



**UNSW**  
SYDNEY

Australia's  
Global  
University

# Centre for Applied Economic Research (CAER)

## Annual Report 2017



CENTRE FOR APPLIED  
ECONOMIC RESEARCH



**UNSW** | **AGSM**   
Business School

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## 1. Centre for Applied Economic Research (CAER) – key facts

### 1.1 [Presiding faculty](#)

UNSW Business School

### 1.2 [Schools, centres, faculties and other organizations with which CAER interacts](#)

CAER has significant linkages with the academia, industry and government. The following table summarizes the schools, centres, faculties and other organizations with which CAER interacted during 2017. The nature of the interactions is also indicated. Further descriptions of the interactions are provided in the sections to follow of this report.

Entity	Nature of interaction
<b>Within UNSW</b>	
School of Economics, UNSW Business School	On-going engagement; CAER's management, majority of CAER members, and part of the Steering Committee members are academics at the school; Collaboration and coordination of teaching and research supervision activities; Provision of in kind facilities.
School of Banking and Finance, UNSW Business School	On-going engagement with the Real Estate Initiative; Part of CAER members and the Steering Committee members are academics at the school; Collaboration and coordination of teaching activities.
UNSW Law	On-going engagement with the Law and Economics Initiative; Part of CAER members and the Steering Committee members are located at the school; Coordination of research supervision activities.
<b>Outside UNSW</b>	
Australian Bureau of Statistics	On-going engagement with the Economic Measurement Initiative.
Australian Bureau of Agricultural and Resource Economics and Sciences	On-going engagement with the Economic Measurement Initiative.
Department of Communications and the Arts	On-going engagement with the Economic Measurement Initiative.
OECD	On-going engagement with the Economic Measurement Initiative.
U.S. Bureau of Economic Analysis	On-going engagement with the Economic Measurement Initiative.
The Australian National University and the University of Melbourne	Collaboration with the Economic Measurement Initiative on an Australian Research Council Discovery Project Grant.
School of Economics, the University of Queensland	On-going engagement with the Economic Measurement Initiative and the Real Estate Initiative.
The Australian Treasury	On-going engagement with the Economic Measurement Initiative and the Real Estate Initiative.
Department of Industry Innovation and Science	On-going engagement with the Economic Measurement Initiative.

<b>Entity</b>	<b>Nature of interaction</b>
<b>Outside UNSW – Cont.</b>	
Statistics Netherlands	On-going engagement with the Economic Measurement Initiative and the Real Estate Initiative.
RF Capital	On-going engagement with the Real Estate Initiative; Industry partner on joint Australian Research Council Linkage Grant.
CorVal Partners Limited	Industry partner on joint Australian Research Council Linkage Grant with the Real Estate Initiative.
Jones Lang LaSalle (JLL)	On-going engagement with the Real Estate Initiative.
The Urban Taskforce Australia	On-going engagement with the Real Estate Initiative.
Property Council of Australia	On-going engagement with the Real Estate Initiative.
Reserve Bank of Australia	On-going engagement with the Real Estate Initiative.
Herbert Smith Freehills law firm (Sydney)	On-going engagement with the Law and Economics Initiative; Key donor of the Law and Economics Initiative.

### 1.3 [Governance and management of CAER](#)

#### **Director**

Professor Kevin Fox, School of Economics, UNSW

#### **Deputy Director**

Associate Professor Mariano Kulish, School of Economics, UNSW (from October 2016 – July 2017)

#### **Steering Committee**

Professor Elizabeth Carson (Associate Dean Research) – Chair

Professor Kevin Fox (Director, CAER)

Professor Jerry Parwada (Head, School of Banking and Finance)

Mr Tim Harcourt (J.W. Nevile Fellow in Economics)

Ms Maree Magafas (School Manager, School of Taxation and Business Law)

### 1.4 [CAER's research initiatives and their members in 2017](#)

CAER's research activities are carried out through its research initiatives where each initiative focuses on a specialised research area. The following is a list of CAER's research initiatives and their members during 2017. The research agenda of each initiative is described in section 2 of this report.

#### **Economic Measurement Initiative 2017**

Professor Kevin Fox - School of Economics, UNSW

Professor Erwin Diewert - School of Economics, UNSW and Vancouver School of Economics, the University of British Columbia

Associate Professor Glenn Otto - School of Economics, UNSW

## **Real Estate Initiative 2017**

### Research team

Professor Kevin Fox - School of Economics, UNSW  
Professor Erwin Diewert - School of Economics, UNSW and Vancouver School of Economics, the University of British Columbia  
Associate Professor Glenn Otto - School of Economics, UNSW  
Associate Professor Mariano Kulish - School of Economics, UNSW (until July 2017)  
Dr Nigel Stapledon – Andrew Roberts Fellow in Real Estate/voluntary Real Estate Research Fellow, CAER

### Research affiliates

Mr Andrew Roberts - UNSW alumnus and key founder of the Real Estate Initiative  
Mr Luan Ferreira - Quantitative Researcher, RF Capital  
Dr Minxian Yang - School of Economics, UNSW  
Dr Christopher Gibbs - School of Economics, UNSW  
Dr Nalini Prasad - School of Economics, UNSW  
Mr Aaryn Lally - Honours Student, School of Economics, UNSW  
Dr Xiangling Liu - Research Fellow, CEPAR  
Dr Shanaka Herath - Vice Chancellor's Post-Doctoral Research Fellow, Faculty of Business, University of Wollongong  
Professor Jan de Haan - Delft University of Technology and Statistics Netherlands  
Associate Professor Alicia Rambaldi - School of Economics, the University of Queensland  
Mr Tom Cusbert - Reserve Bank of Australia  
Dr Peter Tulip - Reserve Bank of Australia  
Mr Mohamad Mourad – JLL  
Mr Vince De Zoysa – JLL  
Mr Keith Lee – JLL  
Mr Ryan Farrow - Property Council of Australia

## **Herbert Smith Freehills Initiative on Law and Economics 2017**

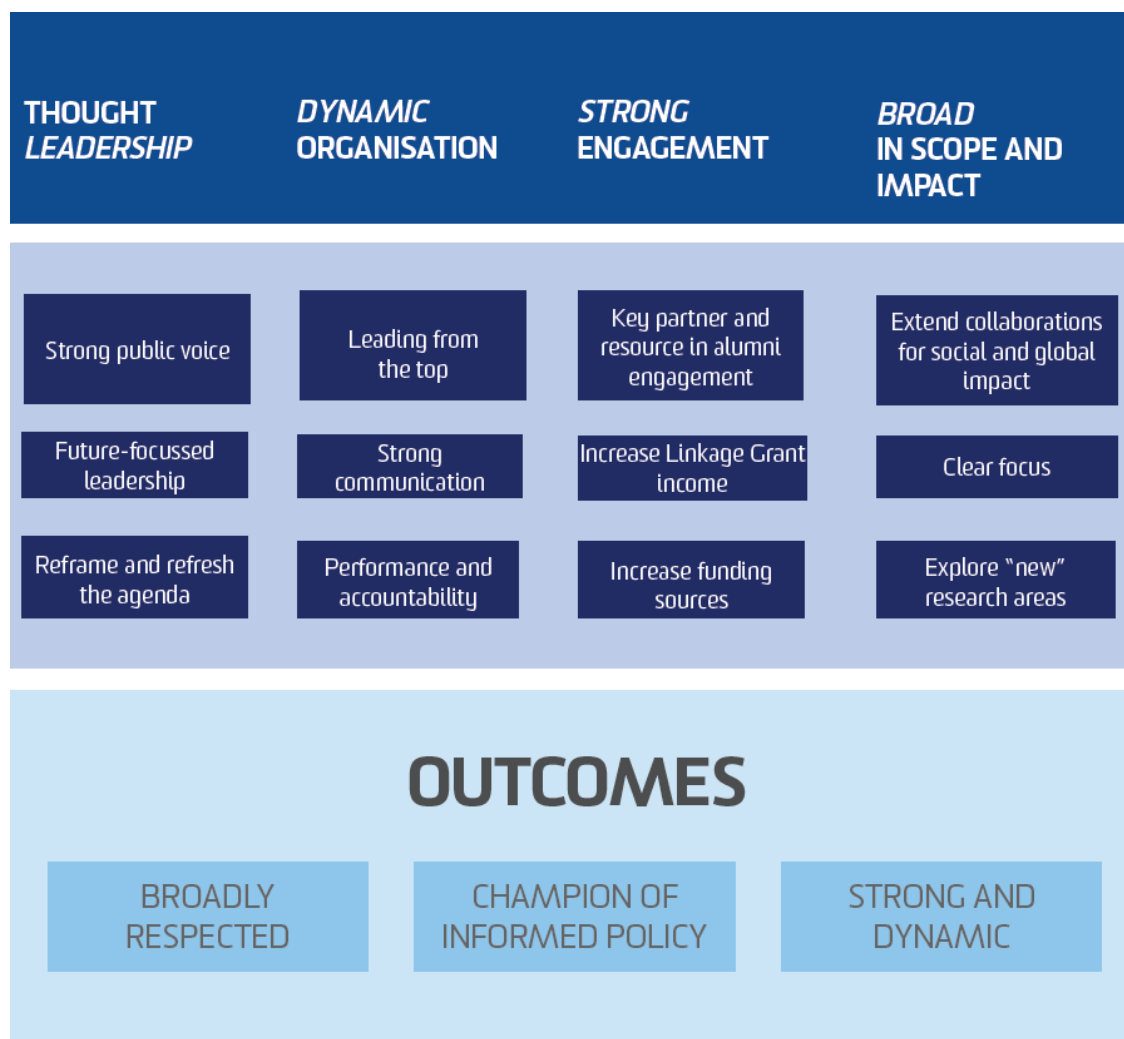
Professor Richard Holden, Initiative Director - School of Economics, UNSW  
Professor Rosalind Dixon, Initiative Deputy Director - UNSW Law

