

6.6 公開セミナー基調講演資料

6.6.1 第3回公開セミナー

Current Trends in Higher Education Philanthropy

Scott Bidy - 16 December 2017



Content drives large gifts

- Institutional Affinity and Affiliation provides an opening
- Serious philanthropists are increasingly focused on results and quality

Institutional Loyalty is in Decline

- Large, complex organizations are increasingly viewed with distrust and skepticism
- Institutions spend more time reacting to critiques and scandals
- Ability to communicate about Mission & Values becomes limited
- Institutional loyalty is driven by Mission & Values

Higher Education Still Highly Regarded

- Many large philanthropists remain committed to the transformational power of universities
- Research breakthroughs are a significant driver
- The ability of education to transform lives and unlock human potential still critical
- Philanthropists generally appreciate the global perspectives that universities embody

Large gifts dominate the landscape

- Limited fund raising resources drive us to focus on big gifts
- Big data has made it easier to identify prospects with capacity and appropriate interests
- Historically, broad relationships were built by institutions to ensure loyalty of those who would produce great wealth; that approach is declining
- Small gifts can be inefficient

Donor Relationships can be Intersectional

- While small gifts can be inefficient, donor communities are interconnected and individuals share their stories
- Large donors often insist on broad-based support to indicate community support and endorsement
- Smaller gifts can be transformational for smaller programs

The Role of Campaigns is Changing

- Generally, campaigns are marketing initiatives that have an additional effect of inspiring philanthropy
- Campaigns often are the trigger for university strategic planning
- Most global universities are in a perpetual campaign
- When effective they lead to steady growth without disruptions between campaigns

Fundamentals Still Matter!

- Large gifts emerge most often from authentic, long-term relationships built on shared values
- Chasing dollars is perilous; often result in “gifts that keep on taking”
- Success is equally measured by gifts not sought or accepted
- A gift “gone wrong” takes enormous time, resources, and credibility

First Question: From Whom?

- Know the prospects well
- What are their interests and philanthropic objectives?
- What motivates their philanthropy?
- Be realistic about their capacity
- Who will join them? Donors rarely want to support a project alone.

Cultural and Geographic Context

- Understanding a donor's approach to philanthropy; legacy, influence, prestige?
- Increasingly, serious philanthropists are less concerned about recognition and more concerned with results
- Any expectations of *quid pro quo*?
- Effect on other donors
- Local tax considerations / funds transfer issues

Second Question: For What?

- What are the institution's strategic priorities? Be adaptable and open, but don't stray too far afield
- How will the proposal have impact and how will it be measured?
- How will the program be sustained?
- Is the institution capable of delivering the objective? Failure reverberates far and wide

Build a Culture of Philanthropy

- Most everything a university does is a joint venture relying on many financial sources
- Donors' confidence is raised by transparency in the financial model of the institution and project
- Philanthropy is not a hand-off function; all university personnel must get comfortable with fund raising
- We are all stewards of gifts and donor relationships

Management and Resource Allocation Structures for Institutional Effectiveness:

Stanford University as a Case Study

Tim Warner
 Vice Provost for Budget & Auxiliaries Management
 Stanford University, California

Tokyo
 December, 2017

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Part 2: Stanford University's Management Structure

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Part 4: Resource Allocation at Stanford:

- Management Culture
- Priority Setting
- Budgeting
- Consolidated (All Funds) Budgeting

NOTE: 8 SLIDES ARE MARKED 'IMPORTANT'

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Part 1: Changes in Financial Resources at American Research Universities

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To set the context, we attempt to answer the following questions:

1) How have the financial resources available to select US universities changed over the past 14 years?

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Universities included in the analysis

| Public | Private | Private – Large Endowment |
|------------------|-------------------------|---------------------------|
| • Michigan | • CalTech | • Harvard |
| • Ohio State | • Carnegie Mellon | • MIT |
| • UC Berkeley | • Cornell University | • Princeton |
| • UCLA | • Dartmouth | • Stanford |
| • U Texas Austin | • Duke | • Yale |
| • Virginia | • Johns Hopkins | |
| | • Northwestern | |
| | • Rochester | |
| | • U Chicago | |
| | • U Penn | |
| | • USC | |
| | • Vanderbilt | |
| | • Wake Forest | |
| | • Washington U/St.Louis | |

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Changes in Financial Resources Over Time

Notes on Methodology:

- All financial data is adjusted for inflation using Higher Education Price Index (HEPI); all dollars reflect 2014 value
- Each year reflects a 5 year rolling average to smooth volatility (except where noted)
- Growth rates calculated as "CAGR" (compound annual growth rate)

Collected from Outside Data Source:

Sponsored Research
 Gifts
 Investment Income

Collected from Schools:

Student Income
 State Appropriations
 Healthcare Revenue*
 Other Resources

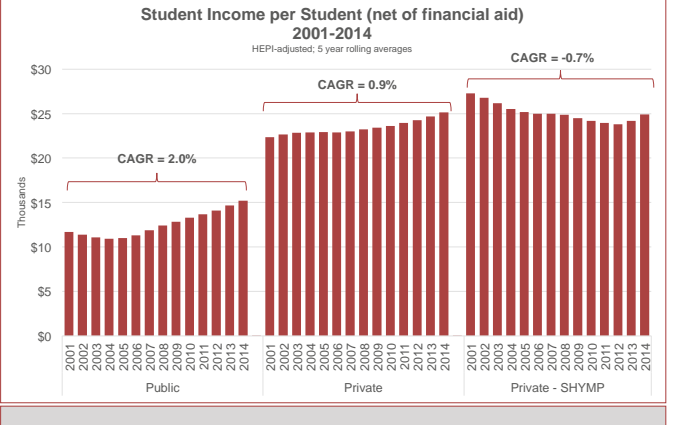
* Depending on legal and accounting relationships, may include all consolidated hospital and clinic revenues, revenues transferred from hospitals to university, or nothing at all

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Student Income

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- Student income per student has increased more quickly at public schools than private schools, and has actually decreased at large endowment schools

