



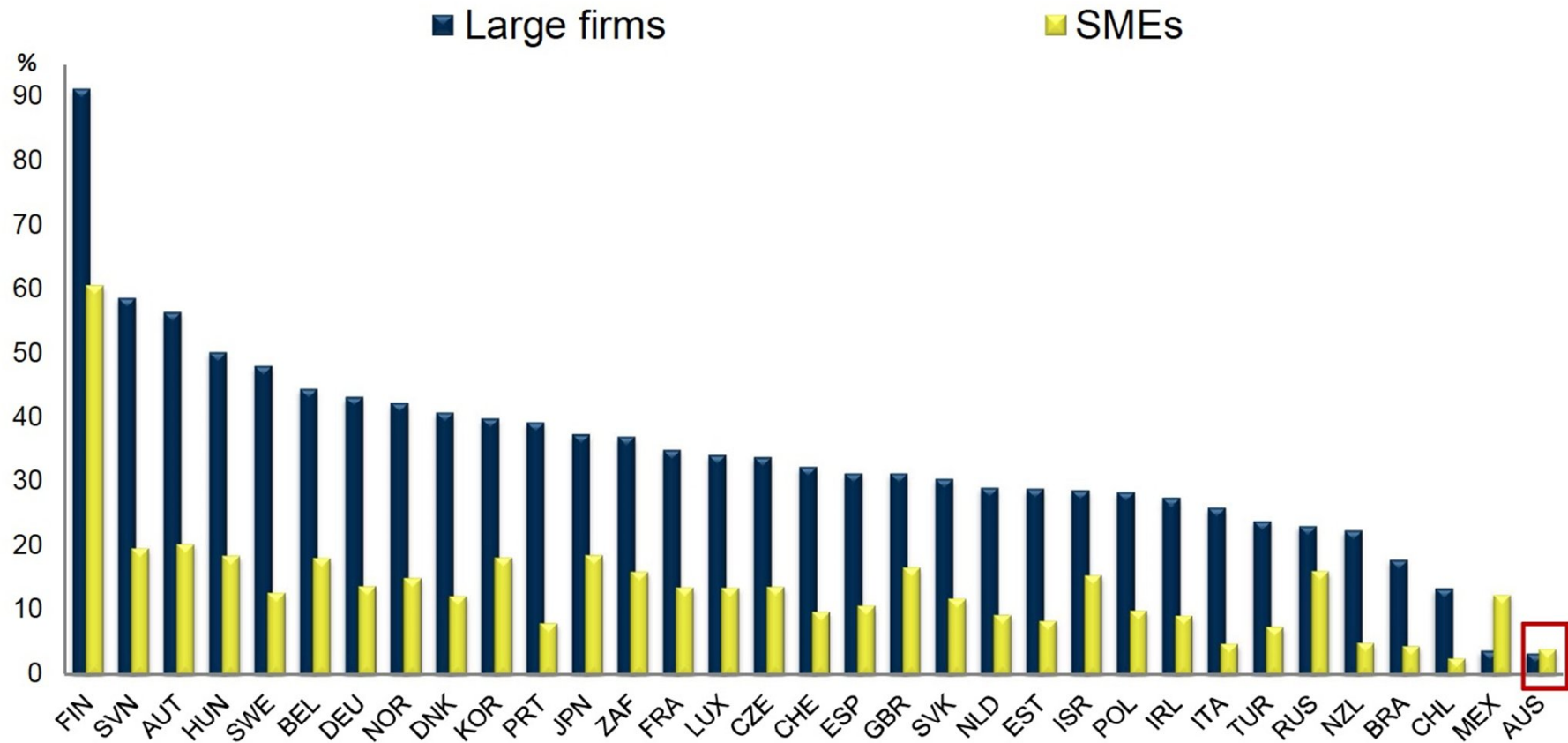
International Innovation Benchmarks: Scan of overseas models of university- industry collaboration

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Introduction

- Considerable amount of theoretical literature/
case study literature
- Need for practical comparison and usable paths
forward
- International scan illuminates; future directions
for university-level comparison

Firms/HEI collaboration, 2008-10



Source: OECD 2013

Context

- Higher education new populist role
- Need for revenue, more practical research
- Student seeking employable outcomes

Yet much remains unknown



What is UIC?

