Beyond Industrial Policy: Emerging Issues and New Trends

Ken Warwick

Vienna
6 June 2014
Industrial policy beyond the crisis

- The revival of industrial policy
- What do we mean by Industrial Policy?
- The evolving rationale
- The instruments of industrial policy
- Typology by policy orientation
- New industrial policy in practice
- Industrial strategy in the UK
- Conclusions
Renewed interest in industrial policy worldwide
Examples of industrial policy initiatives

• Brazil – *Plano Brasil Major*
• China - *Plan for National Strategic Emerging Industries*
• India – *National Manufacturing Policy*
• Japan – *Industrial Structure Vision*
• Netherlands – *Top Sectors Policy*
• UK – *Plan for Growth and Industrial Strategy*
Why the resurgence of interest?

- Search for measures to stimulate growth and employment in response to the crisis
- Concerns over structural imbalances
- Prevalence of market failure
- Political economy of bail-out finance
- Challenge of emerging market economies
Share of global manufacturing value added

Source: OECD estimates, based on UNSD
Location of value added in the value chain

Source: Gary Gereffi, presentation at OECD workshop, September 2010.
“Industrial Policy is any type of intervention or government policy that attempts to improve the business environment or to alter the structure of economic activity toward sectors, technologies or tasks that are expected to offer better prospects for economic growth or societal welfare than would occur in the absence of such intervention.”
The evolving rationale for industrial policies

- Laissez faire
- Traditional, state-aids, ownership-based
- Neoclassical, market-failure correcting
- New growth, technological capabilities
- Institutionalist, neo-Schumpeterian, evolutionist, systems-based
• **Aim**: Industrialisation, productivity, sector growth, employment, social welfare, distribution.

• **Target group**: Sector (or technology, input, or stage of the value chain), firms or clusters?

• **Rationale**: Underlying philosophy that justifies active industrial policy (market failures, capacity building etc).

• **Orientation**: Is policy horizontal/functional or vertical/selective? Is targeting strategic or in response to market pressures? Is intervention time-limited or longer-term? Conditional or unconditional? Does policy work with existing comparative advantage or explore new areas?

• **Policy domain**: Product or factor markets – labour, capital, land and technology. Role for policies to develop entrepreneurship or facilitate coordination or the creation of new networks?
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<table>
<thead>
<tr>
<th>Policy domain</th>
<th>Horizontal Policies</th>
<th>Selective Policies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product markets</strong></td>
<td>Competition and anti-trust</td>
<td>National champions</td>
</tr>
<tr>
<td></td>
<td>Incentive law</td>
<td>Nationalisation/privatisation</td>
</tr>
<tr>
<td></td>
<td>Product market regulation</td>
<td>State subsidies/credit lines</td>
</tr>
<tr>
<td></td>
<td>Exchange rate policy</td>
<td>Public procurement</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Trade policy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cars scrappage</td>
</tr>
<tr>
<td><strong>Labour and skills</strong></td>
<td>Skills and education policies</td>
<td>Targeted skills policies</td>
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<tr>
<td></td>
<td>Training subsidies</td>
<td>Apprenticeship programs</td>
</tr>
<tr>
<td></td>
<td>Wage subsidies</td>
<td>Sector-specific advisory services</td>
</tr>
<tr>
<td></td>
<td>Labour market regulation</td>
<td></td>
</tr>
<tr>
<td><strong>Capital markets</strong></td>
<td>Loan guarantees</td>
<td>Strategic investment fund</td>
</tr>
<tr>
<td></td>
<td>Corporate tax/capital allowances</td>
<td>Emergency loans</td>
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<tr>
<td></td>
<td>Macro/financial stability</td>
<td>Support investment bank</td>
</tr>
<tr>
<td></td>
<td>Financial market regulation</td>
<td>Inward investment promotion</td>
</tr>
<tr>
<td><strong>Land</strong></td>
<td>Planning regulation</td>
<td></td>
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<tr>
<td></td>
<td>Land use planning</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Technology</strong></td>
<td>R&amp;D tax credit</td>
<td>Green technology</td>
</tr>
<tr>
<td></td>
<td>Sectoral budgets</td>
<td>Local Markets</td>
</tr>
<tr>
<td></td>
<td>IPR regime</td>
<td>Public procurement for innovation</td>
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<td>Future labs</td>
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<tr>
<td></td>
<td></td>
<td>Technology funding</td>
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<td></td>
<td></td>
<td>Centers of expertise</td>
</tr>
<tr>
<td><strong>Systems/institutions</strong></td>
<td>Entrepreneurship policy</td>
<td>Initiative planning</td>
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<tr>
<td></td>
<td>Scenario planning</td>
<td>Forwight initiatives</td>
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<tr>
<td></td>
<td>Strategic planning</td>
<td>Sectoral competitiveness strategy</td>
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<td>Innovation policies</td>
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Product markets

