students in the academic fields that were expected to sustain the nation's progress over the coming decades. Economist Professor Bruce Chapman was invited by the Hawke government to develop a paper that canvassed possible funding options. Through his research into education policy and economic modeling, he became convinced that delivering the government's outcomes required a fundamental change in contemporary thinking that overcame the problems of other funding models.

The existing fee-free education policy set in 1974, while seemingly equitable, required that taxpayers pay the education costs of all students in all fields of study. The government was providing free education to people who would go on to earn higher incomes, but those people were not required to contribute back to the scheme that had enabled their access to high-wage earning degrees beyond normal taxes; nor were those earning lesser incomes. The system

was cash strapped and prospective students were missing out on places, undermining the goal of equal access for all. There were other problems with inequality – although fee-free education was seen as a powerful statement that university education was available to everyone, in practice it did not change access for non-traditional students. School graduates from more affluent socio-economic backgrounds still comprised the bulk of university students during the fee-free years in Australia.

The mortgage style financing used elsewhere in the world, most notably the United States, requires regular repayment regardless of post-degree income. The result is often selective entry for those who can afford to pay, substantial repayment burdens, and unacceptable levels of debt default.

Chapman questioned how the costs of tertiary education could be shared more fairly without further disadvantaging students from low income backgrounds. He developed his income-contingent loan model for higher education.

THE SOLUTION

To develop the new model, Chapman worked with other social scientists, public servants and political figures, including Meredith Edwards, Bob Gregory, Neville Wran, John

Dawkins, Pam Lyndon, David Phillips, and Chris Ronalds. After a year's intensive analysis and modelling, they produced an income-contingent loan model which underpinned the successful introduction of Australia's Higher Education Contribution Scheme (HECS) in 1989. The scheme now recoups nearly \$2 billion annually to the Australian Government and supports the steady growth of a highly skilled workforce. This model sought to rebalance the burden from taxpayers to those who would benefit most from higher education – the students – but only when their income reached a fair threshold for loan repayment.

The team's solution was an innovative scheme that allowed students access to undergraduate degrees without requiring upfront payments or loans to be repaid immediately. It utilised a theory put forward many decades before by Nobel Laureate economist Milton Friedman⁷, but which until this breakthrough had not been applied. Under this approach, students are allowed to find work first and to begin repaying their education costs once they have a secure income, with repayments commensurate with that income.

This emphasis on income being a precondition for repayment was radical and significant. International experience has shown that many students face considerable

According to Professor Joseph Stiglitz, winner of the 2001 Nobel Memorial Prize in Economic Sciences, "There are several areas where Australia should be particularly cautious about imitating the US model. One of the reasons that the US has gone to the bottom of the league tables in economic opportunity is our education system, and especially the way higher education is financed. It is one of the reasons that only about 8% of those in the bottom half get a college education. Australia's income-contingent loan program, HECS, is the envy of the rest of the world. It works".⁸

Research by labour economists shows a substantially improved earning profile for those finishing higher education compared to school leavers and vocational education. According to NATSEM, over the working lifetime of a university graduate the financial gain generated from income is more than \$1.5 million or 70% more than those whose highest qualification is Year 12, even after taking into account the foregone earnings of students while they study.⁹

repayment burdens on conventional, mortgage-like higher education loans, or simply cannot participate at all when faced with upfront charges. In contrast to mortgage-style loans, income-contingent loans prevent students who are unable to repay immediately going bankrupt or having their credit rating ruined.¹⁰

Deferred income-related payment was a globally unique feature of the model and was fuelled by the notion of a 'fair go' for prospective students. Under the HECS model, the Australian Government buys a place at a university. A student who qualifies for one of those places then commits to repay the government for the cost of their place but only if their future income meets or exceeds the average Australian wage, and then only at a maximum 8% of their gross income.¹¹ If students fail to earn above the minimum wage, they do not pay. If they have a break from paid employment and fall under the debt threshold, they do not pay until their income has recovered. If they die, their families do not pay.

The HECS model was a breakthrough concept, and clearly demonstrates how relatively inexpensive social science research can save the public purse billions of dollars while improving the equality and effectiveness of Australia's higher education system.¹²

THE BENEFITS

Since the introduction of HECS, higher education enrolments in Australia have increased by approximately 70% including increases amongst students from lower socio-economic backgrounds, which is attributed to the scheme's payment deferral, and the government's investment in substantially more student places.¹³

HECS has also proved to be a low-cost model to run, while raising considerable revenue.¹⁴ In 2013, for example, the scheme recouped \$1.8 billion.¹⁵



That figure alone does not tell the whole story of the high return on investment of HECS. Administration costs are just 4% of revenue because loan repayments are collected through the existing tax system and returned to government. In this way a new income stream was generated and the government was no longer fully funding higher education delivery.

The increased number of university-trained Australians has, fortuitously, provided the highly skilled and highly specialised workforce needed for the jobs of the 21st century.

WHAT NEXT FOR HECS?

Since its inception in 1989, the HECS system has been extended to cover many other aspects of Australian tertiary studies financing. This includes tuition assistance for graduate studies, access to private universities, vocational education and training, and study abroad support.¹⁶

New research is being conducted into how to make the system even more efficient and effective. For example, Chapman and colleagues are now exploring the potential benefits of requiring repayments from Australians who earn a significant income overseas following their studies in Australia. His research shows that the costs to the public sector of unpaid HECS debt from graduate debtors working overseas is approximately \$30 million per year. This translates to an annual loss of 2% of annual HECS repayment revenue.¹⁷ Addressing issues such as this suggest there is still work to be done to maximise the benefits of this innovative evidence-led policy for students and government alike.

Improving markets through income-contingent instruments has the potential to lead to large gains in revenue. For example, in the 25 years since income-contingent education loans (HECS and HELP) were introduced they have generated \$18.24 billion in government revenue via voluntary repayments and compulsory repayments, by students through the tax system.¹⁸



\$18.24 billion

SETTING AN INTERNATIONAL EXAMPLE

According to Chapman, Australia's income-contingent loan model is increasingly considered by global experts as a desirable paradigm for government support and as a lower cost alternative to private financial markets in addressing critical social issues.¹⁹ Australia's example of successfully applying the model to tertiary education has inspired other countries to do the same. New Zealand, South Africa, England and Wales, Hungary, and South Korea have adopted it as their student loan mechanism.²⁰ The Netherlands and Malaysia are on the brink of implementing similar schemes.²¹

By contrast, in the United States mortgage-type loan systems require repayment regardless of income, and can include the accrual of compounding interest as high as 20%.²² Under this system, the longer it takes to repay the loan, the higher the cost. Student debt has tripled in the last decade to \$1.5 trillion AUD and it is estimated that more than seven million borrowers are in default and millions of students are behind on their repayments.²³ In the United States, the government and private lenders are less likely to achieve the types of return on investment realised in the Australian system.

Thus, the HECS example provides evidence that there are financially-sustainable yet equitable alternatives to mortgage-like loans for tertiary education.²⁴

WHAT NEXT FOR INCOME-CONTINGENT LOANS?

The income-contingent loan model has expanded in concept well beyond the team's initial vision 25 years ago. Their research has opened up a new field of inquiry

that brings together social scientists and STEM (science, technology, engineering, mathematics) scientists to apply income-contingent solutions to contemporary public policy issues.²⁵ Potential areas could include: paid parental leave; legal aid; business innovation; unemployment support; aged care provisions; health care; drought relief; Indigenous business investment; research and development investment; housing loans for the disadvantaged; residential solar energy devices; and payment of white collar criminal fines, among others.²⁶

Perhaps the most pressing application of income-contingent loans beyond education is in drought relief. Over many decades the Australian Government has provided financial support to farm businesses as well as a welfare payment to farm families in times of drought. But this support has usually taken the form of grants and interest rate subsidies, raising questions of equity and effectiveness. Chapman and Professor Linda Botterill have been investigating the possibility of an income-contingent loan policy for the delivery of support to drought-affected farm businesses. Repayments on government-financed contingent loans would be required only if and when farm revenues have recovered after the drought. Chapman argues that this is highly likely to be more equitable than a grants system financed by taxpayers.²⁷ It would be far simpler to administer and could be tailored to individual farm circumstances.

Income-contingent loans could also be applied to paid parental leave schemes to offer additional time off for new parents beyond the current leave entitlements. As Chapman explains, because repayments of the loan would only be required when households were in a position to repay,

such a scheme could provide significant consumption-smoothing and income-distribution advantages over alternatives. Furthermore, it could introduce flexibility and choice without requiring major further contributions from the government or the employer, while providing a solution to a financing impasse that would not be forthcoming from commercial banks.²⁸

In addition, it should be noted that there are numerous and continuing discussions about reforming higher education, including such contentious matters as deregulation of fees and the relationship between higher education and vocational education and training (VET). The extension of income-contingent loans to vocational education and training in Australia has been associated with significant challenges in course completion and loan repayment. The difficulties in this area further highlight the need for careful design of policy implementation.

HECS has provided a platform for how innovative social science can influence government to seek new and effective solutions for national challenges. Chapman's research has also inspired the next generation of social scientists to pursue exciting new applications for the versatile income-contingent loan model.

BACK TO SCHOOL: LEARNING HOW THE SOCIAL SCIENCES CAN IMPROVE THE NATIONAL CURRICULUM

A recent overhaul of primary and secondary high school curricula aims to improve national education standards. It's also hoped to help arrest significant declines in Australia's global ranking of education quality. Social scientists argue more needs to be done to improve the national curriculum and education standards.

Social scientists have been highlighting problems in Australia's education standards for many years. While the drop in maths and science rankings have captured news headlines, various studies show that Australian students are falling behind in many subjects.²⁹

TABLE 1
OECD Programme for International Student Assessment

2009	9th
2012	19th
2015	14th

The OECD's most recent Programme for International Student Assessment (PISA) report ranked Australia 14th out of 76 countries in science, math and reading comprehension.³⁰ While this is an improvement on the 2012 PISA study, where Australia ranked 19th³¹, it is still a slip from ranking 9th in the 2009 PISA study³². The

same report emphasised the importance of education for a nation's economy. Under the title *Low Performance in Education Carries a High Cost*, the report notes that the quality of schooling is a powerful predictor of national wealth over the long term.³³

Reforming the curriculum for the present and future Australian society is complex. The requirements for facts and figures must find balance with cultural sensitivities, parental values, student ambitions, youth cultures, technological advances, and political oversight.

Australia has undertaken massive education reforms in recent years. In March 2011, the national curriculum was introduced in all states and territories.³⁴ Educationist Professor Barry McGaw, then Chair of the Australian Curriculum, Assessment and Reporting Authority, has said the national curriculum is based on the principles of giving all students – not just high achievers – access to world-class education in all disciplines, and increasing their engagement with their studies.³⁵

“We are not right at the top and we should aspire to be there in education as we do in other domains. A world-class national curriculum, building on the best of our current curricula and shaped by comparison with the best from overseas, gives us the prospect of achieving that goal.”

36

- Professor Barry McGaw

A CURRICULUM FOR THE NATION, BY THE NATION

The development of the national curriculum has been a long and challenging process. For more than two decades, Australia has been working towards a nationally consistent curriculum framework. In 1989, all state and territory education ministers issued a set of common goals for schooling in Australia. Called the Melbourne Declaration, it detailed statements of expected outcomes for students that would guide the development of state and territory curricula. Since then, there have been a number of milestones bringing the country closer to a national curriculum.³⁷

In 2003, a Ministerial Council on Education, Employment, Training and Youth Affairs meeting agreed to the development of *Statements of Learning* for english, mathematics, science, and civics and citizenship, that “define and deliver common curriculum outcomes to be used by

jurisdictions to inform their own curriculum development”.³⁸ The Statements sought to address concerns about curriculum inconsistency across regions and how this impacted an increasingly mobile student population.³⁹ The Statements outlined “essential skills, knowledge, understandings and capacities that all young Australians should have the opportunity to learn by the end of Years 3, 5, 7 and 9”.⁴⁰

The *Statements of Learning* enabled a national assessment program in numeracy and literacy to be implemented in 2008. For the first time, the learning of Australian students was to be assessed in a nationally consistent fashion. That same year, work on the national curriculum development began with a scoping study by the interim National Curriculum Board (iNCB). In late 2008 and early 2009 a series of nation-wide consultations were held for framing papers, to establish national standards in english, mathematics, science and history. At the same time, state, territory and Commonwealth education ministers developed framing papers on these subjects as well as: geography; social sciences; arts; languages; health and physical education; information and communication technology, and design and technology⁴¹. These were the foundation stones of the national curriculum.

Formed in 2009, the Australian Curriculum, Assessment and Reporting Authority (ACARA) brings together social science researchers and representatives from every state and territory, as well as representatives from the Catholic education system and

The national curriculum was not just a curriculum for the nation – but one devised by the nation.

the independent school sector⁴². From May 2009, ACARA began the monumental task of drafting curricula for K–10 english, mathematics, science and history.

One of the most innovative aspects of this process was the way in which the public was consulted. The draft curriculum was open to the public for comment and forums were held in each state and territory so that representatives from schools and regulatory authorities could provide direct feedback. Forums were also held to engage teachers, curriculum experts, professional associations, universities and other relevant groups.

As a further innovation, the draft national curriculum was trialled in 150 schools across the country. This allowed teachers to further express their experiences and views, and submit examples of work, program overviews and student samples. This process of curriculum mapping revealed the extent of similarities and differences between the different jurisdictions, focusing on both content and level of cognitive demand. By the end of 2010, more than 20 years after the first consensus on goals for a national curriculum, the first truly Australian Curriculum was ready for Australian schools.

FROM STUDENTS TO CITIZENS

Now in its eighth iteration, the national curriculum creates continuity across the states and territories in core subject areas as well as three cross-curriculum priorities: Aboriginal and Torres Strait Islander Histories and Cultures; Asia and Australia's Engagement with Asia, and Sustainability. These priorities are based on the goals agreed to under the 1989 Melbourne Declaration, and it is important that incorporation of the priorities encourage

conversations between students, teachers and the wider community.⁴³

The Australian social scientist and educator, Professor Simon Marginson, has long argued for the role of the national education system as one of forming not just well-performing students, but rather self-managed citizens. he says:

The attributes and capacities of citizens, including those rights which society might identify as common or universal, are deliberately formed in social institutions. Citizens are not born but made; and citizenship is not fixed in stone but an evolving agenda for governments and others to consider. This means that what happens in education really matters. It also means that because what happens in education can change, it is possible to change the character of people's social attributes – their nature as citizens. In the short course of Australian history different models of citizen have come to the fore, each with foundations in education.⁴⁴

"Like many governments, the Australian government was sure that better national performance in STEM was crucial to enhancing innovation in industry, and workforce productivity," says Marginson and his colleagues. As a result, the national curriculum emphasises STEM skills and knowledge, which are seen as vital "in equipping the whole population for a future world in which engineering, technology and public discussion of science problems were going to be central and vital."⁴⁵

Marginson and his colleagues are, however, quick to point out that they do not see the STEM disciplines as necessarily superior to

other disciplines: “We emphasize the need to lift the potency of the humanities, and enhance the capacity of education systems in the social sciences, foreign language learning, and professional and occupational training outside STEM. Ideally we would like to see more students studying STEM to a later stage in their education, and also see solely STEM-specialist students broadening their studies to engage deeply in the humanities and social sciences. It should not be a case of either/or but rather one of both and more (and also better). It should be possible to configure educational structures and programmes to lift learning all round.

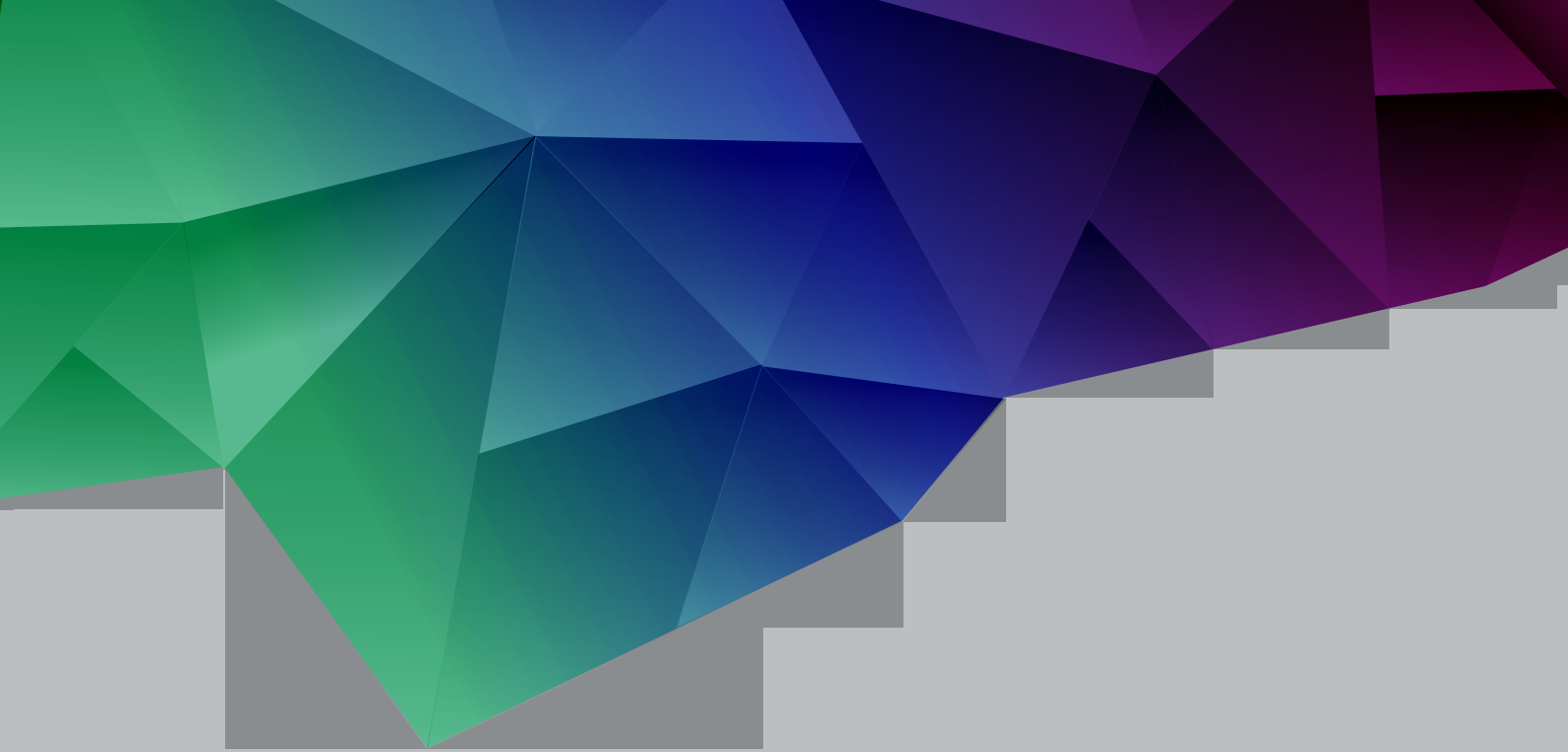
We believe that science must become more aware of society, and society must become more intelligent about science.”⁴⁶

(CLASS)ROOM FOR IMPROVEMENT?

The national curriculum provides Australia with a platform to address its worrying position on global education rankings. The existing consultation pathways and networks can and should be convened regularly to continually improve the curriculum. For Australia to take seriously the need to improve globally, it must invest in the expertise provided by social scientists to gather the evidence to support long-term reforms that respect, reflect and even lead national needs and aspirations.



Primary school children in Brisbane. Source: SBS.



ECONOMY & MANAGEMENT

REACHING MATURITY: THE DEVELOPMENT OF AUSTRALIA'S MANDATORY SUPERANNUATION CONTRIBUTION SCHEME

Australia's retirement scheme ranked **3rd** in the world in 2015 and 2016 in the Melbourne Mercer Global Pension Index, up from 5th in 2014 and 11th in 2013⁴⁷. Australia scores well in all categories and particularly well in health and quality of life. This score was also based on Australia's continued strong economic performance, with relatively low levels of public debt, low unemployment, strong bank balance sheets and low levels of inflation, when compared in an international context.

More than 100 years ago Australia was one of the first countries to introduce an aged pension. At the time not many Australians lived past the pension age of 65. By the 1980s certain alarm bells were sounding – the number of people reaching pension age was booming, and they were drawing a pension for much longer. Australia needed a major shift in policy. The idea of compulsory superannuation came to the fore, and it is today considered one of Australia's greatest policy initiatives. Superannuation is one of the three pillars of our retirement income system – the others are the Age Pension and personal savings. Indeed, Australia's development of this three pillar system was commended at the time as global best practice by the World Bank.⁴⁸

As the Australian superannuation contribution scheme matures, retired Australians are more able to live well without increasing the burden on taxpayers.

Australia is currently ranked third in the world's best retirement income systems in developed countries. Our innovative approach to superannuation based on evidence-led policy plays a critical role within this system.⁴⁹

TABLE 2
Melbourne Mercer Global Pension Index
2016 Ranking⁵⁰

DENMARK	1st
NETHERLANDS	2nd
AUSTRALIA	3rd
FINLAND	4th
SWEDEN	5th
SWITZERLAND	6th
SINGAPORE	7th
CANADA	8th
CHILE	9th
IRELAND	10th

The superannuation system is bolstered by mandatory employer contributions to employees' private superannuation savings

and creates an incentive for workers to plan for retirement. This was not always the case. At the beginning of the 1980s, less than 45% of Australia's total working population had any superannuation and an even smaller proportion of blue collar workers and women had access to superannuation.⁵¹ At that time the superannuation system was fragmented and inflexible. Many funds were tied to particular employers and required many years of service with the one company before any benefit became available.

The lack of a universal superannuation system meant that Australia's steadily growing and ageing population was more and more reliant on the taxpayer-funded Age Pension. There was alarming growth in outlays. Changes were required and social scientists were there in numbers ready to help lead the way.

By the mid-1980s the Australian Council of Trade Unions and the Labor Party successfully argued for the introduction of compulsory employer superannuation contributions of 3% by the Conciliation and Arbitration Commission.⁵² Employer groups fought against this ruling, taking the government to the High Court. Their challenge failed in 1986 and compulsory employer contributions commenced in 1992 as part of the Superannuation Guarantee, rising from the initial 3% in annual increments to 9% of ordinary time earnings by 2002–03. Today, participation in superannuation funds is greater than 90% among Australian workers.⁵³ Universal superannuation boosted the level of support available for future retirees, and contributed to better inter-generational equity.⁵⁴

It is also a significant financial investment for the nation. According to the OECD's 2015

Pension Funds in Figures survey, Australia's superannuation fund assets are the third largest amongst OECD nations, with managed funds of approximately \$2 trillion.⁵⁵ That's a 10% increase in just two years, and represents 118% of nominal GDP.⁵⁶



Australia now accounts for nearly 6% of the world's total pension fund assets.⁵⁷ Australia's compulsory superannuation system has its foundation in many reviews, enquiries and deliberations based on social science research. Economists, accountants, statisticians, sociologists, demographers and behavioural scientists have all helped shape Australia's internationally recognised superannuation system. Their models, papers, advice and opinion pieces have contributed to developing the most efficient system, and realising the full potential of compulsory retirement savings.

These social science contributions have been there from the start, and have been shaping Australia's current retirement income system long before the introduction of compulsory superannuation contributions in 1992.

From as far back as the 1930s Australia has been considering change to the retirement income system. The modern retirement income system saw its origins in the 1970s. For instance, in 1976 economist Professor Keith Hancock led the National Superannuation Committee of Enquiry, which examined the possibility of a universal mandatory contribution scheme for retirement savings. Hancock's research focused on employment trajectories, income

trajectories, the contributions needed to reach benefit levels, and the relationship with the Age Pension.⁵⁸ His findings helped shift the focus of retirement income policy from the Age Pension as a means of alleviating poverty towards a proactive program of contributory superannuation.⁵⁹

Superannuation featured in the work of the Commonwealth taxation review conducted between 1972 and 1975. Justice Ken Asprey led a multidisciplinary team of accountants, lawyers and economists investigating tax reform.⁶⁰ Asprey's review was among the first reports to strongly emphasise the potential inequity in retirement savings arrangements in Australia. It guided policies through the next two decades as governments built a new superannuation system, and reformed associated tax concessions.⁶¹

Between 1972 and 1976, economist Ronald Henderson led the Commission of Inquiry into Poverty in Australia. It examined whether the social security system, including the Age Pension, was failing to address poverty. The Commission noted the lack of reliable data available, and so prompted the then Commonwealth Bureau of Census and Statistics to conduct a Special Income Survey.⁶² Such surveys, once considered to be a novel social science tool, are now regularly conducted and serve as the basis for many evidence-led policy initiatives.

In 1975 the Federal Government established the Income Security Review to analyse and assess the recommendations from existing inquiries. This was an internal review initially headed up by senior statistician Ian Castles, and then by economists Mike Keating and Col McAlister. The review benefited from input from Andrew Podger and other social scientists within government. Castles's

recommendations sought to encourage people to spread earnings and consumption across their lifetime.⁶³

In the 1980s and 1990s, demographers, sociologists and economists continued to inform the superannuation debate. These decades saw an unprecedented increase not only in the number of older Australians but also in the proportion they made of the general population. The role of social scientists in official reports such as that of the National Population Council to Prime Minister Hawke, a forerunning of what became Treasury's regular *Intergenerational Report*, and of the Economic Planning Advisory Council to Prime Minister Keating, maintained this evidence-based analysis trajectory for superannuation advancement.

In addition, gerontologists Professors Hal Kendig and John McCallum reviewed data on the ageing population and concluded that private superannuation was not providing continuous retirement income for retirees and only covered a low and privileged number of persons in the workforce.⁶⁴ Sociologist Professor Bettina Cass directed government's social security review in the late 1980s. Her issues paper *Towards a National Retirement Incomes Policy* recommended the inclusion of compulsory superannuation as a component of an equitable and sustainable retirement income system.⁶⁵

Recognising the need for major reforms of the superannuation system, government negotiated with trade unions the 3% occupational superannuation contribution to employee funds as a trade-off for national wage increases. Workers who were already covered by corporate-sponsored superannuation schemes either had the

occupational superannuation contributions paid into those schemes or separately into industry superannuation funds.⁶⁶

In 1983, the Prices and Incomes Accord between the Hawke–Keating government and the Australian Council of Trade Unions established a landmark in Australian industrial relations history. Although an alliance between the political and industrial wings of the labour movement had existed ever since the formation of the ALP in the 1890s, the Accord remains the first and only “successful formal cooperative working relationship between Australian trade unions and Labor in government”.⁶⁷ It achieved its initial objective of addressing the problem of ‘stagflation’ and helped to facilitate structural reform in the Australian economy. It also set in motion the introduction of a ‘social wage’ in the form of favourable taxation measures, income assistance, universal health care and compulsory superannuation. The Accord’s legacy remains contentious in academic debate, but its status as a milestone for Australian industrial relations history is undisputed.⁶⁸

By the late 1980s not all workers were covered by occupational superannuation, while a substantial proportion were, and not all employers complied with their superannuation obligations.⁶⁹

All of this work culminated in the introduction of compulsory superannuation contributions, via the Superannuation Guarantee, as first announced in the 1991–92 Budget. Of course, the system needed further refinement as social scientists revealed problems with its operation. Shortly after the introduction of the Superannuation Guarantee, in 1992, social scientist Brian Sweeney produced

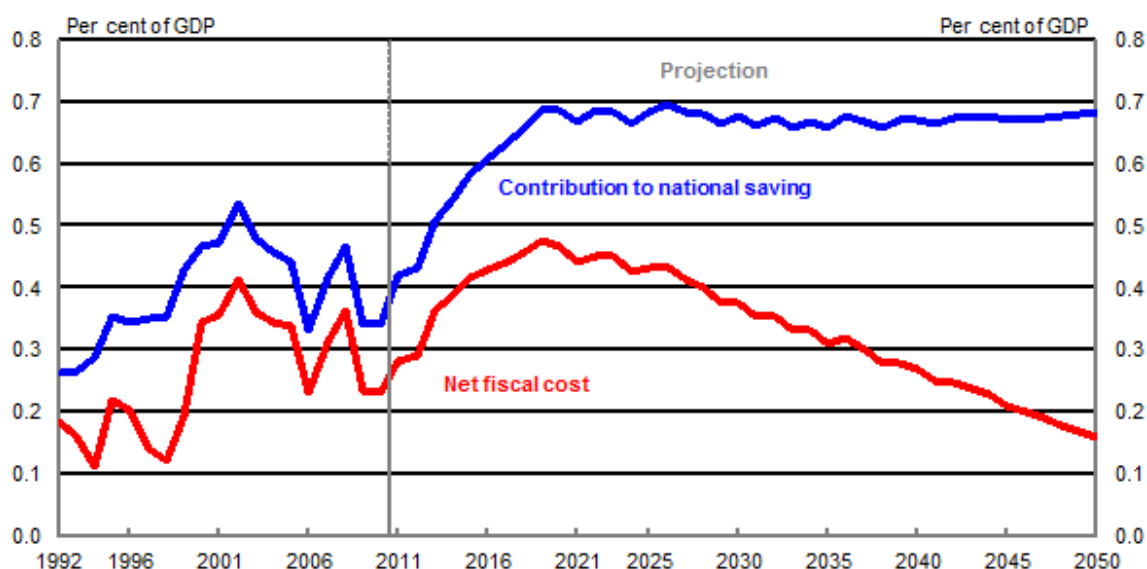
a report for government on the attitudes of Australians toward superannuation. His study concluded that retirement income policy objectives were being jeopardised by community resistance to voluntary private savings, and inadequate knowledge or misinformation about superannuation. His research helped lead the government to introduce a five-year consumer education strategy.⁷⁰

In the late 1990s a conference, joining the Australian National University and the then-Department of Family and Community Services, was held to build better links between government and academia. The collaboration led to the creation of the Household, Income and Labour Dynamics in Australia (HILDA) Survey. This comprehensive project has helped shape an understanding of how people respond to various incentives and seeks to identify the economic determinants of behaviour, including retirement income savings.

Compared to other OECD countries, and particularly countries with similar financial systems, Australia has an above average savings rate. Superannuation makes a major contribution to the relatively high saving rate. Compulsory superannuation’s contribution to national saving (Figure 1, blue line) was calculated as 0.4% of GDP in 2010, and is estimated to rise gradually to nearly 0.7% of GDP by 2020, and staying at roughly this level until 2050.⁷¹

In the new millennium, two major government reviews addressed superannuation – a tax review chaired by economist Dr Ken Henry (the Henry Review) and the Super System Review chaired by lawyer Jeremy Cooper. These reviews recommended significant reforms to the

FIGURE 1: Public sector contribution to national saving and the net fiscal cost⁷¹



superannuation system, particularly in relation to taxation, and the introduction of a low-cost default superannuation product, MySuper.⁷²

In response, the government will increase the compulsory employer contributions to employee superannuation, from 9% to 12% by 2025. It also removed a provision that excluded employees aged 70 years and over from the entitlement to the Superannuation Guarantee. Financially vulnerable Australians now receive a tax rebate called the Low Income Super Contribution.

WHAT'S NEXT?

Today, the Australian superannuation system has produced the fourth largest pool of funds under management in the world. The size of the industry is now roughly the same size as the Australian GDP, greater than the capitalisation of the Australian Stock Exchange, and on par with the combined deposits of all Australian banks.⁷³ It is expected to be more than two-and-a-half times the size of GDP by 2033.⁷⁴ This is a

profound recognition of the importance of superannuation and the work that has gone into its development for the benefit of Australian workers.

The ability of social scientists to exploit big data, behavioural studies, econometrics and demographics will continue to be essential in informing and guiding decision makers, industry and all Australians about our superannuation system and how it can serve us for the future. It is story of social innovation and ongoing enhancement.

RESERVE BANK BOARD: PARTICIPATION AND INFLUENCE

Australia now has the longest economic expansion of any country in the world. As of 1 April 2017 it will have achieved 104 quarters without recession. Sound fiscal leadership from the Reserve Bank of Australia is at the heart of that unprecedented achievement.⁷⁵ Much like other central banks, its role is to conduct monetary policy. Its primary tool is setting the cash rate to meet an agreed inflation target guided by goals of price stability, full employment and Australia's economic prosperity.⁷⁶ The noteworthy feature of the Reserve Bank, however, is the emphasis it places on a multidisciplinary approach to developing monetary policy.

The Reserve Bank Board is comprised of nine members appointed by the Treasurer for terms of five years (for ex officio members) or seven years (for non-executive members). The members of the Reserve Bank Board are not only economists, but also social scientists from a wide range of disciplines and sectors – public, private, government and academia. Together, this wealth of experience and broad expertise shapes policies for the good of the Australian people, not just in terms of economic growth.

