

Institutional benchmarking: some reflections on the operational definitions of indicators

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Outline



- Context of Quality Initiatives
- Quality Indicators
- Malaysian Research University Audit and SETARA (Malaysian Rating System)
- Some comparisons
- Definitions of criterias / IMD Criteria
- Conclusion

Ninth Malaysian Plan (2006 – 2010)



- Emphasis on Human Capital (*Modal Insan*)
- Role of Higher Education
 - Capacity building (50RSE:10,000 work force)
 - Regional Education Hub
 - Socio-economic well-being (wealth creation)

Imperatives



- QUALITY ENHANCEMENT
 - REGIONAL HUB (MQF /MQA)
 - WORLD CLASS INSTITUTIONS
- RESEARCH UNIVERSITY
 - ENGINES OF KNOWLEDGE-BASED ECONOMY
 - SOURCES OF TECHNOLOGICAL INNOVATION
 - EDUCATION OF THE WORKFORCE
 - BEST ENVIRONMENT FOR BASIC RESEARCH
 - RESEARCHER TRAINING

Indicators in HE



“The range of indicators is broad and dependent on purposes, but there are indicators that are common across and beyond the university and of use for quality assurance. Indicators are quantitative (statistics) and qualitative (comments from surveys for example). There is a variety of terms used including ‘performance indicators’, and ‘management indicators’. ‘Performance indicator’ can be ambiguous and tends to direct itself to staff appraisal. ‘Management indicator’ is not a term necessarily seen as suitable for higher education. ‘Quality indicators’ is a more appropriate term for our purposes.”

***Guidelines for Using Quality Indicators in
Course Management, Monash University 2004***

Performance indicators in UKM



- Key Performance Indicators – Public Service Improvement Circular No 2/2005 Guidelines for establishing KPI and implementation of performance measurement in Government Agencies
- KPIs and Strategic Planning (*Pelan Strategik UKM 2000 – 2020*)
- ISO9001-2000 (Customer feedback as part of CQI)
- Ranking and Rating – Criteria and Quality Indicators (Audit and Assessment)
 - SETARA (Rating)
 - Research University Audit

My role ...



- Strategic Planning
- PPA = monitors extent objectives & mission achieved
- PPA = data (Executive Information system)
- PPA = Input & Verification of data for RU audit and National Rating Exercise
- PPA = GUNI – AP (institutional benchmarking)

Quality Indicators...



- SETARA and Research University Audit
- Two different committees - compositions
- LAN and MOHE
- Different purposes





RU Criteria



- Quantity and Quality of Researchers (e.g. the critical mass of researchers and experience of the university staff and qualification)
- Quantity and Quality of Research (e.g. publication, competitive research grant obtained both nationally and internationally)
- Quantity and quality of Postgraduates
- Innovation (e.g. commercialisation, patents)
- Professional Services (e.g. consultancy and endowment)
- Networking and Linkages (e.g. international and national research collaborations, leadership and representation in learned and professional associations);
- Support facilities (e.g. library holding and accredited laboratories).

The standards or minimum requirement for the Malaysian RUs were set after considering factors such as local conditions. The minimum requirements are benchmarked against internationally renowned universities. Performance data on these criteria over five years were audited and scored.

Malaysian Research University Assessment Criteria



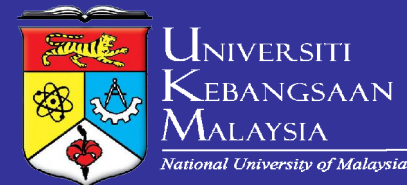
| Section | Criteria | Weightage |
|---------|-------------------------------------|-----------|
| A | General information | - |
| B | Quantity and Quality of Researchers | 25 |
| C | Quantity and Quality of Research | 30 |
| D | Quantity of Postgraduates | 10 |
| E | Quality of Postgraduates | 5 |
| F | Innovation | 10 |
| G | Professional Services and Gifts | 7 |
| H | Networking and Linkages | 8 |
| I | Support Facilities | 5 |
| | TOTAL | 100 |

Section A: General Information



- Academic Staff – Total, S&T
- UG Students – Local & Foreign
- PG Students – Local & Foreign, Research & Coursework
- Research Institutes