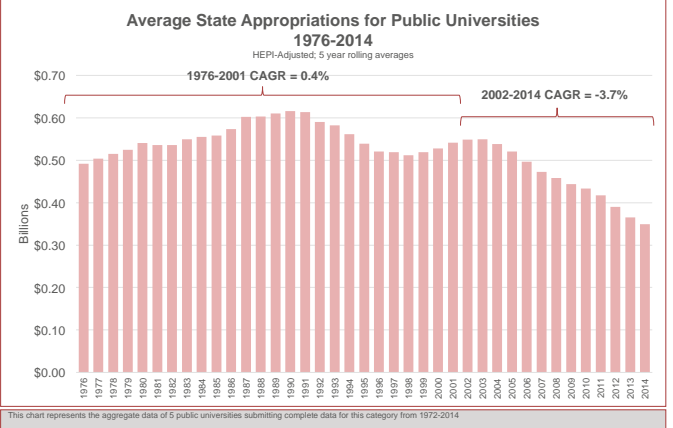


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State Appropriations

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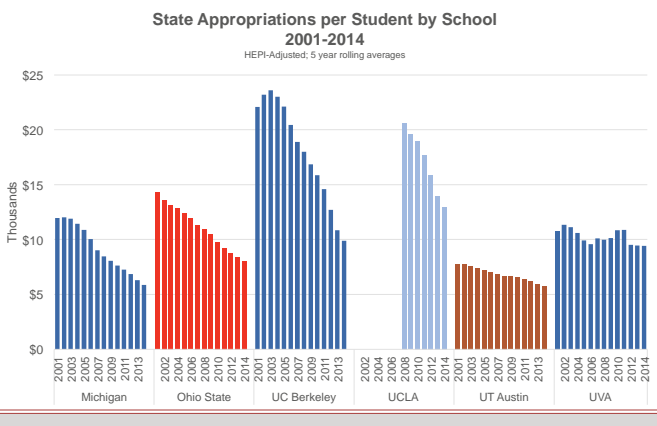
- Since their most recent maximum in 2002, State Appropriations to public universities have dropped, leaving inflation adjusted resources today at a level much lower than in the 70's, 80's, and early 90's



This chart represents the aggregate data of 5 public universities submitting complete data for this category from 1972-2014

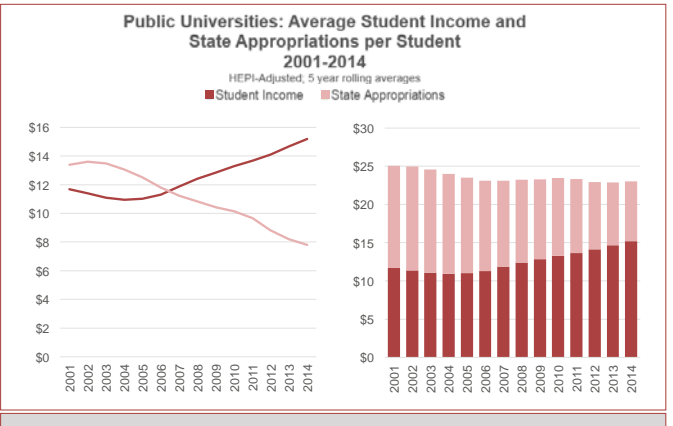
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- All public universities in our data set have seen significant declines
- UC Schools have seen some of the sharpest declines, but UCLA maintains the highest absolute level of State Appropriations per student



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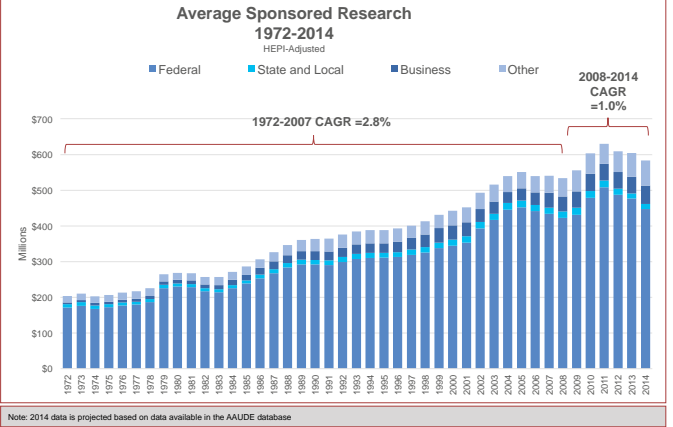
- IMPORTANT SLIDE #1** --- Student Income and State Appropriations per student have had an inverse relationship, but the growth in Student Income has not fully offset the decline in State Appropriations



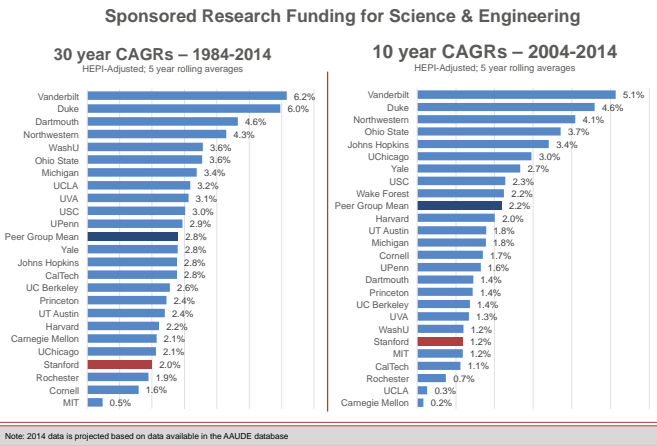
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Sponsored Research

- CAGR from 2008-2014 was 1.0%. Universities saw strong growth in Federal Research funding in 2009-2011, but federal funding has declined from 2011-2014 at about 4.1% per year

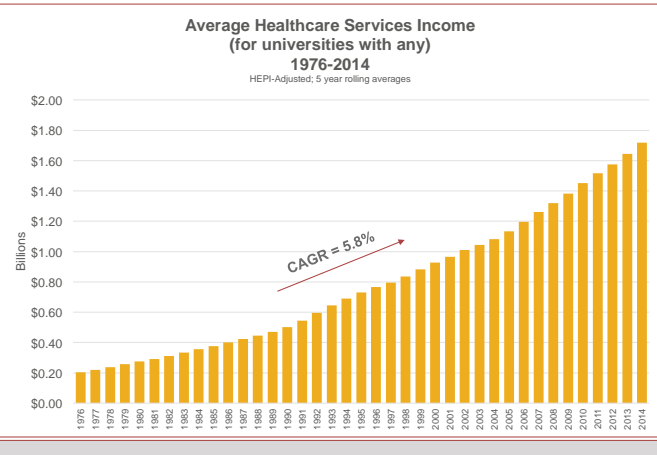


- Over the last 30 years, Vanderbilt and Duke have grown their funding most quickly, thereby gaining Sponsored Research share
- Large endowment privates have grown at a rate well below average



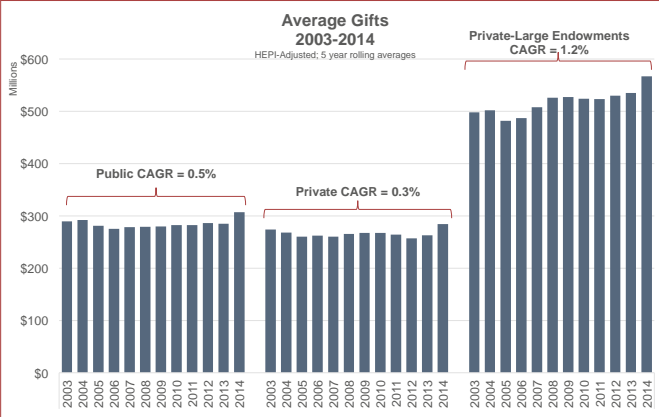
Healthcare Services

- Healthcare services has grown more quickly than any other revenue stream over the past 4 decades at 5.8% over inflation



