



27 November 2017

Hon Grant Robertson  
Minister of Finance

By email: [REDACTED]

Dear Minister,

## Triannual Report – 1 July 2017 to 31 October 2017

I am pleased to submit the Commission's first triannual report for the 2017/18 year. While intended to cover the reporting period 1 July 2017 to 31 October 2017, this report also comments on matters outside of the reporting timeframe where relevant.

Work is progressing on the two inquiries initiated earlier in 2017: *State sector productivity* (measuring and improving state sector productivity) and *Low emissions economy* (transitioning to a low emissions economy). The Commission published issues papers for both within the reporting period. The issues paper for the *State sector productivity* inquiry was published in July, closely followed the *Low emissions economy* issues paper in August 2017.

The latter generated a great deal of interest and the Commission received 130 submissions on the issues paper. While the state sector productivity inquiry attracted less interest, the inquiry is proceeding well and the team are scheduled to release a draft report in December 2017.

The Commission continues to publicise its commentary about New Zealand's productivity performance. The document – *Achieving New Zealand's productivity potential* - was published in November 2016 and has received ongoing interest. The Commission has recently published two papers on innovation-based research using the longitudinal business database. In addition, the Commission's research function continues its work on spatial economics and reallocation and employment dynamics. Working papers will be published in 2018.

Overall the Commission tracked to budget for the period.

We look forward to meeting you in December and discussing in person our role, areas of focus and opportunities.

Yours sincerely

**Murray Sherwin**  
Chair

# Triannual Report: 1 July 2017 to 31 October 2017

## Report structure

- Operational delivery
- Financial performance
- Capability
- Priorities and issues ahead

## Operational delivery

This table is a high-level summary of our operational delivery. Green indicates progress according to schedule; orange indicates delays or other issues.

	Status	Comment
Inquiries		<p>The Commission published an issues paper for the <b>State sector productivity</b> inquiry on 27 July 2017.</p> <p>The Commission also published the <b>Low emissions economy</b> issues paper on 9 August 2017.</p>
Research		<p>Commission research outside of the inquiries continues with the recent publication of papers on innovation. The Commission's work on spatial economics (regional development) is proceeding. By better understanding the process of growth and development across New Zealand's cities, we hope to use this work to build a strong evidence base for regional development policy. With that in mind, we are planning to host a conference on regional development issues in mid-2018.</p> <p>During the reporting period, the Productivity Hub finalised contracts for work on competition as part of our ongoing efforts to understand New Zealand's productivity performance.</p>
Promoting understanding		<p>The Commission continues to promote understanding of productivity related matters through its inquiries and research programme. There is significant interest in the low emissions economy inquiry. The Commission has had 90 engagement meetings and received 130 submissions in response to the issues paper. With less general appeal, the state sector productivity inquiry is progressing well and a draft report will be published in December 2017. The Economics &amp; Research team is continuing to work with other government agencies and share its research and insights with government, wider research communities and businesses.</p>

## Inquiry: *Measuring and improving state sector productivity*

	Status	Comment
Right focus		<p>The terms of reference for the inquiry ask the Commission to undertake an inquiry into how the New Zealand state sector can effectively measure and improve productivity in core public services with a particular focus on health, education, justice and social support. The Commission is about to publish its draft report which (as per the terms of reference):</p> <ul style="list-style-type: none"> <li>• Provides guidance on how to measure efficiency/productivity in public services, taking into consideration measurement issues and how imperfect measures are most appropriately and usefully employed.</li> <li>• Considers the appropriate role of efficiency/productivity measures in public sector performance frameworks and the capability and systems that are needed to better measure, understand and improve productivity.</li> </ul>
High-quality work		<p>The OECD notes the lack of measures to appropriately capture public sector productivity beyond the system of National Accounts, internationally. The work being undertaken by this inquiry is therefore pushing into uncharted territory. The quality of the work has been commended by professor Patrick Dunleavy of the London School of Economics (one of the few scholars investigating how to measure the productivity of UK public services). We intend to further test the quality of our work by conducting our usual post-inquiry evaluations consisting of (i) an online survey of all inquiry participants; (ii) an independent expert review; and (iii) an independently conducted focus group.</p>
Effective engagement		<p>Demonstrating how to measure state sector productivity will be neither enduring nor successful unless state sector agencies are engaged and along for the journey. The inquiry team has found it difficult to meaningfully engage with core agencies in the justice, health, education and social services sectors and in some cases has had to work with publicly available data to produce measures without agency input. The team has, however, been able to work with the New Zealand Police and MSD on measurement projects that use their existing administrative data and systems to answer productivity questions of interest to these agencies. The Commission is also working with the district health boards' body TAS to get a "health sector view" about the use of data and the interpretation of health system measures.</p>
Clear delivery of message		<p>The key message of this inquiry is clear and is articulated in the forthcoming draft report: the state sector needs to measure its productivity. The expected responses from agencies are that it is too hard, too expensive and not relevant to what they need to do. This inquiry</p>

		demonstrates that we can measure productivity and explains why we should.
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## Inquiry: Transition to a low emissions economy

