



# Measuring Innovation in South Africa

William Blankley, CeSTII, HSRC

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# Background

- Centre for Science, Technology and Innovation Indicators (CeSTII) commissioned to conduct Annual R&D Surveys and regular Innovation Surveys to establish a baseline set of indicators for DST to monitor progress in achieving NSI/R&D Strategy goals

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# R&D Surveys

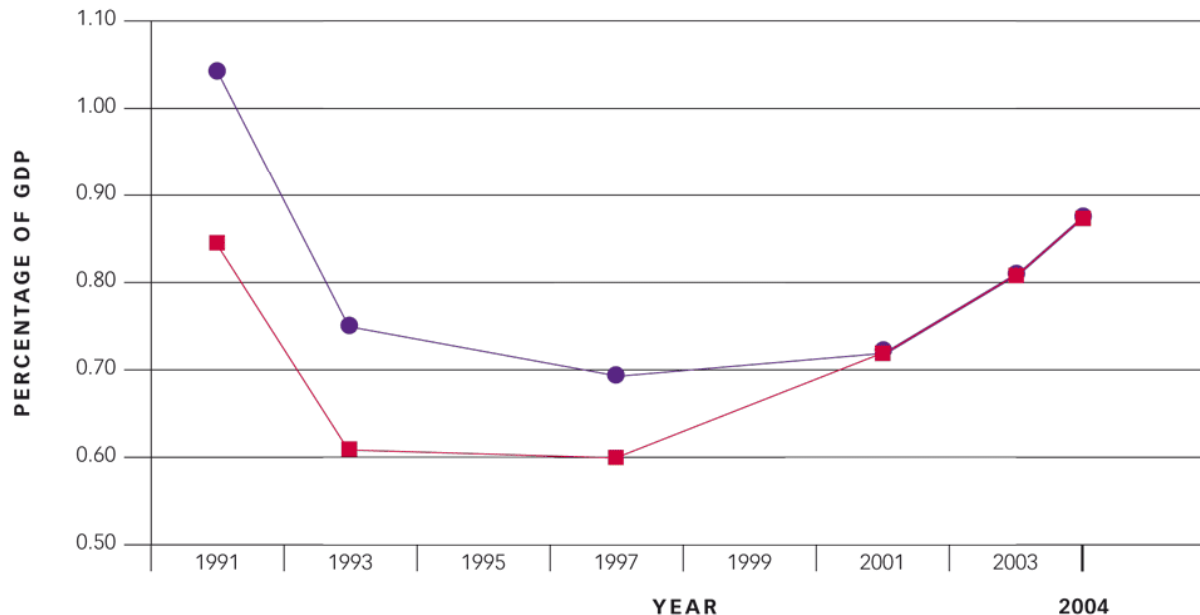
- CeSTII has now undertaken the third in a new official series of R&D Surveys
- 2004/05 R&D Survey Results launched by Minister of S&T in Parliament on 22 June 2006
- Will be making connections between R&D and innovation surveys (64% of innovative firms are active in R&D)

# GERD as a percentage of GDP (revised and unrevised) 1991-2004

Fig 2:

Unrevised —●—  
Revised —■—

Gross expenditure on R&D as a percentage of GDP (revised and unrevised)  
(South Africa, 1991-2004)