### 1.5 CAER's administrative staff in 2017

In September 2016, Carmit Schwartz, (Centre Coordinator) and Oded Shrier, (Research Officer) ceased employment with CAER to pursue other interests. CAER would like to thank Carmit and Oded for their support and dedication to the Centre's activities and wish them well in their future endeavors. Following their departure, Kala Miranda commenced as full-time administrator of CAER. She was hired to assist CAER's Director in the administration of the Centre and in coordinating the research activities of CAER's initiatives. Her position was funded by CAER.

Administrative support was also provided by the UNSW Business School, mainly consisting of HR, IT, finance and marketing support.

## 1.6 CAER's mission and history



### History

Founded in 1976 CAER is one of the oldest centres in the University and the first centre to be established in the former Faculty of Commerce and Economics (now the UNSW Business School). CAER's primary emphasis is on applied economic research relevant to policy issues. For more than thirty years a significant body of such research has been carried out and the results published in academic journals, books and the Centre's own publications. CAER's work is valued by its internal and external stakeholders and its years of built up impact have contributed to its brand name achieving a high level of external recognition. CAER is proud of its contribution to UNSW and the broader community. It remains relevant, having changed with times, and continues to attract top class international visitors, research funding and research collaborations.

## 2. CAER's performance in relation to its identified objectives

The following is a summary of CAER's performance in relation to its identified objectives during 2017. A detailed description of CAER's operations in 2017 is provided in the following sections of this report.

- Carry out, encourage and enhance applied economic research with an interdisciplinary and multidisciplinary focus that addresses current policy issues both within Australia and globally.

In 2017 CAER's research activities were carried out and advanced through the following research initiatives:

### **Economic Measurement Initiative**

The appropriate measurement of economic variables is of high importance as data of economic variables is used by a wide range of researchers and policy decision makers, spanning the social sciences, humanities and the physical sciences. Therefore, the research undertaken by the Economic Measurement Initiative is dedicated to improving measurement techniques of economic variables to more accurately reveal empirical facts. To achieve its aim the initiative applies advanced and innovative tools from economic theory, econometrics, aggregation theory, experimental economics, mathematics, and statistics. The initiative research areas include: performance measurement, inflation measurement, index number theory, functional form specification and measurement issues in international comparisons.

An illustrative example of the real world impact CAER's research is having is the project undertaken by the Economic Measurement Initiative on the use of scanner data in measuring price changes. **From the December 2017 quarter, the Australian Bureau of Statistics** implemented the recommended methodological changes to maximise the use of transactions data to compile the CPI. This has come about as a result of UNSW-based research, conducted with the financial support of the Australian Research Council through the Linkage Grants program, in collaboration with the ABS and Statistics Netherlands. For further details, see the following and references therein:

**ABS (2017), "An implementation plan to maximise the use of transactions data in the CPI," Information Paper 6401.0.60.004, Australian Bureau of Statistics, Canberra.**

### **Real Estate Initiative**

With the encouragement and financial support of UNSW alumnus, Mr. Andrew Roberts, the Real Estate Initiative was established in 2012 under the umbrella of CAER within the UNSW Business School. It is a multi-disciplinary initiative, with collaboration between CAER, UNSW Business School and UNSW Built Environment. As the real estate sector represents a substantial share of the capital assets and savings of businesses and households in the economy and is a major influence on the performance of the economy, the Real Estate Initiative was established to develop a research program to explore real estate-related issues from multidisciplinary perspectives and also to develop education programs to boost skills in the sector. The research areas of the initiative are organised under two broad themes: Financial Stability, and Housing Affordability and Urban Policy. Within the Financial Stability theme, the initiative's research topics include: identification of property market bubbles and implications for financial markets and policy; the role of real estate in multi-asset portfolios (diversification, volatility, hedging); real estate markets and future trends in other financial markets; real estate and corporate risk management; the role of real estate in multi-asset portfolios; pricing of unitized real estate investments for retail and institutional investors; Chinese investment, real estate market risk, and the wealth and welfare of Australians. Within the Housing Affordability and Urban Policy theme, the initiative's research topics include: housing and the macro economy - lifecycle (diversification, volatility, hedging) wealth accumulation, tax treatment of owner occupied housing, economic fundamentals and real estate prices for retail and institutional investors; infrastructure policy and urban development; competition policy and housing affordability; land supply and house prices; understanding regional demand for housing; price indices - methods for accounting for quality

change, spatial indices, decomposing indices into land and structure components; price-rent ratios - understanding the evolution of real estate markets; productivity of the real estate services industry.

### **Law and Economics Initiative**

The Herbert Smith Freehills Initiative on Law and Economics is a collaboration between CAER, UNSW Business School, UNSW Law and the Herbert Smith Freehills law firm (Sydney). Its main goals are to help establish law and economics in the Australian academia, begin a dialogue with practitioners about developments in the field and developments in practice, and to establish UNSW as a key leader in the field. The research of the initiative aims to analyse and understand law and legal institutions from economic perspectives rather than the legal realistic tradition. This is achieved by applying the latest developments in the field of economics, including the incorporation of tools from labour economics and the insights of information and behavioural economics on the limits of neo-classical economic models.

CAER's diverse research activities clearly indicate its role in leading research that crosses discipline boundaries, and as such it adds great value to UNSW research capabilities, supports UNSW's research strength "Law, Business and Economics", and significantly contributes to promoting the UNSW research brand.

- Encourage and support collaborative research across schools and faculties both at the national and the international level.

CAER's collaborative research during 2017 is demonstrated by its following undertakings:

- In 2017 the Real Estate Initiative continued its work on the research project: "The Economic Measurement of Property Markets: Prices, Bubbles, Economic Growth and Productivity". This project is part of an Australian Research Council Linkage Grant which involves collaboration between the Real Estate Initiative and property investor RF Capital together with its associate property fund manager and investor CorVal Partners Limited. The research project builds on both firms' research capacity on property markets, including their data availability and industry expertise.
  - In 2017 CAER supported domestic and international collaboration and stimulated its research activities by hosting six distinguished visitors.
  - As a research centre, CAER's collaborative activities are mainly concentrated on research. However, CAER also undertakes educational collaborative activities where they are deemed appropriate in achieving its mission. In 2017 Professor Kevin Fox delivered a course on Economic Measurement as part of the Economic Measurement Initiative. Dr Nigel Stapledon member of the Real Estate Initiative, delivered a course offered as part of the UNSW Business School's Real Estate major.
- Support and facilitate research training and career opportunities for outstanding Australian and international students and researchers.

During 2017 CAER members have supervised eleven PhD students.

CAER employed Dr Iqbal Syed as a Senior Research Associate and the Real Estate Initiative until mid-year, after which he took up an appointment as a tenured Senior Lecturer at Massey University, New Zealand. Many junior academic and government researchers participated in the Economic Measurement Group Workshop.



- Build and enhance UNSW research capacity and outcomes through stimulating network opportunities and exposure to cutting-edge research.

CAER's commitment to building and enhancing UNSW research capacity and outcomes is shown by the following activities undertaken in 2017:

#### **Visitors**

In 2017 CAER supported domestic and international collaboration by hosting six visitors. These visits of distinguished and internationally-recognized visitors assist stimulating CAER's research activities and provide staff and students the possibility of interactions with leading researchers in diverse areas of investigation. Among other activities, these visits usually involve a formal presentation given by the visitor.

#### **Conferences, workshops and special events**

In 2017 CAER organized the EMG Workshop as part of its objective of helping academics and students become leading and internationally-recognised researchers. The workshop typically involves academics from overseas and around Australia, and representatives from the public and private sectors. The success of the workshop has led it to become a regular and well-attended event of international standing.

The Law and Economics Initiative of CAER in conjunction with Australian Law and Economics Association hosted a conference in December 2017. Keynote speech was delivered by Professor Bert Huang, Professor of Law at Columbia Law School.

