IFISE Project Status and Preliminary Conclusions

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Outline

1. Fourth meeting objectives
2. Planning for Italy high-tech seed and venture capital sources
3. Administrative decisions and project status (in short)

4th Meeting Objectives

1. Results presentation
2. Planning guidelines for Italy
3. Confrontation with Italian policy makers
4. Administrative Issues

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Italy: Planning Issues

1. Institutional Issues: Do we have the right institutional framework for high-tech new firms
2. General concepts and planning issues for VC policy
3. North vs. South : Diversity of potentiality and actual supply of Venture Capital.
4. Lombardia:The most innovative region in Italy
5. Sectoral issues
6. Geographical Issues
7. Seed Capital provision for the high potential regions

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(1) Institutional Issues

Coping with timing (at all levels): Italy lacks an institution like the Office of the Chief Scientist at the ministry of industry and trade able to cope competently and quickly in the wake of continuous changes.

Would such an institution be regional, national or both?

(2) General Planning Issues

1. The public intervention for start-up capital is aimed at triggering the creation of VC, whereas the public intervention in seed capital provision is aimed at continuosly fostering new ideas
2. How to direct existing VC to regions sectors and stages
3. How to create efficient seed capital sources able to gather succeesful ideas from all the territory and bring them to a higher development level

(3) South of Italy: A matter of suffocation?

1. Very strong public VC intervention and subsidies
2. No private VC headquarters
3. Very few private VC deals
4. Public oriented potential entrepreneurs
5. Only one high-tech industry nucleus (in Sicily)

(3A) South of Italy: A high-tech strategy

1. Continuing to attract large high-tech firms following the success of ST Microelectronics in Catania
2. Avoiding additional public funds into new companies. Is there a case to encourage private VCs to operate in those areas?
3. Creating high-quality high-tech oriented consulting team able to help getting public money, supplying high-tech consulting and link to italian or international VCs.

(4) Lombardia and the high potential areas – Missing seed capital?

1. Private Venture Capital is not missing in Lombardia
2. Public seed capital is scarce and private seed capital is hardly existent.
3. Fast high-tech growth is not a declared regional objective

(4A) A strategy for Lombardia, the most innovative region of Italy.

Just add public seed capital !?

A few alternatives:

1. A Technological Incubators programme for Lombardia Combine public/mixed funds to existing BICs.
2. A Technological Incubators programme for Lombardia
3. Seed funds independent of physical facilites

(5) Sectoral issues

- Low specialization in the classic High-tech sectors
- Only 2% investments in the industrial automation – the only high-tech sector in which Italy specializes
- Biotech, some potential in Universities, no potential in the industry

Pharmaceutical & Biotech related Industrial R&D

R&D INVESTMENTS						
	Italy	**France**	**Germany**	**UK**	**US**	**Japan**
R&D/Turnover Ratio	6,02%	12,33%	10,72%	19,97%	15,91%	20,04%

Source: Farmindustria 2000

R&D PERSONNEL						
	Italy	**France**	**Germany**	**UK**	**US**	**Japan**
R&D personnel	5.024	15.200	15.000	20.900	51.000	34.437
% of R&D personnel on total personnel	7,18%	16,87%	12,99%	28,25%	19,62%	28,24%

Sorce: Farmindustria 2000

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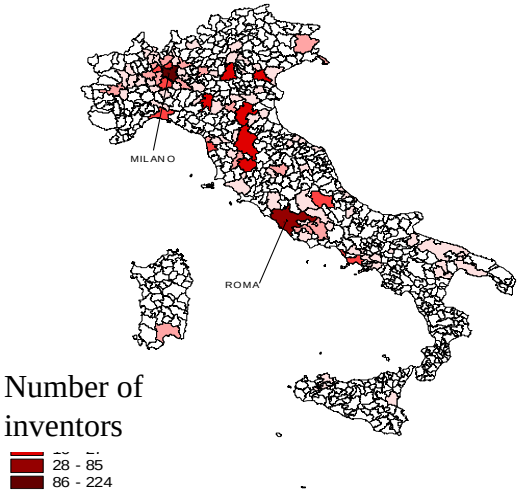
Pharmaceutical Industrial R&D

