



クルノ経済研究センター

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Now that the markets have failed...

Lessons from the European innovation policy

Now that the markets have failed...

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A. The Market as the Cornerstone Institution of Europe

- From the Common market...
- a slow deregulation...
- to market “failures”

B. Competition and incentives as the driving forces of Europe

- Promoting competition...
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C. Cooperation vs. competition: how to promote innovation in an “ecosystem”?

- Respect institutions and social logic
- Coordinate, do not submit
- Is the ecosystem the right paradigm?

A. The Market as the Cornerstone Institution of Europe



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1. From the Common market..

Article 92 of the 1957 Treaty of Rome:

"Save as otherwise provided in this Treaty, any aid granted by a Member State or through State resources in any form whatsoever which distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods shall, in so far as it affects trade between Member States, be incompatible with the common market."

Article 87 of the 1997 EC Treaty (State aid rules):

"EC prohibits specific kinds of aid that might be given by EU member states to enterprises, and gives powers to the European Commission to clear some such aid as "compatible with the common market".

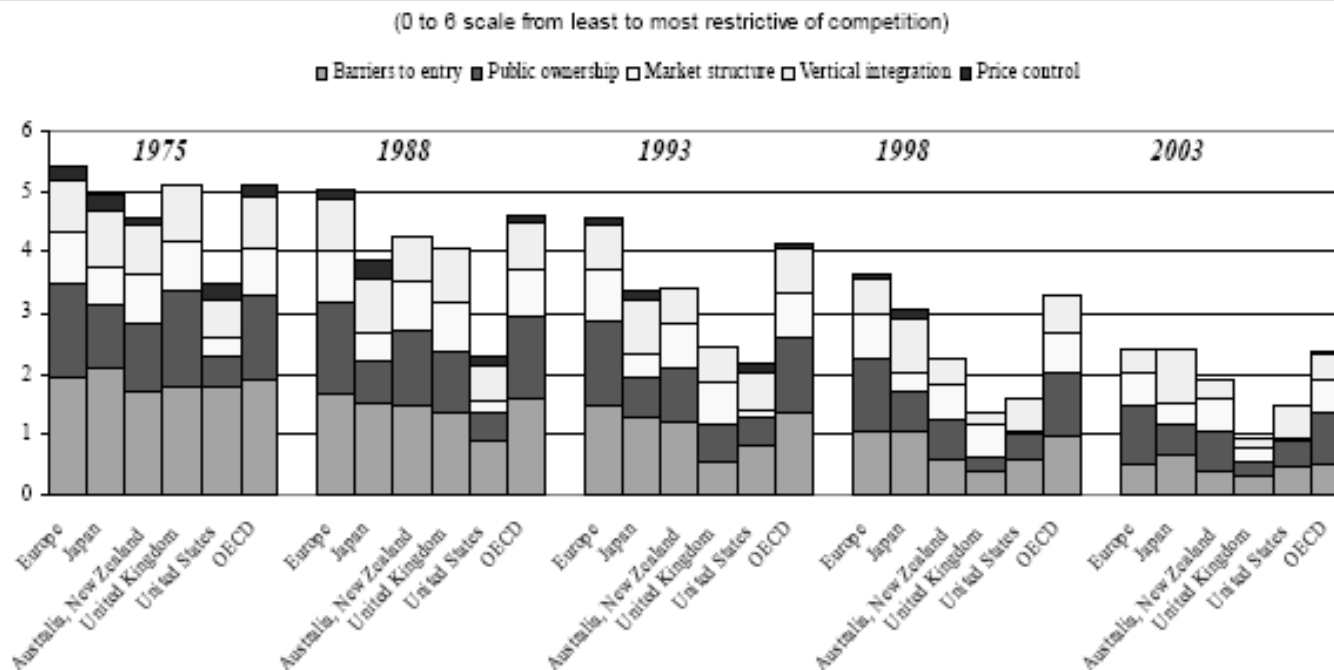
Article 88 governs the enforcement of these State aid rules.

2. ... a slow deregulation...

Reform in energy, transport and communication (1975-2003):
breakdown by regulatory area



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1. Simple averages of the regulatory indicators for seven industries: electricity, gas, road freight, railways, air transport, post and telecommunications. Data for Europe, Australia-New Zealand and OECD are simple cross-country averages. Europe is defined as EU15.

Source :Paul Conway and Giuseppe Nicoletti (2006)

3. to market “failures”

Community framework for state aid for research and development and innovation (2006/C 323/01) :

“Given the available R&D&I capabilities, market failures may prevent the market from reaching the optimal output and lead to an inefficient outcome for the following reasons:

- Positive externalities/knowledge spill-overs;
- Public good/knowledge spill-overs;
- Imperfect and asymmetric information;
- Coordination and network failures.



B. Competition and incentives as the driving forces of Europe



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1. Promoting competition...

"Europe seems to be losing ground, not because of an insufficient rate of capital accumulation, but for lack of innovation capability."

The so-called Lisbon Strategy, which aimed at fostering innovation and productivity, proposed a series of structural reforms for labour, financial and product markets.

A link between competition and innovation underlies the whole Strategy: more product market competition should bolster innovation, and thus productivity and growth.

A) 1...



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1. Promoting competition...