In addition, the Law and Economic Initiative also hosted a 'Lunchtime talk' by Associate Professor Betsey Stevenson of the University of Michigan. Associate Professor Stevenson is one of the world's leading labour economists, having been Chief Economist at the US Department of Labour, and recently serving on the Council of Economic Advisers to the President of the United States. Her talk was on the "Five Challenges the Labour Market Faces and Implications for Economic Growth".

#### **Academic, industry and government engagements**

In 2017 CAER continued to foster and expand its linkages with the broader academic community, industry and the public sector:

##### ***Academic engagements***

- In June 2017, Kevin Fox, invited to present his work on "The Contribution of Research and Innovation to Productivity" at the seminar series of the Centre for Global Higher Education, UCL Institute of Education, University College London, June 2017, London.
- In 2017 the Economic Measurement Initiative commenced its research project: "Natural Resources and Ecosystem Services in Productivity Measurement". This project is part of an Australian Research Council Discovery Grant and it involves collaboration with the Australian National University and the University of Melbourne.
- In July 2017 Professor Richard Holden gave a presentation at the Learn@Lunch lecture series<sup>1</sup> on the science behind contract theory. In particular, Professor Holden addressed the

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<sup>1</sup> Learn@Lunch is a bite-sized lecture series in the heart of the Sydney CBD, where UNSW Business School alumni are invited to bring their lunch and listen to a leading UNSW Australia Business School academic discussing one of the most pressing issues facing business today.

question of how formal and informal business agreements can be structured to create incentives that lead to efficient outcomes. Using real world examples, Professor Holden discussed the benefits and challenges of financial incentives and their contribution to income design and demonstrated why contracts work and how to make them better.

- Professors Rosalind Dixon and Richard Holden were both academic co-lead of UNSW Grand Challenge on Inequality.
- Professor Ricard Holden participated as a panel member of UNSW Business School's experts who analysed the 2017 Federal Budget and its implications at an event hosted by Dean Chris Styles: "BusinessThink Federal Budget Roundtable 2017" in May 2017 at Sydney's CBD.

### **Industry engagements**

- As part of its teaching program, the Real Estate Initiative hosted **Bryan Reid** (Vice President, Research, MSCI), as a guest lecturer in Professor Kevin Fox's ECON4309/6309 Economic Measurement course in the second semester 2017. In his lecture Bryan discussed the methodologies employed by MSCI in producing real estate related regional and global indexes, benchmarks, performance modelling, data metrics and risk analytics.
- In 2017 Dr Nigel Stapledon was appointed as a Chief Advisor at MacroPlan-Dimasi, a firm located at Sydney's CBD and provides a range of property related services, such as research, economics, planning, spatial analysis and advisory, critical to the formulation of successful development projects.

### **Government engagements**

- In 2017 **Professor Kevin Fox** was acting as an Advisor to the Australian Treasury.
- In 2017 **Professor Kevin Fox** advised the Australian Bureau of Statistics on land price measurement.
- During 2017 **Professor Kevin Fox** was a member of the Australian Bureau of Statistics Methodology Advisory Committee, the Australian Bureau of Statistics Productivity Measurement Reference Group, and the Australian Bureau of Statistics Input-Output User Group.
- During 2017 **Professor Kevin Fox** was a member of the Committee for Economic Development of Australia (CEDA) Advisory Group and provided expert advice on their research report on improving the productivity of services.
- On 22 August 2017, **Professor Kevin Fox** met with the Department of Education and Training to provide advice on research relating to the returns to spending on higher education.
- On 23 August 2017, **Professor Kevin Fox** met with the Department of Agriculture and Water Resources to provide advice on research relating to productivity measurement in the agricultural sector.
- **Professor Kevin Fox**, Invited Panelist, Workshop on "*Industry and Innovation Policy*", organized by the Department of Industry, Innovation and Science, September 2017, Canberra.

- Raise the profile, around Australian and internationally, of applied economic research at UNSW.

In 2017 CAER continued to create impact through the following activities:

#### **Publications**

To enhance the profile of UNSW's high-impact research and researchers CAER publishes and communicates its research achievements in journals and outlets of the highest standing internationally. In 2017 members of CAER edited 7 books, published six book chapters and twenty articles in highly regarded international refereed journals. They also wrote one non-refereed introduction to a journal special issue.

#### **Conferences, workshops and special events**

In 2017 CAER organized the EMG Workshop and the Law and Economic annual conference. Events such as these raise the profile of applied economic research at UNSW in the broader community and strengthen CAER's position as a leading research centre in the region.

#### **Professional engagements and scholarly achievements**

The professional engagements and scholarly achievements attained by CAER members in 2017 further contributed to its community impact. In particular,

- In 2017 **Professor Kevin Fox** was acting as an Advisor to the Australian Treasury.
- **Professor Kevin Fox**, member of the Policy and Advocacy Committee of the Academy of the Social Sciences in Australia. (2016-2018 term).
- **Professor Kevin Fox**, member of the Panel B Committee of the Academy of the Social Sciences in Australia. (2016-2018 term).
- **Professor Kevin Fox**, member of the Council of the International Association for Research in Income and Wealth. (Election period, Aug 2016 – Aug 2020).
- **Professor Kevin Fox** was part of a team that jointly won a major new UK prize in economics – the **Indigo Prize 2017**. The Prize challenged entrants to consider how to measure economic activity in a 21st century economy. Kevin collaborated with colleagues from Imperial College, Wellesley College, LUISS (Rome), the Georgetown Centre for Business and Public Policy, and NESTA, to submit an entry titled “Improving GDP: Demolishing, Repointing or Extending?”. The aim of the competition was to catalyse a debate about how and what factors are currently measured given the evolving economies, technology and skills bases, and what should now be taken into consideration in official economic statistics that measure the health, size and growth of a modern economy.
- The 2017 Kendrick Prize Committee of the International Association for Research in Income & Wealth (IARIW) selected the article “Life Cycle Price Trends and Product Replacement: Implications for the Measurement of Inflation” by **Daniel Melser** and **Iqbal A. Syed** as the best article in the issues of the *Review of Income and Wealth* published in 2016. The article appeared in the September 2016 issue. This research was conducted while both authors were research fellows in the EMI.
- **Professor Kevin Fox**, Invited Discussant, the 30th PhD Conference in Economics and Business, jointly organized by the Australian National University, Monash University, the University of Melbourne, the University of Queensland, and the University of Western Australia, November 2017, Melbourne.
- **Professor Kevin Fox**, Invited Participant, Workshop on *Structural Changes in the Global Economy: Trends, Puzzles and Implications*, organized by the Australian Treasury and the

Centre for Applied Macroeconomic Analysis at the Australian National University (CAMA), August 2017, Canberra.

- **Professor Kevin Fox**, Invited Speaker, Seminar Series, Department of Economics, College of the Liberal Arts, Pennsylvania State University, May 2017.
- **Professor Kevin Fox**, Invited Speaker, Montréal Environment and Resource Economics Workshop, hosted jointly by the departments of economics of the universities of Montréal, Québec à Montréal, McGill and HEC Montréal, May 2017.
- **Professor Kevin Fox**, Invited Speaker, Financial Services Indices, Liquidity and Economic Activity Conference, Financial Resilience Research Centre and Bank of England, London, May 2017. Special Issue of the Review of Income and Wealth on “Productivity Measurement, Drivers and Trends,” Series 63, Supplement 1, 2017.
- **Professor Kevin Fox**, Invited Chair, the NBER-CRIW Conference on Measuring and Accounting for Innovation in the 21st Century, March 2017, Georgetown University, Washington, D.C.
- **Professor Kevin Fox**, invited Speaker, the 15th EWEPA Conference, hosted by the School of Business and Economics, Loughborough University and its Centre for Productivity and Performance, June 2017, London, UK.
- In 2017 **Professor Richard Holden** was elected a Fellow of the Econometric Society.
- In 2017 **Professor Rosalind Dixon** was elected co-President of the International Society of Constitutional Law (ICON-S).
- In 2017 **Professor Richard Holden** was elected President of the Australian Law and Economics Association.
- Richard Holden, Invited Speaker, Harvard Economics, 2017
- Richard Holden, Invited Speaker, Harvard Law School, 2017
- Richard Holden, Invited Speaker, MIT, 2017
- Richard Holden, Invited Speaker, Chicago law school, 2017
- Richard Holden, Invited Speaker, Northwestern Law School, 2017
- Richard Holden, Invited Speaker, University of Sydney, 2017
- Richard Holden, Invited Speaker, University of Melbourne, 2017
- Richard Holden, Invited Speaker, Hong Kong University. 2017
- Rosalind Dixon, Invited Speaker, ICON-S Conference, Copenhagen, Summer 2017
- Rosalind Dixon, Invited Speaker, Columbia Law School, Workshop on Constitutions and Economic Justice, Spring 2017
- Rosalind Dixon, Invited Speaker, Fordham Law, Faculty Workshop, Spring 2017
- Rosalind Dixon, Invited Speaker, University of Chicago, Conference on Constitutional Implementation, Fall 2017
- Rosalind Dixon, Invited Speaker, NYU Law, Conference on populism and the new public law, Fall 2017
- Rosalind Dixon, Invited Speaker, Harvard Law School, International Comparative Law Workshop, Fall 2017

It is evident that CAER's work is valued by external stakeholders and its brand name has achieved a significant level of recognition.