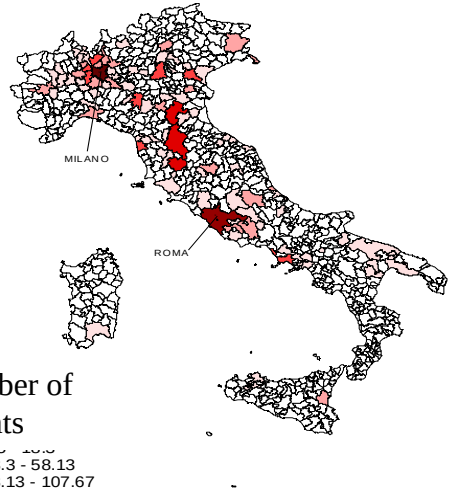
Inventors in pharmaceuticals per Local Labour System



Number of inventors

Total inventors in pharmaceuticals (years 1995-2000): **705**

Patent applications in pharmaceuticals per Local Labour System



Number of patents

Total patents in pharmaceuticals (years 1995-2000): **335**

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Pharmaceutical Industrial R&D

Region	Local units	Administrative units	Research centres	Production units of raw materials	Production units of drugs	Employees	Employees in R&D activities
Abruzzo	6	1	2		6	917	43
Basilicata	1				1	429	
Calabria							
Campania	5	1		2	3	1.316	32
Emilia Romagna	12	5	7	3	7	1.894	252
Friuli Venmezia Giulia	2	1	2	1	2	227	8
Lazio	64	43	18	13	23	13.179	827
Liguria	7	5	3	1	6	438	27
Lombardia	121	77	38	12	51	31.145	2.963
Marche	2	1	1		2	671	48
Molise							
Piemonte	16	6	2	4	9	2.568	191
Puglia	4	2		2	1	99	3
Sardegna							
Sicilia	3	2	2		2	1.233	32
Toscana	31	21	13	3	21	5.991	419
Trentino Alto Adige							
Umbria							
Valle d'Aosta							
Veneto	11	8	4	3	7	2.984	521
TOTAL	**285**	**173**	**92**	**44**	**141**	**63.091**	**5.366**

Source: Farmindustria 2000

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Pharma Biotech and related areas – Public sector researchers (2000)

REGIONE	biotech	genetica	medicina	TOTALE
CALABRIA/BASILICATA	23	6	0	29
CAMPANIA	**147**	**54**	**796**	**997**
EMILIA ROMAGNA	**202**	**84**	**830**	**1116**
FRIULI	65	17	152	234
LAZIO	**138**	**115**	**1123**	**1376**
LIGURIA	41	13	305	359
LOMBARDIA	**264**	**123**	**1378**	**1765**
MARCHE	63	18	120	201
PIEMONTE	84	35	361	480
PUGLIA	99	31	281	411
SARDEGNA	62	19	305	386
SICILIA	**140**	**39**	**1088**	**1267**
TOSCANA	**168**	**58**	**736**	**962**
TRENTINO	0	0	0	0
UMBRIA	60	19	181	260
VENETO	92	42	535	669
TOT	**1648**	**673**	**8191**	**10512**

Geographical Issues (I)

- Very strong concentration of VC funds in Milan (may be due to strong financial institution presence)
- Few VC in the northern region apart from Milan
- Only 5 VC investments in Tuscany, one of the most innovative regions (as for public research) in Italy
- Many Italian potential entrepreneurs…overseas !!

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Geographical Issues (II)

	RICERCATORI NELL'HIGH-TECH - SETTORE PUBBLICO		
REGIONE	Ricercatori/1000ab	Tot.Ricercatori	Investimenti VC nell'high-tech (AIFI-2000)
ABRUZZO/MOLISE	0,27	433	2
CALABRIA/BASILICATA	0,12	329	2
CAMPANIA	*0,28*	**1575**	*6*
EMILIA ROM	**0,50**	**1962**	**30**
FRIULI	0,39	464	5
LAZIO	**0,42**	**2160**	*24*
LIGURIA	0,37	616	17
LOMBARDIA	*0,30*	**2660**	**131**
MARCHE	0,26	368	1
PIEMONTE	0,21	930	18
PUGLIA	0,18	713	2
SARDEGNA	0,36	595	3
SICILIA	*0,36*	**1794**	*3*
TOSCANA	**0,46**	**1618**	*5*
TRENTINO	0,08	71	0
UMBRIA	**0,51**	411	*1*
VENETO	*0,26*	**1125**	**27**
TOT	**0,31**	17391	**277**

