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Enterprise and innovation policies in comparison: where do the Italian regions go?

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Outline

- **Regions as key actors of industrial policy**
- **The objectives of the analysis**
- **Market failures and their remedies**
- **The empirical analysis: can we detect any “model” of regional policy?**

Regions as key actors of industrial policy

spending review

Constitutional reform

Administrative reform (Bassanini law)

EU p.p. 1994-1999

EU p.p. 2000-2006

EU p.p. 2007-2013

90s 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 ...

<p>mostly national policy-making</p>	<p>Public and private research policies, technological clusters, policies for lagging-behind areas</p>	<p>Public and private research policies, technological clusters, "Industria 2015", renewables and eco-efficiency, lagging-behind areas</p>
<p>limited regional policy-making</p>	<p>shaping policy agencies and tools, transfer of some former national programs, experimentation of own firm and innovation programs</p>	<p>full implementation of regional powers, new choices?</p>

Firm support, innovation and research remain within the concurrent legislative competence of State-Regions

The objective of our analysis

→ (p.p. 2000-06 – policy learning) During the first programming period, the regional policy makers have set the stage. They have inherited some national policies, and - in some cases- they have experimented their own tools & interventions (Brancati, 2004; Bellandi and Caloffi, 2006).

→ (p.p. 2007-13 – policy ?) Once defined their policy-making infrastructures & experimented some tools:

1. What is regional industrial policy today?
2. Can we identify any regional policy model?

Market failures ... and their remedies

Causes of market failure	Socially desirable goals are not fully attained because	Possible corrections (examples)
positive externalities, spillovers	firms have low incentives to invest in R&D as competitors could reap the benefits of their R&D effort	R&D subsidies, tax-credit, IPR regulation
coordination failures	presence of transaction costs; incentives to cooperation are not well aligned between the parties (e.g. SMEs and Universities); lack of information about the possible benefits of cooperation	incentives to R&D collaboration; cluster policies; vouchers
information asymmetries	problems of adverse selection and moral hazard prevent financiers/lenders to provide firms with the finance needed to invest	subsidized credit, public loan guarantees, public VC, investment subsidies
negative externalities (e.g. environmental)	the firm has little interest in reducing negative externalities, better dump them into the collective laps	regulation, taxation, subsidies towards eco-efficient investments
network externalities	the value of a technology is greater the larger is the number of users of the same technology	incentives to the adoption of standards, regulation
incomplete information	poor information about the benefits linked to the adoption of a given technology	informative actions and campaigns, incentives to the adoption of standards

The empirical analysis

Analysis of the regional programming documents (POR) + implementation documents + call for tenders issued by the Italian regions