### **Media engagement**

To raise the profile of CAER and UNSW, members of CAER's research initiatives were actively engaged with the media and were extensively interviewed on various topical issues during 2017. In addition to Professor Holden's on-going media engagement on SkyNews Australia, the Australian Financial Review and the Conversation, there were fifty-seven media engagements during the year with media engagements taking place almost every month.

In summary, CAER delivers its stated mission and objectives in a financially sustainable manner and continues to add significant value to UNSW.

### **3. CAER's planning for the coming year 2018**


In accordance with CAER's planning activity for 2017, the Director in coordination with the Steering Committee implemented the following steps during 2017:

- The Director, in consultation with the Steering Committee, continued to work on CAER's strategic plan for the future. In particular, CAER's mission and objectives have been re-phrased in-line with UNSW's 2025 strategic plan.
- CAER's administrator continued to work on the revision of the website, specifically, on the web sections which are not affected by the strategic planning. The "events", "news", CAER's management were updated. The revisions of all three initiatives sections has been completed. The updating of the website was made in a future-friendly manner so that the website remains compatible with the continual release of new devices.

The following steps were remained to be implemented in 2017:

- CAER's strategic plan for the coming years to be finalized. In particular, CAER's mission and objectives to be rephrased and KPIs to be tailored accordingly.
- Initiatives Guidelines to be finalized.

4. Statement of financial performance certified by the UNSW Business School's Finance Manager for the year ended 31 December 2017.

		2017		2016		Difference	
		\$'000	\$'000	\$'000	\$'000	%	
<b>Statement of Financial Performance</b>							
<b>For the Year Ended December 2017</b>							
		Note					
<b>REVENUE</b>							
		1	364	472	(108)	-23%	
			62	245	(182)	-75%	
			-	-	-	-	
		2	(9)	0	(9)	-11753%	
		3	-	-	51	-100%	
			-	-	-	-	
			-	1	(1)	-100%	
			<b>417</b>	<b>718</b>	<b>(249)</b>	<b>-37%</b>	
<b>EXPENSE</b>							
			289	494	(205)	-41%	
			3	3	-	0%	
			0	1	(1)	-92%	
			-	-	-	-	
			7	14	(7)	-51%	
			55	169	(114)	-67%	
			2	5	(3)	-55%	
			2	3	(1)	-48%	
			1	-	1	-	
			(31)	(12)	(19)	164%	
			<b>39</b>	<b>184</b>	<b>(145)</b>	<b>-79%</b>	
			<b>328</b>	<b>678</b>	<b>(350)</b>	<b>-52%</b>	
			<b>\$ 89</b>	<b>\$ 40</b>	<b>100</b>	<b>-907%</b>	
			-	-	-	-	
			<b>\$ 89</b>	<b>\$ 40</b>	<b>100</b>	<b>-907%</b>	
			-	-	-	-	
<b>NOTES:</b>							
1	Revenue in Advance will be noted in Creditors & Other Liabilities.						
	Research Revenue generated (cash basis).		\$ 364	\$ 506	(142)		
	Category 1 Research Revenue therein		364	356	8		
2	UNSW Budget model includes other revenue items		-	-	-		
	Teaching Revenue		-	-	-		
	Block Grants		-	-	-		
	Indirect Cost Recoveries		-	-	-		
3	Other Research Revenue includes internal fund transfers.						
4	Restricted Funds - Cash at year end		\$ 163	\$ 125	38		
5	Funds available in Division of Advancement						
<b>Comments on the Statement of Financial Performance by the Centre:</b>							
1. Statement of Financial Performance has been prepared on the basis of accrual accounting by using research centre report recommended by GMO.							
<b>Certified by Faculty Finance Manager (Or Delegate)</b>							
Name: Kieran McGeachie, CA			Signature:  Date: 7/05/2018				

**Statement of Financial Position**

As at December 2017

	Note	2017		2016	
		\$000	\$000	\$000	\$000
UNSW Australia Internal Cash	6	172	129		
Accounts Receivable	7	-	(0)		
Sundry Assets		(0)	0		
Investments		-	-		
Property Plant & Equipment	8	0	0		
Creditors and Other Liabilities	1	(0)	3		
<b>NET ASSETS</b>		<b>\$ 173</b>	<b>\$ 126</b>		

**NOTES:**

- 6 Statements are prepared on UNSW Accounting principles - Operating & Strategic funds adjusted revenue
- 7 UNSW has central provisions in respect of payments made to employees and taxation. Such provisions will not be reflected in this Centre's Statement of Financial Position.
- 8 Cash balance includes the GST centralised daily on Debtor and Creditor balances.
- 9 Accounts Receivable are gross value - inclusive of applicable GST.
- 10 Property Plant & Equipment is depreciated over the expected useful life of the asset.
- 11 UNSW Division of Advancement holds donated funds centrally. Draw down of funds to the Centre is reflected in the Statement of Financial Performance.

**Additional notes:**

- The expenses of the Real Estate Initiative are administrated through an FC101 project on UNSW accounts. Every year funds from the UNSW Foundation accounts are transferred to the FC101 project to cover the expenses and appear as donation income in the FC101 project.
- The expenses of the Law and Economics Initiative are administrated through an FC101 project on UNSW accounts. Every year funds from the UNSW Foundation accounts are transferred to the FC101 project to cover the expenses and appear as donation income in the FC101 project. On the 31<sup>st</sup> of December 2017 the remaining donation balance within the UNSW Foundation accounts of the Law and Economics Initiative was \$159,477.27.
- CAER would like to acknowledge the generous support of \$6,000 from the UNSW Business School's Research Office for the EMG Workshop 2017. The support was transferred into CAER's operating project and was incorporated in the above annual financial statement.

## 5. Details of research grants and projects associated with CAER during 2017

The following is a list of research grants and projects held by CAER's research initiatives in 2017 as part of their activities<sup>2</sup>. CAER members are marked in bold.

- Australian Research Council Linkage Grant, 2014-2017, "The Economic Measurement of Property Markets: Prices, Bubbles, Economic Growth and Productivity", \$625,000, investigators: **K.J. Fox**, **G. Otto**, **N. Stapledon**, **M. Kulish**, **M. Hu**, **W.E. Diewert** and **I.A. Syed**, industry partners: property investor RF Capital and its associate property fund manager and investor CorVal Partners Limited. The research project is a collaboration between the Real Estate Initiative and the two industry firms, building on both firms' research capacity on property markets, including their data availability and industry expertise. Funds of this project (both ARC and industry partners') are administrated by CAER.
- Australian Research Council Future Fellowship Grant, 2013-2017, **R. Holden**, \$910,034. The project aims to further the understanding of non-price institutions such as firms, voting rules, trading mechanisms, bargaining protocols, and publically owned assets. Fifteen percent of this project is devoted to research which is undertaken by the Law and Economics Initiative. Funds of this project are administrated by the School of Economics (UNSW).
- Australian Research Council Discovery Grant, 2015-2019, "Productivity Measurement, Drivers and Trends: A New Analytical Framework", \$551,400, investigators: **K.J. Fox** and **W.E. Diewert**. The project aims to advance new concepts and methods for productivity measurement that have the potential to improve policy and national welfare, with special attention to: productivity in the mining industry, the increased holding of precautionary cash balances by firms during financial crises, innovative examination of firm productivity dynamics, and a more realistic approach to capitalisation of research and development and other intangible investments. The project is part of the research agenda of the Economic Measurement Initiative. Funds of this project are administrated by CAER.
- Australian Research Council Discovery Grant, 2017-2019, "Natural Resources and Ecosystem Services in Productivity Measurement", \$320,000, investigators: **K.J. Fox**, R.Q. Grafton, C. Obst and **W.E. Diewert**. This project aims to significantly advance the understanding of sources of productivity growth through addressing theoretical and practical problems in the economics of natural resources and ecosystem services. A key issue is the valuation of non-renewable resources and ecosystem services, acknowledging their contributions to economic activity and the impact on national income from their depletion and degradation. This then leads to new approaches to incorporating natural resource depletion and degradation into productivity analysis. Theory and practice for aggregate, regional and industry level analysis will be developed with the goal of better informing environmental, innovation and industry policy.

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<sup>2</sup> Research grants and projects which CAER members obtained outside the activities of CAER's research initiatives are excluded from the list.



