Impact Evaluation of COMPLEX PORTFOLIOS

Queensland Government

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Acknowledgement of Country

We begin today by acknowledging the Traditional Custodians, the Turrbal and Yuggera people. We pay our respects to their Elders past, present and emerging. We extend that respect to all First Nations people here today.

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Presentation Outline

1. Introduction - The Advance Queensland Initiative
2. Approach to Evaluation
3. Key learnings – Cost Benefit Analysis
4. Conclusion – Impact, Lessons and Success Factors
5. Questions

What do we mean by complex?

Complex

Nonlinear, Adaptive, Uncertain, Dynamic

SYSTEMS APPROACH

- Change intervention
- Multiple actors (individuals, institutions)
- Networks of relationships and connections

Flagship initiative

LAUNCHED 2015

Scaled to **$755 million**

140 programs and activities, delivered by **9 gov't agencies**

5 KEY STRATEGIES

Coordinated by **Innovation Division**

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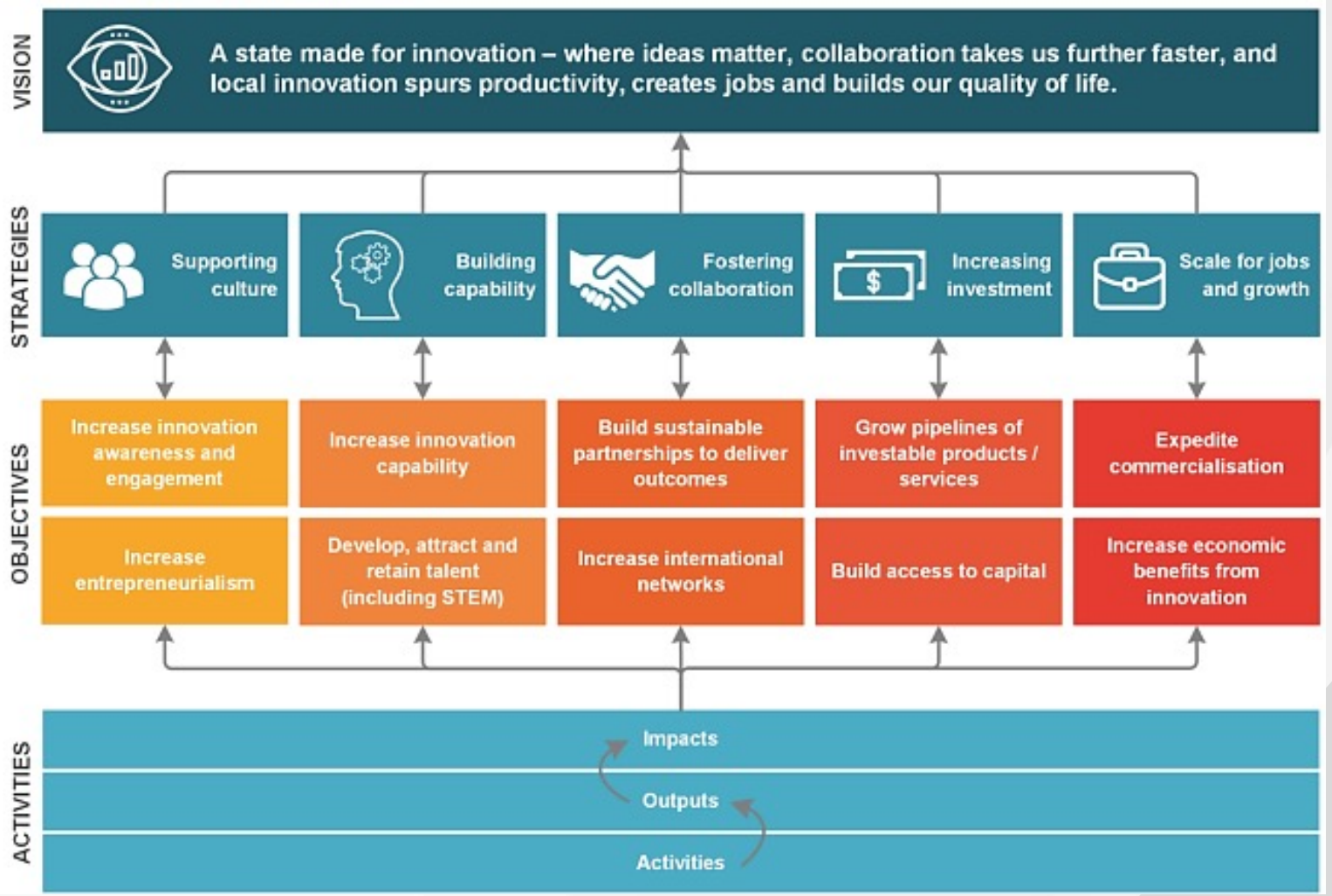


