

Promoting Innovation and Commercialisation The Australian Framework

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- Australia overview
- Innovation & commercialisation data
- Publicly funded innovation
- Business innovation
- Lessons for APEC economies

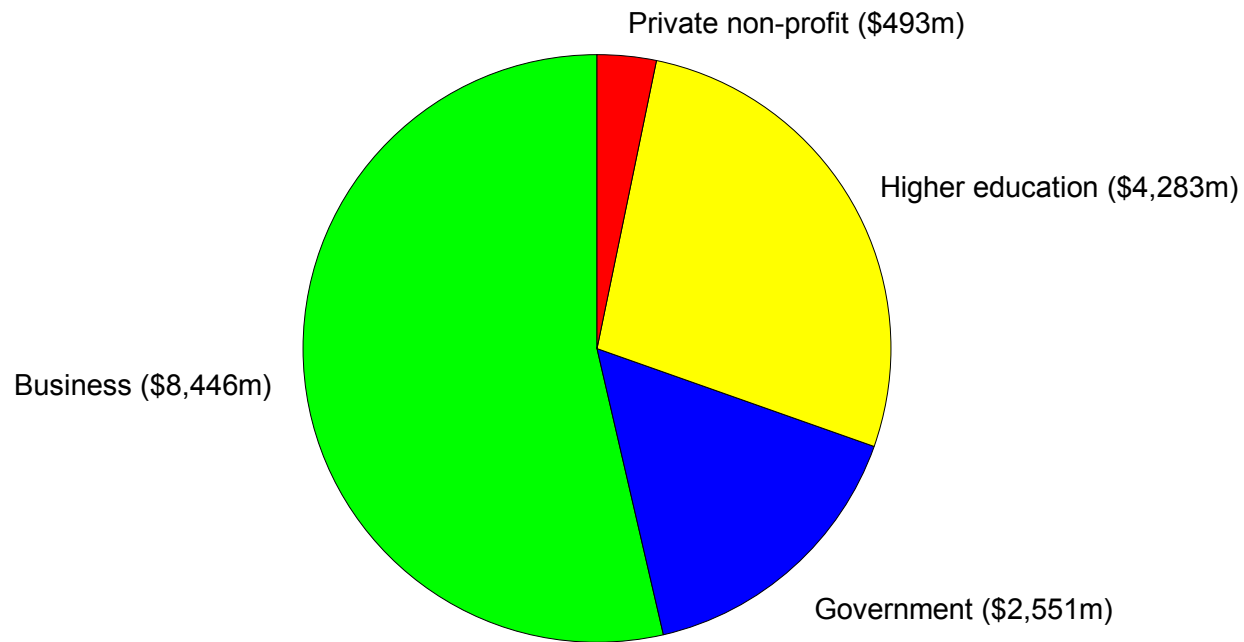
Australia Overview

Australia overview

- Relatively small domestic market (21m people)
- Geographic isolation
- Open market to global economy
- Common perception:
 - good at ideas
 - poor at commercialising
- High international sports ranking
- Need effective policy to achieve similar in innovation & commercialisation

