

The use of bibliometrics to monitor the New Zealand tertiary education system

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Overview

1. Monitoring of the New Zealand tertiary education system
2. Monitoring research performance
3. Use of bibliometric data by New Zealand government agencies
4. Current uses of bibliometric data
5. Future uses of bibliometric data

Monitoring of the New Zealand tertiary education system

- Ministry of Education
 - Monitoring the Tertiary Education Strategy
 - Monitoring the impact of government policy on the tertiary education system
- Tertiary Education Commission
 - Tertiary education funding agency
- Ministry of Research, Science and Technology
 - Monitoring the overall research performance of New Zealand

Monitoring of research performance by Ministry of Education

- Counts of research output
- Peer-reviewed research quality
- External research contract income
- Research degree completions
- Commercialisation data
- Staffing trends
- Bibliometric data

Bibliometric databases used by New Zealand government agencies

- Ministry of Education
 - Aggregated dataset containing counts of publications and citations
 - Focus on New Zealand tertiary education sector/institutions
- Ministry of Research Science and Technology
 - Unit record dataset
 - Focus on publications by all New Zealand authored papers
 - Trends in co-authorship/collaboration

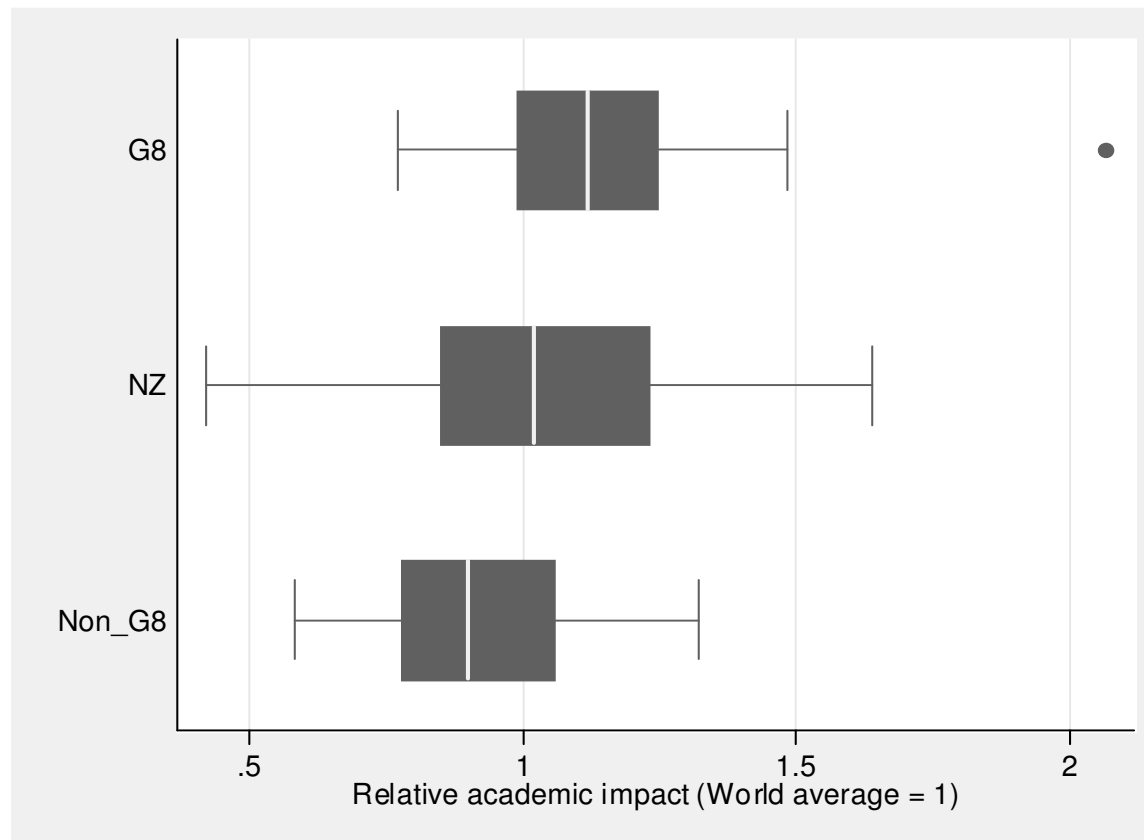
Current use of bibliometrics by Ministry of Education

- Benchmarking performance of New Zealand universities
 - World average
 - Australian universities
- Monitoring the impact of the Performance-Based Research Fund (PBRF)
 - Research quality (60%)
 - Research degree completions (25%)
 - External research income (15%)
 - Allocated \$NZ220m in 2007/8

