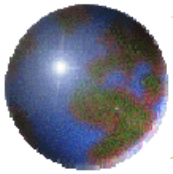

THE USE AND MISUSE OF INTERNATIONAL DATA IN HIGHER EDUCATION

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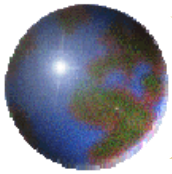


Comparing U.S. higher education to systems in other countries has become common in recent years

- This development is positive in that we can learn much from looking at the experience of other countries
- But international comparisons also can lead to incorrect conclusions if they are not done properly

One Concern with International Comparisons: Cultural, Demographic and Economic Differences Among Countries May Skew Results

- Cultural – Countries vary sharply in their attendance expectations
  - A number of countries don't expect students to attend
- Demographic – Declining demographics in some countries can have large effects on statistics
  - Some European countries have declining numbers of college age students which raise many of their rates
- Economic – Differences in societal development will have large impact on various rates
  - Less developed and more agrarian countries have different labor force needs than more industrialized ones

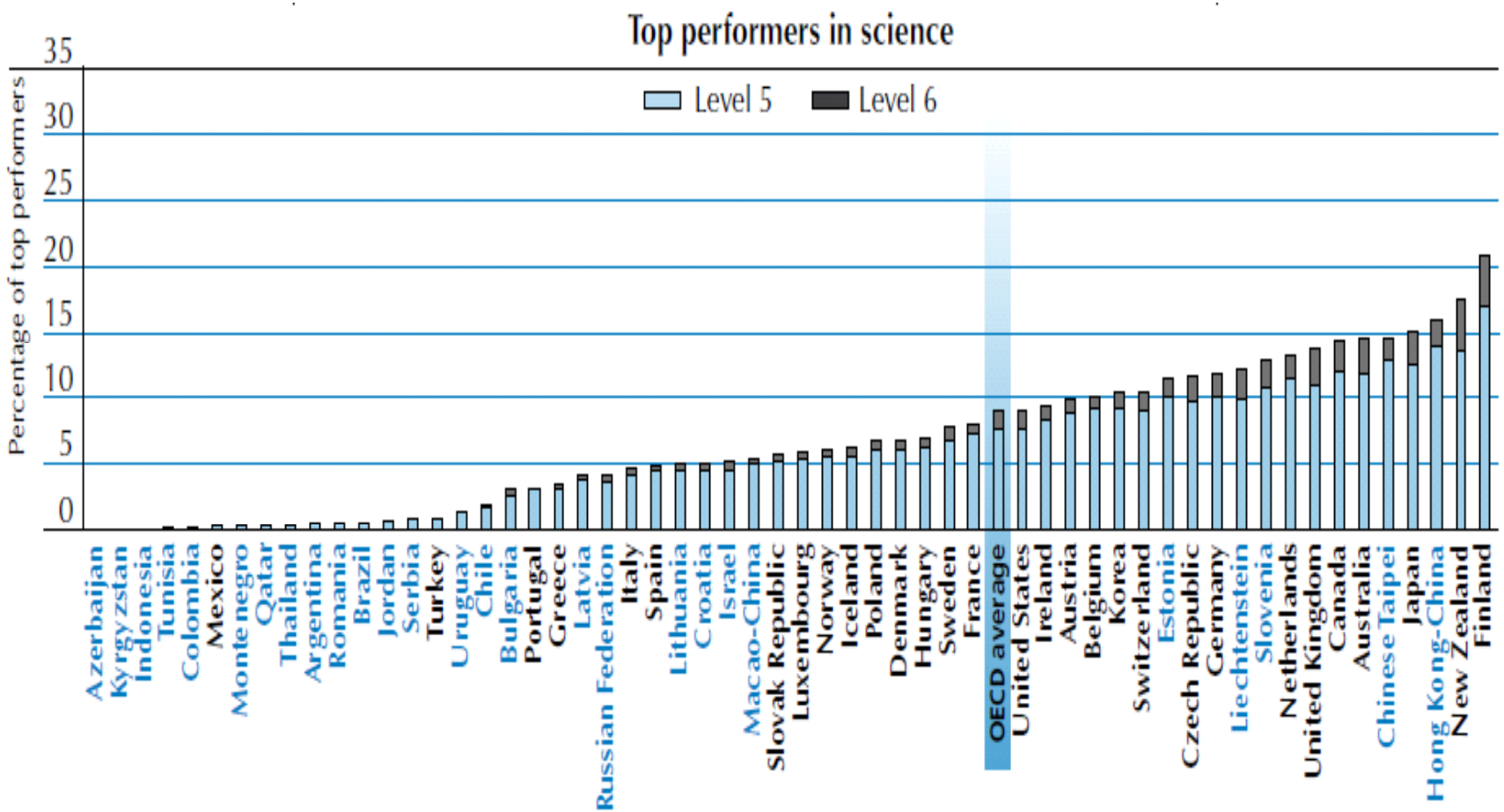
Examples of how international data on higher education have been misused

