

PRIME STI INDICATOR CONFERENCE
Lugano 16-17 Nov. 2006

**INDUSTRIAL R/D EXPENDITURE: A CRITICAL
COMPARISON BETWEEN THE TWO (R&D and CIS)
SOURCES OF DATA.**

Bianca Poti and Emanuela Reale
CERIS CNR
PRIME STI INDICATOR CONFERENCE
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AIM

EXPLORING THE RELATION BETWEEN THE
R/D EXPENDITURE IN THE TWO R/D AND
INNOVATION SURVEYS THROUGH A
COMBINED AD HOC DATASET

**DEFINITION OF THE
PROBLEM**

MEASUREMENT PROBLEMS OF R/D EXPENDITURES
IN THE TWO R&D AND INNOVATION SURVEYS

GODIN 2002 . WE NEED TO UNDERSTAND AND
MEASURE DIVERGENCES

OECD FOCUS GROUP 3 2004.A COMBINED SURVEY
IS NEEDED

OSLO MANUAL 2005: ALL R/D HAVE TO BE
INCLUDED AS INNOVATION ACTIVITY

LIST OF CRITICAL ASPECTS

PRESENCE OF DIFFERENCES IN R/D EXPENDITURES FOR A SAME GROUP OF FIRMS IN THE SAME YEAR 2000

CHARACTERISATION OF THE DIFEFERENCES

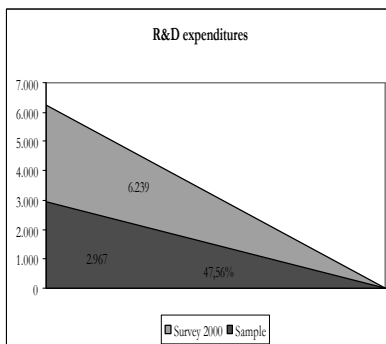
COMPONENTS OF THE R/D EXPENDITURES

CHARACTERS OF THE DATASET

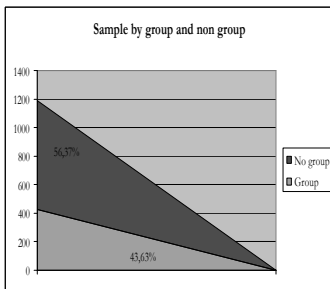
IT REPRESENTS HALF OF THE TOTAL R/D EXPENDITURES OF THE R/D SURVEY

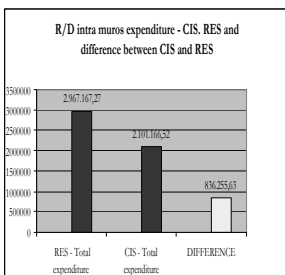
IT IS A BIASED DATASET . SIZE, SECTOR

R&D expenditures

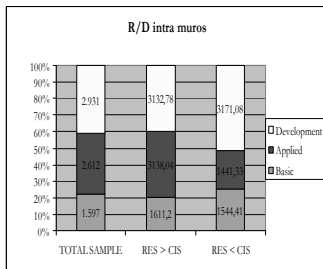


	N° firms	%	Belonging to and groups	%	medium high tech Sectors	%
Innovators	702	92,25%	397	56,55%	462	63,81%
<i>of which</i>						
<i>Innovators without R/I in CIS</i>	57	8,11%	27	47,37%	35	61,40%
Non innovators	89	7,75%	27	54,24%	33	55,03%
Total observations	761	100,00%	429	56,37%	495	65,04%

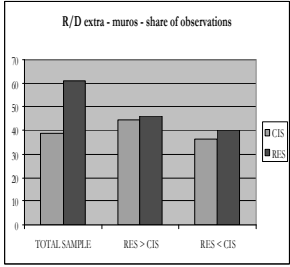


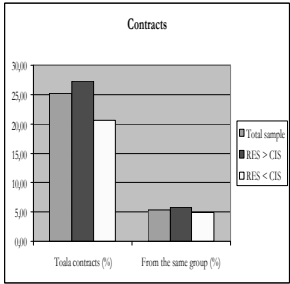


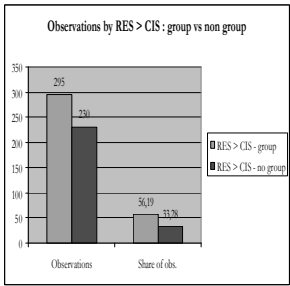
Different groups in the dataset				
	Number of firms	%	Intra-muros R/D expenditure	Average expenditure
RES > CIS	525	75,98	1.063.890,03	2.026,457
RES = CIS	1	0,14		
RES < CIS	165	23,88	227.634,401	1.379,602
Total firms	691	100	836.255,63	1.210,211

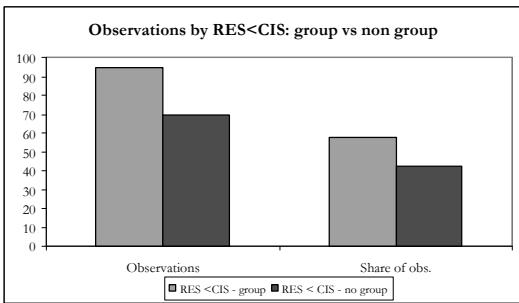


	Central Laboratories		Divisional laboratories		Within design function		Within Production function	
		%		%		%		%
Dataset	274	36,0	98	12,8	385	50,6	472	62,0
RES>CIS	200	38,1	66	12,6	279	33,1	339	64,6
RES<CIS	61	36,9	24	14,8	84	50,9	94	56,9









Kolmogorov-Smirnov test for equality in distributions

Gp vs non GP	0,2113	0,055	0,038	different
comessa vs non comessa	0,2333	0,12	0,082	different at 10%

Note: Diff_RS_CIS = difference between R/D expenditure by RES and R/D expenditure by CIS

NOTE: Diff_RS_CIS = difference between R/D expenditure by RES and R/D expenditure by CIS

Simple correlations between "patents and R/D expenditures

From CIS	0,7035 *
From RES	0,8615 *
RES < CIS	-0,0027
RES > CIS	0,7137 *

Note: * = 5% of significance; RES < CIS = observations with a intra-muros R/D expenditures greater in CIS than in RES;
RES > CIS = observations with a intra-muros R/D expenditures greater in RES than in CIS

CONCLUSION

A RELEVANT DIFFERENCE BETWEEN THE TWO SURVEYS

STRUCTURAL REASONS OF DIFFERENCES:

- *RELEVANT ROLE OF APPLIED RESEARCH
- *DIFFICULT TO SEPARATE R/D EMBODIED IN INNOVATION PROJECTS
- *DIFFICULT TO IDENTIFY R/D INVESTMENT FINALISED TO ENABLE INNOVATION PROJECTS (TO BUILD AND EVALUATE A SET OF PROJECTS)
- *DIFFICULT TO IDENTIFY THE COMMERCIALISED R/D

CONCLUSION

THE TWO SURVEYS STILL LOGICALLY SEPARATED

TO INSERT R/D IN A LARGER CONTEXT OF INNOVATION STRATEGIES, DEALING WITH A BETTER IDENTIFICATION OF R/D COMPONENTS
