# MONGOLIA'S HIGHER EDUCATION DEVELOPMENT IN A COMPARATIVE PESPECTIVE

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**November 22, 2011**

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- Policies guiding reforming of higher education
- Issues and implications
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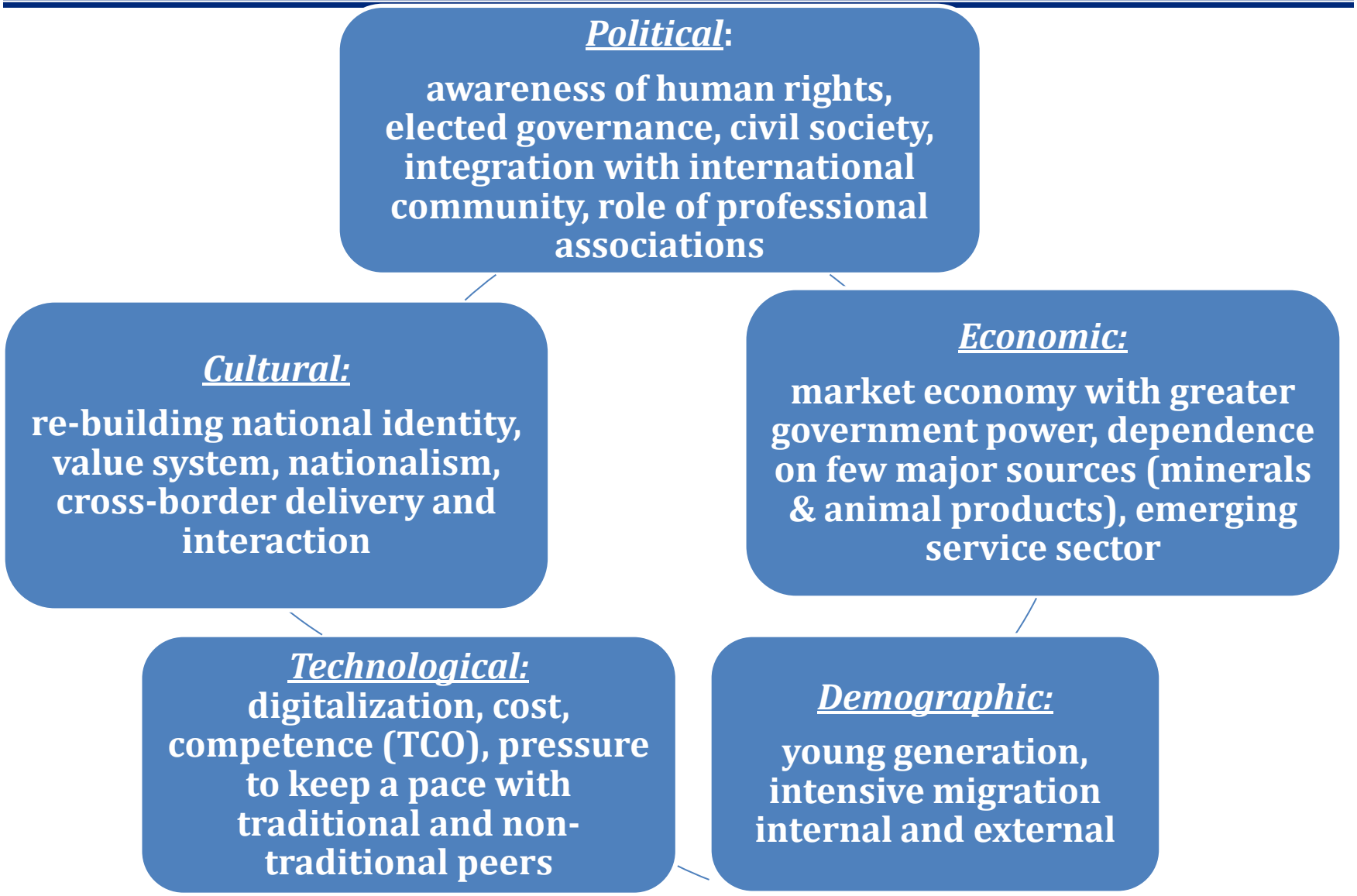
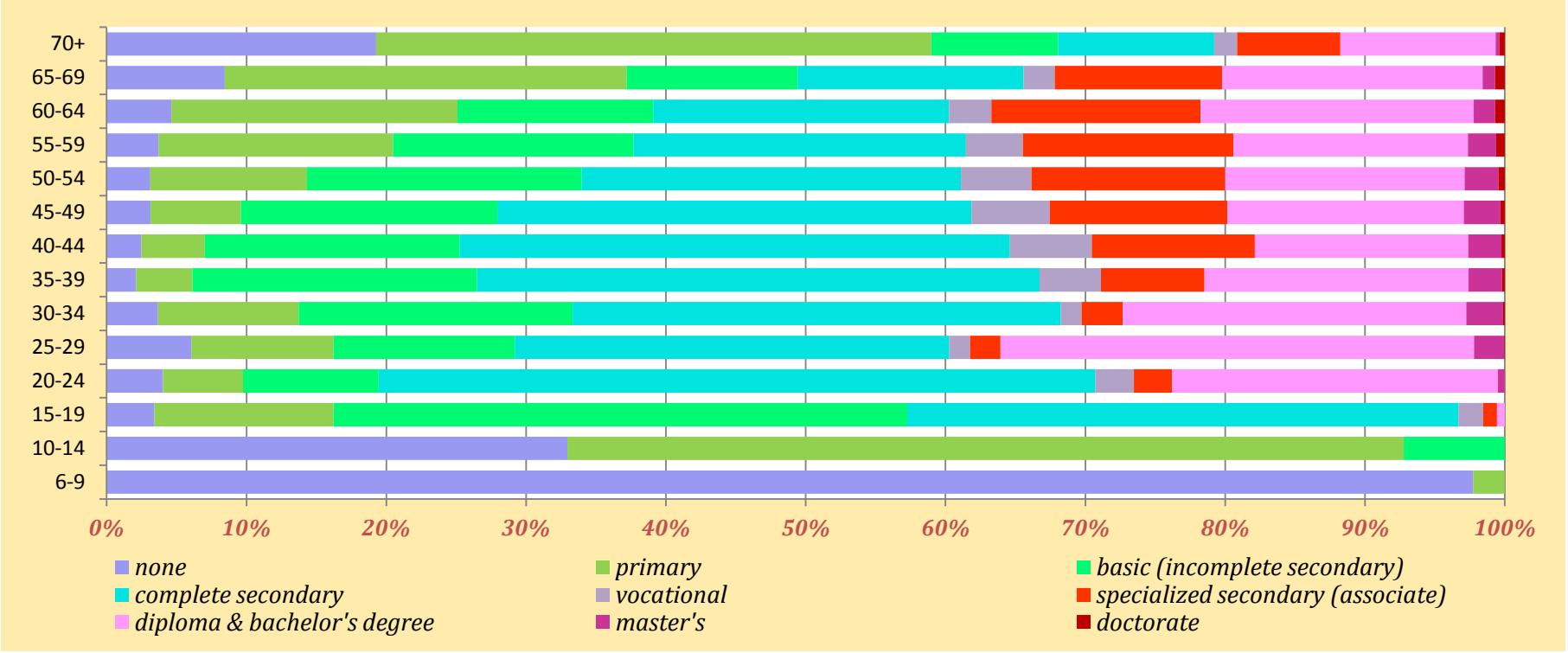
## I. Overview of higher education context in Mongolia:

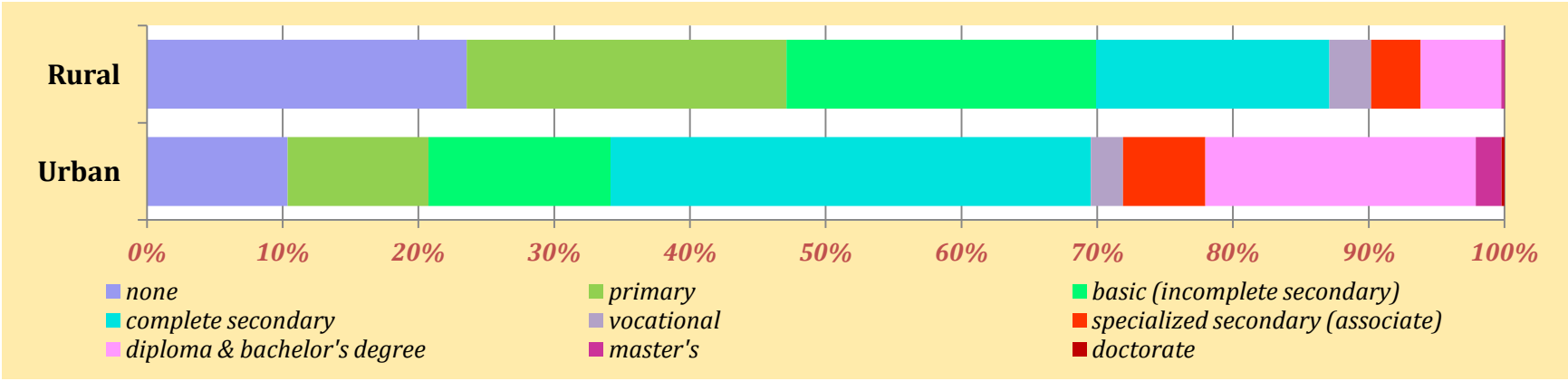
- **Transition continued two decades**

# Driving forces for change



# Education attainment of Mongolia population aged 6 and older, (2010 National Census)



## II. Policies guiding reforming of higher education :

- **Key areas of change in a comparative perspective**

# Main features of Mongolia's higher education reform

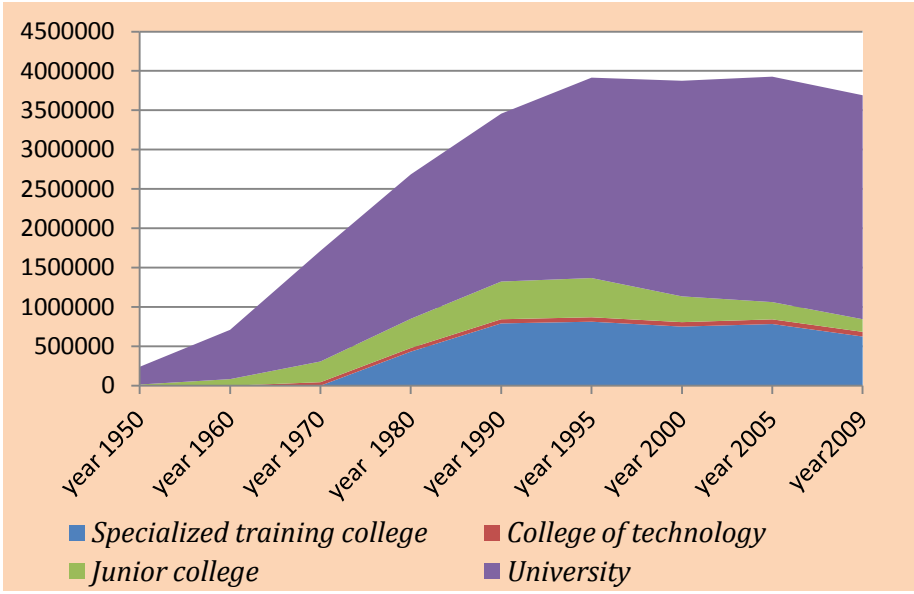
- **Governance and administration:**
  - decentralization, participatory Governing boards, institutional autonomy & accountability
- **Access & Relevance:**
  - academic programs, credit structured degree system
  - enrolment planning and forecasting: employment ("social") demand-supply, individual aspirations and motivations
- **Quality assurance:**
  - licensing, accreditation, inspection, customers' choice
- **Funding and financing:**
  - state share, private spending, alternatives (new legislation)
  - resources & facilities: sources of investment, need for renovation and maintenance to keep a pace with

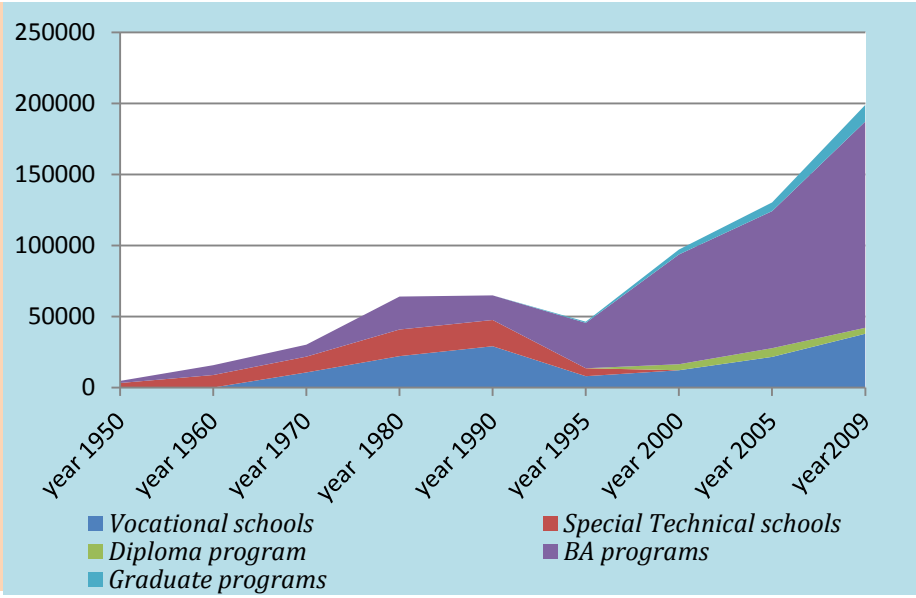
# Higher education in two countries

| Mongolia: | Japan: |
|---|---|
| Tradition:<br>• Recent introduction of liberalization: decentralization and privatization<br>• Teaching institutions<br>• Emerging private sector | Tradition:<br>• Strong government support and regulation<br>• Strong national universities<br>• Big private sector |
| Increasing:<br>• call for quality and relevance<br>• interest to collaborate<br>• State allocations after long absence<br>• competition across borders | Increasing:<br>• autonomy to universities<br>• expectation from industries and society<br>• competition among universities |
| Decreasing:<br>• enrolment quotas<br>• public confidence | Decreasing<br>• Operational grant from the government (since 2004)<br>• 18 years population |
| → Strategic focus<br>• Create cluster of universities<br>• New funding mechanism: diverse sources, competitive grants and student aid package<br>• International standards of programs | → Strategic and efficient management<br>• Mid-term (6-year) plan as a contract<br>• Competitive funding<br>• Efficiency - reduce and restrict costs |

# Education Enrollment Growth in Japan and Mongolia, 1940-2009

| | in Japan | | | | in Mongolia | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Year | Specialized training college | College of technology | Junior college | University | Vocational schools | Special Technical schools | Diploma program | BA programs | Graduate programs |
| 1950 | ··· | ··· | 15,098 | 224,923 | | 3,186 | | 1,476 | |
| 1960 | ··· | ··· | 83,457 | 626,421 | | 8,811 | | 6,909 | |
| 1970 | ··· | 44,314 | 263,219 | 1,406,521 | 10,628 | 11,121 | | 8,427 | |
| 1980 | 432,914 | 46,348 | 371,124 | 1,835,312 | 22,109 | 18,734 | | 23,214 | |
| 1990 | 791,431 | 52,930 | 479,389 | 2,133,362 | 29,067 | 18,478 | | 17,338 | |
| 1995 | 813,347 | 56,234 | 498,516 | 2,546,649 | 7,987 | 5,584 | | 31,973 | 804 |
| 2000 | 750,824 | 56,714 | 327,680 | 2,740,023 | 12,177 | | 4,224 | 77,281 | 3,465 |
| 2005 | 783,783 | 59,160 | 219,355 | 2,865,051 | 21,574 | | 6,128 | 96,504 | 6,106 |
| 2009 | 624,875 | 59,386 | 160,976 | 2,845,908 | 37,867 | | 4,203 | 145,196 | 11,712 |