SECTION B: Quantity and Quality of Researchers (25%)



| No. | Criteria | Indicator | Weight-age | Sub-Weight-age | KPI |
|-----|---------------------------------|---|------------|----------------|-------|
| 1 | Critical Mass | Total number of academic staff involved as principal investigator (leadership) of research grants (in reviewed and funded research projects). | 30 | 100 | 75% |
| | | a. University funded | | | |
| | | b. National grants | | | |
| | | c. International grants | | | |
| 2. | PhD Qualification or Equivalent | a. Total number of staff with PhD/DSc, DEng | 20 | 70 | 67% |
| | | b. Total number of staff with Professional Qualifications | | 30 | 13.5% |

Section B: Quantity and Quality of Researchers (25%)

| No. | Criteria | Indicator | Weight-age | Sub-Weight-age | KPI |
|-----|---------------------------------|--|------------|----------------|-----|
| 3 | Research Experience (3 cohorts) | Total number of research experienced staffs: | 30 | 30 | |
| | | a) >20 years experience | | | 30% |
| | | b) 10 – 20 years experience | | 40 | 40% |
| | | c) < 10 years experience | | 30 | 30% |

Section B: Quantity and Quality of Researchers (25%)

| No. | Criteria | Indicators | Weight-age | Sub-Weight-age | KPI |
|-----|--|---|------------|----------------|--------|
| 4 | Recognitions/awards/stewardship conferred by national and international learned and professional bodies (100/year) | a. Total number of awards conferred by NATIONAL bodies | 20 | 40 | 95 No. |
| | | b. Total number of awards conferred by INTERNATIONAL bodies | | 60 | 40 No. |

SECTION C: Quantity and Quality of Research (30%)



| No. | Criteria | INDICATORS | Weightage | Sub-Weightage | KPI |
|-----|--|--|-----------|------------------|-------------------|
| 1 | Publications <i>(2 papers in national/international refereed and cited journals/staff/year or cumulative impact factor for the institution of not less than 500)</i> | a) Publications in citation-indexed journals including refereed proceedings | 50 | 100 | 2.65/staff |
| | | b) Cummulative impact factor of publications | | | OR |
| | | c) Publications in non-citation-indexed Journal | | 5.3/staff | |

SECTION C: Quantity and Quality of Research (30%)

| No. | Criteria | INDICATORS | Weight-age | Sub-Weight-age | KPI |
|------------|---|---|------------|----------------|--------------------|
| 1 Cont. | <p>Publications (2 papers in national/international refereed and cited journals/staff/year or cumulative impact factor for the institution of not less than 500)</p> | d) Total number of books authored | | | 0.66/ staff |
| | | e) Total number of chapters in books | | | 2.65/ staff |
| | | f) Other Publications that have created an impact to government/society/policy (abstracts, articles in magazines, newsletters, etc- not including unpublished reports) | | | 26.5/staff |

SECTION C: Quantity and Quality of Research (30%)

| No. | Criteria | Indicators | Weight-age | Sub Weight-age | KPI |
|-----|---|---|------------|----------------|-------------------------------|
| 2 | Research grants for S&T academic staff <i>(At RM 50,000/ staff/year of which at least 20% from international sources and 20% from private sector)</i> | a. Total amount of public fundings (from government agencies) | 40 | 50 | 40K/ S&T staff |
| | | a.Total amount of private fundings (including contract research) | | 20 | 13.35K / S&T staff |
| | | a.Total amount of international fundings | | 30 | 13.35K / S&T staff |

SECTION C: Quantity and Quality of Research (30%)

| No. | Criteria | KPI | Weight-age | Sub Weight-age | KPI |
|-----|--|---|------------|----------------|----------|
| 3 | Research expenditure for each project. <i>(Not less than 60% of grant attained/year)</i> | a. Total amount of research grants received | 5 | 100 | 80% |
| | | b. Total amount of research grants spent | | | |
| 4 | Post-doctoral appointment <i>(10/year)</i> | a. Number of Post-docs appointed | 5 | 100 | 15/ Year |

SECTION D: Quantity of Postgraduates (10%)