About the evaluation

Context

Focuses on the whole of AQ initiative and innovation systems level from 2015 to 2021.

Commissioned to assess the effectiveness and return on investment for AQ.

Key input into next AQ strategy and budget bid for additional funding

COMPLEXITIES

1. The innovation system is multidimensional and complicated to measure. Selecting appropriate indicators and data quality.
2. Getting buy-in and engagement of a diverse range of stakeholders in the evaluation journey.
3. Funding and complexity increased over time - objectives, program types and delivery modalities.
4. Many foundational concepts have no shared definition across programs and agencies *e.g. 'startup', 'innovation', 'knowledge economy'.*

Full report: www.advance.qld.gov.au/advance-queensland-evaluation

Evaluation Methods

Data collection - mixed methods using a variety of data sources.

Analysis:

a) Contribution Analysis
b) Analysis of Unintended Outcomes
c) Cost Benefit Analysis
d) Attribution Analysis

COMPARATORS

Compare change over time (growth in Qld knowledge economy since AQ investment to before investment)

Compare change by location (growth in Qld since AQ investment compared to other states and territories)

Compare change by group (performance of AQ participants and recipients with those that did not engage with AQ programs)

Data sources

Documents and literature

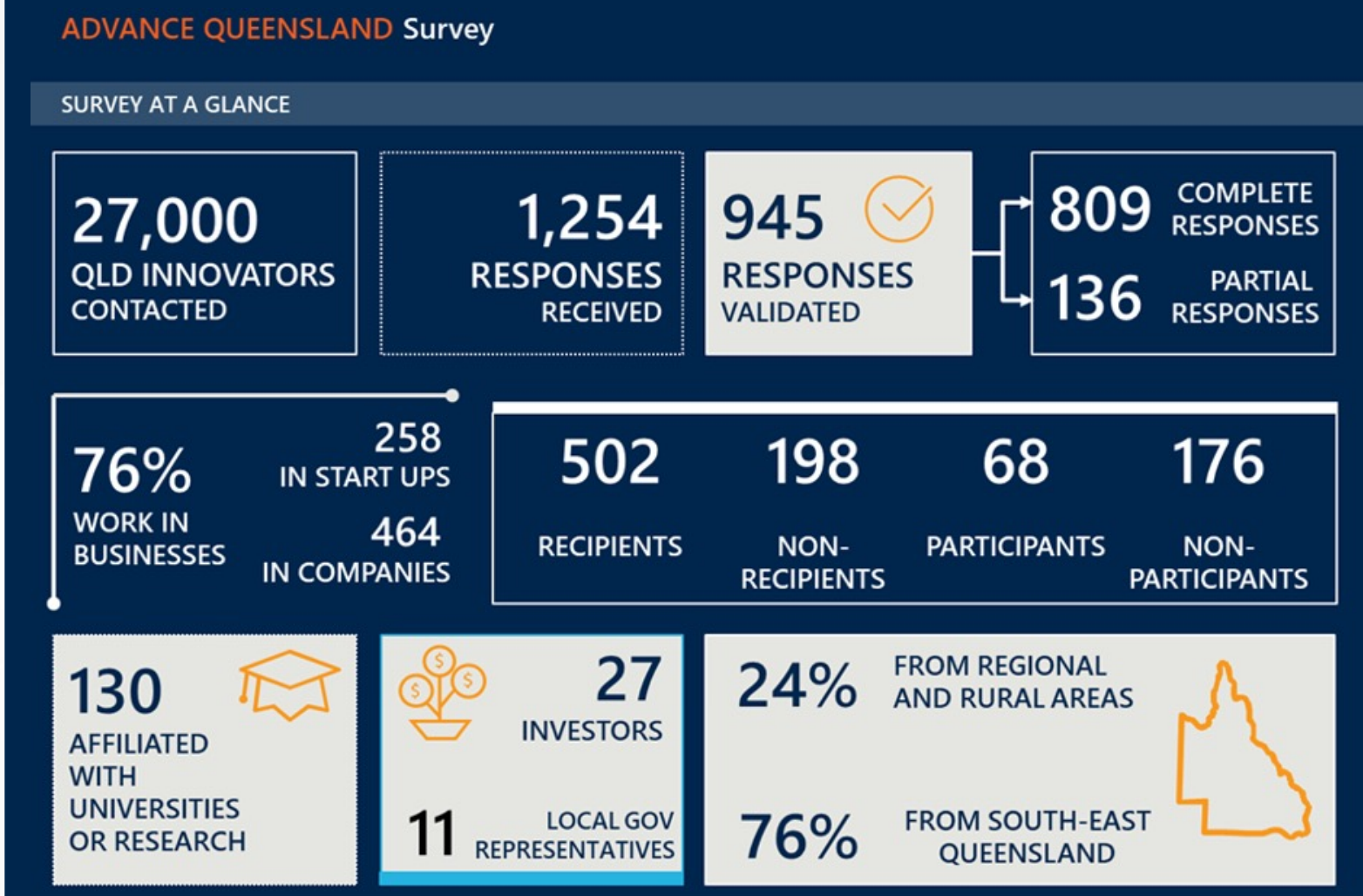
AQ program performance data
(2016 - 2021)

Publicly available data
(e.g. Australia Bureau of Statistics (ABS))

Other restricted datasets
(e.g. Payroll tax, ABS Business Longitudinal Analysis Data Environment, BLADE)

Informants
(interviews, focus groups)

Survey of Qld businesses and program participants



Insights from the economics stream of evaluating a portfolio of government programs

These figures are estimates and subject to some limitations, and wide error margin around the benefits. Please refer to the caveats in the Efficiency section for more information on how to interpret these numbers.

Results indicate AQ achieved a central case **benefit cost ratio** of **1.6**

SENSITIVITY ANALYSIS

Discount rate	Total benefits	Total costs	Net benefit	Benefit cost ratio
4%	$2.32bn to $3.03bn	$1.27bn	$1.05bn to $1.76bn	1.8 to 2.4
7% (central case)	$2.19bn to $3.00bn	$1.35bn	$0.84bn to $1.65bn	1.6 to 2.2
10%	$2.09bn to $2.98bn	$1.44bn	$0.66bn to $1.55bn	1.5 to 2.1

Treatment of government funds used to “leverage” private investment, or exports, in a CBA