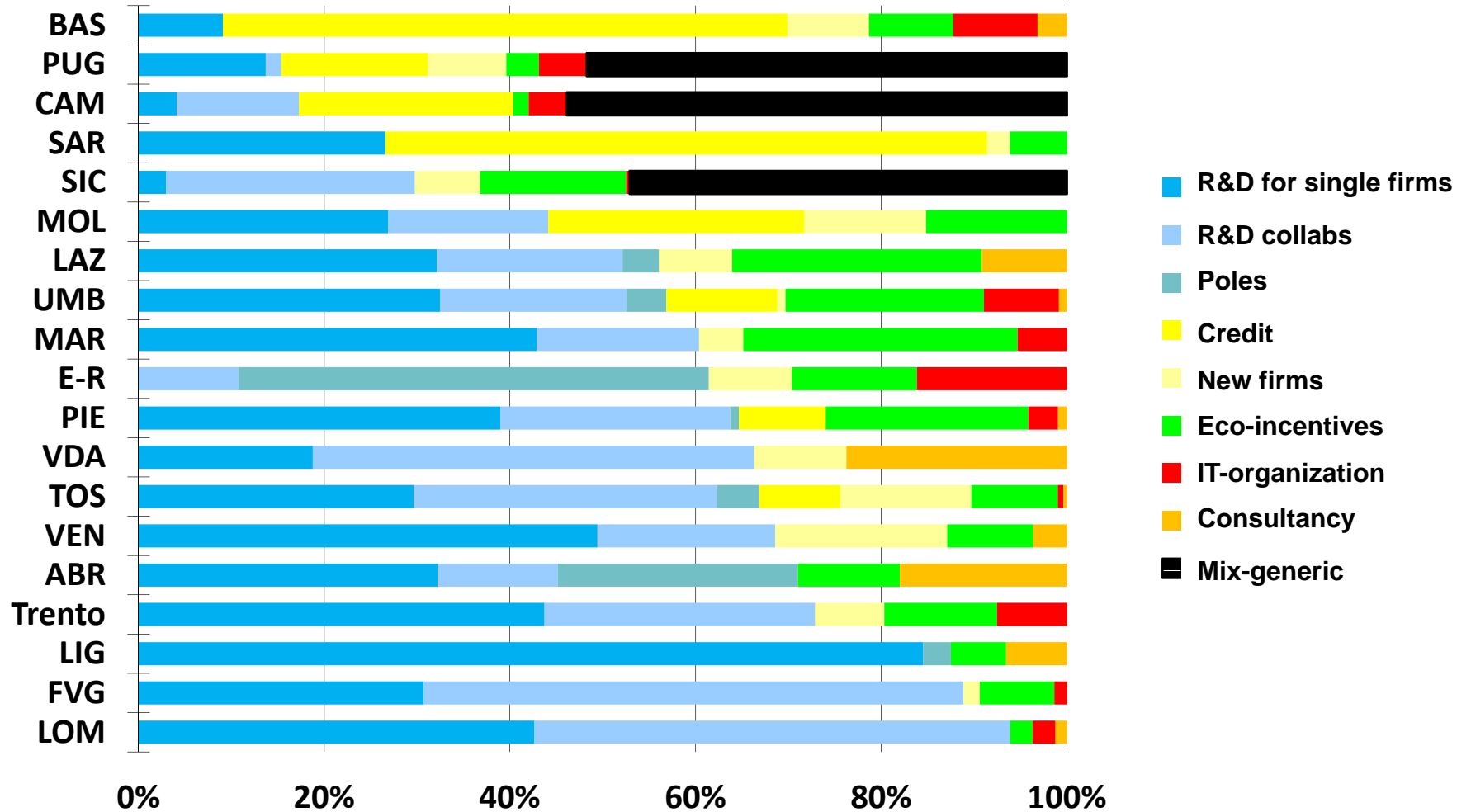
- 1. Market failures and policy objectives**
- 2. Beneficiaries' and projects' features**
- 3. Specific features of the policy tool**
- 4. Policy target(s)**

The weights used: the ERDF funds used by the various interventions as of june 2012