Innovation and Commercialisation Data

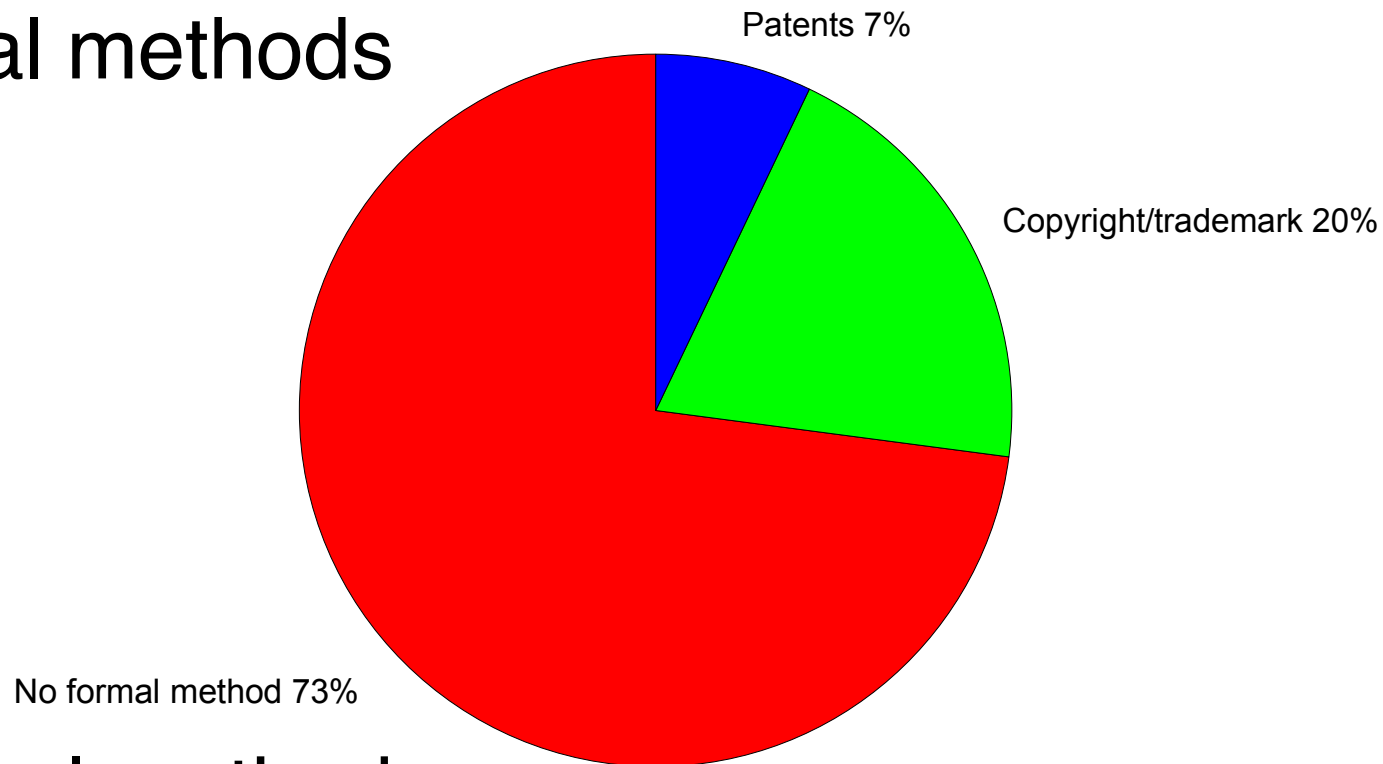
R&D expenditure



Australian gross expenditure on R&D (2004)

- Dominated by economic motivation (91%)
- Only 35% of firms are actively innovating
- 12% started, but did not complete or abandoned an innovation project
- Smaller companies innovate less often
 - 28% for 5-19 employees
 - 52% for 100+ employees
- Barriers to innovation:
 - direct costs, market related, lack of skilled staff