Leverage (or “dollar matching”) of grants

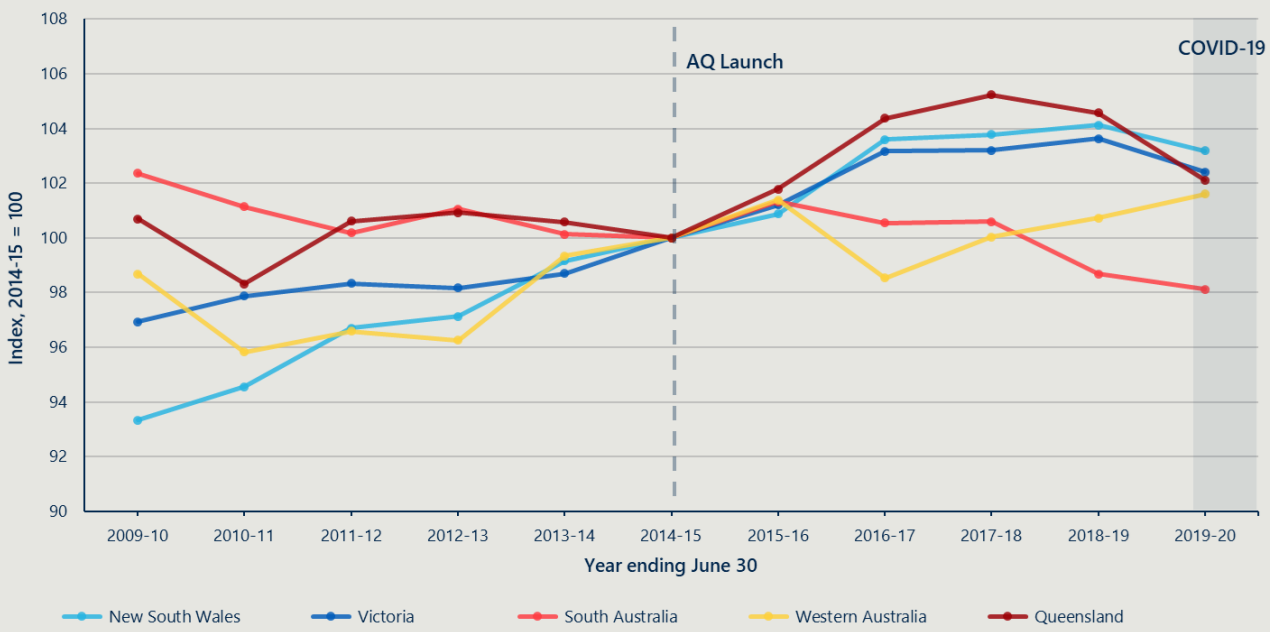
1. Leverage (or ”dollar matching”) of grants is often of interest to policy makers, to ‘amplify’ the funding available.
2. However, the total funds invested from all residents in the jurisdiction determines the total economic cost.
3. Government grants that leverage funding from outside the jurisdiction (e.g. Cwth funds) are less likely to displace investment elsewhere in the jurisdiction.

Exports versus domestic sales

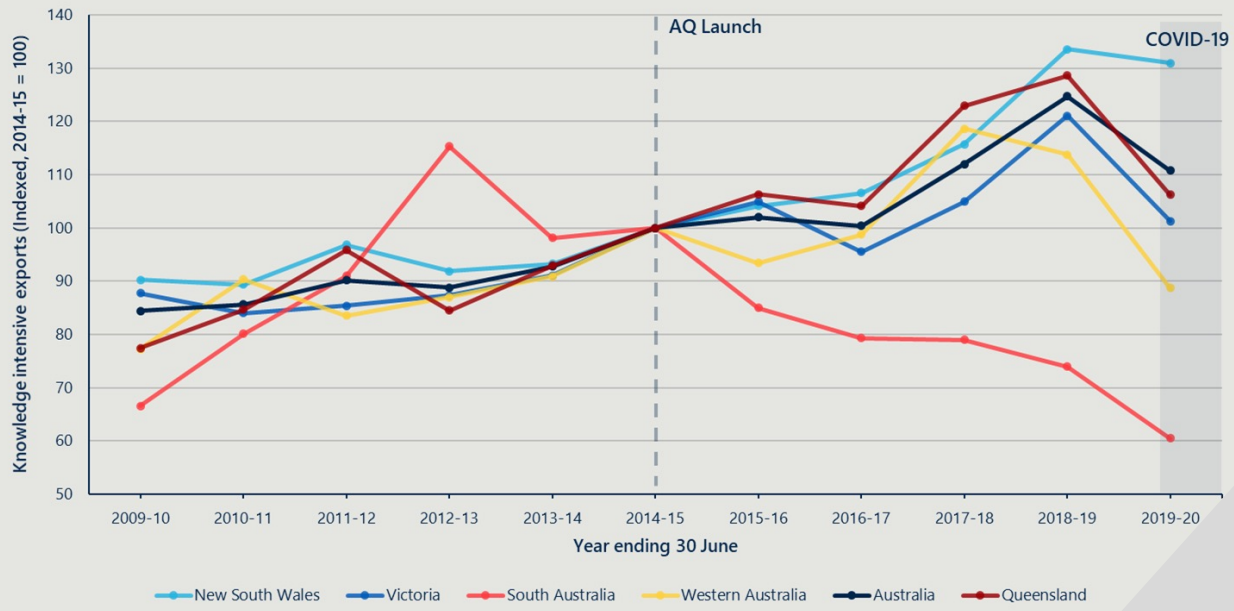
1. Not all growth in sales of Queensland businesses are of equal economic value.
2. Increased exports are less likely to cannibalise market share of other Queensland businesses than domestic sales.
3. Only the value-added component of exports (and not total export revenues) were included in the CBA.