# Mongolia higher education in 20 years

**Growth of the Tertiary education sector, 1991-2010**

| | 1991 | 2010 | increase, 1991-2010 | share of total, 2009 |
|---|---|---|---|---|
| **number of TEIs** | **14** | **113** | **8-fold** | **100%** |
| public | 14 | 16 | 114% | 14% |
| private | | 97 | | 86% |
| **number of students** | **20,000** | **170,126** | **8.5-fold** | **100%** |
| public | 20,000 | 104,431 | 5-fold | 61% |
| private | | 65,695 | | 39% |

# International higher education development trends

***Common evidence***

- Needs of knowledge-based society
- **Expansion** in enrollment: massification

  **elite → mass → universal**
- **Globalization and cross-border delivery** (common standards comparable expenses, lessening of direct government interference) new providers, virtual mode, MIT OCW
- **Growth of competing public services** (basic education and literacy, healthcare, infrastructure, environmental issues)
- **Cost** of instruction and maintenance
- **Government role:** increased regulatory functions and common process of reviewing and reforming national higher education systems regardless of level of development; Bologna Process/Brisbane Communiqué, Regional Conventions,

***Common responses***

Liberalization, decentralization, delegation and privatization

(Johnstone, D.B. (2009) Worldwide Trends in Financing Higher Education: A Conceptual Framework)

# **Higher Education: Reform Trends** (Kai-ming Cheng)

- **Rebuilding the national system**
  - Expansion of higher education
  - Establishing elite institutions
- **Enhancing private participation**
  - Re-positioning the private sector
  - Fostering a philanthropic culture
- **Redefining student learning**
  - Restructuring the curriculum
  - Redefining student experiences
- **Internationalizing higher education**
  - Globalizing the institutions & WTO
  - Facing international competition

# Enrolment in higher education

| 1990/1991 and 2001/2002 | | | |
|---|---|---|---|
| | *Enrolment (Thousands)* | | *Gross enrolment ratio* |
| | *1990/91* | *2001/02* | *2001/02* |
| Countries in transition | 8,481 | 12,168 | 36.5 |
| Developed countries | 30,837 | 40,273 | 54.6 |
| Developing countries | 29,326 | 58,290 | 11.3 |
| World | 68,644 | 110,731 | 23.2 |
| *Sources:* UNESCO Statistical Yearbook 1998 and EFA Global Monitoring Report 2005 | | | |

Globally, the percentage of the age cohort enrolled in tertiary education has grown from 19% in 2000 to **26% in 2007**, with the greatest gains in higher income countries. In low-income countries from 5% in 2000 to 7% in 2007.

There are some 150.6 million tertiary students globally, roughly a 53% increase over 2000.

(Altbach et al. 2009)

# Higher education gross enrollment rates: Asia

| *Country* | *1991* | *1999* | *2002* | *2004* | **2008+** | **change** |
|---|---|---|---|---|---|---|
| Kazakhstan | 42 | 25 | 39 | 48 | | 1.14 |
| Kyrgyzstan | 14 | 29 | 43 | 80 | | **5.71** |
| Pakistan | 3 | | 3 | 3 | | 1.00 |
| Tajikistan | 22 | 14 | 14 | 16 | | 0.73 |
| Uzbekistan | 30 | | 15 | 15 | | 0.50 |
| PRC | 3 | 6 | 13 | 19 | | **6.33** |
| **Mongolia** | **14** | **26** | **34** | **39** | **(47)** | **3.36*** |
| South Korea | 39 | 66 | 83 | 89 | | 2.28 |
| **Japan** | **30** | **45** | **51** | **54** | **(58)** | **1.93**** |
| Indonesia | 9 | | 15 | 17 | | 1.89 |
| Philippines | 27 | 29 | 30 | 29 | | 1.07 |
| Thailand | | 32 | 39 | 41 | | 1.28*** |
| Vietnam | 2 | 11 | 10 | 10 | | **5.00** |

Source: ADB (2008). *Education and Skills: Strategies for accelerated development in Asia and the Pacific*

## III. Issues and implications

- **National and institutional comparisons**

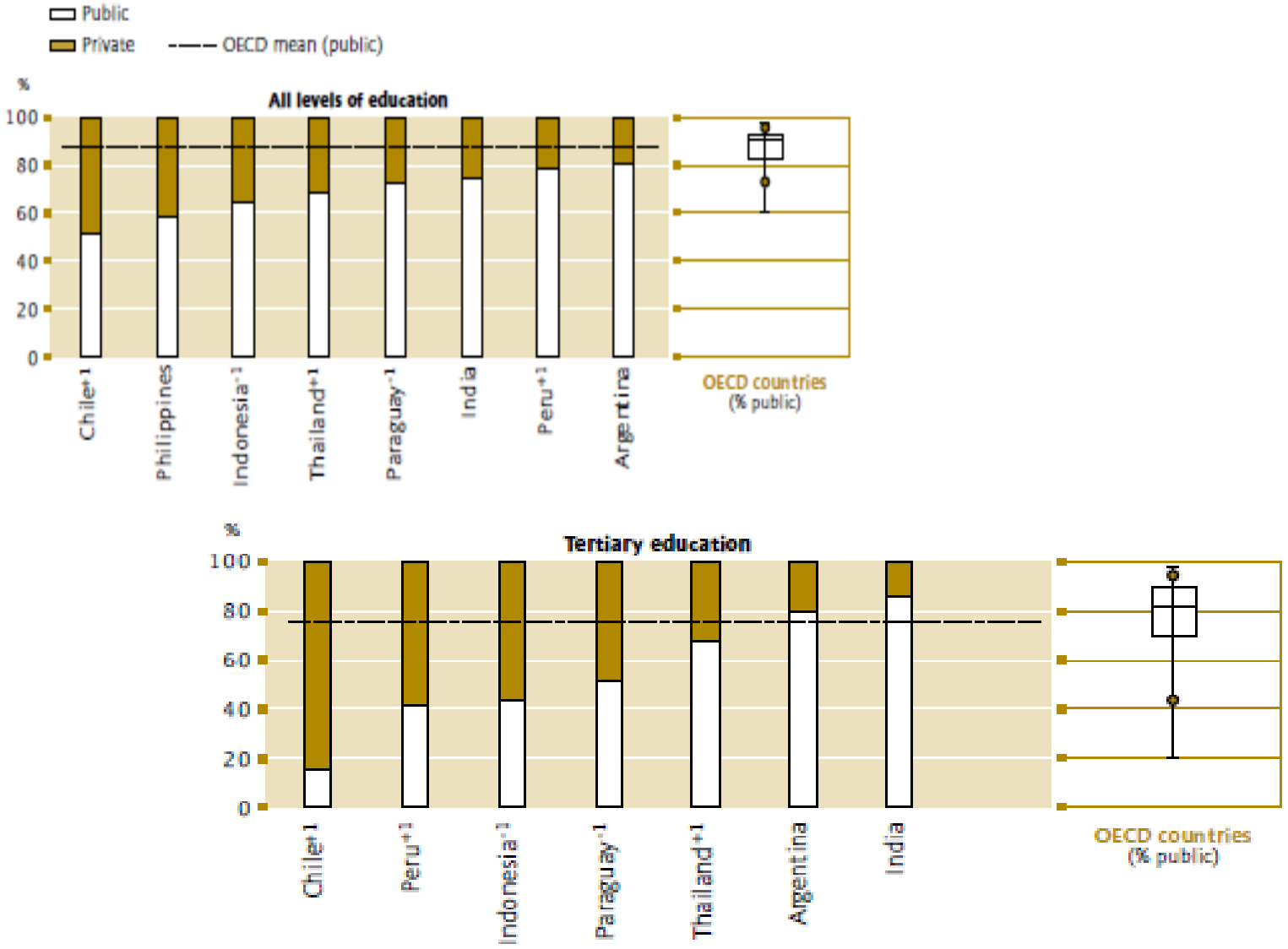
# Trends in National Higher Education Development Strategies in Asia and the Pacific

