IRPET Istituto Regionale Programmazione Economica della Toscana

U-I collaboration in Tuscany: lessons from the past and current trends

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Arezzo, 27 October 2015

Brief industrial profile of Tuscany

- a region of small manufacturing firms
- hosting historical “industrial districts” in low tech industries that are now heavily challenged by international competition
- limited presence of larger companies, some with well-established brands, also in high technology industries
- some former public-sector firms in heavy or strategic industries now private/multinationals

Strenghts & Weaknesses

STRENGHTS	WEAKNESSES
❑ Public research system is potentially suitable to intercept the innovative needs of local firms supporting their competitiveness	❑ Level of private R&D investments is endemically low, especially in SMEs and more traditional industries
❑ Larger firms that are already connected to public research and closer to technology frontier may act as bridges btw research and smaller businesses	❑ Difficult match between SMEs and public research
❑ Newly established technology transfer infrastructure may help smaller firms understand their innovation needs	❑ The share of non-innovative SMEs is non-negligible, the risk of competence lock-in and competitive marginalization is high
	❑ SMEs demand for innovation services is relatively weak, which hampers the development and the qualification of this part of the service industry

Opportunities & Threats

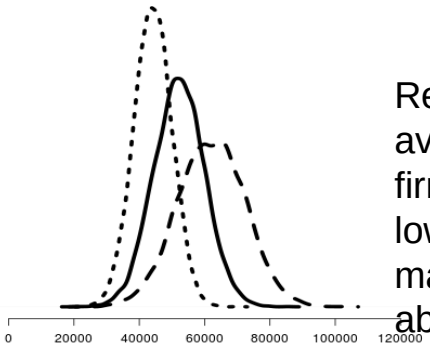
OPPORTUNITIES	THREATS
❑ Institutional changes at the national level → THIRD MISSION of universities. As a consequence, regional universities are strenghtening technology transfer (TT) activities	❑ The recent economic crisis may have further discouraged private R&D investment, which was already endemically low
	❑ The regional system of public research and TT is threatened by tight public budget constraints

Lessons from a past policy

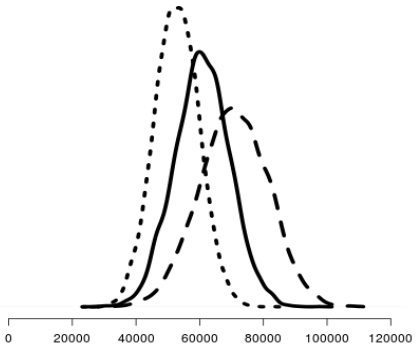
Collaboration polices were initially experimented in Tuscany as small development project suited to small firms…

- Tuscany Region policies supporting R&D consortia from 2002 to 2008.
- 4 programs (SPD 171, SPD 172, RPIA02, RPIA06), 9 waves, 168 funded R&D projects/consortia participated by 1127 agents, of which 765 SMEs
- Other consortium members: Large firms; Innovation centers, technology parks and similar infrastructures; Universities and research centers; Business associations, Chamber of commerce; Local governments; other public bodies
- Policy goal: Promotion of process innovations

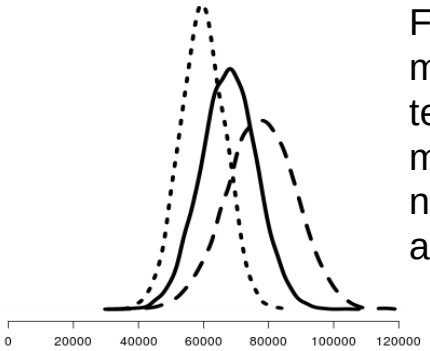
Lessons from a past policy



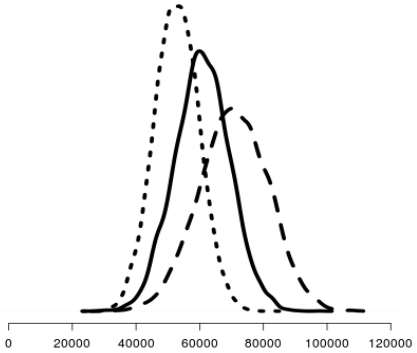
Representative firm: average productive small firm, active in relatively low technology manufacturing, with no absorptive capacity



Firm active in low technology manufacturing, with individual absorptive capacity



Firm active in medium-high technology manufacturing, with no individual absorptive capacity



Firm active in medium-high technology manufacturing, with individual absorptive capacity

Posterior predictive distributions of labor productivity for hypothetical small firms participating in a consortium involving:
(**solid line**) some firms with some absorptive capacity;
(**dashed line**) firms with some absorptive capacity and large enterprises;
(**dotted line**) firms with some absorptive capacity and universities.

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Lessons from a past policy

- Supply chains can be a good base for promoting consortia
- Universities are better placed in large scale, highly innovative projects where also larger companies are involved
- The direct exposure of small firms to universities does not necessarily work

Characteristics of successful U-I partnerships

- Well-defined objectives, roles and expectations;
- Relation based on mutual trust and respect;
- Identification of key personnel, duties and restrictions;
- Projects run professionally – deliverables, timelines, financial management;
- IP and publication issues resolved early on (or ex-ante);
- Inclusion of dispute resolution methods;
- Over-emphasis by governments on industrial links may be counter-productive;
- Links may be especially important when new technologies emerge, and become less important as the technologies become established.

Current trends in regional innovation and TT policy

- U-I collaboration is highly encouraged in large R&D projects involving SMEs → unaffordable to many small firms, but entry barriers can be overcome by means of I-I partnerships
- according to a ‘mission-oriented’ approach, very large strategic projects are funded requiring cooperation between large and small firms, with research organizations potentially involved
- priority to: IT, Photonics, Robotics, Pharma/Chemistry, Nanotech, Industrial machinery & Automation, Sustainable industrial processes
- less ambitious R&D/innovation projects relegated to small subsidy schemes or to repayable loans

Contacts

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