If the program is large, macroeconomic data can be used to measure benefits

Multifactor productivity comparison, index 2014-15 = 100



Knowledge intensive exports, index 2014-15 = 100



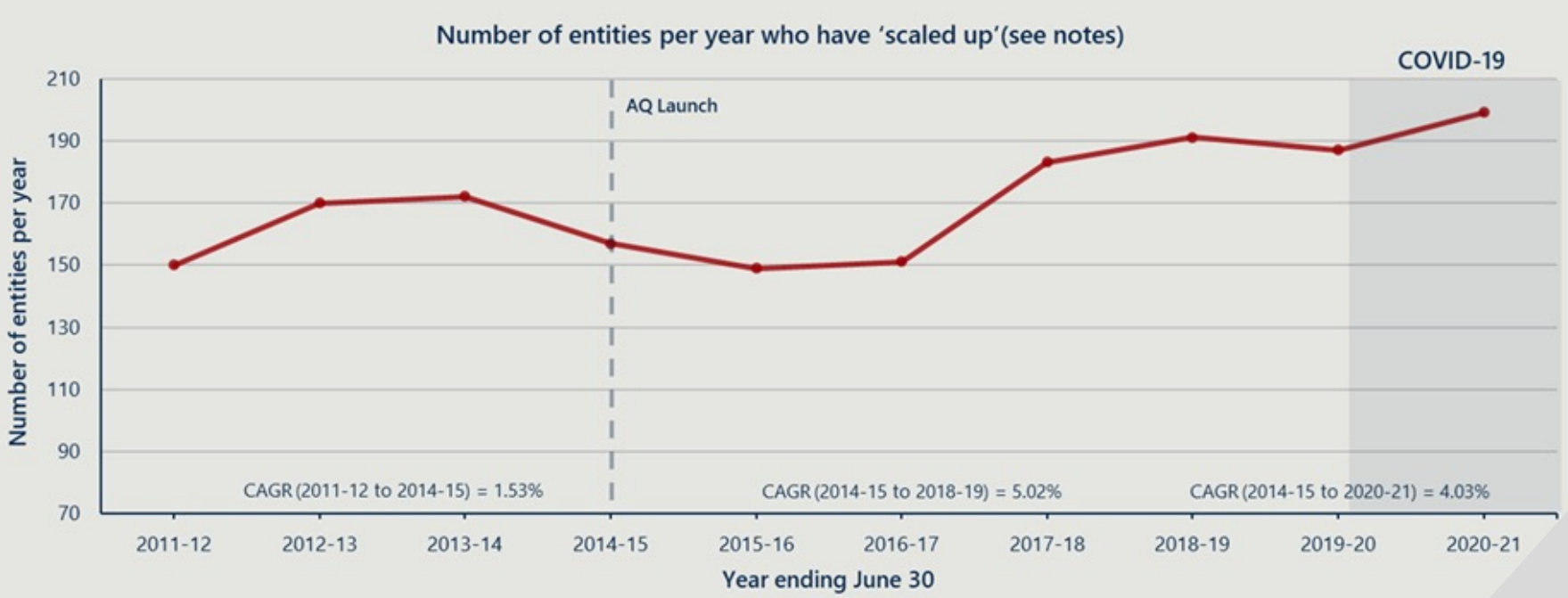
Comparisons with other jurisdictions (particularly similar resource-rich States like WA) indicate a divergence in economic performance due to different approaches to innovation policy