## 6. Statement of in-kind contributions, cash contributions, infrastructure and other resources provided to CAER during 2017

### 6.1 In-kind contributions

*Estimated value of CAER members contribution to CAER's activities –by research initiatives<sup>3</sup>*

CAER member	Type of Activity	Value of Contribution
Professor Kevin Fox	Economic Measurement Initiative activities	64,022
Professor Erwin Diewert		
Associate Professor Glenn Otto		
Professor Richard Holden	Law and Economics Initiative activities	56,008
Professor Rosalind Dixon		
Professor Kevin Fox	Real Estate Initiative activities	155,126
Professor Erwin Diewert		
Associate Professor Glenn Otto		
Associate Professor Mariano Kulish		
Dr Nigel Stapledon		
Mr Andrew Roberts		
Mr Luan Ferreira		
Dr Minxian Yang		
Dr Christopher Gibbs		
Dr Nalini Prasad		
Dr Xiangling Liu		
Dr Shanaka Herath		
Professor Jan de Haan		
Associate Professor Alicia Rambaldi		
Mr Tom Cusbert		
Dr Peter Tulip		
Mr Mohamad Mourad		
Mr Vince De Zoysa		
Mr Keith Lee		
Mr Ryan Farrow		
<b>Total in-kind</b>		275,156

*Estimated value of in-kind contribution to CAER's administration<sup>4</sup>*

<sup>3</sup> CAER members whose salary was paid by funds held within CAER's department ID are excluded from the table.

	Type of Activity	Value of Contribution
Professor Kevin Fox	Director	46,671
Associate Professor Mariano Kulish	Deputy Director	16,033
Professor Elizabeth Carson (Associate Dean Research)	Steering Committee	7468
Professor Jerry Parwada (Head, School of Banking and Finance)		
Mr Tim Harcourt (J.W. Nevile Fellow in Economics)		
Ms Fei Wong (General Manager, UNSW Law)		
UNSW Business School administrative support	HR, IT, finance and marketing support	13,113
<b>Total in-kind</b>		83,285

## 6.2 Cash contributions<sup>5</sup>

Entity	Purpose	Cash Contribution
School of Economics	Support for the EMG Workshop 2017	\$6,000
<b>Total cash</b>		\$6,000

## 6.3 Infrastructure and other resources provided to CAER

CAER continue to share the allocated office space in the Quadrangle Building (Quad 1039) with the Industrial Relations Research Centre (IRRC). Dr Stapledon was allocated an office within this space while the other two offices are reserved to CAER's visitors. The remaining four workstations are reserved to CAER's postgraduate students. The rest of CAER members provided their own office space (including computers) on or off campus. The School of Economics provided office space and printer/photocopier facilities for CAER administrative staff. The UNSW Business School provided additional meeting space.

<sup>4</sup> Administrative support which was funded by CAER's funds is excluded from the table.

<sup>5</sup> The following table reports only cash contributions which were made available to CAER and which were administrated by the contributing entity. Cash contributions which were transferred into CAER's financial projects are reported as part of CAER's annual financial statement in section 4 above.

## 7. Details of publications, professional engagements and scholarly achievements associated with CAER during 2017

### 7.1 Research output of CAER members

The following is a list of research output attained by CAER members in 2017 as part of their initiative activities. CAER members are marked in bold.

#### Books – edited

**Professor Rosalind Dixon.** *The Invisible Constitution in Comparative Perspective* (Cambridge University Press, Forthcoming 2017) (with Adrienne Stone).

**Professor Rosalind Dixon.** *Comparative Constitutional Law in Latin America* (ed. with Tom Ginsburg) (Edward Elgar, 2017).

**Professor Rosalind Dixon.** *The Critical Judgments Project: Re-Reading Monis v the Queen* (Federation Press, 2017) (with Gabrielle Appleby).

#### Book Chapters

**Diewert, W.E. and K.J. Fox,** 2017, “Decomposing Value Added Growth into Explanatory Factors,” in E. Grifell-Tatjé, C.A.K. Lovell and R. Sickles (eds.), *The Oxford Handbook of Productivity Analysis*, Oxford University Press, forthcoming.

**Diewert, W.E. and K.J. Fox,** 2017, “Alternative User Costs, Productivity and Inequality in US Business Sectors”, in *Productivity and Inequality*, W.H. Greene, L.A. Khalaf, P. Makdissi, R. Sickles, and M-C. Voia (eds.), Springer, 2018, 21–69.

**K.J. Fox and L. Y. T. Lee,** 2017, “Efficiency Analysis in Uncertain Operating Environments: The Problem with Outliers,” in T. Ancev, M.A.S. Azad and F. Hernandez (eds.), *New Directions in Productivity Measurement and Efficiency Analysis: Counting the Environment and Natural Resources*, Edward Elgar, June 2017, Chapter 4, 80–97.

**Dixon, Rosalind.** “Constitutional Non-Transformation? Socioeconomic Rights and the Middle Class” in *The Future of Social and Economic Rights* (Katharine G. Young, ed., forthcoming 2017) (with David Landau).

**Dixon, Rosalind.** “Comparative Constitutional Law in Latin America: An Introduction” in *Comparative Constitutional Law in Latin America* (ed. with Tom Ginsburg) (Edward Elgar, 2017) (with Tom Ginsburg).

**Dixon, Rosalind.** “Critical Thinking in Constitutional Law and Monis v the Queen” in *THE CRITICAL JUDGMENTS PROJECT: RE-READING MONIS V THE QUEEN* (Federation Press, 2017) (ed. with Gabrielle Appleby) (with Gabrielle Appleby).

**Holden, Richard.** “Law and Economics” in *The Critical Judgments Project: Re-Reading Monis v the Queen* (Federation Press, 2017) (ed. with Gabrielle Appleby) (with Gabrielle Appleby).

**Dixon, Rosalind.** “Comparative Reproductive Rights: Constitutional convergence and non-convergence” in *Constitutions and Gender* (Helen Irving ed., Elgar, 2017) (with Jade Bond).

**Dixon, Rosalind.** "Treaty Implementation in Canada- A Comparative Perspective on the Tasmanian Dam Case" in *The Tasmanian Dam Case 30 Years On* (Michael Coper et al eds, Federation Press 2017).

### **Refereed Journal Articles**

**Diewert, W.E. and K.J. Fox,** 2017, "Decomposing Productivity Indexes into Explanatory Factors", *European Journal of Operational Research*, Vol. 256 (1), pp. 275–291.

Elnasri, A. and **K.J. Fox,** 2017, "The Contribution of Research and Innovation to Productivity", *Journal of Productivity Analysis*, Vol. 47 (3), pp. 291–308.

**Diewert, W.E. and K.J. Fox,** 2017, "Output Growth and Inflation across Space and Time", *Eurostat Review on National Accounts and Macroeconomic Indicators (EURONA)*, Issue No 1, pp. 7-40.

**Holden, R.T.,** P. Aghion, E. Fehr and T. Wilkening, "The Role of Bounded Rationality and Imperfect Information in Subgame Perfect Implementation - An Empirical Investigation", *Journal of the European Economic Association* 16(1), 2018, 232-274.

**Holden, R.T.,** "A Process for Non-Partisan Redistricting" in Joseph E. Tabor (ed.) *An Illinois Constitution for the 21st Century*. Illinois Policy Institute. Chicago, IL. 2017.

**Holden, R.T.,** "A Nobel Prize for Property-Rights Theory," *Games*, 8(4), 2017.

**Holden, R.T.,** "Competitive Neutrality in Industry Equilibrium", *Australian Journal of Competition and Consumer Law*, forthcoming.

**Holden, R.T.,** "When to Drop a Bombshell" (with Gabriele Gratton and Anton Kolotilin). *Review of Economic Studies*, forthcoming. [Online Appendix A], [Online Appendix B]

**Holden, R.T.,** "Gaming and Strategic Opacity in Incentive Provision" (with Florian Ederer and Margaret Meyer), *RAND Journal of Economics*, conditionally accepted.

**Dixon, Rosalind.** "Proportionality & Comparative Constitutional Practice", *Law & Ethics of Human Rights* (Forthcoming, 2018).

**Dixon, Rosalind.** "Globalizing Constitutional Moments? A Reflection on the Japanese Art 9 Debate", *American Journal of Comparative Law* (Forthcoming 2018) (with Guy Baldwin).

**Dixon, Rosalind.** "The Forms and Limits of Constitutions as Political Insurance", 1`5(4) *International Journal of Constitutional Law* (2018) (with Tom Ginsburg).

**Dixon, Rosalind.** "Tiered Constitutional Design", *GW Law Review* (Forthcoming, 2018) (with David Landau).

**Dixon, Rosalind.** "Detaining Non-Citizens: Political Competition & Weak v Strong Judicial Review", *Virginia Journal of International Law* (Forthcoming, 2018) (symposium on the 'External Dimensions to Constitutions) (with Brigid McManus).

**Dixon, Rosalind.** "Constitutional Design Two-Ways: Constitutional Drafters as Judges", 57 *Virginia Journal of International Law* 1 (2017).