- **South Korea**: "*Brain Korea 21*" to prepare world-class scholars
- **PR China**: "*Project 211*": *100 key universities*, "*Project 985*" (1985) *world class* elite universities (30-35)
- **Philippines:** *Higher Education Research Agenda 1998-2007*
- **Thailand**: regional higher education *hub*
- **Malaysia**: regional *hub & Apec universities*
- **India**: to join leaders' group by 2020, with *special focus on excellence*
- **Russia**: federal academic centers to reach the level of world class universities
- **Qatar, Singapore and the United Arab Emirates**: recruiting prestigious foreign universities to establish local campuses serving as "*hub*"
- Strengthening of universities in **Australia, New Zealand, Japan, Singapore** and **Hong Kong** (*Global Rankings*)

**CROSS-BORDER EXPORTERS, COMPETITIVE RESEARCH UNIVERSITIES ARE ROLE MODELS**

# Relative shares of public and private expenditure

Public and private expenditure on educational institutions as a percentage of the total expenditure and tertiary education, 2004

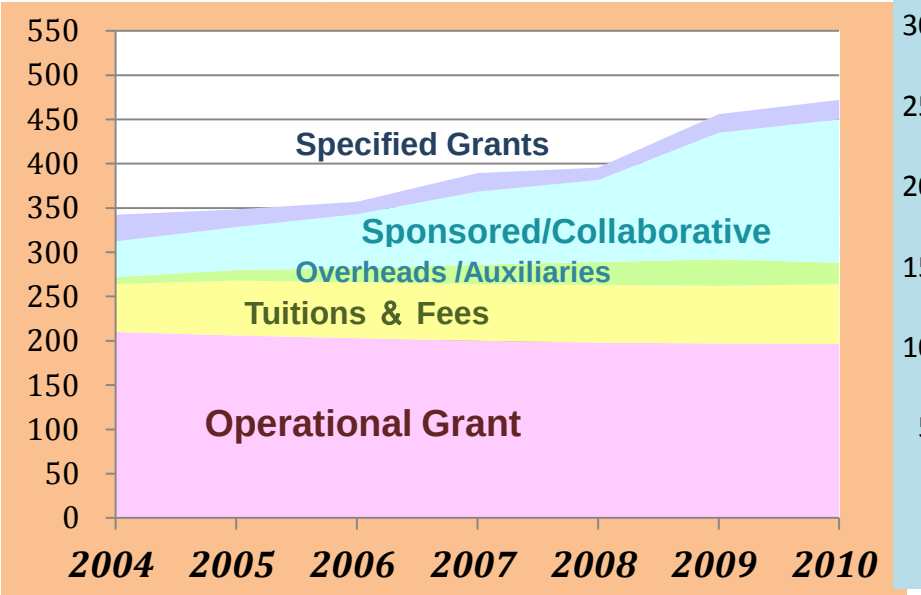


# Universities from two countries

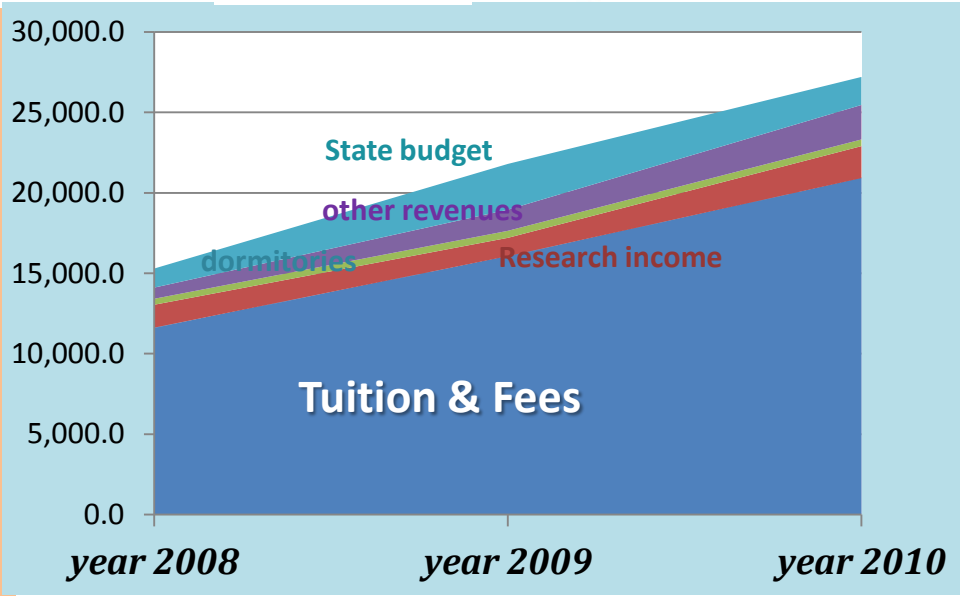
| Tokyo Tech | | MUST |
|---|---|---|
| *1881* | established | *1959* |
| **National university** | **Profile** | **State-owned university** |
| Science and engineering | program area | Engineering, science, humanities |
| 3 campuses in Tokyo, 6 schools, 4 research labs and numerous research/education centers | Location | Multi-campuses spread in many locations in Mongolia, 17 schools, 6 research institutes and numerous education/research centers |
| The Board of Directors, Faculty senate (internal) | Governing body | Governing Board (external), Academic Council |
| **9,898** | **Enrolment** | **28,126** |
| 4,890 | undergraduate | 24,300 |
| 3,484 | master's | 2,023 |
| 1,524 | doctoral | 565 |
| 1,710 | employees | 1,973 |
| **1,150** | Full-time faculty | **1,071** |
| 374 | professors | 96 |
| 336 | associate professors | |
| 390 | other faculty | |
| 1,538 | Adjunct/part-time staff | |
| **8.6** | **SFR** | **25.1** |