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Geographical Issues (III)

COMPANY	**R&D employees**	**SITES**	**TYPE OF RESEARCH**
STMICROELECTRONICS	3,000	2 **Milano** area 1 Catania	semiconductor physics and devices
ALCATEL	1,000	2 **Milano** area	optical fibre and optical communication devices
BULL	900	2 **Milano** area	general purpose systems, software (new generation mainframe, system integration projects, billing systems)

Geographical Issues (III)

TELECOMITALIA LABS	850	mainly in Torino	mobile internet, multimedia systems, broadband networks, voice technology
ERICSSON	800	1 **Milano** area, 1 Roma , 1 Bologna, 1 Salerno	wireless broadband access, high capacity radio, WCDMA (wideband code division multiple access)
SIEMENS	800	1 **Milano** area	second and third generation mobile networks
AGILENT	120	1 Torino 1 Brescia	optoelectronic and photonic devices and components for high speed optic fibre transmission

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Geographical Issues (III)

INFOSTRADA	110	**Milano** area	interactive video and streaming, communication protocols, ADSL technology and last mile
PIRELLI	100	**Milano**	optical fibres and material, nanotechnologies for optical transmission
LUCENT	50	1 **Milano** 1 **Roma**	software development for intelligent networks
ALBACOM	50	1 **Milano**	design of voice and data networks
PHILIPS	25	1 **Milano area**	video signal processing, digital radio transmission, systems for broadband transmission, video networks and systems

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Geographical Issues (IV)

High-tech industry is strongly concentrated in Lombardia whereas high-tech academia is spread throughout Italy – VCs are strongly concentrated in Lombardia. How to exploit university spin-offs from the rest of Italy?

1. Regional-Academy funds
2. Helping existing VCs invest in other regions' universities

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Existing Support Programme

Fast Changing Programmes

- Law 297
- Startech
- UMTS funds
- European Programmes (BICs, ETF…)
- Regional Programmes – Lombardia Fund of funds and law 35/96.
- South of Italy – Objective one area

Seed Capital Planning (I)

Private VC do not enter very early stages of high-tech ventures. Then, if there is no strong support from the public to cope with the technology risk, research-intense firms will never be able to emerge.

Seed Capital Planning (II)

Do we accept the general philosophy of the Technological Incubators Programmes ?

- Integrative incubators (funds-consulting-monitoring, office space etc)
- "Offering a chance to any good idea"
- Centrally governed
- Quite generous – Problems with EC regulation

Seed Capital Planning (III)