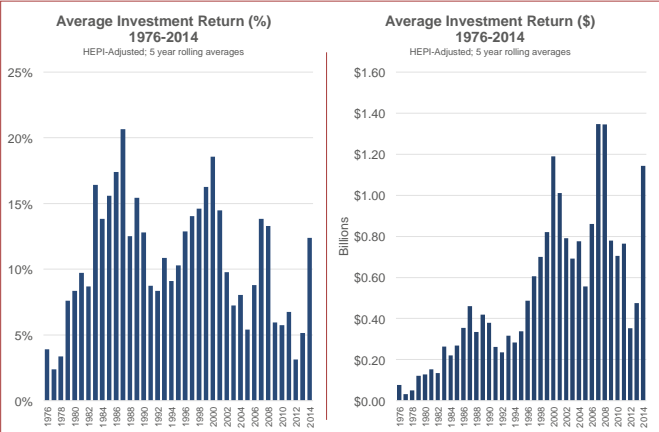
Gifts

- Large endowed privates have managed to maintain some growth over the past decade; other private schools have been nearly flat



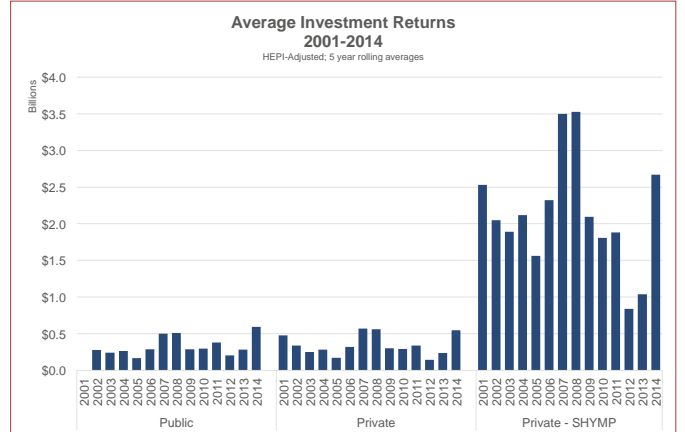
Investment Income

- Investment Returns are by far the most volatile source of income for Universities



This chart represents the aggregate data of 18 universities submitting complete data for this category from 1972-2014

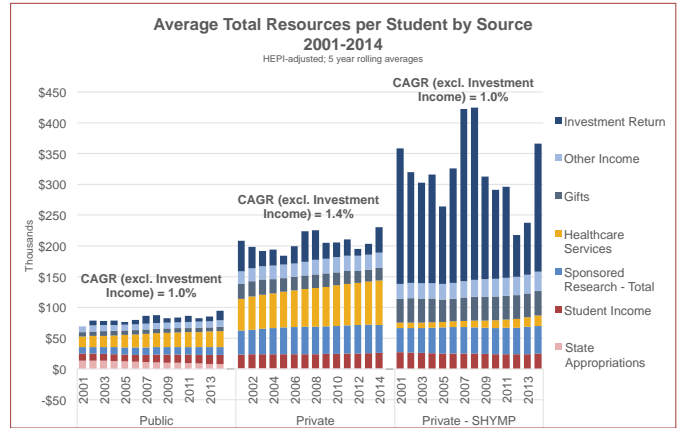
- Private-Large Endowment schools maintain a clear advantage in this category



This chart represents the aggregate data of 24 universities submitting complete data for this category from 2001-2014

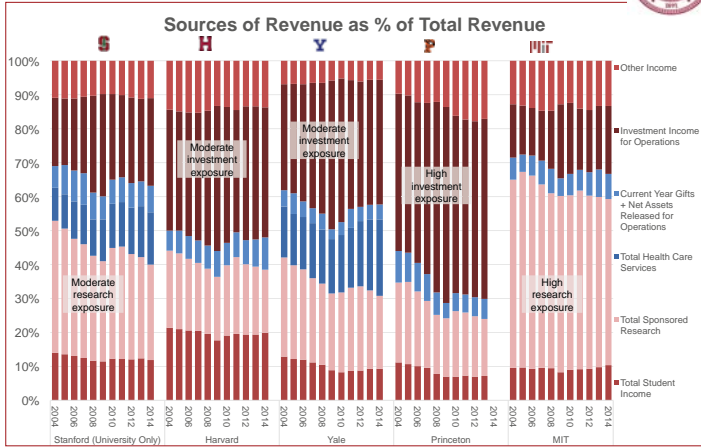
Observations

IMPORTANT SLIDE #2 --- On a per student basis, public universities are at a distinct funding disadvantage compared to their private peers
We've seen little growth on a per student basis, net of inflation, in the past 10 years



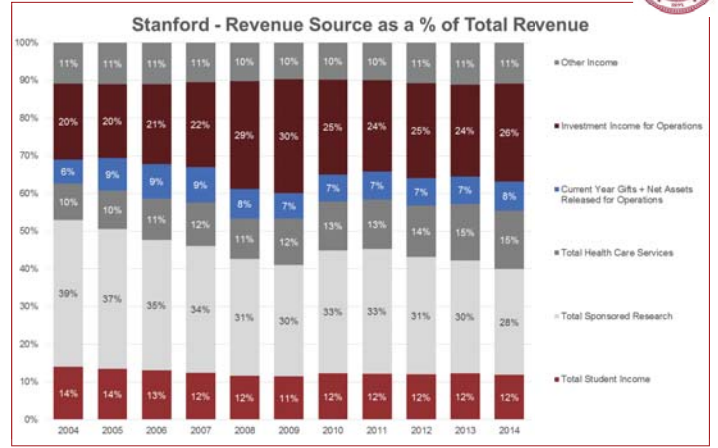
This chart represents the aggregate data of 24 universities submitting complete data for this category from 2001-2014

Stanford is exposed to sponsored research risk, but generally more diversified across sources than peers



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STANFORD, SPECIFIC: Investment and Healthcare Income have grown as % of revenue, while Sponsored Research has decreased



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To Summarize



- Public universities increased tuition to offset falling state appropriations; expanded fund raising; tried to add endowment
- Privates expanded their Health Care revenues, but do not have sufficient endowments to compete with the wealthier universities
 - most of the Health Care revenue likely stayed in their medical schools
- Large endowed universities are using enhanced investment returns to widen the gap
- Stanford has a diversified mix of revenue sources

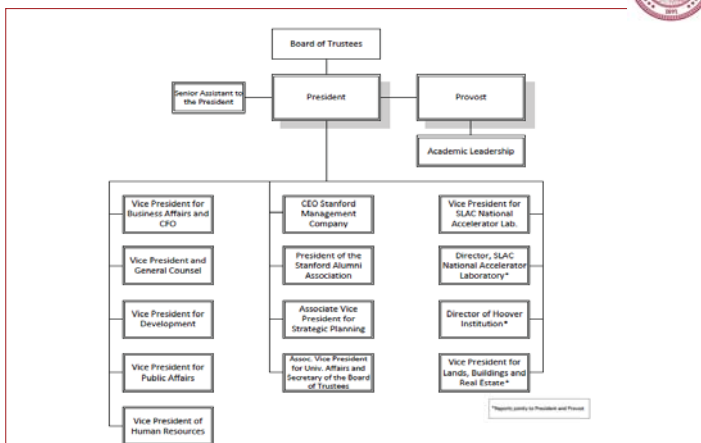
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Part 2: Stanford Management Structure