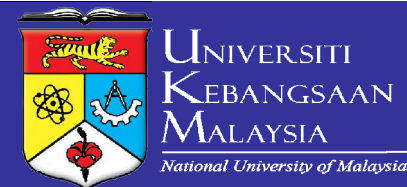
| No. | Criteria | KPI | Weightage | Sub-weightage (%) | KPI |
|-----|--------------------------|---|-----------|-------------------|---|
| 1. | Number of PhDs graduated | a. Total number per year | 50 | | |
| | | b. Ratio of PhDs graduated to academic staff | | 50 | 1:10 |
| | | c. Percentage of PhD in S&T | | 50 | 75 |
| 2. | Number of PhDs enrolled | a. Total number per year b. Ratio of PhDs enrolled to academic staff c. Percentage of PhD enrolled in S&T | 0 | 0 | Already counted in Other section |

SECTION D: Quantity of Postgraduates (10%)



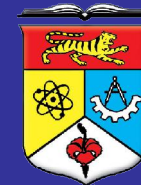
| No. | Criteria | Indicators | Weightage | Sub-weightage (%) | KPI |
|-----|---|---|-----------|-------------------|-------|
| 3 | Postgraduate Enrolment | a. Ratio of postgraduates to academic staff | 30 | 50 | 4.4:1 |
| | | b. Ratio of UG to PG (based on research and mixed modes only) | | 50 | 2.5:1 |
| 4 | Percentage of International Postgraduate students | Percentage of international postgraduates students | 20 | 100 | 14% |

SECTION E: Quality of Postgraduates (5%)



| No. | Criteria | KPI | Weight | Sub-Weightage | KPI |
|-----|---|--|--------|---------------|-----|
| 1 | Entry qualification at Bachelor level | Percentage of postgraduate intake with CGPA \geq 3.0 or equivalent | 60 | 100% | 64% |
| 2 | Fellowships/ grants awarded to postgraduate via research mode | Percentage of postgraduates via research modes (with thesis) with fellowships/grants | 40 | 100% | 14% |

SECTION F: Innovation (10%)



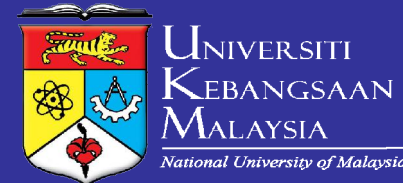
| No. | Criteria | Indicators | Unit | Weightage | Sub-weightage | KPI |
|-----|-------------------------------|---|------------------------|-----------|---------------|-----|
| 1 | Patents | a. Total number of patents granted | Total No. (Cumulative) | 30 | 100 | 12 |
| | | (i) National patents | | | | |
| | | (ii) International patents | | | | |
| | | b. Total number of patents pending | | 0 | | |
| | | (i) National | | | | |
| | | (ii) International | | | | |
| 2 | Commercialized products | Total number of products licensed for commercialization | | 20 | 100 | 7 |
| 3 | Technology know-how licensing | Total number of technology know-how licensing | | 20 | 100 | 7 |

SECTION F: Innovation (10%)



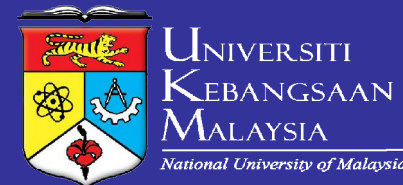
| No. | Criteria | KPI | Unit | Weight age | Sub-weight age | KPI |
|-----|--|---|-----------|------------|----------------|-----------|
| 4 | IPR/ copyrights (including original writings) | Total number of IPR(other than patents)/ copyrights (including original writings) | Total No. | 30 | 100 | 12 |

SECTION G: Professional Services and Gifts (7%)



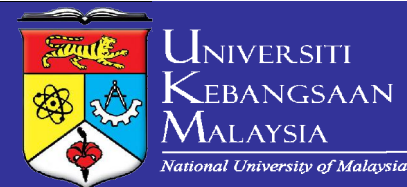
| No. | Criteria | Indicators | Weightage | SubWeightage | KPI |
|-----|--|--------------|-----------|--------------|----------------|
| 1 | Income generated from training courses | Total amount | 100 | 100 | 25Mil/ Year |
| 2 | Income generated from consultancy excluding contract research) | Total amount | | | |
| 3 | Endowment (including professorial chairs) | Total amount | | | |
| 4 | Gifts (money, equipments, research materials, etc.) (worth \geq RM 3,000.00) | Total amount | | | |

