

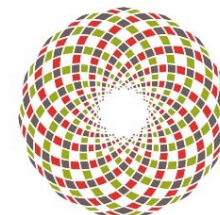
What is Emperor BERD Wearing?

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Te Pūnaha Matatini

Data ■ Knowledge ■ Insight

- Beth has explained why business R&D (“BERD”) is valuable for the country
- Described some of the mechanisms that can be used to encourage BERD
- What are the specific challenges of the NZ context?



- We want to improve Kiwis' long-run well-being
- We can invest in human, physical, natural, social capital (good idea but diminishing returns)
- Find new ways of doing things that reduce the cost of achieving any given level of well-being
- Historically, globally, firms' efforts have been the most successful mechanism for "innovation"



- BERD is “low” in NZ
 - Relative to GDP
 - Relative to population
- **Partial** explanations for low BERD
 - Agriculture, forestry, tourism are low R&D industries everywhere
 - In all countries, R&D is less prevalent in small firms, and we have almost entirely small firms



- Why do some industries not invest much in R&D?
 - “Technological opportunity” is low
 - Largest opportunities for improvement not research-related
 - Research-like activities occur but are not recorded as such
 - Fragmented industry structure makes “spillover” problem particularly acute



- Why might small firms not invest in R&D?
 - R&D often more effective if carried out at relatively large scale
 - Securing the benefits of R&D requires management or other capabilities they don't have
 - Difficulties in financing
 - Research-like activities occur but are not recorded as such
 - Small sales base makes “spillover” problem particularly acute



- Key question for policy:

To what extent is NZ BERD low because research is just not that valuable in NZ, and to what extent is BERD low because of social/economic/institutional or other barriers to firms' undertaking valuable BERD?



- If technological opportunity is low, more R&D will not produce useful results.
- If non-technological factors are most important for success, or if management capability limits implementation, R&D results may generate little benefit.
- If research is occurring but not being reported, new policy may increase reporting without changing real



- R&D financing can reduce financial barriers.
- Certain funding mechanisms (e.g. partnerships) can improve coordination for otherwise fragmented industries.



- Policy can also attack barriers directly
 - Foster creation of coordinating organizations or mechanisms (e.g. industry research organizations)
 - Improve technological opportunity by fostering flow of scientific/technical knowledge from non-profit research sector to firms
 - Try to build management capability



- **Danger:** goal is NOT moving NZ up in the OECD BERD report tables, but rather increasing innovation and productivity
- Can produce increase in reported BERD with no change in real activity
- Can produce real increase in R&D that generates little economic/social benefit