- Selective use of data
- Selective use of international comparisons
- Incorrect data analysis
- Confusion of terms
- Inappropriate Indicators

I. Selective Use of Data: Looking at Top High School Science Performers

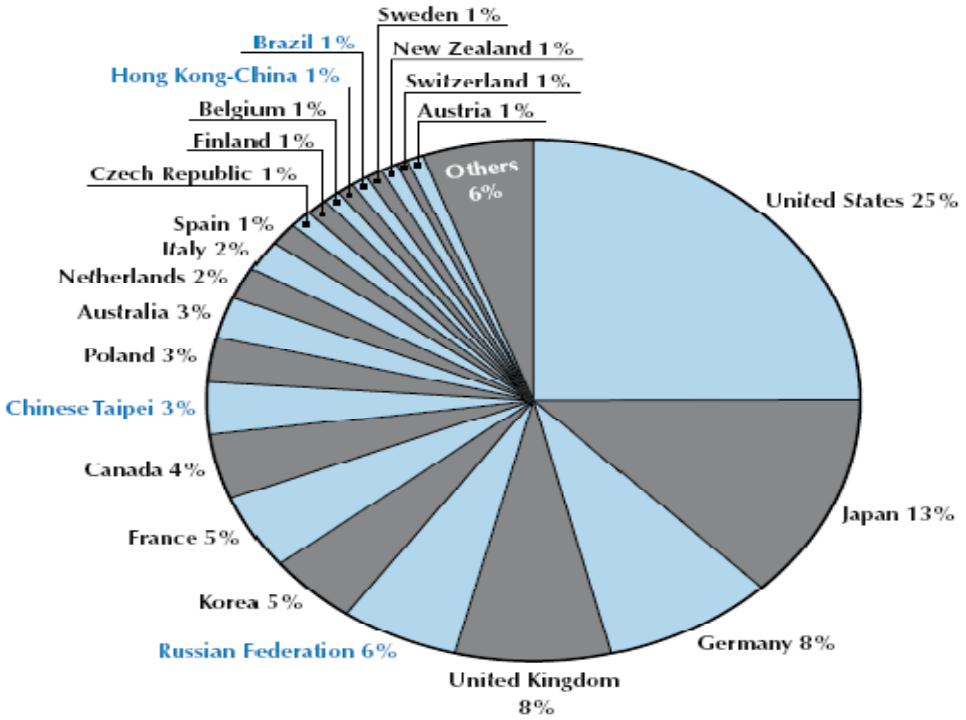
- Much has been made of how poorly U.S high school students perform in math and science when compared to other OECD countries (PISA)
- The following charts show two sides of the same issue using the same data
  - View 1 shows the percentage of 15 year olds in each country that are top performers in science
  - View 2 shows the share of all top performing 15 year olds in science who are American

View 1: Share of Top High School Science Performers in Each OECD Country



View 2: U.S. Share of Top High School Science Performers

Percentage of top performers across all PISA countries and economies



Note: "Others" includes countries that account for 0.5% or less: Hungary, Turkey, Ireland, Israel, Chile, Slovak Republic, Denmark, Norway, Mexico, Greece, Portugal, Slovenia, Thailand, Lithuania, Argentina, Croatia, Bulgaria, Estonia, Latvia, Romania, Colombia, Indonesia, Serbia, Jordan, Uruguay, Macao-China, Iceland, Luxembourg, Tunisia, Liechtenstein, Qatar, Azerbaijan, Kyrgyzstan, Montenegro.