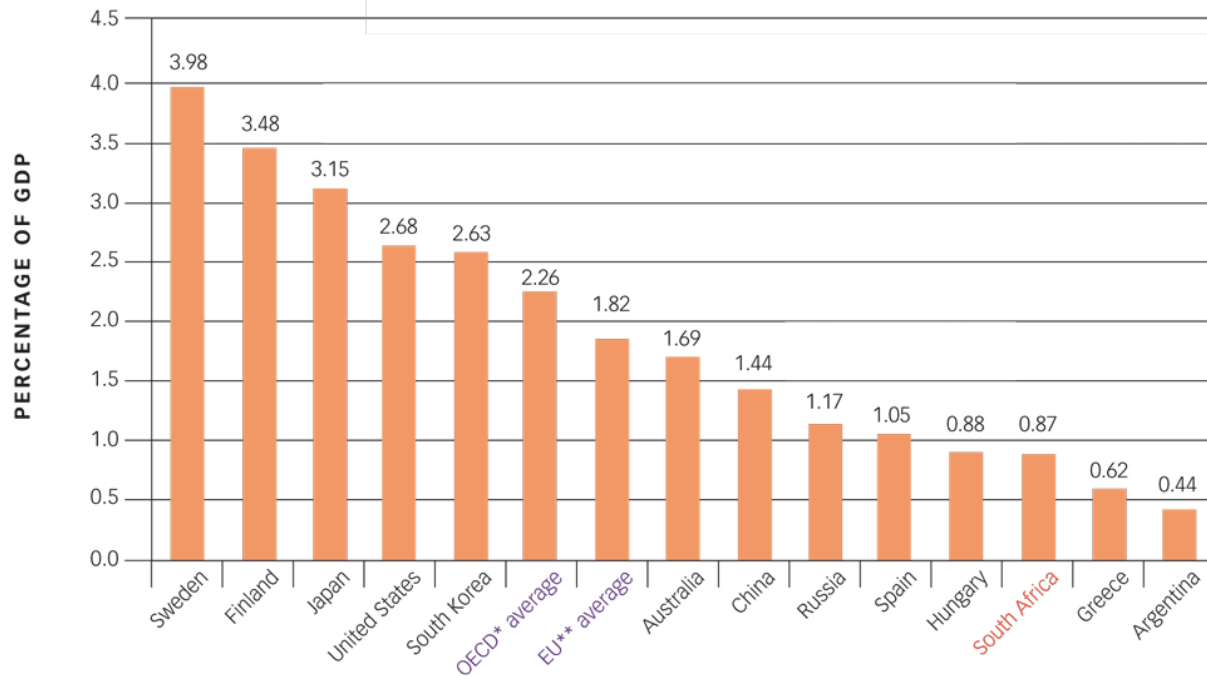
# GERD as a percentage of GDP (International Comparisons 2004)

Fig 3:

Gross expenditure on R&D as a percentage of GDP 2004\*  
(International Comparisons)

\* or latest year available

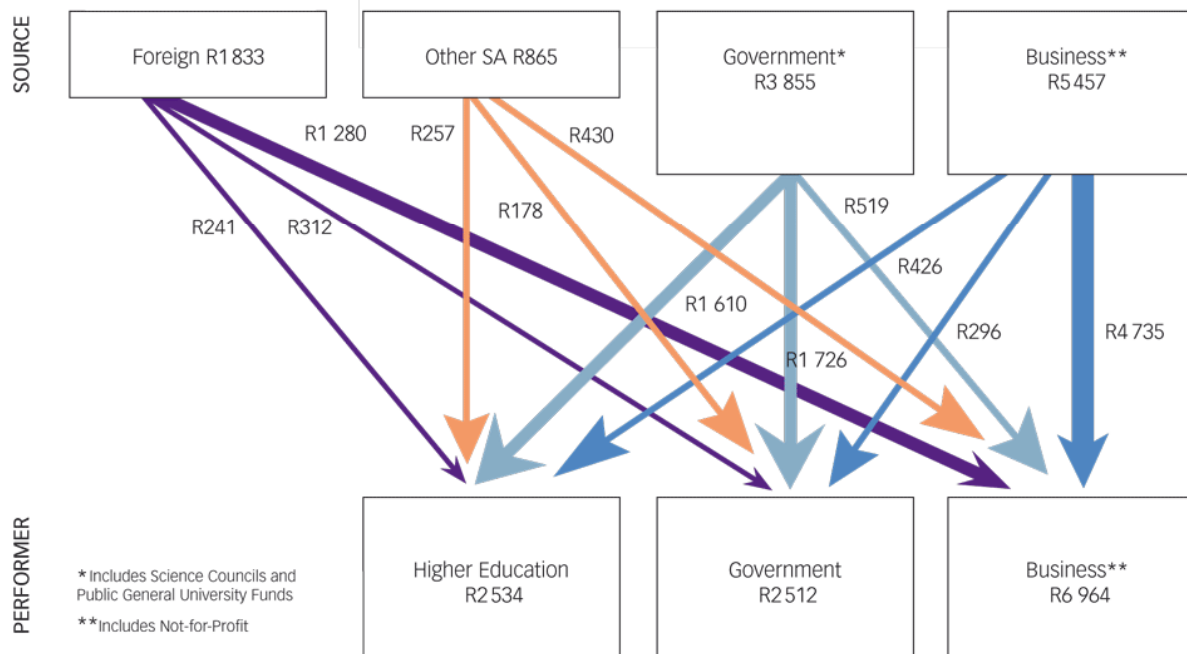
\* Organisation for Economic Cooperation and Development  
\*\* Expanded European Union (25 states)



