



Geography of Journal Publishing

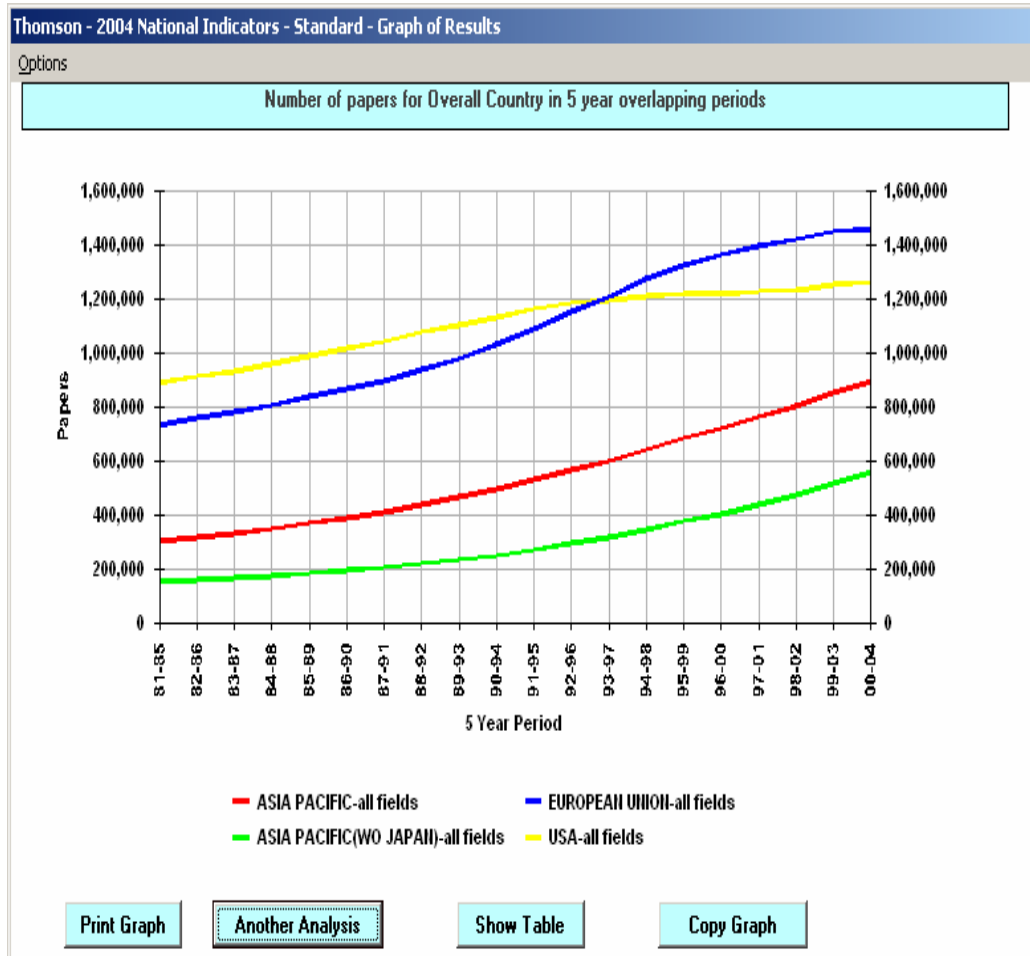
Fiesole Collection Development Retreat Series, Number 7
Melbourne 2005

Nancy K. Bayers, MLS
Manager, Research Services Group
Thomson Scientific

Introduction

- Quantitative analysis of Asian publication output and impact
- Data based on TS Web of Science, 1981-2004:
 - 8500 journals in the sciences, social sciences and humanities
- Emphasis on the three Asian nations experiencing the greatest growth in output: China, South Korea and Taiwan

Publication output: 1981-2004



World up 80%

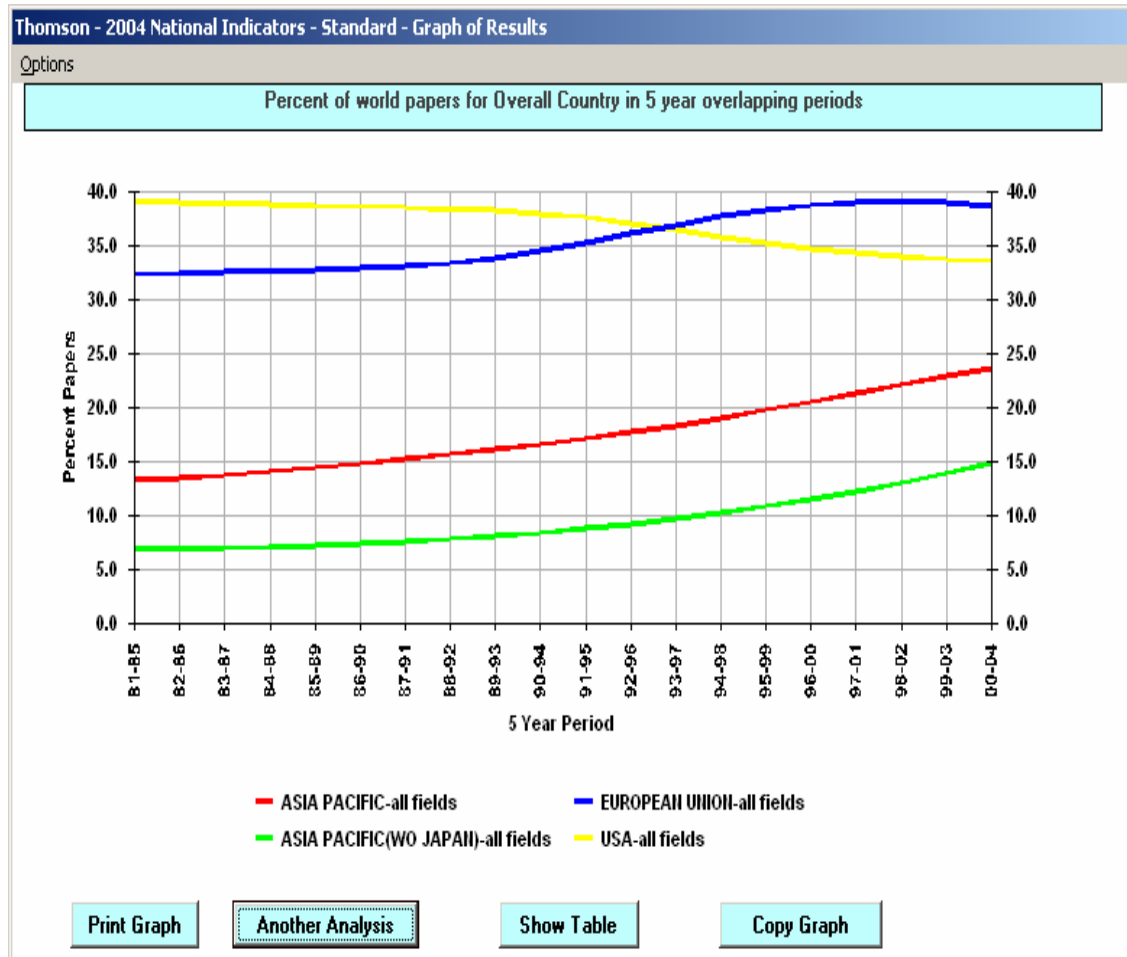
EU 110%
290,000 v 140,000

US 50%
260,000 v 170,000

Asia 240%
200,000 v 60,000

Asia ex Jp 340%
130,000 v 30,000

Percent papers in world: 1981-2004



Year 2004:

EU 38%

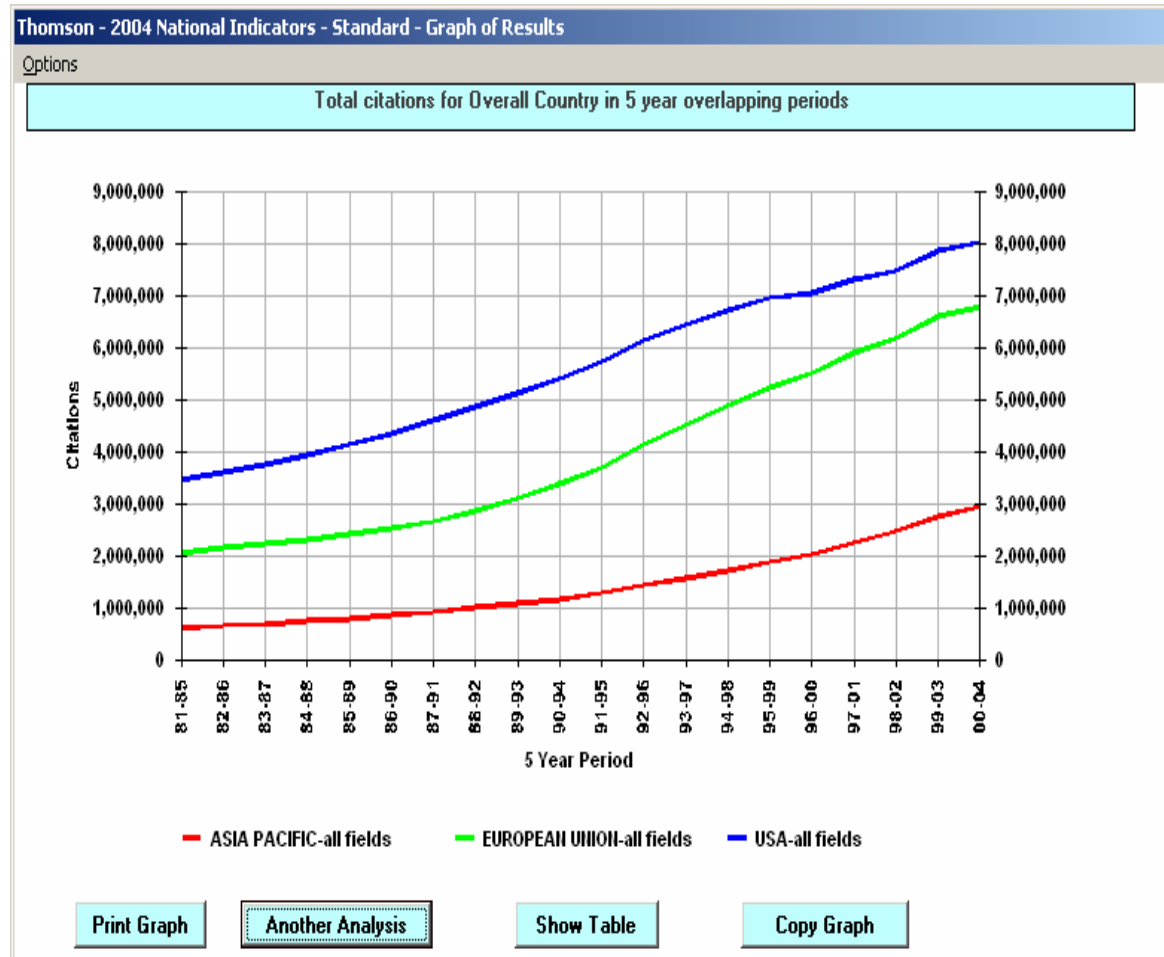
US 33%

Asia 25%

Asia 17%

x J

Overall Citations in five-year periods, 1981-2004

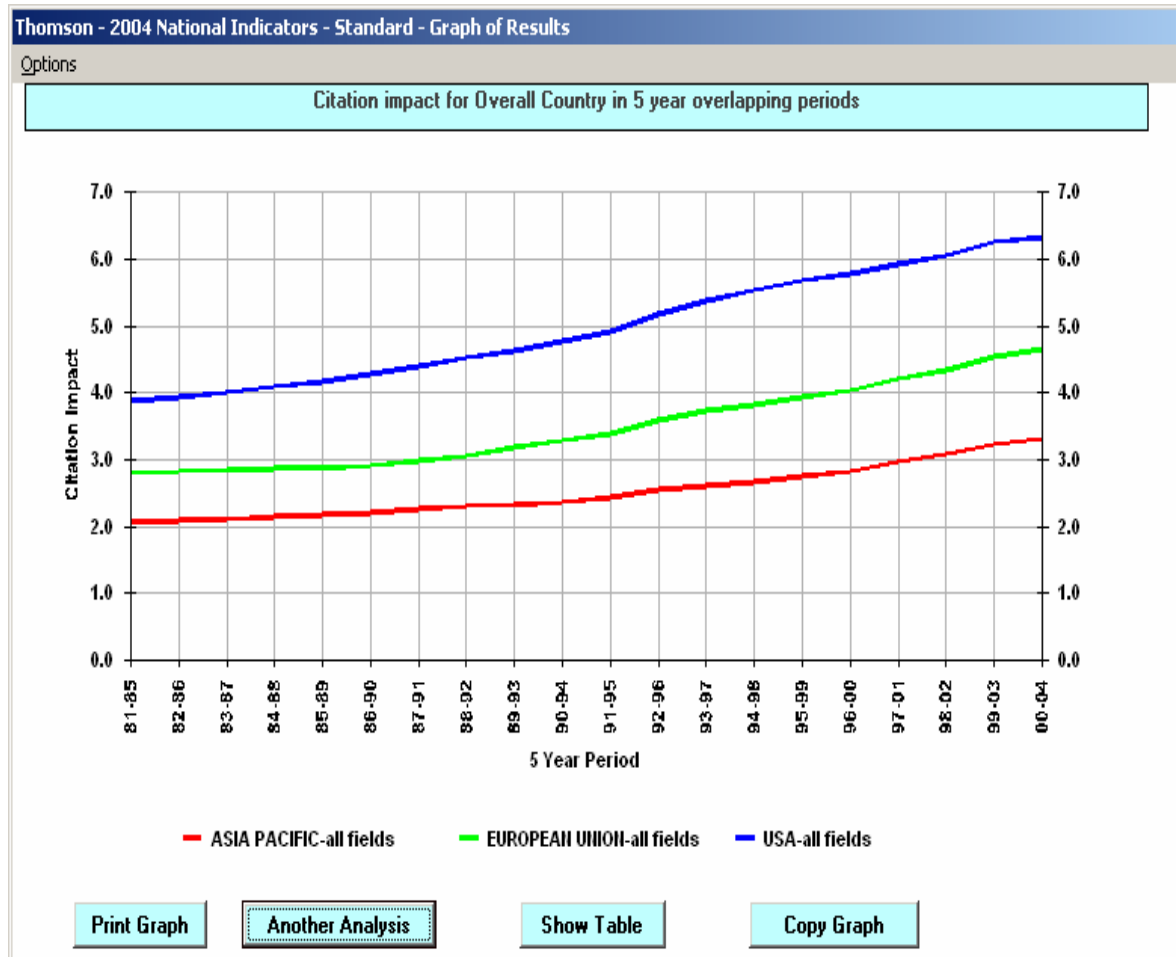


Asia 380%

EU 240%

US 130%

Impact: cites per paper in five-year periods, 1981-2004



World up 52%

4.4 v 2.9

EU 68%

4.7 v 2.8

US 62%

6.3 v 3.9

Asia 50%

3.0 v 2.0

% papers in Asia v. % field overall, 2000-2004

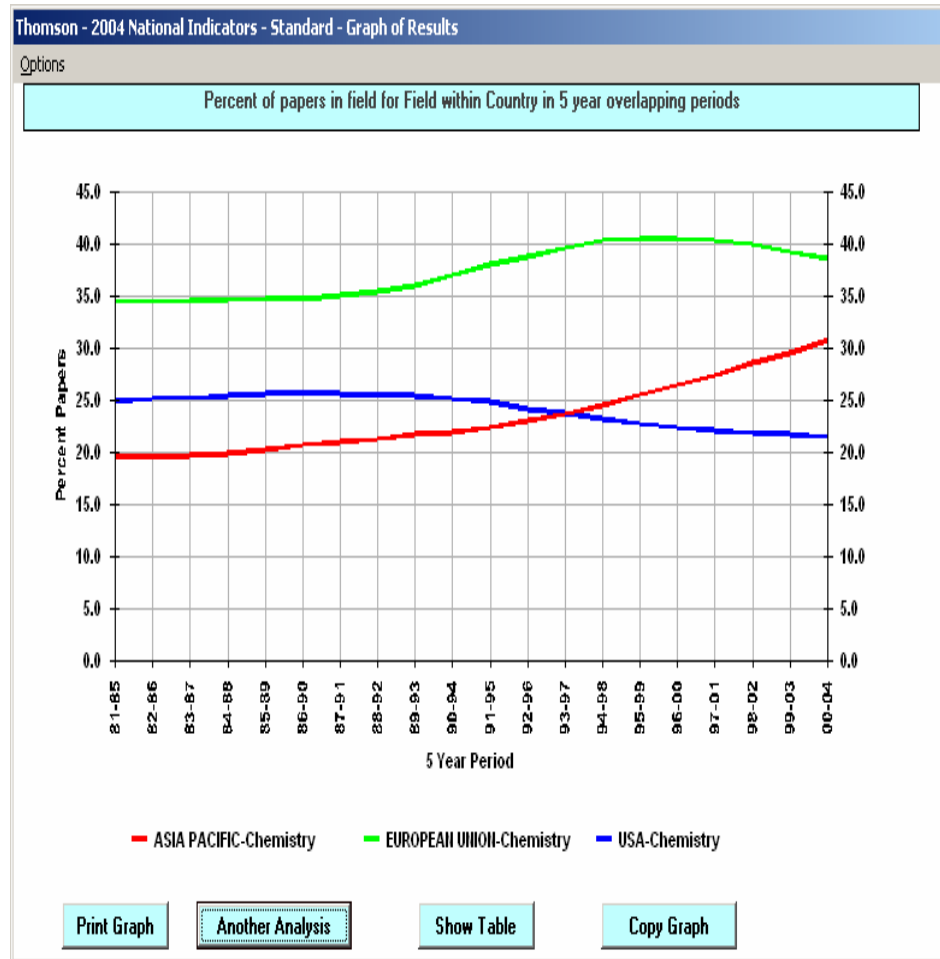
ASIA

- Chemistry 18.2%
- Physics 18.1
- Clinical Medicine 17.8
- Engineering 10.4
- Materials Science 6.9