One of Australia's most distinguished and influential economists, Dr H.C. "Nugget" Coombs, was the Reserve Bank's first – and longest-serving – Governor. Considered by some to be the "ultimate public servant", Dr Coombs had strong interests in a number of

diverse fields. Throughout his career, which spanned four decades from the 1940s, he was a champion of the arts, Chair of the Council for Aboriginal Affairs and Chancellor of the Australian National University, among other achievements. His eclectic interests shaped his perspective and influenced his leadership of the Reserve Bank. Under Dr Coombs, the Reserve Bank became a prestigious institution where economic intelligence was great and economic debate flourished.⁷⁷

Today, Coombs's legacy continues through the work of contemporary experts on the Reserve Bank board. One recent former member of the board is Professor Warwick McKibbin, an internationally recognised economist who has expertise in macroeconomic policy, international trade and finance, greenhouse policy issues, global demographic change and the economic cost of pandemics.⁷⁸ It is this breadth of experience that McKibbin cites as being particularly valuable to the Board. The development of monetary policy requires not only econometric skills, but also a deep understanding of the psychology of the market and the consequences for ordinary Australians.⁷⁹

A close contemporary of McKibbin now on the Board is industry leader and economist Professor Ian Harper. Between 2005 and 2009, Harper served as inaugural Chair of the Australian Fair Pay Commission, an independent statutory body whose role

was to set and adjust minimum wages in Australia. In 2014–2015 he chaired a review of Australia's competition policy, laws and regulators.⁸⁰

Past social scientists have also been strong influencers of the Reserve Bank Board, including economists such as Professor Trevor Swan, Professor Robert Gregory, Professor Adrian Pagan and Dr John Edwards.

Today, Australia's monetary policy is also being shaped through the work of the Shadow Board of the Reserve Bank. Based at the Centre for Applied Macroeconomic Analysis at the Australian National University, the Shadow Board aims to foster a lively and informed debate in the community about each interest rate decision and about macroeconomics more generally. Its nine members – currently including McKibbin – work together to quantify the uncertainty surrounding a preferred target cash rate and show how these uncertainties may be aggregated to provide a more

robust collective view. They also generate data on probabilistic monetary policy decision making that may be used in future research.⁸¹

It's been the expertise of social scientists on the Reserve Bank Board and Shadow Board that have successfully managed a quarter of a century of growth – fulfilling the Reserve Bank role as guardian of Australia's economic prosperity.



Reserve Bank of Australia Building, Sydney. Photo by Joel Carrett.
Source: AAP.

THE PRODUCTIVITY COMMISSION

The Productivity Commission and its precursor organisations – the Tariff Board, the Industry Assistance Commission, the Industry Commission, the Bureau of Industry Economics and the Economic Planning Advisory Commission – has had a profound impact on policy development and reform.

Since the Productivity Commission was formed in 1998, it has helped to shape new policy directions that have repositioned Australian economic policy away from a narrow, protectionist and anti-competition focus to a more open, pro-competition and community-wide focus.

Even though the Government can instruct the Productivity Commission what inquiries to undertake, it cannot direct what it can say, thereby embodying a core principle of independence. Another core principle of the Commission is transparency, demonstrated by the opportunities afforded to the public to scrutinise and participate in review processes. A third core principle is the community wide focus where the Commission seeks to advance the interests of the community at large.

“The Productivity Commission has provided a vital, independent source of public information and advice to government on policy reforms needed to underpin Australia’s long-term prosperity”.⁸²

Since its inception, the Commission has sought to drive higher living standards in Australia by focusing on a more efficient and

productive economy. Influential reports on Australia’s gambling industries and the Great Barrier Reef, and regular intergovernmental reports on Indigenous disadvantage, demonstrate the remit of the Commission to review a wide range of issues from social, economic and environmental areas.

By quantifying the costs of industry protection and assistance, and the gains from microeconomic reform, the Commission has been able to explain when and to what extent assistance provided to one industry impacts consumers and other industries. Quantification has relied heavily on the pioneering work by economist Professor Max Corden to develop effective analytical tools and by economists such as Professors Alan Powell, Peter Dixon and Philip Adams to develop quantitative modeling.

THE ACCC AND CONSUMER RIGHTS

Established in 1995, the Australian Competition and Consumer Commission (ACCC) is Australia's consumer watchdog. As the ACCC says, its job is to "promote competition, fair trading and the effective regulation of national infrastructure for the benefit of all Australians".⁸³

Social science is the backbone of the ACCC. Commissioners are trained in law, economics, business, finance and public policy, and tasked with safeguarding competition and protecting consumer rights.

The ACCC acts as the consumer's advocate investigating and pursuing legal matters such as unfair billing policies, discriminatory or predatory business practices, collusion between major corporations, and even encouraging international competition and trade.

The ACCC launches legal action against corporations which it finds in breach of consumer and trade law, monitors changes in markets, and has 20 cartel investigations under way at any one time. It advocates for appropriate regulation of monopoly infrastructure, like telecommunications and electricity, and engages in public debate when it sees an abuse of monopoly power. The practice and study of social science enables this statutory organisation to carry out these roles and protect consumers, businesses, and the wider community.⁸⁴

Social scientists, especially lawyers and economists, have been influential leaders for the ACCC. Long-time Chairperson, Professor Allan Fels, was a long-standing advocate for the role of the Commission and his successors, business leader Graeme Samuel and economist Rod Simms, have continued this tradition.

PLAYING FAIR AND WINNING BIG: REFORMING THE NATIONAL COMPETITION POLICY

The national competition reforms of the 1990s strengthened Australia's economy so that it could compete effectively on a global scale. These reforms increased productivity, contributed to growth in wages⁸⁵ and, more importantly, provided significant improvements to Australia's overall economic prosperity.⁸⁶ Since economist Professor Fred Hilmer's classic review over 20 years ago economic conditions have changed, and new industries have emerged requiring new competition reforms.⁸⁷

According to economist Professor Ian Harper, the lead author of a recent major review of the National Competition Policy, "Reform focused on improving productivity, including competition reform, is not only desirable, it is necessary to ensure future growth in Australian living standards".⁸⁸

The recommendations put forward by Harper and his team to the Australian Government aim to invigorate the economy in a way that the Hilmer Report did in the early 1990s. What was it, then, that made the Hilmer reforms so game-changing?

POLICY ADVANCES

In 1960, Australia was the world's third richest country.⁸⁹ Thirty years later the OECD revealed Australia's global ranking had plunged to 15th. Growth was faltering, inflation and unemployment rising, and living standards falling. There had been growing

discussion about the negative effect of trade barriers, protecting major industries from domestic and international competition. Trade protection was smothering business innovation. Businesses had little incentive to produce new products, reduce costs and increase efficiency. This lack of drive resulted in slowing output growth, declining living standards, and inflation and unemployment on the rise.⁹⁰

At the time it was acknowledged that domestic policy and institutional factors were constraining Australia's potential and were responsible for much of its economic malaise.⁹¹

Federal governments increasingly acknowledged the need for opening up the Australian economy. A pivotal move came in 1983 when the government floated the currency, allowing international financial markets to set the value of the Australian dollar. This then imposed pressure for industry reform. At first, reforms were introduced industry by industry, before giving way to across the board tariff reductions in the late 1980s.

National trade legislation was still based on state based law that had been incrementally revised. The *Trade Practices Act* of 1974 was considered inadequate to undertake the scale of reform needed to open Australia's economy to global competition.⁹²

Reform needed teams of social scientists from multiple disciplines to remake the way Australia traded goods and services. Painstaking research and efforts of economists, lawyers, demographers, statisticians and political scientists all had a hand in bringing down Australia's trade barriers.⁹³

In the early 1990s competition reforms continued, but it was decided a comprehensive review was needed. Prime Minister Paul Keating asked Hilmer to conduct a wide ranging inquiry, and its report became the basis of the National Competition Policy.⁹⁴

Following this report, the government tasked the Industry Commission (the forerunner of the Productivity Commission) to model the benefits of the recommended policy. They found significant gains included:

- Australia's real GDP boosted by \$23 billion more than business as usual
- real after-tax wages would grow by 3%
- household spending rising by an average \$1500 a year
- 30,000 extra jobs.⁹⁵



In light of these findings, each jurisdiction committed, in April 1995, to a far reaching six-year program of competition reform (subsequently extended to 2005) broadly in line with the Hilmer Committee recommendations.⁹⁶

Central to the recommendations was an overhaul of the *Trade Practices Act* to extend its anti-competitive provisions to

all businesses. Government monopolies were singled out for reform so they would lose their unfair advantage over the private sector. Essential services were targeted to increase competition in road transport, electricity and gas. A more efficient use of water was recommended, at least in part, to improve environmental outcomes. Also, the report recommended a review of all laws that restricted competition, and the introduction of national standards by all governments. The implementation of these reforms required social science research to inform robust multidisciplinary approaches to public policy formation.

One of the primary strengths of the Hilmer recommendations is its focus on national regulation. The review argued against industry specific regulators, saying they would create consistency problems between industries, duplicate efforts and increase costs. Instead national regulatory bodies were set up, with the Australian Competition and Consumer Commission, to administer the *Trade Practices Act*, and the Australian Competition Tribunal to replace the Trade Practices Tribunal.

The report has also been praised for its implementation plan, which, in essence, shared the fruits of labour reform. It recommended regular Commonwealth payments to the states as they introduced reform. The payments were funded by increased tax revenue to the federal government flowing from greater competition. Australia's current prosperity owes a great deal to the productivity improvements that occurred in the 1990s.⁹⁷

The success of the National Competition Policy model has been attributed to three aspects of Australia's institutional framework:

- “an agenda agreed by all governments that outlines the reform commitments with a practical degree of specificity;
- an independent body responsible for negotiating, monitoring and reporting on reforms; and
- the provision of appropriate incentives including financial payments.”⁹⁸

The innovation of this institutional framework is attributable to Hilmer's vision. The Hilmer Report recommended one economy-wide regulatory body which would ensure consistency of regulation across all industries and would draw on both internal and external industry-specific expertise.⁹⁹

A further innovation of the National Competition Policy was the so-called competition payment through which the federal government pays the states and territories a share of gains from regulatory and other micro-economic reforms, to encourage continuing competition and implementation of policy innovations.¹⁰⁰

MEASURES OF SUCCESS

Nine years later the Productivity Commission found the National Competition Policy had delivered substantial gains to the Australian economy. The Commission found changes had added 2.5% to GDP, or \$20 billion, stemming from 13 years of uninterrupted economic growth.¹⁰¹



Real per capita incomes climbed at a greater rate than at any time during the 20th century, and unemployment fell to its lowest level in three decades. Prompted by greater competition, businesses innovated in a number of areas, leading to reduced prices for items like milk and electricity, and increased choices for consumers.

The Commission also found that some communities bore more of a brunt than others. It cited the dairy industry and reduced income in a deregulated market, and job losses in communities where large public utilities were based. It found that, overall, the gains to the nation, and to regional and rural Australia, outweighed the costs.

While identifying areas where more work was needed, the Commission found that Australia could look forward to greater benefits as productivity continued to rise, driven by a more competitive environment.¹⁰²

In 2013, when government commissioned the first comprehensive review of the National Competition Policy in 20 years since Hilmer, Harper was appointed as the Chair of the Review Panel. In March 2015, Harper made a total of 56 recommendations to government.¹⁰³

“The main area where we break new ground in this Review,” said Harper in a 2014 speech, “is further extending competition into all the places where government has an impact on the market: including procurement and human services such as health, education, disability care, aged care, job services, public housing and correctional services.”¹⁰⁴

The Review highlighted Australia's ageing population as a good example of the need to

increase competition in aged care services. It said there should be more providers, sparking innovative business practices and creating more choice for consumers. It was a new paradigm for government. Instead of just delivering services, governments would encourage other groups to cater to the needs of Australia's elderly. The government would act as watchdog and regulator, ensuring older Australians got a better deal with greater competition.¹⁰⁵

"We recommend that all Australian governments, individually and collectively, adopt choice and competition principles in the domain of human services, including a guiding principle that user choice should be placed at the heart of service delivery," Harper told the Committee for Economic Development Australia (CEDA).¹⁰⁶

Harper cited an example from a regular Meals on Wheels customer where the customer gained control of his catering funds, and he used that money to send someone down to the local takeaway for meals. The same principle is now being applied in the National Disability Insurance Scheme (NDIS), with clients able to hire their own support workers, rather than going to one agency which may have a high rotation of staff.¹⁰⁷

Harper added: "In our view, the general presumption needs to be that individual Australians are the best judges of what they want and need, in the area of human services, just as in other aspects of their lives."¹⁰⁸ Estimates from the Productivity Commission suggest that improved productivity of health service delivery alone could implicitly boost household consumption by \$40 per person in 2005–06 dollars.¹⁰⁹

The Harper Review identified a number of priority areas where competition modernisation is required, including: trading hour restrictions; intellectual property; emerging retail technologies; taxis and ride-sharing; and mandatory product standards.¹¹⁰ The government agreed to most of the recommendations of the Harper Review, including the establishment of the ACCP and a national Access and Pricing Regulator, and gave support for choice and competition principles in human services led by a Productivity Commission review.¹¹¹

The success of the Hilmer Report implementation and the widespread support for the Harper Review have demonstrated the appetite from the government to lessen market restrictions. The reforms covered seek to allow greater access to goods and services ranging from taxis to books, and will pursue changes to road transport regulations, rules governing shipping and online shopping. The government's response to the Harper Review has been met with support from business groups, major retailers, motoring groups and consumers alike.¹¹²

WHAT NEXT?

As the pace of digital disruption picks up speed, the Australian economy faces an ever more complex competitive environment. The federal government is increasingly referring to a fourth industrial revolution. Across Australia, while it's still widely accepted that increasing competition drives economic progress, there have been fierce public debates about the merits of increasing competition, particularly in areas affecting culture, penalty rates and employment prospects.

Some challenges remain for the Australian economy. According to CEDA, competition is the cornerstone source of productivity and efficiency in markets. It can drive more competitive prices, deliver better choices for consumers and raise living standards for all Australians. Economists frequently take these benefits of competition for granted – but competition can sometimes be viewed negatively in the broader community. It can take concerted political effort to introduce successful reforms.¹¹³

Another challenge is the rapidly changing technological environment. At the time of the Hilmer Review in 1993, the internet was in its infancy; now it is ubiquitous. Improvements in telecommunications have changed many aspects of business, and the introduction of e-commerce and innovative digital products have allowed competition to come from unexpected sources. The consequence is that new products and markets have emerged, often expanding beyond conventional geographic boundaries. This increases the choices for consumers and allows small, agile firms to compete with older, larger, local incumbents.¹¹⁴

“Australia’s competition policies, laws and institutions need to be flexible,” Harper argues. “They need to be responsive and adaptive to deal with changes such as the industrialisation of developing nations, the ageing Australian population and the diffusion of digital technologies. They need

to cope with fluid markets with constantly shifting boundaries, and not be constrained by unnecessary barriers,” he says.¹¹⁵

In the aftermath of the commodities boom, productivity growth will increasingly depend on building Australia’s competitive advantage in more highly skilled areas. Not only in technology and services, but in new forms of manufacturing like 3D printing. As in the past, major structural change will have significant impacts on Australian society – what we teach, how we work and where we live. In order to stay competitive, Australia will need the right policies to smooth this economic and social transition. Competition policy will be fundamental in that mix, which in turn will rely on social science to provide the best evidence and modelling to achieve future prosperity.

Social science research on economic evidence and the lessons of the past have demonstrated increased competition is one of the surest ways to lift long-term productivity growth.¹¹⁶ The nation awaits the implementation of the recommendations from this review for its part in advancing the country’s national progress.

Beyond this, a 2015 Australian Council of Learned Academies report suggested that the nation could complement competition reform with capability investment, using a two-track approach to enhance inclusive growth.¹¹⁷

AUSTRALIAN SOCIAL SCIENTISTS PIONEER OPEN REGIONALISM IN ASIA PACIFIC

Australia pioneered a new, closer economic relationship with its Asian and Pacific neighbours based on decades of work by social scientists. In 1989 the Asia-Pacific Economic Cooperation (APEC) forum had its first meeting in Canberra. Senior ministers from 12 countries attended, marking the beginning of a new era in economic cooperation. It was a major initiative of the Hawke government, which wanted closer regional economic ties within Asia, and with the broader global economy. The idea was not new; since the end of WWII there had been discussion about reintegrating Japan and Asia into the global economy to improve international security. Peter Drysdale says the idea of a regional forum for economic cooperation has a deep intellectual history. He says the principles underlying APEC's evolution were the result of continuous academic effort over several decades – effort from both Australia and Japan.¹¹⁸

Since 1989 APEC has grown exponentially. It now includes 21 countries, including world powers China and the United States, and is one of the premier forums to deal with evolving regional economic and political challenges. Certainly as China continues to pursue its territorial goals in the South China Sea, APEC will play a pivotal role in regional security.

WAR AND PEACE; THE ROOTS OF APEC

As early as 1935 the young Australian research economist, John Crawford, suggested Australia should shift its trade focus from Britain and Europe to Asia, or what he referred to as the “Near North”. He controversially talked about the potential of trading with Japan at a time when it was pursuing economic and military expansion.

It wasn't until after WWII that the idea of cooperating economically with Japan was seen as necessary for both economic and security reasons. Crawford joined other intellectuals in championing Japan's integration in the global economy, and in the post-war trade framework – the General Agreement on Tariffs and Trade (GATT). Rather than pushing Japan to languish on the sidelines of industrialisation, the Allies recognised their mistake excluding Germany after WWI, and decided to engage Japan in post-war economic frameworks.¹¹⁹ Involving Japan was one primary aim in post-war economic reconstruction. But it was not the only one. Making the most of Pacific Rim relations, and access to the huge United States market, were significant attractions to the idea of transnational economic cooperation.

Australia – and Australian scholars in particular – were instrumental in developing a regional forum that could work more effectively with GATT than

could individual nations. Australia's move towards establishing a regional forum began in its efforts to engage Japan – a growing industrial giant of the 1970s. The ANU's John Crawford joined forces with Peter Drysdale, Saburo Okita (who went on to become Japan's Foreign Minister) and Professor Kiyoshi Kojima in forging a comprehensive bi-lateral relationship. It promoted a "high degree"¹²⁰ of economic interdependence, and the scholars argued that such a relationship built mutual trust. They also argued successfully that this agreement could be applied to the whole Asia Pacific region.

Just a few years later in the early 1980s, social scientists expanded on this idea that regional economic cooperation would provide significant trade advantages to individual nations. It was a concept broadly known as "Open Regionalism". It led Crawford and Okita to set up the Pacific Community Seminar at the ANU. Its Pacific Economic Cooperation Council (PECC) brought together leading thinkers in government, academia and business to tackle some of the big issues facing the Asia Pacific region. PECC continues to operate today. By the late 1980s it recommended setting up a more powerful regional leadership forum to address pressing trade issues.

The post-war push for more open multilateral trading, the "non-discriminatory" approach, was beginning to falter. Fast growing East Asian economies were winning market share from labour intensive nations. The United States, for instance, responded with protectionist policies. The Australian government launched APEC in 1989 as a ministerial forum to address these issues, drawing on the intellectual debates and

ideas of PECC and other groups.¹²¹

The timing of APEC's launch also coincided with the end of the Cold War. That international struggle split Asia into an uneasy East–West divide. APEC's goals of trade and investment liberalisation, based on Asia's economic and development priorities, helped establish a new, more open, political order.



1989 APEC Ministerial Meeting. Source: APEC.

Drysdale argued that it was not a question of whether or not there would be a regional forum like APEC – but rather a question of when. In his 1988 book, *International Economic Pluralism*, Drysdale tracked the growing momentum for enhanced Asia Pacific economic cooperation throughout the 1970s and 1980s. He made the case for an intergovernmental mechanism focused on regional cooperation and consultation, citing the experience of other successful Asia Pacific institutions such as ASEAN, established in the late 1960s, and the research-focused Pacific Trade and Development Conference series (PAFTAD).¹²²

FURTHER DEVELOPMENT OF OPEN REGIONALISM

In his research, Drysdale identified three common principles of successful cooperation: openness, equality and evolution. 'Openness' depended on a non-discriminatory approach to trade policy. 'Equality' required activities be conducted on a basis of mutual benefit and equal participation for all members, large and small. 'Evolution' involved a consensus-based, step-by-step approach to cooperation, with voluntary participation.¹²³

These principles feature heavily in APEC's earliest documents. The Seoul APEC Declaration of November 1991, for example, recognised the role of "openness and a spirit of partnership is essential for the prosperity, stability and progress of the entire region".¹²⁴ The declaration enshrined APEC's objectives to reduce trade barriers without detriment to other economies, to commit to open dialogue and consensus-building, and to maintain the flexibility to evolve in line with changes in regional and global economic circumstances.¹²⁵

AUSTRALIA AND JAPAN LEADING THE WAY

By 1988, Shigeo Muraoka, Vice-Minister of Japan's Ministry of International Trade and Industry (MITI), was championing open regionalism as a model for trade between Japan, Europe and North America. His views were outlined in the MITI report *Towards a new Asia Pacific Cooperation*, which stressed the need for a non-discriminatory, outward-looking form of regionalism.¹²⁶ Not long after, Muraoka met with the Australian Minister for Trade Michael Duffy. Muraoka asked Australia to take a leadership role in

promoting a new ministerial forum.¹²⁷

As a first step, the Australian Government announced a meeting of Asia Pacific trade and foreign ministers in Seoul in January, 1989. Momentum for a permanent regional forum continued to grow through the year, leading to APEC's first meeting, held in Canberra in November. It was, according to Drysdale, a joint product of creative Australian and Japanese economic diplomacy.¹²⁸

APEC now states that its main aim is to increase prosperity for the people of Asia and the Pacific. It promotes economic growth that is "balanced, inclusive, sustainable, innovative and secure".¹²⁹

Building on the principle of a level playing field, APEC is a champion of trade liberalisation. It aims to harmonise regulations across the region, so that goods and services can move easily across national borders. It promotes international best practice amongst business and encourages transparency in governance.

APEC decisions are made by consensus. All nations have an equal say, and there are no binding commitments or treaties. If a commitment is made, it is undertaken on a voluntary basis, and APEC provides assistance to deliver the outcome. Open dialogue is encouraged, as is mutual respect.

Drysdale says these principles helped ensure APEC's success because they reflect dominant cultural mores in many Asian nations. Multilateral trading was also attractive to members wanting to build their economies, improve relations with neighbours, and improve their access to

APEC says its benefits are remarkable – “growth has soared in the region, with real GDP increasing from USD 16 trillion in 1989 to USD 20 trillion in 2015. Meanwhile, residents of the Asia Pacific saw their per capita income rise by 74%, lifting millions out of poverty and creating a growing middle class in just over two decades. APEC total trade (goods and services) has increased more than 6.7 times between 1989 and 2015, while trade by the rest of the world grew by only 5.6 times in the same period.”¹³⁰

a previously protectionist global trading regime.

While the early emphasis of the APEC was on trade and investment reform, two other agendas came to the fore: a commitment to pursue measures to reduce the time, cost and complications of trading in the region, called Facilitating Business; and building the technical capacity of member nations. APEC lists technical priorities as “strengthening anti-corruption, cross-border education and skills training, emergency preparedness, energy security, environmental protection, defense against pandemics and infrastructure development”.¹³¹

The APEC process has brought many tangible benefits to the region and beyond. Being a member of APEC is associated with significant trade advantages. Members have higher trade volumes not only amongst themselves but with non-member nations. Drysdale says that APEC is also more open to foreign investment than the world average.¹³²

In a 2009 study, Drysdale found that **“APEC members’ trade is 32% higher against its potential than that of European Union members and 10% higher than that of NAFTA members.”**¹³³

He says the critical factor is that APEC doesn’t restrict trade between members and others, unlike other trade blocs.

APEC has also helped members survive global financial crises. After what was seen as an inadequate international response to the 1997 Asian financial crisis, APEC economies have improved regional financial and trade integration, cooperation and macroeconomic monitoring. It is considered to have helped member countries better weather the 2008 GFC.¹³⁴

Overall, Drysdale says APEC’s open regionalism is not just good for the region, but a boon for the whole world. “East Asia is now a force of stability and dynamism at a turbulent time in the global economy. And it is important to be absolutely clear that the evidence is that APEC has mattered to securing this outcome.”¹³⁵

WHAT WERE THE OPTIONS TO OPEN TRADE?

Open regionalism was not the only available model of regional cooperation when social scientists were advocating for a regional trade forum. The European Economic Community was being developed in the 1980s and 1990s, and that a more hierarchical trade structure was Asia’s main alternative. The European Union is both a political and economic union of 28 countries with a common market, legislation

and currency. Unlike APEC, the European Union's trade policies discriminated against non-members. Soon after, another major trade bloc emerged, the North American Free Trade Agreement (NAFTA) which also relied on trade barriers disadvantaging non-member states.

Both these trade blocs have a supranational authority to ensure that member nations follow through on commitments. Critics say that without that overarching power, APEC has little influence on its members. However, supporters like Drysdale say when you measure the effect of APEC's voluntary economic performance, it compares more than favourably with the outcomes of NAFTA and the European Union, both of which are legally binding, exclusive arrangements.¹³⁶

REGIONALISM IN THE FUTURE

The very concept of open regionalism is under threat. Outside Asia, prospects for regional integration appear to be worsening. The integrity of the European Union has been shaken by the withdrawal of one of its largest economies, Britain. Protectionist, isolationist sentiments have shaped the tone of United States political debate. As Australian economist Dr Shiro Armstrong and former Indonesian Trade Minister Dr Mari Pangestu have recently written, "populist anti-trade and anti-immigration sentiments seem to be capturing the North Atlantic, and given Asia is still growing faster than the rest of the world it has a peculiar responsibility to protect the global system".¹³⁷ Armstrong and Pangestu add that regional institutions will be crucial to facilitating this.

The election of Donald Trump in America, and his axing of the 12-country Trans Pacific Partnership (TPP), means that new multilateral trade arrangements are on the table. Australia is negotiating another regional deal based, at least in part, on the notion of open regionalism. The Regional Comprehensive Economic Partnership (RCEP) includes China, India and Japan and all of ASEAN's membership.

China is poised to exercise economic leadership in an increasingly multi-polar international order, where no single power dominates. Any serious effort towards economic and trade integration on a regional or global scale must recognise the diversity of experience among world economies, especially China. It is in Australia's benefit that any future arrangement be made on a basis of openness and mutual benefit.¹³⁸

The need for an open, equal and evolving approach to economic cooperation and international integration is perhaps even greater now than when APEC was created.

In this global political and economic climate, the work of social scientists will be even more crucial in fostering stability and prosperity in the face of impending regional and global challenges. The example of APEC shows that with a solid grounding in social science concepts and evidence, economic diplomacy can have long-lasting, positive effects for the whole region and beyond.

BRINGING ECONOMICS TO THE STREETS

Over the last ten years, consumer debt and exclusion from the financial system has risen dramatically in Australia. Both issues are particularly prevalent among 18–24 year olds, especially those from disadvantaged backgrounds. Low levels of financial literacy exacerbate debt problems and financial exclusion.¹³⁹

Street Finance, an initiative of the University of Melbourne, is a subject that combines education, community engagement and research to address financial challenges facing young Australians today. The course connects third-year economics students with

secondary school students to help improve financial literacy. The aim of the program is to teach young adults how to better manage their finances through topics like budgeting, banking, debit and credit cards, understanding mobile phone contracts, online shopping, and consumer rights.

This innovative program brings practical economic expertise to the people who need it most, to help prepare young students for adulthood. This initiative is a prime example of the utility of the social sciences not only in research and analysis but also in education and community engagement.

ECONOMY-WIDE MODELLING

Australia undertook significant economic reforms from the mid-1980s through the 1990s. The Commonwealth and state and territory Governments overcame strong resistance from vested interests to implement these reforms. They did so by developing a persuasive narrative, which was backed by sound evidence. Economy-wide modelling of reforms played an important role in producing that evidence.

Economy-wide modelling made significant advances in the 1970s and by the 1980s. Computable general equilibrium (CGE) modelling (notably the ORANI model developed by Peter Dixon and other economists) was able to challenge the prevailing protectionist policies. The Industries Assistance Commission sponsored the associated IMPACT Project which brought together academics and public servants to build and use these new policy-oriented models of the economy.

The political narrative of the emerging reform era was best articulated by then-Treasurer Paul Keating: “The way forward for Australia is not to be closeted and sheltered, but to be open and dynamic, trading aggressively in the world. Only this kind of economy can provide the employment and rising living standards that Australia can aspire to.”¹⁴⁰ Supporting that narrative was an evidence base developed by Treasury and others, involving economy-wide simulations.

The modelling took on even greater policy relevance when it became possible to develop detailed industry and regional economy models within the overall ORANI framework. Policy reforms in the 1990s in industries such as grape growing in South Australia, the chemicals and plastics industry, minerals processing, and support for the Tasmanian economy, all benefited from the results that modelling could elucidate. These analytical powers were then taken up by a broader group of stakeholders. The influential farm sector, for one, used the results to show how its own trade-exposed producers were suffering from the many inefficiencies and protections afforded to manufacturing and other industries. Policy agencies in China, Malaysia, Singapore and elsewhere also adopted Australia’s modelling expertise.

A further indicator of the utility of this work was its ready adoption and adaptation by private consultancy firms. Once limited to public policy planning, companies such as Access Economics and Econtech, among others, have integrated modelling into their consultancy approaches.

An analysis of the success of Australia’s development and utilisation of economy-wide modelling by two of its prominent players (Alan Powell and Richard Snape) identified three strong foundations that translate to social science innovation more generally. First, the methodological development was seen as a public good, and there was complete and accessible documentation of the core version, which could then be adapted to a wide variety of policy issues. Second, a significant cohort of professional social scientists was trained in the use of the new methodologies. Third (and in this case a lasting testimony to contributor Ken Pearson and colleagues), software was developed, which is now routinely used by a wide range of analysts to adapt the methodology to the variety of industry and regional policy issues regularly confronting governments. Australia’s record of economic growth and rising living standards has been underpinned by the analytical power of economy-wide modelling.





ENVIRONMENT

A CLIMATE FOR POLICY CHANGE

Science has proven beyond any reasonable doubt that the world climate is changing at a more rapid rate than any other time in at least a million years. Social science holds the keys to further guiding Australia as it responds to a rapidly changing environment. Economics, law, business management, health and environmental management are just a few of the disciplines that need to be harnessed, and, in collaboration with science, find the best way to address this most challenging, and evolving, threat to Australia's future prosperity.

THE PROBLEM

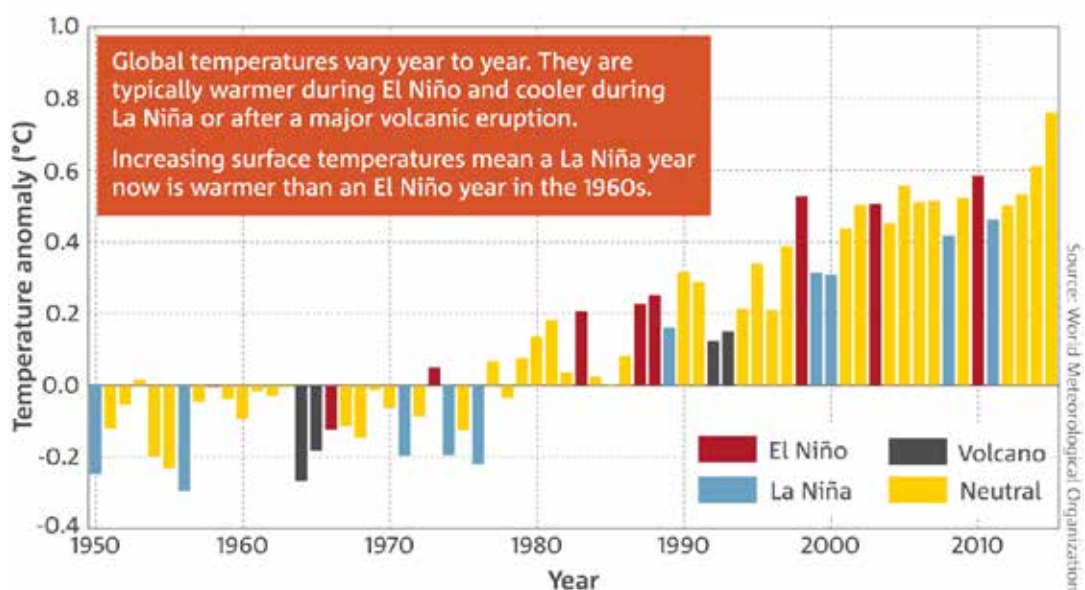
Warming is a central theme of climate change. Australia's mean temperature has risen by approximately 1 degree Celsius since 1910.¹⁴¹ See Figure 2.