Source: *OECD PISA 2006 Database.*

II. Selective Use of International Comparisons: U.S. Cost and Attainment

- Many recent reports in the U.S. have focused on how the U.S. spends the most on tertiary education among OECD countries but gets less in terms of attainment than many countries
  - - Are these assertions true?
- The answer depends very much on which international rankings are being examined
  - Following chart on where the U.S. stands on cost, commitment, and attainment shows how the U.S. ranks higher in some categories and lower in others

Where the U.S. Ranks on Cost, Commitment, and Attainment

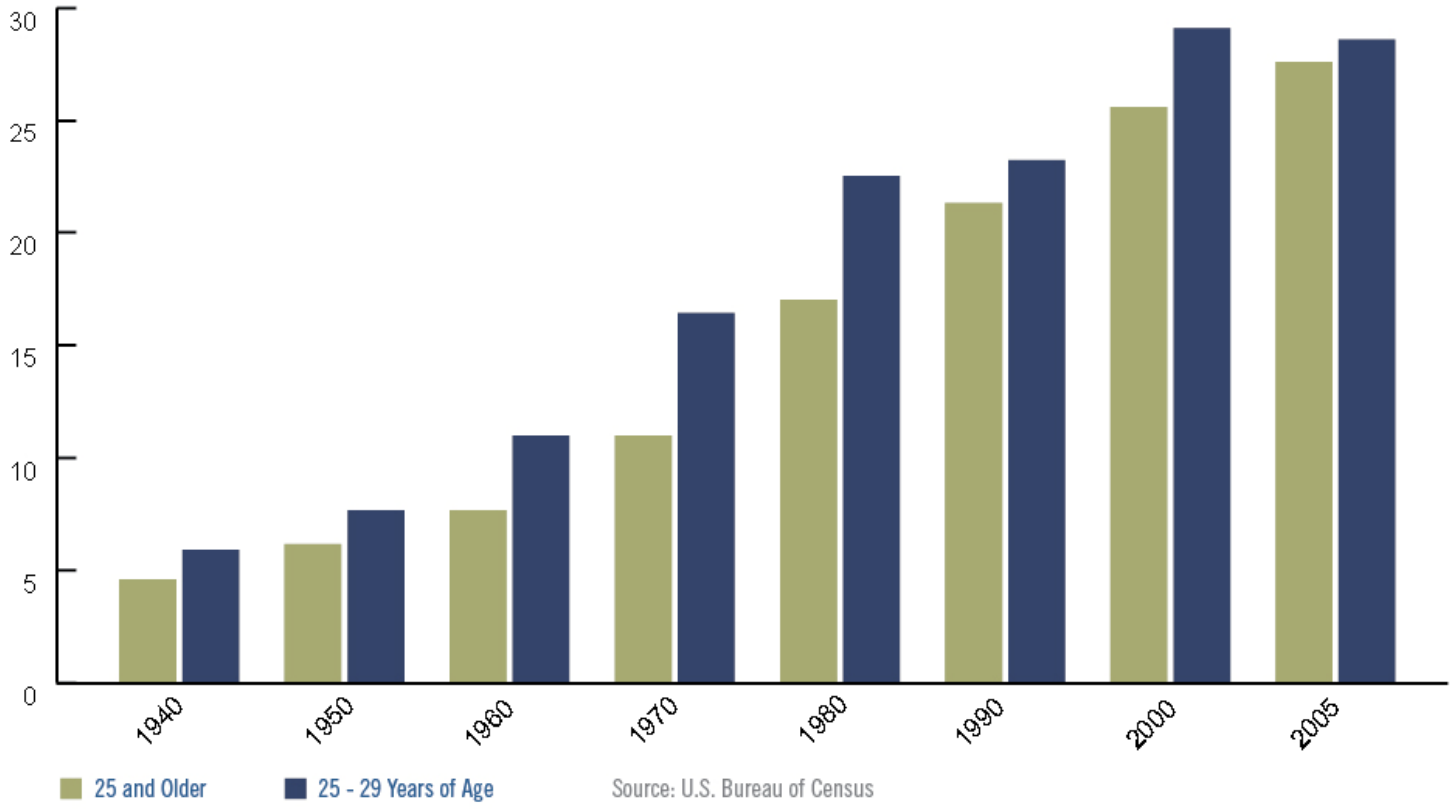
WHERE THE UNITED STATES RANKS ON COST, COMMITMENT, AND ATTAINMENT AMONG OECD COUNTRIES			
COST	EDUCATION	RESEARCH	TOTAL
Higher Education Spending per Student, 2005	1st	15th	1st
COMMITMENT	PUBLIC	PRIVATE	TOTAL
Higher Education Resources as a Percentage of GDP, 2005	15th	1st	1st
DEGREE ATTAINMENT	BACHELOR'S	SUB-BACHELOR'S	TOTAL
Attainment Rates, Workers Aged 25-64, 2006*	2nd	9th	3rd
Attainment Rates, Workers Aged 25-34, 2006*	6th	11th	10th
Attainment Rates, Workers Aged 55-64, 2006*	1st	5th	1st
Difference in Attainment Rates Between Workers Aged 25-34 and 55-64, 2006*	30th	18th	29th