- Biology & Biochemistry 6.8
- Plant & Animal Science 5.8
- Geosciences 2.7
- Neurosciences 2.7
- Agricultural Science 2.7

World

- Clinical Medicine 23.8%
- Chemistry 14.1
- Physics 12.5
- Engineering 8.0
- Biology & Biochemistry 7.5
- Plant & Animal Science 6.1
- Materials Science 3.9
- Neurosciences 3.9
- Social Sciences 3.6
- Geosciences 3.0

% papers in field, 1981-2004: Chemistry



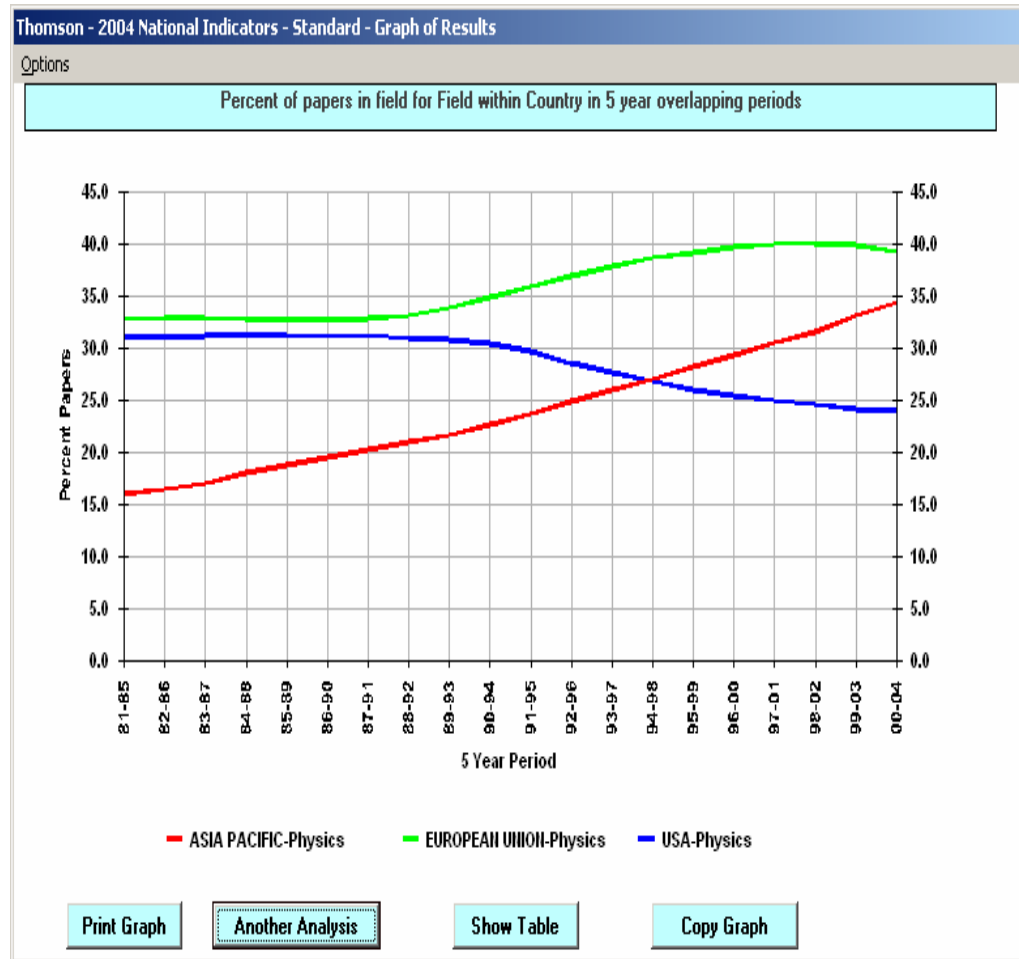
Currently:

Asia 31%

EU 39%

US 22%

% papers in field, 1981-2004: Physics



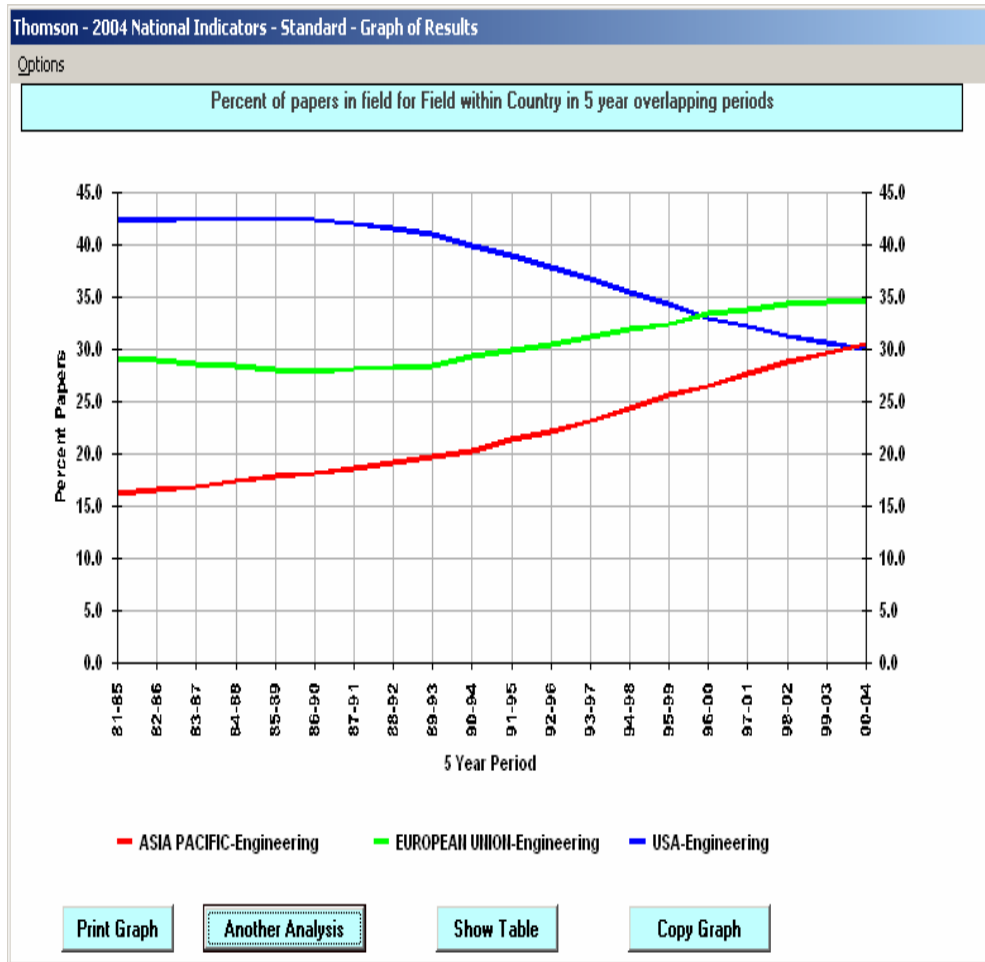
Currently:

Asia 35%

EU 39%

US 24%

% papers in field, 1981-2004: Engineering



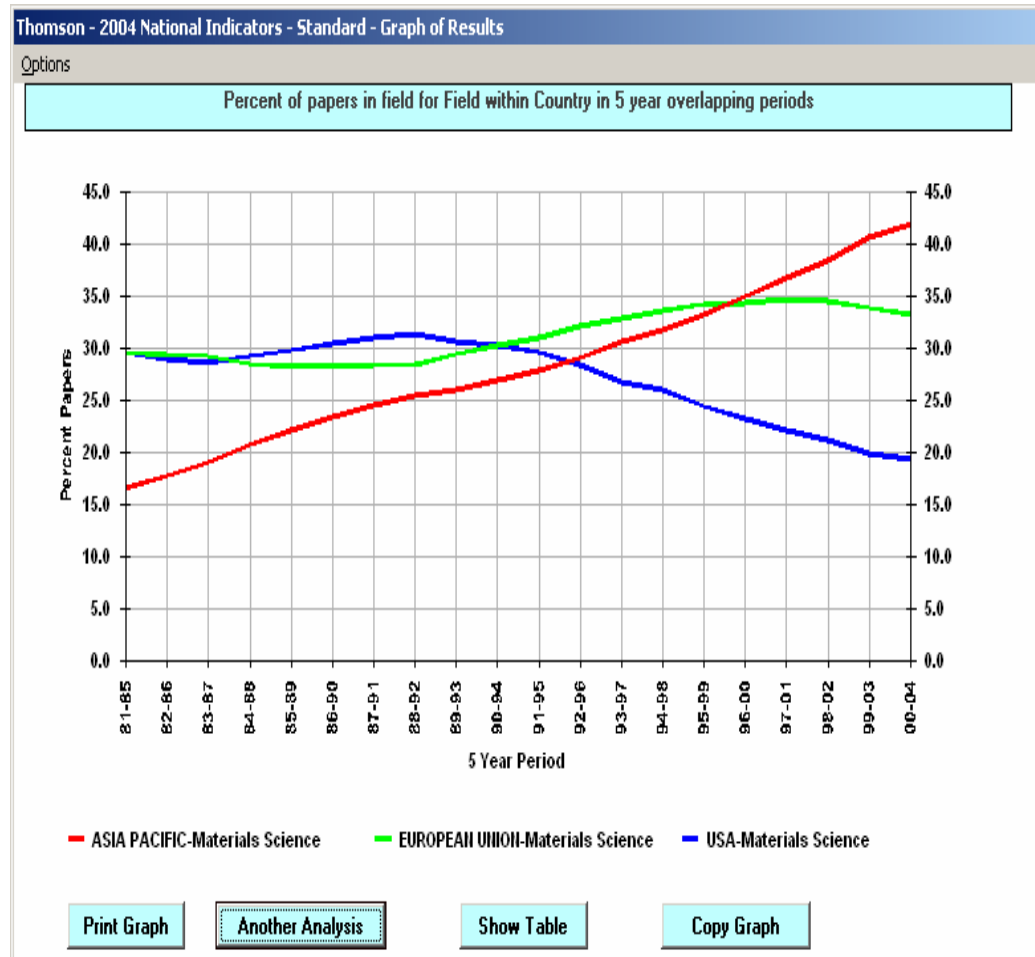
Currently:

Asia 30%

EU 35%

US 30%

% papers in field, 1981-2004: Materials Science



Currently:

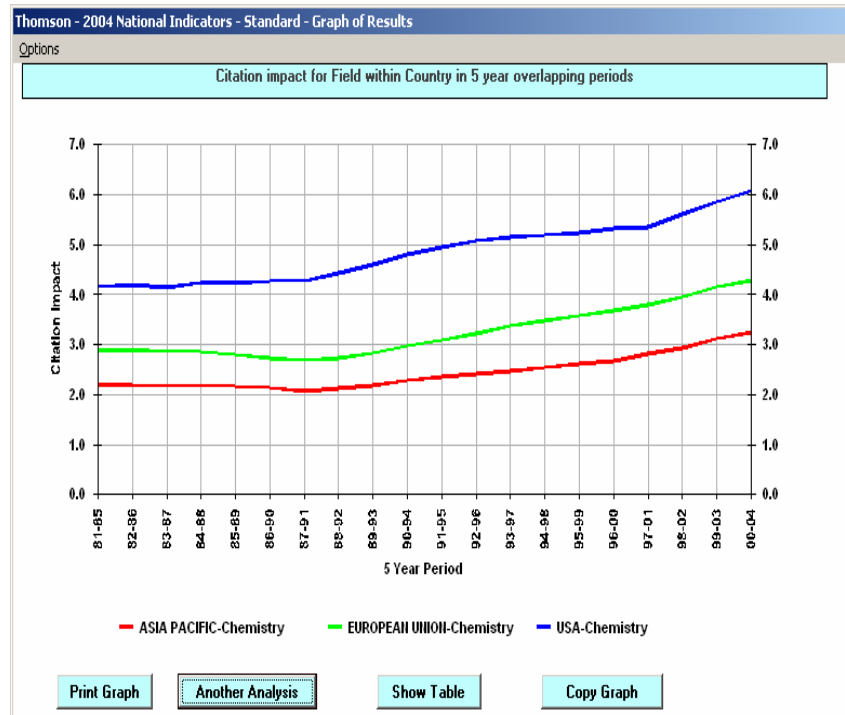
Asia 42%

EU 33%

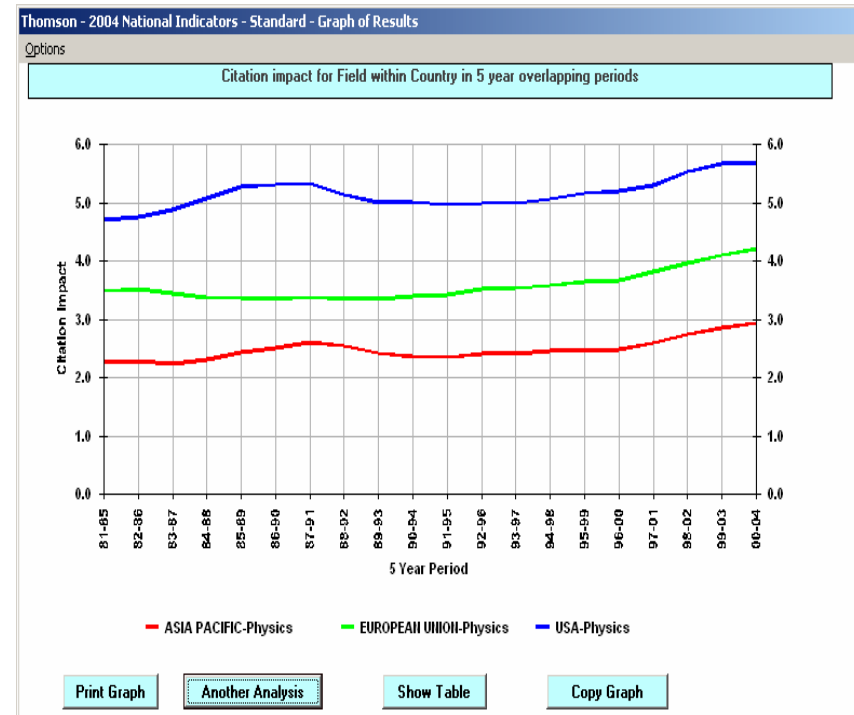
US 20%

Impact

Chemistry



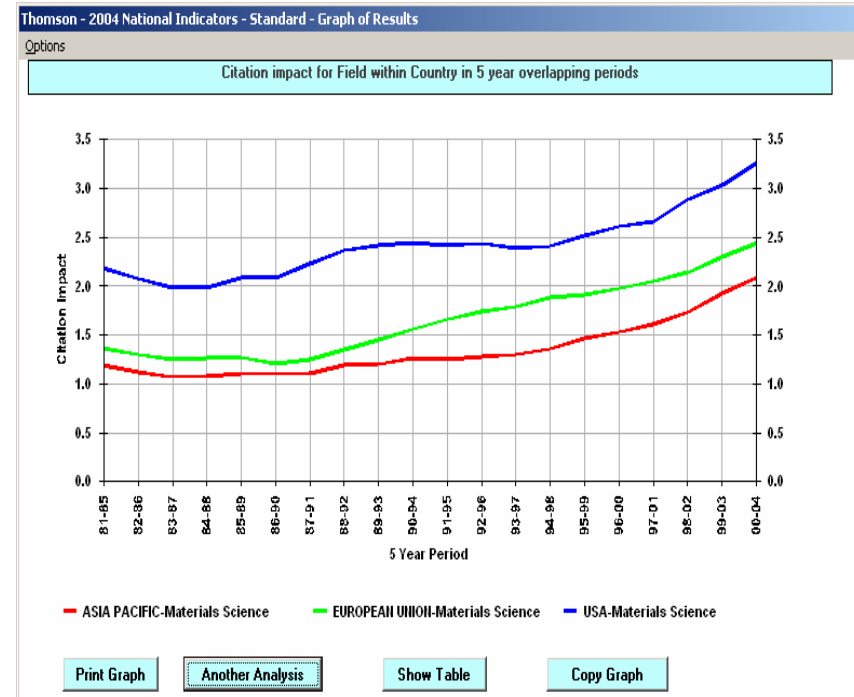
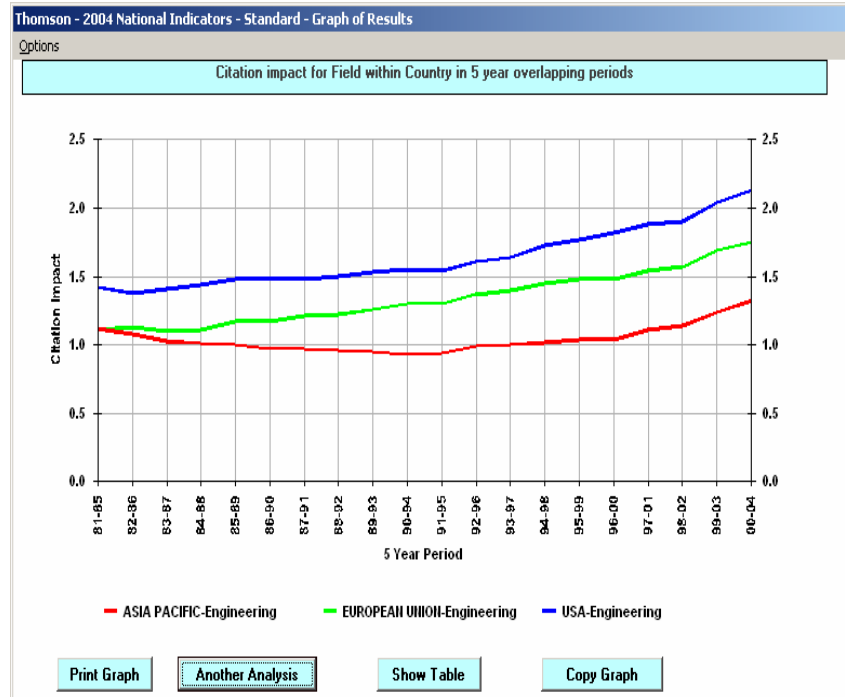
Physics