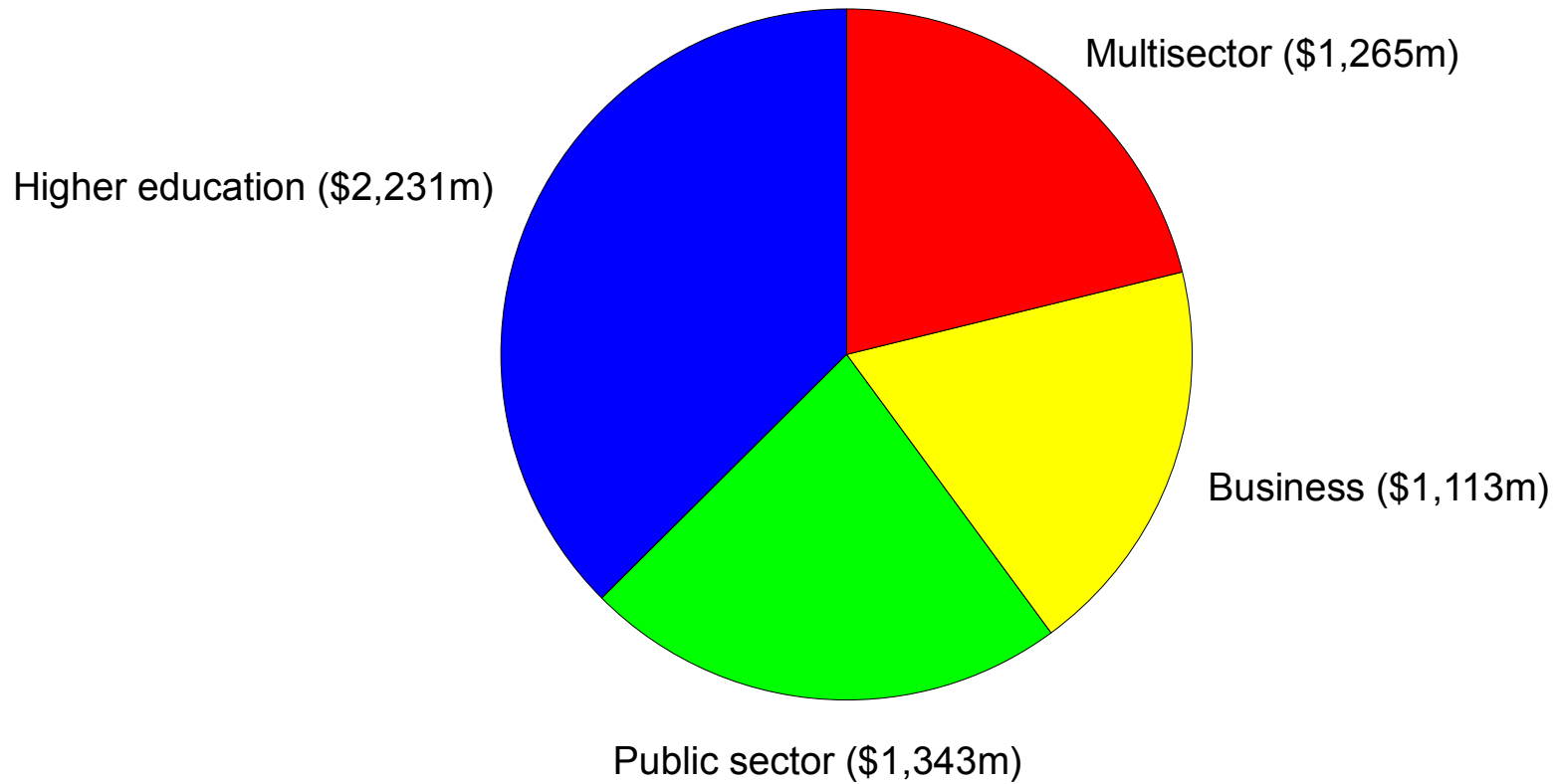
- Formal methods



- Informal methods

- secrecy (23%)
- design complexity (8%)
- frequent changes (6%)