Source: Education at a Glance 2008, OECD (2008) * U.S. attainment rates are revised to correct error in Education at a Glance 2008

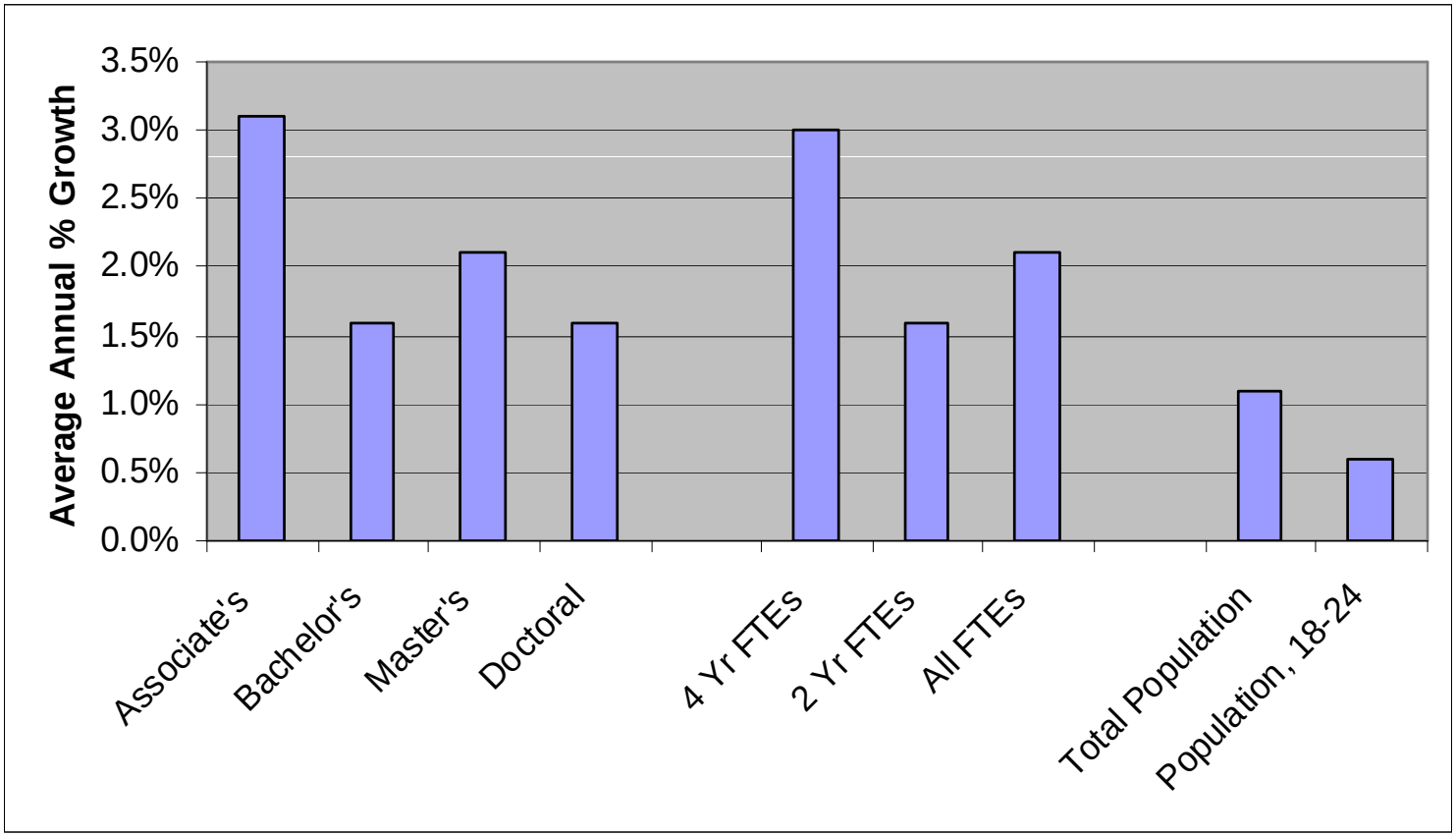
III. Incorrect Data Analysis: Attainment in U.S. has been flat for forty years

