



Australian  
National  
University

ANU COLLEGE  
OF BUSINESS  
AND ECONOMICS

research  
themes





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## Dean's Welcome

The Australian National University (ANU) has a distinctive mission to address the major challenges of our age. For the ANU College of Business and Economics, this mission means that our research agenda is focused on issues that are highly significant for organisations, the Australian economy, and society at large, as well as on the ongoing pursuit of excellence in foundation research.

This booklet describes our research agenda, with a short description of each of its components:

### *Foundations*

Providing a deep intellectual environment for the advancement of knowledge.

### *Strong Organisations*

Lifting Australia's productivity and economic growth through outstanding organisational leadership and management.

### *Transformative Innovation*

Capturing value for Australia from the profound global changes stimulated by new technology, particularly digital technology.

### *Wealth and Well-being*

Enhancing individual, societal and national wealth and well-being in the face of economic, demographic and environmental change.

Our College is actively engaged in partnering with industry for the co-creation of value in areas congruent with our research agenda. Further support for our research agenda is offered by our community of alumni. Our foundation research demonstrates the high international standing of our academic staff. Our impact cases show how we produce research that is both academically excellent and significant for industry partners.

If you are interested in exploring how researchers in the ANU College of Business and Economics may partner with your organisation, please make contact with our Business Development Office to begin the conversation.

Best wishes

Professor Shirley Leitch  
**Dean, College of  
Business and Economics**

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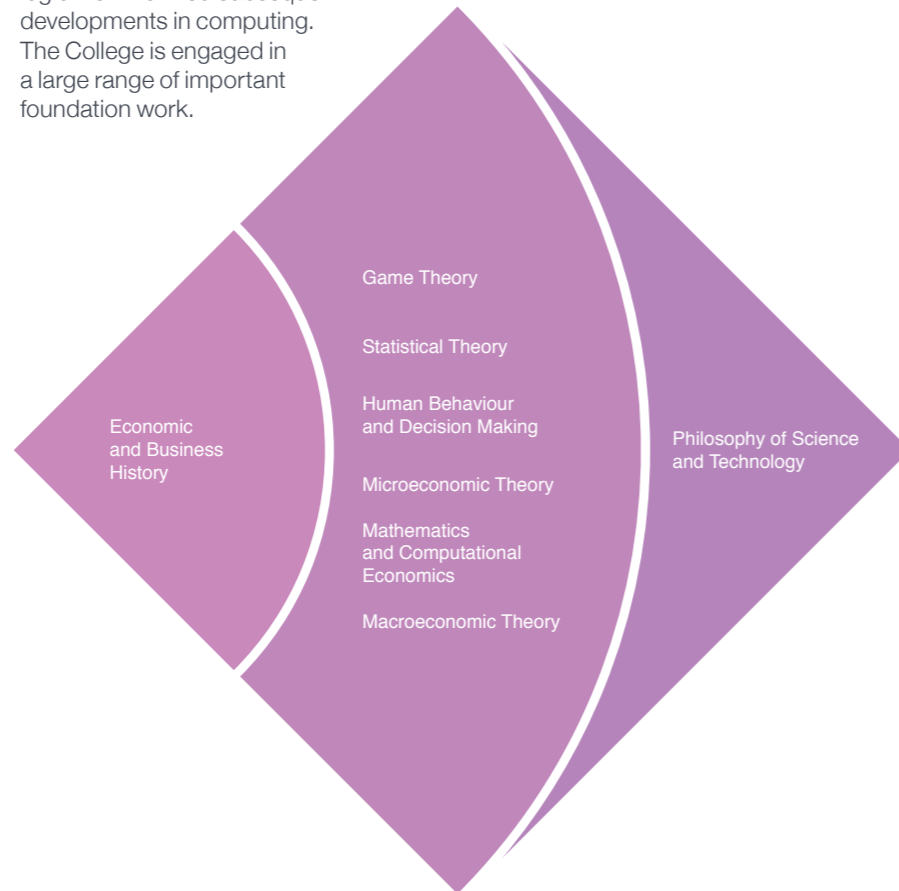
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## Foundations

**Foundations** are defined as the basis upon which everything else sits—the building blocks of further growth and development. At the College of Business and Economics, we recognise the importance of having an environment in which foundation research, including research that may lead to future unanticipated advances, is undertaken. This environment is like the ‘air that we breathe’ and emphasises a true appreciation of scholarly values and scientific discovery that provides both the context for other work and its conceptualisation.