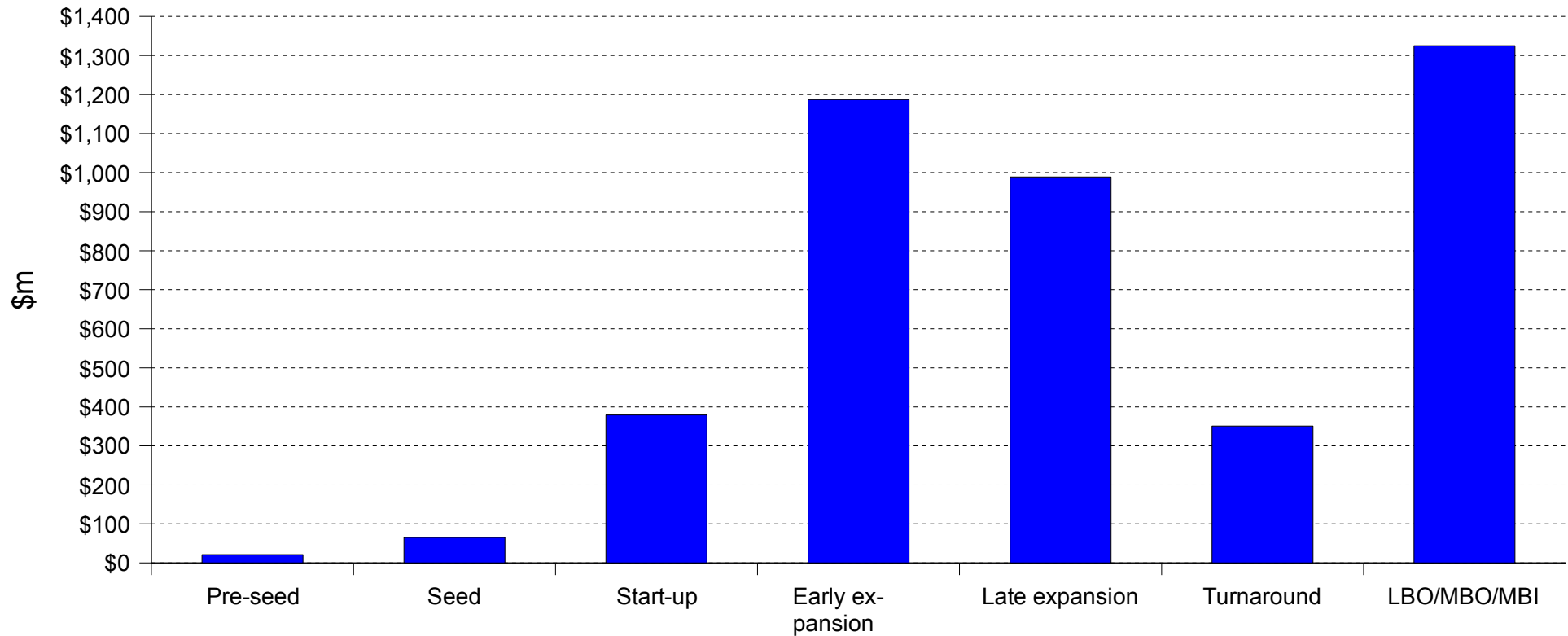
Public funded R&D



Commercialisation of public funded research

Commercialisation measure	Australia	US	UK	Canada
Invention disclosures	23	41	45	40
LOA income (US\$'000)	1,031	3,357	1,005	1,333
Start-up companies	0.7	1.1	3.6	1.4

Venture capital



Analysis of Australian data

- Government R&D above OECD, business below
- Business R&D focussed on economic outcome
- Only 35% of businesses are actively innovating
- Major barriers to innovation for businesses are:
 - costs, market related and lack of skilled staff
- IP protection underutilised
- Commercialisation of publicly funded research falls short by international comparisons
- Lack of early stage commercialisation funding

- Encourage businesses to innovate more
 - particularly small businesses
- Improving the commercialisation of publicly funded R&D
- Availability of commercialisation and IP skills
 - training and intermediaries
- Supply of early stage commercialisation funding

Publicly Funded Innovation

University research commercialisation

- Two traditional roles of universities
 - teaching and basic research
- Technology engagement
- Performance evaluation of researchers
 - move away from pure published papers criteria
- Tie university funding to research performance
 - Research Quality Framework – 2009 funding
 - should not impose excess admin burden
 - measurement criteria need to be clear

Cooperative research centres

- Joint public-private research centres
- Long-term, large scale research
 - suitable for larger companies
- Focus has narrowed to supporting industry
 - originally broad economic, social & environmental
- Shifting research teams to spin-off companies
 - can de-skill the CRC
 - different skills required for research vs commercialisation
 - financial fairness considerations

- IXC Australia
 - network of IP consultants
 - manage the IP exchange process
 - avoid IP contamination
- Australian Institute of Commercialisation
 - early stage advice
 - commercialisation consulting
 - training and skills development
 - industry events – Commercialisation Expo
 - TechFast – technology assessment and matching

Business Innovation

R&D tax concession

- Main channel for public funding of private R&D
- 125% claim on previous spending
- Tax offset for small companies
- 175% premium rate for incremental spending
 - above 3 year average
- Productivity Commission recommendations:
 - limit 125% rate to small companies
 - base the 175% rate on a fixed R&D to sales ratio
 - narrow the R&D definition – innovative **and** risky

Government grants

- Range of schemes
 - large number of sector specific
- Competitive merit based
- Evaluation suffers from information asymmetry
- Loan repayment schemes may improve outcomes

- Government established and mixed funding
- Managed by venture capital companies
- Limits imposed to constrain to early stage
- Special structure with tax exemption available

Lessons for APEC Economies

Lessons for APEC economies

- Good measurement of R&D inputs and outputs
- Determine local challenges and opportunities
- Research that produces public good benefits requires public funding
- Publicly funded research requires focus on developing the commercialisation channels
- Develop commercialisation skills
 - researchers and intermediaries
- Promotion of business innovation is shifting from company targeted to market based

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