This is an unprecedented trend in recorded history, and it is predicted to continue. There is also clear evidence that the temperature increases are caused by increasing carbon dioxide (greenhouse gases) in the atmosphere, hindering the Earth's ability to radiate heat (Figure 3). The result of the predicted rises in temperature include:

- rises in sea level
- more frequent and severe bushfires, and
- more frequent and severe storm events.

Policy needs to change across all levels of government to prepare for future impacts. Examples of adapting to climate change include: changes to local government law on land use, especially to prepare for more frequent bushfires; better insulation for houses to cope with more intense heat waves, and developing drought resistance crops. Mitigation efforts are also crucial. Without significant and appropriate

FIGURE 2: Global temperature variations¹⁴²



responses both at a government level through changes to emissions policies, and an industry and individual level through changes to consumption, the problem will only get worse.

Adaptation can be categorised into three streams – social (the relationships between people and groups, behaviours and attitudes, and culture), economic (the production, distribution, and consumption of goods and services) and institutional (the formal and informal rules governing social and economic activities).¹⁴³ It is human adaptation to changing environmental systems that will determine the success or lack thereof of our response to a more variable environmental regime.

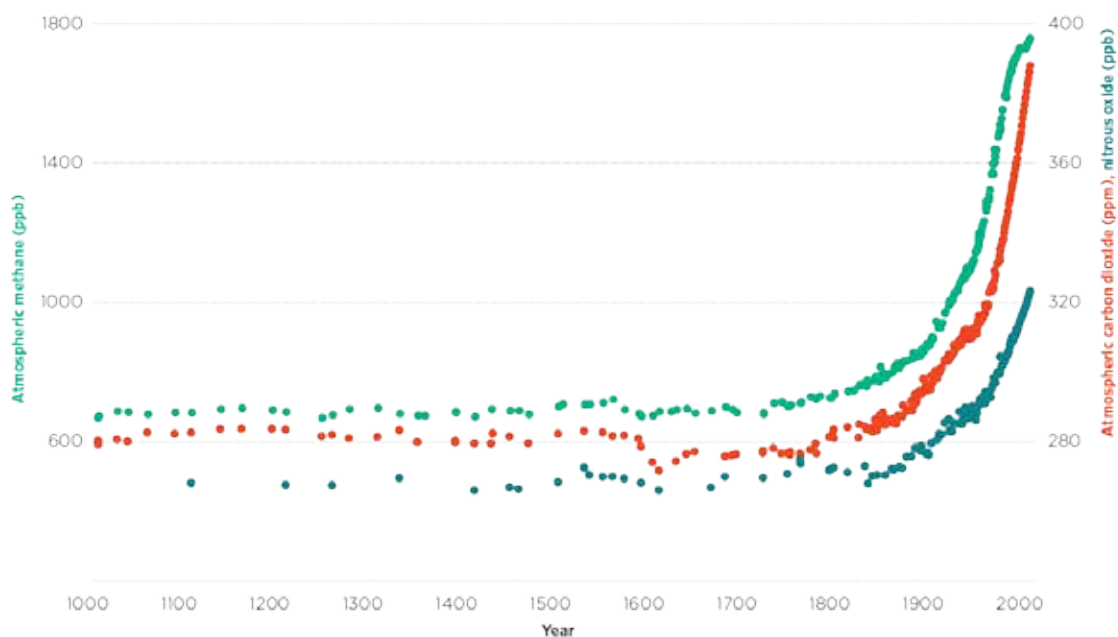
Responses will require both mitigation and adaptation to be addressed effectively. While rising temperatures could be slowed by immediate and concerted mitigation

action, communities, governments and industries will still be required to adapt to an environment that will continue to be affected by the long-term impacts of climate change. The social sciences provide evidence, modelling and analyses, which will be essential to adapting to a changing environment.

Climate change policy is a complex issue, and has been bitterly contested at the political level. Effective policy action has been bedevilled by several factors. While the science is conclusive that the impacts of climate change will be significant, the precise consequences are unclear and thus open to contentious debate.

Compounding the complexities, the costs of effective action are borne in the present but benefits will not be realised until decades later. That delay will make it challenging for society to accept and for governments

FIGURE 3: Greenhouse gases in the atmosphere¹⁴⁴



to manage. Those profiting from current practices continue to support the campaign for the status quo, prompting high level lobbying on behalf of emitters to limit cuts to emissions. Effective policy has proved a difficult political sell; while several climate change policies have been put forward, they have all been scuttled by a polarised Federal Parliament.

Australia is an outlier among developed countries in two respects. Our greenhouse gas emissions are not only the world's largest, per capita, but Australia's emissions reductions efforts will fall short of meeting international expectations. The share of fossil fuels in electricity production in Australia, for example, declined only marginally from 90.5% in 1995 to 85.1% in 2014.¹⁴⁵ This high per-capita emission is attributed to Australia's reliance on, and abundance of, inexpensive coal, including brown coal with a particularly high CO₂ emission rate, use of private vehicles and a comparably high standard of living.¹⁴⁶

Under present policy settings, Australia's emissions are set to substantially increase to more than 21% above 2005 levels by 2030, equivalent to an increase of around 52% above 1990 levels. Australia's current policies will fall well short of meeting its proposed Paris Agreement target of an emissions reduction of 26–28% below 2005 levels by 2030.¹⁴⁷

Social scientists have put forth two basic approaches to achieving the required emissions reduction. One is a market-based approach, built around putting a price on carbon emissions, while the other is a regulatory approach, such as governments buying carbon reductions. According to Garnaut, "in the market-based approach,

carbon can be priced in two ways. Fixed price schemes, or carbon taxes, set the price and the market decides how much it will reduce the quantity of emissions. Floating price schemes set the quantity of emissions and permits to emit are issued up to that amount. The permits are tradeable between businesses and so the market sets the price."¹⁴⁸

Various hybrid approaches are also possible. Yet, despite a broad consensus from social scientists internationally that pricing carbon in some way is the most effective policy response, the road to climate change policy reform in Australia has been long and bumpy.

BEGINNINGS OF CLIMATE CHANGE REFORM MODELLING IN AUSTRALIA

Australian social scientists have been working on the problem of how to abate climate change with policy since the late 1980s. In 1988, Australia committed to the Toronto Target, cutting CO₂ emissions associated with human activity by 20% by 2005. Three years later, economists modelled the emissions reductions needed to achieve this target in our most fossil fuel hungry sectors – electricity generation and road transport.¹⁴⁹ They calculated that Australia's commitment to the Toronto Target could be met using one of three regulatory measures:

- a mandated 20% reduction in CO₂ levels in each industry and in each region of Australia
- a 20% reduction but with tradeable emission quotas so that the costs of reducing the output of CO₂ are equalised over all industries producing CO₂, or

- a tax, such that each tonne of CO₂ emitted from any fossil fuel source, is penalised at the same rate.¹⁵⁰

Before the term 'carbon tax' became a political battlefield, it was long advocated as a sensible policy alternative. The tax option was the most effective and fairest solution, and this was compatible with international research. A general finding was that if taxes were to be increased, sufficiently severe, and applied globally, they would be effective in reducing global CO₂ emissions.¹⁵¹ There are other advantages to a carbon tax. Eminent economist Professor Ross Garnaut's major report, *Garnaut Climate Change Review*, found that such a tax would raise considerable revenues. It said a carbon price of \$26 per tonne could raise approximately \$11.5 billion in the first year.¹⁵²



This revenue could then be used to buffer the transition to a low-carbon economy. The Garnaut Review is innovative because it focuses not only on the science, but also the social science of reducing emissions across the disciplines of economics, ethics and sociology. Garnaut highlights that climate change is a global problem – solutions lie in collective action, and Australia cannot shirk its international responsibilities.¹⁵³

By the 2000s, reducing greenhouse gas emissions became a global imperative. There was compelling evidence from the scientific community, including Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO), that "a sharp cut in world greenhouse gas emissions would

substantially reduce the risk of catastrophic climate change over the next century."¹⁵⁴

The science was clear, but the social science contribution to policy was yet to follow. In 2007, Australian economists Professors Philip Adams and Peter Dixon released a major report that argued cutting greenhouse gas emissions is like buying an insurance policy.¹⁵⁵ A small cost is incurred (a loss in GDP) but a significant risk (catastrophic climate change) is reduced, assuming other nations reduce emissions as well.¹⁵⁶ With this in mind, Adams and Dixon set out to calculate the costs to Australia of an emissions trading scheme. Their research found that an emissions trading scheme would have only a small effect on Australia's GDP in the coming decades, and a tiny and reversible reduction in employment over the long term.¹⁵⁷

POLICY INNOVATION; POLITICAL STAGNATION

In the year Adam and Dixon's study was released, the then Prime Minister John Howard promised an emissions trading scheme if he won the 2007 election.¹⁵⁸ The issue was quickly moving from the academic realm to the political. Instead, the Rudd government won office. One of its first acts was to ratify the Kyoto Protocol. Prime Minister Kevin Rudd declared climate change as the "great moral, environmental and economic challenge of our age".¹⁵⁹ Under his leadership, emissions trading legislation was introduced to Federal Parliament, but it met with considerable political opposition.

Following a defeat of the legislation in the Senate, the legislation was shelved. In 2011, under Prime Minister Julia Gillard, a modified price on carbon (a market mechanism) was

introduced to Parliament and it came into force in 2012. It set an initial price on carbon of \$23 a tonne, before transitioning to a floating price. The scheme lasted just three years before being scrapped in 2015.¹⁶⁰ The resulting carbon price, albeit brief, achieved large reductions in emissions.¹⁶¹ Tellingly, dire warnings from opponents about the policy's impact, like \$100 lamb roasts and soaring electricity prices, did not eventuate.

Both the Rudd and Gillard Labor governments turned to social science and evidence-led policy debate to help convince the Australian public of the need for urgent action. In 2008 under Rudd, and again in 2011 under Gillard, Garnaut was commissioned to review Australia's policy responses to climate change. Both the Government and Opposition accepted the 2008 Garnaut Review's proposal that Australia should reduce emissions by 5% by 2020 from 2000 levels. The Government also agreed that Australia should make a stronger commitment to achieving international targets.¹⁶² According to Garnaut in his 2011 review, Australia should offer to reduce 2020 emissions by 25% from 2000 levels.¹⁶³ This was a bold proposal in the politically sensitive climate of the time.

Economic modelling in 2012 by the Australian Treasury and the Centre of Policy Studies (CoPS) at Monash University showed that in the medium term the impact of a carbon price on GDP would be minimal. To cut greenhouse gas emissions by 20% of year 2000 levels in 2050, the Australian economy would be 2.8% smaller than it

otherwise would have been. What does that mean? Without a carbon tax, Australia's GDP was trending to grow at an average of 1.4% until 2050; with a carbon tax, economic growth is projected to average just over 1.3%.¹⁶⁴ In other words, the level of GDP we would have reached on 1 January 2050 will not be reached until 1 January 2052.¹⁶⁵ Phased-in over 40 years, this is less than 0.1 of a percentage point shaved off annual growth.¹⁶⁶

Research from the CSIRO in 2015 found that collective policy choices are crucial, and that Australia could make great progress to sustainability without radical changes in social values. While individual choices are important, the researchers found that decisions made as a society are likely to shape Australia's future sustainability more than the decisions made by industry, businesses and households individually.

They also argue that policy reform can reconcile economic and ecological goals, and that sustainable prosperity is possible but not predestined. Australia is free to choose.¹⁶⁷

As clear as the case for reform may seem, the political appetite for it has weakened since 2008. Instead, public discussion has focused on the struggle between special interests and the national interest.¹⁶⁸

The research, then, was conclusive: neither a carbon emissions scheme, nor a carbon tax, would seriously undermine Australia's economic growth, but opposition to these reforms remained entrenched.

What, then, is Australia's fair share of the global carbon reduction burden and indeed is that enough, should we not be doing more? The Garnaut Review proposes that "given our starting point, the realistic ambition is to catch up with our fair share, rather than to be a leader". In concrete terms, if the world had reached effective agreement on emissions reductions that would lead to concentrations of greenhouse gases of 550 parts per million (ppm), Australia's fair share would, in Garnaut's opinion, be 10% of global emissions.¹⁶⁹

GETTING BACK ON TRACK

Australia faces significant challenges in achieving a coherent package of climate change policies, and will call on the social sciences in facing these challenges. As economist Dr Ken Henry points out, climate change policy in Australia is a "shambles". "At least 14 years ago, our political leaders were told that there was an urgent need to address the crisis in business confidence,

in the energy and energy-intensive manufacturing sectors, due to the absence of credible long-term policies to address carbon abatement. It is quite extraordinary, but nevertheless true, that things are very much worse today."¹⁷⁰ In his speech, Henry reiterated the call from social scientists for market-based price signals to guide climate change mitigation.

In mitigation, analysis of market mechanisms must continue, but also of the economic, social and equity aspects of other mitigation policies, including shifts to renewables, provision of public transit, land-based sequestration of carbon and energy efficiency measures. In climate change adaptation, the very strong basis of social science research encouraged by the first phase of the National Climate Change Adaptation Research Facility has slowed, but the contributions of economics, behavioural sciences, law, public policy and administration, and others are now more needed than ever.

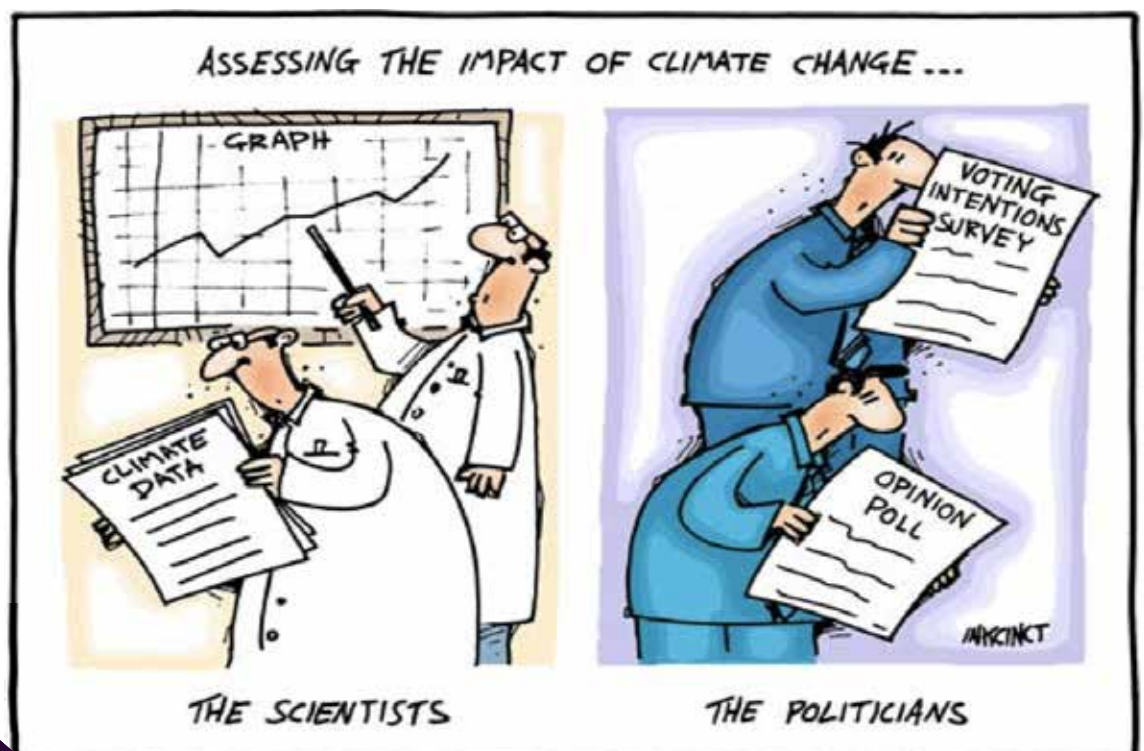
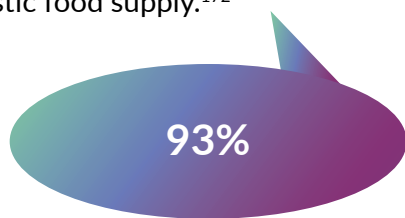


Photo by John Ditchburn.

GROWING FOOD, GROWING PROFITS: AGRICULTURAL ECONOMICS IN ACTION

Australian agriculture has always been a fundamental industry domestically, but it's also led the world in several areas of agricultural innovation. By bringing together advances in science, technology and social science research, Australian farmers and agribusiness have been at, or near, the global technological frontier for two centuries.

Agricultural economists have played a central part in Australia's agricultural productivity and export success. Australian farmers produce enough food to feed 60 million people.¹⁷¹ This provides 93% of the domestic food supply.¹⁷²



Domestic consumption only represents a third of Australia's agricultural output; the rest earning more than \$41 billion a year in export revenue.¹⁷³ Currently that is one-eighth of Australia's export revenue, and is set to rise as the exchange rate depreciates and Australian producers export more to the burgeoning Asian market.

Asia has growing populations with rising incomes. Currently, more than 60% of our produce is exported to Asia, with China now the single largest export destination for Australian food.

To realise export growth, significant investments in Australian agriculture and supportive infrastructure are needed. One ANZ study estimated that \$600 billion is needed between now and 2050 for Australian agriculture to maintain growth and profitability.¹⁷⁴ The study, and another by ABARES¹⁷⁵, predict that Australia can double the real value of its annual agriculture exports. Others urge caution – modelling published last year by the CSIRO found that a lack of action on climate change, and current slowing of agricultural productivity, could dampen optimistic predictions. The modelling revealed that “sustained agricultural production and farm income is predicated on continued productivity improvement over the coming decades; the current evidence of decline is therefore disturbing”.¹⁷⁶

DIGGING INTO THE HISTORY OF AGRICULTURAL ECONOMICS

One of Australia's early agricultural economists, Sir John Crawford, had a significant policy influence in Australia. He is credited with integrating agricultural economics within public administration and policy making.

A milestone in Crawford's career was the establishment in 1945 of the Bureau of Agricultural Economics. As its founding director he championed more efficient agricultural production and distribution,

suggesting greater land clearing and settlement, developing irrigation systems, better pest control and price stabilisation through central marketing. He believed government should be active in these activities, saying “the rural economy was not able, without assistance from the State, to maintain all our farmers and farm workers at a satisfactory living standard”.¹⁷⁷

Meanwhile Australian public sector agricultural research and development expanded after WWII with agricultural economics growing strongly from the late 1960s.¹⁷⁸ Agricultural innovation was a focus, as were policies to guide the projected growth of agricultural products. Social science helped the uptake of new farm technologies like: the development and adoption of crop varieties; pasture improvement for wool growers; advances in dairy farming; rabbit eradication; sale by sample process for wool growers; weed management practices; and land conservation practices, most recently conservation tillage.

For much of the 20th century, the environment was largely considered as an impediment to agricultural development. However, agricultural economists began changing their views in the mid 1960s, and by the 1980s were focusing on concepts of environmental conservation and designing analytical tools to assist in managing the environment for its benefits, both to the public and to sustainable agriculture.

Agricultural economist Professor Kym Anderson says formal economic modelling of the effects of market distorting policies actually stretches back more than five decades. That modelling became the foundation for later calls for reform from

such institutions as state departments of agriculture, the Federal Bureau of Agricultural Economics and the Industries Assistance Commission.

TRANSFORMING THE AGRICULTURAL LANDSCAPE

Social scientists have been instrumental in shaping Australia’s agricultural commodity policy changes during the microeconomic reforms of the 1980s and 1990s. Their greatest contribution was providing extensive evidence to help dismantle price schemes for dairy, wheat, dried fruits and other products. Their modelling also informed reform of the reserve price scheme for wool, fertiliser subsidies and tariffs on crucial farm machinery. Agricultural economists Garry Griffiths and Alistair Watson for instance have been heavily involved in assessing the benefits of shifting to a competitive market structure to generate large increases in national economic welfare.¹⁷⁹

The commodity and trade policy analysis skills of Australian agricultural economists have also been used in international trade negotiations. Anderson has been involved in efforts that have resulted in significant global trade policy improvements, in both developed and developing countries.¹⁸⁰

Another agricultural economist, Professor Andrew Stoeckel, has conducted research on international trade has also received world acclaim. As Director of the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), he initiated major reviews of important rural industries including wool, wheat, beef, sugar, cotton, horticulture and dairying, and assessments of other matters such as banking, drought,

fertiliser subsidies, pricing schemes and tariffs. His research into barriers to investment across the Asia-Pacific Economic Cooperation (APEC) region have been incorporated into the OECD's handbook for implementation of their Policy Framework for Investment.

Social science research also guides the government to more efficiently assist the agricultural sector. This will be a growing focus in future on the impact that climate change has on variations in seasonal rainfall and the impact this has on the sector. Where this is experienced as severe drought, farmers can lose their farms. Drought policy is an area where social science is poised to provide an efficient and effective policy solution to satisfy interests on both sides of the farm gate.

Government's response to past droughts has been criticised as ad hoc and uneven. Handouts in the 1983 drought for instance were provided in the form of subsidies for livestock transport and fodder, as well as interest rate subsidies. They were given to some farmers, but not others, regardless of who was most deserving of support. In evaluating the effects of drought policies, social scientists made some important findings.

Perversely, schemes favoured farmers who did not prepare for inevitable droughts, creating some disharmony in farming communities. Also, handouts create an expectation that farmers can rely on government assistance in future, deterring them from providing for themselves. Based on this research, social scientists recommended a number of reforms to more effectively and efficiently support farmers and the wider agricultural sector. Agricultural

economists recommended ending drought handouts. Instead they suggest providing farmers with information and incentives to adequately prepare for future droughts and other natural disasters. Such future proofing would also provide security during periods of low commodity prices.

An example of this is the opportunity for an innovative loan system to supplant government subsidies and grants that now partially support struggling farmers. Research by political scientist Professor Linda Botterill and colleagues shows how income-contingent loans to primary producers can serve their needs better than grants or conventional loans and provide for farm security in a more sustainable fashion. Other recommendations suggest developing an explicit support payment system for farm households in need.

The research of agricultural economists into drought has also been applied to policies for other natural disasters affecting the urban as well as rural economy, including floods, bushfires and cyclones.¹⁸¹

FORECASTING FUTURE YIELDS

Historically, farmers have responded to their eroding terms of trade by increasing productivity. Australian agricultural economists Professors Julian Alston and Philip Pardey have assessed the private and social returns to investments in agricultural research and development, and shown them to be huge both in Australia and abroad.¹⁸² However, there are warnings of underfunding in this area and concerns about better communicating the economics of science, and the importance of public funding in food and agricultural. Without that evidence, policies may continue to miss

the mark, over-regulating some technologies like GMOs, and under-regulating others, such as pesticides.¹⁸³

There needs to be further study of the impact of Australia's supermarket duopoly, and its impact on suppliers, as well as the restructuring of domestic and international food markets. The growing number of multinational food companies has prompted Australian social scientists to revise their research and teaching in a value chain framework – a model that helps firms analyse ways of creating value and competitive advantage.

Economist Dr Brian Fisher says to realise future economic growth in agriculture it is critical to develop more robust approaches to sustainable farming and climate change adaptation, as Australia warms and dries out.¹⁸⁴ Australian farmers are already well regarded internationally in dryland farming, natural resource management and sustainable agriculture. The Murray–Darling Basin water market and the use of individual tradeable quotas for various fish stocks are recognised as good examples of social science leading to significant economic benefits.¹⁸⁵

As one social scientist remarked, “it’s hard to be green when you’re in the red”,¹⁸⁶ so incentives have been conceived to assist private landholders manage uncleared

land for their own benefit and the public good. With more than half of the Australia landscape under private ownership, conservation stewardship payments have helped slow the rates of native land clearing. Such clearing has had profound effects on the environment, but especially on biodiversity, which is increasingly recognised as vital for soil health and sustainable agricultural production.¹⁸⁷ Australian environmental economists are said to have punched above their weight in international circles. Professors Jeff Bennett and Alan Randall say from basic economic principles through to state of the art analytical tools, Australian economists have been at the heart of formative debates.¹⁸⁸ For instance, Dr Deborah Peterson¹⁸⁹ developed the precautionary principle to risk in Australian natural resource management, arguing that clear guidelines are needed to ensure good decision making.

Agriculture is, and will always remain, a high-risk industry. Development of new scientific and technological systems, to increase the productivity of Australian farms in their risky and uncertain environment, must be complemented by social science research to optimise uptake as opportunities arise. On-and off-farm efficiency will be critical to agriculture's continuing contribution to the Australian economy, society and environment.

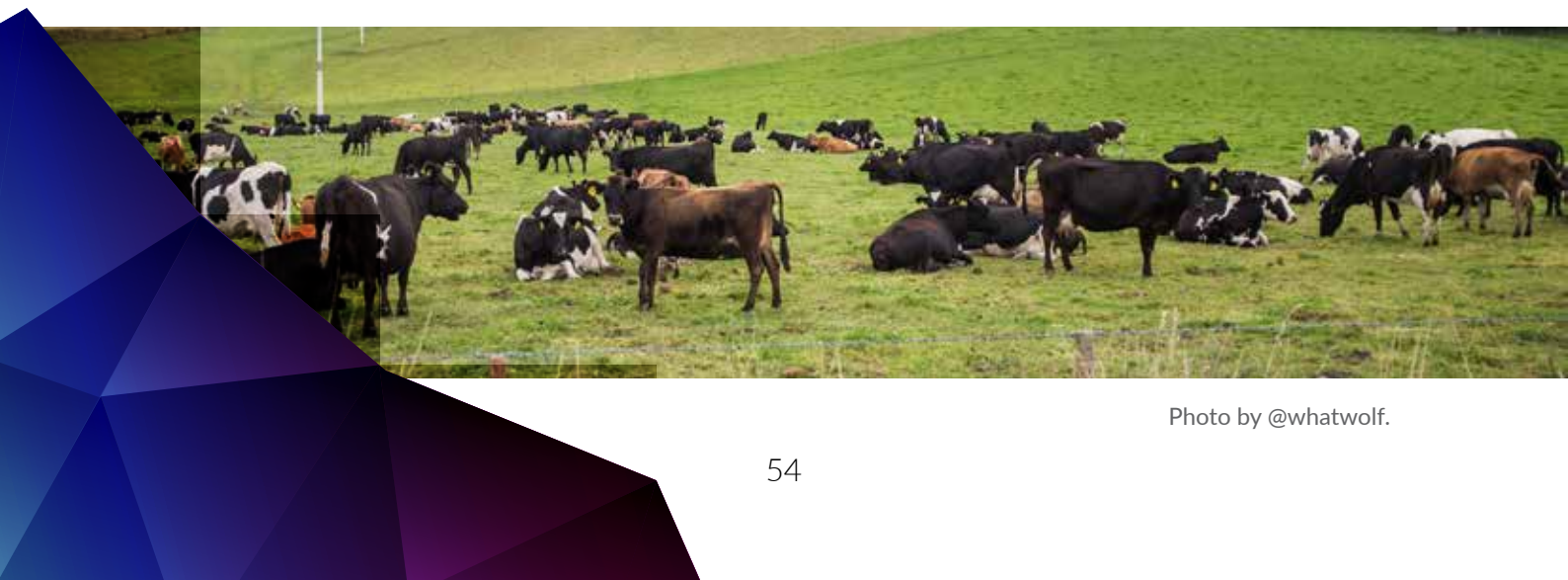


Photo by @whatwolf.

GOING WITH THE FLOW OF GOOD WATER MANAGEMENT

According to Harvard Professor and winner of the 2014 Stockholm Water Prize, Dr John Briscoe: “Australia’s water management policies enabled it to do something that no other country could conceivably have managed – in a large irrigated economy (the Murray-Darling Basin) a 70% reduction in water availability had very little aggregate economic impact. There is virtually no other system of water management in the world that would have been able to absorb that sort of shock in such an effective way. This represents an achievement of global significance as human communities across the world respond to a changing climate.”¹⁹⁰

Australia is a world leader in the good governance of freshwater resources. This has not always been the case. Significant governance reform was initiated in 1994 with the Council of Australian Governments' Water Reform Framework. This framework and the subsequent National Water Initiative in 2004 identified the principles underpinning the transition to a more efficient and resilient water governance and management system including:

- transparent and statutory-based water planning
- clear, nationally compatible and secure water access entitlements, ideally defined as a perpetual share of the available resource, with sound registry arrangements
- water pricing for recovering the cost of water services, and
- open water markets involving removing artificial barriers to trading in water entitlements and allocations.

When fully implemented, adoption of these principles would bring about more

productive water use and enable more cost-effective and flexible recovery of water to achieve economic, social and environmental objectives.¹⁹¹

While water reform has been implemented in many surface and groundwater systems in Australia, the most renowned example of our social science driven and evidence-led policies in this regard lies in the management of the Murray–Darling river basin. The implementation of a water market mechanism and the introduction of environmental flows to restore the health of the river system are considered world best practice.

By 1994, surface water systems, particularly in the Murray–Darling Basin, were fully developed or over developed. As it became clear that water resources in particular catchments were fully allocated, the deficiencies of existing systems of water rights became exposed.¹⁹² There were impediments to moving water allocations to higher value users and potential for

unmanaged allocation.

Largely, the success and innovation of this water management regime lies in its multidisciplinary foundations: hydrological and economic modelling combined with anthropology, sociology and public policy planning to create a system for supporting the agricultural, environmental, Indigenous, industrial and domestic household needs within the basin.

The Murray–Darling Basin is noteworthy for several reasons. For a start, it is one of the world’s most variable regions in terms of streamflows and precipitation.¹⁹³ It is also Australia’s most significant food producing area.¹⁹⁴ Irrigated agriculture is tremendously important, both in terms of the amount of water diverted for irrigation, and for the economic value it creates, but the prevalence of irrigated agriculture also means that water extractions in the basin are large, relative to inflows.¹⁹⁵

In this context, water management reforms have sought to improve aquatic ecosystems without damaging the value of agricultural production.¹⁹⁶ Until the early 1990s, most water available for irrigation was tied to the land asset with no opportunity to transfer water via a market or other mechanism, from less valuable to more valuable uses. Moreover, water for the environment was a residual claimant and there was growing evidence that the diversion of water for irrigation was associated with a significant loss of environmental amenity.¹⁹⁷

REFORMS WERE REQUIRED

Social scientists have been at the forefront of designing the water management reforms. Agricultural economists in particular have

been leading the redesign of water property rights and institutional design to better allocate limited water among competing irrigation, environment, household and business uses. Recommended reforms from agricultural economists have included the separation of land and water property rights, the development of markets for the transfer of water allocations and entitlements, and entitlements with different security of supply properties to reflect climatic variations. Importantly, they included recognition that water allocated to the environment has public-good properties, versus private-good properties for irrigation uses. Such reforms required direct government intervention.¹⁹⁸

In 2005, in the middle of Australia’s worst drought on record, the government announced a \$10 billion water reform package. This included creation of a new independent authority to take over the management of the Murray–Darling Basin, and a law, the *Water Act 2007*, enabling the federal government to take over management of the basin from the state governments that had controlled it since Federation in 1901.¹⁹⁹

A new basin management plan was also foreshadowed, and its remit was to optimise a balance among social, environmental and economic needs. In 2010, a draft plan was released that called for approximately 30% of total water used in the Murray–Darling Basin to be returned to the river system for the purpose of improving ecological health. Community backlash in irrigation areas was extreme and media coverage was intense, resulting in extensive public consultation and debate and continuing negotiations to clarify the need for river flow management to ensure sustainable farming and communities.²⁰⁰

The proposal for environmental flows was radical because it provided a dedicated entitlement for the environment. Fully implemented, this innovation will bring the Murray–Darling Basin from a dangerously over-allocated water system to one comparable with other river basins in the world. The Murray–Darling Basin Plan has become world renowned and is seen as an example of best practice for basin-wide water management.

Of course, there are still issues for policy improvement, including the transfer of water between urban and rural uses, infrastructure maintenance and responsibility, storage strategies, and responses to climate change.²⁰¹ These require further attention from social scientists, hydrologists, policy makers, and communities, but the foundations now exist for supporting evidence-led policy.

WATER MARKET MECHANISM

Several other Western countries, notably the United States, United Kingdom, Spain and Chile, have implemented limited water trading schemes. Australia's water market, however, is the most comprehensive in that it applies across the entirety of the Murray–Darling Basin and is cross-jurisdictional. All states in the basin participate in the same market.