The challenges in foundation research are likely to be intellectual. A famous example is the work done by the mathematician Alan Turing to answer problems in mathematical logic that informed subsequent developments in computing. The College is engaged in a large range of important foundation work.



**Economic and Business History** is the lens through which we can better understand current economic policy and change and business opportunities and development. In order to forecast economic growth and business expansion, a sound understanding of the past is essential. It contributes to both current decision making and preparation for our future.

The University’s rich scholarly tradition of studying Australia’s economic and business history has provided direction to our understanding of the development and current structures of the country’s economy and its business sector. Much of the existing research strength in economic and business history in the College sit within the **ANU Centre for Economic History**, the only centre of its kind in Australia.

Foundation theoretical research at the College includes **Macroeconomic Theory** which underpins all applied macroeconomics and is critical in understanding aggregate economics and pathways for policy consequences. A number of College staff make significant contributions to this area which includes the study of money, capital, social security, and growth. **Microeconomic Theory** typically focusses on analysis at the level of individual economic agents, from consumers to policy-makers, producers and agents within firms; this too, is an area of significant research strength within the College.

**Game Theory** research involves the mathematical modelling of cooperation and conflict between intelligent rational decision makers, where the choices of the decision makers (players) generate outcomes that affect the payoffs for all players, and, crucially, the players are aware of this mutual interdependence. The College has broad and deep expertise in the study of game theory, both in its pure theory and in its extensive applications.



## Alfred P. Sloan Foundation Funding

**Professor John Stachurski of the Research School of Economics has been awarded a substantial research grant from the New York based Alfred P. Sloan Foundation to undertake an ambitious project to significantly enhance computational skills and tools in the economics profession.**

The project, in partnership with Nobel Laureate Tom Sargent of New York University, seeks to raise the level of computational skills within the economics profession which currently lags behind that in the physical and life sciences.

The project will pursue a number of findings including online lectures on a number of economic applications, writing a closely integrated code library, creating supplementary material for publication, developing computational toolkits to aid adoption, and promoting the initiative through seminars and presentations at conferences.



**Statistical Theory** is well represented within the College, particularly in probability and statistics ranging from fundamental work in theoretical foundations to a wide variety of applications in areas including actuarial studies, accounting, management, finance, economics and business, and social and physical sciences. Statistical theory has been applied by our academics within fields as diverse as climate and geological data, epidemiology and medical research, and sample surveys. The College also has strong research capabilities in the field of **Econometrics** (the quantitative analysis of economics phenomena) with a productive synergy between econometrics and statistics both in research and application. College researchers contribute substantially in both fields.

**Mathematical Economics** uses mathematics as a medium of analysis enabling clarity of assumptions and rigorous deduction, and covers all areas of economic analysis. **Computational Economics** uses computer-based modelling methods to address economic questions. Our research contributes to the analytical and statistical construction involved and the application of such modelling.

College research in the area of **Philosophy of Science and Technology** looks at the methods and philosophical underpinnings of scientific enquiry, including the practical sciences, to which many fields in business and economics belong. In order to gain an in-depth understanding of human behaviour in economic and business-related research, knowledge and understanding of **Human Behaviour and Decision Making**, including cognition and instinctive, rational, and emotional responses, are vital.

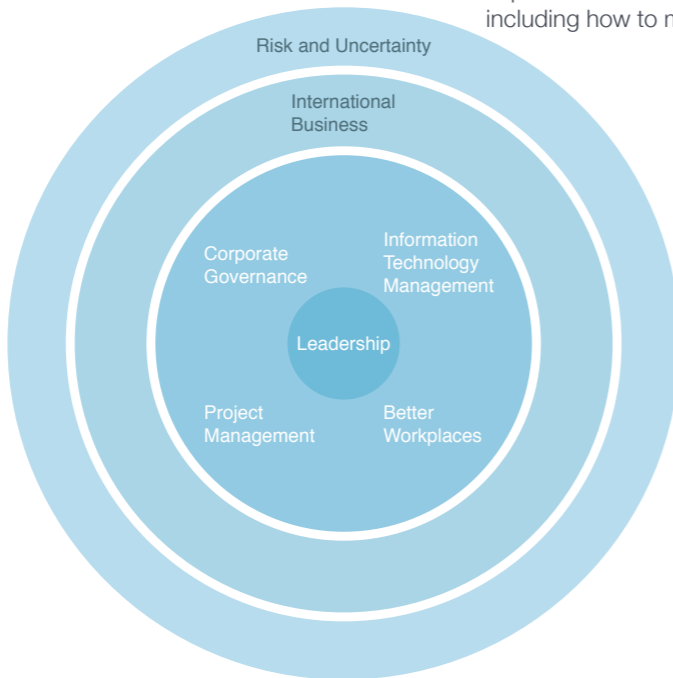
### CASE STUDY:

