New Economics of Entrepreneurship, Innovation & Institutions: Considerations for Australian Agriculture

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New Economics of Entrepreneurship, Innovation & Institutions

Considerations for Australian Agriculture

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The price of everything

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Basic argument

Old economics of agriculture

- Textbook - perfcomp, price taking, ...
- No role for entrepreneurship & innovation
- Govt role to drive up ag. prices, or subsidize ag. costs

New economics of agriculture

Economics of opportunity discovery

-- Entrepreneurship & innovation as collective action problems
-- information about opportunities as the public good

Social welfare/market failure definition of the innovation problem

Creative destruction/Market process definition of innovation problem
Old economics of innovation

- **market failure** in producing new knowledge
  - innovation-push model of public science & technology

- **Innovation problem**: fixed costs under competition (P=MC<AC)
  - E.g. chemicals, consumer electronics, CSIRO

- **Implication**: social welfare max requires government intervention
  - i.e. IP, R&D subsidy, demand support, public science,

Presumption 1: governments can fix market failures
Presumption 2: this applies to agriculture too
New economics of innovation

• the role of entrepreneurial discovery
  – market information, not new technology

• private governance institutions to solve the innovation problem
  – innovation commons

New Institutional Economics
Evolutionary/Schumpeterian economics
Public choice economics
Austrian economics/Economics of Knowledge
Economics of the commons
Complexity economics
Innovation problem: rules to coordinate knowledge for discovery of value

Path from new technology to emergence of new industry

- 3D printing, bitcoin/blockchain, new sports, PC/software
- early wine industry in Australia

Implication:

- a new technology is not a new industry;
- new industry emergence requires governance
  - i.e. cooperation & rules, that become industry groups/associations
Problem with Presumption 1 above:
• knowledge problem,
• rent-seeking/govt. failure,
• no recognition of the entrepreneurial problem

• Presumption 2: this applies to agriculture too
a new research program – agricultural innovation economics

• Study the institutional conditions that resolve collective action problems associated with distributed knowledge in the very early stages of new agricultural industries

• theory: this institutional mechanism is the origin of comparative advantage in agricultural clusters
Agricultural economic policy in Australia: history and consequences

• Agrarian socialist
• Globalised free-trading
• Govt. support for political-economy reasons

• Govt. support for industry-level public goods with externalities (rural R&D corps)
  – have been disappointing, just as economic theory predicts
    (1) public choice theory (capture, rent-seeking)
    (2) new science is not new entrepreneurship
Problems with ag. econ. of innovation

All about **market failure** in ag. science / or marketing. Resolved with government. But ...

(I) – *Where are the entrepreneurs?*

(II) – *Where is the information/knowledge?*

(III) – *Where are the institutions?*
entrepreneurial discovery problems

collective action problems

governance solutions

Schumpeter
Hayek & Ostrom

NOT

NOT

NOT

investment misallocation problems

market failure problems

government solutions

Samuelson, Arrow & Romer

NOT
Opportunity discovery – entrepreneurs & the growth of knowledge

- Agents of change.
- Knowledge needs creating and processing.
- Opportunities need to be revealed.
- Market process theory.
- Evolutionary growth of knowledge.

Discovery of comparative advantage – a local public goods problem

- Discovery of information about local comparative advantage/costs, opportunities, etc
- Entrepreneurial information as a local public good

- Chile salmon farming
- Bangladesh hats
- Pakistan bed sheets
- Columbia cut flowers
- India software
- Taiwan semiconductors
Discover your niche

- Kimberley (Ord River) sandalwood oil
- Barossa valley shiraz
- King island camembert
- Northern rivers creative industries
Barriers to entrepreneurial action

- Finance
- Resources, infrastructure
- Legal & regulatory
- Competence & capability
- Uncertainty about costs & benefits
Entrepreneurs discover these costs & opportunities revealing the regions strengths & weaknesses.
• Institution for collective action in pooling innovation resources (Potts et al 2015)

• Hypothesis: all new industries/niches begin within an innovation commons
  – Entrepreneurial and distributed market knowledge far more important to early stage innovation than scientific technical knowledge
Innovation commons in Australian Agriculture

• Very early Australian wine industry in the Hunter Valley
  • Collective pooling of experiments
  • Information

The life cycle of an Industry Association

- Hypothesis: industry associations originate from a collapsed innovation commons
  - An industry association emerges as a switch in function from coordinating discovery and common pool resource access, to coordinating industrial \textit{niche construction}
I – A New Research Program?

• Ag economics needs to move from old innovation economics to new innovation economics

• New = Schumpeterian + Hayek?Ostrom/Rodrik
II – A New *Policy* Framework?

• from *government* to *governance* solutions

• focus on *institutional structures* from which new industries/opportunities emerge

• We don’t presume to know what the exact opportunities are. That’s the problem to solve.
  – Information is the public good, not (just) infrastructure