- Formal and informal relationships and joint initiatives that combine university resources with industry resources for collaboration, engagement and innovation



Our frame

- International scan of UIC of 15 relevant countries
- Structured using a multidimensional framework
- Examined environmental, technical and managerial dimensions



Table 1: Review framework

Dimensions	Attributes	Description
Environmental	Broader research policies	Broader research policies that set milieu relevant to collaboration
	Broader industry policies	Broader industry policies that set milieu relevant to collaboration
	Specific collaboration policies	Any specific/isolated policies that may exist
	Historical trends	History of collaboration in the country
	Regional contexts	Any regional factors (between countries/provinces) pertinent to collaboration
	Research ecosystem	Aspects of the broader research environment relevant to collaboration
	R&D culture	National social/cultural priorities regarding R&D, and dispositions regarding entrepreneurship and startups, etc.
Technical	Information sources	Whether information is available to assist with collaborations
	Evaluation systems	Whether review and monitoring systems provide information about collaboration
	IP policies and practices	Whether IP policies and practices are conducive to fostering/sustaining collaboration
	Fiscal settings	Incentive or other schemes administered through tax or other arrangements
	Overall research funding	Broader research funding relevant to collaboration
	Targeted funding	Any specific/isolated funding that may exist
Managerial	Research training	Whether doctoral education builds collaboration-relevant skills (via internships, training programs, etc.)
	Workforce development	Whether university or industry staff are encouraged to collaborate (via HR, IR, PD/OR policies or practices, etc.)
	Strategic emphasis	Extent to which collaboration is emphasised in institutional leadership priorities and incentives
	Precincts	Degree to which science/industrial parks and other precincts exist
	Dedicated offices	Whether institutions have established specific offices to manage collaboration
	Broader workforce contexts	Extent to which broader national technical/professional workforce characteristics are relevant to collaboration

Why managerial?

- Important barriers identified: Within changing organizational culture and processes
- Less focused research to date: Much research focused on outcomes like patents
- Impacts other dimensions: Our analysis hypothesizes that managerial dimension may impact environmental and technical aspects

Beware: McNamara Fallacy

Only that which is measurable is important



Findings: Managerial facilitators

1. Distributed human resources

(e.g. human resource partnerships across sector, architectures for doctoral students...)

2. Exchange-facilitating infrastructure

(e.g. networks and platforms, science parks...)

3. University coordinating offices

(e.g. dedicated industry-facing offices, incubators...)



1. Distributed human resources

- Example of working across sectors:
 - French Innovation Law/Singapore 52 day rule
- Example of doctoral training:
 - Brain Korea 21 Program
- Example of collaboration:
 - California Institute for Telecommunication and Information Technology (Calit2)
- Challenged contexts:
 - China and India – the role of personalised networks and institutions



2. Exchange-facilitating infrastructure

- Canada Mitacs Program
 - Producing internships with industry, improved employability of graduates, R&D investment
- French National Centre for Scientific Research (CRNS)
 - Across ten research institutes, over 1,000 research units



→ 7 UK Catapult Centres

- Connecting centres for critical problems or new products for commercial purposes
- 1/3, 1/3, 1/3 funding model
- Additional £185 million to InnovateUK for innovation support in 2015-16

CATAPULT

3. University coordinating offices

- Facilitate communication
- Incubators
- Commercialisations
- Deliver agreements
- Contracts
- IP policies



Israel: Technology Incubator Program

- Allows for various structures, but most are privately owned and managed
- Greatest developments made outside university IP
- Receives hundreds of applicants each year



Suggestions for practice

1. Encourage people to work across sectors
2. Build infrastructure to facilitate long-term relationships
3. Open and support transfer or linkage offices
4. Draft clear policies and guidelines for IP
5. Analyse institutional culture



Related study* findings – in progress

- Poor levels of UIC in Australia for a range of reasons:
 - Little need over last 2 decades – both sectors grown well without the other
 - Universities not structured nor incentivised (nor culturally attuned) to collaborate with Industry
 - Mutual misunderstanding between Universities and Industry
 - Government innovation policy not strategic or broad-based – narrowly focussed on single elements (e.g. access to VC, tax credits)
- Collaboration is about “doing a deal” – need for perceived value in the deal for both parties

* K Moore, M Dollinger, P Rohan in forthcoming book:
Handbook on the Politics of Higher Education



Summary considerations

- A need for more holistic measures
- Future analysis of the underlying facilitators to start and support initiatives
- Investigation of how the dimensions and factors interact with one another



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