Factor markets
(Labour, Capital, Land, Technology)

Systems and institutions
### Typology of instruments by policy domain

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<th>Domain</th>
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| **Product markets** | Competition and anti-trust  
Indirect tax  
Product market regulation  
Exchange rate policy | National Champions  
Nationalisation/privatisation  
Output subsidies/state aids  
Export promotion  
Price regulation (e.g. pharma)  
Public procurement  
Trade policy  
Car scrappage |
| **Labour and skills** | Skills and education policies  
Training subsidies  
Wage subsidies  
Income and employment tax  
Management advisory services  
Labour market regulation | Targeted skills policies  
Apprenticeship policies  
Sector-specific advisory services |
| **Capital markets** | Loan guarantees  
Corporate tax/capital allowances  
Macro/financial stability  
Financial market regulation | Strategic Investment Fund  
Emergency Loans  
State Investment Bank  
Inward investment promotion |
| **Land**         | Planning regulation  
Land use planning | Enterprise zones  
Place-based clusters policy  
Infrastructure |
| **Technology**   | R&D tax credit  
Science Budget  
IPR regime | Green technology  
Lead Markets  
Public procurement for innovation  
Patent Box  
Selective technology funding  
Centres of expertise |
| **Systems/Institutions** | Entrepreneurship policy  
Scenario planning  
Distribution of information  
Overall competitiveness strategy | Indicative planning  
Foresight initiatives  
Identifying strategic sectors  
Sectoral competitiveness strategy  
Clusters policy |
Orientation: Is policy horizontal/functional or vertical/ selective? Is targeting strategic or in response to market pressures? Is intervention time-limited or longer-term? Conditional or unconditional? Does policy work with existing comparative advantage or explore new areas?
Typology by policy orientation

Industrial Policy

Horizontal
Framework conditions

Selective
Strategic

Defensive/Reactive

“Tasks”
Sectors
Technology
Two-way classification of strategic industrial policy

- Infant industry
- Building on strengths in development
- Seeking strategic advantage in new areas
- Consolidating on frontier strengths

Comparative advantage-developing

Catch-up

Frontier

Comparative advantage-following
Figure 2 - stages of industry lifecycle

Source: Livesey (2012)
Comparative industry maturity grid

Source: Livesey (2012)
Industrial policy orientation based on comparative maturity

Source: Livesey (2012)
New industrial policy in practice

- Cluster policies
- Investment promotion
- Public procurement
- Fostering green growth
Evaluation case studies*

- National experience in specific policy areas
  - R&D support policies
  - Innovative public procurement
  - Capital market interventions – support for risk capital
- National experience with policy packages
  - Cluster and regional policies
  - Sectoral approaches and Public Private Partnerships
  - National industrial strategy

Policies to support business R&D

- Mix of incremental tax credits and direct support best....
- ....but costly to administer
- New OECD analysis on R&D tax credits:
  - Incremental better than volume based and credits should be payable for young firms
  - Dangers of incumbent bias, policy instability, tax planning by MNEs
- Focus direct support on market failure, pre-competitive ventures and research partnerships
- Use matched grants to identify best projects
Innovation-oriented public procurement

- Need for additional evidence on impact
- Avoid the risk of capture and anti-competitive effects
- Build expertise in the public sector and remove regulatory barriers
- Avoid fragmentation in procurement and build links to innovation agencies
- Manage the risks – technological, uptake and market risks
Capital market interventions (risk capital)

- Increased role for Government VC since crisis
- Some positive evidence but evidence of impact not yet conclusive.
- Policy most effective where other private funding leveraged – hybrid models
- Mix of demand and supply side policies required
- Policy most successful when there is scope for experimentation and learning
Cluster policies and business networks

- Target market failure and work with existing/emerging clusters
- Framework for dialogue/cooperation between firms, public sector, NGOs
- Mechanisms for interaction of local firms with research/training bodies
- Direct subsidies only modest effect on location
- Wider determinants of success rarely evaluated
- Role for Government in brokering business networking and creating informed demand, perhaps with a degree of financial support.
Sectoral approaches and PPPs

- Some examples of sector success
- Little systematic evidence that sector performance related to degree of support or that sector focus necessary
- But sector strategies and PPPs offer natural conduit for new forms of industrial policy
- Soft, facilitative intervention, hard to evaluate
- Some work under way in TIP
- Netherlands plans to evaluate Top Consortia for Knowledge and Innovation
• Examples of success in industrial strategy programmes (Rodrik, 2004; Bianchi and Labory, 2011; O’Sullivan et al, 2013; Stiglitz and Lin, 2013)

• Dearth of rigorous evaluation

• Less emphasis on product market support measures and more emphasis on support for technology and skills, PPPs, facilitation and coordination - newer and harder to evaluate.