Importantly, the separation of water rights from land ownership, emanating from the 1994 Intergovernmental Agreement on Water Reform and the 2004 National Water Initiative, facilitated the establishment of a water market. Irrigators would now own a water licence, an entitlement that can be bought and sold like any other property right.²⁰² Water markets allow water to flow

to where it can be used most productively.²⁰³

Depending on seasonal availability, farmers may choose to irrigate their crops, especially permanent plantings such as orchards requiring recurrent water, and purchase additional water to do so, or to forego an annual crop, such as rice, and sell their seasonal water allocation instead.²⁰⁴ Users determine whether they need to buy or sell their water, and when. The price of water becomes then a reflection of demand and supply factors, but within limits.²⁰⁵ To ensure fair trading, the Australian Competition and Consumer Commission (ACCC) has monitoring, advisory and, in some cases, a price-setting and enforcement role for the water market and charge rules.²⁰⁶

In Australia, the southern Murray–Darling Basin is where more than 80% of water trade occurs. Trade in water entitlements (permanent trade) increased from 40GL in 2005–06 to a high of 763 GL in 2008–09. The period 2009–10 to 2012–13 saw a sharp increase in the purchases of entitlements for environmental purposes. In 2011–12 environmental purchases peaked at 48% of entitlement trades. Allocation trades (likened to annual leasing of water entitlements) reached 6058 GL in 2012–13.²⁰⁷



ENVIRONMENTAL FLOWS

Environmental flows provide a flexible allocation for the ecosystem to ensure its long-term health, in the context of a management plan that also meets the

needs of people and their industries.²⁰⁸ The ecological needs of riverine systems are more complex than simply “add more water”,²⁰⁹ as flows and water levels must be monitored and adjusted, in response to achieve environmental outcomes and satisfy human need. The Murray–Darling Basin is pioneering the use and regulation of basin-wide environmental flows.

The lack of consensus about magnitude of environmental flows is an illustration of a common obstacle for policy makers; evidence-led policy can be undermined by lack of support from stakeholders. As Australian economist, Professor Quentin Grafton, points out, “While everyone agrees that all policy should be based on the best available evidence there is often a big gap between what is espoused and what is practised.”²¹⁰

Impact-related evidence is desperately needed to inform effective policy development debates. More than simply removing water from users and irrigators, the Government has developed a system of mechanisms for water recovery and management. These include buy-backs

where willing sellers have sold their irrigation entitlements to the Australian Government, the Sustainable Rural Water Use and Infrastructure Program (SRWUIP) for irrigation delivery infrastructure, and other river maintenance initiatives.

THE MURRAY–DARLING – AN EXAMPLE FOR THE WORLD

Water management in the Murray–Darling Basin is a best-practice example of implementation of water reform and planning in a region where water resources are highly contested and future supply is insecure.²¹¹ Water reform is difficult, and it is rarely undertaken without intense political and community debate.²¹² The Murray–Darling Basin Plan provides an important case study of a major reform process which has the potential to be highly successful. As with most reform processes, there was no silver bullet but necessary ingredients included good political leadership with strong community engagement and consultation, regular evaluations, good science, significant funding, a sound regulatory framework, and contributions from the social sciences throughout.²¹³



Aerial photo of the Murray River. Source: Australian Studies Centre.

KNOWLEDGE OF POWER: ENERGY LABELLING SYSTEM

Labelling electrical products so that consumers could compare their energy consumption and operating costs was a policy promise of the Wran Labor government before the 1978 NSW state election, at a time when the second global oil crisis and rising energy prices made Australians especially sensitive to the running costs of their appliances and cars.

Up to then the only such programs were in the United States and Canada. The Energy Authority of NSW started work on the program in 1982, concentrating first on refrigerators and freezers. At the time there were no Australian methods for energy testing, so it took several years to develop standards, the legislation and the label design.

The Wran government was one of the first in Australia with a Minister for Consumer Affairs. The energy labelling project was headed by Andrew Pavey, a physicist and council member of the Australian Consumers Association, publisher of the journal *Choice*. The other important member was Dr George Wilkenfeld, an architecture graduate from Adelaide, who had also done post-graduate work on energy systems in London and Sydney. The team commissioned Les Winton, a founder of the market research company ANOP, to probe consumer attitudes and test label designs. Drawing on a range of social science disciplines, the project represented the first major departure from the engineering approach to electricity system

planning, which had dominated NSW policy for decades.

Appliance manufacturers were initially opposed, arguing (often simultaneously) that consumers would ignore the label and it would have no effect, but at the same time would cause major disruption in the industry and lead to job losses in local manufacture. Energy labelling received some support from the Commonwealth government, but was not implemented until the Victorian Labor government joined with its NSW counterpart to launch the program in the two states, covering over 60% of the national population.

Energy labels became mandatory for refrigerators and freezers sold in NSW and Victoria in December 1986. Coverage has since extended to air conditioners (1987), dishwashers (1988), clothes washers and dryers (1990), televisions (2009) and computer monitors (2013).

During the 1990s all states, territories and New Zealand enacted legislation modelled on NSW and Victoria. Since 1999 the program has been managed under a formal inter-governmental agreement, and has been extended beyond energy labelling to minimum energy performance standards. In 2012, the Commonwealth assumed regulatory control when it passed the *Greenhouse and Energy Minimum Standards (GEMS) Act*.

Energy labeling has been well received by consumers, with awareness levels consistently exceeding 90%.²¹⁴ It has been so successful in raising the energy efficiency of appliances that the rating scales are revised every decade or so. Models rated 5 or 6 stars on the old scale are re-rated to 2 or 3 stars, so higher ratings become more difficult to achieve and suppliers keep competing to provide ever more efficient products. The Commonwealth ensures the integrity of the program by regularly testing products and prosecuting suppliers who misrepresent product performance.

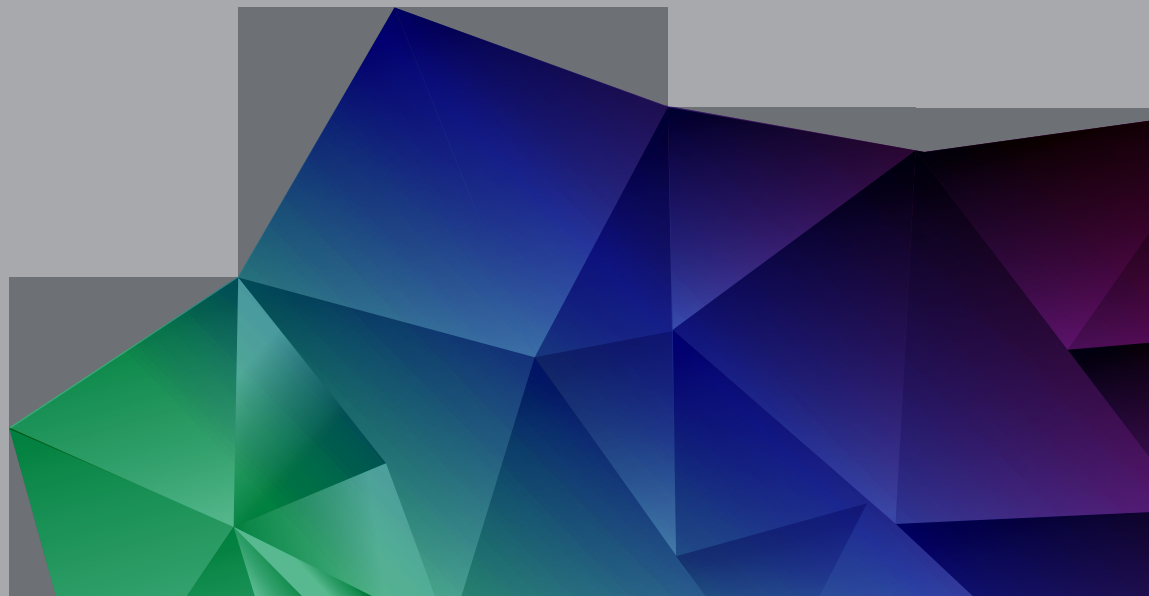
The appliance industry now fully supports energy labeling, and regularly quotes high star ratings in advertising. In 2007 the Commonwealth Department of the Environment introduced a water efficiency label with a similar design. By reducing Australia's demand for electricity, the

energy labeling and minimum standards program saved about 87 million tonnes of greenhouse gas emissions between 2000 and 2013, and is projected to save another 129 million tonnes between 2014 and 2020.²¹⁵ While over 80 countries now have energy labels of some kind, the Australian program is considered one of the best managed and most cost-effective. One of the pillars of the program's success over more than 30 years is regular qualitative and quantitative consumer research, resulting in incremental rather than wholesale changes.



Energy ratings label. Source: EnergyRatings.gov.au.

LAW & JUSTICE



ON THE RIGHT PATH: HUMAN RIGHTS LEGISLATION IN AUSTRALIA

For the majority of its history, Australia had been the only Western democracy without a written statement of rights in any of its jurisdictions. Thanks to the work of social scientists, by 2007 the United Nations was showcasing the *Australian Capital Territory Human Rights Act 2004* as an example of global good governance in protecting human rights.²¹⁶

The Act brought into law for the first time in Australia a statement of human rights as a measure against which government action can be tested.²¹⁷ Much of the Act's structure is attributed to lawyers Professor Hilary Charlesworth, Professor Larissa Behrendt, public servant Elizabeth Kelly, and former journalist Penelope Layland, who comprised the Consultative Committee that provided the recommendations and model drafted into the Act.

With the passage of the Act in 2004, the Consultative Committee's Chair Hilary Charlesworth described Australia's "exceptionalism" as the only Western democracy without a Bill of Rights as now being somewhat reduced.²¹⁸ Previous attempts at introducing human rights legislation both at federal and state and territory levels had failed, but the work of Charlesworth and her colleagues was a significant milestone for the protection of human rights in Australia.

While the Act itself was significant, the way it came to be written was also a remarkable piece of social science. The process was not limited to a closed group of academics. Rather, it was a broad-based consultative process with a wide cross-section of the Australian public.

Alongside traditional stakeholder engagement processes, the Committee also commissioned a 'deliberative poll'. It was the first of its kind to be held in Australia.²¹⁹ The poll drew together a representative sample of the community, like a focus group. The group was exposed to the comprehensive range of arguments for and against the bill, allowing the participants to effectively probe the concept and more directly influence the results.

One important feature of the deliberative poll was that it measured the attitudes of the participants before and after they were exposed to the details and possible implications of the proposed human rights act. The results of this survey were telling. More than half of those who were undecided about the need for the bill at the outset of the process were supportive of it by the end of the deliberative consultation.²²⁰

Once the Consultative Committee had determined that there was sufficient support for establishing a Bill of Rights it turned its attention to the form of the bill. In developing its recommendations, Committee

members consulted other Australian and international lawyers who had analysed bills of rights in the United Kingdom, New Zealand, South Africa, Canada and Hong Kong.

Two Committee members also drew upon their own extensive scholarly analyses of human rights. Charlesworth is a pre-eminent expert on international law and human rights who has been globally recognised for her involvement in a pioneering study on the failure of international law to adequately address the needs of women.

Charlesworth's colleague on the Consultative Committee, Larissa Behrendt, is similarly experienced and renowned. She is the first Indigenous Australian to graduate from Harvard Law School, and has researched and written extensively on Aboriginal social justice. Behrendt worked in Canada's Assembly of First Nations, and her experiences there and in the United States gave her an intimate understanding of both countries' bills of rights. She saw benefits for Australia in adopting elements from the Canadian model and was particularly impressed by the culture built around human rights and the lack of backlash towards Indigenous people in Canada asserting their rights.²²¹

The Consultative Committee ultimately recommended that the ACT Government adopt a dialogue model for the Bill of Rights legislation. The dialogue model would, through a statutory framework, promote "institutional interaction on human rights issues between the three arms of government" – executive, legislative and judiciary – and the community.²²² Charlesworth said she was drawn to statutory models of bills of rights because

they limit the bias of the judiciary.

The Committee proposed that the legislation should implement the rights set out in the two major UN human rights treaties to which Australia is a party, namely the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights.

The Committee noted that international law has been slow in developing a category of Indigenous rights,²²³ and the *ACT Human Rights Act 2004* does not mention these rights specifically (though it does make provisions for reviewing this in the future). The preamble to the Act does, however, acknowledge that: "Although human rights belong to all individuals, they have special significance for Aboriginal and Torres Strait Islander peoples—the first owners of this land, members of its most enduring cultures, and individuals for whom the issue of rights protection has great and continuing importance."²²⁴

A five-year review of the legislation found that the *ACT Human Rights Act 2004* had had an immediate impact on policy development and the quality of law-making in the ACT.²²⁵ For example, it was used to guide discussion on counter-terrorism following the London bombings in 2005. The ACT's *Terrorism (Extraordinary Temporary Powers) Act 2006* was rushed through following the London bombings in 2005, but it differed in many aspects from the Commonwealth's national security regime and the ACT's own human rights legislation from 2004. Publicising these differences helped raise the level of national debate on human rights and counter-terrorism laws.

The *ACT Human Rights Act 2004* was also important for protecting the rights of other marginalised groups in the ACT, and for raising awareness of human rights in different parts of society. The ACT is home to Australia's first human rights-compliant prison, the Alexander Maconochie Centre, and the *ACT Human Rights Act 2004* was instrumental in providing the legislative basis for how inmates are treated.²²⁶ The five-year review also found that the innovative community consultation process for developing the bill had been a clever part of the design of this social science project. It ultimately helped overcome an entrenched reluctance about human rights in the Australian political and legislative landscape and added momentum to efforts in other Australian jurisdictions.

In the past 12 years, other Australian states have followed the ACT's example. Victoria has passed the *Charter of Human Rights and Responsibilities Act 2006* (Victoria) and community and expert consultations have canvassed the adoption of human rights

legislation in all other states and territories, including most recently in Queensland.²²⁷ In 2009, the National Human Rights Consultation Committee released a report recommending the adoption of a federal human rights Act.²²⁸

If more broadly implemented, this would bring Australia in line with global best-practice on human rights, and raise the standards for rights-based policy in this country, and it began with a group of social scientists working without fanfare with the ACT community to develop one piece of legislation.



Source: WitnessRadio.

DEFEATING FAMILY VIOLENCE WITH SOCIAL SCIENCE

Australian social scientists are creating the world's first Family Violence Index.²²⁹ Beginning in 2015, researchers began developing an evidence-based benchmark for policy makers on how best to allocate resources so as to most effectively address the problem of family violence.

The Index is one step in efforts to reverse a rising trend of violence towards women in Victoria. Data from 2012 and 2013 show violence as the leading cause of death and disability in Victorian women under age 45. There was a 72.8% increase in reports of family violence incidents to Victoria Police between 2004 and 2012. Family violence costs the state economy more than \$3 billion each year and the nation \$14.7 billion.²³⁰

While the statistics paint a disturbing picture, most of the data traditionally collected does not measure how effectively resources are being used to tackle the problem of domestic violence. The Family Violence Index has been created to fill that knowledge gap in Victoria, and to create an evidence base for policy reform. The initial work on the Index followed the formation of Australia's first Royal Commission into Family Violence, headed by Judge, the Hon. Justice Marcia Neave, a former social science academic.

*"When one woman is a victim of family violence, then we are all diminished. It's a crime and it's our problem. Thousands of dedicated professionals and volunteers work so hard to improve the system and save lives, but they're under a lot of pressure. This Royal Commission will honour their efforts."*²³¹

- Victorian Premier Daniel Andrews

The Royal Commission into Family Violence was tasked with examining relevant parts of the Victorian justice, police, housing and health systems, from the ground up. The inquiry covered an exceptionally broad range of topics including:

risk assessment; information sharing; service system pathways; police; courts; offences and sentencing; housing; financial security; recovery; the experience of children and young people; people from diverse communities; system governance and oversight; industry planning; primary prevention; the role the health system, faith communities and workplaces in addressing family violence.²³²

As such, the findings of this extensive piece of social research illustrate that family violence is not limited to the domestic realm alone but rather is part of a complex social

and political system. Combating these issues thus requires comprehensive policy changes in many different government departments.

In March 2016, after a 13-month investigation, the Commission concluded that all parts of the Victorian system were overwhelmed, and systemic transformation was required. The Commission's final report made 227 recommendations to the Victorian state government. It was described as a landmark moment and a turning point in addressing the scourge of family violence in Victoria.²³³ At seven volumes, it was the most extensive set of recommendations yet written on how to prevent and respond to the issue of domestic violence.²³⁴

The Victorian state government has accepted all of the Commission's recommendations and committed \$572 million over two years in the 2016–17 Budget, to respond to the most pressing of the issues identified by the inquiry – “including more housing and crisis refuges, more counsellors, more prevention programs and more support for children who are victims of family violence.”²³⁵

The Commission found that gaps in the data on policy effectiveness restrict the government's ability to respond effectively and to plan. This, in turn, results in ineffective or wasteful expenditure on some responses and insufficient expenditure on others. The Commission added that misdirected funding could also inhibit attempts to direct prevention and early intervention initiatives to areas where action is needed most.²³⁶ Based on these findings, the Commission called for the creation of a database to measure the extent of, and response to, family violence in different communities in Victoria. This became the Family Violence Index, one of

the Commission's most forward-looking recommendations.²³⁷

The task of developing the Victorian Family Violence Index has been taken on by Australia's National Research Organisation for Women's Safety (ANROWS), which works with researchers from criminology, social work and medical theory disciplines at the University of Melbourne. Researchers will investigate the types of measures, statistics and data that should be included in the Index.

The aim of the social scientists from ANROWS is to bring together multidisciplinary data from across the fields of crime, justice, health, education and community to create a single indicator of family violence.²³⁸ Statistics incorporated into the Index could include: numbers of cases reported to the police; police referrals to family violence services; convictions of perpetrators; extent of homelessness caused by family violence; the number of working days lost by employees affected by domestic violence, and hospitalisations due to such violence.²³⁹ This approach is in line with the findings of the Royal Commission into Family Violence, which illustrate that the problem extends across many parts of society and government in all states and territories.

While the Commission's findings are state-based, Victoria's peak service for women and children hopes that they mark the beginning of better intervention by the state and federal governments across Australia.²⁴⁰ The Council of Australian Governments (COAG) has already acknowledged that a whole-of-government and community response is needed to achieve a reduction in violence against women. COAG also hosted a national summit in October 2016 to profile best

practice and review progress in regards to tackling family violence in Australia.²⁴¹

The National Plan to Reduce Violence against Women and their Children 2010–2022 has been endorsed by COAG as well. The national plan is implemented through four three-year action plans, which are in part informed by the Victorian Royal Commission's findings, as well as the findings of a 2015 Federal Senate Inquiry into domestic violence, and the findings of the Special Taskforce on Domestic and Family Violence in Queensland.²⁴² The sharing of research findings and coordination of policy responses across states is a critical element of any strategy to tackle this pressing but complex social issue.

This Queensland taskforce, headed by former Governor-General of Australia and legal expert, Dame Quentin Bryce, began examining the policy landscape in Queensland in September 2014. It released 140 recommendations in February

2015 and the Queensland Government accepted all 121 recommendations directed at government, and supported the 19 recommendations directed to the non-government sector.

Across Australia, then, state governments are choosing evidence-led policy to address domestic violence. The emphasis on commissions of inquiry led by social scientists is not only testament to the complexity of the issues at hand, but also to the importance of sound, long-term data from different policy arenas to guide government responses. Studies have shown that changing regulation in only one part of the system is not enough to make a significant difference – but more research is required in the long term to determine the effectiveness of recommendations being adopted by Australian state governments.



Royal Commission into Family Violence. Source: The Conversation.

THE VERDICT IS IN: DIVERSIONARY CONFERENCING FOR JUVENILE OFFENDERS IS CUTTING COURT COSTS AND CRIME RATES

Crime costs everyone. But there is persuasive evidence that criminal behaviour can be successfully addressed/arrested in many juvenile offenders through 'restorative justice', and in this case the 'reintegrative shaming' and 'diversionary conferencing' models of justice developed by the Australian criminologist, and winner of the prestigious Stockholm Prize in Criminology, Professor John Braithwaite. This evidence-informed approach has been reducing crime rates, saving taxpayer money and improving young lives in Australia since the late 1980s.

Braithwaite has been instrumental in developing and testing his behavioural theories that ultimately led to a slew of law reforms that combat crime at the point of the earliest offence. His research was the basis of policies that significantly reduced juvenile crime in Australia.

A large part of Australia's mainstream juvenile justice system now involves a form of restorative justice called diversionary conferencing. As a result of Braithwaite's ground breaking research, Australia, along with New Zealand, have become world leaders in this form of restorative justice.

Diversionary conferencing works by providing an offender the opportunity to see – and perhaps apologise for – the harm that they have caused, and by providing

the victim an opportunity to air their grievances. Victims and supporters of the victim are invited to meet with the offender and the people the offender respects and trusts. According to Braithwaite, this group discusses the consequences of the crime, drawing out the feelings of those who have been harmed. They then discuss how that harm might be repaired and any steps that should be taken to prevent reoffending.²⁴³ Diversionary conferencing may be used instead of a court trial, thus reducing costs, while potentially rehabilitating offenders more effectively than incarceration.

This innovative approach focuses on shaming the offender for the offence committed while at the same time respecting the individual, and offering forgiveness and acceptance back into the group. This was the basis of Braithwaite's Reintegrative Shaming Theory. His research was based on the theory that restorative justice processes ought to prevent crime more effectively than retributive practices. He showed that tolerance of crime, stigmatisation, and outcasting of criminals encourages further offending. In contrast, his approach of reintegrative shaming has proven to prevent reoffending by conveying a disapproval of the criminal act within a continuum of respect for the offender.²⁴⁴

The Reintegrative Shaming Theory was developed by Braithwaite in the late 1980s. It was inspired by various Asian policing and educational practices and influenced by regulatory processes for dealing with corporate crime.²⁴⁵ Reintegrative Shaming was later combined with the practice of youth offender conferencing, popular at the time in New Zealand.

The link between Braithwaite's theory and the New Zealand conferencing method was made in 1990 by educator John MacDonald, who was then adviser to the NSW Police Service. He developed a pilot scheme of police-run conferencing for young offenders in Wagga Wagga.²⁴⁶ In time, this became the model for an even larger test case – the Reintegrative Shaming Experiment (RISE) – in the ACT. This forward-thinking piece of experimental social research was one of only three projects in the world to compare the effects of conferencing and court processes.²⁴⁷

From these social experiments diversionary conferencing was born and was subsequently applied Australia-wide to address some of the challenges facing the juvenile justice system. These challenges included ineffective policies, large government investments in policing and prison infrastructure that were not leading to a corresponding decrease in crime, and low public satisfaction with the system.

The integration of diversionary conferencing into Australia's juvenile justice systems has had impressive success. There is now a growing body of research indicating positive outcomes for both victims and offenders.²⁴⁸ There are also cost savings to the Australian taxpayer. A case resolved with diversionary conferencing can cost 18% less than a similar

case heard in a court – and there are further savings that result from the reduction in reoffending.²⁴⁹

The most striking successes of the diversionary conferencing approach have been found in the ACT. Violent offenders assigned to diversionary conferencing reoffend 38% less than those offenders assigned to traditional court sentencing. This reduction is a win for the juveniles as they are committing fewer instances of violent crime and being more quickly rehabilitated; a win for policing as resources can be redirected elsewhere, and a win for taxpayers as prison infrastructure needs and legal costs are lowered. Most importantly, it is a big win for the community as crime rates are falling, while victims of crime are more likely to feel that justice has been served, and they feel less threatened by the individual, potentially improving wellbeing.

Because of its success in the juvenile justice systems around Australia, diversionary conferencing is now used with adult offenders too. It is also being applied to some civil matters. For example, it has been successfully used in welfare and child protection cases, workplace disputes, and in schools. In other words, the behavioural theory of an Australian social scientist, applied to costly and hurtful juvenile crime addressed through forward-thinking policy, is having profound and positive effects on our society beyond the realm for which it was first imagined.

SUPPORTING CHILDREN THROUGH INNOVATIVE POLICY

Australia's Child Support Scheme is world renowned – it provides both financial benefit to the children of separated parents and revenue for government. One of its most innovative features was its establishment as a part of the Australian Taxation Office (ATO).²⁵⁰ A Child Support Agency within the ATO collected payments and made deductions from the income of non-custodial parents, providing efficiencies unequalled elsewhere.²⁵¹

The development and adoption of this novel scheme illustrates the benefit to society that can be had when there is an alignment of political will, a clearly articulated policy problem and social science evidence for reform measures. In the case of the Child Support Scheme, the need for reform was clear, there was strong leadership on the issue, and the research of social scientists provided the data needed to justify the scheme that had not been trialled anywhere else in the world.

THE PERFECT STORM FOR REFORM

Three factors led to the successful introduction of reform – the previous system was inefficient and ineffective, there was rising political will to reduce risk to children, and the government sought to reduce spending. “In this case, the problem was easy to articulate,” points out economist Professor Meredith Edwards, “why should a child suffer financially just because its parents chose

to no longer live together? It was easy to appeal to taxpayers: why should they foot the bill just because parents decide to live separately?”²⁵²

Until the late 1980s, child maintenance payments in Australia had been largely voluntary and inefficient, even though the *Family Law Act 1975* specified that both parents had a financial responsibility to maintain their children according to their means. In reality, fewer than a third of sole parents received maintenance payments, and public debate on the issue focused largely on the poverty of sole parent families.²⁵³

In cases where payments were made, the amount was not related to the non-custodial parent's ability to pay, but to a prescribed schedule. In other words, the higher the income, the lower the proportion paid in maintenance.

There was also increased recognition of the need to provide better financial support for lower-income families, especially sole-parent families, and action was soon taken.²⁵⁴ At the same time other government imperatives were at play. Government was keen to find ways of reducing its budget deficit, and placing more financial responsibility for children on the non-custodial parent was one possible way of reducing government spending.²⁵⁵

In addition, there was political will for the issue – some political leaders were keen to make their mark in moulding public attitudes toward the quality of family life,²⁵⁶ and at the same time many ministers were concerned about worsening poverty among sole-parent families.²⁵⁷

In 1983, a national inquiry into child maintenance reform was launched and, three years later, a review of social security recommended an increase to financial support for families – but this needed a mechanism for financing.²⁵⁸ Revenue for this purpose was expected to be drawn from the reform of child maintenance arrangements.²⁵⁹ In the end, the reform package was part of a wholesale rethinking of the structure of the welfare system. It aimed to move the system away from dependency and into programs that encouraged greater participation in the labour market.²⁶⁰

Originating in this environment, the Child Support Scheme was introduced in 1988.²⁶¹ It worked in three stages. First, an administrative assessment was made about the amount that the non-custodial parent would be required to contribute. In this scheme, the financial needs of children were given a higher priority than all but the essential requirements of parents. Second, a Child Support Agency (in this case, in the

ATO) collected payments through garnishing income or by direct monthly payments from non-custodial parents. Third, the Department of Social Security distributed those payments to custodial parents.²⁶²

One extraordinary aspect of the Child Support Scheme is the involvement of the Australian Tax Office. This was the most controversial aspect of the reforms because the tax system had not previously been used for this type of public program. Systems then in operation were designed more for tax processes, such as batch processing rather than customer counter type services. Thus, tax officers were now expected to undergo a major cultural shift in dealing face to face with clients, who were often distressed.²⁶³ After an initial adjustment period, the system proved to be an effective one, and one that continues to this day.

POLICY INNOVATION

This use of the tax system for administering child support payments was an innovation that paved the way for other policy reforms. It opened up the Australian Tax Office for involvement in social initiatives, such as income-contingent loans for tertiary education – the Higher Education Contribution Scheme (HECS).²⁶⁴

Australia's ground-breaking Child Support Scheme has attracted a lot of international interest. The United Kingdom in particular was keen to implement reforms on similar lines and established a Child Support Agency in 1993, but strayed from important characteristics of the Australian model, in particular not involving their Inland Revenue Department. New Zealand also showed interest in a reformed Child Support Scheme and in 1992 followed the Australian model to a large extent, including using their Inland Revenue Department to assess payments by use of a formula and to collect and enforce payments.

Edwards, who was instrumental in shaping the Child Support Scheme, argues that few policy development processes could have thrown up as many difficult and sensitive issues for analysis as did the child support reforms. There was a vast array of complex political, legal, administrative and other problems, crossing many portfolio interests.²⁶⁵ Yet, almost unbelievably, there was no significant lobby group advocating for this initiative. Rather, the policy was driven from within government and supported by the Family Law Council.²⁶⁶

From its beginning in February 1986, the newly established Maintenance Secretariat, who was responsible for ushering in the Child Support Scheme reforms, adopted a systematic approach to collecting data. This was necessary to counter opposition because the scheme was open to attack on many fronts.²⁶⁷

A rigorous research process was used to determine the revenue and distributional impact of the scheme, especially identifying winners and losers. For example, early meetings were held between the Maintenance Secretariat and the Department of Finance to agree on costings, revenue and income distribution, in order to promote equity and social acceptance.

Another good illustration of the depth of research was the data-gathering and analyses quantifying the costs of raising children. This data was used to determine what proportion of the non-custodial parent's income should be used to contribute to child support.

LESSON LEARNED FOR BOLD POLICY REFORM

As Edwards has pointed out, few people in the mid-1980s believed that the government would be able to introduce a scheme as radical as the one it adopted.

The policy initiative overcame a number of serious obstacles. There were no international models to follow, as no other country had tried before to integrate an administrative and court-based assessment system for collecting child maintenance. Nor had any country yet delivered a collection and enforcement system utilising the tax office. At the same time, while there was support from some quarters of government, bureaucratic resistance to the scheme was strong. No government department wanted carriage of this scheme and the policy crossed many portfolios, making responsibilities unclear.²⁶⁸ In addition, what little interest was generated among potential lobby groups was negative.

Some in fact were suspicious of the motives of the government, believing that its continued interest was revenue-driven only. Then there was strong opposition to radical changes from the Law Council of Australia as well as from groups of non-custodial parents.²⁶⁹

In spite of institutional intransigence and some special interest group disapproval, radical change did occur, and the reasons for the ultimate success of the reform process promised applicability in other contentious policy areas. Importantly, the child support reforms were considered in a broad policy context. The policy analyses were rigorous and comprehensive, demonstrating how crucial it can be that issues are identified and

discussed by decision makers before detailed work is undertaken. Debates on major issues encouraged ministers to consider principles underlying the policy, not just costs and possible benefits, and this brought to the forefront early issues of disagreement that required resolution.²⁷⁰

The effectiveness of the roles and interactions between influential players was another contributing factor to the success of the reform process. At the same time, the process required much coordination across departments. This was facilitated by the commitment of political leaders and bureaucrats alike to the issue.²⁷¹

Lastly, elements for successful problem identification were met. There was broad agreement on the nature of the problem, there was a prospect of a solution, it was an appropriate issue for government to put on the agenda, and it did not cut across the ideological position of the governing party. This meant that stakeholders were ready to move on to examine possible approaches to reform and illustrates that social sciences are necessary not only to provide the data

for policy reform, but also to scope and articulate problems in a bold but attainable way.²⁷² This exceptionally successful policy reform demonstrates that social science based initiatives can be generated and executed entirely from within government across a range of portfolios.



UNDERSTANDING AND COMBATING CRIME WITH SOCIAL SCIENCE

The social sciences play a major role in combating crime in Australia and the region. This is attributed to a system of strong and complementary institutions, which conduct the research that facilitates crime investigations and supports evidence-led policy making in the justice sector.

The Australian Institute of Criminology has been the foremost research and knowledge centre on crime and justice issues in Australia since 1973. Social scientists employed by the Institute undertake evidence-based research to inform policy and practice. They also promote justice and the reduction of crime by communicating their findings to a public audience.²⁷³

Crime is a complex concern which intersects a number of social issues such as the costs of crime (both tangible and intangible), access to justice, the detection and reduction of crime, rates of violence, ownership of weapons, drug use, crime demographics, equity, and status of victims and offenders.²⁷⁴ Researchers monitor and analyse data for a range of crime and justice issues affecting Australians, with the aim of better informing crime response policies to maximise impact and reduction. These include broad-scale trends in homicide, drug use, firearms, theft, deaths in custody, armed robbery, juveniles in detention, fraud, money laundering, and human trafficking.²⁷⁵

The Australia Institute of Criminology also manages the J.V. Barry Library – Australia's most comprehensive collection of criminology and criminal justice documents.²⁷⁶ The Library produces the CINCH database, an index of all aspects of crime, criminal justice and criminology in Australia and the region from 1968 onwards.²⁷⁷ This database is important not only for academic scholarship, but also for supporting current crime investigations. Figure 4 displays which agencies and institutions access the CINCH database. The Australian Criminal Intelligence Commission (formerly the Australian Crime Commission and CrimTrac) tackles crime affecting Australia through its investigative, research and information delivery services.²⁷⁸ These functions all rely on the existence and maintenance of a large and varied evidence base for all aspects of criminal activities. That evidence base is created by social scientists.