SECTION H: Networking and Linkages (8%)



| No. | Criteria | Indicators | Weight-age | Sub-Weight-age | KPI |
|-----|--|---|------------|----------------|---------|
| 1 | International Institution participation in research related activities | a. Total number of MOUs signed. | 30% | 20 | 6 No. |
| | | b. Total number of programme implemented under each MOU | | | |
| | | c. Total number of staff involved in joint research project. | | 20 | 225 No. |
| | | d. Total number of international students participating in undergraduate/ postgraduate/ exchange programme. | | | |
| | | e. Total number of students sent abroad for training. | | | |
| | | f. Total number of staff sent abroad for training. | | | |
| 2 | Membership in International bodies/ associations | a. Total number of membership in international bodies/associations. | 20 | 20 | 320 No. |
| | | b. Total number of staff appointed as leader/ committee for the international bodies/ associations. | | | |

SECTION H: Networking and Linkages (8%)



| No. | Criteria | Indicators | Weight-age | Sub-Weight-age | KPI |
|-----|---|---|------------|----------------|------------|
| 3 | International projects | Total number of staff secured international projects (research/ training/ consultancy) | 70 | | |
| | | (i) Total number of staff involved as project leader | | 0 | |
| | | (ii) Total amount of international grants secured | | 20 | 67K |
| 4 | International award/ fellowship/s cholarship. | Total number of staff awarded international fellowship/ scholarship | 70 | | 20 |
| 5 | International Professional bodies | a. Total number of staff accepted as members in the professional bodies/ associations | | 20 | |
| | | b. Total number of staff appointed to chairmanship/ committee position in the professional bodies/associations at international level | | | |

SECTION H: Networking and Linkages (8%)



| No. | Criteria | Indicators | Weight | Sub-Weig | KPI | | |
|-----|---|---|--------|----------|-----|-----|-----|
| 6 | National Inter-Institution participation | a. Total number of MOUs signed (government/private agencies/industries) | 70 | 20 | 12 | | |
| | | b. Total number of program implemented under each MOU | | | | | |
| 7 | Member in Professional bodies at national level | a. Total number of staff accepted as member in professional bodies/associations | | 70 | 40 | 590 | |
| | | b. Total number of staff staff appointed to chairmanship/committee position in the professional bodies/associations | | | | | |
| 8 | National projects | a. Total number of staff involved in joint research project. | | | 70 | 40 | 450 |
| | | b. Total number of students participating in undergraduate/ postgraduate/ exchange programme. | | | | | |
| | | c. Total number of students sent for training. | | | | | |
| | | d. Total number of staff sent for training. | | | | | |
| 9 | National award/ fellowship /scholarship. | | 0 | 0 | | | |

Section I: Support Facilities (5%)

| No. | Criteria | Indicators | Weight-age | Sub-weight-age | KPI |
|-----|---|--|------------|----------------|--------|
| 1 | Equipment (accreditation to GLP/ISO17025) fully operational and calibrated or physical facilities that meet safety and quality standards | Total number of equipment (accreditation to GLP/ISO17025) fully operational and calibrated or physical facilities that meet safety and quality standards | 30 | 100 | 100% |
| 2 | Library facilities | a. Total number of books/titles | 40 | 100 | 1,350K |
| | | b. Total number of online books/titles | | | |
| 3 | Supporting facilities including networking and shared facilities service centre or recreational centre or access to high end research facilities | Total number of supporting facilities | 30 | 100 | 100% |

Malaysian RUs

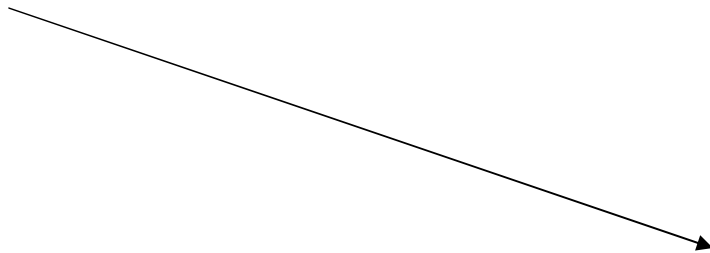


- RU Audit completed May 2005
- Four universities (out of 20)
 - Universiti Kebangsaan Malaysia
 - Universiti Malaya
 - Universiti Sains Malaysia
 - Universiti Putra Malaysia
- Additional USD40 Million Grant