# Trends in revenue streams

*100 Million Yen*

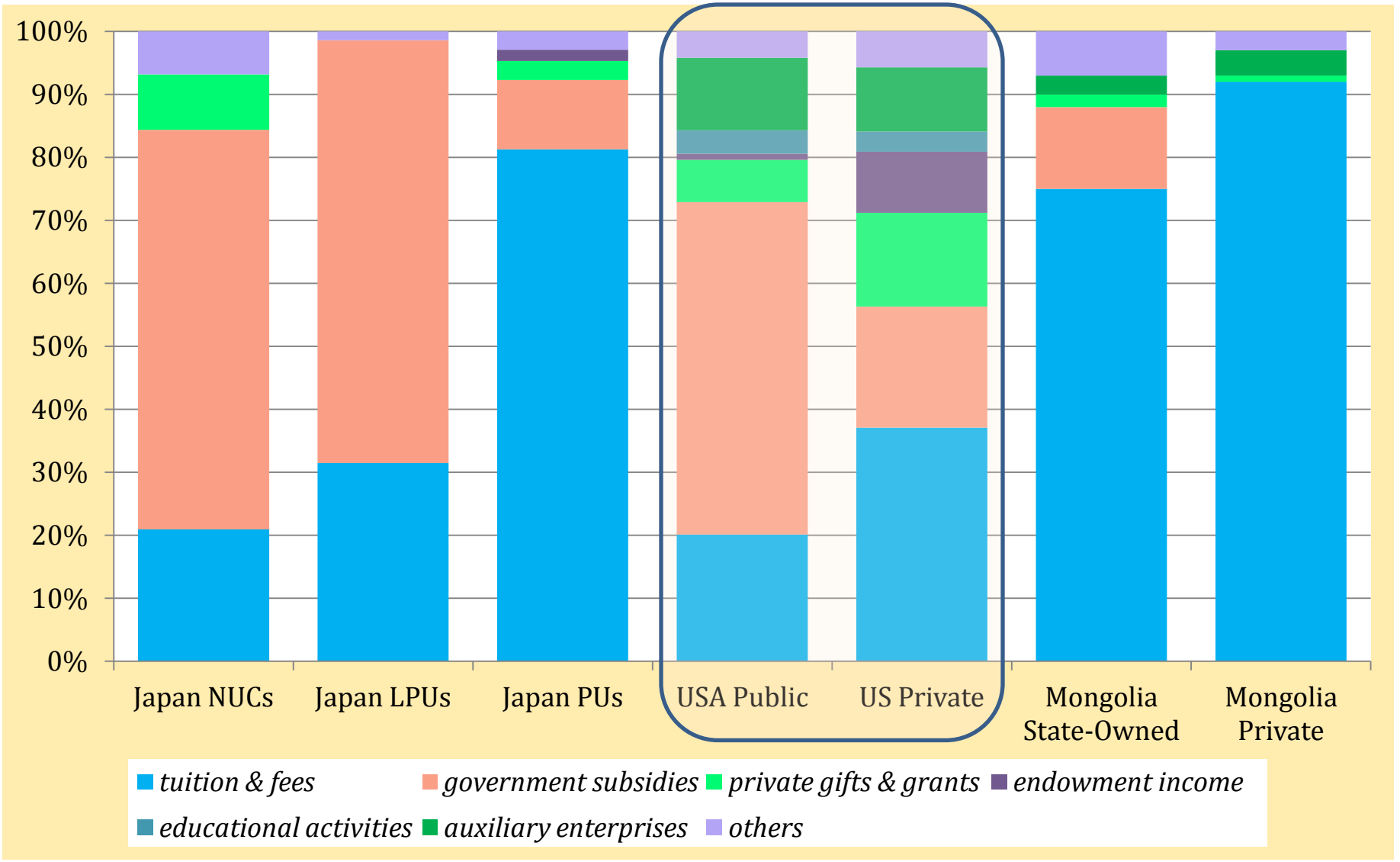



*Million MNT*




| Tokyo Tech, 2010 | | MUST, 2010 | |
|---|---|---|---|
| revenue per student: | *4.9 Mln Yen* | Revenue per student | 1.0 *Mln MNT* |
| operational grant | 19,667.0 | 979.6 | state budget allocation |
| sponsored | 14,043.0 | 1,987.4 | research income |
| tuitions and fees | 6,946.0 | 20,917.9 | revenues from main activities |
| facilities | 3,972.0 | | |
| specified grants | 2,209.0 | 167.3 | donations & gifts |
| auxiliaries | 1,357.0 | 2,393.4 | auxiliaries |
| other | 1,000.0 | 762.7 | other |
| **total** | **49,194.0** | **27,208.3** | **total** |

# Income composition of Universities in three countries compared



# Public funding for higher education in selected countries

| | US | England | Canada | Japan* | Mongolia |
|---|---|---|---|---|---|
| Public/private funding mix (2006) | 34%/66% | 65%/35% | 53%/47% | 64%/36% | 24%/76% |
| Sources of public funding | 51 | 1 | 11 | 7 | 2 |
| Fee-setting authority | mixed | public | public | public | mixed |
| Loan providers | multiple | 1 | 1+ | 2 | 1+ |
| Loan type | mortgage | ICR | Mortgage | Long-term | Special rate |
| Grants | Federal/state /institutional | Federal/ institutional | Federal/ provincial/ institutional | state | state |
| The challenges of affecting access and attainment through public policy levers are quite different in the three countries | | | | | |

**Diverse sources and multiple channeling lessens dependency on dominant provider**

# How expensive is higher education: Tuition Fees as percentage of per capita GNI

| Country | Public Universities | Private Universities |
|---|---|---|
| Mongolia | 16% | 16% |
| Australia | 11.3% | 21.9% |
| Canada | 10.0% | n/a |
| Japan | 11.8% | 18.5% |
| Korea | 16.3% | 31.1% |
| New Zealand | 6.5% | n/a |
| United Kingdom | 5.2% | 4.9% |
| United States | 11.4% | 42.0% |
| Italy | 3.3% | 11.5% |
| Netherlands | 4.4% | 4.4% |
| Israel | 12.0% | 29.2% |
| Chile | 27.9% | 32.0% |

Sources: Provided by Salmi, drawn from OECD Education at a Glance 2007; Background Report; World Bank World Economic Indicators.

"Attendance to higher education entails significant private costs that average 60% of GDP per capita." (Altbach et al. 2009)

# Challenges and possible interventions

- **Low economic and social return:** Poor labor market outcomes and mismatch of skills
- **Low-cost and low-quality:** teaching dominance, compromising quality, uncontrolled expansion
- **Inequitable access:** income level, social standing
- **Inadequate governance:** political intrusion, vested interests of those who make major decisions, absence of corporate governance tradition
- **Single source funding:** dependence on students' ability to pay
- **Lack of basic infrastructure**: incomplete delivery, instable organization

# Summary of recommended steps for Mongolia

- After 20 years, there is a marked numeric growth
- But there is a great need to:
  - **review core functions** of higher education in new reality
  - commit political leaders to maintain policy continuity: **central → de-central → re-central → ?** balance government intervention and institutional self-regulation (autonomy and accountability)
  - enhance **institutional governance and management**: create a buffering body to protect institutional autonomy, establish basic functional units to support institutional and academic operations
  - maintain clear and consistent policy to **foster balanced competition and collaboration**: performance indicators, joint offers, technology transfer
  - cultivate academic culture in compliance with **academic integrity**, ethics and code of conduct
  - **diversify revenue sources** by creating favorable stimulating legal environment: tax exemptions,
  - effective and **coherent state funding** through various forms of stimulus package, e.g. strategic investment, program funding, competitive grants and student aid
  - **quality assurance**: external and internal bodies; credit transfer, cross-registration

# Concluding remarks

# Mission of higher education expanded:

promote **citizenship** and active participation in society

help understand, interpret, preserve, enhance, promote and disseminate national and regional, international and historic **cultures**

help protect and enhance **societal values**

contribute to the development and improvement of **education at all levels**

- with a worldwide vision, for endogenous capacity-building, and for the consolidation of human rights, sustainable development, democracy and peace, in a context of justice

## advance, create and disseminate knowledge

- through **research**
- its service to the community
- relevant expertise to assist societies in cultural, social and economic development

## educate

- highly qualified graduates and responsible citizens

# Social responsibility of higher education: 2009 World Conference COMMUNIQUE

- Higher education as **a public good** is the responsibility of all stakeholders, especially governments.
- …higher education has the **social responsibility** to advance our understanding of multifaceted issues, which involve social, economic, scientific and cultural dimensions and our ability to respond to them. It should lead society in generating global knowledge to address global challenges, inter alia food security, climate change, water management, intercultural dialogue, renewable energy and public health.
- Higher education institutions, through their core functions carried out in the context of **institutional autonomy and academic freedom**, should increase their interdisciplinary focus and promote critical thinking and active citizenship. This would contribute to sustainable development, peace, wellbeing and the realization of human rights, including gender equity.
- Higher education must not only give solid skills for the present and future world but must also contribute to the education of **ethical citizens** committed to the construction of peace, the defense of human rights and the values of democracy.
- **Autonomy** is a necessary requirement for fulfilling institutional missions through quality, relevance, efficiency, transparency and social responsibility.

Source: **COMMUNIQUE, 2009 World Conference on Higher Education: The New Dynamics of Higher Education and Research For Societal Change and Development (UNESCO, Paris, 5 – 8 July 2009)**
http://unesdoc.unesco.org/images/0018/001832/183277e.pdf

# Summary of mainstream trend (1)

- Higher education in general, leading universities in particular, is expected to carry out multiple functions – **broader mission**
- **Competition** is becoming even fierce as globalization penetrates in sphere of life and new issues of public concern raise. However, enhanced collaboration with strategic partners is imperative to be competitive.

  "*While competition has always been a force in academe and can help produce excellence, it can also contribute to a decline in a sense of academic community, mission and traditional values*." (Altbach et al. 2009)

- Governments in search of more **effective ways of funding** their HE institutions. **Cost-sharing** is becoming the most popular way to reduce budgetary burden. While state remains to be the major funder for higher education, multi channeling of public funds is the way to reach **balance in stakeholders' participation**
- **Diversification of revenue sources promotes institutional autonomy.** But, not every institution is capable to benefit from this opportunity: fund-rising and benefiting from unrestricted gifts and donations are culturally and socially grounded. Equally important is the institutional capacity to generate revenue.