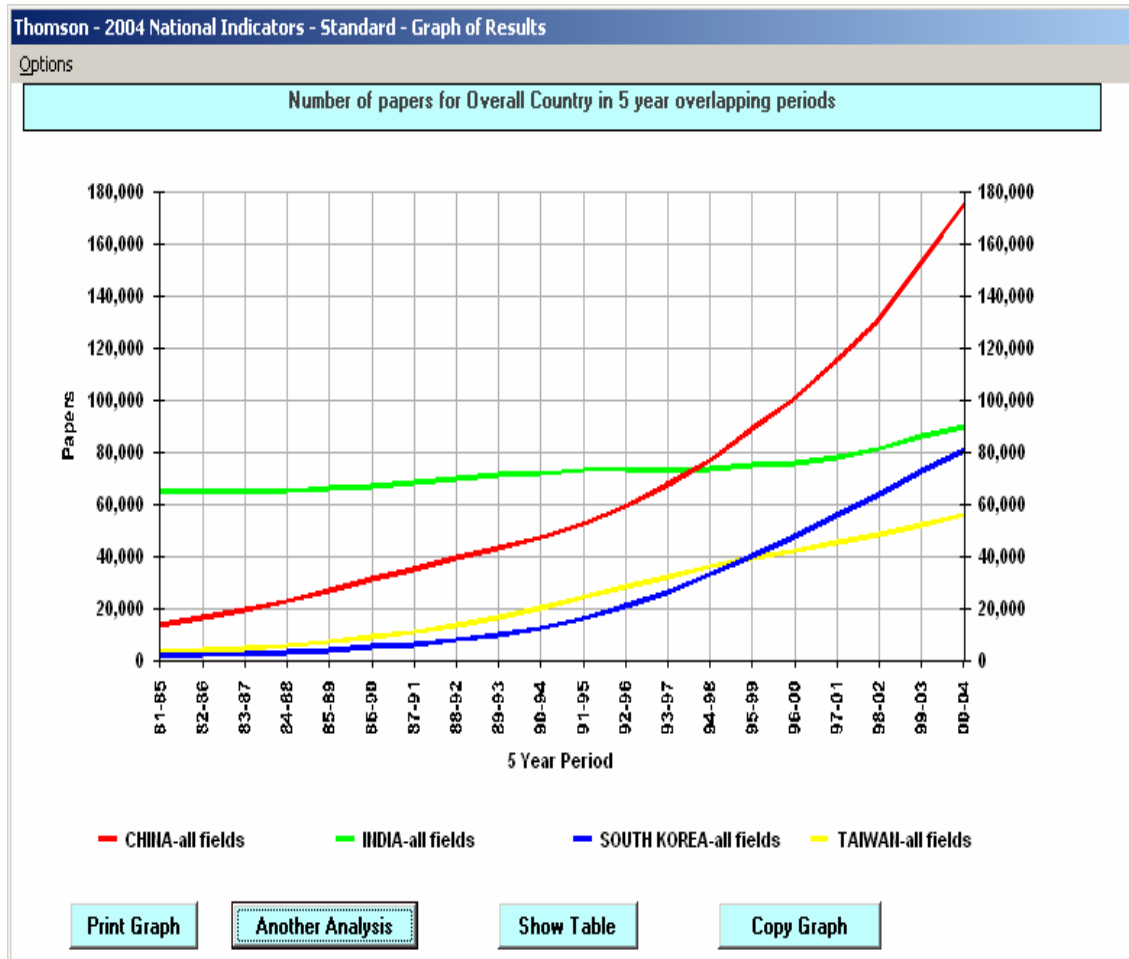
Impact

Engineering

Materials Science



4 SELECTED NATIONS: Publication Output



Increase 2004 over 1981

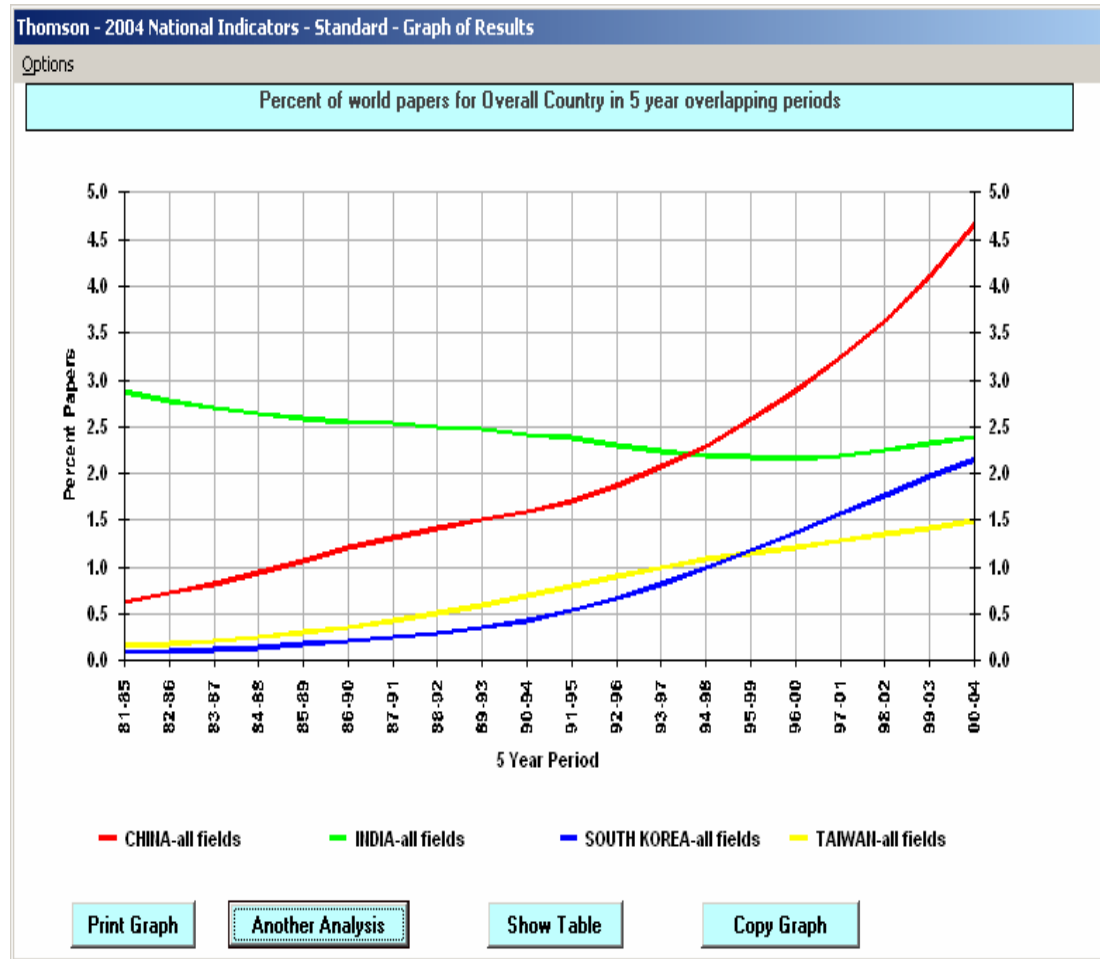
China **2800%**

India **48%**

S Korea **9400%**

Taiwan **2500%**

4 SELECTED NATIONS: Percent papers in world