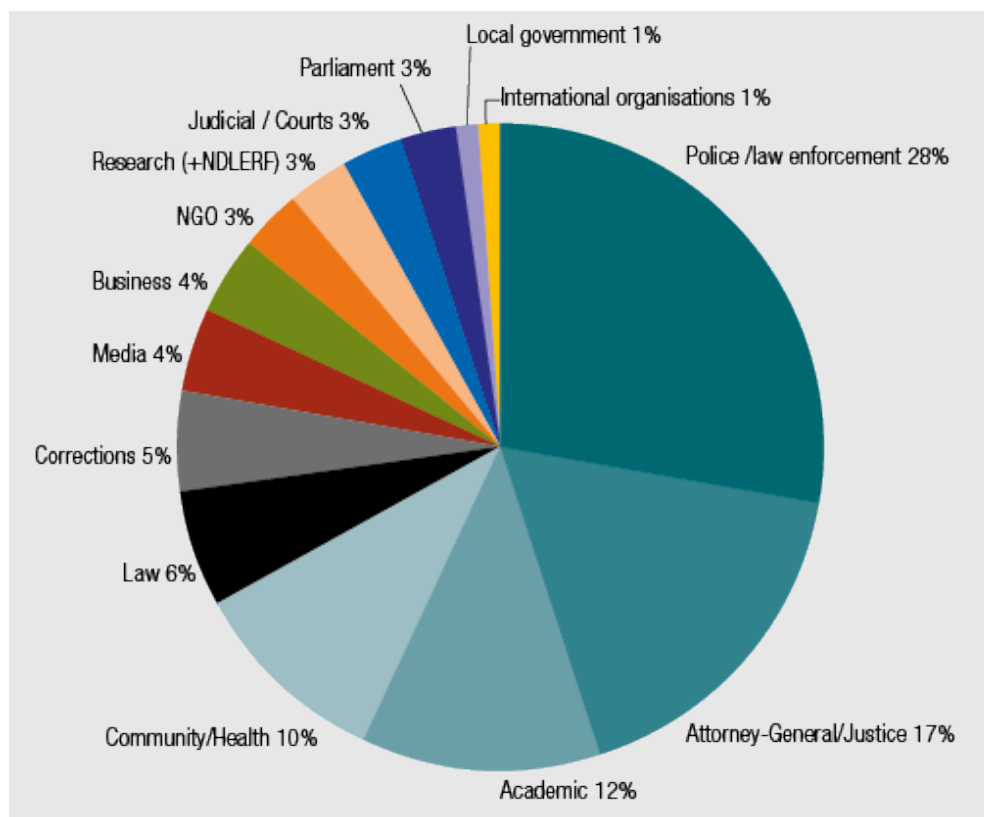
Social science research allows the Australian Criminal Intelligence Commission to create the big picture of crime in Australia. The Commission then uses this intelligence to target serious and organised crime, and deliver information capability and services to front line policing and law enforcement.²⁷⁹

In addition to the work of these institutions, a number of individual criminologist and lawyers have contributed to combating crime in Australia and the region. Professor

Adam Graycar, for example, spent nine years as the head of the Australian Institute of Criminology and has worked in many public policy domains, including international agencies such as the United Nations Office on Drugs and Crime (UNODC) and the World Bank. Professor Jason Sharman's research interests lie in assessing the scale and impact of corruption. His work focuses on money laundering tax havens. He has estimated that over a billion dollars of foreign corruption proceeds flow into Australia each year.²⁸⁰

Experts, including Graycar and Sharman among many others, play an important role in providing the evidence that supports policy in the field of crime and justice, while institutions such as the Australian Criminal Intelligence Commission rely on social science research to investigate criminal activities and make Australia a safer, more just place for all. Psychologist Dr Don Weatherburn, as Director of the NSW Bureau of Crime Research and Statistics, has been instrumental in blending analysis and data for state government advice.

FIGURE 4: Users of the CINCH database ¹⁴³



ENDING CONSCRIPTION

Two of the defining issues of the 1960s in Australia were conscription and the Vietnam War. The nation was divided on these issues, and public demonstrations over them were a feature of the era. So it is not surprising that when the Whitlam Labor Government came to power in 1972, the first two decisions it made were to end the draft and withdraw Australian troops from Vietnam.

Conscription had been introduced in 1964. Twenty-year old men were conscripted for two years of service by a random birthday ballot. From 1966 conscripts were included in Australian forces in Vietnam.

The two issues had particularly exercised the university community and student protesters were among the most prominent opponents. Academic researchers had also contributed to understanding of them.

Regarding conscription, historians such as Professor Ken Inglis drew on the perspective of Australia's earlier formative experience with the conscription debates of 1916–17 for insight. Likewise public administration scholars and social analysts, such as Professors Roy Forward and John Western, provided insight into contemporary politics and public opinion. The Australian scene attracted overseas attention, such as from United States political scientist Professor Henry Albinski.

Underpinning the politics of war and peace was an important economic issue. Liberal leaders such as Menzies, Gorton and Fraser affirmed a view that there was no

alternative to a draft for young Australian men to support Australia's military role. According to Menzies, "the abundance of civil employment at good and increasing wages"²⁸¹ would prevent a voluntary system of military recruitment from providing the numbers required. As Liberal MHR John Jess put it, nothing less than "gold swords and gold spurs" would be sufficient.²⁸²

The Government offered no public estimation regarding the potential cost of greater voluntary recruitment as opposed to adding conscripts to the career military core. To economists, this is an eminently testable proposition. Professor Glenn Withers, initially a tutor at La Trobe University, and then a doctoral student and Fellow at Harvard University, set about calculating the wage cost of a fully volunteer military (using statistical regression analysis of military recruitment behaviour).

His research for Australia was published in September 1972 in both academic journal and book format. It was also picked up in earlier media commentary including a major double page feature in the *Australian Financial Review*. The analysis showed that a modest transitional increase in pay could deliver the desired replacement of conscripts by volunteers and indeed ultimately produce a saving, given the longer service of volunteer recruits.

Prior to publication, his research was provided to the incoming Prime Minister Gough Whitlam and Defence Minister Lance Barnard, who had encouraged the work,

and it helped form the budget basis for the post-conscription military. The pay increases recommended produced the number required for a new fully professional volunteer military.

This work was also extended to the United States draft, following prompting from JK Galbraith at Harvard, and Withers was used as an analyst for determining the cost of ending the United States draft by President Richard Nixon in 1973. Neither Australia nor the United States have since returned to the use of conscription.



Conscription protests. Source: ABC.

NAVIGATING INTELLECTUAL PROPERTY

As one of Australia's last unexamined monopolies, intellectual property (IP) laws need to innovate to respond to a rapidly evolving global environment.²⁸³ In order to develop a robust and competitive framework, policy makers should look to the social sciences to provide the best conceptual platform and data for reform. Following a recommendation from the 2015 National Competition Policy Review, led by economist Professor Ian Harper, the Productivity Commission completed a comprehensive review of IP regimes in September 2016.²⁸⁴ This landmark year-long inquiry constitutes Australia's first fully comprehensive official analysis of the worth and rigour of its copyright and patent rules.²⁸⁵

WHAT IS INTELLECTUAL PROPERTY?

All forms of research have intellectual property consequences. IP regimes, such as copyrights and patents, provide not only legal protections, but also economic protections, human rights, and even global commons. The basic premise is that owners of IP – be they authors, composers, film makers or the designers of everything from buildings to pharmaceuticals – are given temporary monopolies over what they create.²⁸⁶ These temporary monopolies allow for the protection of knowledge that then produces benefits for the owners and more broadly for society.

Australian lawyer, Professor Peter Drahos, explains that IP “refers to a group of legal regimes, each of which, to different degrees,

confers rights of ownership in a particular subject matter”,²⁸⁷ and that the subject matters which fall within the scope of IP are ever expanding. Copyright, patents, designs, trademarks and protection against unfair competition form the traditional core of IP. Recent additions to the scope of IP include the protection of computer software as part of copyright, the patentability of micro-organisms as part of patent law, and new systems such as plant variety protection and circuit layouts.²⁸⁸

The prime resource in modern economic life, argues Drahos, is information. IP rights are, in essence, rights of exploitation of information. Information ownership is critical in industries, such as agriculture, where the ownership, protection and commoditisation of genetic information is a major concern.²⁸⁹

INTELLECTUAL PROPERTY AND TRADE

Intellectual property was not always linked to trade. Prior to the 1980s, there was a 'free rider' problem in global IP regimes, and some countries, especially the United States, were not satisfied by this status quo. For the American film and pharmaceutical industries in particular, IP (copyright for the former, patents for the latter) represented the backbone of their industries.²⁹⁰ Eventually the idea that IP should be linked to trade began to take root around the world.

In the 1980s, a set of rules for IP was drafted and ended up in the World Trade Organization (WTO). Known as the Agreement on Trade-Related Aspects of

Intellectual Property Rights (TRIPS) and binding on all WTO members, it contains an important rule: "Any free trade agreements following TRIPS cannot set lower standards of protection for IP, and where one WTO member grants more of these privileges to another state it must grant them to all WTO members."²⁹¹

The standardisation of IP protections across the world facilitated the globalisation of trade and innovation. However, a problem, according to Drahos, lies in the fact that the ownership of intangible assets (including movies, music and patents on medicines) can be easily moved around because they exist as electronic documents. Multinational corporations leverage this mobility to relocate their IP assets to places that minimise their compensation and tax obligations, such as Bermuda, the Cayman Islands, and Singapore.²⁹²

Yet, missing from the current debate, according to Drahos, is how IP functions as a double-edged sword wielded against consumers. Today, multinational companies use patents, copyrights, trademarks and other legal privileges to extract profit from consumers, pushing states to police consumer behaviour on their behalf (as in the case of criminalising entertainment

downloading). At the same time, multinationals use these legal privileges to avoid paying taxes on their profits.²⁹⁴

There are also other unintended consequences of globalised IP protection. Australia, for example, was accused by international tobacco companies of trademark infringement following the 2011 ground-breaking regulation on plain paper packaging for tobacco products. Tobacco companies have traditionally had strong trademark protections because the product they sell is largely brand-based, rather than differentiated from competitors by other innovations or unique features. Thus, Australia's plain packaging law was perceived as undermining the selling power of tobacco companies. It was also argued by multinational companies that the plain packaging legislation contravened Australia's obligations under TRIPS, specifically the article that establishes trademarks must not be encumbered in any way.²⁹⁵

The litigation against Australia illustrates the tensions that sometimes arise between the protection of private or corporate IP rights, and the public good. For Australia, this particular case is not insurmountable – we are a rich country and able to defend our public interest in front of the WTO

"In the global digital village the right of freedom of expression becomes a means by which to protect other more complex activities than simply the right not to be interfered with when one stands on a soapbox in the park. Citizen groups begin to demand access to the media so that their interests as citizens are recognized. Freedom of communication is appealed to in this process, not as a classical negative right, but rather as a right of access, a positive right. Expression itself takes on many more forms. The complex jurisprudence that has arisen in the United States around freedom of speech is testimony to the way in which changing technological contexts force us to reconceptualise rights."²⁹³

- Professor Peter Drahos

– but for a poor country, challenging the privileges of a global monopoly would be significantly more difficult.²⁹⁶ This is not often a consideration for policy makers and law makers in the IP field. That is a challenge for the international IP law regime because there is an element of human rights, and of protecting global commons, in protecting IP.

An important way in which IP rights and human rights overlap is in regards to information. The freedom of expression is a classic human right but, in an increasingly globalised and technologically complex world, may sit uncomfortably with IP rights.

Another aspect of IP that may need to be reconceptualised is that which may infringe on the human right to development. Patent systems, for example, restrict access to life-saving drugs by raising the price of those drugs.²⁹⁷ This tends to adversely affect the health of the populations of poorer states, thereby interfering in their development prospects.

There is also an increasingly clear tension between current IP regimes, and the rights of Indigenous peoples. The definition of property ownership applied by Western lawyers does not resonate in most Indigenous cultures, where the connections between land, knowledge and art form part of an organic whole. In practice, that means Indigenous groups often do not obtain IP

protection for their traditional informational resources – meaning that these can theoretically be freely appropriated.²⁹⁸

The response of Indigenous peoples, as well as Western NGO groups, has been a political struggle to change the existing IP regime. As part of this struggle, IP has become linked to much bigger issues, including the sovereignty and self-determination of Indigenous peoples, and the protection of culture, food security, biodiversity, sustainable development, health policy and biotechnology.²⁹⁹ Importantly, however, the concept of IP has not been entirely rejected. Instead, Indigenous peoples assert and call for the recognition of Indigenous IP rights, and are pushing to make IP serve a function beyond that of appropriation of value.³⁰⁰

The prevailing IP regime is beginning to encompass the protection of other values, such as global public goods. Public goods range from those that are constituted by norms (peace, order and good government) to those physical goods that provide a collective benefit independently of any norms (for example, forests and algae that consume carbon).³⁰¹

The discussion on IP is now expanding to include issues relating to the provision of international or global public goods (for example, protection of the ozone layer, the control of epidemics, increasing agricultural

Pre-existing public goods, such as biological assets in the form of forests, wildlife and microorganisms, pose a classic tragedy of the commons dilemma. Individuals continue to deplete these biological assets – to the detriment of all – because to date various cost-internalisation techniques based on taxes and property rights have not been found or implemented sufficiently and governments have not acted to subsidise the preservation of these public good assets at the levels that are needed.³⁰²

yields).³⁰³ There is more work that needs to be done to reform IP regimes, both in Australia and globally – and that work must fall to social scientists.

The current IP regime has largely been set by a community comprised of technically minded lawyers. “In their hands,” argues Drahos, “intellectual property has grown into highly differentiated and complex systems of rules.”³⁰⁴ However, this may no longer be enough to protect rights, including copyright in creative works, given the impact of internet transmission.

“For policy makers around the world, the challenge of the coming bio-digital millennium will be to define efficient property rights in information,” says Drahos. That will mean engaging with a much broader community – specifically, human rights lawyers, activists, Indigenous community representatives, and other scholars – and taking a multidisciplinary approach to evolving IP regimes.³⁰⁵

The scope of IP continues to evolve, with its impact expanding far beyond the country in which the knowledge is created. In order to effectively address issues of human rights, economic impact, global commons and technology, the social sciences must participate in shaping new policies for global trade.

DATA SOVEREIGNTY FOR INDIGENOUS PEOPLES

There are approximately 400 million Indigenous people around the world comprising thousands of distinct communities encapsulated by some 70 nation-states. The diverse nature and geographic spread of these groups poses a complex question about the proper role of state machinery in gathering statistics on Indigenous peoples. In the past, governments have been content to generate social binaries (Indigenous/non-Indigenous) as input to public policy. However, the legal and moral framework that allowed for such simplification of complex and varied forms of Indigenous social and political organisation has shifted, and Indigenous groups are asserting their own statistical identity and ownership of information in new ways.

Whilst not denying a role for centralised data collection, what Indigenous peoples seek is meaningful participation in decisions affecting the collection, dissemination and stewardship of all data that are collected about them. Indigenous peoples also seek mechanisms for capacity building in their own compilation of data and use of information as a means of promoting their full and effective participation in governance and development planning.

There are many examples around the world of Indigenous groups who have taken successful steps towards retrieving data sovereignty. For example, the Yawuru people of Broome, Western Australia, recognised an

immediate need for data about themselves to secure their social, economic, cultural and environmental base as a senior player in regional planning, following determination of their native title in 2006. Several initiatives were embarked on concurrently including: a survey of all Indigenous people and dwellings in the town to create a unit-record baseline; the development of an instrument to measure local understandings of wellbeing; the construction of a geographic information system to digitally map places of cultural, social and environmental significance; and a documentation project to collate and store all relevant legal records, historic information, genealogies and cultural information.

In Canada, initiatives have been taken at the level of First Nations as a whole. First Nation principles of Ownership, Control, Access and Possession of data became trademarked as OCAP™, under the auspices of a regionally representative steering committee that became the First Nations Information Governance Centre (FNIGC). This initiative is seen as a political response to colonialism and the role of knowledge production in reproducing colonial relations, and much of its impetus came from the sorry history of research and information gathering involving First Nations people. This is therefore self-determination applied to collective data, information and knowledge, and since 2010 FNIGC has operated on behalf of First Nations to ensure that it is applied through

a certification process for research projects, surveys and information management systems.

In New Zealand, the Independent Māori Statutory Board has worked to develop the Māori Plan for Tāmaki Makaurau as an integral part of the Auckland Plan, which is the Auckland City Council's strategy to contribute to social, economic, environmental and cultural wellbeing through a comprehensive long-term (20–30 year) strategy for growth and development. Following research that identified several approaches to measuring Māori wellbeing, a mixed methods approach was adopted to align the needs and aspirations of Māori with the interests of the Auckland Council. Following direction from Māori communities in Tāmaki Makaurau, the result is a 30-year aspirational plan consisting of five elements: Māori values; major directions; domains and focus; Māori outcomes, and indicators. The exercise highlighted that considerable data gaps exist for Māori at the regional level, particularly in the environmental and cultural domains.

The Australian Bureau of Statistics (ABS) has established a number of Aboriginal and Torres Strait Islander enumeration and engagement activities. The main vehicle for improving the quality and relevance of Australian Indigenous statistics is the Indigenous Community Engagement Strategy involving Indigenous Engagement Managers in each jurisdiction. The ABS has also instituted a twice-yearly round table on Indigenous statistics to gather grassroots feedback on their activities from select Indigenous people. A Reconciliation Action Plan also promotes career pathways for Indigenous people within the organisation.

As for the future, the focus is on how to better generate data that more closely reflects Indigenous world views, while still meeting government objectives. Indigenous peoples are already positioning themselves and organising to give practical expression to various forms of Indigenous data sovereignty, at all scales at which Indigenous polities are formed – international, national, regional and local. Likewise, (some) National Statistical Offices are starting to consider how their practices, in relation to their collection and management of data pertaining to Indigenous peoples, might need to change. At the supranational level, the United Nations is assessing the requirements for Indigenous measures of development as input to the post-2015 UN development agenda.

There are consequences in all of this for the epistemology of social science and, indeed, for any research activity that involves the collection or use of data on Indigenous peoples, their territories and ways of life, and it will take a multidisciplinary approach across academic disciplines, government sectors, and cultures to achieve a fair and representative outcome.³⁰⁶



PUBLIC HEALTH

HEALTHY, WEALTHY, AND WISE: AUSTRALIA'S UNIVERSAL HEALTH INSURANCE SYSTEM

The introduction of universal health insurance was one of the most significant social and economic reforms of the Australian post-war period.³⁰⁷ It continues to be an example of global best practice. More than 30 years after its implementation, international studies on the most efficient health care systems rank Australia's health system at sixth out of 55 developed nations, ahead of the United Kingdom at 10th and the United States at 44th.³⁰⁸ Australia's health care outcomes in terms of longevity, wellbeing and overall satisfaction with life, are world leading – in 2013 Australia ranked first in the OECD's Better Life Index.³⁰⁹

The Australian universal health insurance system has made it possible for everyone, irrespective of income, to access needed healthcare. This is good not just for individuals, but for the nation.

RESEARCH AND POLITICS

Initially called Medibank, Australia's universal health insurance scheme was first introduced by the Whitlam Government in 1975. It was founded on the work of health economists Dr John Deeble and Dr Richard Scotton, who were then researchers at the Institute for Applied Economic and Social Research at Melbourne University. Prior to Medibank, the limitations of the nation's then-voluntary, but government subsidised,

health insurance scheme were starting to be felt and the financial growth of the health insurance funds was paralleled with growing dissatisfaction among Australians at rising contribution rates and gaps in coverage.³¹⁰

Deeble and Scotton's research identified a number of issues of concern with the existing voluntary system. Most notable among them was the lack of health care cover for some 15% of the population, primarily at the lower end of the income range. The voluntary system was also regressive for others, owing to the combined impact of tax deductions and health insurance contributions. On top of that, the existing system was making it increasingly difficult for patients to qualify for public status in public hospitals.³¹¹ There was clearly a need for drastic change in health care policy in Australia in the late 1960s and early 1970s.

Deeble and Scotton advocated for a universal health system that would minimise financial barriers to medical and hospital care and suited the Australian political and social environment. They had several criteria in mind:

- "appropriate health care should be available without regard to the income, age, type of illness, general health status or personal circumstances of patients;
- the costs of providing this care should be

- equitably distributed;
- the system of financing should be comprehensive and should promote a high quality of care, integration of facilities, and the most efficient use of resources in the health care industry;
- the system should be efficient and economical in its own operation; and
- the system should offer satisfactory rewards, incentives and conditions of practice to health professionals.”³¹²

Their research caught the attention of policy makers and politicians trying to find a financially sustainable and socially equitable solution to health care policy. Despite the roll back of publicly funded universal cover between 1976 and 1984, most of Deeble and Scotton’s ideas remain embedded in Australia’s current universal coverage scheme, Medicare, which was introduced in 1984. The objectives of coverage, access and equity were largely achieved because the rigorous design of the social research, which ultimately was not lost in the implementation.

Medibank was however not without its critics. Just as ‘Obamacare’ (the *Affordable Care Act*) has been opposed in the United States in more recent times, the new system of universal health coverage was strongly opposed by the then-opposition party, the Australian Medical Association, private insurers and most state governments.³¹³ In spite of initial strong opposition, and after a long and heated political debate, legislation to establish Medibank was passed in August 1974. That was achieved following a double dissolution election and a joint sitting of the Federal Parliament. Publicly funded universal health care continued to be controversial and Medibank lasted only a short time. The incoming Fraser Government introduced a

series of modifications, which effectively resulted in the scheme’s dismantling by 1981.³¹⁴

In 1983, the newly elected Hawke Government moved quickly to re-establish a universal health insurance scheme, and Medicare commenced on 1 February 1984. It included the restoration of bulk billing and free public hospital treatment.³¹⁵ Since then, the system has undergone numerous amendments, including: several increases in the tax levy; the introduction of subsidies for private insurance; the use of the Medicare levy to fund other programs including the NDIS, and a short-lived patient co-payment requirement in 1991.³¹⁶ A similar proposal in the 2014 budget was not implemented.

The initial introduction of universal health coverage changed the context in which health funding issues were formulated and debated. In particular, universality and equality became explicit policy objectives in a way that had not previously been the case. Overnight the percentage of the Australian population eligible for benefits went from 85% to 100%, with the introduction of Medibank on 1 July 1975.

Significantly, the system changed the power balance between the Commonwealth and state governments. As part of the Medibank scheme, the Commonwealth agreed to pay the states and territories half of the operating costs of public hospitals, in return for services being provided to all Australians free of charge.³¹⁷ Medicare is part-funded by a 2% levy on income tax (about 17% of Australian Government health expenditure³¹⁸) and by general taxation.³¹⁹ Although not part of the original Deeble and Scotton design, since 1997 high income earners who do not hold private health

insurance pay an additional surcharge in order to encourage individuals to take out private hospital cover and, where possible, to use the private hospital system to reduce demand on the Medicare system.³²⁰

The Medicare approach allowed the government to define what constituted the national public hospital system, set uniform terms for access and gave the Commonwealth leverage over the scope of medical services provided to all Australians.³²¹ This leverage also provided a financing structure with long-term capacity for cost control. The new funding arrangements meant that the federal government had a greater say in health policy and its administration – and who had access to services.

BENEFITS TO THE NATION

Research has now shown how universal health care advances the lives of people and enhances economic and social opportunities – including facilitating the possibility of sustained economic growth. Medicare has paid around \$235 billion in benefits for Australians to access a broad spectrum of services, such as general practitioner visits, specialist visits, surgery, pathology, radiation therapy, midwifery, mental health services and diagnostic imaging.³²²



Total health expenditure in 2014–15 was \$161.6 billion.³²³ This was the third consecutive year that growth in health expenditure was below the 10-year average. Growth in health expenditure per Australian,

\$6,846 in 2014–15, was also relatively low, at less than half the average annual growth over the decade (1.4% compared with 2.9%).³²⁴ Despite the low growth, health expenditure's share of GDP reached 10.0% for the first time in 2014–15.³²⁵

In 2012–13, spending on Medicare totalled \$18.5 billion, making it the third most expensive government program line after the Age Pension and family payments.³²⁶

NEW CHALLENGES

Universal health coverage financing in Australia is facing new challenges. Advances in medical technology and a steadily growing and ageing population require an ever-expanding health care system.³²⁷ Spending on Medicare is now \$20 billion a year and costs are projected to almost double to \$37 billion per year over the next decade.³²⁸ Increases in the cost of state-of-the-art health care – largely as a result of enormous advances in new medical knowledge and technology – is putting mounting pressure on the system's financial sustainability.³²⁹

The new challenges are not just a question of costs. The types of health services required are also changing. Chronic diseases – such as cancer, heart conditions, lung conditions and mental health – are increasingly prevalent in Australia, but Medicare was designed at a time when illness was more likely to be acute and time-limited.³³⁰ Along with a growing health sector, and the diversity of settings in which health services are delivered, these have created many competing priorities for government.³³¹ Balancing these priorities in an efficient and socially equitable way will require strong political leadership and innovative social policy.

Social scientists argue that there is little evidence to support the claim that co-payments will increase the financial sustainability and accessibility of the system. “The long-term solution to Medicare sustainability lies not in higher co-payments but in substantive reform”, argues economist Dr Stephen Duckett. “This includes investing in cost-effective prevention and in a better designed primary care system.”³³² That, in turn, requires solid social science to provide evidence-led policy in rapidly changing social, political and economic contexts.

As Duckett argues, the greatest threats to Australia’s public health system lie in “the power of vested interests that stifle policy innovation in health.”³³³ Policy innovation in health will be crucial if Medicare is to continue providing universal health coverage in a cost-effective and high quality manner. Previous works from the social sciences have laid the basis for universal health insurance, which took into account contemporary Australian conditions at the time of implementation. As Duckett points out, we know a lot about what is spent and not enough about what is achieved.³³⁴ More research is required to:

- develop and implement better performance reporting, particularly around equity and outcomes that include patient perspectives
- develop new approaches to reducing the health risks from poor lifestyle choices
- design payment methods that move the focus from volume to greater efficiency
- develop policies to extend the drive for paying the efficient price from public hospitals to all other health care services
- support the availability of reliable information that supports patient choice,

such as doctor fees and outcomes; and implement this in way that is consumer friendly

- build better co-ordination with social care that can reduce downstream health care costs
- encourage community debate about what Australia wants from its health care system, including expectations for end of life care and dying.

As if to anticipate Duckett's concerns, five economists earlier prepared a report for the Commonwealth Department of Health and Aged Care, drawing on 122 studies, and established how a greater investment in public health would pay for itself many times over.³³⁵

Social sciences are invaluable in fine-tuning the system for current and future conditions to deliver the right care, to the right people, at the right time and place, at a cost the community can afford. This is something which medical science itself cannot do alone, but social science can help mightily.³³⁶

TOUGH STANCE ON TOBACCO PACKAGING IS SAVING LIVES

New comprehensive research shows smoking imposes a heavy economic burden throughout the world, gobbling up almost 6% of global health expenditure and nearly 2% of the world's GDP. In 2012 this amounted to \$1,436 billion USD (\$1,898 billion AUD).

This is particularly evident in high income jurisdictions, like Australia, North America and Europe. Each year, smoking kills an estimated 15,000 Australians, and costs Australia A\$31.5 billion in social (including health) and economic costs.

New initiatives in tobacco control are urgently needed. Plain packaging has been a success, but it required steely determination by ministers to ensure continuity. Smoking rates are declining in Australia, although the rate appears to be slowing, and there are still worryingly high rates of smoking in some populations and jurisdictions, such as the Northern Territory. In 2009, Australian researchers predicted smoking cessation rates would need to double to ensure Australian smoking prevalence dropped to the policy target of 10% by 2020.³³⁷

In 2012, Australia led the world in the introduction of plain packaging for tobacco products. This initiative, underpinned by the efforts of leading social scientists, has set an example for the rest of the world on how policy based on evidence can save lives and taxpayer money. It has resulted in a reduction of Australia's smoking population by 108,228 in its first three years.³³⁸

108,228 

The policy has already been shown to be saving thousands of lives³³⁹, and is predicted to save many more in the years to come. This

is significant, as smoking is estimated to kill around 15,000 Australians a year.³⁴⁰

Plain packaging has been mandatory for all tobacco products sold in Australia since 1 December 2012. Packs must be drab, dark brown in colour and devoid of all brand design, and in addition must carry large, graphic health warnings.

The policy has had an immediate and significant effect on smoking behaviours in Australia. For example, one year after plain packaging laws were implemented, the number of people attempting to quit smoking rose by 7%.³⁴¹ Of course, the impacts of plain packaging should be considered in a long-term context along with

other control methods, but thanks to several social science research projects, a baseline is being created that will allow for the ongoing measurement of effects.

One recent study examined the effects of plain packaging on short-term changes in quitting-related thoughts and behaviours. It found that plain packaging with larger graphic health warnings increased pack avoidance, and encouraged smokers to stop themselves from smoking. The same study also found that smokers attempted to quit smoking more often after the introduction of the plain packaging policy, and were more likely to stub out their cigarettes before finishing them.³⁴² A national study measuring adult smokers' reactions to health warnings on packs showed a greater awareness of these warnings, and smokers attributed their motivation to quit to the warnings, compared with previous packaging.³⁴³ Importantly, the plain packaging policy resulted in a significant reduction in the appeal of cigarette packs and brands, particularly for adolescents and young adults.³⁴⁴



Tobacco package warning. Source: Cancer Council Australia.

While the long-term financial benefit of this measure cannot yet be known, research shows that even a small reduction of smoking prevalence could save Australia's health care system \$273 million over ten years.³⁴⁵



Other academic studies have found that the level of absenteeism from work attributable to smoking has been reduced as a consequence of the plain packaging policies.³⁴⁶ Smokers take more sick leave than non-smokers, thus reducing the number of days taken off work increases productivity.³⁴⁷ The direct and positive effect of this on Australia's productivity gains is a further benefit of this tough stance on tobacco packaging.

Australia's plain packaging shift has been hailed as the most dramatic global development in tobacco control in more than 40 years.³⁴⁸ It is a casebook example of the use of research and evidence to develop policy, the desired effects of which are, in turn, confirmed through further social research. Based on the research of social and medical scientists, Australian authorities have been able to argue that tobacco is exceptionally deadly and so deserving of the exceptional status that plain packaging signifies.³⁴⁹ This research approach is significant because, while the adverse health effects of tobacco consumption have long been known in the medical literature, the potential impacts of various regulatory approaches required further attention. It is through the public policy arena that the biggest gains and benefits can be instituted.

Prior to the introduction of legislated plain packaging for tobacco products, no country had ever mandated the entire appearance of packaging for any consumer product.³⁵⁰ The Australian regulation is therefore both exceptional and radical.³⁵¹

In the last 20 years, Australian social medicine experts Professors Simon Chapman and Melanie Wakefield, among many other social scientists, have leveraged the growing understanding of tobacco companies' methods and tactics for promoting their products to develop countervailing policy responses.

Chapman's research focuses on the management of tobacco advertising and control. In their 2008 review³⁵², Chapman, with colleagues Dr Becky Freeman and legal scholar Professor Matthew Rimmer, discussed the probable impact of mandatory plain packaging. They analysed tobacco industry statements about the importance of packs as promotional vehicles, and they offered a critique of legal objections raised by the industry.

Tobacco companies have long argued that they do not want minors to smoke. They claim that their marketing activities are aimed only at maintaining market share or expanding that share through adult consumers switching brands. However, Chapman's research revealed the importance tobacco companies placed on attracting new smokers, and the significant research efforts they put into pack design in order to attract young people.³⁵³

When Chapman was appointed to the Government's Preventative Health Taskforce – Tobacco Committee in 2008 and asked to suggest bold, evidence-based preventative

strategies, he proposed plain packaging. The Committee unanimously accepted his suggestion and it became one of the Taskforce's 2009 recommendations to Government. The use of strong evidence in this case engendered bipartisan support. Wakefield was also on the Committee and, like Chapman, she provided a strong evidence base for the Taskforce's recommendations based on her 2002 ground-breaking review paper *The Cigarette Pack as Image*³⁵⁴, and subsequent research investigating how reducing packaging design features affects smokers' perceptions of attractiveness and the social desirability of smoking.

Because of this research and advice, the legislation includes several different measures that focus on: discouraging people from taking up smoking; encouraging cessation; discouraging relapse; reducing the appeal of tobacco and the ability of packaging to mislead; and increasing the effectiveness of health warnings.³⁵⁵ Wakefield led the team that conducted the first comprehensive evaluation of the legislation's impact, and this was published in the *British Medical Journal* in 2015.³⁵⁶

Of course, the legislation has not been popular with all vested interests. The plain packaging policy was seen as a massive threat to the transnational tobacco industry, which quickly implemented an unprecedented global campaign to try to defeat the bill and deter other countries from following Australia. The tobacco industry spent well over \$14 million on TV and other media campaigns, threatened to launch complaints to the World Trade Organization, and predicted catastrophic job losses. Ultimately, the tobacco industry lobby was defeated in a failed 6–1 Australian

High Court challenge³⁵⁷, but its aggressive campaigning can be seen as an indication that Australia's brave legislation has a major anticipated effect – as predicted by the social science research that provided the evidence base for this policy.