**Dixon, Rosalind.** "The Core Case for Weak Judicial Review", 38 *Cardozo Law Review* 2193 (2017)

### **Other Research Output**

**Fox, K.J.**, 2017, "Editor's Introduction to the Special Issue of The Review of Income and Wealth on 'Productivity Measurement, Drivers and Trends' IARIW-UNSW Special Conference, Sydney, 26–27 November 2013," *Review of Income and Wealth*, Vol. 63 (S1), pp. S1-S6.

**Fox, K.J.**, 2017, "The ET Interview: Professor W. Erwin Diewert," *Econometric Theory*, <http://dx.doi.org/10.1017/S0266466617000226>.

**Diewert, W.E. and K.J. Fox**, 2017, "Decomposing Value Added Growth into Explanatory Factors", a paper presented at the 15th EWEPA Conference, hosted by the School of Business and Economics, Loughborough University and its Centre for Productivity and Performance, June 2017, London, UK. The paper was also presented at the Society for Economic Measurement Conference, July 2017, Boston.

**Diewert, W.E. and K.J. Fox**, 2017, "The Digital Economy, GDP and Consumer Welfare," a paper presented at the NBER Summer Institute, NBER/CRIW Workshop, Boston, July 2017.

**Diewert, W.E. and K.J. Fox**, 2017, "The demand for money balances and the measurement of productivity," a paper presented at the Bank of England Conference on "Financial Services Indices, Liquidity and Economic Activity" in honour of Oswald Distinguished Professor William A. Barnett, London, May 2017.

**Diewert, W.E. and K.J. Fox**, 2017, "Substitution Bias in Multilateral Methods for CPI Construction using Scanner Data," a paper presented at the Seminar Series of the Department of Economics, College of the Liberal Arts, Pennsylvania State University, May 2017 and at the Society for Economic Measurement Conference, July 2017, Boston.

**Fox, K.J.**, 2017, "Natural Resources and Ecosystem Services in Productivity Measurement," a paper presented at the Montréal Environment and Resource Economics Workshop, hosted jointly by the departments of economics of the universities of Montréal, Québec à Montréal, McGill and HEC Montréal, May 2017.

Yi-Chun Chen, **Richard Holden**, Takashi Kunimoto Yifei Sun and Tom Wilkening 2017, "Getting Dynamic Implementation to Work".

Wouter Dessein and **Richard Holden** 2017, "Organizations with Power-Hungry Agents".

**Richard Holden**, Michael Keane and Matthew Lilley 2017, "Peer Effects on the United States Supreme Court".

## 7.2 Professional engagements and scholarly achievements of CAER members

The following is a list of professional engagements and scholarly achievements attained by CAER members in 2017 as part of their research initiative activities. CAER members are marked in bold.

### *Editorial activities*

- **Kevin Fox**, Associate Editor, Journal of Productivity Analysis.
- **Kevin Fox**, Editor, Special Issue of the Review of Income and Wealth on “Productivity Measurement, Drivers and Trends,” Series 63, Supplement 1, 2017.
- **Professor Richard Holden** is editor of the Journal of Law and Economics.

### *Professional memberships*

- In 2017 **Professor Richard Holden** was elected a Fellow of the Econometric Society.
- In 2017 **Professor Rosalind Dixon** was elected co-President of the International Society of Constitutional Law (ICON-S).
- In 2017 **Professor Richard Holden** was elected President of the Australian Law and Economics Association.

### *Invited speaker/discussant/chair/participant*

- **Kevin Fox**, Invited Discussant, the 30th PhD Conference in Economics and Business, jointly organized by the Australian National University, Monash University, the University of Melbourne, the University of Queensland, and the University of Western Australia, November 2017, Melbourne.
- **Kevin Fox**, Invited Participant, Workshop on *Structural Changes in the Global Economy: Trends, Puzzles and Implications*, organized by the Australian Treasury and the Centre for Applied Macroeconomic Analysis at the Australian National University (CAMA), August 2017, Canberra.
- **Kevin Fox**, Invited Speaker, Seminar Series, Department of Economics, College of the Liberal Arts, Pennsylvania State University, May 2017.
- **Kevin Fox**, Invited Speaker, Montréal Environment and Resource Economics Workshop, hosted jointly by the departments of economics of the universities of Montréal, Québec à Montréal, McGill and HEC Montréal, May 2017.
- **Kevin Fox**, Invited Speaker, Financial Services Indices, Liquidity and Economic Activity Conference, Financial Resilience Research Centre and Bank of England, London, May 2017. Special Issue of the Review of Income and Wealth on “Productivity Measurement, Drivers and Trends,” Series 63, Supplement 1, 2017.
- **Kevin Fox**, Invited Chair, the NBER-CRIW Conference on Measuring and Accounting for Innovation in the 21st Century, March 2017, Georgetown University, Washington, D.C.

- **Kevin Fox**, Invited Speaker, the 15th EWEPA Conference, hosted by the School of Business and Economics, Loughborough University and its Centre for Productivity and Performance, June 2017, London, UK.
- **Richard Holden**, Invited Speaker, Harvard Economics, 2017
- **Richard Holden**, Invited Speaker, Harvard Law School, 2017
- **Richard Holden**, Invited Speaker, MIT, 2017
- **Richard Holden**, Invited Speaker, Chicago law school, 2017
- **Richard Holden**, Invited Speaker, Northwestern Law School, 2017
- **Richard Holden**, Invited Speaker, University of Sydney, 2017
- **Richard Holden**, Invited Speaker, University of Melbourne, 2017
- **Richard Holden**, Invited Speaker, Hong Kong University, 2017
- **Rosalind Dixon**, Invited Speaker, ICON-S Conference, Copenhagen, Summer 2017
- **Rosalind Dixon**, Invited Speaker, Columbia Law School, Workshop on Constitutions and Economic Justice, Spring 2017
- **Rosalind Dixon**, Invited Speaker, Fordham Law, Faculty Workshop, Spring 2017
- **Rosalind Dixon**, Invited Speaker, University of Chicago, Conference on Constitutional Implementation, Fall 2017
- **Rosalind Dixon**, Invited Speaker, NYU Law, Conference on populism and the new public law, Fall 2017
- **Rosalind Dixon**, Invited Speaker, Harvard Law School, International Comparative Law Workshop, Fall 2017

- Members/fellows of committees/organizations

In 2017 **Professor Richard Holden** was elected a Fellow of the Econometric Society.

In 2017 **Professor Rosalind Dixon** was elected co-President of the International Society of Constitutional Law (ICON-S).

In 2017 **Professor Richard Holden** was elected President of the Australian Law and Economics Association.

*Scholarly achievements*

- In 2017 **Professor Kevin Fox** was acting as an Advisor to the Australian Treasury
- An illustrative example of the real world impact CAER's research is having is the research project undertaken by the Economic Measurement Initiative on the use of scanner data in measuring price changes. **From the December 2017 quarter, the Australian Bureau of Statistics** implemented the recommended methodological changes to maximise the use of transactions data to compile the CPI. This has come about as a result of UNSW-based research, conducted with the financial support of the Australian Research Council through the Linkage Grants program, in collaboration with the ABS and Statistics Netherlands. For further

details, see the following and references therein:

ABS (2017), "An implementation plan to maximise the use of transactions data in the CPI," Information Paper 6401.0.60.004, Australian Bureau of Statistics, Canberra.

- **Professor Kevin Fox** was part of a team that jointly won a major new UK prize in economics – the **Indigo Prize 2017**. The Prize challenged entrants to consider how to measure economic activity in a 21st century economy. Kevin collaborated with colleagues from Imperial College, Wellesley College, LUISS (Rome), the Georgetown Centre for Business and Public Policy, and NESTA, to submit an entry titled "Improving GDP: Demolishing, Repointing or Extending?". The aim of the competition was to catalyse a debate about how and what factors are currently measured given the evolving economies, technology and skills bases, and what should now be taken into consideration in official economic statistics that measure the health, size and growth of a modern economy.
- The 2017 Kendrick Prize Committee of the International Association for Research in Income & Wealth (IARIW) selected the article "Life Cycle Price Trends and Product Replacement: Implications for the Measurement of Inflation" by **Daniel Melser** and **Iqbal A. Syed** as the best article in the issues of the *Review of Income and Wealth* published in 2016. The article appeared in the September 2016 issue. This research was conducted while both authors were research fellows in the EMI.
- In 2017 **Professor Richard Holden** was elected a Fellow of the Econometric Society.
- In 2017 **Professor Rosalind Dixon** was elected co-President of the International Society of Constitutional Law (ICON-S).
- In 2017 **Professor Richard Holden** was elected President of the Australian Law and Economics Association.
- In 2017 **Professor Rosalind Dixon** and **Professor Richard Holden** have been appointed to lead *Inequality*, the third of UNSW Grand Challenges. The UNSW Grand Challenges program is an initiative to establish UNSW at the forefront of debate and policy response to the biggest issues of our time. The program aims to champion the critical place of universities in public engagement and leading open and informed debate.

## 8. Details of CAER's engagement with the academia, government, industry and broader community

The following sections provide details of CAER's activities undertaken in 2017 to accomplish its aims of providing a stimulus to the research undertaken at UNSW, supporting research students and early career academics, encouraging collaborative research and raising the profile of applied economic research at UNSW in the broader community.