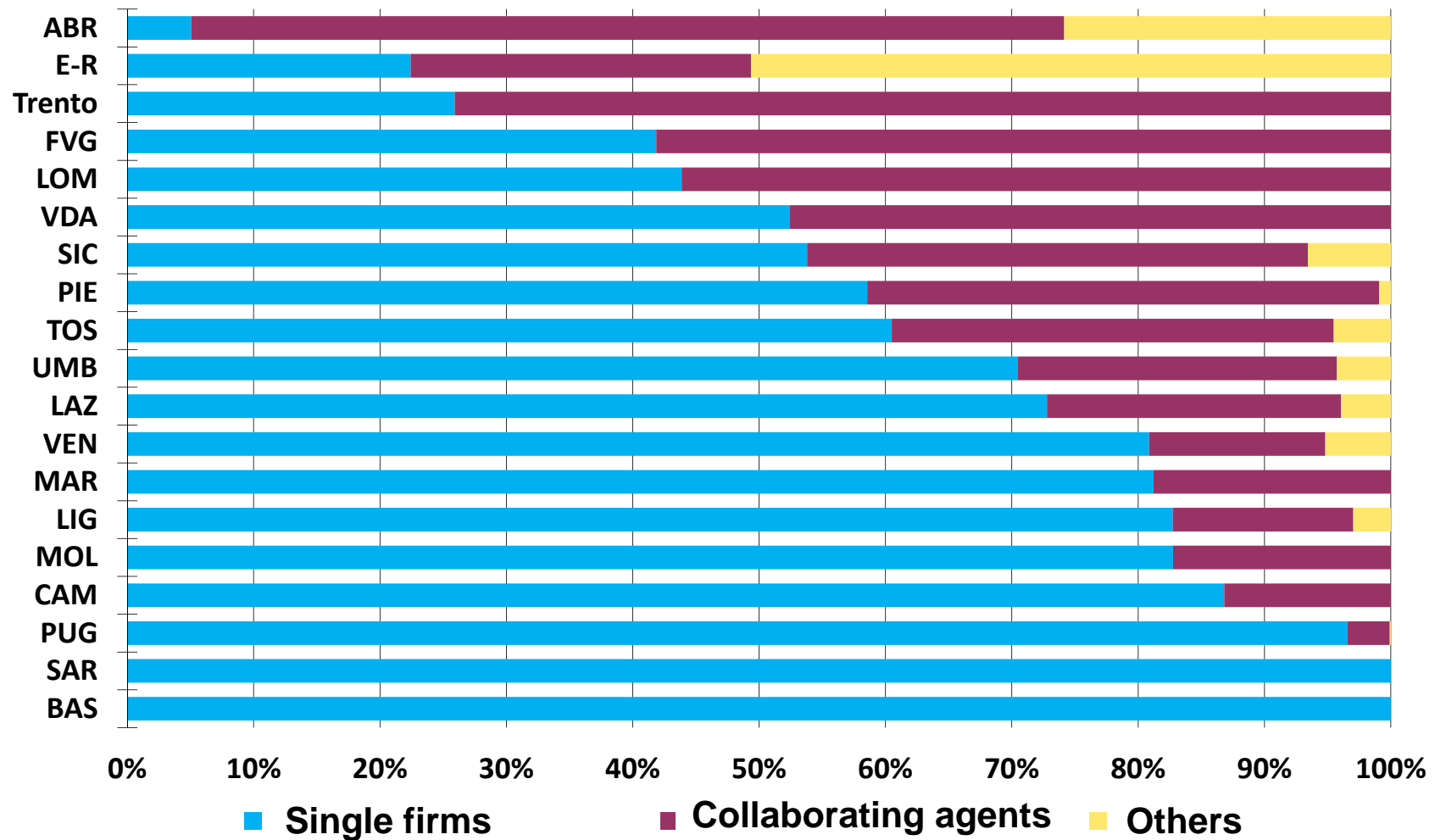
1. Market failures & policy goals

		Goals	
		R&D investment	Other kind of investment
Market failures	positive externalities, spillovers	1. R&D incentives for single firms	
	coordination failures	2. Incentives to R&D collaboration; 3. Innovation poles and clusters, production chains/filières, technology transfer	
	information asymmetries	3. Micro-level interventions on credit and capital markets	
	negative externalities		4. Eco-incentives
	network externalities		5. Diffusion of ICTs
	incomplete information		6. Information campaigns, diffusion of management/marketing techniques and practices to raise organizational performance