#### Foundations at Work

The College has been running an executive education program with the Federal Department of Treasury to provide postgraduate training to graduate staff who have degrees in fields other than economics. This program specifically covers economic concepts with minimal recourse to mathematics, and includes microeconomic principles, markets and business cycles, labour economics, tax and monetary policy, and health and welfare. The course broadens the graduate staff officers' career options and allows them to contribute to public policy related to their roles. A number of academics from the College have been leveraging their expertise to teach this course since 2008.

## Strong Organisations

Strong organisations lift Australia's productivity and economic growth—both priority research goals for Australia. Enhanced management capabilities can boost productivity and create value at both the enterprise and macroeconomic levels. Improvements in workplace organisation, governance, strategy formation, communication, culture, technology management, external relationships, and leadership can all affect productivity at the organisational level.



Research in the ANU College of Business and Economics contributes to this important theme in a number of ways.

Strong organisations are at the cutting edge of **Leadership** and leadership development, and our research shows that strong organisations need ethically sound, informed and effective leadership to create and sustain high performance. Good leadership plays a key role in engaging employees and providing the energy and impetus to encourage good performance and foster creativity.

Our expertise includes building outstanding leadership that engages groups of leaders to build a stronger, more positive culture and in turn enhance the bottom-line. This work covers the development of individual leaders to understand their role as part of a larger more collaborative leadership collective that has an opportunity to make a difference, and equally, a responsibility to society. However, the dark side of human behaviour can generate the display of destructive leadership, which is another aspect that our researchers study, including how to minimise its impact.

Research into **Better Workplaces** shows that they have healthier, productive and more fulfilling work environments. Our research on productive behaviour shows how the employee's 'voice', customer service and ethical choices can be promoted in the workplace. The communication of ideas, suggestions and opinions improves innovation, decision-making, and organisational performance. Employee well-being is a major research area that encompasses supervisory skills and the management of stress in the workplace. Similarly, inclusivity in the work environment assists employees' fit with the job and organisation, and their identity and productivity in multi-lingual workplaces, and supports how the employees' values and goals can best be met and managed.

Effective **Corporate and Public Sector Governance** directs resources and supports internal and external factors enabling value creation. Our multi-disciplinary governance research has important implications for effective governance in Australia and other countries. The College hosts the **Australian National Centre for Audit and Assurance Research (ANCAAR)**, which fosters, develops and disseminates research of significance to policy makers, practitioners and users. It encompasses regulation, accountability, disclosure, auditing, board composition and executive management, and mergers and acquisitions.

### CASE STUDY

#### The GFC and Auditing

The American Accounting Association formed an international committee of experts on auditor reporting, chaired by Professor Neil Fargher, to provide a synthesis of academic research for the United States Public Company Accounting Oversight Board (PCAOB) on audit reporting issues arising from the Global Financial Crisis. The project included discussions with, and a report to, representatives of the PCAOB. The report was cited by the Deputy Chief Accountant, Office of the Chief Accountant of the U.S. Securities and Exchange Commission, in a speech on the importance of the academic community and their work to audit policy and regulation.

Strong organisations must have effective **Information Technology Management** in order to meet strategic goals. Our research encompasses Enterprise Architecture Frameworks, effective management of IT resources, e-Commerce including innovative web design and enhanced human-computer interaction, and systems security and privacy.

### CASE STUDY

#### Electronic Commerce and Agribusiness

In recognition of her work in technology management, Professor Shirley Gregor, Director of the **National Centre for Information Systems Research (NCISR)**, was made an Officer of the Order of Australia for services as an educator and researcher in the field of information systems and in the development of applications for electronic commerce in the agribusiness sector.