# Major flows of funding for R&D 2004/05 (R millions)

**Fig 8:**

Major flows of funding for R&D, 2004/05 (R millions)

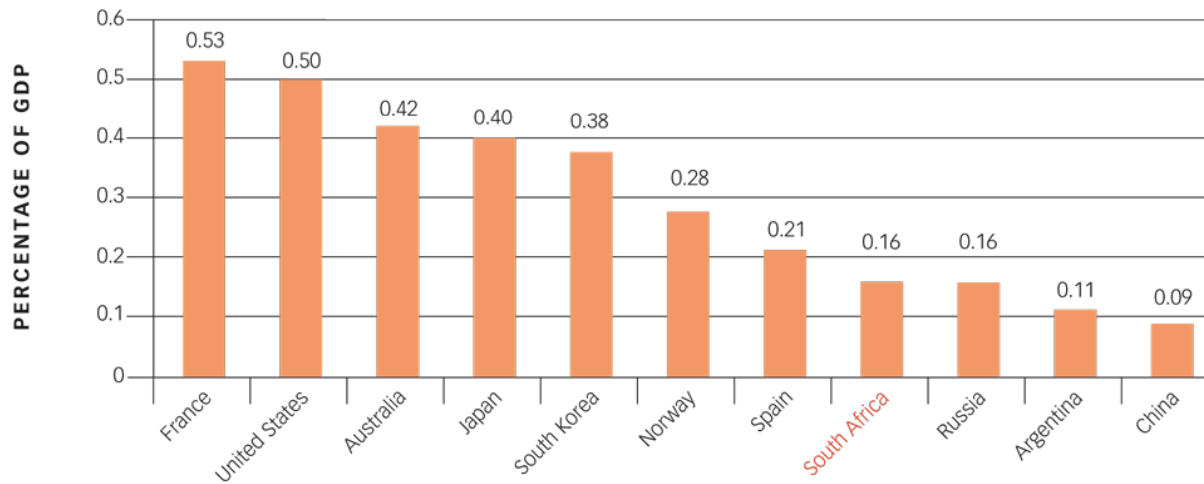


# Basic research as a percentage of GDP 2004 (International Comparisons)

Fig 11:

Basic research as a percentage of GDP 2004\* (International Comparisons)

\* or latest year available



# Innovation Surveys

- Two previous unofficial surveys of Innovation in South Africa
- Innovation Survey 2005 compatible with Community Innovation Survey 4 (CIS4) of EU

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# FRD/ISP 1994 Survey

- Modelled on first CIS
- Very small budget from international donors
- Confined to manufacturing sector
- Tended to focus on known R&D performers or innovators – 78.7% innovative
- Low response rate (8.9%)
- R&D expenditure poor proxy for innovation
- Proved useful for lobbying for greater government support for official S&T surveys

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# U.Pretoria/U.Eindhoven 2000 Survey

- Based on CIS2
- Better funded
- Sample based on commercial database
- Random sample by sector (not size)
- Postal, internet and telephonic survey
- Student workers
- Low response rate (8.4%)
- 52% of South African manufacturing firms innovative

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# Purpose of the South African Innovation Survey 2005

- International comparisons of innovation survey results important for S&T Policy development
- CIS4 a sophisticated and useful survey for comparisons
- Important for South Africa to have regular and reliable survey based data on Innovation & R&D to report on the development of the NSI

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# Eurostat CIS4

- March 2001 - Eurostat open request to all non-EU countries to use core CIS questionnaires and methodology to allow international comparisons
- Followed the same format of questions and basic methodology as CIS4 to allow international comparisons but piloting took account of South African terminology and business environment

# Eurostat CIS4 (cont.)

- Support and advice from OECD NESTI, Eurostat, StatsSA, DST, NACI and UP important in shaping the South African Innovation Survey 2005
- Tabulated basic results to Eurostat from members by 30 June 2006
- First results from South African Survey now being processed

# Approach

- Random, stratified sample of 3087 enterprises from Statistics SA business register (official statistics agreement with DST)
- Survey call centre (6 agents+manager)
  - Cleaned sample plus managed sectors
- Two pilot surveys
- Stakeholders workshop for buy in
- High quality questionnaire
- Non-response survey to control bias