National Accreditation Board



- “Rating Agency”
- SETARA = Rating System



SETARA



- Public Consultation with IHLs
- Committee from among academicians
- **Initially**, rating based on 5 domains :
 - Academic Staff
 - Program
 - Students' Choice
 - Resources
 - Governance

SETARA



- Models and consultation
 - Rating Agency Malaysia (RAM)
 - Melbourne Institute of Applied Economic and Social Research (MIAESR), University of Melbourne.
- Issues Resolved:
 - Third party validation
 - Mixture of quantitative & qualitative data
 - Sustainability of indicators (available & relevant)
 - Benchmark partners
 - Sensitivity of data

SETARA Rating Instruments



FINAL

- **Questionnaire on Academic Reputation (QAR)**
- **On-line submission of data in 6 domains**
 1. Academic Staff (19 indicators)
 2. Student Selectivity (14 indicators)
 3. Research (12 indicators)
 4. Academic Program(19 indicators)
 5. Resources: Teaching-learning, research, finance, and student support services (33indicators)
 6. Governance & Management (9 indicators)

SETARA Online



SETARA
Sistem Penarafan Institusi Pengajian Tinggi Malaysia

MALAYSIA

KEMENTERIAN PENGAJIAN TINGGI
MINISTRY OF HIGHER EDUCATION MALAYSIA

Kata Nama :

Kata Laluan : **Masuk**

Sila hubungi:-
Bahagian Penjaminan Kualiti, Kementerian Pengajian Tinggi.
Tel : 03-88835318
e-Mel : tpbjk@mohe.gov.my

Kementerian Pengajian Tinggi

Senarai IPTA

Bantuan & FAQ

Paparan terbaik menggunakan Internet Explorer 5.5 & ke atas dengan Resolusi 800 x 600 pixel

The banner features a large blue background with a globe and light rays. On the left, there is a circular logo with the Malaysian coat of arms and the word "MALAYSIA". In the center, the word "SETARA" is written in large blue letters, with the subtitle "Sistem Penarafan Institusi Pengajian Tinggi Malaysia" below it. On the right, there is a logo for the Ministry of Higher Education Malaysia, featuring a globe and the text "KEMENTERIAN PENGAJIAN TINGGI" and "MINISTRY OF HIGHER EDUCATION MALAYSIA". Below the main title, there is a photograph of a group of graduates in caps and gowns. At the bottom, there is a login section with two input fields for "Kata Nama" and "Kata Laluan", and a "Masuk" button. To the left of the login section, there are three icons with corresponding text: a building for "Kementerian Pengajian Tinggi", a pen and paper for "Senarai IPTA", and a document with "OK" for "Bantuan & FAQ". At the very bottom, there is a small note in italics: "Paparan terbaik menggunakan Internet Explorer 5.5 & ke atas dengan Resolusi 800 x 600 pixel".

Domain & Indicators



| Domain | No. of Indicators | No. of item |
|-------------------------|-------------------|-------------|
| Academic Staff | 6 | 19 |
| Students' Choice | 6 | 12 |
| Research | 5 | 13 |
| Programs | 8 | 23 |
| Resources | 4 | 31 |
| Governance & Management | 4 | 20 |
| TOTAL | 33 | 118 |

Category of Institution



Each domain is weighted differently depending on the category of institutions

Broad-based University

A university offering a comprehensive range of programs in varied disciplines

Specialised University

A university which offers a broad range of programs in specific disciplines

Research-Intensive University

A university which focuses on research and devotes a greater percentage of resources on research

SETARA



| Domain | Institution Category | | |
|--|----------------------|--------------------|-------------|
| | Comprehensive | Research Intensive | Specialised |
| Academic Staff | 25 | 25 | 25 |
| Competitiveness (students' preference) | 10 | 10 | 10 |
| Research | 20 | 25 | 15 |
| Academic Programmes | 25 | 15 | 25 |
| Academic Resources / Infrastructure | 10 | 15 | 15 |
| Governance and Management | 10 | 10 | 10 |