Making use of novel datasets: BLADE and payroll tax data

When evaluating large government programs, it can be possible to access datasets usually unavailable

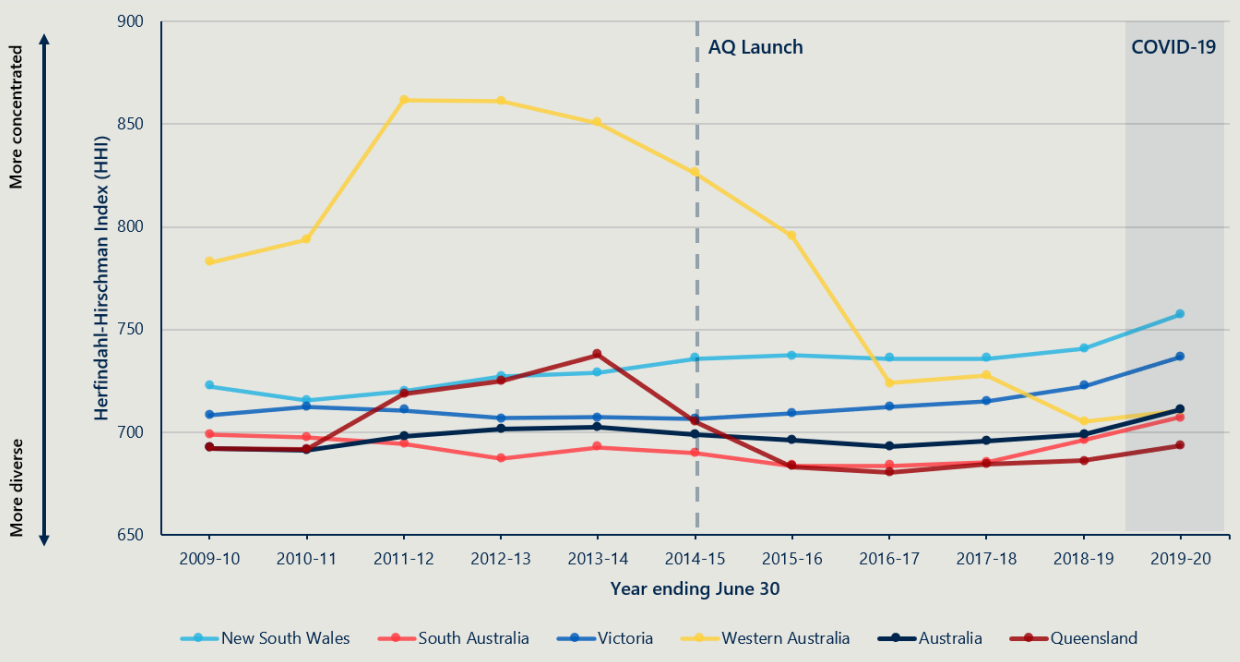
- BLADE (Business Longitudinal Analysis Data Environment) – unit record data on both firms participating in AQ and a quasi-control group of non-participant firms.
- Payroll tax data gave new insights on firms scaling up (payroll growing from <$10m to >$10m).