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Stanford's Organizational Structure – High Level



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IMPORTANT SLIDE #3 --- The Roles of the President and the Provost



- In some American universities, such as Stanford, the president is heavily focused on fund raising and external matters, while the provost is focused internally
- At Stanford, the Provost serves as chief operating and academic officer
- We call this the 'Strong Provost Model'
 - The Deans of the Schools report to the Provost
 - The Provost is the chief budget officer of Stanford
 - This has been a long standing and successful model for Stanford
- This structure is not always found at other American universities

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Provost's Reporting Structure



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The Role of Boards



- The Board of Trustees is the legal governing board of Stanford
- The Board has 30+ members, principally from business community; mostly graduates
- Public universities also have governing boards. Members are elected and/or appointed by the governor of the state
- Many universities also have advisory boards for schools/faculties/departments and programs
 - Advisory boards serve to expand the connection to businesses and potential donors

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Part 3: Stanford's Financial Structure and Budget

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Consolidated Budget FY18 – By Line Item



CONSOLIDATED BUDGET FOR OPERATIONS, 2017/18

(IN MILLIONS OF DOLLARS)

| 2015/16 ACTUALS | 2016/17 BUDGET | 2016/17 PROJECTED ACTUALS | 2017/18 CONSOLIDATED BUDGET | CHANGE FROM PROJECTED ACTUALS |
|-----------------|----------------|---------------------------|-----------------------------|-------------------------------|
| Revenues | | | | |
| 857 | 896 | 903 | 937 | 3.8% |
| 1,005 | 1,050 | 1,046 | 1,085 | 3.8% |
| 448 | 591 | 644 | 559 | -13.2% |
| 1,034 | 1,177 | 1,123 | 1,253 | 11.6% |
| 391 | 350 | 391 | 391 | 0.0% |
| 1,406 | 1,284 | 1,349 | 1,519 | 12.6% |
| 540 | 534 | 508 | 516 | 1.5% |
| 5,680 | 5,881 | 5,965 | 6,261 | 5.0% |
| Expenses | | | | |
| 3,123 | 3,323 | 3,359 | 3,622 | 7.8% |
| 270 | 286 | 286 | 298 | 4.3% |
| 185 | 204 | 199 | 199 | 0.1% |
| 1,541 | 1,781 | 1,781 | 1,734 | -2.6% |
| 5,118 | 5,594 | 5,625 | 5,863 | 4.1% |
| 562 | 287 | 340 | 408 | |
| (346) | (166) | (187) | (243) | |
| 216 | 121 | 152 | 165 | |
| 2,990 | 3,238 | 3,206 | 3,358 | |
| 3,206 | 3,359 | 3,358 | 3,524 | |

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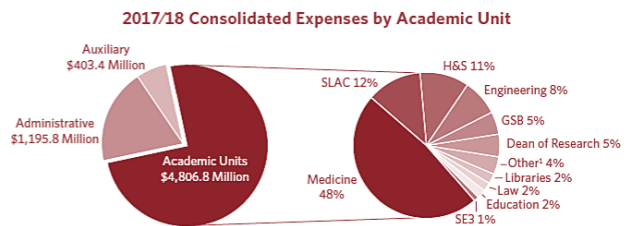
IMPORTANT SLIDE #4 --- Consolidated Budget FY18 – By Fund Type



| | GENERAL FUNDS | DESIGNATED | RESTRICTED | GRANTS AND CONTRACTS | AUXILIARY & SERVICE CENTER ACTIVITIES | TOTAL |
|---|----------------|----------------|----------------|----------------------|---------------------------------------|----------------|
| Revenues and Other Additions | | | | | | |
| Undergraduate Programs | 369.2 | | | | | 369.2 |
| Graduate Programs | 366.6 | 7.2 | | | | 373.7 |
| Room and Board | | | | | 194.5 | 194.5 |
| Student Income | 735.8 | 7.2 | 0.0 | 0.0 | 194.5 | 937.4 |
| Direct Costs—University | | | | 806.8 | | 806.8 |
| Indirect Costs | 278.0 | | | | | 278.0 |
| University Sponsored Research | | | | 806.8 | | 1,084.8 |
| SLAC Sponsored Research | | | | 559.4 | | 559.4 |
| Health Care Services | 36.4 | 1,163.5 | 12.5 | | 40.9 | 1,253.2 |
| Gifts and Net Assets Released from Restrictions | 3.8 | | 287.4 | | | 291.2 |
| Endowment Income | 261.3 | | 982.1 | | | 1,243.4 |
| Other Investment Income | 119.4 | 153.2 | 2.4 | 0.2 | 0.5 | 275.8 |
| Investment Income | 380.7 | 153.2 | 984.5 | 0.2 | 0.5 | 1,519.2 |
| Special Program Fees and Other Income | 16.1 | 339.6 | 4.4 | 0.2 | 155.9 | 516.2 |
| Total Revenues | 1,450.7 | 1,663.5 | 1,388.8 | 1,366.7 | 391.7 | 6,261.4 |
| Expenses | | | | | | |
| Compensation | 950.4 | 1,091.8 | 574.7 | 726.9 | 277.6 | 3,621.5 |
| Financial Aid | 42.9 | 6.3 | 231.7 | 17.4 | | 298.2 |
| Internal Debt Service | 36.0 | 47.7 | 0.5 | | 115.1 | 199.3 |
| Other Operating Expenses | 323.2 | 287.6 | 269.4 | 573.1 | 280.9 | 1,734.2 |
| Total Expenses | 1,352.5 | 1,433.4 | 1,076.4 | 1,317.4 | 673.7 | 5,853.3 |
| Operating Results | 98.1 | 230.1 | 312.4 | 49.3 | (281.9) | 408.1 |

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FY 18 Consolidated Budget – By Unit



¹ Other is Hoover, VP for Undergraduate Education, VP for Graduate Education, and VP for Teaching and Learning.