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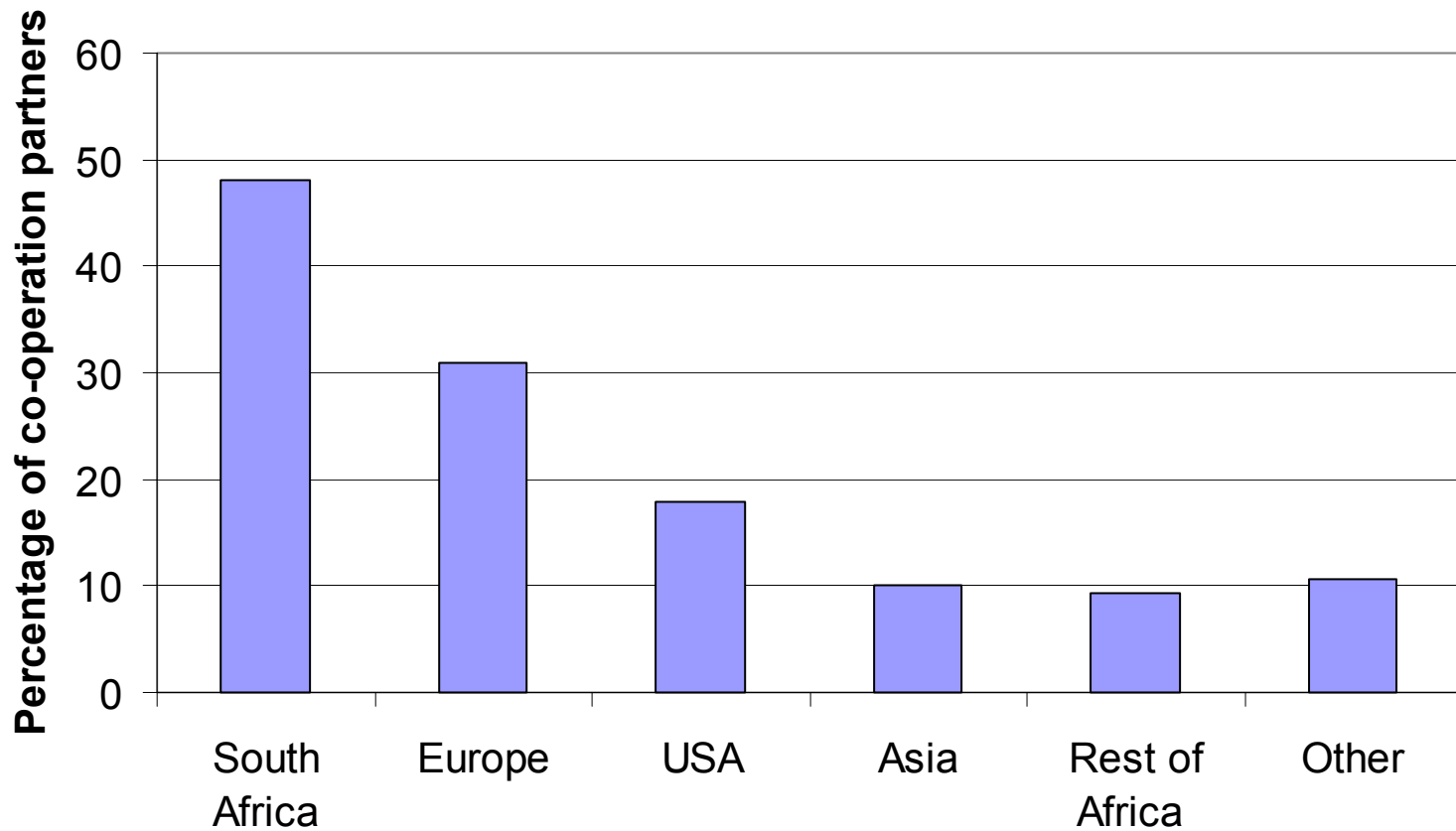


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# Preliminary trends (unweighted)