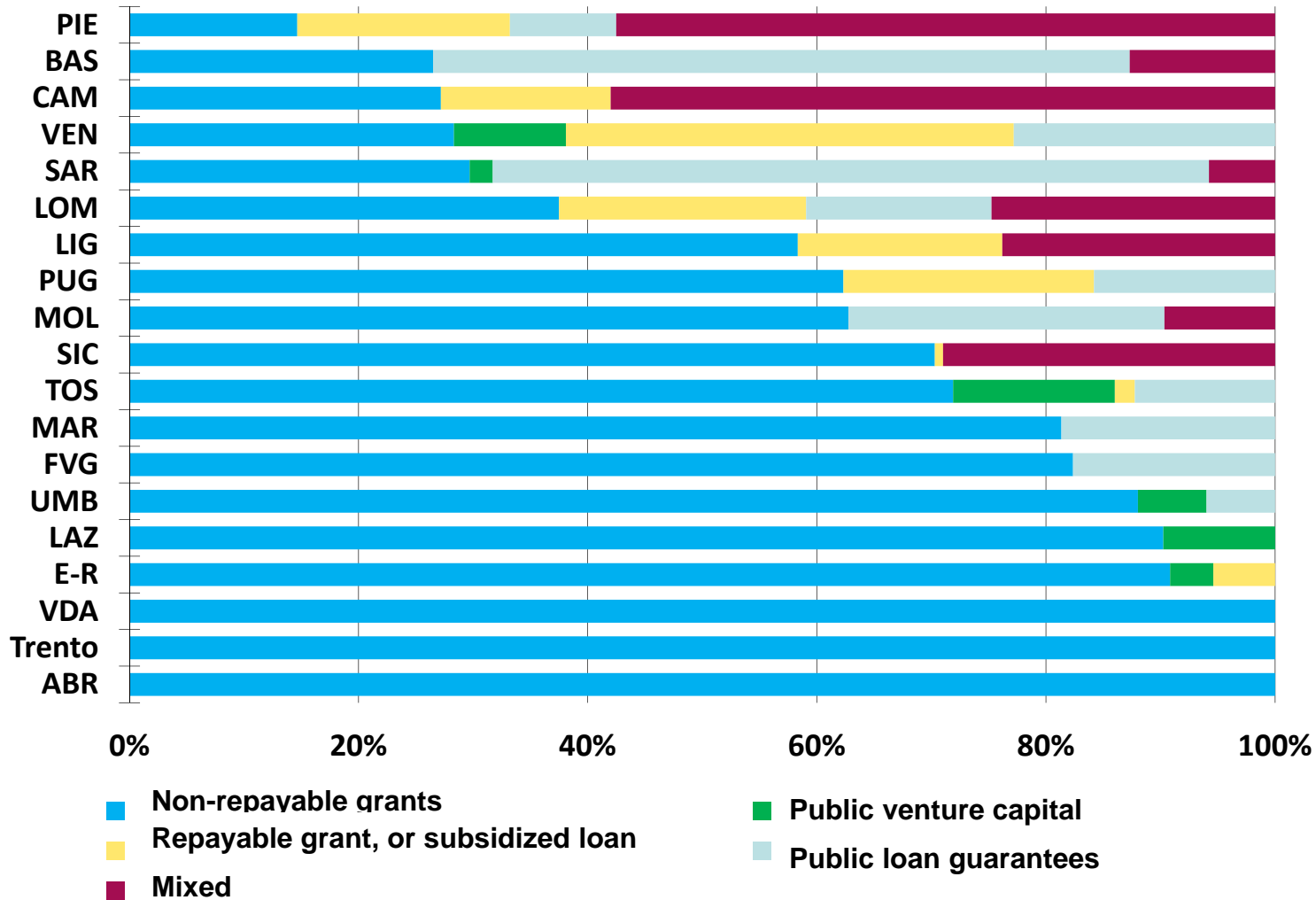
1. Market failures & policy goals



2. The beneficiaries