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IMPORTANT SLIDE #5 --- Financial Management Principles



- Financial management dispersed and decentralized
- Academic units (schools, departments, centers, individual faculty) encouraged to generate their own funds:
 - Research grants
 - Gifts – expendable, facilities, endowment
 - Other programs – e.g., technology licensing, executive education, affiliate programs, conferences
- Medical and Business Schools allocated General Funds by formula
- 'Non-formula' academic and administrative units allocated General Funds at discretion of Provost
- All units permitted to spend funds they generate or are allocated, though they must comply with individual fund restrictions
- Central monitoring of unit financial performance and fund balances

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Stanford's Budget Challenges and Considerations



| | Challenges | Considerations |
|-------------------------------------|---|--|
| Federal Research | • Outlook for federal research remains uncertain | • Diversified federal and overall sources of funding |
| Investment Markets | • Investment markets remain volatile + continued global uncertainty | • Sophisticated investment team |
| Financial Aid | • Greater need for aid to offset financial pressures on students and families | • Low tuition dependency; student income = 12% of revenue |
| Housing & Transportation | • High living cost in San Francisco Bay Area | • Staff and faculty recruiting • Significant expense to support housing subsidies |

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Part 4: RESOURCE ALLOCATION AT STANFORD:

- **Management Culture**
- **Priority Setting**
- **Budgeting**
- **Consolidated (All Funds) Budgeting**



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IMPORTANT SLIDE #6 --- Management Culture



- Key elements of Stanford's management culture:
 - Hire the best faculty and support them
 - Incent faculty to be entrepreneurs
 - Lower departmental barriers
 - Provost as chief academic and budget officer
 - Central funds available to president/provost for targeted investment
 - Actively engage with donors and potential donors
 - Address all sources of funds in budgeting process, with a formal link to capital planning and budgeting

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Priority Setting – THREE LEVELS OF PRIORITIES



- University Priorities:
 - Housing
 - Transportation
- Academic Priorities:
 - For example: Enhanced presence in Neurosciences
- School and Administrative Unit Priorities
 - For example, improving a department so that it ranks more highly

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Key Participants in Priority Setting



- Individual faculty members
- Executive Cabinet
- University Cabinet
- University Budget Group
-
- Consultation with Board of Trustees
- Consultation with donors

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Examples of priority setting



- Expansion of Bio-engineering, circa 2000
 - Multi-school effort to improve Stanford's position in this growing field
- Geo-biology in the School of Earth Sciences
 - A strategic planning priority within a school
- Enhancements to Graduate Housing
 - University-wide priority
 - Interaction with a major donor
- Expansion of Career Services Center for students
 - An administrative/university priority
- The role of Independent Labs—enhancing collaboration outside of departmental structures
 - The Woods Institute for the Environment

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Moving from Priority Setting to Budgeting: Key elements of the annual budget process



- “Strong Provost” management model
- 75% of revenue is restricted or designated, so all funds must be included in development of plans
- Budget process focuses on general funds in the context of a unit's consolidated operations and university priorities
- Budget Group plays a key advisory role
- Emphasis on transparency and linkage of operating and capital budgets
- Annual Stanford University Budget Plan is presented for approval to Trustees and includes Consolidated Budget, Capital Budget, Capital Plan

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IMPORTANT SLIDE #7 --- The Role of the University Budget Group



- Advises Provost on all major budget issues
- Comprised of a dozen senior faculty and 3-4 senior administrators
- Meets 20-25 times per year, so major time commitment
- Most members serve multiple years and take a university perspective, rather than their own school

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Capital Plan and Budget



- Capital planning is integrated into budget planning
- Stanford develops a 3-5 year capital plan and updates it annually
- Multi year capital plan estimated at \$2.9 billion
- Annual capital budget is typically around \$500 million
- Stanford has minimal deferred maintenance on its facilities
- Stanford budgets for the renewal and replacement of building systems

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The Stanford Experience prior to All Funds Budgeting



- We did not focus deeply enough on:
 - Sponsored research (at the time approximately 30% of the university's expenses)
 - Direct expenditures against restricted and school-controlled funds (another 20%)
 - Auxiliary and service center enterprises (just over 10%)
 - Poor linkages between the capital planning and budget
 - The amount and use of central and school fund balances
 - Rationalized policies on reserve balances

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IMPORTANT SLIDE #8 --- Essentials of All Funds Budgeting



- Understanding of all funding sources by all levels of management
- Rules for the accumulation and use of reserves
- Budget review discussions with Deans that include consideration of all funds available for Schools' use
- Strong local unit financial management and systems support
- Trustee comfort with comprehensiveness of information being presented

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Key Conclusions

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CONCLUSIONS

- All American universities being forced to become more entrepreneurial and cost effective
- Investment income, fund raising, and more diversified revenue sources will be more critical in the future, as tuition and research will grow slowly
- Key structures and management principles that have contributed to Stanford's success:
 - Hiring the best faculty and incenting them to be entrepreneurs
 - Engagement (in all forms) with business and other constituents
 - 'Strong Provost' management model
 - All Funds Budgeting
 - advisory Budget Group

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End

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6.6.2 第4回公開セミナー

Building a Strong University (System)

John Elchemandy
Stanford University



Questions to answer

- What role does the modern research university play in the U.S.?
- How do you measure success of research universities?
- How did U.S. higher education become so strong?
- Case Study: How did Stanford transition from a good regional university to a global leader?

University Mission

Mission(s) of Modern U.S. Universities

- Undergraduate education: produce educated, well-rounded citizens, prepared for workforce, but also for rich, fulfilling lives
- Professional training: building on UG education, focused *graduate* training for professional career paths (e.g., education, medicine, law, business)
- Research mission: conduct most of nation's advanced scientific research and train next generation of scientists and Engineers
- Innovation: country's most fertile source of commercial innovation and entrepreneurship

Related, synergistic, yet distinct

Measuring Success

Measuring Success of Undergraduate Mission

- Graduation Rates
- Placement Rates
- Student Satisfaction
- Alumni Satisfaction
- Employer Satisfaction
- Median Income of Graduates

Note absence of direct measures of student learning

Measuring Success of Graduate Mission

- Applicant Pools, Selectivity, Yield
- International Demand
- Completion Rates (and TTD)
- Licensure Rates (medicine, law)
- Reputation In Field
- Satisfaction (Student/Alumni/Employer)
- Periodic Program Reviews

Applicant demand tends to be better informed at graduate level

Measuring Success of Research Mission

- Awards, National Academy Memberships
- Reputation Surveys
- Publications, Citation Rates
 - Top 1%, Top 10%, Top 50%
 - Number, percent, and per capita
- Competitive Research Grants
- Corporate Funding/Reputation

Publication counts without field-specific quality filters are of little value

Measuring Success of Innovation Mission







- Patents Issued and Licensed
- Startups by Students, Faculty, Alumni
- Porosity of University/Industry Boundary
 - Faculty Consulting
 - Industrial Affiliates Programs
 - Corporate Recruiting

Hardest Both to Achieve and to Measure

Higher Education in the U.S.

How Strong is U.S. Higher Education?

- 2017 Academic Ranking of World Universities (Shanghai Jiao Tong)

|  |  |  |  |  |  |
|---|---|---|---|---|---|
| 8 of top 10 | 2/10 | 0/10 | 0/10 | 0/10 | 3/10 |
| 22 of top 30 | 4/30 | 1/30 | 0/30 | 0/30 | 6/30 |
| 48 of top 100 | 9/100 | 3/100 | 2/100 | 4/100 | 11/100 |

This was not always the case. How did it happen?