Chapman along with Freeman have also produced a book on the topic aimed at the general public. Called *Removing the Emperor's Clothes: Australia and tobacco plain packaging*, the book is free and details the many steps and obstacles towards achieving plain packaging of tobacco products in this country. In it, the authors declare that they wrote the book “principally for those in other countries wanting to make the best case for plain packaging and to defend it from the inevitable attacks that will follow”.³⁵⁸

Other countries have indeed begun taking Australia as an example of international best practice on regulating the sales of tobacco products in the interest of public health. Ireland has legislated for plain packaging of tobacco products and lauded Australia for paving the way on this issue.³⁵⁹ After its launch of a consultation paper on plain packaging in 2015, the Norwegian Health Minister said Australia should be commended for providing an excellent example to follow in terms of making tough policies in the public interest based on solid evidence.³⁶⁰ The UK Government too has said that Australia inspired that country's consultation process, which led to the

introduction of plain packaging laws in the UK in 2016.³⁶¹

Nonetheless, these successes should not be seen as the end of the road for Australian research on the effects of commercially available products on public health. For example, the effects of electronic cigarettes are relatively unknown, nor is the link yet clear between the entry of these products onto the Australian market and other smoking behaviour. More research is also required into the potential increase in illicit tobacco consumption within Australia, following the introduction of the plain packaging legislation (although preliminary evidence suggests that this increase may be negligible).³⁶²

The ground-breaking research of Chapman, Wakefield and their colleagues on the effect of tobacco product packaging and marketing on smoking behaviours could also be applied to other types of commercially available products that may potentially have adverse effects on public health. There may, for example, be savings made to the economy in terms of money spent on health care by innovative regulation of products containing alcohol, sugar, salt etc. The payoff from better public health has generally been well documented. To best understand what links exist and how to reduce adverse impacts requires a commitment to rigorous social science research.

PREVENTION IS BETTER THAN CURE: CONTAINING THE HIV EPIDEMIC WITH BEHAVIOURAL CHANGE

Australia's response to the onset of human immunodeficiency virus (HIV) in the late 1980s and 1990s is widely recognised as one of the most effective in the world. In the absence of an effective medical treatment at the time, only prevention was available to combat the spread of the disease.

Unlike other countries, which largely took a punitive approach to behaviours that were known to spread HIV, the Australian strategy relied on behavioural change. This progressive approach was underpinned by strong research that suggested a community and government partnership may be more effective in reducing the spread of HIV than punitive policies.

This approach produced the best HIV prevention outcome of any comparable country by far. The rate of HIV infections in Australia fell from approximately 2,500 per year in the mid-1980s to less than 500 per year within a decade.³⁶³ At 0.1%, the current prevalence, or overall proportion of people in Australia who are living with HIV, is low compared to other high income countries and countries in the region.³⁶⁴ For example, the United States had a prevalence rate of 0.9% in 2013, which is the equivalent of 40,630 new infections that year.³⁶⁵

The model of HIV prevention adopted by Australian state governments and the

medical profession focused on the need to educate and empower those most at risk. This was radical in that it was very different from the traditional understanding of disease prevention as a fight in which only doctors and medical researchers could engage.³⁶⁶

No single policy initiative was responsible for slowing the spread of HIV in Australia, but the research conducted into behaviour change offered numerous options for a comprehensive and multifaceted public health response.³⁶⁷ Critical and unique elements of the Australian approach included: respect for human rights through legal mechanisms; collaboration and partnership between stakeholders; and a focus on empirical research and evidence when developing policy.³⁶⁸

One example of the collaboration between researchers and advocacy groups is the partnership between the AIDS Council of NSW (ACON) and the School of Behavioural Sciences at Macquarie University, Sydney. Researchers and community organisation activists together developed research questions and studies that would provide guidance for the design of campaigns and programs. Various steering committees, comprising researchers, community workers and government bureaucrats, provided a forum for discussion of social research needs.

The collaborative approach to research and policy formulation had several distinct advantages. For a start, researchers could gain access to the subjects they needed for their work and thus research questions were developed in response to the changing context of HIV prevention in the affected communities. At the same time political scientists, such as Professor Dennis Altman, provided an advocacy voice for community groups. Indeed Altman's writings have also been at the forefront globally of understanding and awareness in the wider field of sexual behaviour. Ultimately, the state government accepted the community's recommendations for changes to campaigns and programs as they were backed up by research findings.³⁶⁹ In time, this successful collaboration between social scientists and community groups helped lead to the establishment of the National Centre in HIV Social Research.

Quantifying the exact number of Australians who did not contract HIV because of this approach is difficult. But it is beyond doubt that large-scale behavioural prevention did decrease the incidence of HIV spreading throughout the country. Many thousands of young Australians have grown to adulthood free of HIV infection and without risk of dying from AIDS. Furthermore, health service providers and social support services have been spared the costs of providing additional therapies and welfare to those affected by the disease. In turn, funds and resources not allocated to HIV/AIDS have been directed to other health care challenges and needs.³⁷⁰

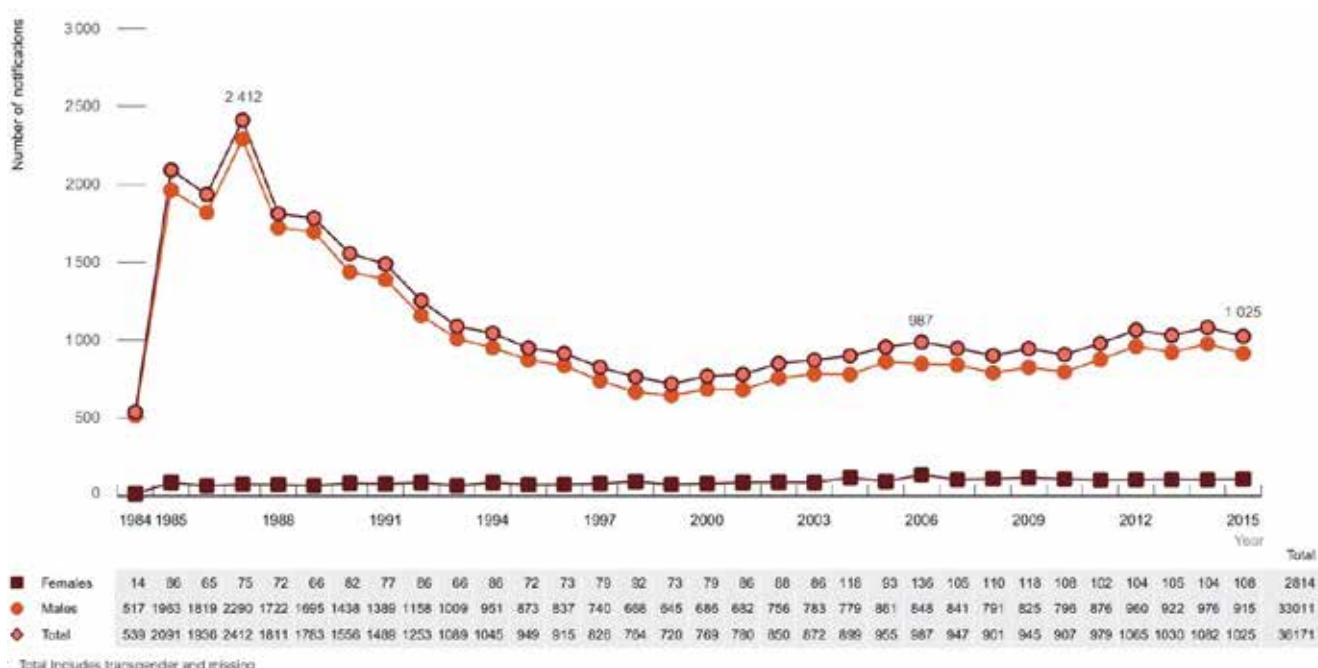
A 2007 study found that the domestic spread of HIV/AIDS was contained for little more than \$100 million a year spent over 20 years to cover all HIV-related care,

treatment, prevention and research. Australia has produced by far the most impressive and cost-effective outcomes of any comparable country thus far.³⁷¹

In comparison, the medical cost saved by avoiding one HIV infection in America is at least \$229,800 USD.³⁷² Nonetheless, the country is still facing a major ongoing HIV epidemic, with around 40,000 new infections per year.³⁷³ Although the United States is the greatest national funder of addressing the HIV epidemic globally, without comprehensive public education and prevention programs in place, stigma and discrimination continue to hamper people's access to HIV prevention, testing and treatment services, fuelling the cycle of new infections.³⁷⁴

Despite the success of Australia's prevention-based approach, the task of preventing HIV is not over. In a number of countries, including Australia, levels of new HIV infections are the highest since the early 1990s (Figure 5). In fact, Australia has seen a gradual and steady increase in new HIV diagnoses over the past 15 years.³⁷⁵ The number of HIV notifications newly diagnosed in Australia has remained stable for the past four years, with 1,065 notifications in 2012; 1,030 in 2013; 1,082 in 2014 and 1,025 in 2015.³⁷⁶ There is now a need to reconfigure prevention programs in light of the new social dynamics that affect risky behaviour. That, in turn, requires new social research to determine what those conditions are and how they can best be addressed through evidence-led policy.

Sociologists Professors Peter Aggleton and Susan Kippax suggest that one significant factor in the increased rates of HIV infection in recent years is a declining public and

FIGURE 5: Number of new HIV infections diagnosed in Australia to 2016³⁷⁷

policy interest in addressing the social conditions in which sex and sexual risk are enacted. They argue that because HIV has successfully been reframed as a chronic medical condition that can be managed with therapeutic drugs, it has eclipsed the social aspects of the disease.³⁷⁸ In other words, Australia's prevention programs have become a victim of their own success.

Prevention, to be effective over the long term, requires consistent and continued efforts. However, as the message of 'prevention is better than cure' takes hold in a society, the risk of new HIV infections declines – for a time. The lower rates of new infections may lead to prevention programs being cut as they are perceived as no longer necessary.

In the absence of behavioural change, for programs and policies targeting social conditions in which risk of infection is highest, a strictly medical approach to curing disease prevails. The problem with

this is that medical responses do not, for example, quickly respond to shifts in sexual practices.³⁷⁹ Similarly, exclusively medical responses are unable to identify and address the social-logistical problems of sustaining condom use over extended periods, as well as ongoing frequent HIV testing.³⁸⁰ Thus, the task of adapting and revitalising future HIV prevention responses again requires a vital contribution from social scientists.

RANDOM BREATH TESTING AND ITS NOT-SO-RANDOM DETERRENCE EFFECTS ON DRINK DRIVING

A radical policy on combating driving under the influence of alcohol has saved thousands of lives in Australia over the past 30 years. The introduction of Random Breath Testing (RBT) on Australian roads has been shown by numerous studies to be an effective deterrent to drink driving, and a policy that also happens to have saved taxpayer money. Australia's RBT program has been recognised as the world's most successful.³⁸¹ Social research has shown that the success of the program lies not so much in its effectiveness in catching people driving under the influence of alcohol, but in deterring would-be offenders.

The RBT is a system of mass breath testing techniques at roadblocks, which are highly visible, unpredictable in their locations and give the impression of ubiquity.³⁸² The program is an important element of drink-drive law enforcement that works by deterring people from consuming alcohol prior to driving; the unpredictable but ubiquitous presence of mobile or stationary RBT units effectively increases the perceived likelihood of apprehension.³⁸³

Saving lives has also had a clear financial benefit for the Australian economy. Figures from 2006 illustrate the scale of the economic costs of unsafe driving practices.³⁸⁴ Drink driving alone results in an average of 650 deaths per year and has been estimated

to cost approximately \$767 million per annum.³⁸⁵

Studies have shown that the introduction of random breath testing has had a significant and long-term positive effect on reducing accidents and fatalities associated with drinking under the influence of alcohol. The introduction of the RBT program in the early 1980s has helped save thousands of lives. The program has directly contributed to a 33%, or \$253 million, reduction in alcohol-related fatalities and a 17% reduction in alcohol-related injuries on Australian roads.³⁸⁶



\$253 million

In Queensland, RBT led to a reduction in fatal crashes of 35% and 28% in Western Australia over a four-year period. In New South Wales, the introduction of RBT led to an initial 48% reduction in fatal crashes over a four-and-a-half-month period and an average 15% reduction in fatal crashes over a subsequent 10-year period.³⁸⁷

The introduction of the RBT program in New South Wales has been held up as exemplary within Australia. In the two years before the 1982 trial introduction of breath testing in

New South Wales, alcohol was responsible for nearly one-third of crashes. By 2013, this had dropped to 16%.³⁸⁸

The significance of the New South Wales RBT program is that it differed from the introduction of similar measures in other Australian states and territories, and in many other countries. This program was more intensive and aimed at long-term effects from the beginning. It also included extensive media campaigning on television, radio, in print, and on road-side billboards. The program brought together experts from psychology, sociology, communication and other social sciences, to ensure that the messaging and tactics of the campaign achieved maximum impact. A further unique feature of the New South Wales program is that it deliberately aimed to expose as many drivers as possible to the RBT. The intention was to randomly breath test, on average, one in three drivers every year.³⁸⁹ This strategy was specifically pursued because research has shown that among the general population, personal contact with RBT has the strongest deterrent impact on drink driving.³⁹⁰

The design – and thus success – of the program in Australia has been heavily influenced by the research and advocacy of sociologist Professor Ross Homel. In particular, his work helped optimise the RBT program's effectiveness in deterring drink driving. In the late 1970s and early 1980s, Homel's investigations into deterrence led him to conclude that if any legal measure was to achieve an ongoing effect, visible and threatening enforcement must be sustained at high levels. Homel's research showed that continued and consistent enforcement of anti-drink driving policies would not only deter people from driving under the

influence of alcohol in the first instance, but also perpetually redeter citizens.³⁹¹

Homel's social research work made a tremendous contribution to the evidence base for the importance of the deterrence factor in preventing drink driving – and ultimately influence of the policy.

"It seems fair to conclude," Homel has said, "that research played a crucial role not so much in persuading politicians to introduce RBT, but in persuading them (a least in some states) to implement it properly and to continue with it after a period of trial."³⁹² In July 1981, Homel incorporated available evidence, including results of Victorian RBT 'blitzes' into a briefing paper: *Controlling the Drink Driver: The Findings of Research and Priorities for Political Action*. He distributed this document to media, politicians and anyone else who was interested. In addition to this, Homel engaged with doctors, drug and alcohol societies, and social responsibility committees of major churches.³⁹³ His activism coincided with that of a number of other proponents of RBT at the time.

In 1982, the New South Wales Government formed the Joint Standing Committee on Road Safety (StaySafe) and a majority of Homel's suggestions were adopted in the Committee's final report recommendations, which were accepted by the government.

Shortly after RBT was introduced in New South Wales in December 1982, Homel's research turned to developing an explicit theoretical model of effective deterrence. Using the RBT example as a foundation, he tested the theoretical model against evaluation data compiled over several years, which allowed him to both modify and refine

the theory, and to provide evidence of the causal links between police activity, media publicity and behaviour change.³⁹⁴

Understanding these causal links, and following a longitudinal mode of social research has revealed some important aspects of the RBT policy. The New South Wales RBT program, for example, stands out because it demonstrates the influential power of effects observed over a long period in a way that is unprecedented in Australia and internationally.³⁹⁵

Much of this evidence has been the result of Homel's work both before and after the program's introduction. A number of researchers have since built on his RBT deterrence model to develop a set of best practice principles for implementation.³⁹⁶

Indeed, the Australian experience has been replicated overseas with great success. The introduction of RBT schemes in Finland,

New Zealand and Ireland have all led to a significant reduction in alcohol-related road accidents and fatalities.³⁹⁷

The lessons learned from the implementation of the RBT program across Australia are now being adopted in other areas of policy. For example, Homel's model is now applied to other road safety behaviours such as speeding, unlicensed driving and drug driving. His research suggests that if the essential ingredients of the RBT example could be isolated and applied to other aberrant or unsafe behaviour, police may be able to achieve substantial reductions in crime with no increase in resources.³⁹⁸

The introduction of the RBT program across Australia has also undoubtedly had widespread and positive results. The numerous social research studies on the long-term effects of the program on drink driving rates and alcohol-related accidents

Similar positive effects on Australian society have been achieved through the research of Professor John Nieuwenhuysen. Around the same time that Homel was developing his model of deterrence, Nieuwenhuysen examined other forms of regulation around the consumption of alcohol. In 1984 he reviewed Victoria's *Liquor Control Act 1968* and developed a number of policy recommendations. The state government accepted most of these and in 1988 Victoria's licensing laws went from being the most restrictive in Australia to the most liberal. This research put an end to the notorious '6 o'clock swill' caused by overly restrictive trading hours for licensed establishments.

In essence, Nieuwenhuysen's review championed the cause of small European-style bars and the ability of the market, rather than the government, to determine the style and location in which people could drink a glass of wine.³⁹⁹

Although Nieuwenhuysen's research led to a relaxing of previously restrictive regulation, while Homel's research led to a tough new stance on drink driving, both researchers have based their policy recommendations on a rigorous evidentiary base. Both sets of policies, designed for their specific fears and problems, have successfully achieved the intended consequences in terms of influencing behaviour.

The social sciences have worked with policy makers on a number of public health programs to improve public safety. In 2003, economist Professor Peter Abelson and colleagues costed a range of programs that addressed road trauma over the period of 1970–2010, including: the mandatory fitting of seat belts; campaigns against drinking and driving; reduced vehicle speed limits; enforced speed restrictions; accident Black Spot programs, and improved traffic management. The researchers attributed 50% of the reduction in road accidents to these public health measures (with the remaining 50% attributed to better roads and vehicles). The benefits arising from public health programs were estimated at \$2.7 billion per annum in the late 1990s, with 1,000 lives saved and 5,000 hospital cases averted each year.⁴⁰⁰

provide the evidence for this. But further research is still required on aspects of drink driving and the effectiveness of possible approaches for increasing deterrence in regards to other types of criminal behaviour, as it is needed for alcohol service and sales hours, seatbelt use, and more.

Further research on deterrence theory could be beneficially applied to other criminal or anti-social behaviours, both in Australia and overseas. As Homel points out: “Ideally, policy should flow out of theory, and a major job of researchers is to ensure that policies and especially police practices and publicity

campaigns flow from, or are consistent with, soundly-based theory.”⁴⁰¹ In a very real sense, Homel’s research demonstrates that social science can do more than assist governments and institutions in providing for Australians – the social sciences can save lives.



Random breath testing units. Source. ABC.

SOCIAL DETERMINANTS OF HEALTH

There is strong, and growing, evidence documenting widening health inequities across the world. Widening gaps in health equity have led to repeated calls for innovative policy approaches that promote health and wellbeing, through action on the social and economic determinants of health to create conditions that are conducive to improved population health, wellbeing and equity.

The European Union and the World Health Organization have also promoted a Health in All Policies (HiAP) approach, which advocates for all sectors of government to take action designed to promote health, wellbeing and equity. This approach is being applied in South Australia and Tasmania.

HiAP builds upon a long history of theory and conceptual development in the health promotion movement; such as the concepts of inter-sectoral action for health, healthy public policy, and joined-up government. All three of these concepts are underpinned by the idea that the health sector must work with other sectors, particularly within and across governments, to facilitate recognition of the impact that all sectors have on health, to advocate for improved health and to mediate between differing interests across sectors. The importance of policy on social determinants in the disease prevention and health promotion fields has been documented, but government action has been slow to move away from a focus on direct attempts to change individual behavior – or 'lifestyle drift'.

The quest for better coordinated government policy nationally and locally is elusive, but the social science disciplines of social medicine, psychology, sociology, political science, and law are crucial in bridging this gap.

Effective policy implementation requires expertise and a firm understanding of the factors affecting the progression of policy issues into the policy agenda before we will see any substantial increase in the adoption of healthy public policies.⁴⁰²

In this way HiAP exemplifies action in the social sciences to better ensure different areas work collaboratively to deliver integrated approaches and comprehensive understanding. Narrow discipline research offers much because it allows depth of analysis under clear protocols of excellence. It therefore remains an invaluable basis for knowledge advance. To complement this with more inter-disciplinarity, drawing on a range of insights, provides additional impact and benefit, especially when engaging policy makers.

PREVENTION, EARLY INTERVENTION AND ACCESSIBILITY IN MENTAL HEALTH

Mental health disorders are responsible for more than 7% of disease incidences globally, profoundly altering quality of life for many persons, and presents an enormous cost to economies.⁴⁰³ Many people with significant disorders do not seek or do not have access to professional care for their conditions. Preventive measures for physical conditions such as lung and heart disease, skin cancer, obesity, etc. are known to be effective and are routinely introduced at the individual and societal levels.

Efforts to prevent the onset of mental health disorders however are almost non-existent. The social sciences disciplines of psychology, sociology and social medicine have been working with modern technology to close this gap. Social medicine offers an efficient and effective pathway to overcoming mental health problems in Australia.

STIGMA AND MENTAL HEALTH LITERACY

People who struggle with mental health issues are reluctant to seek treatment due to fears of how they will be perceived by family, friends and medical professionals.⁴⁰⁴ Australian social medicine and health researchers have made ground-breaking contributions in this area through research into stigma⁴⁰⁵ and how to address stigma through mental health literacy. Mental health literacy seeks to demystify diagnosis, treatment resources, the effectiveness of medical intervention, and the value of self-help methods.⁴⁰⁶ Identifying mental health stigmas in the community helps to define

targets for intervention at both individual and community levels. The social science approach to literacy and stigma has powered the massive mental health promotion initiatives of the last decade.

TRIAGING MENTAL HEALTH

Social scientists have enabled timely identification and response to mental health problems at multiple levels in the community. Mental Health First Aid (MHFA) is the 'invention' of mental health educators Professors Betty Kitchener and Tony Jorm of Deakin University.⁴⁰⁷ It equips members of the public with the skills to recognise mental health problems and to provide appropriate, evidence-based assistance until professional help is available. MHFA is a creative means to ensure that individuals in need of treatment are able to receive it as early as possible and are led to treatment in a supportive, non-stigmatising way. Over 2% of the Australian population have been trained in MHFA and the program has spread to more than 20 countries.

ONLINE PREVENTION PROGRAMS

When combining the high prevalence of mental health disorders with financial barriers and geographical distance, it is unlikely that sufficiently trained professionals appropriately located throughout the country will ever be able to meet the need for care.

Australian social scientists have pioneered the adoption of technology to remote delivery of treatment and preventive programs.⁴⁰⁸

A great example of this from researchers at the Australian National University is MoodGYM, “a free, interactive self-help program that provides cognitive behaviour therapy training in order to help users prevent and cope with mental health crises”, and is now used in more than 200 countries.⁴⁰⁹ Online preventive programs have been developed for most common disorders and for groups such as school children, Indigenous Australians and the socially isolated.

Next generation versions of these systems are under development, focusing on the ubiquity of smart devices and social media. Research is currently under way into harnessing the data generated by smartphones and social media activity, to detect at-risk status in individuals; a psychological equivalent of the FitBit.⁴¹⁰ Such an innovation would bring assistance at the right time and in the right place to individuals who might never consider seeking help through conventional channels.

PREVENTATIVE MEASURES

The idea that mental health conditions might be prevented through a merger of social, behavioural and psychological approaches has only recently gained traction.⁴¹¹ Trial programs targeting depression and anxiety have been trialled in schools, with programs promoting support networks to avert the risk of self-harm.⁴¹² Behavioural intervention programs promote activities such as exercise, sleep hygiene and diet. Mental health disorders are no longer seen as purely medical problems.

Advances achieved through prevention, and timely and effective intervention, have been driven by multiple approaches from the social

sciences. By improving the quality of life for the affected individuals, the burden on society is reduced.

INTRODUCTION OF ACTIVITY BASED 'CASE MIX' FUNDING

Up until the 1990s, public hospital budgets were set on the basis of politics, negotiations and incremental change. Efficiency was purported to be achieved by marginal trimming of budgets each year (so called 'efficiency dividends'). Negotiations were often acrimonious with the print media enlisted by hospitals to assist in demonising state health authorities to garner a favourable outcome for the hospital, if not the taxpayer. Budget cuts rarely led to efficiency improvement but were more likely to lead to service reductions, as Christmas closures stretched into Easter as a way of reducing outlays.

Measurement of hospital activity and efficiency was crude, with cost per stay or cost per bed day the most common metrics. Neither of these adjusted for the complexity of patients treated.

Research in the United States in the 1970s and early 1980s created a more robust way of measuring hospital inpatient activity through the development of Diagnosis Related Groups (DRGs) – a way of grouping hospital activity by the diagnosis of the patient into groups which were both clinically meaningful and which were expected to consume similar amounts of resources.

A very productive collaboration between economists in the Victorian health department and at the University of New South Wales evaluated the applicability of the United States groupings in Australia,

grouped Victorian data to DRGs, and published data comparing hospital performance in Victoria, and between Victorian averages and average United States performance. Economists at Monash University used Victorian hospital data to develop measures of relative costliness of each DRG.

Building on that work, economists in the Victorian health department developed a way of funding hospitals on the basis of their activity, as measured using DRGs, using prices based on the Monash relative costliness measures. Phasing in of this new approach – activity-based funding – commenced in 1993. Victoria was one of the first jurisdictions outside the United States to use DRGs for hospital payment.

The Victorian policy was seen as a success in driving improved efficiency and South Australia followed suit with a similar policy the next year. Subsequent modifications to the policy have included incorporating measures of hospital quality into the pricing structure.

All states now use activity-based funding approaches, also called 'casemix' health management, and it now (2017) forms the basis for determining payments from the Commonwealth government to states and territories for additional public hospital activity.

NATIONAL DISABILITY INSURANCE SCHEME

The introduction of the National Disability Insurance Scheme (NDIS) was a different piece of public policy reform. While, like the GST, it had been proposed some decades before its introduction, unlike the GST, it had not been the subject of a lengthy political debate stretching over years. It re-emerged as one of the 'big ideas' raised at the Australia 2020 Summit convened by then Prime Minister Kevin Rudd.

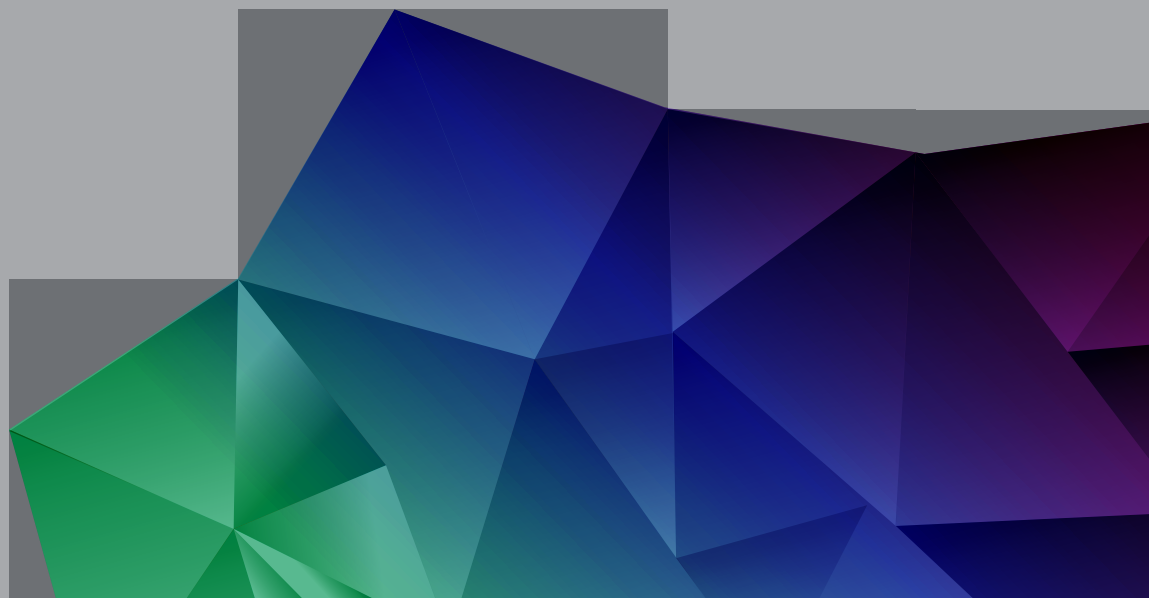
The Government then referred it to a Productivity Commission inquiry in 2010 to look at a national disability long-term care and support scheme. The terms of reference included, as an option, a social insurance scheme. Community support was built through a joint effort by disability organisations in the Every Australian Counts campaign. The policy was supported by the Coalition Opposition, although at times the Opposition raised questions about how it would be funded.

The Government considered a number of options for funding the scheme and despite initially ruling out the option, proposed an increase in the Medicare levy of 0.5% to help fund the cost. This was supported by the Opposition with some caveats. Unlike the GST, the NDIS had support from the then Opposition. It was also widely supported by other stakeholders. The Government put time into explaining the need for the scheme to the public and harnessing the support of the stakeholder groups.

The proposal had overwhelming public support, even though it included a tax increase with an opinion poll, conducted after the 0.5% Medicare levy was introduced, that showed more than three-quarters of voters (including 87% of Labor voters and 74% of Coalition voters) supported the scheme. What these two reform proposals demonstrate is the value of communicating the national need and proposed solution to the political parties, interest groups, and the public.

The social science of public opinion, interest group understanding and political analysis can assist policy development and implementation. The NDIS was framed in a way that won public support and overcame concerns about funding. The GST didn't win public support but instead was an example of the willingness of the leadership, backed by major stakeholders, to pursue a change they believed was necessary.⁴¹³

SOCIAL CHANGE



EQUAL PAY FOR EQUAL WORK IN THE FAIR GO NATION

In its 2016 report, the Australian Workplace Gender Equality Agency noted that on average women earn 18% less than men in equivalent full time roles, and there is a \$100,000 annual pay gap between men and women in senior management roles.⁴¹⁴ Australia considers itself a 'fair go' nation that values egalitarianism, so why does this not extend to equal pay for Australian women? Social science research shows that while much progress has been achieved since the late 1960s in ensuring equal pay for equal work, there are still many barriers to women's equality in the workplace. Some of these have been addressed, and many more could be addressed through evidence-led policy.

According to a 2015 study by the World Economic Forum, Australia ranks 63rd out of 145 countries in terms of wage equality between the sexes.⁴¹⁵ This study, which also examines a wide range of social, economic, health and education indicators, puts Australia at number 36 in the world in terms of gender equality – down 12 places from where it ranked in 2014. The report goes on to say that this decline can be explained by a decrease in Australia's Economic Participation and Opportunity score, due to a drop in estimated earned income.⁴¹⁶ In other words, income equality has a significant impact on other societal wellbeing factors.

Researchers point out that factors such as labour market structures, gender role attitudes, and regulatory institutions and practices, together create what are called 'contextually specific dynamics of gender inequality'.⁴¹⁷ These, however, can be shaped by evidence-led policy to close the gender wage gap.

GOOD FOR THE GOOSE AND GOOD FOR THE GANDER – EQUAL PAY BENEFITS THE WHOLE COMMUNITY

“The most important determinant of a country's competitiveness is its human talent—the skills and productivity of its workforce. Ensuring the healthy development and appropriate use of half of the world's available talent pool thus has a vast bearing on how competitive a country may become or how efficient a company may be. Gender equality is thus fundamental to whether and how societies thrive.”⁴¹⁸

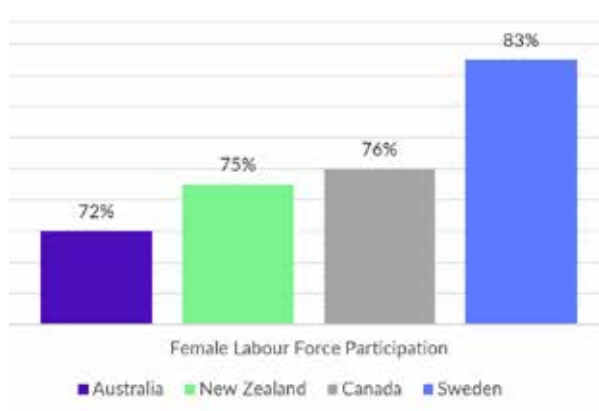
- The World Economic Forum

Achieving gender equality is important for workplaces not only because it is fair

to do so, but because it is also linked to a country's overall economic performance. Numerous studies have linked workplace gender equality with: improved national productivity and economic growth; increased organisational performance; enhanced ability of companies to attract talent and retain employees; and enhanced organisational reputation.⁴¹⁹

International research has found that greater female participation in the United States workforce since 1970 accounts for a quarter of current GDP, and that the reduction in the male–female employment gap has been an important driver of European economic growth in the last decade.⁴²⁰ By contrast, Australian female labour force participation fell well below that of comparable countries.