3. Types of incentives



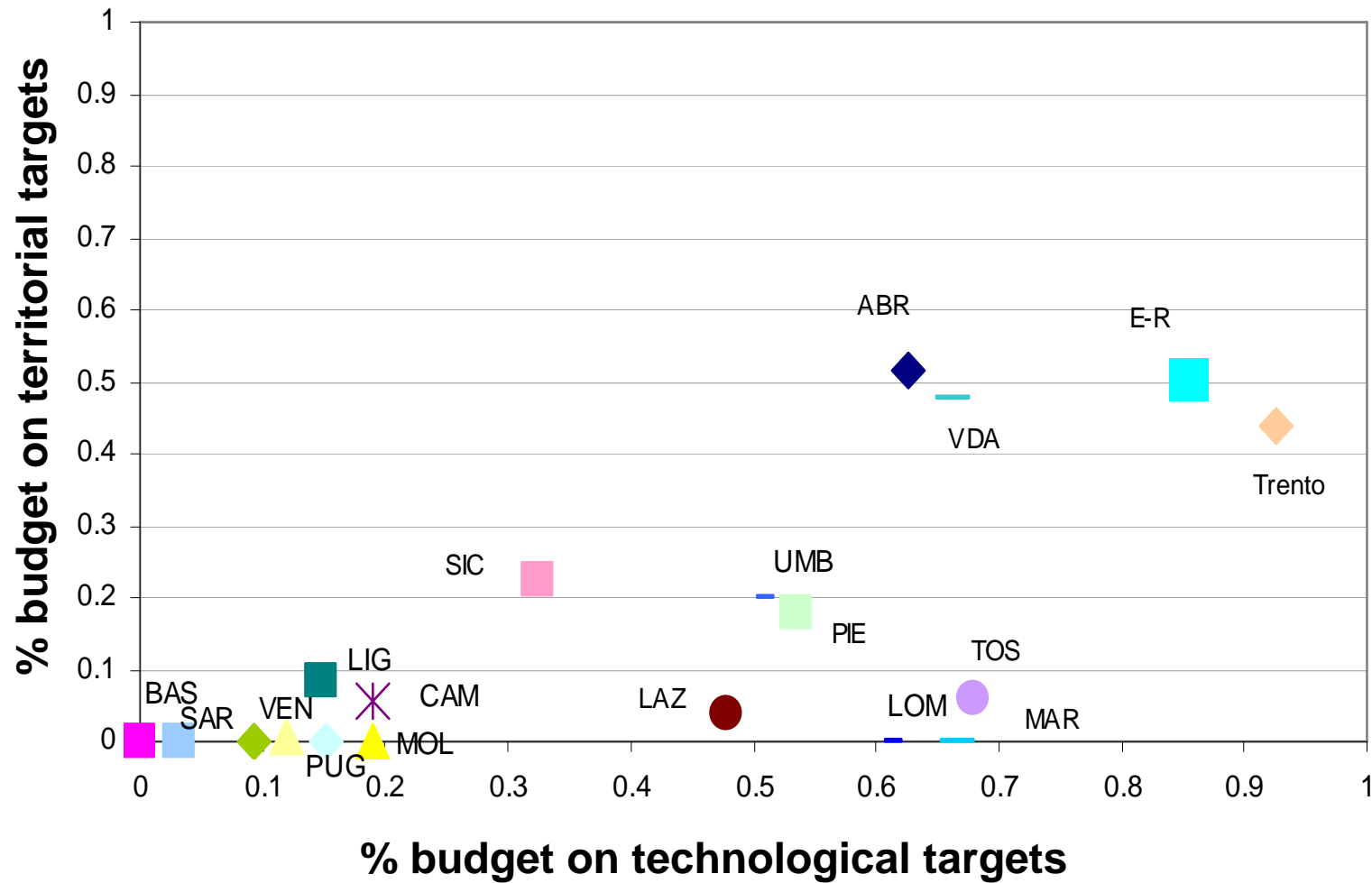
Admission procedure:

Over 80% of the interventions is based on mechanisms of evaluation / negotiation

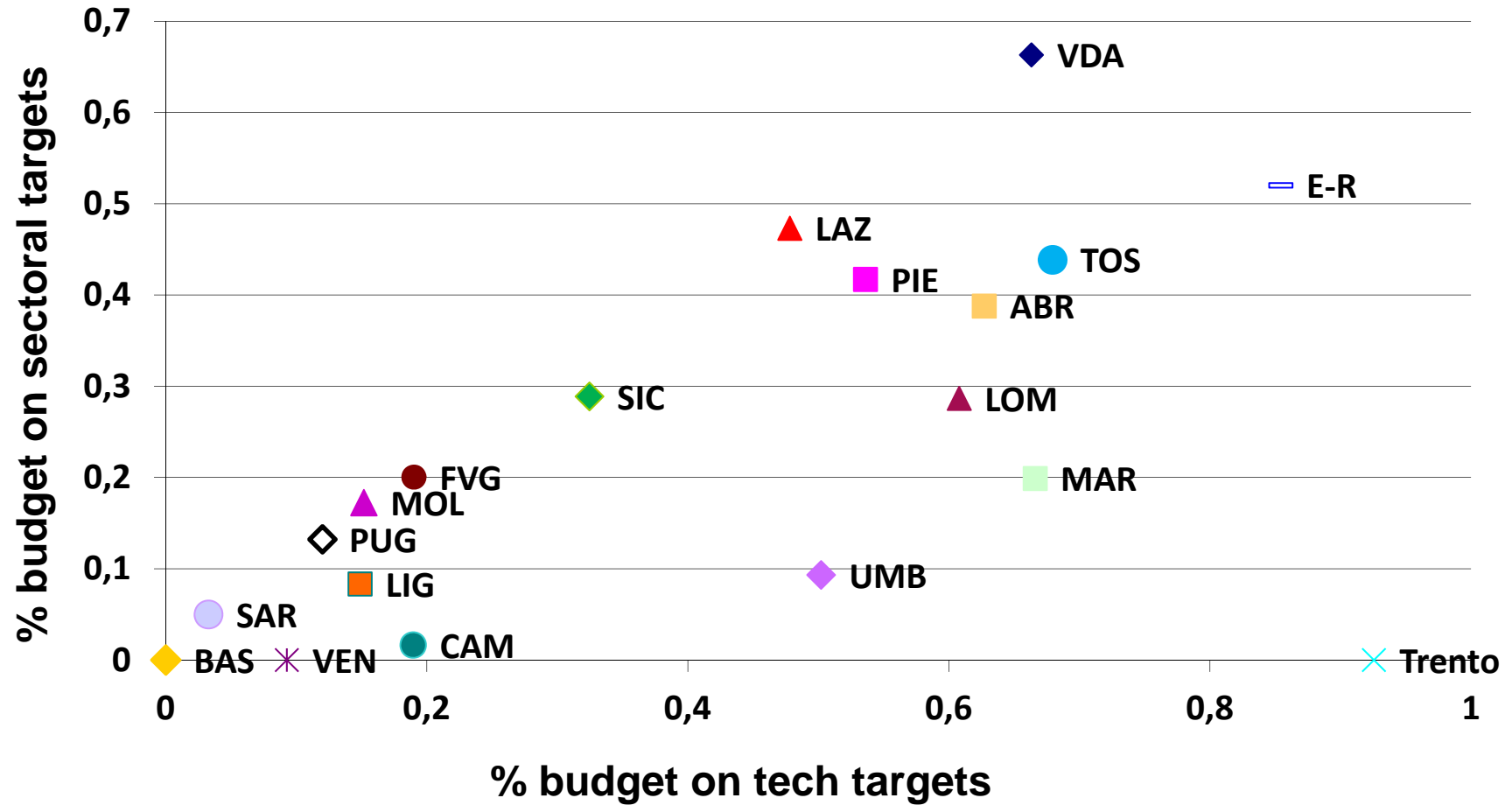
Only 13% has semi-automatic nature

(almost) no automatic incentives

4. Targets (1)



4. Targets (2)



National policies

Goal	Incentive type	Total (millions)
Mixed/Generic	Non-repayable grants	64.0
	Non-repayable grants + Subsidized loans	400.0
	Public loan guarantees	620.0
R&D for single firms	Non-repayable grants	2145.5
	Non-repayable grants + Subsidized loans	400.0
	Tax credit	350.0
	Subsidized loans	20.0
R&D collaborations	Non-repayable grants	1485.0
	Non-repayable grants + Subsidized loans	3134.7
New firms	Non-repayable grants	67.5
Eco-incentives	Non-repayable grants	120.0
	Non-repayable grants + Subsidized loans	400.0
IT-Organization	Tax credit	98.0
Internationalization	Subsidized loans	300.0
	Public VC	228.0

Resources allocated per goal, 2008-12. Preliminary elaboration on Italian Government data

Cluster analysis: the variables

Variable	Description	Obs	Mean	Std. Dev.	Min	Max
R&S	Pct of funds devoted to R&D support	19	0.623	0.254	0.173	0.939
Tech focus	Pct of funds devoted to specific technologies	19	0.410	0.290	0	0.925
Partnership	Pct of funds devoted to R&D collaborations	19	0.298	0.193	0	0.614
SMEs + LF	Pct of funds devoted to programs that do not exclude large firms (LF)	19	0.354	0.228	0	0.862

Cluster analysis: the methodology

- We compare the results obtained by using hierarchical methods (centroid-based)
- We choose the k-medians, which leads to the more balanced results