### 8.1 Conferences, workshops and special events

#### **EMG Workshop 2017**

The Economic Measurement Initiative of CAER hosted its seventeenth annual international workshop on the 1<sup>st</sup> December 2017 at UNSW main campus. The aim of the workshop is to create a genuine engagement between academics, statistical agencies researchers, government policy makers and industry representatives from all around the world, leading to an improved understanding of economic measurement and the potential impact on policy. The workshop was supported by the Australian Research Council, UNSW Business School and the School of Economics.



**The workshop featured an outstanding program consisting of the following speakers:**

Marcel van Kints (Australian Bureau of Statistics), Jan de Haan (Delft University of Technology, Statistics Netherlands and Australian Bureau of Statistics), Paul Schreyer (OECD), Erwin Diewert (University of British Columbia and UNSW), Adam Gorajek (UNSW and Reserve Bank of Australia), Costa Georgeson / Alex Sibelle (Australian Treasury), Kirk Zammit (ABARES) and Khanh Hoang (ANU and Australian Bureau of Statistics).

**Law and Economics Initiative 2017**

Herbert Smith Freehills Law and Economics Initiative in conjunction with Australian Law and Economics Association hosted a conference on 6<sup>th</sup> December 2017. The conference was supported by the Australian Research Council, UNSW Business School and the School of Economics.

**The conference featured of the following speakers:** Professor Bert Huang (Columbia Law School), Anup Malani (University of Chicago Law School via skype), Kentara Asai (ANU), Benjamin Gussen (UQ), Rebecca Mendelsohn (ANU), Robert Akerlof (Warwick) and Rhett Martin (USQ).

In addition, the Law and Economic Initiative also hosted a 'Lunchtime talk' by Associate Professor Betsey Stevenson of the University of Michigan. Associate Professor Stevenson is one of the world's leading labour economists, having been Chief Economist at the US Department of Labour, and recently serving on the Council of Economic Advisers to the President of the United States. Her talk was on the "Five Challenges the Labour Market Faces and Implications for Economic Growth".

8.2 Visitors

The following is a list of visitors hosted by CAER as part of its commitment to stimulate research activities and foster research students and early career academics:

**Visitors hosted by the Economic Measurement Initiative of CAER**

Dr Paul Schreyer, OECD, visited UNSW in December 2017.

**Visitors hosted by the Real Estate Initiative of CAER**

Professor Jan de Haan, Statistics Netherlands and Delft University of Technology, visited UNSW from January to December 2017.

**Visitors hosted by the Law and Economics Initiative of CAER**

Dr Varun Gauri, Head of Global INsights Initiative, Development Economics, World Bank, Washington DC, visited UNSW in August 2017.

Professor Anup Malani, University of Chicago Law School, visited UNSW in August 2017.

Dr Robert Akerlof, Department of Economics, University of Warwick, visited UNSW from August 2017 to March 2018.

8.3 Academic, industry and government engagements

*Academic engagements*

- In June 2017, **Professor Kevin Fox**, invited to present his work on "The Contribution of Research and Innovation to Productivity" at the seminar series of the Centre for Global Higher Education, UCL Institute of Education, University College London, June 2017, London.

- In 2017 the Economic Measurement Initiative commenced its research project: “Natural Resources and Ecosystem Services in Productivity Measurement”. This project is part of an Australian Research Council Discovery Grant and it involves collaboration with the Australian National University and the University of Melbourne.
- In July 2017 **Professor Richard Holden** gave a presentation at the Learn@Lunch lecture series<sup>6</sup> on the science behind contract theory. In particular, Professor Holden addressed the question of how formal and informal business agreements can be structured to create incentives that lead to efficient outcomes. Using real world examples, Professor Holden discussed the benefits and challenges of financial incentives and their contribution to income design and demonstrated why contracts work and how to make them better.
- 2017 **Professors Rosalind Dixon** and **Richard Holden** were both academic co-lead of UNSW Grand Challenge on Inequality.
- **Professor Ricard Holden** participated as a panel member of UNSW Business School’s experts who analysed the 2017 Federal Budget and its implications at an event hosted by Dean Chris Styles: “BusinessThink Federal Budget Roundtable 2017” in May 2017 at Sydney’s CBD.

#### *Industry engagements*

- As part of its teaching program, the REI hosted **Bryan Reid** (Vice President, Research, MSCI), as a guest lecturer in Professor Kevin Fox’s ECON4309/6309 Economic Measurement course in the second semester 2017. In his lecture Bryan discussed the methodologies employed by MSCI in producing real estate related regional and global indexes, benchmarks, performance modelling, data metrics and risk analytics.
- In 2017 **Dr Nigel Stapledon** was appointed as a Chief Advisor at MacroPlan-Dimasi, a firm located at Sydney’s CBD and provides a range of property related services, such as research, economics, planning, spatial analysis and advisory, critical to the formulation of successful development projects.

#### *Government engagements*

- In 2017 **Professor Kevin Fox** was acting as an Advisor to the Australian Treasury.
- In 2017 **Professor Kevin Fox** advised the Australian Bureau of Statistics on land price measurement.
- During 2017 **Professor Kevin Fox** was a member of the Australian Bureau of Statistics Methodology Advisory Committee, the Australian Bureau of Statistics Productivity Measurement Reference Group, and the Australian Bureau of Statistics Input-Output User Group.
- During 2017 **Professor Kevin Fox** was a member of the Committee for Economic Development of Australia (CEDA) Advisory Group and provided expert advice on their research report on improving the productivity of services.

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<sup>6</sup> Learn@Lunch is a bite-sized lecture series in the heart of the Sydney CBD, where UNSW Business School alumni are invited to bring their lunch and listen to a leading UNSW Australia Business School academic discussing one of the most pressing issues facing business today.

- On 22 August 2017, **Professor Kevin Fox** met with the Department of Education and Training to provide advice on research relating to the returns to spending on higher education.
- On 23 August 2017, **Professor Kevin Fox** met with the Department of Agriculture and Water Resources to provide advice on research relating to productivity measurement in the agricultural sector.
- **Professor Kevin Fox**, Invited Panelist, Workshop on “*Industry and Innovation Policy*”, organized by the Department of Industry, Innovation and Science, September 2017, Canberra.

#### 8.4 Media engagement

The following is a list of media engagement undertaken by CAER members in order to raise the profile of CAER and UNSW in the broader community:

##### On-going

- **Professor Richard Holden**, weekly commentator on Peter van Onselen’s PVO NewsDay on SkyNews Australia.
- **Professor Richard Holden**, monthly op-ed writer for the Australian Financial Review.
- **Professor Richard Holden**, weekly columnist for the Conversation. The weekly column called “Vital Signs” aims to contextualise weekly economic events and cut through the noise of the data impacting global economies.

##### January 2017

**Professor Richard Holden** wrote an article on “Vital Signs: economic game changers to watch for in 2017”, The New Zealand Herald.

**Professor Richard Holden** wrote an article on “Time to cash out of paper money”, the Australian Financial Review.

**Professor Richard Holden** wrote an article on “Superannuation in Australia in vital need of radical change”, The Australian.

**Professor Richard Holden** wrote an article on “Printing more money isn’t the answer to all economic ills”, The Conversation.

**Professor Richard Holden** wrote an article on “Vital Signs: brace yourselves for the new economic reality,” The Conversation.

##### February 2017

**Professor Richard Holden** wrote an article on “High company taxes mean slow death for the economy”, the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: time to shift the goalposts on investor lending again?" The Conversation.

**Professor Richard Holden** wrote an article on "High company taxes mean slow death for the economy," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: the case of the missing investment," The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: business confidence spikes but uncertainty reigns," The Conversation.

**Professor Richard Holden** wrote an article on "We need a grand bargain on tax," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: there's never been a tougher time to be a central banker," The Conversation.

**Professor Richard Holden** wrote an article on "The Greatest Ever: Kenneth Arrow, economist, 1921-2017," the Australian Financial Review.

### **March 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: if it looks like a bubble and sounds like a bubble....," The Conversation and Sydney Morning Herald.

**Professor Richard Holden** wrote an article on "Vital Signs: war gaming the economic fallout from Brexit," The Conversation.

### **April 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: regulators fiddle while house prices sizzle," The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: where are all the jobs?" The Conversation.

**Professor Richard Holden** wrote an article on "Turnbull's work visa policy is more populist than Trump's," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: what will end up in Scott Morrison's 'good' books?" The Conversation.

### **May 2017**

**Professor Richard Holden** wrote an article on "By the numbers: How the US is Australia's indispensable trading partner," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: why the government still thinks it can 'grow away' the deficit," The Conversation.

**Professor Richard Holden** wrote an article on "Budget 2017: bank populism will be paid for by Australians," The Conversation and Sydney Morning Herald.