U.S. Higher Ed: A patchwork quilt with no plan

- System arose with no central plan
 - Religious wave: denominations establish colleges as new land settled
 - Government waves: state universities, land-grant colleges, normal schools
 - Philanthropic wave: research universities following German model
- No central control or supervision
 - Fifty states, some with multiple systems
 - Private institutions autonomously run
- Minimal oversight by federally-recognized, private accreditation agencies

U.S. Higher Ed: Federal funding post WWII

- After WWII, decision made to rely on universities for most basic research (thanks to Vannevar Bush)
 - Federal research agencies established
 - Most grants based on merit, determined by blind peer review
- After WWII, "GI Bill" provides financial assistance for veterans to complete college
- Resulting infusion of federal dollars allowed expansion and strengthening of entire system, from liberal arts colleges to large research universities
- Voluntary accrediting agencies "conscripted" to certify eligibility for student aid (currently ~50 recognized agencies)

What makes U.S. Higher Education Strong?

- Limited federal role
 - Research funding, student support, no federal ministry
- Highly competitive
 - For students, faculty, research funding
- Institutional diversity, flexibility
 - System excels at capturing talent
- Practical tradition

Downside: Little ability to change quickly

Downside: Soaring cost of college

Downside: Wide variation in quality

Downside: Sometimes overly close ties

Case Study: Stanford University

Stanford in 1891-1950



In its first 60 years, Stanford was a regional university serving mainly "Children of California"

Building a Strong Research University

"Ample endowment may have been provided, intelligent management may secure large income, students may present themselves in numbers, but in the end, the Faculty makes or mars the University."

Leland Stanford
Opening Ceremonies, 1891

Building a Strong Research University



Building a Strong Research University

In the period from 1891 to 1950,
Stanford grew steadily in strength
and stature

By 1950, Stanford was an excellent
regional university
but still not ranked in the top 10

Building a Strong Research University

Beginning roughly in 1955
Wallace Sterling and Fred Terman
set out plan to transform Stanford

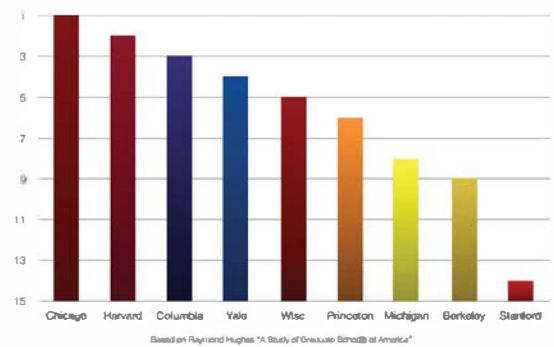
- Faculty:** build steeples of excellence
- Facilities:** tap post-war expansion of federal
research infrastructure
- Funding:** rely on faculty's ability to compete for
peer-reviewed research funding

Building a Strong Research University

By 1966, Stanford's faculty were among
the strongest in the country

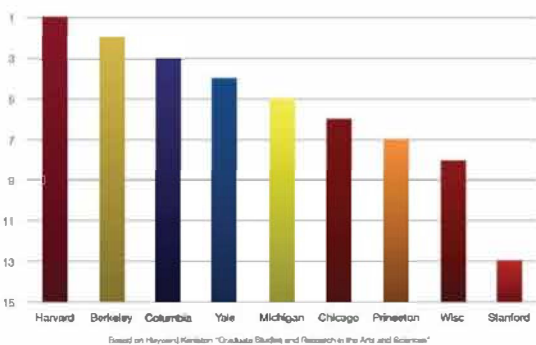
Faculty Reputation Rankings

1925



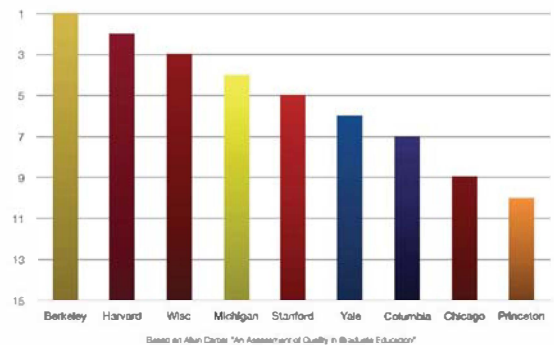
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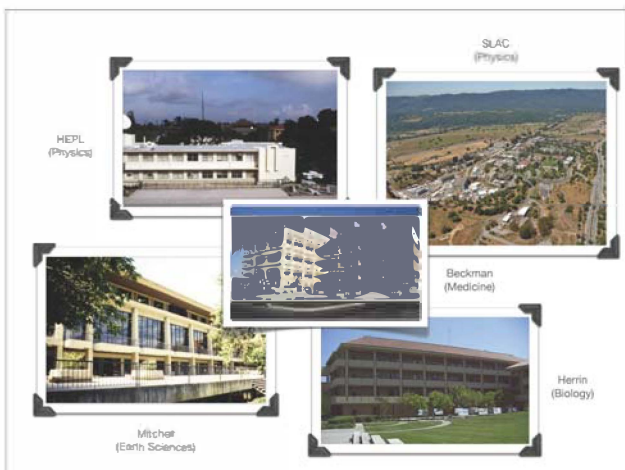
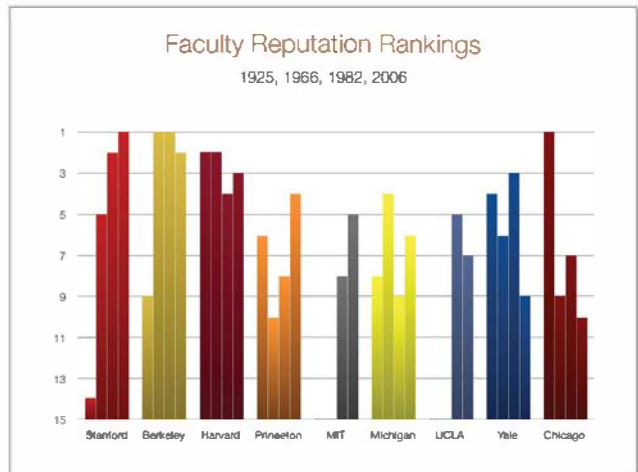
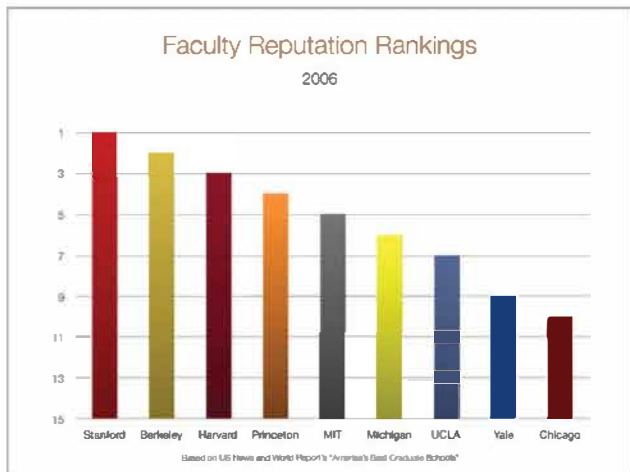
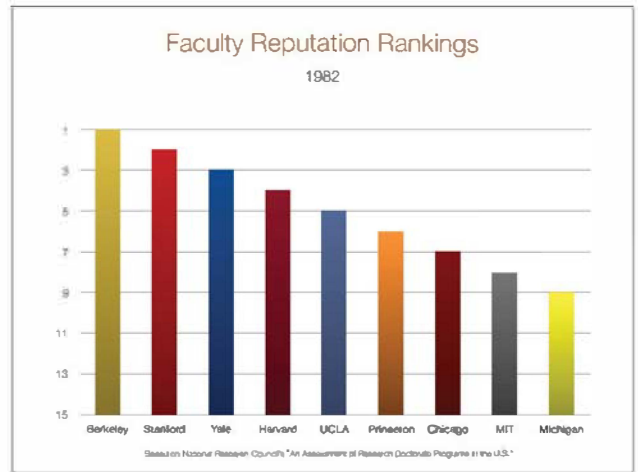
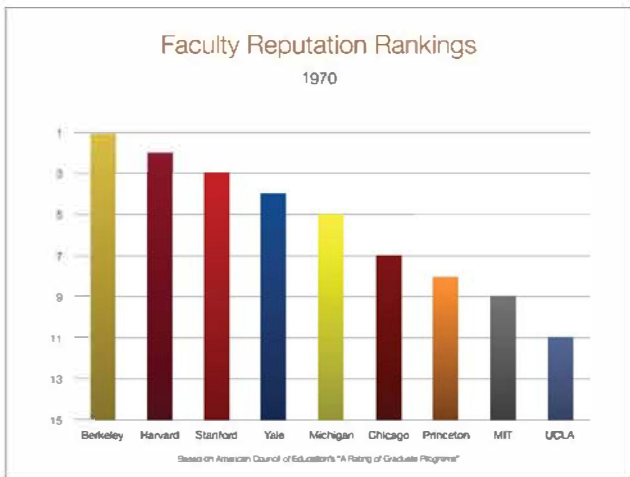
1959