According to economic theory, the relationship between competition and innovation is ambiguous:

- For Schumpeter (1934), monopoly profits are rewards to innovators; the appropriability of innovation output is thus a crucial incentive issue. A rise in competition is expected to decrease rents stemming from innovation, and thus incentives to innovate.
- On the other hand, competition may encourage innovation. Incumbents may innovate to keep their market power and fend off new entrants, or potential entrants may hope to capture the market position of incumbents by surpassing them with new and better products. In both cases, innovation would be the means for a firm to get the upper hand over its competitors.

The positive effect of competition, alleged to be at its maximum when an economy moves closer to the technological frontier, cannot be found.

- First, regulation has a positive effect whatever the distance from the frontier, and the magnitude of its impact is higher the closer the industry is to the frontier.
- Second, the effect of regulation is negative when it is farthest from the frontier and becomes positive (or insignificant) when the technology gap decreases. These results contradict the belief in the innovation-boosting effect of increased competition, as taken into account in the Lisbon Strategy (<http://www.jourdan.ens.fr/~amable/Competition-Innovation-Distance.pdf>)

2. and fostering incentives



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In 2007, 20 OECD countries had adopted an **R&D tax credit**, compared to 12 in 1995, and the trend is up (Turkey, France, Spain)

Why have one? Because R&D is good for growth?

- Market forces do not generate enough R&D “of the right sort”, and an R&D tax credit is not better than other policy instruments...
- Most studies find a positive effect, a “bang for the buck” higher than 1 (up to 3.6)
- The effect seems stronger for small firms (Netherlands, Switzerland)

3. ... in radically different Social Systems of Innovation



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Economies diverge in terms of the institutions that characterize them, depending on the particular aspect of the economy that is being studied.

- The labour market is more or less regulated; wage bargaining more or less centralized;
- Financial systems are more or less reliant on banks, or on the freedom that they give to the financial markets.
- Education is organized differently from one country to the next, with more or less close ties to productive system;
- Universities are more or less independent
- Competition between private companies is more or less intense.

An initial approach would be to suppose that an optimal solution exists in each of these areas, independent of the institutional configurations that are present in any of the other areas. The best institutional configuration for an economy could therefore be the one that is closest to the sum total of these optimal local configurations...

...(table from Amable B., 2001)



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Table 4.1

	AUS	CAN	USA	GBR	NOR	SWE	FIN	DNK	JPN	KOR	ALL	FRA	BEL	IRL	NLD	AUT	CHE	ESP	PRT	ITA	GRE
general analysis	1	1	1	1	1	2	2	2	3	3	4	4	4	4	4	5	5	6	6	6	6
scientific specialisation	1	2	2	1	2	3	3	3	5	5	5	5	3	3	3	3	5	4	4	5	2
sc. Publications / GDP	1	1	5	3	5	2	1	1	4	5*	4	4	5	5	1	5	3	4	5*	5	5*
invented patents (specialisation)	1	4	5	4	1	2	2	1	5	5*	3	4	5	2	2	3	3	3	3*	3	1*
controlled patents (specialisation)	1*	5	4	1	5*	6	6	3	4	4*	1	4	1	4*	4	5*	1	2	1*	2	1*
industrial structure	1	1	5	5	1	2	1	2	4	4*	4	5	5	-	4	3	-	3*	3*	3	1*
GDP structure	1	4	4	4	6	5	6	4*	3	3*	2	1	1	-	2*	2	-	2*	1*	2	1*
labour market, policy	1	1	2	1	1	5	4	5	2	2*	4	4	4	4	5	1	2	4	-	3	2*
employment protection	1	1	1	1	4	4	4	2	3	2*	4	4	4*	1	4	3	2	3*	3*	3*	3*
employer/employee relationship	1	5	5	5	1	3	3	3	5	4*	2	4	2	2	2	1	2	4	4*	4	4*
employment structure	1	1	1	1	1	2	5	1	3	3*	3	5	5	3	1	3	1	4	4*	5	4*
Education	1	2	2	6	2	3	5	5	1	1*	6	6	6	1	6	5	3	4	1*	5	4*

C. Cooperation against competition: how to promote innovation in an “ecosystem”?



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1. Respect institutions and social logic

- Science
- Administration
- Industry
- Finance
- Domestic organizations

C. Cooperation against competition: how to promote innovation in an “ecosystem”?



2. Coordination, not submission

- The market is neither the alpha, nor the omega, just another institution; it is neither the best social means of coordination, which may be efficient or not, nor the organization where agents maximize.
- Frauenhofering Europe ?
- ... The case study of the French National Innovation Agency and its impact on European framework : market failures are everywhere to be found
 - Legislation,
 - energy,
 - transportation...
 - and concern small and big firms !

C. Cooperation against competition: how to promote innovation in an “ecosystem”?



- **3. The challenges of importing a concept from another discipline...**

Ecosystems (short for ecological systems) are functional units that result from the interactions of abiotic and biotic components.

Like all systems they are a combination of interacting, interrelated parts that form a unitary whole. All ecosystems are "open" systems in the sense that energy and matter are transferred in and out. The Earth as a single ecosystem constantly converts solar energy into myriad organic products, and has increased in biological complexity over time.

Economics has only one way to deal coherently in terms of ecosystem: it must use evolutionary games !

... C. Levi-Strauss « Earth appeared without mankind and will disappear without it »