- One of the recent assertions has been that attainment rates in the U.S. have been flat for forty years
- This analysis is incorrect as the following three charts show
- Problem arises from analysis based on lack of difference in rates between the youngest and oldest group of workers

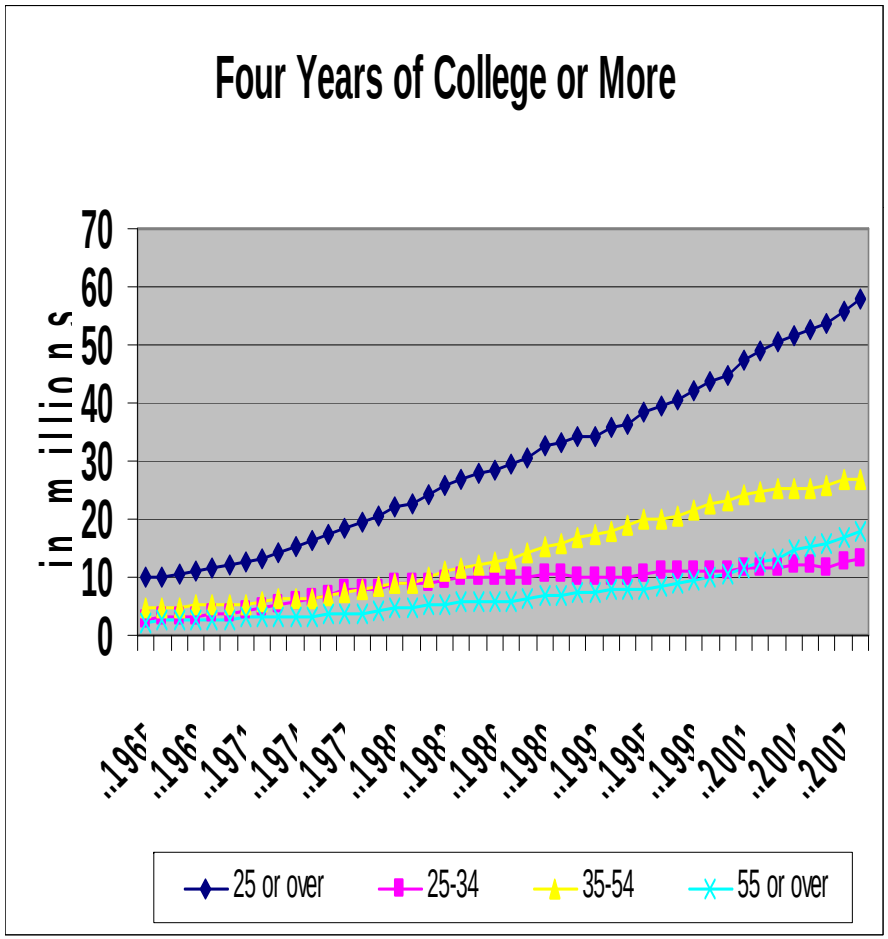
U.S. ATTAINMENT RATES, BACHELOR'S DEGREE OR MORE, 1940 TO 2005