Faculty Reputation Rankings

1966





Building a Strong Research University

How do you bring about a transition that you know will take decades to complete?

- Vision:** provide clear, compelling vision that will outlast you
- Culture:** create a culture that will permeate institution and perpetuate itself
- Process:** establish processes that support goal and make it difficult to stray

| | Faculty | Funding |
|-----------------|---|---|
| Vision: | Tenure requires best in broadly defined field; not just best candidate or best in cohort; "Harvard of the West" | University provides outstanding colleagues, space, students; faculty generates funding |
| Culture: | Total meritocracy; uncompromising standard of excellence; preference for junior stars; wait for right candidate | Anything possible; entrepreneurship rewarded; "eat what you kill"; practical applications valued |
| Process: | Billet system for positions; appointments only in departments; appointments & tenure require ok at every level | Research administration as facilitators; independent labs for large, interdisciplinary research; Office of Technology Licensing |

Building a Strong Research University

Long-term Transformation

Long-term transformation cannot depend on individual leaders, since leaders will change

To initiate this kind of change leaders must provide *seeds* (vision), *soil* (institutional culture), and *trellis* (administrative process) that will survive leadership change

End

フロンティアを拓く大学

京都大学の挑戦

Toward Frontier-pioneering University
-Challenge of Kyoto University

I. 我が国の大学の研究力強化における課題

- ・若手研究人材の確保と育成: 生活環境、流動性、マインド (特に大学院博士課程)
- ・我が国の研究・開発における本当の「死の谷」

II. 京都大学のチャレンジ

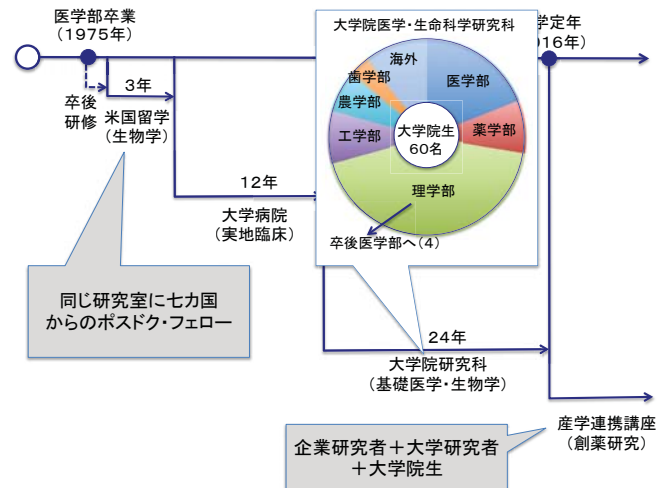
- ・指定大学としての重点施策
- ・人事組織と大学運営の改革
- ・研究の国際化と新しい産学連携モデル
- ・財務基盤の強化

I. 我が国の大学の研究力強化における課題

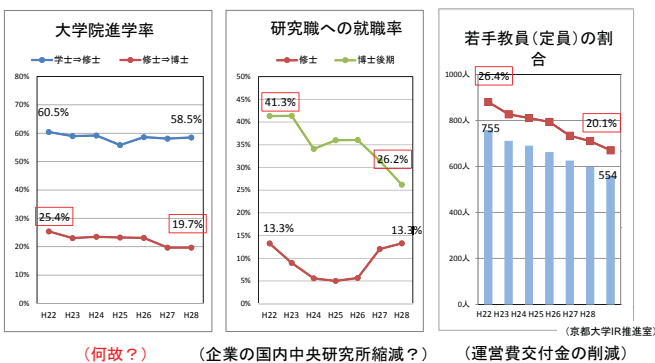
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日本の大学院と若手研究者の現状



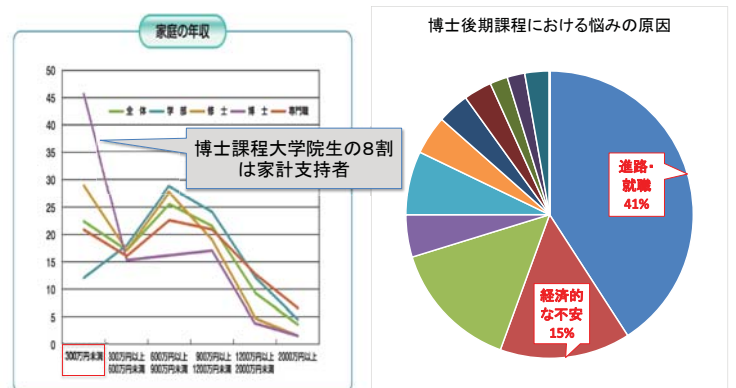
(何故?)