# Summary of mainstream trend (2)

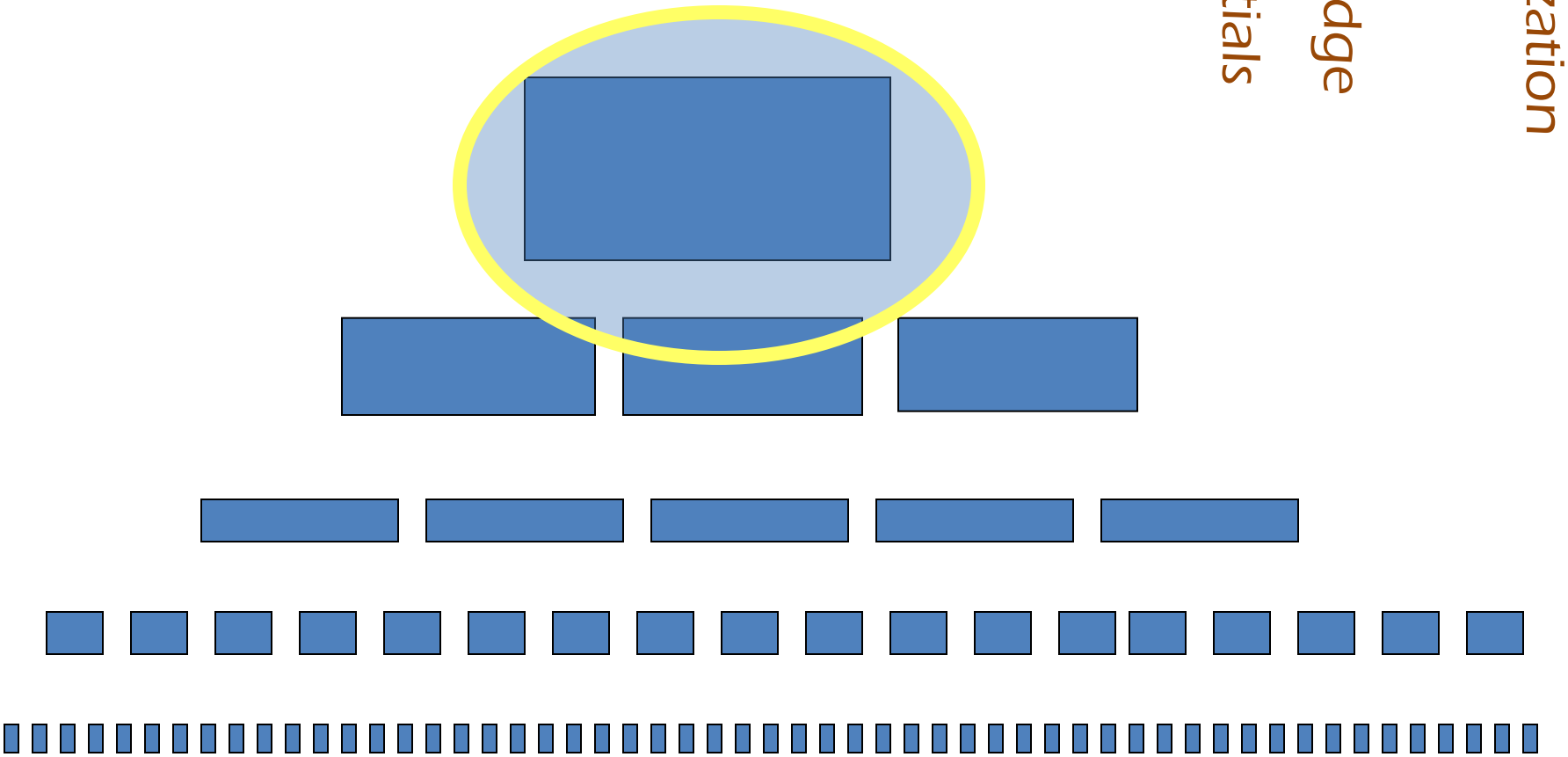
- **Rapid rise** of demand on higher education leads to emergence and growth of private sectors
- The major focus is on improving **quality and relevance** of teaching and research: expanded and diversified provision lead to revision of legislative and policy frameworks for the establishment and operation of HEIs, and in effective quality assurance arrangements.
- Adoption of **a common credit currency**, comparable assessment criteria and setting equivalent **achievement standards** across universities within countries can make an important contribution to student mobility and enhanced mutual recognition of qualifications.
- The main responsibility of governments is to ensure **support at a reasonable level** without necessarily providing all such support from public sources.

# Thank you for your attention!

- Questions?
- Comments?

# Industrial Society: Pyramid

Organization
Society
Knowledge
Credentials

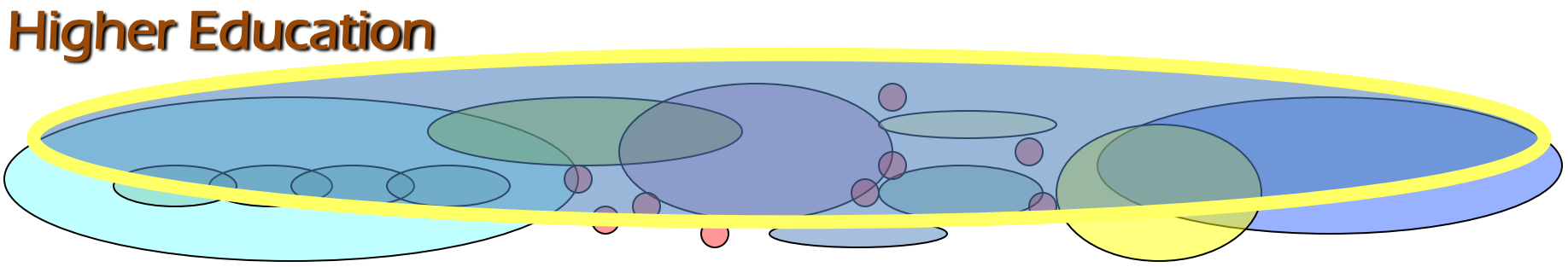


# Post-industrial: Workplace

Project Groups/Task Forces

Small Enterprises

Free-lancers



# A matter of discourse

- Knowledge (Post-industrial) Discourse

Higher Education
for
Knowledge Economy

Education: Learning Capacity
Research: Knowledge Advancement

A new place for the human factors!

Dual tasks:

- Quantity:
  - Doing more and better of what have been done!
- Quality:
  - The substance of higher education is changing!

# Education

## (Skills?)

## revisited

# Do we know …

- What is the extent of mismatch between study and work?
- How much and how frequent people change jobs and/or careers?
- How much that is studied in higher education is used (or not used) in work?
- How much that is used in work is studied (or not learnt) in higher education?

# Do we know …

- How incomes vary with the same credentials? Why?
- What does the workplace expect beyond the credentials?
- How long would the value of a credential last?

# Do we know …

- The economy:

  What will it be like in 20 years' time?

- Our young people

  What will they face in 20 years' time?

## HKU Graduates Mismatch

- Medicine: 1%
- Law: 15-20%
- Engineering: 35%
- Arts & Social Sciences Basic mismatch

## Imperial College

| Year | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| | | | | |
| Aspiring to be an engineer (%) | 81 | 74 | 49 | 44 |

# Job & Career Changes

- UK (City and Guild, 2006):
  - 13 jobs/life
- US (DOL)
  - 10.6 jobs/life (2006)
  - 4.3 occupations/life (2002)