Sponsor/initiating Institutions

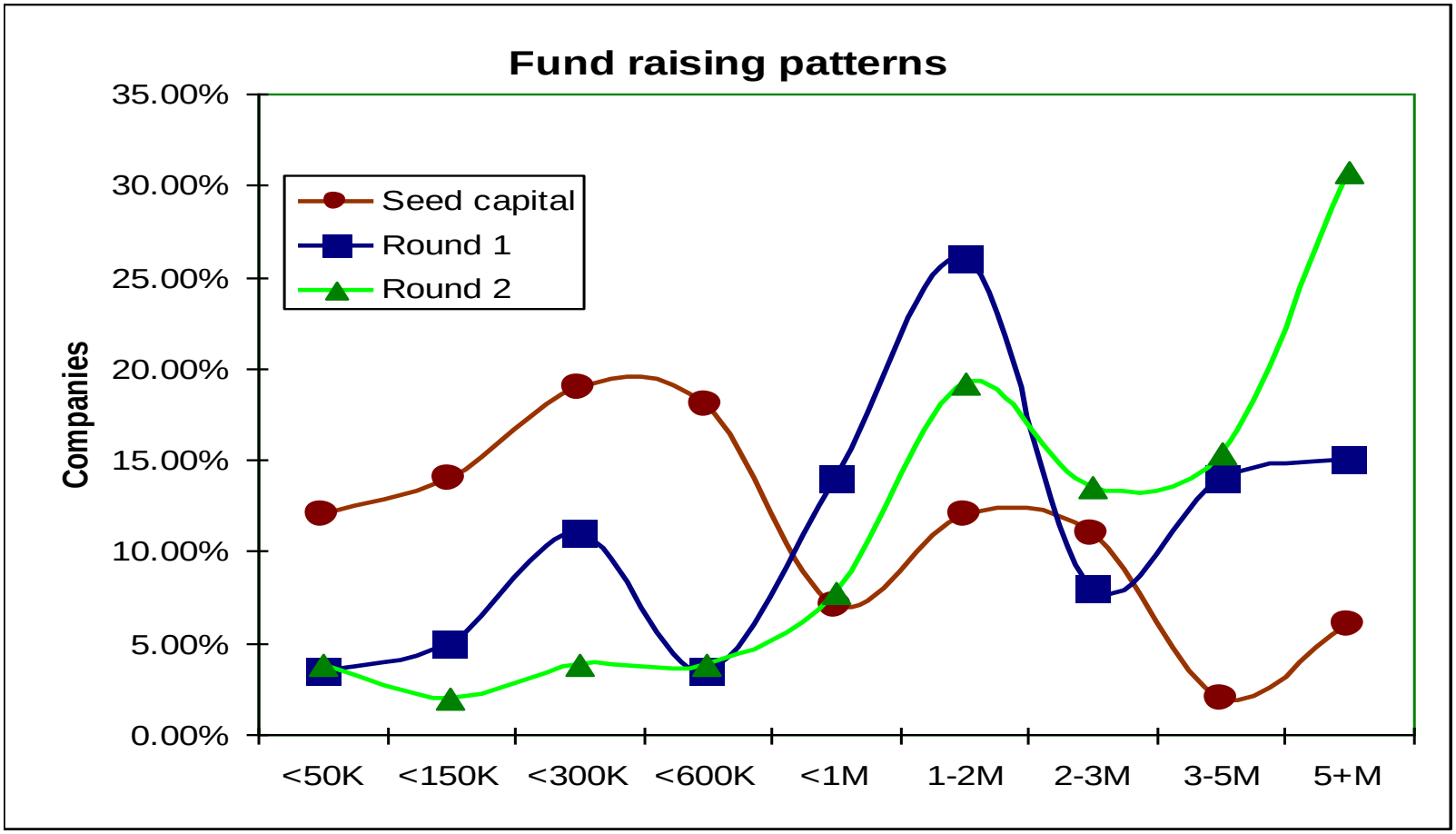
1. Universities
2. Industries
3. Local Authorities
4. Combination of any of the above

Seed Capital Planning (IV)

Size of grants to projects – A few indicators:

1. Israeli incubators – 300K$
2. Israeli Most Frequent Israeli Raising (150-600k$ - see graph below)
3. Israel Biotech First Raisings (0.4-6M$)
4. Italian Biotech Needs (Potential Entrepreneurs) – 0.5-10M$?
5. Italian Potential Entrepreneurs (design houses sector) 0.6-1M$

Seed Capital Planning (V)



Source: Arie Sadovski – The University of Haifa

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Seed Capital Planning (VI)

Sectoral / Non-Sectoral / Focused Incubators ?

1. Sectoral are more efficient?
2. Non sectoral will not lose an opportunity
3. Focused usually provide for a “natural specialization
4. What about a special Biotech incubator?

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Seed Capital Planning (VII)

Sectoral Specialisation Strategy

- In a big city/university a combination of one general Incubator + 2-3 sectoral?
- What about smaller centers (Catania) or Medium-sized (Bologna)? Efficiency or fair opportunity?

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Seed Capital Planning (VIII)

Is it important that?

1. Decision are made quickly (1 month in the Israeli incubator ; 4-5 month in for the Italian 297/99 law)
2. There is a central management for all incubators
3. The incubator's manager gets incentives/share for success.
4. There is a net of experts at national level

Other Issues

1. Professors and researchers just don't want to leave research ! How to save both research and entrepreneurship in universities
2. Property division in early stages
3. EC rules and the "De Minimis" limitation

Summary

1. South needs no more money for firms…
2. Lombardia only needs seed capital
3. Other innovative areas/sectors need both seed and start-up capital, mainly for academy spin-offs
4. Biotech needs a special plan for academy spin-offs
5. EC general regulation may be not suitable for high-tech start-ups

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Administrative Issues (for IFISE partners)

1. Dissemination workshops Amsterdam & Pavia
2. Delays in EC reactions: Payments and prolongation

DINNER 20:30

TRATTORIA ALLE LANGHE

CORSO COMO 6