Monitoring the impact of the PBRF

- PBRF introduced 2004 (introduction confirmed in 2002)
 - Uses peer-assessment to measure research quality across three dimensions:
 - Quality of research output
 - Peer esteem
 - Contribution to the research environment
 - Replaced funding distributed based on number of enrolments at bachelors level or higher
 - Objective of PBRF to raise average quality of research
 - Research quality measured at the individual level, but results published at institutional/subject level
 - Two Quality Evaluations so far in 2003 and 2006 (partial evaluation). Next scheduled Quality Evaluation 2012.

Benchmarking New Zealand university performance (93 narrow subject areas 2003-2007)

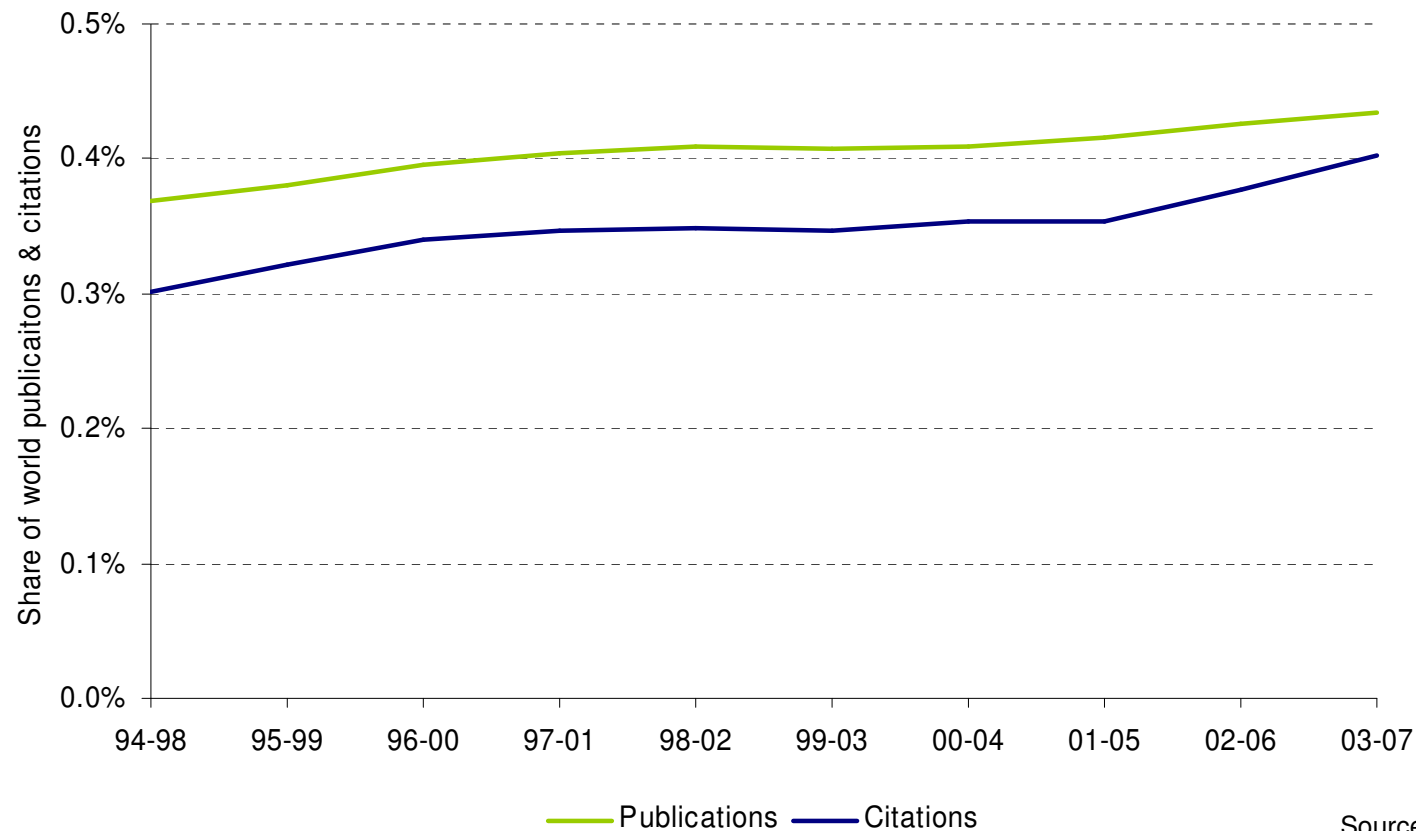


Source: Thomson Reuters

Monitoring the impact of the PBRF

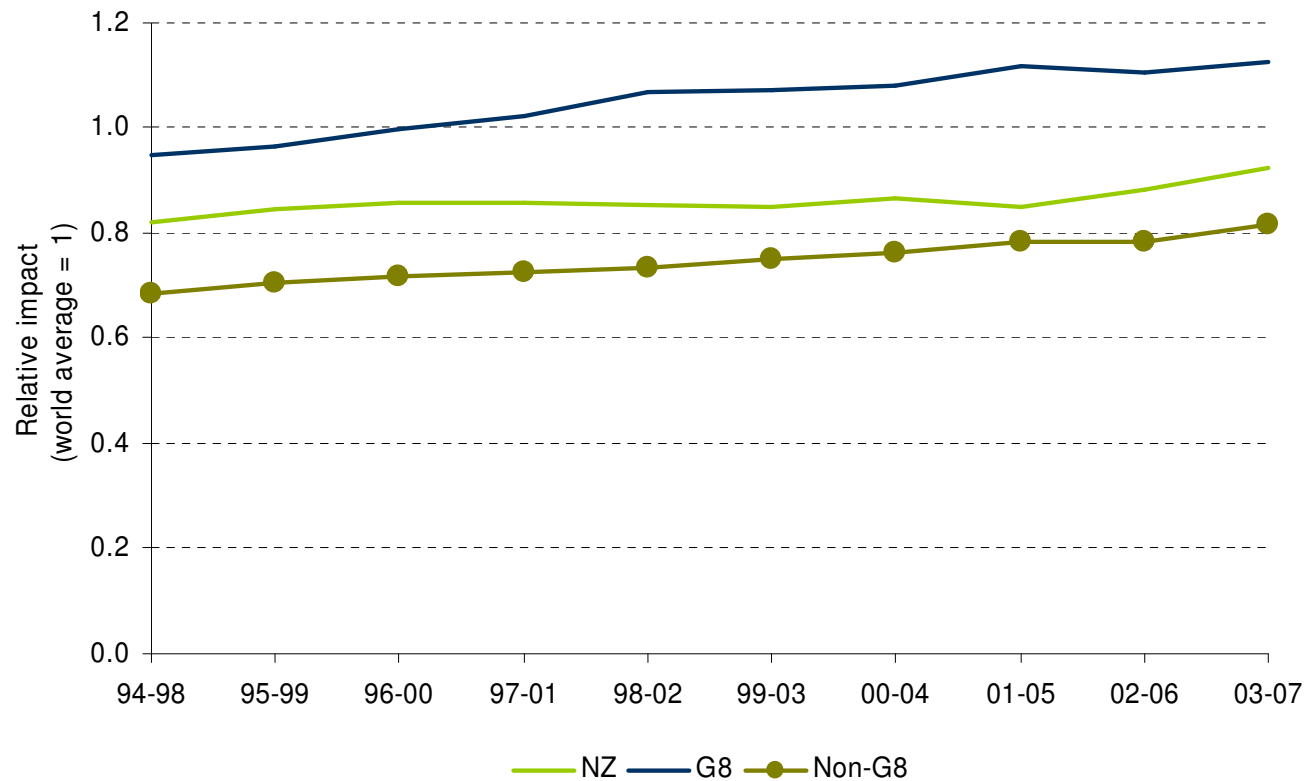
- PBRF Quality Evaluation results showed that research quality increased by 14 percent between 2003 and 2006. But:
 - ‘Carry overs’
 - Staff ‘learned’ from previous Evaluation – better presentation of evidence portfolios
 - Changes in number of participating tertiary institutions
- Therefore, difficult to tell if the PBRF is having an effect on research quality
- Leaves bibliometric data as one of the few ways to analyse if the PBRF is having an impact

Monitoring the impact of the PBRF



Source: Thomson Reuters

Monitoring the impact of the PBRF



Source: Thomson Reuters

Future uses of bibliometric data

- Noted the increased use of bibliometric data to measure and potentially fund research performance
- Symposium in September 2008 examined the role of bibliometrics in New Zealand
- Will keep a watching brief on developments in Australia and the UK

Ministry of Education monitoring

- Ministry of Education reports assessing research performance can be found at the Education Counts website:

www.educationcounts.govt.nz