2004: % papers

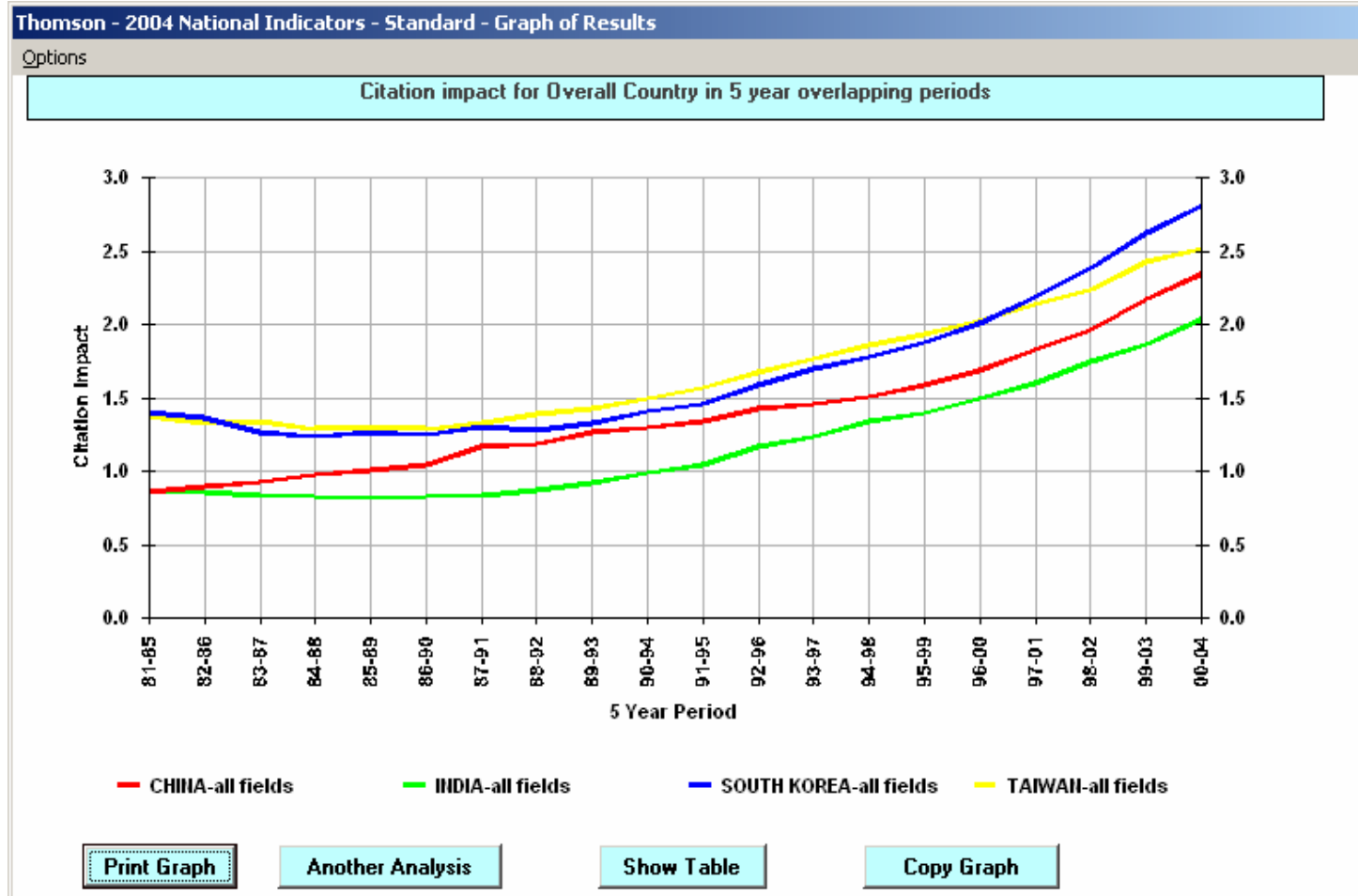
China **6.0%**

India **2.6%**

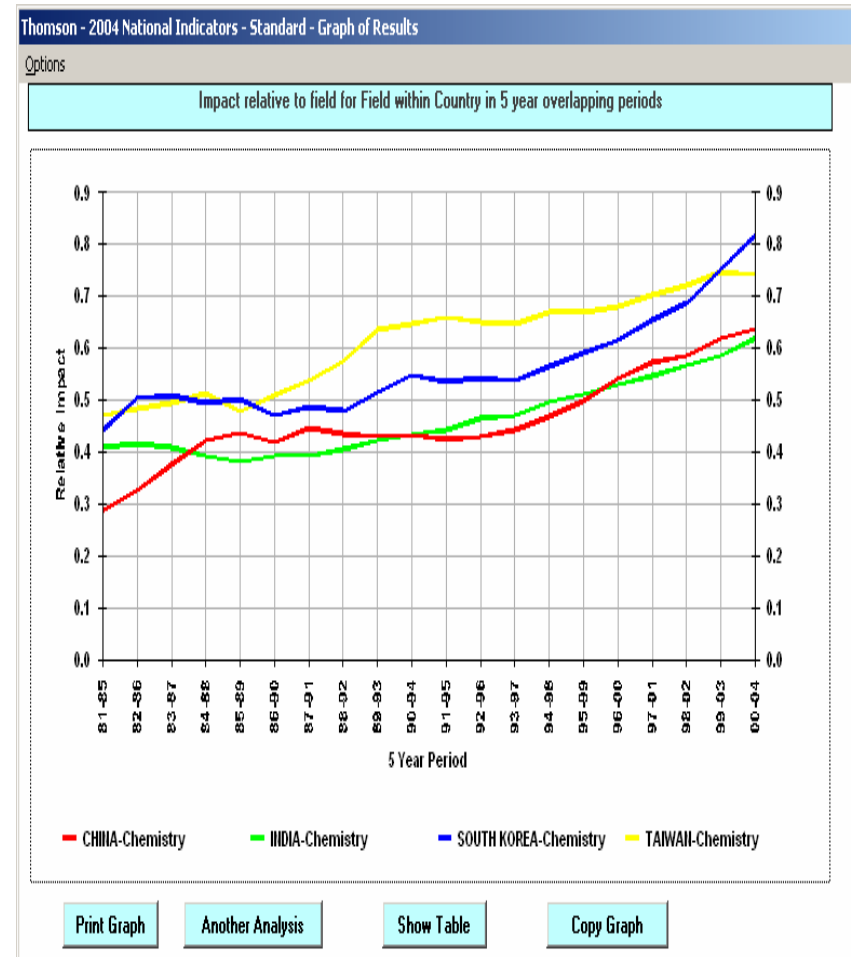
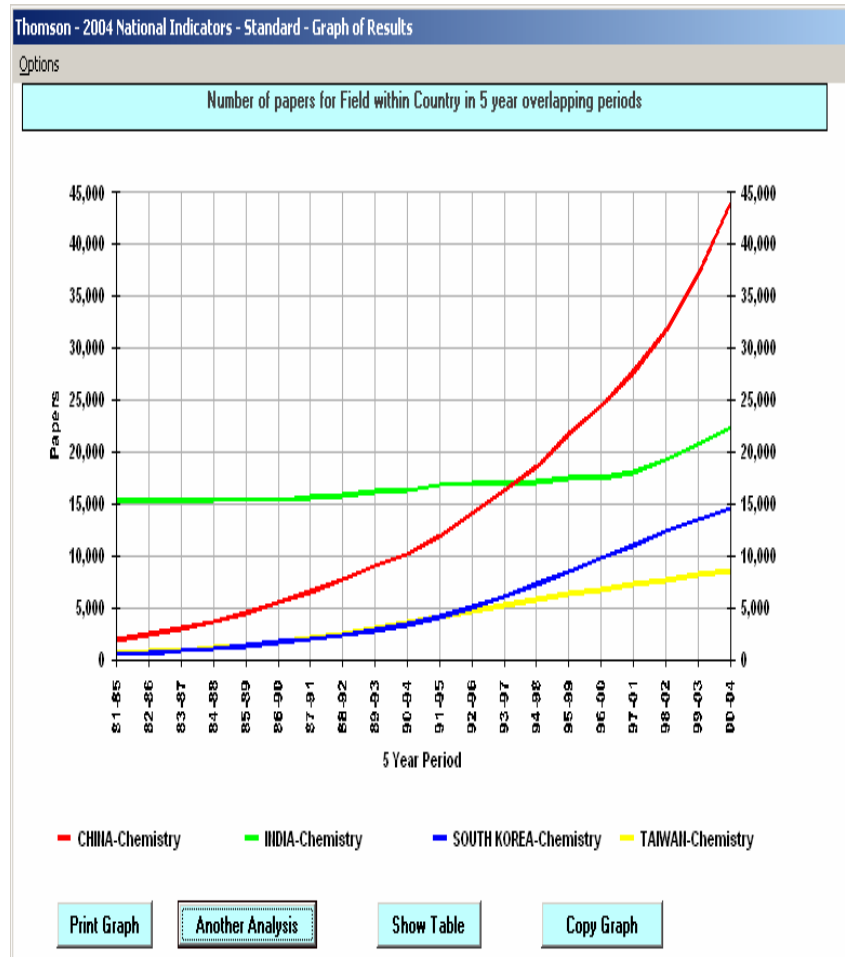
S Korea **2.5%**

Taiwan **1.7%**

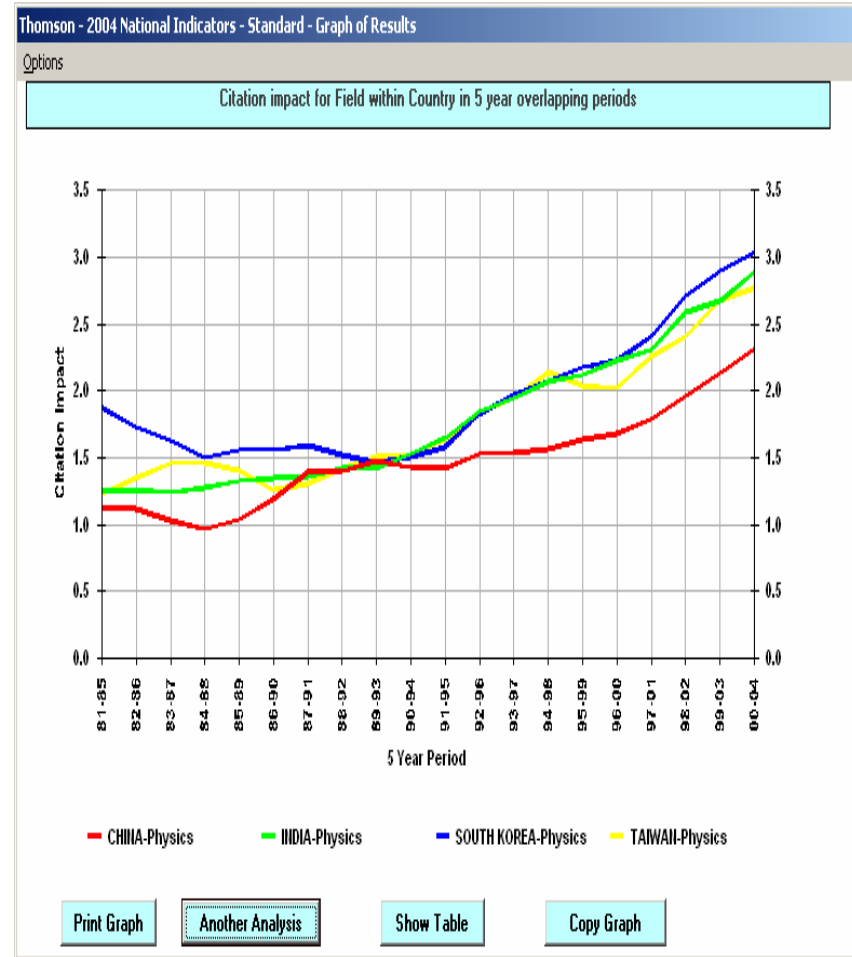
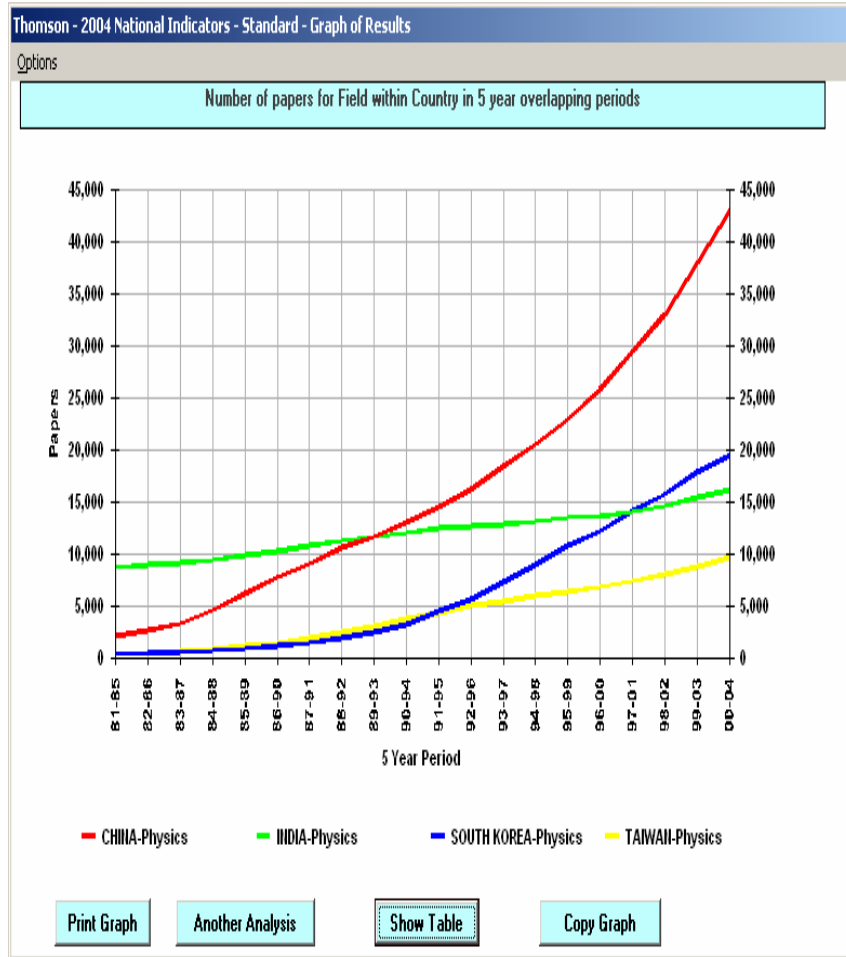
Impact