## People at Work

**Professor Prashant Bordia is a chief investigator on the People at Work Project that aims to assist Australian employers to identify and manage psychosocial hazards in the workplace. The project follows a five step risk management process: preparing, assessing, consulting, action, and review and improve.**

Through the use of a risk assessment survey tool, this project will assist in creating a national database documenting hazards and worker outcomes across sectors, industries and occupations.

The project is a collaboration between The Australian National University, the Queensland University of Technology, Workplace Health and Safety Queensland, WorkCover NSW, WorkSafe Victoria, Comcare, Safe Work Australia, and *beyondblue*.



The successful implementation of projects requires strong **Project Management** capability to ensure enhanced efficiency and continuous growth. Our research strengths in this area include evaluation and improvement of the quality of project planning—a key and critical factor in the success of any project, and effective and enhanced professional-client interaction. Selecting which projects to invest in, and good leadership of the project is crucial to success and may enhance or impede team performance.

The study of organisations and their interaction in **International Business** is a research sub-theme of the College. We look at how strong organisations seek opportunities and operate across borders, and form policy frameworks that maximise opportunities and set conditions under which business takes place. We investigate how organisations internationalise their operations and how they operate in new markets.

Strong organisations must identify, understand and manage **Risk and Uncertainty** in order to limit any downside impacts as well as ensure their ability to enhance and leverage any positive events and opportunities. College research in this area shows how participants react to risk and uncertainty, as well as developing models to explain their behaviour. Our research

includes identifying and managing risk in government, society, institutions, and companies—the impact of political and social uncertainty on corporate failure, market returns, and accounting choices. We also look at how individuals make decisions with limited information, understanding and cognisance of risk, particularly in a financial context.

### CASE STUDY:

#### The International Business Plan Competition

The College strongly supports the ANU International Business Plan Competition, which was established in 2010. The competition runs as part of a semester-long course where students take on the role of professional consultants and provide analysis for expansion of their product and service offerings to new international markets. After the Competition is completed, many students are offered internship opportunities with their designated clients. This initiative is organised and coordinated by Dr Vinh Lu from the Research School of Management, and sponsored by Invest Canberra (ACT Government). It provides a great opportunity for business owners and operators to engage with enthusiastic students. Among the businesses involved are previous winners of the ACT Chief Minister's Export Awards.

*"PRD Software worked with 4 groups of students over the course of a few months and discussed at length all sorts of business ideas, marketing ideas and the history of the helpdesk and service management software industry. It was a great exchange of ideas, slogans, marketing blunders and energy. We met at the PRD Software office, we met at the ANU, we met at the pub.*

*Congratulations to all the students and especially to Dr Vinh Lu, and his team who organized the course and provided energy and enthusiasm that the all students couldn't help but reciprocate. PRD Software was extremely impressed with the quality of the students, their research, public speaking abilities and the comprehensive marketing plans that were delivered. Great to see the Australian National University engages in such a practical and valuable service to both their students, and the local community of small business. The future of export, business and commerce in this country is looking very bright indeed. Well done ANU."*

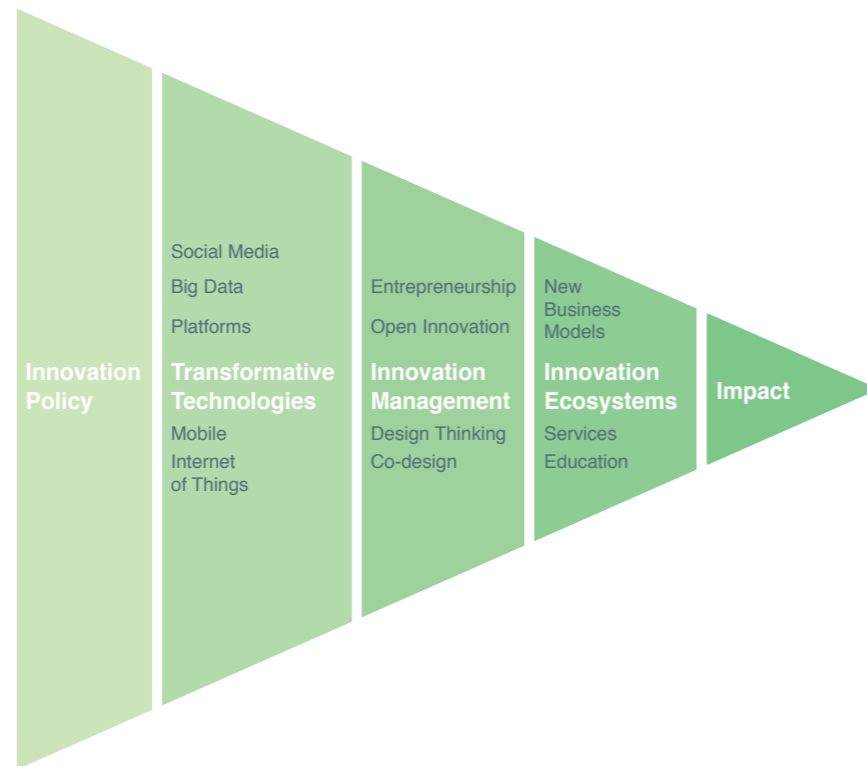
Mr Rod Weir  
**Managing Director  
PRD HelpMaster**