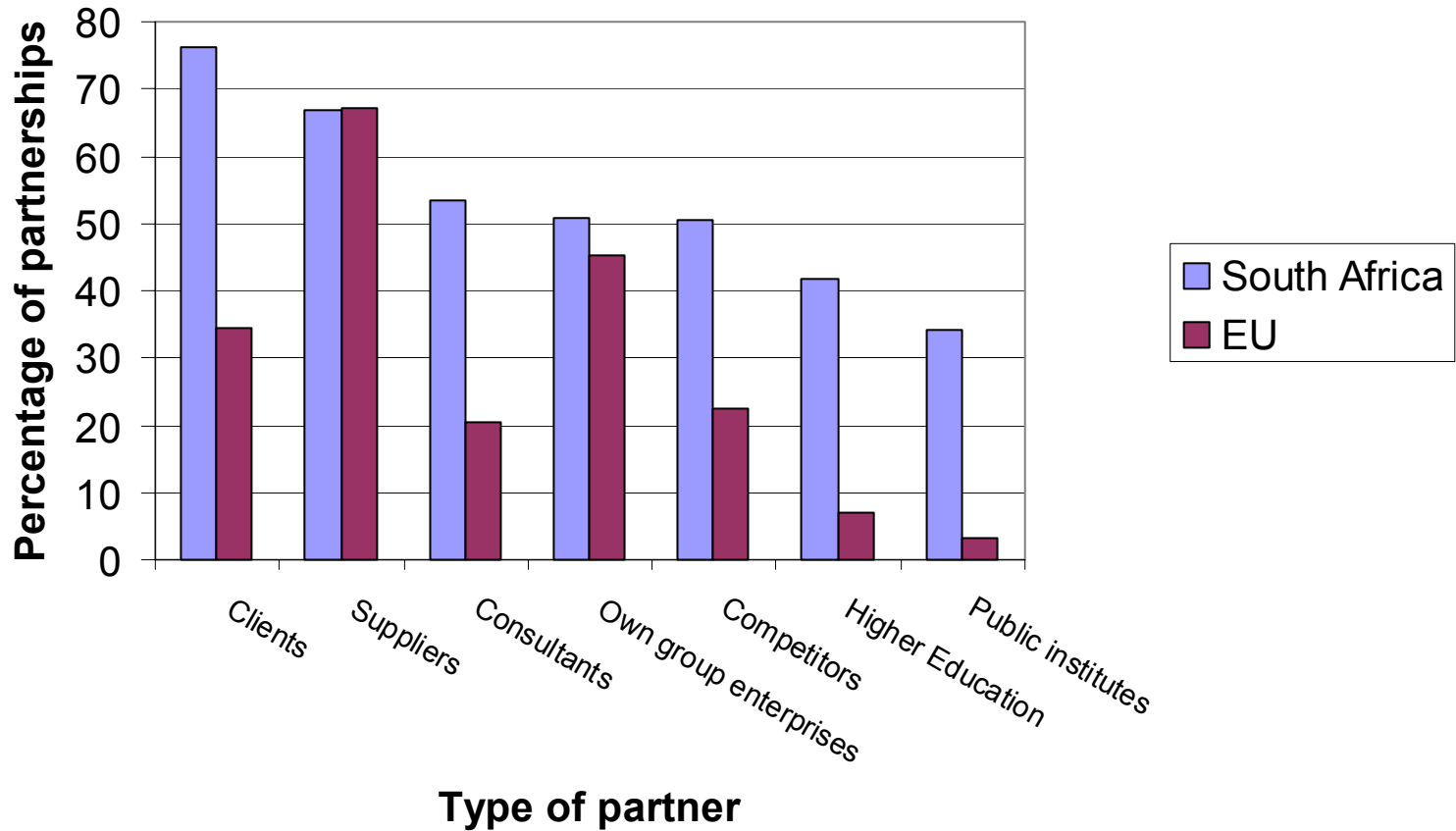
- Non-response survey only recently completed and still busy with analysis and weightings
- A 32% survey response rate (previously 8.9% and 8.4%) – Survey reluctance is high but survey call centre effective
- Non-response survey a 98% response rate
- About 60% of respondents innovative

### Location of co-operation partners of innovating South African firms 2002-2004





## South African firms in innovative partnerships by types of cooperation partners located in SA and EU 2002-2004



# Innovative South Africa

- Strong but relatively small core of researchers and innovators across institutions and sectors – to expand capacity
- Historically a strong manufacturing sector but increasing services R&D and innovation
- Numerous programmes and support measures for R&D and innovation + new R&D tax incentives coming
- Diversity of natural resources – stimulating for R&D and innovation
- Strong political, economic and trade links with other African countries - new R&D and innovation linkages

Knowledge Systems

# Thank You

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