RU Criteria



| Criteria | Indicators | Weightage |
|---|---|-----------|
| Quantity and Quality of Researchers (25%) | Critical mass, Staff qualifications, research experience, accolades | 25% |
| Quantity and Quality of Research (30%) | Publications, grants, expenditure, post-docs | 30% |
| Quantity of Postgraduates (10%) | Enrolment ratio; PhD graduated, | 10% |
| Quality of Postgraduates (5%) | Entry level, fellowships/grants | 5% |
| Innovation (10%) | Patents, commercialization, licensing, copyrights | 10% |
| Professional Services and Gifts (7%) | Consultancy, endowment | 7% |
| Networking and Linkages (8%) | Active collaborations, memberships | 8% |
| Support facilities (5%) | Library, Accredited Labs | 5% |

Respondents

- Top Management IHL Malaysia
- Top Management IHL ASEAN
- Professional Bodies & Corporate / Private Sector

- Second Phase – to include regional universities
- ARS in tandem with SETARA
- Not online

Perception in ARS (1 -6 Scale)



- Human Resource (Academic Staff)
- Programmes
- Entry qualifications
- Quality of academic programme / marketability of graduates
- Post graduate quality
- Kualiti pasca-siswazah
- Research & Innovation
- Ability to generate future leaders

Initial ARS “analysis”



- **As expected more established universities do better**
- **Encouraging response from professional bodies & corporate / private sector**
- **Respondents from peer institutions – Indonesia & Brunei (first phase Dec. 2005)**

Domain 1 : Academic Staff



- a) Qualifications (Ph.D, Profesional qualifications)
- b) Academic Experience (teaching, research, industrial)
- c) Professional affiliations
- d) Staff from Industry (industrial and academic attachment)
- e) International recognition
- f) Involvement of staff in design/consultation/innovation

19 Indicators

Domain 2 : Student Selectivity



- a) Students Admission Rate
- b) Student's First Choice
- c) Entry Qualifications (Critical Programmes)
- d) Students' Sponsorship
- e) Study Continuation (Postgraduate Level)
- f) International Students Admission

14 Indicators

Domain 3 : Research



- a) Number of Research projects
- b) Products (Patent, Innovation, Policy, Academic Publication)
- c) Articles in Refereed Journals
- d) Awards/Recognition

13 Indicators

Domain 4 : Academic Program



- a) Admission to Postgraduate Programs
- b) Diversity of Teaching Methods/Techniques
- c) External Examiners/Assessors
- d) Accreditation
- e) Graduate Marketability
- f) Quality of Graduates
- g) Rates of Graduation
- h) Student-Lecturer Ratio for Critical Programmes

23 Indicators

Domain 5 : Resources (Educational)



- a) Teaching and Learning
- b) Research Grant
- c) Finance
- d) Student Support Services

31 Indicators

Domain 6 : Governance & Management



- Risk management : amount spent on IT upgrade
- Governance structures
- QA processes
- Services Delivery

20 Indicators

Update



- **First Cycle SETARA = completed March 2006 based on 2005 data**
- **Still waiting Report**

THES-QS



| Criteria | Indicators | Weightage | UKM * |
|------------------------------|------------------------|-----------|-------|
| Research Quality (60%) | <i>Peer Review</i> | 40% | 32 |
| | Citation per Faculty | 20% | 0 |
| Graduate Employability (10%) | Recruiter Review | 10% | 22 |
| International Outlook (10%) | International Faculty | 5% | 9 |
| | International Students | 5% | 6 |
| Teaching Quality (20%) | Student: Faculty Ratio | 20% | 25 |

Comparisons



| | Melbourne Inst | US News & World Report | THES | Shanghai Jiao Tong |
|------------------------|--------------------------------|---|----------------------------|---|
| Academic staff | √ | √ | √ Int'l faculty only | √ Focus on Nobel Laureate |
| Student selectivity | √ | √ Stdnt/alumni f/back & performance prominent | √ Int'l students only | - |
| Research | √ Fewer indicators than Setara | | Citations only | Highly cited researchers & citations in Science index |
| Academic program | √ | √ | Teacher:student ratio only | - |
| Resources | √ | √ | - | - |
| Governance & Mangement | - | - | - | - |