## Transformative Innovation

Australia has transitioned from producing and manufacturing its own goods to importing them. With a decline in local production and shrinkage in the resources sector, the Australian economy is now at a critical crossroads for its long-term growth and prosperity for many decades to come. The Australian economy needs to build new foundations of competitive advantage to maintain the well-being and standard of living of Australians. The development and implementation of new processes, products and technologies is the key to building such foundations.

Research in the College contributes to transformative innovation through system-level innovation—based on a combination of radical and incremental innovations— together with organisational and managerial innovation.

Advances in information and communication technologies can lead to sustained growth, with digital innovation based on web technology, social media, mobile technology, cloud computing, and embedded devices and data analytics.



Transformative innovation requires policies that foster national and regional innovation, as well as innovation in industries, firms and non-profit organisations. College research in **Innovation Policy** is based on a sound understanding of the innovation process and of national and regional innovation systems.

Innovation is largely made possible through technologies that provide a platform for subsequent advances.

**Transformative Technologies** include Information and Communications Technology, next generation genomics and renewable energy solutions. Advanced analytical techniques are required to deal with **Big Data**—the explosion of available information collected and stored, and the massive amounts of data continuously being produced. The Big Data movement will bring new levels of scientific discovery and economic value in areas such as genomics, environmental monitoring, high finance, and marketing and advertising.

**Social Media**—including Facebook, Instagram, LinkedIn, Twitter, and other social sites—has become an important medium of organisational and political communication with over a million active users on Australia’s 12 social media sites. Organisations can use the large volumes of data from social media together with data analytics for purposes including targeted marketing.

The increased range and reach of IT-based innovations is enabled by underlying standards and **Platforms** that allow a large number of people and systems to interact.

### CASE STUDY

#### Student Industry Research Projects

The College runs applied research projects involving high performing Masters students. Under supervision of at least one academic, the students work closely with a sponsoring organisation on an agreed topic, and at the completion of the project, deliver a report with recommendations for management. This model was initially trialled for Information Systems projects, but will be expanded to a wider range of management topics from 2016. Organisations such as EY, Arup, Deloitte and the Canberra Innovation Network have been involved with the program.

*“EY has now hosted student projects from the ANU College of Business and Economics over 6 semesters and values the collaboration. Working with the students on their Information Systems projects provided us with valuable insights into how we use certain technologies and challenged us to think strategically about how we better harness the latter.”*

Prof Stephanie Fahey  
**Oceania Lead Partner for Education,  
EY**



## ANU and the World Wide Web

**The ANU is set to play a major role in the future development of the Web after being chosen as the new host of the World Wide Web Consortium (W3C) Australia Office.**

Jointly hosted by the ANU College of Business and Economics and the ANU College of Engineering and Computer Science (CECS), the W3C Australia Office is helping define international standards and shape the future of the Web, and provides college staff and researchers with the opportunity to work with leading companies in the web space including Google, Microsoft and Apple. The ANU is helping W3C serve the needs of communities in technology, research, business, industry and government, while staying at the forefront of the latest developments and ideas in Web technology.



### CASE STUDY

#### eGovernment in Bangladesh

Innovation in the use of information and communication technologies (ICT) in government is important for many reasons, and especially so in developing countries, where the use of ICT can encourage transparency as well as improving operational efficiency and contributing to societal benefits. A team based in CBE received two successive grants from AusAID to improve innovation in the public sector with ICT in Bangladesh, based on the PhD research of Dr Ahmed Imran. The projects undertaken developed a strategic pathway for e-government adoption in Bangladesh and a custom-built training program on ICT management. This training program was accompanied by a textbook *Management of eGovernment in Developing Countries*, authored by Dr Ahmed Imran, Professor Shirley Gregor and Dr Tim Turner. The training program

became part of the curriculum at the Bangladesh Public Administration Training Centre in Dhaka, where all public sector officers receive their initial training. The projects coincided with the Bangladesh Government's vision to enable a Digital Bangladesh. The research team was awarded the ANU Vice Chancellor's Award for Community Outreach in 2010.