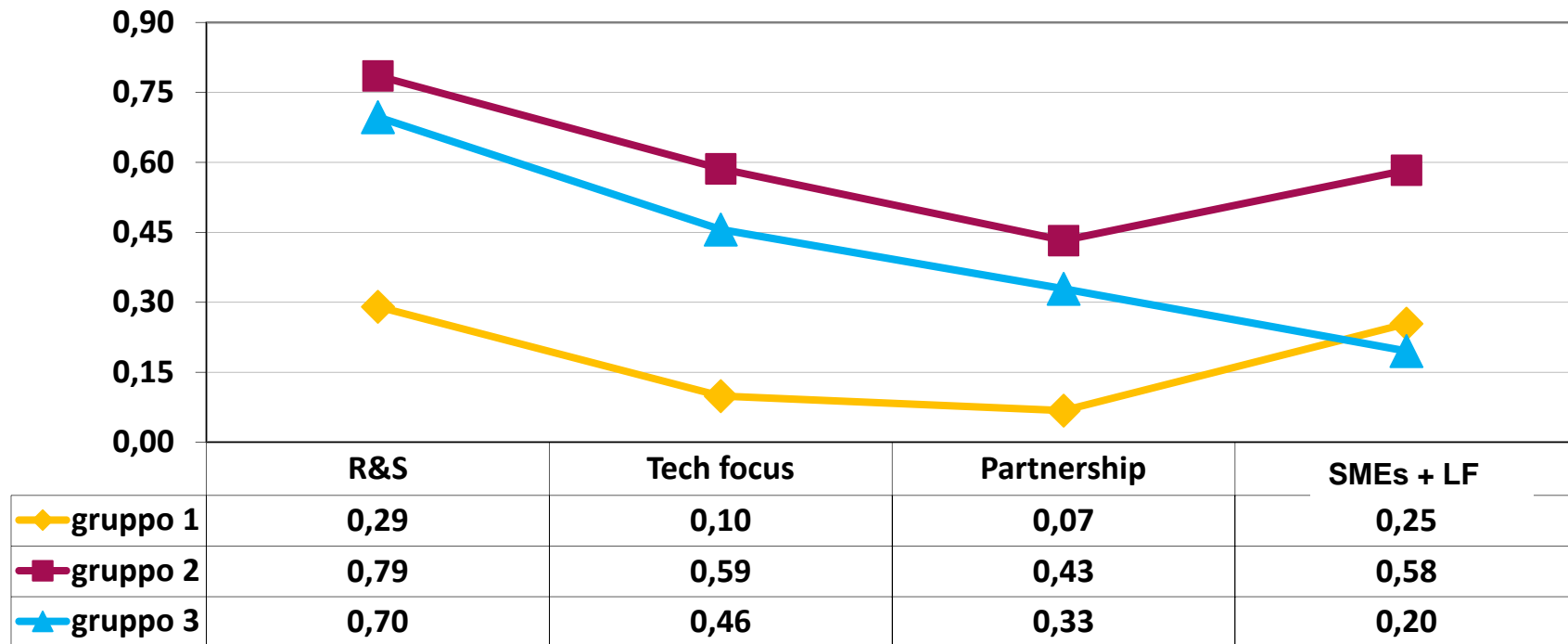
Given a set of obs (x_1, x_2, \dots, x_n) , where each obs is a d-dimensional vector, the n obs are divided into k groups ($k < n$), $G = \{G_1, G_2, \dots, G_k\}$ so that

$$\operatorname{argmin}_G \sum_{i=1}^k \sum_{x_j \in G_i} |x_j - Me_i|$$

Where arg min is the argument of the minimum, i.e. the partition into k groups, among all the possible partitions, such that the within group “variability” reach its lower value and Me_i is the median within each G_i

Cluster analysis: the results

Cluster analysis, k-medians method, obs: 19



group 1 Generic investments, SMEs
group 2 R&D, also LFs
group 3 R&D, only SMEs

BAS, CAM, MOL, PUG, SAR
 FVG, LOM, PIE, TRE, TOS, UMB, VDA
 ABR, ER, LAZ, LIG, MAR, SIC, VEN

Anti-crisis policies?

What kind of industrial policies (can be turned to) pursue anti-cyclical purposes?

How can we identify an anti-crisis policy?

- In theory: in some cases this goal comes with the type of program (e.g. support to liquidity), while in others this goal is less explicit (e.g. public loan guarantees for investments, grants for short-term projects). Other policies may hardly be viewed as anti-cyclical (e.g.: tech cluster policies)
- In practice: we check whether explicit reference is made to anti-crisis purposes in the programs (this happens, e.g. in Piedmont, Molise and Tuscany). Alternatively, we check whether the presence of an anti-crisis goal can be deduced by the way the policies are being implemented (Lombardy, Umbria, Campania)

Concluding remarks

- **Different priorities**
- **Some attention on collaborative R&D, but – overall – the support to individual firms through subsidies or financial engineering has a larger weight**
- **In spite of recent emphasis on innovation clusters & poles, only a few regions are strongly betting on territorially targeted policies**
- **Southern regions of Italy can be described by the trinomial: generic investments, single firms, low level of targeting. Their situation is not very different from the previous p.p. (Bellandi and Caloffi, 2006)**
- **Central-Northern regions of Italy place a major emphasis on R&D (also on collaborative R&D). They have a different policy attitude towards large firms**