Defining Criteria



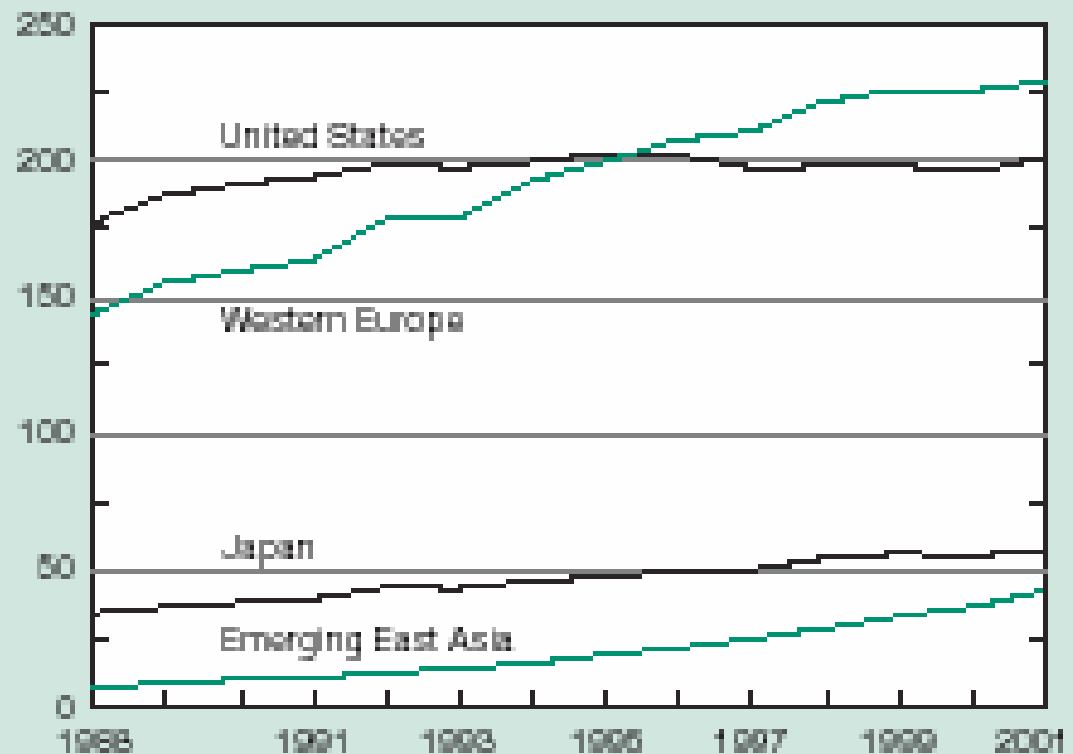
- International Faculty
 - Different nationalities?
 - Different origin of their education (PhDs)
- International Students
 - Ability to draw students from different nationalities
 - Different cultures / homogeneity of campus?

Defining criteria

- Absolute or relative?

Output of S&E articles by selected countries/
regions: 1988–2001

Thousands of articles



NOTE: Emerging East Asia consists of China, Singapore, South Korea, and Taiwan.

Absolute vs Relative



| PAPERS | CITATIONS | PAPERS/PERSON |
|---------------|------------------|----------------------|
| USA | USA | Switzerland |
| UK | UK | Sweden |
| Japan | Germany | Israel |
| Germany | Japan | Finland |
| France | France | Denmark |
| Canada | Canada | UK |
| Italy | Italy | Netherlands |
| Russia | Netherlands | Australia |
| China | Switzerland | USA |
| Spain | Australia | Norway |
| Australia | Spain | Singapore |
| Netherlands | Sweden | France |
| India | China | Germany |

Source : King 2004

- Total public expenditure on education measured in terms of percentage of GDP
- Does the education system meet the needs of a competitive economy?
- Does the language skills meet the need of enterprise?
- What is the percentage of population in the 25 – 34 years cohort in tertiary education?
- Does university education meet the needs of a competitive economy?
- Is the knowledge transfer between industry and universities highly developed?

