

Data to deliver better policy

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Outline

- DIIS Data Strategy
- OCE datasets and maps
- An overview of how the OCE utilises BLADE
- Program participant analytics and tools
- Firm-level OCE research insights
- How DIIS and its partner agencies contribute to the DIPA initiative



DIIS data strategy

Data Capabilities



Our people are data literateOur people understand data

- Our people are aware of and can manage the risks involved in using data
- Our people are able to tell compelling data stories

Data Culture



- Our people value data and evidence
- Our people talk positively about data stories and the data support available to them
- Government and industry value our services and advice

Data



- Our people can access quality data, simply and easily
- Members of the public and third parties can access quality data
- We are trusted managers of data
- We have the social license for how we use data

Analytics and Visualisation



- Our people can access advanced analytics and visualisation tools and resources
- Our decisions are optimised with trusted insights

ACT

SUCCESS FACTORS

Increase staff data and analytics skills, engagement, and empowerment.

Secure, well-managed and governed data

Data-driven policies, programs and services we provide to the Australian businesses and citizens

STRATEGIC IMPAC



Contribute to creating jobs and economic growth and by extension the lives of Australians

OCE Datasets and Maps

There are various datasets and maps that inform our work

Datasets

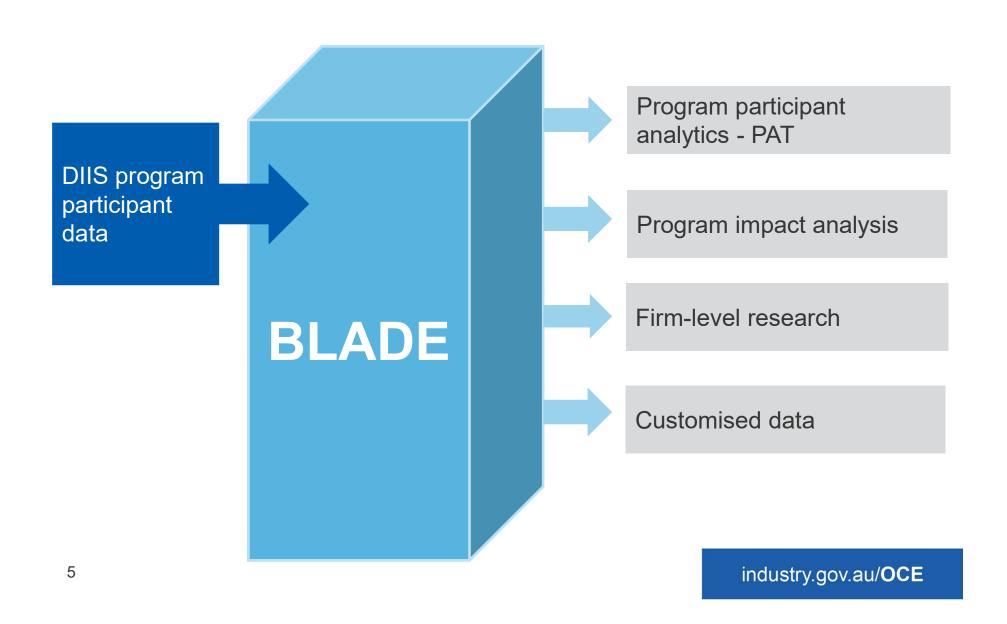
- Firm-level analysis –
 BLADE (DIIS program and other administrative data)
- DIIS Commodity Database
- Innovation statistics ABS, OECD and DIIS
- Energy statistics
- Industry/macro economic (ABS, OECD, private data etc.)



Maps

- Industry Maps
- National Innovation Map

An overview of how the OCE utilises BLADE



Challenges of using BLADE

Data size – millions of observations

- Too large to be read into desktop computer memories (and keeps growing every year).
- Can only inspect a handful of observations at a time.
- Need well optimised code.

Data completeness

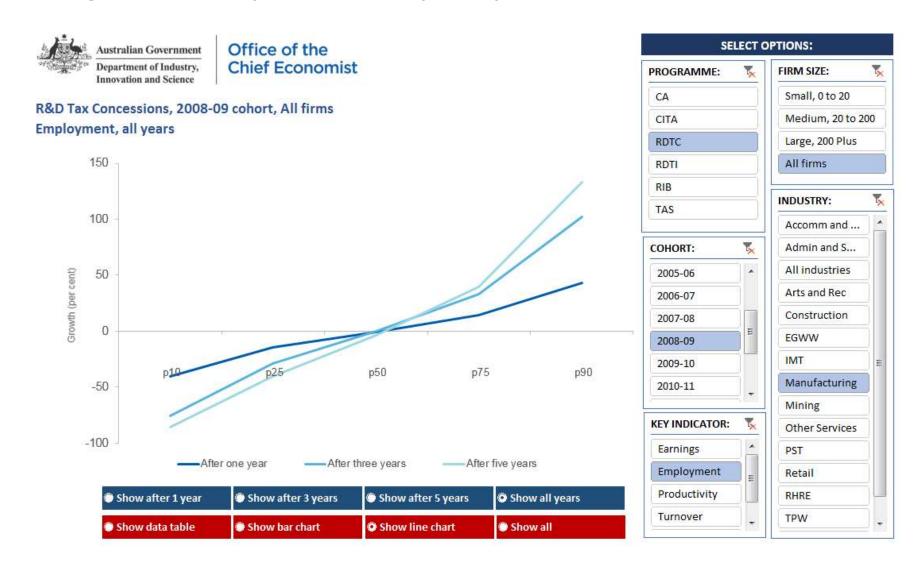
- Not every variable is available for every firm.
- Quality: admin errors, erroneous and legitimate outliers, missing values.
- For BLADE 2001-02 to 2015-16 less than 25% have a non-missing employment report.

Data linkage for 'complex firms'

Integrating program data and BLADE data with different variables

Confidentiality controls

Program Analytics Tool (PAT)



Firm-level OCE research insights

- Born-global firms
 - Firms that export from birth
 - Have high export intensity margins and are capital intensive
- Entrepreneurship trends
 - On average, young firms in Australia are quite unproductive upon entry
 - However, their productivity jumps in one year after birth

Commercialisation Australia

Overall, there is an increase in exporting activity, and patents and trademark applications among the participants

- **Government assistance**
 - Assisted firms more likely to apply for and obtaining financing
 - However, receiving too many forms of assistance undermines that chance

Firm-level OCE research insights

- Enterprise Connect
 - Firms had higher turnover and employment growth
 - Firms had increases in export sales and survival rates.
- Program Analytics Tool

Relative to the general business population, medium and large firms are over represented in DIIS programs

- **Market concentration**
 - Is on average increasing
 - However, most increase is within industries that are already concentrated and export oriented
- R&D collaboration

We estimate an 11 per cent increase of productivity two years after collaborative R&D activity is reported.

How DIIS and its partner agencies contribute to DIPA





Data Integration Partnership for Australia









Undertake and commission research

- Understanding the drivers of (firmlevel) productivity
- Assessing the impact of public support for firms

Advise on continued development of data assets and prioritisation of use (especially BLADE)

- Research priorities to drive data development work
- Finding new datasets to work on or link (state government program data, linking employee information to firm data)

Capacity building

- Building skills within partner agencies
- New analytical approaches - big data analytics, machine learning, latest developments in panel data econometrics

Dissemination

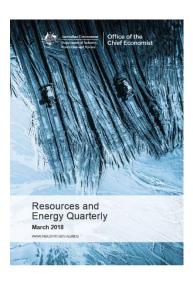
- Events and other communication mechanisms
- Building the network

Further information









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