**Professor Richard Holden** wrote an article on "Budget 2017: government still tinkering with housing affordability," The Conversation and Sydney Morning Herald and The Age.

**Professor Richard Holden** was interviewed on the "Australian Budget 2017: Is this really the blueprint for a rosy future?", Business Think, May 2017 Issue.

**Professor Richard Holden** wrote an article on "Vital Signs: dismal wages growth makes a joke of budget forecasts," The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: Trump's innumerate budget makes Australia's look plausible," The Conversation.

**Professor Richard Holden** wrote an article on "The government should pick towns, not industries, to fund," The Conversation.

#### **June 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: have we finally reached 'peak' house prices?" The Conversation.

**Professor Richard Holden** wrote an article on "Save Towns, not Industries," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: what does Treasurer Morrison mean when he says we're 'growing into the growth'?" The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: Australia is facing an interest rates dilemma," The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: it will take more than asking for a pay rise to fix Australia's wages problem," The Conversation.

**Professor Richard Holden** wrote an article on "We might as well say goodbye to SA," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: how likely is another financial crisis? It comes down to what we believe," The Conversation.

#### **July 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: the RBA was right to keep rates on hold," The Conversation.

**Professor Richard Holden** wrote an article on "Vital Signs: the RBA's still longing for Goldilocks growth," The Conversation.

#### **August 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: that feeling you get when the economy can't be explained by economic models," The Conversation.

**Professor Richard Holden** wrote an article on "Economics of a Sound Marriage," the Australian Financial Review.

**Professor Richard Holden** wrote an article on "Vital Signs: RBA rates decision stuck between jobs growth and household debt," The Conversation.

**Professor Richard Holden** wrote an article on "Payday lenders: The dark truth is that we need them, but it doesn't have to be this way," ABC news.

**Professor Richard Holden** wrote an article on "Vital Signs: don't expect much from the central bankers at Jackson Hole," *The Conversation*.

**Professor Richard Holden** wrote an article on "Vital Signs: living in the past won't distract from our current economic woes," *The Conversation*.

#### **September 2017**

**Professor Richard Holden** wrote an article on "Vital Signs: don't count your economic chickens before they hatch," *The Conversation*.

**Professor Richard Holden** wrote an article on "'Choosing Openness' grapples with the big questions," *Lowy Institute Interpreter*.

#### **October 2017**

**Professor Richard Holden** wrote an article on "Trump can make us uncompetitive at the stroke of a pen," *the Australian Financial Review*.

**Professor Richard Holden** wrote an article on "Vital Signs: the data is mixed but worrying signs from mortgagees," *The Conversation*.

**Professor Richard Holden** wrote an article on "Richard Thaler: the Nobel economist changing our behaviour," *the Australian Financial Review*.

**Professor Richard Holden** wrote an article on "Vital Signs: the spooky mortgage risk signs our bankers are ignoring," *The Conversation*.

**Professor Richard Holden** wrote an article on "Vital Signs: economics can't explain why unemployment and inflation are both low," *The Conversation*.

#### **November 2017**

**Kevin Fox** was interviewed on "Transactions data: a smarter method for measuring inflation", *Business Think*, November 2017 Issue.

**Professor Richard Holden** wrote an article on "Vital Signs: the US economy is outpacing Australia's and we should all ask why," *The Conversation*.

**Professor Richard Holden** wrote an article on "Vital Signs: business conditions are peachy, so why aren't businesses investing?" *The Conversation*.

**Professor Richard Holden** wrote an article on "Australia's tenuous place in the new global economy," *The Conversation*.

**Professor Richard Holden** wrote an article on "Vital Signs: Australia's mining boom transition is on shaky ground," *The Conversation*.

**Professor Richard Holden** wrote an article on "Labor Should Take Heed," *the Australian Financial Review*.

**Professor Richard Holden** wrote an article on "Vital Signs: five economic red flags to watch for in 2018," *The Conversation*.

**Professor Richard Holden** wrote an article on "Vital Signs: Australia heads into 2018 with mixed economic signals," *The Conversation*.

## 9. Details of research supervision and teaching activities carried out by CAER members on behalf of academic units

### 9.1 Research supervision

Postgraduate research supervision activities within CAER are coordinated with the relevant Schools/Faculties (mainly the School of Economics and UNSW Business School), in accordance with the relevant UNSW policies, procedures and delegations. The following is a list of research supervision carried out by CAER members in 2017 as part of their initiative activities. CAER members are marked in bold.

#### **PhD Supervision**

Supervisor: **Kevin Fox**

Adam Gorajek: *Crossing Econometrics and Measurement*

In progress

Supervisor: **Kevin Fox**

Glenn Fahey: *Firm Level Dynamics*

In progress

Supervisor: **Kevin Fox**

Shipei Zeng: *Topics in Measurement Economics*

In progress

Supervisor: **Kevin Fox**

Khanh Hoang: *Accounting for Natural Capital in Productivity Analysis*

In progress

Supervisor: **Richard Holden**

*Muse Garcia-Demie*

School of Economics, UNSW, 2017-2018 (submitting March 2018)

Supervisor: **Richard Holden**

*Johannes Hoelzemann*

School of Economics, UNSW, 2017-2018 (submitting March 19, 2018)

Supervisor: **Richard Holden**

*Barton Lee*

School of Economics, UNSW, 2017-2018 (ongoing).

Supervisor: **Rosalind Dixon**

*Shreeya Smith*

UNSW Law School.

Supervisor: **Rosalind Dixon**

*Jemima Roberts*

UNSW Law School

Supervisor: **Rosalind Dixon**

*Khanh Hoang*

UNSW Law School

Supervisor: **Rosalind Dixon**  
*Bhatara Reza*  
UNSW Law School

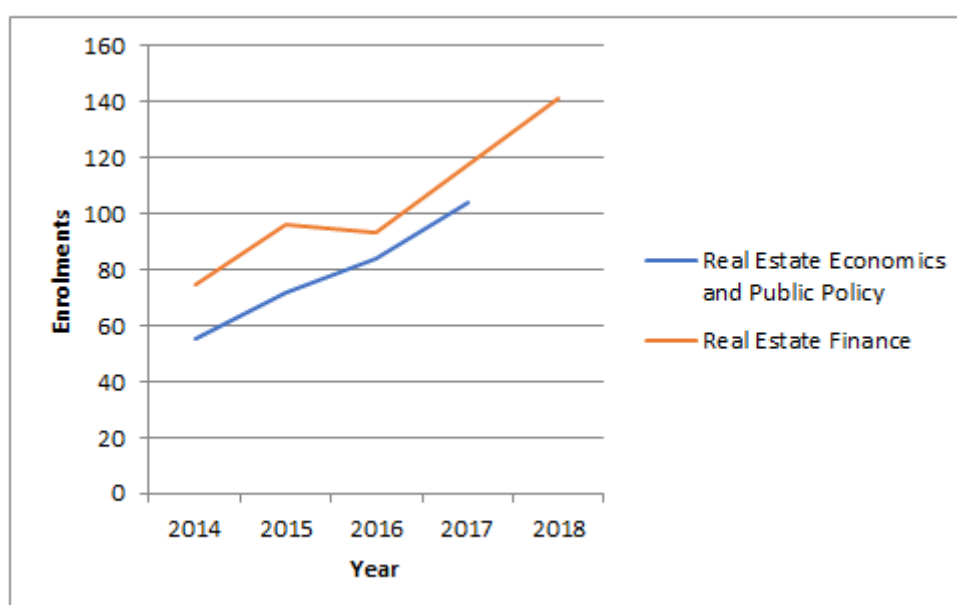
## 9.2 Teaching activities

### **Real Estate Initiative**

- In 2017 twenty-five students have completed the real estate studies major, which is a great achievement for the Real Estate Initiative since the establishment of the major in 2014. The real estate major continued to see an increase in students' enrolments. In particular, enrolments for the "Real Estate Economics and Public Policy" course has increased to 94 in 2017, and twelve current students chose the real estate major as their specialized major.

Dr Nigel Stapledon, member of the Real Estate Initiative taught the "Real Estate Economics and Public Policy" course which was delivered to both undergraduate and postgraduate students in the second semester of 2017. The delivery of the two courses was coordinated with the UNSW Business School in accordance with the relevant UNSW policies and procedures.

### **Enrolments in Key New Courses**



## **10. Details of significant managerial or personnel changes during 2017**

Several managerial and personnel changes took place in 2017:

- Dr Stapledon continued his association with CAER on a voluntary basis and the Director is in the process of officially appointing him as a visiting Real Estate Research Fellow within CAER (a non-remunerated position).



- In July 2017 Associate **Professor Mariano Kulish** ceased his role as CAER's Deputy Director.

CAER would like to thank Associate Professor Mariano Kulish for his contribution to the Centre's activities and to wish him well in his future endeavors.

## **11. A record of dates and attendance at meetings of CAER's Steering Committee**

No meetings were held during the year 2017 due to official absences, the appointment of a new Associate Dean (Research) and scheduling difficulties.