Percentage of GDP spent on education



| | | | |
|----------------|------|---------------------|-------------|
| 1. Israel | 8.4% | 19. Jordan | 5.8% |
| 2. Denmark | 8.2% | 24. Austria | 5.6% |
| 3. Belgium | 8.1% | 25. Malaysia | 5.3% |
| 4. Slovenia | 7.4% | 28. Australia | 5.1% |
| 5. Iceland | 7.4% | 34. Taiwan | 4.5% |
| 6. Sweden | 7.4% | 41. Hong Kong | 4.2% |
| 7. New Zealand | 7.1% | | |
| 16. France | 5.9% | | |

Does the educational system meet the needs of a competitive economy?



| | |
|----------------|---------------------|
| 1. Singapore | 13. India |
| 2. Finland | 14. Malaysia |
| 3. Austria | 19. New Zealand |
| 4. Ireland | 20. Netherlands |
| 5. Iceland | 21. USA |
| 6. Switzerland | 23. Taiwan |
| 7. Australia | 25. Sweden |
| 10. Denmark | 32. Japan |
| 12. Hong Kong | 35. Thailand |

Are the language skills meeting the needs of enterprise?



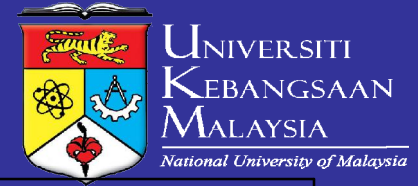
| | |
|----------------|-----------------|
| 1. Luxembourg | 12. Singapore |
| 2. Switzerland | 15. Israel |
| 3. Denmark | 18. Philippines |
| 4. Iceland | 19. Malaysia |
| 5. Sweden | 22. Germany |
| 6. Netherlands | 24. Jordan |
| 7. Finland | 25. Hong Kong |
| 10. India | 30. Taiwan |

Percentage of population in the 25 – 34 years cohort that have attained at least tertiary education



| | | | |
|--------------|-------|---------------|-------|
| 1. Canada | 53% | 14. Hong Kong | 37.4% |
| 2. Japan | 52% | 15. Ireland | 37% |
| 3. Singapore | 49% | 18. Australia | 36% |
| 4. Korea | 47% | 23. Russia | 31% |
| 5. Taiwan | 43.2% | 37. Malaysia | 18% |
| 6. Israel | 42% | | |
| 7. Finland | 42% | | |
| 12. Spain | 38% | | |

Does university education meet the needs of a competitive economy



| | |
|----------------|-----------------|
| 1. Singapore | 18. Sweden |
| 2. Iceland | 20. Malaysia |
| 3. USA | 21. Norway |
| 4. Switzerland | 24. Netherlands |
| 5. Ireland | 25. Jordan |
| 6. Finland | 27. Germany |
| 7. Austria | 31. Taiwan |
| 10. Israel | 34. Thailand |
| 14. Hong Kong | 50. Korea |
| 16. India | |

Is the knowledge transfer between industry and universities highly developed?



| | |
|--------------|-----------------|
| 1. Finland | 13. Malaysia |
| 2. USA | 14. Hong Kong |
| 3. Austria | 16. Australia |
| 4. Israel | 18. Germany |
| 5. Iceland | 21. Japan |
| 6. Singapore | 23. India |
| 7. Bavaria | 28. Philippines |
| 12. Taiwan | 32. Korea |
| | 36. Thailand |

Generic KPIs ?



- KPIs - tied to the objectives of the university and to evaluate the extent the strategic goals are met
- Cf. KPIs for ranking and rating
- Essence of evaluation of performance in Higher education = the extent to which the expressed mission of the university is achieved. Since public universities are organisations of services that do not look for profit, to measure their performance is notably more complex than a typical company

CHALLENGES



- UKM has made concerted efforts to establish and use KPIs through systematic institutional planning and reporting process
- refinement of KPIs via the reviews of SP in the light of internal and external environment and UKM's performance to ensure that the KPIs are well defined, robust and permits benchmarking
- Time line and targets – some are subjected to external factors and control
- Alignments of KPIs (institution-wide) and the use of KPIs in Annual Reports, SETARA, RU Audit
- Work is continuing to develop UKM data warehouse that is aligned with key performance measures and accessible through a user-friendly data management-reporting tool (SME)

CONCLUSION



- The SETARA rating and ranking system is designed with the purpose of creating a national rating and ranking scheme for higher education. On the other hand, the RU Criteria and Audit is to determine the worthiness of an institution as a research intensive university. Rating and auditing of institutions require that universities are able to manage their data and build effective database of information required. At Universiti Kebangsaan Malaysia, various information systems allows the university to compile and verify the data required by the different exercise. However, fine grained distinctions and also differences in definition of different sets of criteria and indicator, may frustrate and make data capture difficult

Thank you for your
kind attention.

Terima Kasih