Dr Amin Haller (CBE) is the manager of W3C Australia Office, and through his involvement in the W3C is assisting our researchers to expand their current areas of interest including Web payments, digital publishing, linked open data and Web security.

Dr Haller has worked on The Australian Government Interactive Functions Thesaurus (AGIFT), a three-level hierarchical thesaurus maintained by the National Archives that describes the business functions carried out across the Commonwealth, state and local governments in Australia. Dr Haller is also the Chair of the Australian Government Linked Data Working Group. Using linked data formats will allow the government to better share information across departments, and help break down silos.

The Office is working with technology and policy leaders to further develop and promote the implementation of W3C standards in Australia.

## Geoscience Australia Project— Water Observations from Space

**In cooperation with Geoscience Australia and the ANU National Computational Infrastructure, Dr Dale Roberts assisted in the building of a ‘data cube’ that uses decades of satellite imagery to show the history of surface water across Australia since 1987.**

As part of the National Flood Risk Information Project, this data provides a national picture of surface water to enable researchers and scientists to better understand how Australian infrastructure and environmental assets may be at risk from flooding. Through this ground-breaking satellite mapping, Geoscience Australia is able to provide consistent information on flood management and safety, wetland management, agricultural innovation, and infrastructure development.

The Geoscience Australia Project was recognised in the Resilient Australia Awards. Its reporting imagery places Australia at the forefront of disaster resilience.



**Innovative Ecosystems** refer to the shift from innovation in a single organisation, to one or more innovations across organisations, and individuals acting in an ecosystem. Innovation is multi-level and requires drivers at multiple levels of the organisation. Innovation techniques such as **Open Innovation** and **Design Thinking** show firms how to cope with the rapid growth and change in the digital world.

**Business Model Innovation** is useful for both newly formed and established organisations. A newly formed organisation can quickly create, adopt, and implement a new business model, while established organisations will need to reconfigure their model to overcome challenges from new competitors.

Emerging technology offers a unique opportunity for revolutionising the **Education** sector. The College’s Teaching and Learning sector works together with College researchers to explore opportunities for transformative innovation in education design and delivery including mobile and game-based learning, and Open Online Courses.

### CASE STUDY:

#### **Organisational Innovation Projects**

Small teams of postgraduate management students foster organisational innovation through applied management and strategy projects. Under the leadership of Dr Chris Nailer, the teams undertake systemic analyses of the drivers and constraints of growth for innovative local companies. The teams research new opportunities and recommend strategies for future growth. Companies that have been involved include GHD, Air Services Australia, Windlab, Seeing Machines, Rio Tinto Energy, Shaw Vineyards, The Academy of Interactive Entertainment and Australian Scientific Instruments.

*“During the analysis phase of the report, the team had access to information, data, and business development models that are not readily accessible in our day to day business or in ongoing business development cycles. The ANU team were able to readily conduct research, make contact with, and interview a number of Diplomatic and Government stakeholders to consider a range of connected issues. I was particularly impressed with the lateral thinking and the analysis that followed the application of the business modelling.”*

Kevin Earle

**Market Leader,  
Property & Buildings, GHD  
(PNG Infrastructure Study)**



# Wealth and Well-being

The research theme of wealth and well-being encompasses issues that influence communities, societies and economies and the maintenance of a high quality of life in the face of economic, demographic, and environmental change. Significant research undertaken in the College looks at productivity, economic growth and well-being, and policy issues including demographic change, climate change and sustainability, globalisation and regional engagement, and financial market policy.

Societal well-being is central to this research theme, and it reaches across, and is influenced by, the other three themes through the development of strong organisations, and the advancement of knowledge through foundation research and transformative and technical innovation.

A key issue for all countries in achieving high and sustainable economic growth is the enhancement of **Economic Growth and Social Well-being**. College staff are engaged in research that will steer Australia on a path of productivity growth, financial sustainability and citizen well-being. The College is also involved in advising Federal and State governments in diverse policy areas including higher education policy design and reform.