	Status	Comment
Right focus		<p>The new Minister for Climate Change has indicated that he has no modifications to our terms of reference and we should continue our current inquiry process.</p> <p>The low emissions economy issues paper was released on 7 August 2017. The Commission has received an overwhelming response with 130 submissions received. This response underlines the deep and diverse interest in climate change policy.</p> <p>There is a high level of engagement with a diverse group interested in climate change and mitigation policy. The high level of interest in the inquiry has also seen many requests for meetings from interested parties, and those wishing to talk to their submission. We have now completed over 90 engagement meetings.</p> <p>The inquiry team have attended over 12 conferences and seminars relating to climate change research and policy.</p>
High-quality work		<p>There was a very positive response from officials and inquiry participants complimenting the high quality of the paper and the way it has captured the large number of issues in the climate change policy domain.</p> <p>We have collaborated with <i>Motu Economic and Public Policy Research</i> to convene four half-day roundtables that will bring together diverse experts from New Zealand and overseas to shed new light on particularly thorny questions for New Zealand's low-emission transition. Other roundtable partners are the Institute for Governance and Policy Studies at Victoria University of Wellington and the Environmental Defence Society.</p> <p>Two substantial consultancy projects have been commissioned to feed into the draft report:</p> <ol style="list-style-type: none"> <li>1. <i>Towards a very low emissions electricity market</i> (Sapere, Wellington)</li> <li>2. <i>Modelling the transition pathways to a low emissions economy</i> (Vivid Economics). Vivid Economics are based in London and are leading a consortium that includes Concept Consulting and Motu Economic and Public Policy Research. This consortium provides extensive experience in scenario analysis, and the modelling and analysis of climate policy which is vital to delivering on our TOR.</li> </ol> <p>A research working paper has been published on the U.K. <i>Climate Change Act 2008</i>. The working paper examines the background to the Act's introduction, its key design features and performance to date. The paper also identifies lessons from the U.K. experience that may be relevant for New Zealand.</p>

Effective engagement		<p>There is a high level of engagement with a diverse group interested in climate change and mitigation policy. The high level of interest in the inquiry has also seen many requests for meetings from interested parties, and those wishing to talk to their submission. We have now completed over 90 engagement meetings.</p> <p>The inquiry is liaising with representatives from the Climate Change Iwi Leadership Group and have sent material for review and feedback. We have also sent material for review and feedback to Ngāi Tahu, who provided an excellent submission to the inquiry and are very keen to contribute to the draft report.</p> <p>In October 2017 members of the inquiry team attended the 21st Annual Chatham House Climate Change Conference in London - <i>Climate Change 2017: Politic, progress and potential</i>. The conference had a quality line-up of international speakers and experts on climate change research and policy.</p> <p>While in the UK, the Commission met with relevant climate change policy experts, government agencies, and think tanks; including the Committee on Climate Change, the Department for Business, Energy and Industrial Strategy; Bank of England; Confederation of British Industry; and Grantham Institute on Climate Change. We also took the opportunity to meet with people at the OECD; the International Energy Agency; and the European Climate Foundation in Paris.</p>
Clear delivery of message		<p>The issues paper released in August 2017 has been complimented by a diverse cross-section of inquiry participants for its comprehensiveness and clarity.</p> <p>Key messages and issues in the low emissions economy issues paper have been picked up by the media. This underlines the high level of public interest in climate change issues and emissions mitigation policy.</p> <p>For the first time, the Commission used animation to showcase the inquiry and encourage participation. The animation aimed to use a different communication tool to garner interest in the inquiry and appeal to a wider audience. We have received some very positive feedback on the animation and will consider how this communications tool can be used for the draft report next year.</p>

## Previous inquiries

After each inquiry is completed, it is evaluated against a set of inquiry performance measures, using the following external sources of feedback:

- an independent expert review
- an independently facilitated stakeholder focus group
- a survey of inquiry participants.

Reviews have been completed for both the *Better urban planning* and *New models of tertiary education* inquiries, and are available on the Commission's website under each inquiry topic.