# But now …

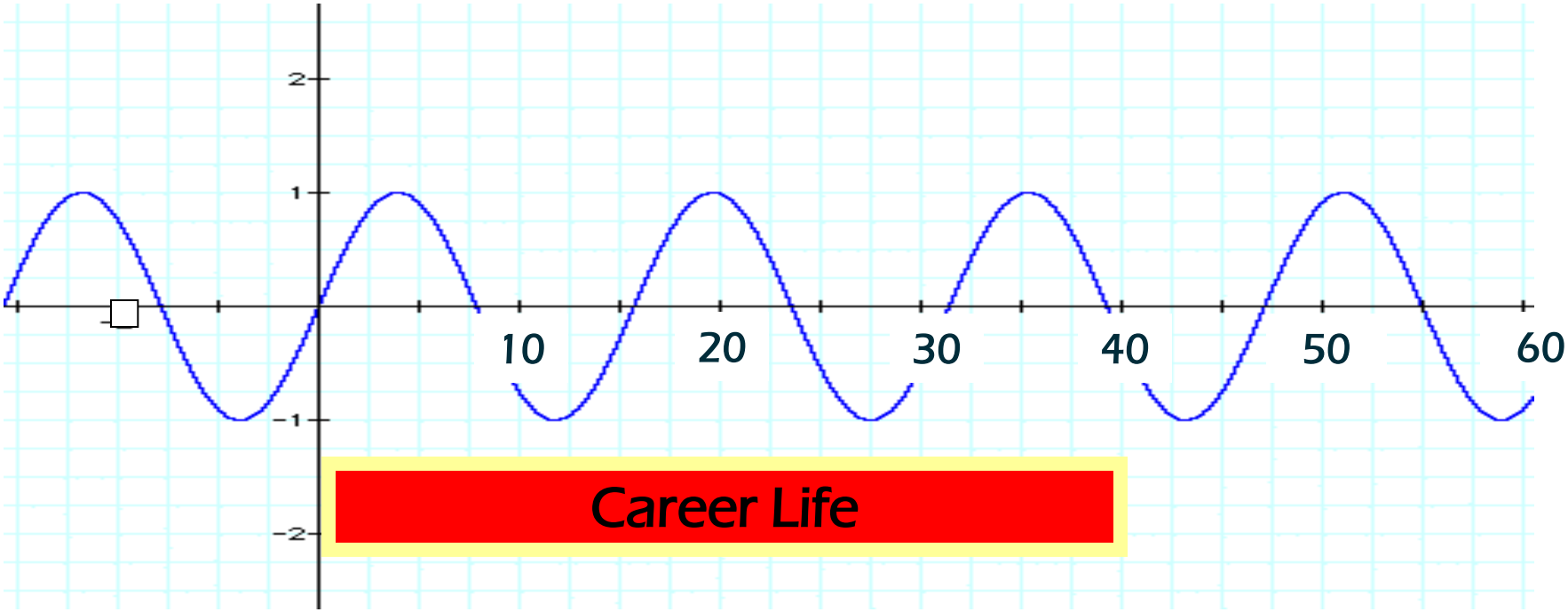
Department Heads in Department Stores

Secondary school graduates

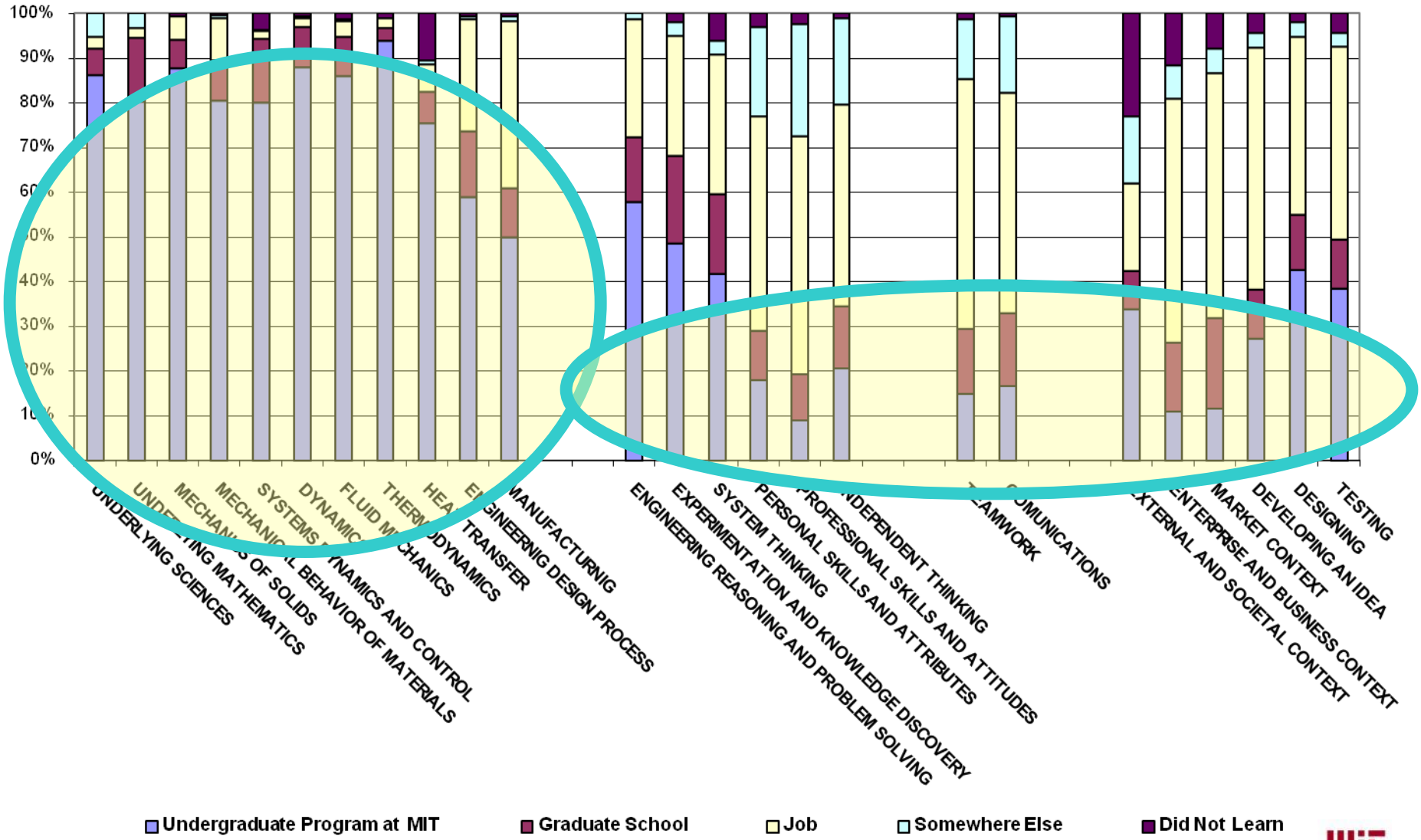
- 1970s: stable and comfortable
- 1980s: re-engineering, second tier shops
- 1990s: shops in malls
- Late 1990s: domestic helpers