FIGURE 6: Female labour force participation, 15–64, 2013⁴²¹



THE DEVELOPMENT OF EQUAL PAY FOR WORK OF EQUAL VALUE

In Australia, the gender wage gap has been narrowing slowly but steadily. In the first half of the 20th century, equal pay for women was a concern only insofar as it was feared that cheap female labour would displace men from their jobs.⁴²² Undermining earning potential for men was deemed to be against the 'family principle' – the notion

that married men had families to support, and therefore needed to earn more to do so. That principle was only abandoned with the provision of the minimum wage for all in 1974⁴²³, but there were several significant developments paving the way for equal pay before then.

Management expert Professor Marian Baird has said that the minimum wage was essential in promoting gender equality. It had, and continues to have, a significant, positive effect on Australian women.⁴²⁴

"The minimum wage is very important," Baird argues, "because lots of women's incomes are based on the minimum wage and so are some of their benefits. So for example, parental leave pay is at the rate of the minimum wage."⁴²⁵

She adds that: "If we lower the minimum wage we quickly lower women's income-earning abilities and therefore equity. Studies overseas have shown that maintaining the minimum wage or increasing the minimum wage is a very quick way of closing the gender pay gap. So minimum wages are essential."⁴²⁶

This effect of minimum wage can be controversial. But one dimension of it must not be forgotten – wage and workforce participation have both supply and demand effects. The question is their balance. In the equal pay case of 1972, the ACTU Working Women's Centre used social science research commissioned from economist Glenn Withers to show that, contrary to employer submissions, increased female participation created as many jobs as it took and it did not depress men's wages. This was accepted by the Arbitration Commission.

WHAT NOW, AND WHAT NEXT?

Following the universal minimum wage decision of 1974, and the equal pay decisions of 1969 and 1972, equality in award wages between the sexes was widely assumed to have been achieved in Australia, but the battle had only just begun.⁴²⁷

The late 1970s and the 1980s saw a series of test cases led by unions in various sectors that further established the details of equal pay in specific industries.⁴¹⁵ Sometimes the unions had great success in levelling the pay gap between male and female wages – but only if they were organised and had this as an explicit objective.⁴²⁸

The *Industrial Relations (Reform) Act (Cth) 1993* promised to solidify equal remuneration for men and women workers for work of equal value, but it proved to have unintended consequences. Claimants under the new Act had to prove discrimination as a cause of the wage gap. This deterred possible claims where pay differences resulted from the more subtle, historical and cultural undervaluation of feminised work. Subsequent legislation, namely the *Workplace Relations Act 1996* and the *Workplace Relations Amendment (Work Choices) Act 2005* maintained the need to prove discrimination.⁴²⁹

Since 2004, the gender pay gap in Australia has actually increased slightly. Currently, women in full time employment earn only 82% of the wage of a man in an equivalent role.⁴³¹ For various reasons there are more women than men in lower-paid and part-time or casual employment, contributing to the gender pay gap.⁴³² Jobs in the social and community services industry (including social work, welfare work, child care, personal care and nursing assistance) still tend to be dominated by women, and such jobs continue to be undervalued and lower-paid.⁴³³ The continued under-valuation of women's work is an area of current research for Australian social scientists.⁴³⁴

In 2010, the Australian Services Union embarked upon the latest in a series of interventions to achieve equitable pay for this sector.⁴³⁵ In 2012, a full bench of Fair Work Australia agreed to increase the pay rates in the Social, Community, Home Care and Disability Industry Award 2010 by up to 41%.⁴³⁶

Yet, despite this milestone, the expectation that women will perform the bulk of care work continues to disadvantage Australian women in other careers too. By one calculation, a young woman entering the workplace today can expect to work for the equivalent of an average of four years more than her male peers over her lifetime. These extra four years account for women

Australian sociologists have pioneered 'equality bargaining' for the provision of paid leave for victims of domestic violence. In 2010, the first enterprise agreement clauses providing paid leave and other entitlements to victims of domestic violence were included in union negotiated enterprise agreements registered with the Australian Fair Work Commission. By mid-2013, over 100 enterprise agreements in Australia included such a clause. These are some of the first enterprise bargaining clauses of this type in the world.⁴³⁰

balancing both paid and unpaid care work, and amounts to the equivalent of an extra month's work for every woman, every year of her life.⁴³⁷

The former Australian Sex Discrimination Commissioner, Elizabeth Broderick, has said that: "One of the cumulative effects of unequal pay is that, at retirement, there is a significant gap in retirement incomes between women and men, with more women than men likely to be dependent on the age pension."⁴³⁸

How to narrow that gap in retirement income is an area of policy requiring significant research and action.

Areas in which the social sciences could provide solutions to such wicked problems of public policy as these include: taxation; superannuation; the casualisation of the workforce; and an ageing population, to name but a few. Investing in the social science that can produce viable solutions to these issues is investing in Australia's future.



Wage equality protests in Melbourne. Source. AAP.

WWII

Women filled the labour shortage caused by Australian men being shipped overseas to serve in World War II.

1943

In response to rising pressure from women's organisations, the Australian Government established a Women's Employment Board, which ensured that women workers during the war earned around 75% of the male wage.⁴³⁹

1945

With the return of the male workforce at the end of the war, there was a sharp decline in women's employment participation.

1951

The International Labour Organization (ILO) adopts the Convention concerning Equal Remuneration for Men and Women Workers for Work of Equal Value.⁴⁴⁰

1969

The Commonwealth Conciliation and Arbitration Commission (later the Australian Industrial Relations Commission) adopts the principle of equal pay for equal work. It was to be phased in over three years, bringing women covered by federally registered awards into line with those covered by the state awards.⁴⁴¹ The ruling officially set the female wage at 85% of the male wage.⁴⁴²

1972

The Commonwealth Conciliation and Arbitration Commission awarded women wholly equal pay.⁴⁴³ The Commission broadens 'equal pay for equal work' to 'equal pay for work of equal value'.⁴⁴⁴ This was significant because the 1969 decision to grant 'equal pay for equal work' benefited only women who did 'equal work' alongside men and not those in jobs 'essentially or usually performed by females'.⁴⁴⁵ Research quickly showed that only 18% of women workers had benefited as a result of the 1969 decision, and this provided some impetus for the 1972 decision to broaden the principle of 'equal pay for work of equal value'.⁴⁴⁶ Within five years the gender pay gap came down by 19%.⁴⁴⁷

1974

The Australian Conciliation and Arbitration Commission decides to grant a single minimum wage for all adults instead of separate male and female rates. This represented the final abandonment of the family needs concept.⁴⁴⁸ It also had another significant implication. While the equal pay decisions of 1969 and 1972 were voluntary – unions were not forced to comply; they were just told they should do so – the minimum wage change was mandatory.⁴⁴⁹

ADDRESSING INEQUALITY: ECONOMIC AND SOCIAL POLICY RESEARCH IN AUSTRALIA

In 2015, the SPRC conducted 85 research projects.⁴⁵⁰ One significant study examined the links between domestic violence and poverty. Domestic violence is increasingly in the public spotlight and on the political agenda. However, many of the social consequences of domestic violence remain unexplored. The research of the SPRC provides evidence for what many domestic violence practitioners have observed for decades: violence and financial abuse contribute to extreme levels of financial hardship and risks of poverty.⁴⁵¹ The SPRC researchers concluded that innovation is needed in paid work, among employers and employment service providers. Victims should be supported to get and keep jobs that provide them with independence and resources to avoid and leave bad relationships. Improvements are also needed in the banking sector, among phone and utility providers, and other sources of household debt, to better respond to the special circumstances of victims of financial abuse.⁴⁵²

Australia is a prosperous nation – but the way in which wealth and benefits are distributed is far from equitable. Many Australians, including children, live in poverty or face other social and economic disadvantages. Measuring disadvantage is not a simple task. In order to account for all aspects of the Australian community, data are gathered from a wide range of sectors including: disability care; health services; labour economics; child care; education and training; housing; social inclusion and wellbeing; children and youth; gender equality; Indigenous disadvantage; ageing; tax and welfare; population and demography; and superannuation.⁴⁵³

Thus, social science research on social disadvantage in Australia is conducted through many different disciplines and centres of excellence. Two of the most

prominent and influential are the Social Policy Research Centre (SPRC) at the University of New South Wales, and the National Centre for Social and Economic Modelling (NATSEM) at the University of Canberra. Both have been instrumental in providing the systematic evidence base for social disadvantage in Australia – and policy solutions for how to tackle it.

The SPRC is a specialist research centre dedicated to shaping awareness of social welfare issues.⁴⁵⁴ Social scientists at the SPRC lead research that explores the major social issues of poverty, inequality, wellbeing and justice. The work of the SPRC is innovative in that researchers work in multidisciplinary teams. Their research enlightens public debate and enhances policy formation, both nationally and internationally.⁴⁵⁵

The SPRC's Director from 1987 to 2009, Professor Peter Saunders, went beyond a strictly economic understanding of poverty. Instead of focusing only on income as the marker of poverty, Saunders also measures other indicators of disadvantage and social exclusion.⁴⁵⁶ "Deprivation exists where people face an enforced lack of socially perceived necessities," he has said. "These are goods, activities, opportunities and capacities which are widely regarded as essential for those living in a particular society."⁴⁵⁷

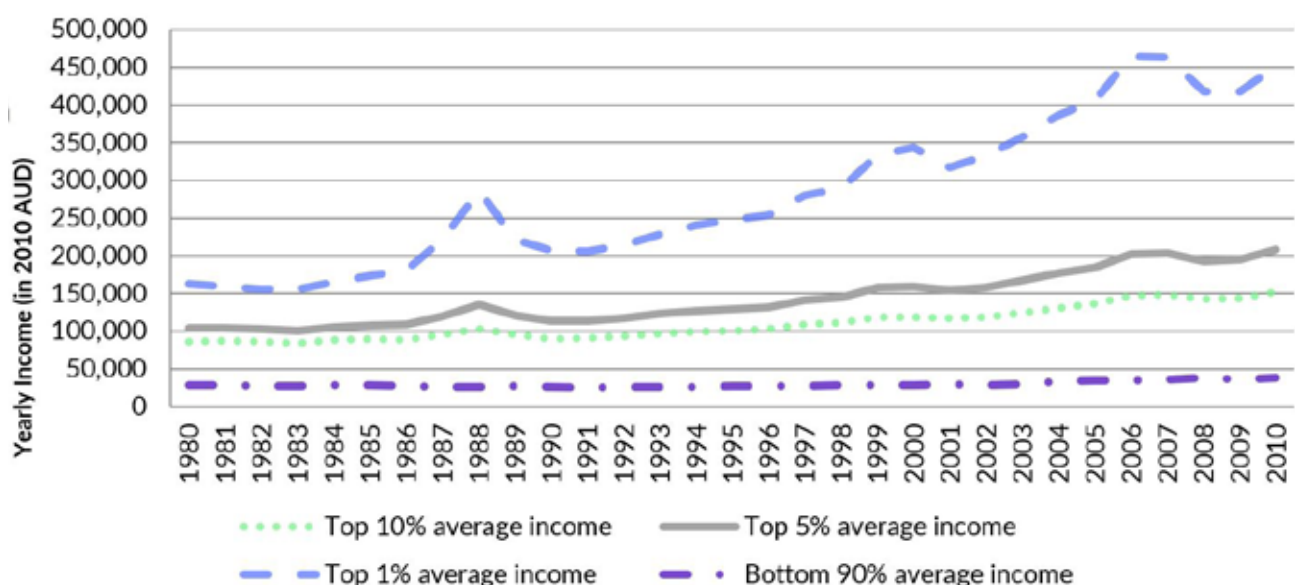
A study conducted by the SPRC asked people to identify things that no-one in Australia should have to go without today. These essentials of life included: a substantial meal at least once a day; home contents insurance; a separate bed for each child; an ability to buy medications prescribed by a doctor, and access to dental treatment when needed. The surprising finding was that over 25% of Australians surveyed were deprived of two or more essential items and 14% were deprived of four or more items. This is also approximately the proportion of Australians who fall below

the conventional, income-based poverty line.⁴⁵⁹

Saunders has also researched child poverty in Australia. "It's now almost 30 years since Prime Minister Bob Hawke promised to end child poverty by 1990," he points out. "The intervening period has seen economic growth deliver rising real incomes to most Australians but achieving the child poverty pledge remains a distant goal."⁴⁶⁰ In 2014, more than 17% of Australian children were living below the poverty line. Studies show that 731,000 children are living in poverty after taking account of housing costs. This, argues Saunders, is "a dismal reflection on our failure to address a problem that is known to impose long-term damage on child development, putting paid to the 'Fair Go' myth that all Australian children have equal opportunities".⁴⁶¹

For its part, NATSEM was established in 1993 with an initial aim to develop microsimulation models for the Australian Government and to undertake broad social and economic modelling. More than 20 years later, it remains one of Australia's

FIGURE 7: Inequality levels in Australia since 1980⁴⁵⁸



leading economic and social policy research centres.⁴⁶²

One of the more innovative and influential contributions to Australian society that NATSEM has made is the development of STINMOD, the static income model of the personal income taxation and government benefits system. The Australian Government relies on this model, through Treasury, Social Services and Employment, to understand how policy impacts on families across different socio-economic groups.⁴⁶³

From its inception, NATSEM's founding Director, Professor Ann Harding, steered micro-economic modelling in Australia beyond its traditional focus on tax and social security to new research areas, such as health, aged care, housing and regional issues.⁴⁶⁴ This was a novel approach because for the first time the purpose of an economic model became identifying all the demographic groups affected by policy changes. For decision-makers, what NATSEM facilitated was analysis, through simulations of the distributive impact of policy changes, across a range of socio-demographic areas. This sought to address previous complaints from policy makers that economic analysis was often too aggregate or dealt only in averages. NATSEM provided the level of detail policy makers needed for informed examination of economic and equity decisions.

WHAT NEXT?

The social science research of the SPRC and NATSEM highlight some worrying trends in Australian society. They also pave the way for innovative policy reform that may shape more equitable socio-economic opportunities. In 2015, Australia became

one of 200 countries that committed to the United Nation's Sustainable Development Goals (SDGs). The first of these global targets it to eradicate extreme poverty for all people everywhere by 2030, and to reduce at least by half the proportion of men, women and children living in poverty "in all its dimensions according to national definitions".⁴⁶⁵ "The world will be watching how we go about making the SDGs a reality," points out Saunders.⁴⁶⁶

Thanks to the research of social science institutions such as NATSEM and the SPRC, we now know far more about how to measure child poverty, including taking account of children's own views, and a lot more about how to reduce it. Australia has the resources to tackle this problem. A generation of uninterrupted economic growth has provided Australia with the resources to get rates of poverty, social exclusion and deprivation down to an acceptable level.

The diversity of the existing evidence on poverty, social exclusion and deprivation in Australia is compelling.⁴⁶⁷ Saunders warns: "Not taking action will deny hundreds of thousands of Australian children the chance to share in the nation's prosperity and make the most of their lives. Those who are opposed to such actions will dispute this, but the reality is that we can tackle child poverty and we owe it to current and future generations to do so."⁴⁶⁸

SKILLS FOR THE FUTURE: AUSTRALIA'S IMMIGRATION SYSTEM

Australia is a nation of migrants, and our future may well be shaped by the intake of new citizens born overseas. For that reason, immigration policies must be carefully designed to ensure the population intake of today can reflect the skills, education and values we want represented in the society of tomorrow.

WHAT DOES THIS MEAN FOR AUSTRALIA?

Occupying a whole continent, Australia can play a major role in accommodating migrants to contribute successfully to their futures and to the future of the nation. Our immigration system should be part of a holistic approach to create an environment that attracts and supports talented people from around the world, people with ideas and ambitions to develop the emerging industries and society of Australia's future.⁴⁶⁹

Much of Australia's recorded story is in fact that of the populating of our island continent. Following approximately 45,000 years of sustained occupation by the forebears of today's Indigenous population, an influx of mostly European immigrants has swelled the national numbers to more than 23 million persons.

Today, Australia accepts a disproportionately large portion of the world's migration flows; 2.8% of the world's immigrants live

in Australia, despite the entire Australian population comprising only 0.3% of the world's population. There are now more people living in Australia who were born overseas, as a proportion of the population, than at any other time in the last 130 years. This is the second highest proportion in the world after Israel, and presents significant economic and social consequences for the country – some positive and some challenging.⁴⁷⁰

On the positive side, some of the cost concerns that go with the benefits of demographic ageing can be slowed with youthful migration, for example. And sustained migration into Australia during the series of regional and global financial crises over recent decades helped Australia weather those better than most countries. On the down-side, issues such as pressure from population growth on infrastructure, environment and social cohesion continue to require attention.

Nevertheless, the balance struck and the immigration system for delivering this is such that, for all its faults, the Australian immigration program is considered world leading: "What Switzerland is to watches and France is to beauty products, Australia is to immigration systems: a national guarantee of quality."⁴⁷¹ The London *Economist* was referring to the quite central role that an "Australian-style points-based immigration system" played in the Brexit debates and

their outcome in the United Kingdom in 2016.

HOW AUSTRALIA CAME TO BE THE IMMIGRATION NATION

Australia has accommodated an estimated 10 million settlers since the First Fleet arrived in 1788. Two 'big waves' explain the bulk of these arrivals: the first with the Gold Rushes and subsequent Long Boom of the 19th century; and then the similar Long Boom post-1945. Following World War II, the immigration program was focused on nation-building⁴⁷², and the promotion of cultural homogeneity.⁴⁷³ The discriminatory 'White Australia' policy was finally abandoned⁴⁷⁴, and the 'populate or perish' approach was replaced with a focus on Australia developing a predominantly skill-based formal selection system for persons seeking permanent migration, along with significant close family reunion migration opportunities.⁴⁷⁵

In addition, several international trends have shaped the Australian immigration system in recent decades. The reunification of Germany in the 1990s and the expansion of the European Union allowed greater mobility of European workers within the continent and expanded economic opportunities. However, this led to shortages of skilled labour in some developed economies including Australia, which had welcomed European workers for many years. The end of the post-war baby boom period further aggravated this shortage.⁴⁷⁶

In the 1980s and 1990s, developed countries began selecting immigrants based more on their potential contribution to the economy and not on their country of origin. Canada took the initial lead in instituting

a score-based system which emphasised human capital attributes, such as education and desired skills.⁴⁷⁷ Australia's immigration scheme moved in this same direction in 1979 through use of a Numerical Multifactor Assessment System (NUMAS) devised by demographer Charles Price for certain family reunion migration applicants.

In 1988, two centuries after the commencement of European migration to Australia, the modern points system for skilled migration was introduced. Again developed by social scientists, the points system emerged from a government advisory committee, chaired by economist Professor Glenn Withers, that examined the overall immigration program structure, and whose recommendations were accepted and implemented promptly and fully by the Hawke government.⁴⁷⁸ The period from 1988 saw Australian migration move increasingly to a skill focus as a result.⁴⁷⁹ The modern points scheme was reviewed in 2006 by a committee comprising three social scientists: Professors Sue Richardson, Lesleyanne Hawthorne and Robert Birrell.⁴⁸⁰

The points-based immigration selection systems developed in Canada and Australia have been emulated in turn elsewhere, including New Zealand, the Czech Republic, Malaysia, Denmark, Singapore and, most recently, Korea, Japan and the Netherlands.⁴⁸¹

Since the year 2000, there have been 1,464,622 skilled migrant visas issued, compared to 753,691 family stream visas.⁴⁸² The family stream allows for the migration of immediate family members of Australian citizens, permanent residents, and eligible New Zealand citizens. There is no points test for applicants, but they must be sponsored

by a relative and there is a cap on annual intake in this category.⁴⁸³ In contrast, skilled migrants must satisfy certain criteria, have specific work skills, be nominated by particular employers, or otherwise have the potential to bring benefits to Australia, as encapsulated in the points calculation. Employer nominations have no cap.

Domestic demographic trends also contributed to the emerging focus on skilled migration. Since the 1970s, the natural growth rate of our population has been declining, as has been the case in New Zealand, Canada, the United States and European countries. The net immigrant arrival rate now contributes more toward population growth than natural increase⁴⁸⁴; as is true of New Zealand, Canada and the United States.

INNOVATIVE FEATURES OF AUSTRALIA'S IMMIGRATION POINTS SYSTEM

The major innovation of the Australian immigration system was its comprehensive 'points test'. The aim of the test is to identify factors in a potential migrant that will benefit Australia or assist with the settlement process. The factors measured on the points test are those that have been identified through social science research as supporting rapid adjustment among immigrants.⁴⁸⁵

The points system currently works as an 'expression of interest' model. Potential migrants from their point of origin enter their details in an online database. After a pre-screening by the Australian Government, an applicant's profile becomes accessible to prospective employers who then evaluate their suitability for available job openings.⁴⁸⁶ Points are awarded for

age, professional experience, education and language proficiency. There are bonus marks when qualifications have been acquired in Australia. In some visa categories, points are also given for family ties in Australia, employer sponsorship, and whether the employer is located outside major metropolitan areas.⁴⁸⁷ This latter consideration is especially important for some potential migrants.

Perhaps the biggest challenge to the continued success of the system is the push to keep expanding immigration further and faster, for the perceived short-term needs of the economy. The long-run validity of the Australian immigration policy, and ongoing public support or acceptance, depends crucially on keeping its role well-focused and well-protected.⁴⁸⁸

The settlement of new migrants into regional areas is seen by many as a priority for Australia in combating the regional depopulation, which can result from ageing populations, low natural population growth, and the migration of young people to cities.

To address the challenge of regional population stagnation and failing businesses, Australia introduced in 1995 the State Specific and Regional Migration (SSRM) visa scheme, which enhanced the role of state and regional authorities in Australia's immigration program. This scheme integrates international migration with regional development planning and strategies by enabling state and territorial governments and regional employers to influence the number and profile of skilled migrants settling in their areas, in line with regional demand for skills and development objectives.

A critical issue was how to retain regional migrants in those regional areas. The solution was provided by geographer Marion Powall and economist Glenn Withers,⁴⁸⁹ who suggested in 2003 a 'temporary to permanent' visa provision, which was promptly adopted by government in 2004. Regional migration grew from 8.5% in 2002–3 to 39% in 2013–14 as a share of total skilled migration.⁴⁹⁰

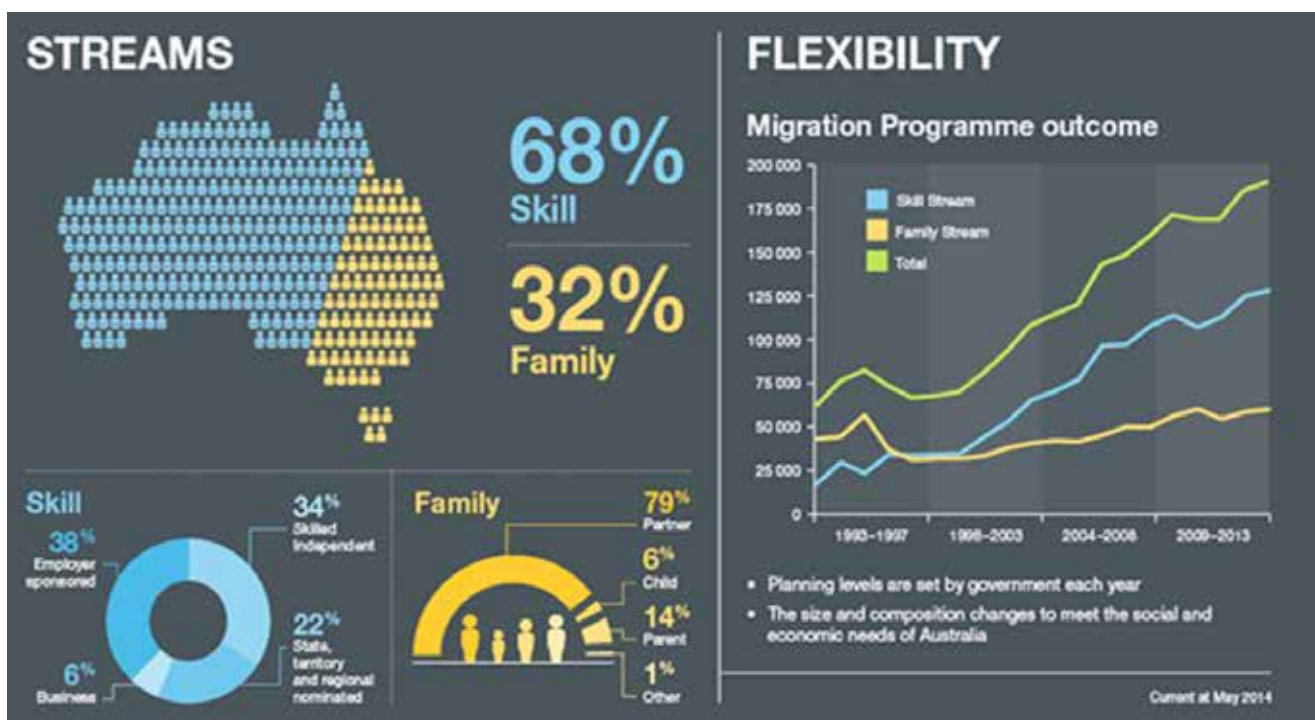
Points are awarded not only for willingness to live in non-metropolitan areas, but also for education. A first degree counts for a certain number of points, a Masters for a higher number and a PhD for even more. Recently, more attention has been paid to attracting international students to Australia, and then retaining them in the labour force after the completion of their qualifications.⁴⁹¹ International students are now allowed to work part-time while pursuing their education, and some dependent family members are eligible to apply for work permits.⁴⁹²

The inclusion of further points for Australian-awarded qualifications, announced effective July 1999 for permanent residency, made a major contribution to the development of the Australian international higher education sector, which has been one of the leading service export industries for some years, ranking just behind iron ore and coal in total exports.

According to social science researchers Andrew Markus, James Jupp and Peter McDonald, "Australia's immigration policy has facilitated the growth of the educational industry by offering the option of permanent settlement to those successfully completing courses in areas of high demand".⁴⁹³

Export value from international students rose from \$3.4 billion in 1998 to \$17.7 billion only a decade later, with student numbers increasing by over 13.9% annually on average over that decade. International students or former students also comprised

FIGURE 8: Migration trends 2014-15⁴⁹⁴



half of general skilled migration over this period.⁴⁹⁵

Research has identified many benefits stemming from Australia's immigration points system. For instance, by increasing the proportion of younger workers in the labour force through the points migration scheme, immigration can slow the impacts of population ageing (though it is not a complete panacea – immigrants age too), but the most significant quantifiable benefits are economic.⁴⁹⁶

Migration has been a significant driver for the Australian economy⁴⁹⁷, and according to a recent report by the Productivity Commission, migration is projected to continue delivering high economic output.⁴⁹⁸ Similarly, Independent Economics has estimated that a continuation of current trends and settings in migration, compared to zero net migration, would lead to a (real) GDP increase of 40% by 2050 and a per capita consumption gain of 12.2%.⁴⁹⁹



This is the economic benefit of Australia's immigration policies in stark terms. Australia's sustained prosperity over the last 25 years has also been supported by migration – including the flexibility offered by the mix of movement of permanent and temporary labour.⁵⁰⁰ Continuing migration helped Australia weather the various global and regional financial crises better than most countries.

Migration is generally well supported by the Australian community, which is unusual

among developed economies, and according to the OECD, it is partially explained by the best practice nature of Australia's immigration program.⁵⁰¹

“One of the absolutely clear and dominant findings of Australian research on immigration economics is that immigration creates as many jobs as it fills.”⁵⁰²

- Professor Glenn Withers

Research also shows that the skill level of migrant arrivals has tended to increase in the post-war period at a more rapid rate than that of the resident population. Social scientists will need to continually monitor migration trends and the skill of applicants, just as they must track the employment and adaptation of existing immigrants, and the wider standing of the domestic work-force, if we are to maintain our highly effective migration system.⁵⁰³

Social science research can help address the important challenges and complications of the current immigration system. One such challenge for Australia, as well as other Western host countries such as Canada and New Zealand, is the trend to increasing numbers of temporary migrants in recent times. Temporary foreign worker programs enable employers to hire foreigners on a short-term basis to fill immediate skills and labour shortages, when local citizens and permanent residents are not available to do the jobs.⁵⁰⁴

Australia's temporary migration program is uncapped and allowed to fluctuate with the level of demand for various component visas, including the working holiday visas and student visas. Currently, the rate of entry for

temporary migrants is 10 times greater than annual permanent entry and represents up to 25% of the labour market in certain age cohorts.⁵⁰⁵ The implications of temporary versus permanent migration, including the blurring of the distinction, remains open for deeper research.

While the temporary migrant program has brought in short-term economic benefits, it also poses some problems. For example, temporary worker programs tend to last longer and grow larger than intended, making them more likely to diverge from the strategic goals of the overarching immigration policy and national long-term policy requirements. Worryingly, international studies show unacceptable exploitation and inadequate enforcement of migrant worker rights in countries that have a high temporary migrant intake, including Australia.⁵⁰⁶

Withers warns that “opening up of guest-worker schemes for unskilled workers is to be assiduously avoided”.⁵⁰⁷ Increasing the temporary skilled migrant program could also have negative repercussions, he adds. A surfeit of temporary skilled labour can allow the government and employers to avoid the necessary investment for locals in the greater capitalisation of production systems and investment in skill upgrading for locals through education and training.⁵⁰⁸

International social science research shows an imbalance in the economic performance of post-World War II immigrants in Australia, New Zealand, Canada and the United States, compared to those native-born. Migrants may experience lower earnings, higher unemployment and be underutilised in terms of their professional skills.⁵⁰⁹ However, their labour market outcomes generally improve

as they gain experience, and adapt to the conditions and circumstances of life and work, including in Australia.⁵¹⁰

In some host nations, immigration policies have also sparked intense controversy and political debate, often fuelled by the fact that much immigration is now taking place from non-Western countries into the West.⁵¹¹ Although this has mostly been managed well in Australia, it can become a crucially important issue. For example, as Western nations become increasingly restrictive in selection of immigrants, larger numbers of people wanting to leave their countries of origin are likely to attempt unauthorised means of migrating. For the time being, Australia, Canada and New Zealand have been less exposed to unauthorised immigration than the United States and the European Union, but this may change if regular immigration becomes more restrictive. Additionally, regional conflicts and deteriorating economic conditions, especially in parts of Asia, Africa, and the Middle East, may drive more people to seek security elsewhere.⁵¹²

Even relatively small numbers of arrivals in such circumstances can give rise to major political concerns, as Australian experience well attests. Refugee policy therefore requires systematic development just as with family reunion and skill migration – and the temporary movements discussed above. The abolition of the Bureau of Immigration, Population and Multi-cultural Research in 1996 has meant that immigration guidance based on research has suffered for the loss of this informed analysis and has reduced public understanding. Such decisions are a sign of false economies by short-sighted governments, often for a passing political convenience.

POPULATION PLANNING FOR THE FUTURE

In light of predictable opportunities, challenges and constraints, what is the future of Australia's immigration policy? The immigration system of the future must be flexible enough to adapt to technological change and a burgeoning 'gig' economy, in which temporary or short-term contract positions are common. As technology disrupts the way in which we all engage in work, new job categories are appearing and evolving as quickly as old ones disappear, but current visa programs do not fully accommodate these rapidly changing work arrangements that are necessary to drive productivity and innovation.⁵¹³

The Productivity Commission shares this concern and recommends a refreshing of the selection system to focus again primarily on points, to remove various distortions and accretions that have evolved over time.⁵¹⁴ Government will need to call on social science assistance to effect the necessary revisions of the system.

Quick decision making in the immigration area, even when in the right direction, can have significant and adverse consequences when not considered thoroughly beforehand, particularly when lacking suitable consultation and good social science evidence.

The immigration policy of the future also needs to be a population policy, based on a preferred population path rather than solely on an arbitrary ceiling number. It should encompass structure as well as numbers. It should be considered by all Australian governments, not just the federal government, and in consultation and cooperation with the education, industry and community sectors. It is important that immigration is compatible with, and can help deliver on, ultimate judgements on an optimal population.

Thus, our immigration policies need to be continually monitored and reviewed and updated. Any changes will require a solid evidence base and the close collaboration of social scientists and policy makers. Any investment in immigration studies will be money well spent. As CEDA points out: "Fine tuning what is considered a world-leading immigration system will continue to deliver economic improvements for all Australians."⁵¹⁵ This is also the view of the OECD.⁵¹⁶

Social science research helped to develop and deliver this system and can ensure that our immigration policies respond to the future needs of the nation, through research and evidence-based policy advice to government and the public.