• Successful implementation requires well designed plans for regular monitoring and evaluation
Why industrial policy evaluation is difficult

- Identification of controls and counterfactuals
- Data challenges and unit of analysis
- Interdependence between outcomes
- Multiple influences on economic outcomes
- Multiple objectives/instruments are common
- Time lags and long-run impact
- Context dependence – translating what works

- Global vs national welfare
- Social and distributional impacts
What have we learned?

Embeddedness  Carrots & sticks  Accountability

(Rodrik, 2008)

“The emerging consensus is that the risks associated with selective-strategic industrial policy can be minimised through a ‘soft’ form of industrial policy, based on a more facilitative, coordinating role for government, consistent with the systems approach......

“The goal of ‘soft’ industrial policy is to develop ways for government and industry to work together to set strategic priorities, deal with coordination problems, allow for experimentation, avoid capture by vested interests and improve productivity.”
“...my chief political project last year was to establish a firm case for an industrial strategy – words previously banished from Whitehall. That case has been won – and I think is now broadly accepted on Right and Left. Work is now well underway with industry to develop long-range strategies for.... important sectors.”
**Industrial Strategy** is a long-term, whole-of-government approach to support economic growth

This new partnership between business and all parts of government has identified a range of opportunities to help create growth for the future, from developing new skills and securing critical investment to commercialising our scientific research and inventions.

**Industrial Strategy** has five main strands:

- **Skills**
  Working in partnership with business to deliver the skills that employers need through more direct control of how government funding on skills is spent.

- **Technologies**
  Investing in eight great technologies where the UK has the research expertise and business capability to become a world leader in big data, space, robotics and autonomous systems, synthetic biology, regenerative medicine, agri-science, advanced materials and energy.

- **Access to finance**
  Creating the British Business Bank, to help remove barriers to the supply of business finance, helping smaller businesses grow by investing in people and equipment.

- **Government procurement**
  Letting businesses know in advance what Government is planning to buy so that they can invest in the right skills and equipment to make the most of these opportunities.

- **Sector partnerships**
  Providing support for all sectors of the economy to help increase global competitiveness, support innovation and realise export potential. Strategic partnerships have been developed in eleven sectors where government and business, working together, believe they can make the most difference.
Developing strategic partnerships with industry

The government is developing long-term strategic partnerships with industry sectors where we can have the most impact on growth.

Advanced manufacturing
- Aerospace
- Automotive
- Life sciences
- Agri-tech

Knowledge services
- Education
- Information economy
- Professional business services

Enabling sectors
- Energy: nuclear
- Energy: oil and gas
- Energy: offshore wind
- Construction

Partnership strategies will:
- be long term
- be created with industry, committing business and government to specific actions
- involve the whole of government
- identify actions to benefit all businesses
‘Eight great technologies’

- **Big data**: transforming scientific enquiry and many industries - the opportunity to lead in this and in the energy-efficient computing revolution.
- **Satellites**: building satellites and analysing and using the data from satellites.
- **Robots and other autonomous systems**: applications ranging from assisted living for disabled people to nuclear decommissioning.
- **Synthetic biology**: engineering genes to help heal, feed and fuel the nation.
- **Regenerative medicine**: new medical techniques for repairing and replacing damaged human tissue.
- **Agricultural technologies**: the opportunity to be at the forefront of the next green revolution.
- **Advanced materials**: with targeted properties enabling technological advances in sectors like aerospace and construction.
- **Energy storage**: technologies for storing energy when it is produced so that it can be used when it is needed.
Closing reflections on industrial policy

- No “one size fits all”. Approach varies with stage of development of country and/or ‘sector’.
- Some moving to more horizontal policy; while others moving to more selective.
- “Choosing races and placing bets”. Both flexibility and tenacity needed.
- Convergence in thinking on “fourth generation” industrial policy with emphasis on systems, networks, institutions and capabilities.
- Risks of “government failure”, capture, protectionism.
- Challenges for evaluation, especially of strategy and policy programmes.
Some emerging lessons

• **Remove barriers** before providing support - i.e. “don’t push on a string”

• **Clarity in objective(s)** – such that success and failure can be assessed in a non-discretionary manner

• Keep the **outsiders and the unborn** in mind – resist political economy pressures from insiders and incumbents

• **Evaluate** (preferably ex ante and ex post) – and incorporate evaluation in policy cycle

• Ensure **public bears risk which is “proportionate”** (enough to matter, not too much to lead to moral hazard)

• **Plan for exit** – and make plan known

• **Incentives/subsidies**: Only for “new” activities
Contact details

Ken Warwick
T: +44 1932 355390
M: +44 7823 535316
warwick.economics@btinternet.com