Entities that 'scaled-up' their payroll to exceed $10m for the first time

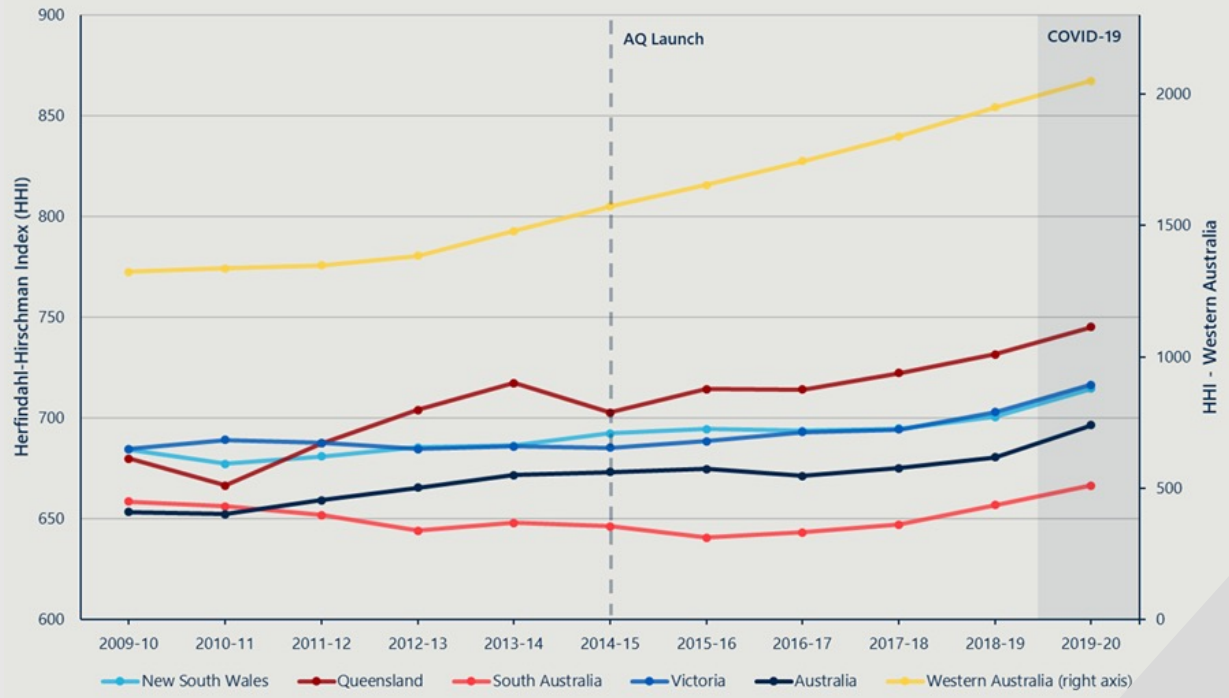


Measuring concepts such as ‘economic diversification’

Herfindahl-Hirschman Index – *excluding* mining



Herfindahl-Hirschman Index – *including* mining



The lower the HHI, the more diversified is the economy, and the higher the HHI, the less diversified is the economy. Note WA uses RHS axis when mining is included.

Conclusion – impact, lessons and success factors for evaluating complex portfolios

Use of evaluation insights in policy and program design cycle

Uses of insights	Examples
Informing Government policy and funding	• Key input into the *AQ Future Economy Roadmap 2022-2032* and associated budget bids. • Informed design of new and enhancement of existing programs.
Enhance shared understanding	• Understanding of economic impact of AQ and innovation, especially Cost Benefit Analysis. • Use of insights in media announcements and responses.
Infusing evaluative thinking into organisation	• Evaluation and program assessment is part of the program life cycle. • Wider acceptance of tools like program logics and theory of change models to understand expected outcomes. • Set a benchmark for evaluation of Qld government investment.
Increasing engagement and ownership	• Program teams participate in evaluation processes and take more ownership and interest in their data.

Lessons & success factors for evaluating complex portfolios

LESSONS

1. Identify and articulate an explicit links between programs and portfolio objectives.
2. Clearly define the measures for impact at the program, strategy and system levels.
3. Collect data at multiple levels.

SUCCESS FACTORS

- Multi-agency and multi-disciplinary advisory groups (including economics, government policy, programming and evaluation).
- Engagement throughout the evaluation to enable stakeholder input at all stages and ownership of insights.
- Collaboration between the Department and Nous Group.
- Use of mixed methods, including comparator groups to isolate the net economic impact.

Questions

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