The Commission is still waiting for the Government's formal response to the *Better urban planning* inquiry. An earlier inquiry, *Boosting productivity in the services sector* (2014) is the only other report of the 10 produced to date without a formal response.

## Research

Work has been completed on innovation and our work on spatial economics (regional development) is proceeding.

### Innovation and firm performance

We have completed our work on innovation and released the final two papers in this research stream.

*Innovation and the performance of New Zealand firms* by Simon Wakeman & Paul Conway:

This paper looks at the impact of innovation on the performance of New Zealand firms. Results show that innovating firms grew more quickly than non-innovators but did not experience improved productivity outcomes. However, digging into the relationship between innovation and firm performance reveals that firms in the manufacturing sector improved their productivity performance as a result of innovation. Firms that were younger or had access to international markets also tended to experience higher productivity growth following some types of innovation.

*The impact of R&D grants on the performance of New Zealand firms* by Simon Wakeman:

This paper evaluates the impact of R&D grants on the firm performance. Given data constraints, the analysis covers the period 2004 to 2012, which precedes the creation of Callaghan Innovation in 2013. Although the paper does not directly evaluate the performance of Callaghan Innovation's R&D grants programme, it does illustrate the insights that can be gained from firm-level analysis of government interventions. Results show that grant recipients tend to increase innovation, and that this flows through to higher employment and higher output per worker. However, grants tend not to increase multi-factor productivity, which is generally taken to represent a firm's "technology".

We have also written a summary on what we have learnt from our research on innovation and how it can be used to support innovation policy, particularly firm-level interventions aimed at lifting innovation.

### Spatial productivity (Regional development)

Our work on spatial productivity (regional development) is progressing and we have presented early draft results within the researcher community. The purpose of the work is to better understand the reasons for differences in income and population growth rates across New Zealand's cities. Using data back to the mid-1970s, we are exploring how and why patterns of industry employment changes have differed across cities. We are also exploring how the distribution of plant size and plant growth rates differs across cities. Both pieces of work are intended to complement future work that will directly estimate the productivity of firms operating in different cities.

By better understanding the process of growth and development across New Zealand's cities, we hope to use this work to build a strong evidence base for regional development policy. With that in mind, we are planning to host a conference on regional development issues in mid-2018.

### Additional projects

The Commission is also working with two international academics on additional research projects focused on improving our understanding of key aspects of New Zealand's productivity performance:

#### Firm absorptive capacity:

Absorptive capacity (AC) refers to a firm's ability to internalise external knowledge and use it to improve their productivity. If firms are not able to learn, then new strategies or technology designed to help firms become more productive are likely to have only limited impact. This project uses BOS data from 2005-2015 to understand the different elements of AC, to examine how AC differs across different firms, and to investigate

the impact of AC on the propensity of firms to innovate, do R&D and export.

#### Products, Establishments, and Industries in International Trade:

This project aims to disentangle the sources of industry growth (for example new firms, new exporters, existing exporters expanding into new markets, introduction of new products) following trade liberalisation. The project will initially look at the 2008 FTA with China and the Trans-Pacific Strategic Economic Partnership Agreement focusing on Singapore and Chile. It may then investigate a wider array of reforms and time periods to capture the impact of trade liberalisations on services firms.

### **The Productivity Hub**

The Productivity Hub is a cross-agency partnership of agencies which aims to improve how policy can contribute to the productivity performance of the New Zealand economy and the wellbeing of New Zealanders.

During the reporting period, the Hub finalised contracts for some work on competition as part of our ongoing efforts to understand New Zealand productivity performance. There are two bundles to this work. The first aims at building the data infrastructure necessary to measure competition in different parts of the New Zealand economy. The second is aimed at assessing the impact of competition and market scale on the performance of New Zealand firms. Importantly for the Commission, part one includes a project on updating our firm-level measures of productivity, which are currently only available from 2000 to 2012.