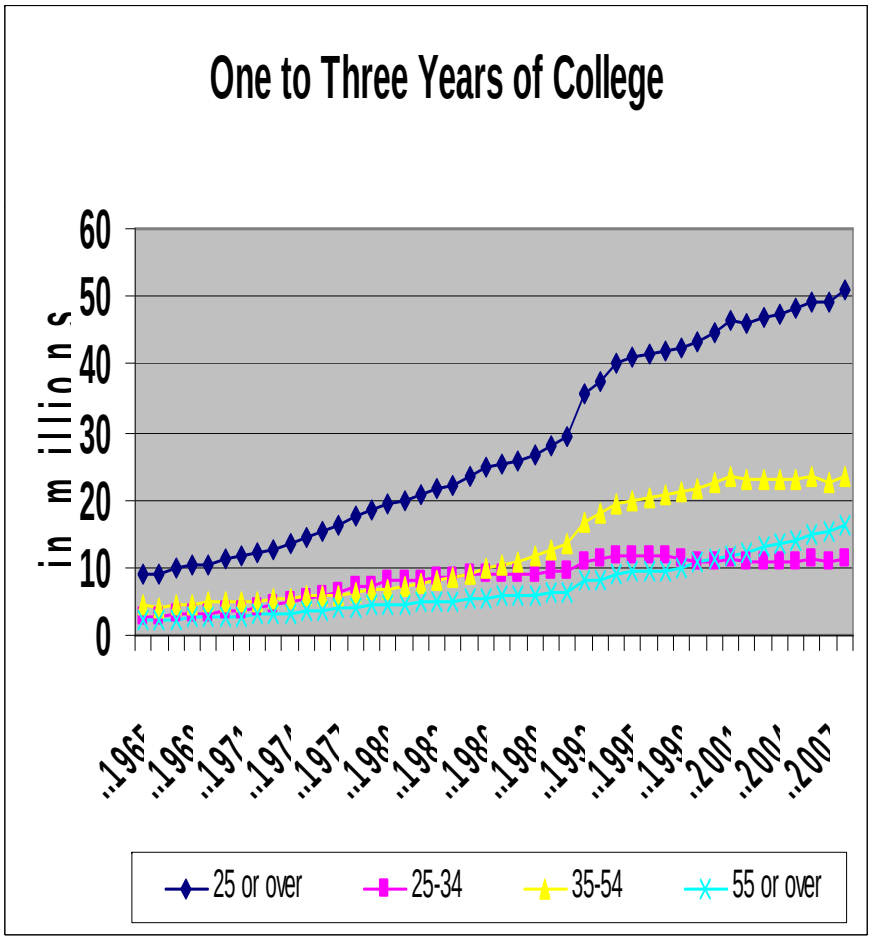


AVERAGE ANNUAL RATES OF GROWTH IN DEGREES, FTE ENROLLMENTS AND POPULATION, 1970 - 2005



ADULT POPULATION WITH AT LEAST SOME COLLEGE, BY AGE GROUP, 1965 TO 2008





IV. Confusion of terms: The Use of Completion and Attainment Rates

- Degree completion and attainment rates are very different measures of student success
  - *- attainment is share of population with a degree*
  - *- degree completion measures graduates as a percentage of those who began*
- But it is not uncommon for people to confuse the terms - to start a paragraph by saying that US attainment rates have slipped from first rank (they have) and finish by saying that we must regain our leadership in degree completion rates (which we never had)

V. Inappropriate Indicators: Graduation Rates and Research Spending per Student

- For many issues, countries do not collect data consistently - OECD and others must then develop proxies that are intended to reflect reality
- Two examples of OECD indicators which are not accurate reflections of reality
  - OECD graduation rates divide the number of graduates in one year by the population at the typical age of graduation for that program
    - More of a bad attainment rate than a completion rate
  - OECD measures university-based research effort by dividing research spending by number of FTE students
    - Measuring national research effort on a per student basis makes little sense

Some Conclusions

- International comparisons should be made carefully because they may not accurately reflect cultural, demographic and economic differences
  - We should shy away from using international comparisons as a basis for ranking countries
- Accurate analysis of international data is necessary for good policymaking
  - Skewed data leads to skewed solutions
- The best use of international comparisons may be to learn from the experience and policies of other countries rather than dwell on numbers and statistics
- These concerns lead us to be more skeptical about international comparisons that would require greater sophistication such as measuring learning outcomes