Few developments have changed the face of Australia more than the rise in the average age of its citizens. This **Demographic Change** raises questions of fiscal sustainability, and affects both taxation and expenditure policies. Academics within the College actively contribute to research studies covering demographic forecasting, superannuation and retirement policy and regulation, health financing systems, retiree financial literacy and needs, and policy design for an aging workforce.

**Climate Change** is predicted to have an adverse economic impact on Australian society, and there is a strong need for innovative design and review of economic policy, to address the issue. College research includes the development of statistical methods to improve the understanding of relationships between environmental factors and health, modern techniques for forecasting emissions, and the financial evaluation of emissions trading schemes.

**Globalisation** brings an increase in tourism which needs to be managed appropriately. College expertise in understanding the role and impact of tourism on an economy includes research on the creation of tourism space, the role of religious and cultural artefacts and their influence on the tourism experience, destination marketing, and the influence of social media.

The growth and stability of the domestic and global economies relies on efficient markets and robust, transparent and effective regulatory systems. Researchers in CBE are involved in the debate and development of theory of securities market regulation, superannuation and banking regulation, including capital adequacy and solvency, the regulation of financial advice, and the current and future role in the economy of electronic currencies

With the unprecedented economic growth of China and other parts of East and South East Asia, Australia's **Regional Engagement** is more critical than ever. China will provide both opportunities and challenges, with potential for growth and future development of Australia's financial markets. College staff are involved in research on trade flows and Australia's links with the world economy and economic activity in our neighbours and trading partners.

**CASE STUDY:**

**Foreign Aid and Developing Countries**

Dr Anna von Reibnitz conducted a study for the Department of Foreign Affairs and Trade (DFAT) to examine, the size and impact of **Foreign Aid** and direct investment on developing countries which were grouped by national income and region. The study provided formal input to a re-examination of the Government's approach to development cooperation and finance, with the aim of ensuring that its future strategy addresses contemporary challenges and structures.

**Refugee Employment**

Professor Giles Hirst is currently running successful programs to help refugees build confidence in seeking and gaining employment as well as enriching their advancement in the community. This work has been conducted in Victoria with very strong results and now Giles is working to implement similar approaches in the ACT and other potential sites. The aims of this ARC funded research project are to understand the challenges refugees face finding work and build confidence within refugee communities to successfully gain meaningful employment. Ultimately the project seeks to empower individuals to realise their strengths, find employment and forge a place for themselves in society.

## RMB Project —China's Financial Development

**Led by Associate Professor Kathy Walsh, this project examines the imbalance in China's economic development and financial market development, and how this is mirrored in Australia's trade and financial links with China, our largest trading partner in the export market.**

The project conducted an in-depth analysis of China's financial landscape and concluded that although Australia could benefit substantially from the opening of China's capital markets, it would require some changes in policy and financial architecture and an increase in market awareness.



Research suggests that much of the policy framework is already in place, but for Australia to fully benefit from China's financial development, there are still a number of policy and market issues to be considered. A number of significant policy recommendations have already been adopted and include the appointment of an official Renminbi Settlement Bank in Sydney, the granting of a Renminbi Qualified Foreign Institutional Investor quota, and the issuing of a Renminbi Bond by the NSW Treasury Corp.

Along with external investors including the Government of New South Wales, the ANU College of Business and Economics pledged further funding for the continuation of analysis of RMB internationalisation and its implications for Australia.

### CASE STUDY

#### Income Contingent Loans

Professor Bruce Chapman and Dr Timothy Higgins are both involved in research and policy analysis around income contingent loans. They have worked on the modelling and costing of the Australian Higher Education Contribution Scheme (HECS) instituted in 1989. HECS was the first income contingent student loan scheme that used the income tax system for collection.

They collaborated with the Department of Education in 2014 to analyse the implications of proposed bond rate indexation put forward in the 2014 Higher Education and Research Reform Bill. They modelled and reported on the costs to borrowers and government of different loan indexation options and suggested that the government consider a hybrid interest rate arrangement or a loan surcharge as possible alternatives.

Professor Chapman and Dr Higgins are also involved in policy debates around the application of income contingent loans to other social and economic reform issues, such as paid parental leave and vocational education. Both were joint recipients of the ANU 2014 Vice-Chancellor's Award for Public Policy and Outreach.





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