# Cycle of societal changes: then

Now …

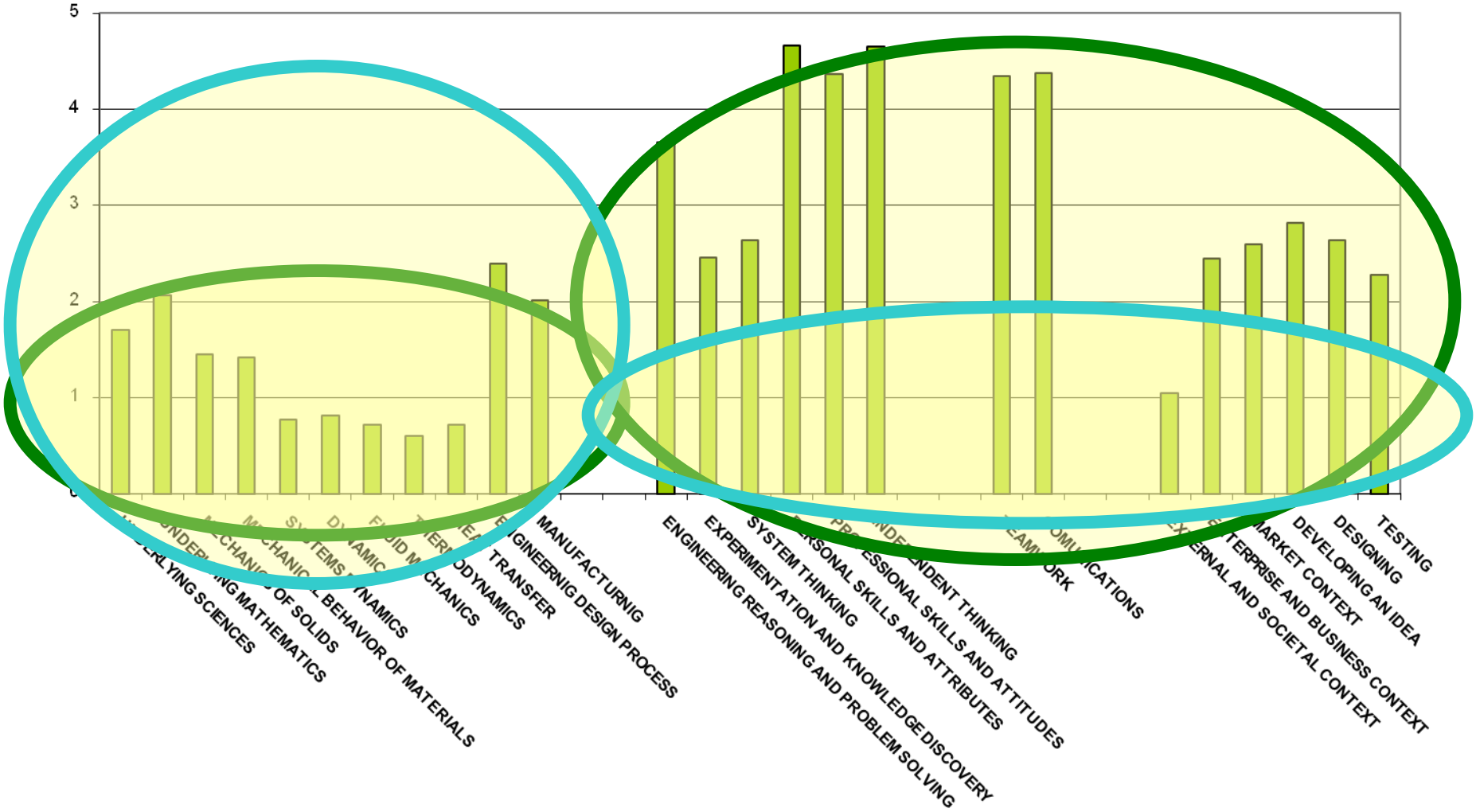


# Source of Knowledge and Skills – MIT Alumni




Source: Kristen Wolfe, B.S. Thesis, Department of Mechanical Engineering, June 2004

# Knowledge and Skills – MIT Alumni
## Mean Frequency of Use




**Frequency of Use: 0 Never, 1 Hardly ever - a few times a year, 2 Occasionally - at least once a month, 3 Regularly - at least weekly, 4 Frequently - on most days, 5 Pervasively - for most everything I do**

Source: Kristen Wolfe, B.S. Thesis, Department of Mechanical Engineering, June 2004

- Same credentials, differential salaries
  (Top salary/Bottom salary)

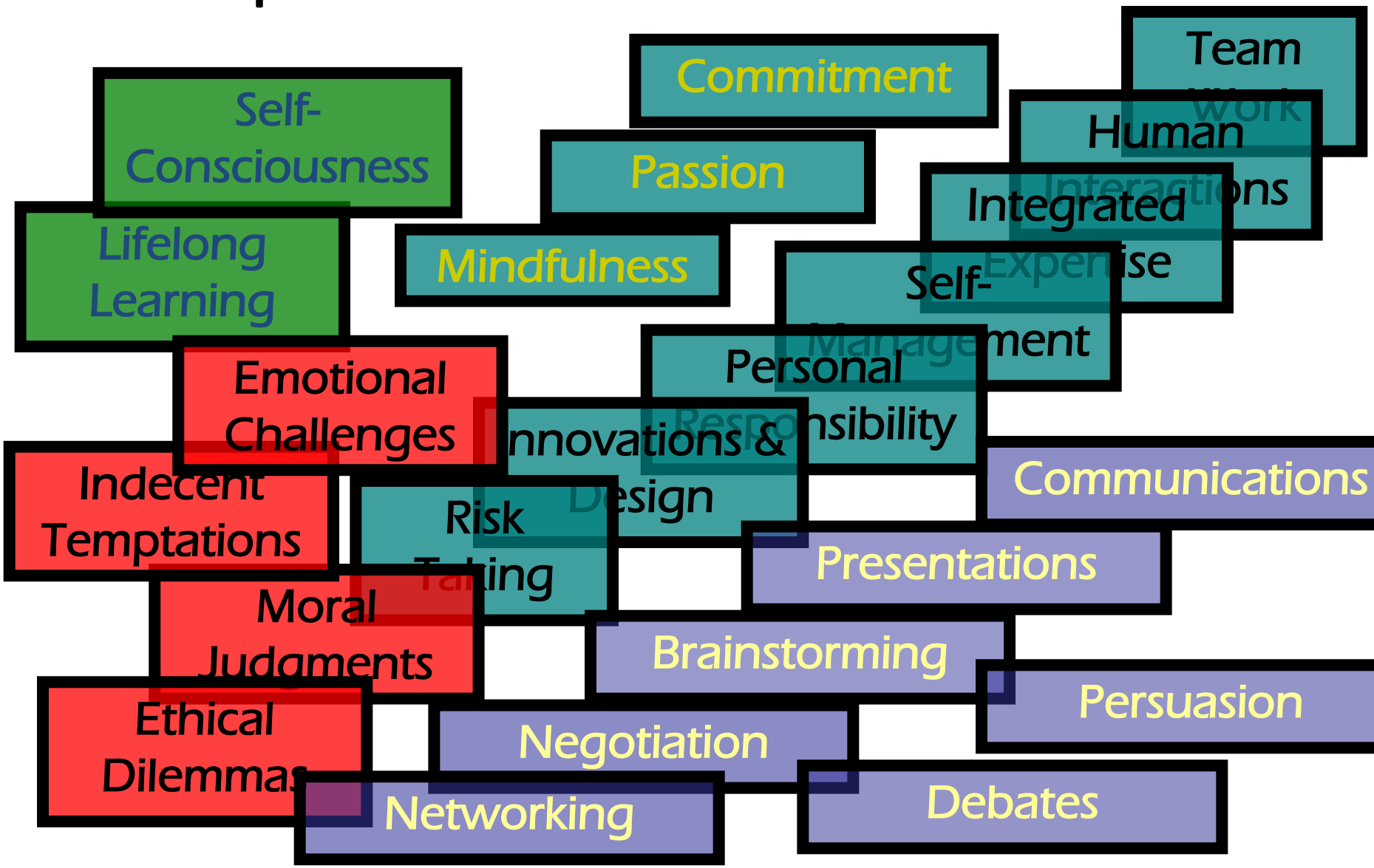
  - Investment banking 13+
  - Retail banking 5.5
  - Computer related 4.5
  - Marketing 4
  - Social Work 2

(Kan 2009, Data from two universities in Hong Kong)

# Beyond “Jobs”

- Work units are getting smaller and looser
- Front-line responsibilities are getting more complex
- More people do not work in organization
- More people are between jobs
- More people retire early

# Expectations on individuals …



# Hence, beyond Skills

- Moral Standards
- Attitudes
- Emotions
- Values
- Ethics
- Personality
- …..

All in the affective domain!

# Beyond economic lives …

There are lives beyond jobs or economic lives.

- Family lives?
- Cultural lives?
- Political lives?
- Spiritual lives?
- Leisure lives?
- Lives after retirement?
- ….

# More recently, …

- Preparation for Disruptions in Life
  - Unpredictable natural disasters
  - Man-made accidents
  - Emerging disease and recurring epidemics
  - Precarious economic crises
  - Unexpected political turmoil
  - Irresponsible politicking
  - Hidden potentials of wars
  - Intolerable social inequality and conflicts

Are we doing anything
in Higher Education
in preparation for such?

# Beyond Skills & Research

Expected functions of higher education:

- Policy Advisory
- Advocacy
- Commentary & Watchdog
- Consultancies
- Community engagement
- Relief & Rescue
- Moral leadership
- Intellectual citizenship

Higher Education
serves National Development!

Higher Education is not
just a Subsidiary of the Economy!

Higher Education
represents Future of the Nation!

Higher Education
prepares Individuals for their Future!