IMMIGRATION DATA

Since the mid-1990s, the Australian Government has invested in developing immigrant databases such as the Longitudinal Survey of Immigrants to Australia (LSIA). These have enabled policy-oriented research on economic and social outcomes of immigrants.⁵¹⁷ While immigration scholarship has blossomed with international initiatives such as the Metropolis project, as well as national data initiatives that support policy-oriented research, there remain important challenges.⁵¹⁸

Population policy is often politicised, and immigration issues tend to garner intense short-term media attention. In contrast, academic research operates on a longer time frame. The data demands are also high, especially for more disaggregated analysis of smaller regions or particular immigrant populations, and for longitudinal analysis. Long-term data sets, such as the census, are critical in providing this information.

Likewise, the lack of rigorous data can have catastrophic effects on policy development. In Canada, for example, the discontinuation of the census in 2011 has created problems for longitudinal analysis and raised concerns about the quality of data on which to base both broad policy research, and settlement and language program funding.⁵¹⁹

The analysis of long-term census data is critical for comparing labour market outcomes of immigrants, such as earnings, unemployment and occupational status,

to those of Australian-born citizens. Social science research based on such data could, for example, be used to further refine the immigration points system. How does the selection of potential immigrants through the points system affect the labour market outcomes?⁵²⁰ Are potential immigrants to Australia influenced more by factors internal to Australia (such as economic conditions) or external factors (for example, immigration policies of other countries)?⁵²¹ Such questions remain unanswered as yet and require further study.

SOCIAL SCIENCE AND NATIVE TITLE

One of the most important and politically contentious aspects of contemporary Australian law and social justice – native title claims – is underpinned by the sometimes overlooked social science discipline of anthropology. Anthropologists, as well as historians and linguists, are slowly but surely generating evidence that improves understanding of the injustices of the past, interpreting that evidence to suggest options to shape a more equitable future for Indigenous communities.

By investigating native title claims, social scientists are paving the way for a slew of other benefits that flow on from land rights. As early as the 1930s, advocates who sought citizenship rights for Aboriginal people understood that land was the key to providing Indigenous communities with the capacity to be self-sustaining and to make decisions about their lives for themselves.⁵²² This continues to be a guiding principle in contemporary native title discourses.

The development of Indigenous land rights in Australia has been slow and remains an ongoing project. There is no definitive starting point, but the 1938 'Day of Mourning', staged by the Aborigines Progressive Association on Australia Day in Sydney, resulted in a land settlement program based on that offered to returned soldiers.⁵²³

Another early milestone was the *Relics Act* of each state. Although these Acts covered only physical artifacts, such as rock paintings, and material culture such as stone, bone

and wooden tools, personal ornaments, etc., they were an acknowledgment of the inherent value of Indigenous cultures. These Acts also had the unintended consequence of requiring the application of anthropology outside of academia, as anthropologists needed to determine the validity of claims.⁵²⁴

Professor Larissa Behrendt and legal expert Nicole Watson point out that for many the contemporary land rights movement had its beginnings in the so-called Gurindji Strike. The Indigenous employees on a Northern Territory cattle station were excluded from the prevailing award wage, and in 1966 the Gurindji leader, Vincent Lingiari, demanded a wage of \$25 per week. When this was refused, the Gurindji declared an immediate strike. Although it was sparked by an industrial dispute, the primary goal of the strike was restoration of traditional lands.⁵²⁵

Throughout the middle of the 20th century, some land rights were afforded to Indigenous peoples. But these were not based on traditional ownership. Some Aboriginal reserves were given in trust to the Indigenous people living there, but the only test for eligibility was residency. Yet, most people living on such lands had been moved from elsewhere – they were not necessarily the traditional custodians of that land.⁵²⁶

When the Whitlam Government came into power with a policy of national Aboriginal land rights in 1972, it commissioned the Woodward Inquiry into Aboriginal land rights. The Inquiry resulted in the most progressive land rights legislation in

Australia's history, the *Aboriginal Land Rights (Northern Territory) Act 1976 (Cth)*.⁵²⁷

At the same time, state-based land rights regimes were emerging in South Australia and New South Wales. In conservative Queensland, Indigenous land rights legislation would not eventuate until two decades later.⁵²⁸ The 1992 *Mabo and Others v Queensland (No. 2)* case was a landmark High Court decision that cemented the legal foundations for native title claims.

The Mabo case overturned the doctrine of 'terra nullius' and recognised that a native title interest can survive the process of colonisation. This was an important psychological victory for Aboriginal people, and a recognition of Indigenous sovereignty. Behrendt argues that even though the High Court in the Mabo case refused to deal with the logical implications of recognising that sovereignty, it was an important symbolic victory.⁵²⁹

Developments in native title law provided a framework for resolving legitimacy of claims, and thus created a need for sound social science evidence. In particular, the definition of 'traditional Aboriginal owners' in the *Aboriginal Land Rights (Northern Territory) Act (Cth) (1976)* established a requirement for determining who did or did not fit these criteria. This definition, which rested on anthropological ideas and advice of the time, inevitably drew many anthropologists into researching and providing evidence in the many claims heard under this Act.⁵³⁰

Under native title, claimants need to establish that the traditional laws they acknowledge, and the traditional customs they observe and on which their rights in land and waters are based, are substantially

the same as those of their predecessors in the same area prior to the acquisition of British sovereignty. The chain of transmission of these traditions also must be shown to be substantially unbroken – traditions reconstituted in recent times are not sufficient to establish credible claim.⁵³¹ In native title cases, anthropologists and other social scientists provide some evidence regarding traditions and cultures of the claimants.

As the eminent anthropologist Professor Peter Sutton has shown, the development of native title case law has pushed the emphasis of social science research into greater historical depth of detail and into a greater focus on particular rights or traditional 'activities'.⁵³² Three disciplines in particular provide the evidentiary basis in Indigenous land rights claims: anthropology, linguistics, and history. There is also often a report on the archaeology of the relevant region that accompanies native title cases. Anthropologists working on native title cases record claimants' and other informants'



Aboriginal Tent Embassy. Source: National Museum of Democracy.

statements about how one may rightfully belong to a place, what rights flow from one's traditional connection to a place, and how one should behave according to customary rules, especially rules relating to the land. These oral statements are important, but are only one part of the evidence because they are subjective and may not fully reflect the behaviours or historical facts pertinent to the land rights claims. Sutton points out that a scholar who has good archival or other older historical records of the relevant ethnographic area can reach longer term conclusions spanning as much as a couple of centuries, well beyond living memory or even oral history.⁵³³ Indeed, anthropologists acting as expert witnesses in native title claims cases rely on combined informant oral and behavioural evidence, together with documentary evidence, in order to gradually form a systematic picture of topics such as customary ways of recognising rights in country and how they might have changed over time.⁵³⁴

Historians also provide evidence about how Indigenous communities have lived and changed over time. They are often engaged in native title cases to provide a social history of the region in which a claim is located. Typically, they recount a document-based history of colonial exploration, conquest and non-indigenous settlement, provide a sketch of the changes in the legislative contexts through which Indigenous people have lived and look at specific themes, such as the trend of race relations and the redistribution of power, or employment and economic patterns.⁵³⁵

Historians can also assist the courts in interpreting oral history according to documented chronologies. Sutton shows

that Aboriginal people in remote areas may sometimes have little or no skill in the use of calendar years when discussing the past, yet can often recall the names of people and past settlements. Knowing when these historical figures were on the scene enables the court to estimate the years when the events took place. Knowing the names and locations of the many, often ephemeral, non-Indigenous settlements of the past is also important to knowing if evidence about events occurring there falls within the geographical purview of the case or not.⁵³⁶

Lastly, linguists provide another aspect of the evidentiary base in native title claims. It has now become quite common for there to be a separate linguistic report alongside the main anthropological, archaeological and historical reports lodged on behalf of claimant groups prior to determinations of native title. Linguistic evidence has played a role in Australian Indigenous land claims for some decades. But in native title cases this type of evidence seems to be assuming a more prominent role than ever, and it may be destined to play an even greater part in the future. This is largely a consequence of the peculiar demands of native title law itself, especially its emphasis on evidence for continuity of native titles since the establishment of British sovereignty.⁵³⁷

A linguist can tell a court what relationship exists between, for example, fragmentary but localised colonial-era linguistic records and those language varieties that have been better recorded and mapped by linguists more recently. Even where the record contains no name for the variety represented in a colonial police sergeant's word list, for example, its degree of closeness to known and usually-named and locatable varieties can establish which one it is likely

to have been drawn from. Together with anthropologists, linguists can often provide expert evidence as to the nature of the relationship between language and country as understood by the native title applicant groups themselves.⁵³⁸

Nonetheless, the depth and breadth of evidence provided by social scientists is not without its shortcomings. Sutton argues that among some judges and arbiters of native title claims there remains a fundamental misunderstanding about what anthropologists can usefully contribute to the case. For a start, not all anthropologists are experts in native title, and not all experts in native title are anthropologists. Sutton also cites examples of cases decided on erroneous analysis of historical studies, but points out that the quality of anthropological evidence is of increasingly high quality.⁵³⁹

In recent years there has been a move by claimants to bring in a panel of anthropologists – not just a single expert witness at a time – in land rights claims cases.⁵⁴⁰ This allows judges and legal counsel to pose the same question to each panel member in turn and thus receive a more balanced perspective on the issue at hand than if experts are cross-examined individually.

The requirement for accuracy and neutrality can even be greater in a court of law than it is in academia. In academia getting something wrong, or cherry picking facts to suit an argument, is part of the operation of the marketplace of ideas, but providing anthropological evidence in a land rights claim case has serious consequences. It could make or break the claim. Moreover, all relevant evidence must be presented for the court to decide its applicability, and as such

it can be examined even more scrupulously than claims made in academic discourse.⁵⁴¹

A SHIFTING LANDSCAPE

Anthropologists interested in Indigenous Australia are increasingly applying their social science research skills to real-world rather than theoretical or abstract questions. Where once anthropologists spent months or even years conducting participant observation studies to build a body of knowledge about specific communities, they now focus on short-term projects. An anthropology graduate today is more likely to go straight to work in Indigenous organisations, such as the Northern Land Council, and apply their social research skills to consulting for government or private sector clients.⁵⁴²

At the same time, there is less need for anthropologists to conduct the type of research that once defined the field, such as documenting oral traditions of Indigenous societies. Many of those traditions have already been documented and it is those written or otherwise recorded documents that are themselves the object of study.

Furthermore, the way in which contemporary Aboriginal people construct and transmit knowledge about their world is also changing. Sutton shows that in previous generations an Indigenous person could describe and define their country according to the topography and flora and fauna. Now it may be defined and described according to man-made markers, such as roads or other infrastructure, and with names that are found on maps. Local and historical knowledge is no longer the exclusive provenance of those initiated into the oral tradition, but also exists independently, in

written and other sources. The benefit of codifying knowledge is that it may in time reduce scope for disputes, especially over land.⁵⁴³

While claims and counter-claims over land may be easier to resolve with the existence of documentation, the field of native title is not likely to shrink in the foreseeable future. Indeed, it is set to continue growing. It is already a sizeable industry and with numerous cases currently before the Federal Court it will be years before they are decided – and many years following that for appeals processes to be concluded.⁵⁴⁴ There will be a continued need for social scientists to provide evidence in these native title claims.

Evidence and advice from the social sciences will also be required as native title cases shift from claims for land and water rights to disputes over natural resources.⁵⁴⁵ Australia's mining boom has already illustrated how such cases may be addressed. The federal government is increasingly tying the sale of natural resource rights to the provision of basic services (for example, health and education) for the local community. Indigenous communities are thus pressured to sell their rights to the natural resources on their land but in return receive services that some social scientists argue they should be receiving anyway. As Behrendt and Watson point out, "sovereignty and self-determination in no way diminishes the government's responsibility to provide

basic health care and basic educational opportunities...that is why we pay tax".⁵⁴⁶

Indigenous land rights will continue to be an important and occasionally controversial area for the application of social science research and analysis. Addressing questions of native title will not only resolve land rights claims but also contribute to long-term justice for Indigenous Australians.

"Land justice is part of a multifaceted approach to ending Indigenous disadvantage. It needs to be a land justice that seeks to benefit Indigenous people rather than secure non-Indigenous interests. It needs to be accompanied by a commitment to ending the under-funding of Indigenous health, education, housing and community infrastructure. It is this holistic approach that offers the most promise for an improved future for Indigenous people".⁵⁴⁷

- Professor Larissa Behrendt

SUPPORTING WORKING PARENTS THROUGH EVIDENCE-LED POLICY

Prior to 2011, Australia was one of only two developed nations that did not have some form of nationally mandated paid maternity or parental leave scheme. Paid maternity leave was provided to less than 50% of working women in Australia; it was available in just half of medium-to-large organisations, and it was present in less than one-quarter of enterprise agreements.⁵⁴⁸

Evidence provided by social sciences researchers showed that the lack of a legislated provision for paid parental leave was a blight on the nation's endeavours toward gender equity and social fairness. It not only deprived Australian families of an opportunity to improve infant welfare, but also robbed businesses of their chance to improve female workforce attachment, retention, capacity and performance.⁵⁴⁹ In other words, the lack of a national paid parental leave scheme represented a missed opportunity to stimulate economic and social advance.⁵⁵⁰

Equally, Australia fell short on a number of international conventions including: the United Nations Convention on the Rights of the Child; the United Nations Convention on the Elimination of Discrimination Against Women; and the International Labour Convention (ILO) 183 on Maternity Protection.⁵⁵¹

The work of a number of social scientists in this area helped to build a body of research

on the outcomes of paid maternity, paternity and parental leave. This, in turn, informed evidence-based policy development. Australian social scientists have been researching options for how to better support working parents since at least the 1980s. Professor Meredith Edwards was one of the first to propose a Child Support Scheme administered through the existing tax system. This ultimately became a feature of the new Australian paid parental leave policy and was emulated elsewhere, such as in the UK.⁵⁵²

A further significant social research project was the 2005 Parental Leave in Australia Study conducted by Professors Gillian Whitehouse and Marian Baird and Dr Chris Diamond. These researchers collected new data and unique data on maternity/parental leave: who had access; who used the leave; duration of leave; the impact on the mother's employment and retention; impact on babies, and gender issues.

Their research showed that the average length of paid maternity leave in Australia was between 6 to 11 weeks, well below the international benchmarks of the ILO (which endorses 14 weeks) and the World Health Organization (which endorses 16 weeks). Not only did their research inform the public campaign, but they were also influential in the alliance of women's groups and union movements that supported the introduction of a paid parental leave scheme.⁵⁵³

A 2009 report by social scientists, Marian Baird, Jenni Whelan and Alison Page, researching policy options for reform found that a period of 16 to 26 weeks paid maternity leave best met the health and welfare needs of infants and mothers.⁵⁵⁴ They also noted that income support would be the most effective way of addressing equity issues, and additional leave up to 52 weeks would further enhance child health, behavioural outcomes and maternal wellbeing. A period of paid paternity leave was also found to be necessary to enable fathers to participate in child rearing.

In all, the Australian authors of the 2009 study found that a period of 52 weeks paid parental leave would be less disadvantageous on women's longer-term careers and income security, while still being manageable by employers. Evidence also showed that businesses not only adapt quickly to government policy on paid maternity leave, but can benefit from the introduction of such a scheme in attracting and retaining staff, as well as providing for enhanced employee satisfaction and commitment.

The Productivity Commission considered this and other research in their review of the social and economic benefits of introducing a paid parental leave scheme. The Commission subsequently proposed that the federal government should fund a total of 18 weeks of paid maternity leave for eligible mothers, with an additional two weeks of paid paternity leave reserved for a father (or same-sex partner). The government-funded entitlement would be set at a level equivalent to the adult minimum wage and would attract tax like any other form of income.⁵⁵⁵ In addition, the Productivity Commission proposed that employers

contribute further, to bring the paid maternity leave entitlement for Australian women closer to 26 weeks.

Commencing on 1 January 2011, the Labor government instituted a policy of 18 weeks of parental leave pay for eligible working parents who take time off from work to care for a newborn or recently adopted child. The scheme was augmented by the introduction of Dad and Partner Pay (DAPP) from 1 January 2013, which offered paid leave of two weeks to the father or same-sex partner.



Paid parental leave features. Source. Department of Social Services.

Social scientists conducted a thorough review of the impact of the Paid Parental Leave Scheme in 2014.⁵⁵⁶ This study showed that the initial scheme (without DAPP) reduced or wholly removed barriers to mothers taking the time off work they needed following a birth, and it provided families with income security during this period. This had important flow-on effects for the health and wellbeing of mothers and babies. In addition, it increased the likelihood that mothers would return to the job they held before the birth, increasing workforce participation and labour supply.

The introduction of DAPP allowed fathers to take additional leave immediately following a birth, and thus provided them with additional time to participate in child care. A further important effect of the new policy was that it had a modest influence on parents and employers to rethink the role of fathers following the birth of a child.⁵⁵⁷

It has been five years since social science research led to the introduction of Australia's current national paid parental leave scheme and there remain further areas for like research and improvement. For example, economist Professor Bruce Chapman has suggested that income-contingent loans could be made available to parents wishing to take leave beyond the current paid leave period. A scheme such as this would allow flexibility for some parents without increasing the burden on the taxpayer. The social sciences have contributed to the existing scheme and their research will continue to assist government to provide effective ways for parents to manage both work and family responsibilities in the future.



Paid parental leave. Source. Department of Social Services.

BUILDING THE FUTURE: URBAN PLANNING IN AUSTRALIA

Australian cities are consistently ranked among the world's most liveable. In 2013, 89% of the Australian population lived in cities (65% in capital cities) and 82% within 50 kilometres of the coast.⁵⁵⁸ How did this nation, founded on rural economies, come to build enticing urban communities and how does urban planning policy need to adapt to the challenges of the future?

Australian urban planning began in earnest following World War II and has developed as a discrete sector, thanks to the input of social scientists from various disciplines – economics, geography, demography, sociology and architecture. Together, researchers from these disciplines have commented on the form and helped shape our urban centres.

CREATING COMMUNITIES, DEFINING A DISCIPLINE

As early as the second-half of the 19th century, more investment was being directed to urban rather than rural areas, and the public sector became an increasingly significant player in this process. Yet, Australia continued to be seen as largely a rural nation. Indeed, it was not until the 1964 publication of *Investment in Australian Economic Development* by the economic historian, Professor Noel Butlin, that this perception changed.⁵⁵⁹

Part of this new identity was the vision of the Australian city – or, more specifically, the Australian suburb. By the 1870s, suburbs were the dominant feature of larger Australian cities and seen as a virtue, where the nuclear family enjoyed a detached home and space for leisure activities. Richer households could escape the noisome and polluted conditions of the city by moving beyond it. Suburbs were the solution to providing a cleaner and less crowded environment.⁵⁶⁰

By the 20th century, Australian cities were decidedly suburban in form and radial in structure. The majority of the population – both rich and poor – enjoyed a life in a suburb in which they had reasonable access to the wide variety of services, such as sufficient water, sewage systems and electricity, public transport, and proximate shopping.⁵⁶¹ These services, in turn, were guaranteed by the rapid promulgation of regulations designed to ensure, for example, adequate ventilation of dwellings, improved sunlight, appropriate living space, provision of potable water and basic sanitation. As Australian cities grew the need for a more controlled development emerged.⁵⁶² The articulation of standards for structural, fire safety and accommodation of housing, and the need to provide for separation of heavy industrial activities from residential areas, followed.⁵⁶³

Professor Patrick Troy, originally trained as a town planner and engineer and now one of Australia's eminent urban policy thinkers, showed that building better cities was a way of building a better Australia. His guiding principle was to build an efficient, healthy city rather than rely on serendipitous outcome of opportunistic investment or development decisions. It was recognised that there was benefit in planning and managing urban areas and this, in turn, created a demand for people who could advise on the appropriate standards for housing and the disposition of activities.⁵⁶⁴

BUILDING BETTER CITIES

From the 1950s, the federal government had increasing involvement in the planning of Australian cities, and state governments were required to introduce town planning policies in order to gain access to Commonwealth funds for urban and suburban infrastructure needs. City planning from the middle of the 20th century was characterised by low density housing with provision for recreation and open space, schools, commercial and industrial development. Concurrent investment in public transport networks was integral to form of development.⁵⁶⁵ This approach was a major turning point in Australian urban planning, exemplified by the establishment of the Department of Urban and Regional Development in 1972, which was the first national authority of its kind to assess the impacts of national policy on the places where most Australians lived.⁵⁶⁶

At first, town planners in Australia based their policies on the philosophy of 'physical determinism' – the idea that the built environment can determine the quality of people living and working in it. In time, the

changing nature and scale of economic activity and social control of development in a city began to reveal the limits of physical determinist precepts for its direction and control. The quality of housing and the range of facilities and services that urban populations demanded soon required more sophisticated approaches and planning.⁵⁶⁷

“Australian universities provided opportunities for research in geography, sociology, public administration, public health, engineering and the history of human settlement. The wealth of information and new understanding that flowed from the focus on urban matters was reflected in new policy and development initiatives.”⁵⁶⁸

- Emeritus Professor Patrick Troy

The 1990s saw another major period of reform and investment in Australian urban planning. In 1991, the Commonwealth Government launched the Building Better Cities Program. This was the first serious attempt to coordinate program development and delivery across the different levels of government. It dealt with improving social justice, fostering micro-economic and institutional reform, improving the environment, and demonstrating more effective coordination between governments.

Commonwealth funding contributed to improvements in urban areas, such as: redeveloping inner city precincts; constructing and refurbishing housing; building and upgrading roads; railways, transport interchanges and new light rail

systems. In addition, water management infrastructure, improved energy networks, and the developing of under-used government land contributed to rejuvenated city and suburban development. One of the major shifts facilitated by this new approach to urban planning was the reclaiming, rejuvenating and repurposing of defunct industrial land.⁵⁶⁹

In the 20 years since the Building Better Cities Program was completed, numerous studies have shown the positive effects of the initiative. Redevelopments in Newcastle and Brisbane, for example, are just two examples of how strategic public investment can be catalytic in attracting private sector investment and unlocking the economic potential of Australian cities. These projects have inspired two mid-scale cities to become centres of long-term economic activity and growth, with positive social consequences.⁵⁷⁰ The railway line from Brisbane to the Gold Coast, also funded under the program, has taken pressure off the freeway system and provided public transport access to schools, shops, and university campuses. The investments made under the Building Better Cities Program illustrate that relatively small investments, strategically made, can have long-term compounding economic outcomes.⁵⁷¹

THE FUTURE OF AUSTRALIAN CITIES

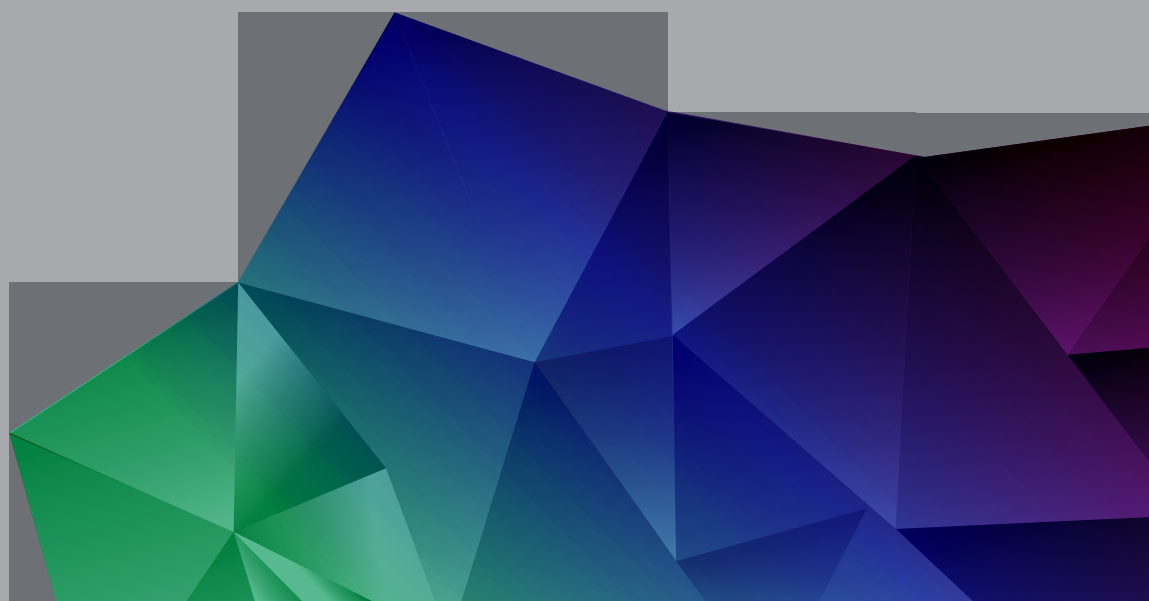
To ensure multidisciplinary approaches and social science research will continue to shape Australian cities, urban planning will need to be well integrated across major policy areas such as population planning, immigration policies, transport, resource allocation and economic planning, to provide for sustained growth and emerging challenges. As Troy points out, “cities may continue to grow and significant areas may be redeveloped, not necessarily to higher densities, but in a way that preserves the opportunity for communities to articulate and preserve their social objectives”. He adds that with the correct structure – one that accommodates and supports community growth, renewal, economic opportunity and long-term stability, the form of the city may change in many details but the liveability of our cities will be assured.⁵⁷²

Governments don't always accept the advice of social scientists, even when there is near unanimity in that advice. Negative gearing has fostered house price inflation but successive federal governments have retained that tax loophole, despite professing a concern about the financial difficulties faced by first home purchasers.⁵⁷³



Photo by @fanjianhua.

CONCLUSION





CONCLUSION

The final chapter in this volume is *Building the Future: Urban Planning in Australia*. This is an appropriate way to end for now, and to start over for the future. That Australians now live overwhelmingly in cities and continue to flock to them from many regional locations is a matter of national concern. The migration to urban centres may continue, or it may not. How are we to know? On balance, would it be a good thing for cities to grow unfettered as they might? Or not? How can essential agricultural industries thrive under this exodus? Should government have a hand in encouraging people to remain in, or return to, regional towns or rural lives? How could that happen in a fair and agreeable way where incentives could attract the young and energetic? How will we know?

These are all important questions to consider, but let's ask seriously who could help us to know? Many will assist, such as officials, business, community, media and more. But social scientists, like those featured in this volume, along with their colleagues, collaborators and students, can lend research, analysis and expertise to help answer most, if not all, of these questions, and help in other new ways to deliver on the answers.

It is not just regional planning issues that require social science insight. So too does tackling the challenge of adapting to climate-change, planning ahead for the skills and population needs of the future, ensuring that the

health care and retirement income schemes can withstand Australia's changing demographics, preparing students and graduates to prosper in a global marketplace, fostering innovative research, and much more.

It is sometimes recognised, as it must be, that innovation is really as much about new ways of doing things as it is about making new things. Social scientists have embraced this newer, wider world of innovation, along with its accompaniments of invention, entrepreneurship, leadership, and management, alongside too the actual conduct of the work of production at all levels.

They have skilled-up to emerging massive data sets, they will jump out of their silos to collaborate beyond social science disciplines with researchers and practitioners across sectors and with fields of endeavour that may not yet even have names. More will move between academe and public service, or to professions, industry or community sectors, and perhaps back again. They will be flexible, and they will need co-operation if this new greater flexibility is to work well for all.

The success of The Knowledge Nation⁵⁷⁴ that we aspire to become will rely on the creation, assumption and consumption of knowledge and data. Those data come at costs, as do the people who decide exactly what data to collect, how to manage and store it, and then how to

distribute it to persons and institutions that can, through thoughtful analyses, help us to understand how to use what we have learned. That depends on the health of the education sector, top to bottom, and the public institutions charged with, and funded for, the collection of data and the knowledge those data can impart.

Thanks to technology, the quantum of data being collected and archived is expanding at astonishing rates, with more to come. Who will address those data, and for what purposes? Who will protect and secure it? What classes of data should be available to all, or to some, or to none? What roles for the social scientists in the New World of Knowledge? What next for the social sciences?

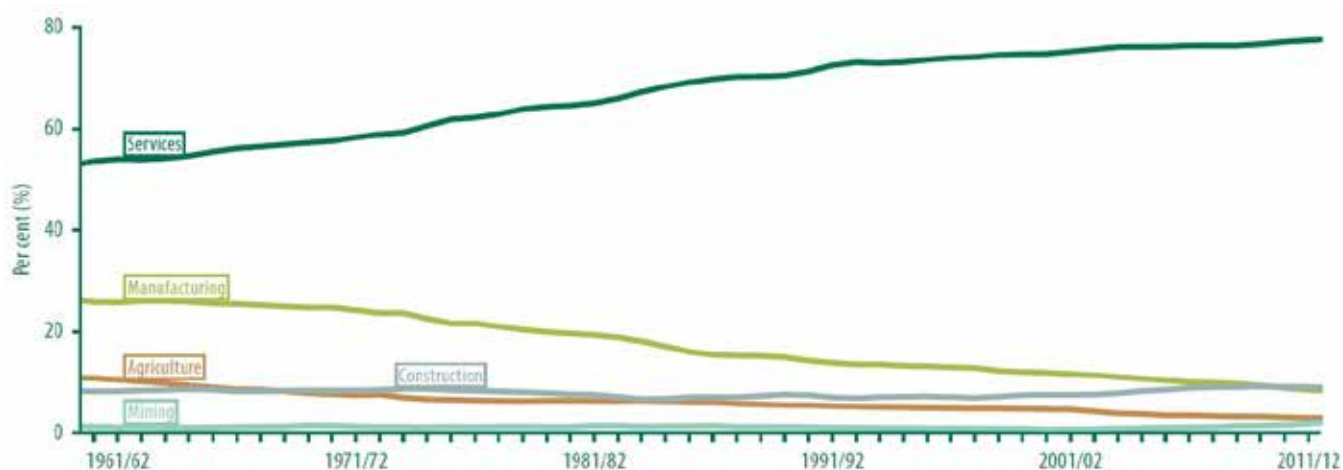
Importantly, perhaps crucially, social scientists will continue to monitor trends in what we do and where we stand among nations. In 2013, the OECD ranked Australia #1 in its Better Life Index. Would we not want to know why that is and what it would mean if

that ranking slipped? Comforted as we seem to be by our some-time reliance on mining and the export earnings and the jobs that this industry provided, should we not understand that the services sector out-performs the mining, manufacturing, agriculture and construction industries (combined!) in the provision of employment? See Figure 9.

Services are, distinctively, direct activities person to person. Matters of the natural and physical world matter less here than does understanding of people, their behaviour and their society. It is the social sciences that most recognise this and can examine it.

Australia has a comparative advantage in the social sciences. With Australia a stable, peaceful, prosperous democracy, the social sciences have been able to develop through the pursuit of such knowledge in a skilled, balanced and open way. It is no accident that despite relatively small research funding, Australian university social science

FIGURE 9: Employment in Australia by industry, 1961–62 to 2011–12⁵⁷⁵



rankings are higher than for many other disciplines. This is in spite of a bias to Australian analysis and data that is less likely to lead to global publication.

This strength must be enhanced and its contribution, both Australian and beyond, exploited even more. This will include the basic ideas and speculations and interrogations that feed more practical engagement and impact. Again, it is no accident that thinkers such as Germaine Greer, Peter Singer, Dennis Altman, and Max Corden were of global standing in underpinning amazing progress in social and economic understanding.

Increasingly there are barriers to the contributions that can be made. The expansion of Australian universities, for instance, has created opportunities for more people to become social scientists. The bad news is that teaching loads have risen as has administration, research has very low grant funding “success” rates, more and more appointments are insecure fixed term and casual, and incentives are for publishing overseas or for becoming managers.

These adverse conditions can be redressed by exercise of political will. Australia’s public funding share of universities is one of the lowest shares of national income in the OECD. Notwithstanding, the great likelihood is

that wherever they choose to exercise their skills, social scientists will carry with them an ethos that is not so much bought as learned and even hard-wired. They will be committed to expertise, independence and open-ness, which are under some threat in modern times, especially with the decline of traditional media and the rise of paid advocacy in interest groups, consultancies and even think-tanks.

Protection of this commitment requires eternal vigilance, not least within universities themselves as they seek to juggle the markets, managers and mandarins that beset them. The Learned Academies have a significant role in assisting this process, so as to provide part of a system of checks and balances and encouragement in the pursuit of veritas.

More generally and allowing for the usual vagaries of human frailty, our social scientists are very cognisant of serving principles that a society should expect of itself. They will continue to infuse whatever functions they serve with unshakeable commitments to fairness, equity, community and the ethical principles that a society must expect of itself. That is what is next for the social sciences.

**THEY WILL CONTINUE TO SHAPE
THE NATION.**





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