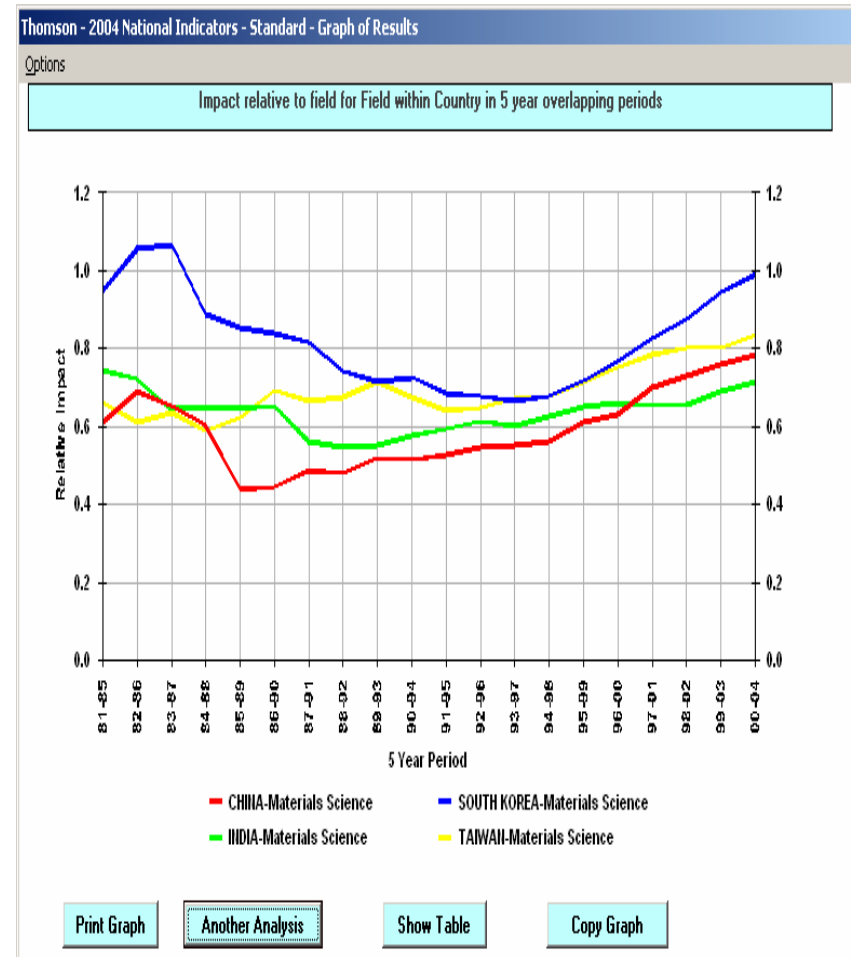
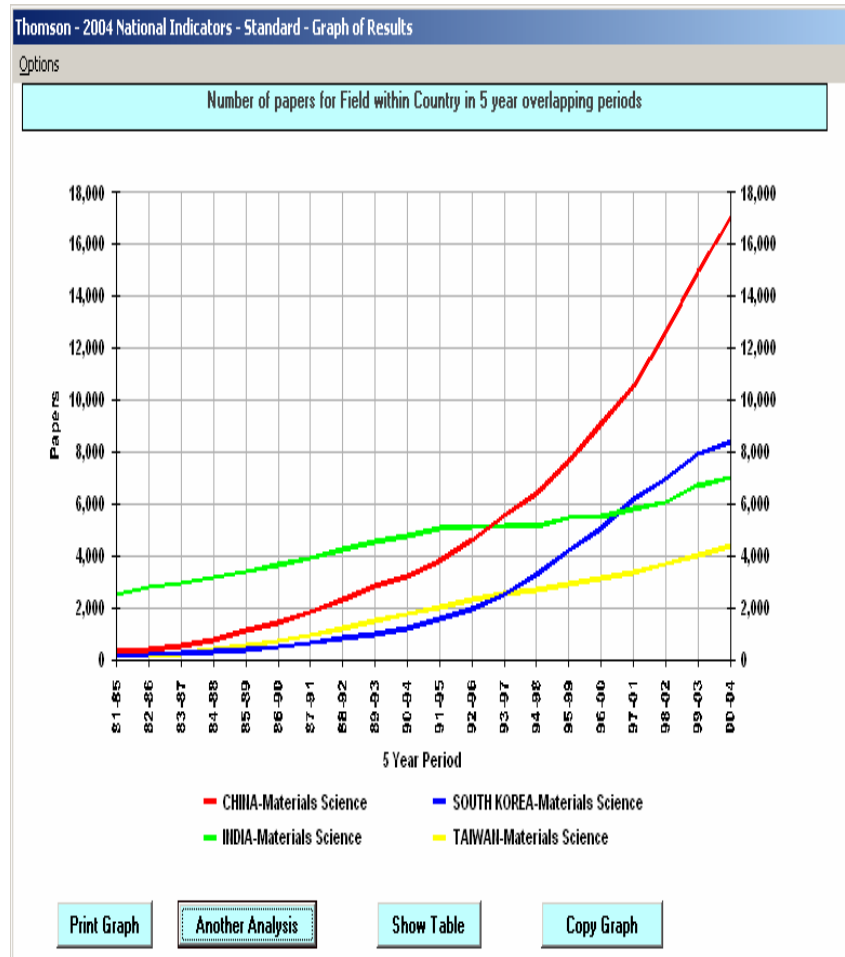
Output and impact: Chemistry



Output and impact: Physics



Output and impact: Materials Science



Conclusions: Rankings by publications

1. US
- 2. Japan**
3. UK
4. Germany
- 5. China**
6. France
- 11. Australia**
- 13. India**
- 14. South Korea**
- 18. Taiwan**

Conclusions

Asian publication output is growing exponentially

Some WHYS:

- Overall economic reforms
- Increased funding
 - Infrastructure, institutes
- Return of expatriates

Asian impact increasing but not up to world averages

Some WHYS

- Culture: conformity; respect for authority
- Too soon for returning scholars to have an impact



Thank you

Nancy K. Bayers, Manager
Thomson Scientific Research Services Group
Nancy.bayers@thomson.com