The Productivity Hub has also continued to run a successful events programme, with a number of recent roundtables including:

- Managing for performance in the New Zealand State Sector, Derek Gill, NZIER, 4 July 2017
- Encouraging water trading in England and Wales, David Black, Ofwat, 19 July 2017
- The economics of social services, Dr Richard Meade, Auckland University of Technology, 18 August 2017
- "Lean" and public sector productivity: panacea or paradox, Professor Zoe Radnor, University of Leicester, 23 August 2017
- Is the Heckman Curve consistent with the empirical evidence on programme returns by age? Dr David Rea, MSD, and Dr Tony Burton, Treasury, 1 September 2017
- The automation advantage, Nicolo' Andreula, AlphaBeta, 6 September 2017
- Asia-Pacific economic integration and New Zealand's productivity potential, Dr Alan Bollard, APEC Secretariat, and Paul Conway, New Zealand Productivity Commission, 3 October 2017
- Hospital performance analytics, Professor Mart Connor, Centre for Health Innovation, Griffith University, 30 October 2017
- Does arguing over knowledge make a difference to policy decision making, Dr Amelia Sharman, New Zealand Productivity Commission, 31 October 2017

### **Publications**

Paul Conway's paper "***Productivity and changing technology***" was published in the 2017 General Election edition of *Policy Quarterly*. This article outlined the possible impacts of new technologies and changes in the global trading environment on New Zealand. It also briefly outlined the broad policy actions required to make the most of rapid technological change and mitigate any negative side effects.

We will soon be publishing a Productivity Commission Working Paper on "***Population change and construction in regional New Zealand***" by Andrew Coleman and Ozer Karagedikli. This paper uses regional variation in population growth rates to investigate how population growth affects residential construction across New Zealand and uses the results to map Auckland's housing shortfall.

### **Quality adjustments to sector level data - tertiary**

We will publish a Working Paper on "Estimating Quality-Adjusted Productivity in Tertiary Education" by Patrick Nolan, Professor Norman Gemmell (Victoria University of Wellington) and Grant Scobie (independent

researcher). This paper illustrates approaches to quality adjusting sector level data in the tertiary sector. It follows a working paper on quality adjustments to sector level data on schools.

## Financial performance

Overall the Commission tracked to budget for the period. The first four months of the year have largely been within budget and variances are insignificant.

The tables below provide a summary of financial performance across the Commission, and in output areas, for the reporting period:

### All financial activity

Financial Performance (\$000's)	4 months to November 2017		2017/18 year
	Actual	Variance to budget	Forecast
Income	1,677	(2)	5,032
Expenditure	1,679	3	5,040
<b>Net surplus</b>	<b>2</b>	<b>1</b>	<b>(8)</b>
<b>Total equity</b>			<b>500</b>

### Output cost breakdown

Output performance (000's)	Actual (4 months to end-Nov 17)	Variance to budget (4 months to end-Nov 17)	Allocation remaining (full year)
Inquiries	1,438	(4)	2,972 (67%)
Research	241	7	389 (62%)

## Capability

There has been some changes to the Commission's resources during this quarter. Both inquiries are challenging and given the breadth and depth of the topics, the Commission has had to carefully balance in-house resource with external specialist resource.

We have had the benefit of the following secondments to help with the inquiries:

- Sandra Moore, Principal Adviser with the Ministry of Social Development has been seconded to the state sector productivity team until December 2017.
- Chris Holland from the Ministry for the Environment is working with the low emissions economy team two days a week.

Other additional resource for the inquiries:

- Teresa Weeks has joined the low emissions economy inquiry. Teresa brings legal expertise to the inquiry and has worked on climate change issues in the United Kingdom.
- The Productivity Commission and the Chair in Public Finance at Victoria University of Wellington have jointly provided a scholarship for an undergraduate student (Huon Fraser) to undertake research on health sector productivity. This work will contribute to the state sector productivity inquiry.

## Priorities and issues ahead

On the horizon for the next triannual period (November 2017-February 2018) and beyond:

- December meeting with the Minister of Finance to introduce the Commission and update progress on the inquiries.
- The *State sector productivity* draft report will be publicly released in December 2017.
- The *Low emissions economy* draft report will likely be publicly released in March 2018.
- In February 2018, the Productivity Hub is hosting the 2018 Productivity Conference – Technological Change and Productivity

### Promoting understanding

The Commission has been promoting understanding of productivity issues primarily through an extensive speaking and presentation programme to a wide range of audiences, across both our inquiry and non-inquiry work. Our work through the Productivity Hub also increases the profile and understanding of productivity issues. The Commission is working with other agencies to develop a consistent and accessible introduction to productivity and why it matters.

#### Speaking engagements

The Commission's Chair (Murray Sherwin) was invited to speak at a variety of events during the last quarter including being on a panel at the OECD Global Forum on Productivity in Budapest.

Domestic engagements included the Urban Development Capacity Conference, the Infrastructure New Zealand Building Symposium, the Metro Mayors forum, the Environmental Defence Society Conference and two events with the New Zealand Planning Institute (Christchurch and Auckland).

Other key speaking engagements for the Chair included the Competition Law Policy Institute of New Zealand and the Government Law Conference.