(企業の国内中央研究所縮減?)
(運営費交付金の削減)

中長期的に我が国の研究開発における国際競争力の低落につながりうる危機的状況

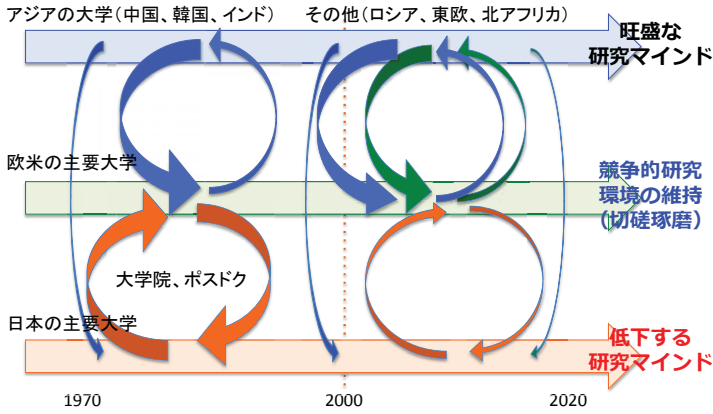
博士課程大学院生の生活状況

○博士後期課程における家庭(独立生計者は自身の家庭)の年収(H27年度調査)



【出展】平成27年度学生生活実態調査(京都大学)

大学の国際化は何故必要か



社会的背景

学位 (PhD) の社会における認識・評価
スカラーシップの欠如
大学院課程の質保証
若手研究者の活用

研究マインド

グローバル環境への早期暴露
競争的研究マインドの醸成
問題意識の低下とモラトリアム

大学院博士課程

進学率の低下
「行くべき人材」が行かない(行けない)

内向的研究マインド

博士人材

我が国全体の研究力の基盤

Induced expression of PD-1, a novel member immunoglobulin gene superfamily, upon program cell death
Yasumasa Ishida, Yasutoshi Agata, Keiichi Shibahara and Tasuku Honjo
EMBO J 1992

分子の発見

基礎研究と応用
概念の確立

PD-L1 on tumor cells in the escape from host immune system and tumor immunotherapy by PD-L1 blockade
PNAS 2002

Yoshiko Iwai¹, Masayoshi Ishida^{1,2}, Yoshimasa Tanaka^{1,3}, Taku Okazaki¹, Tasuku Honjo¹, and Nagahiro Minato⁴

NEJM 2012

大規模臨床試験での検証

The NEW ENGLAND JOURNAL of MEDICINE
Safety, Activity, and Immune Correlates of Anti-PD-1 Antibody in Cancer
NEJM 2012

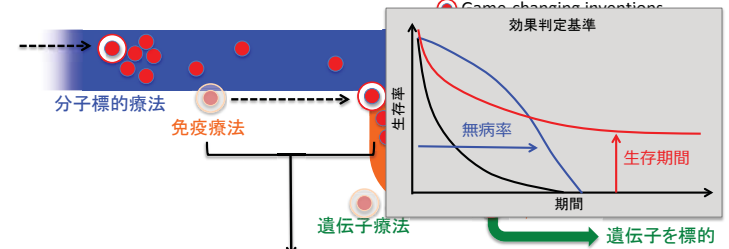
薬剤承認

臨床応用の展開

世界中で数百の臨床試験進行中(より高い治療効果、少ない副作用、より安価に)

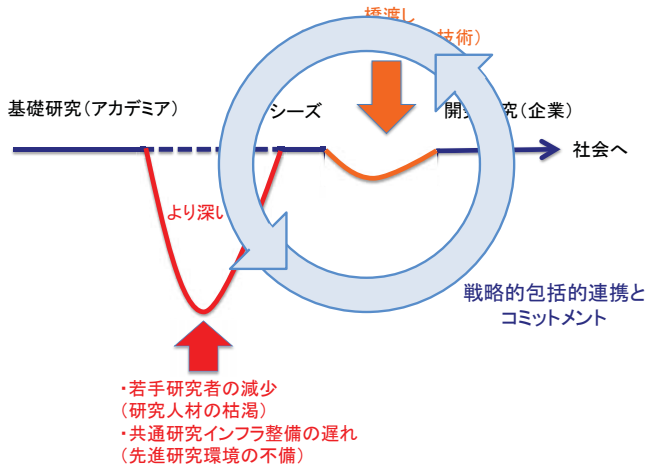
科学と技術; InventionとInnovation

がん創薬の研究開発



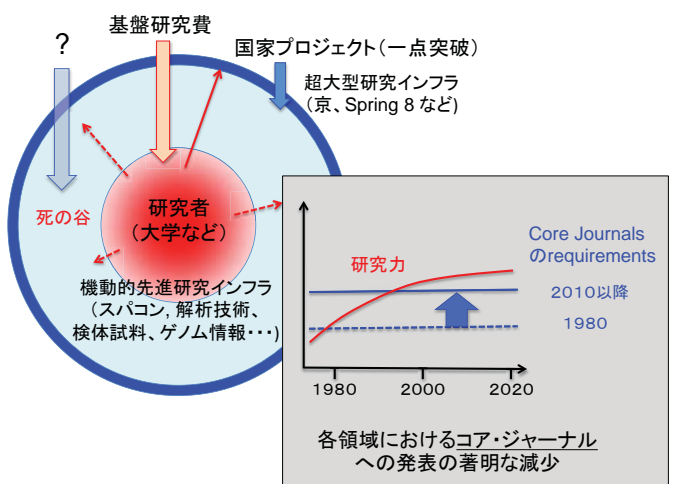
- ・息の長い基礎研究の支援
: 基盤的研究経費の保証
- ・機動的な研究環境基盤の整備
: 有効な研究インフラの組織化
- ・長期の戦略的産学連携
: コミットメントと研究人材のシャッフリング

研究・開発の本当の“死の谷”



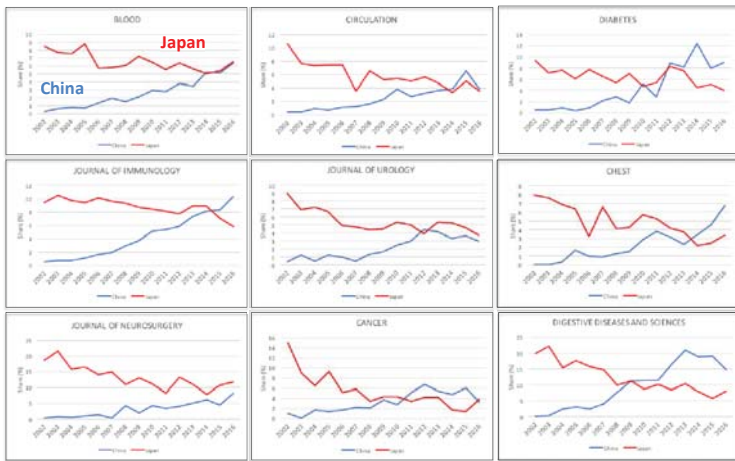
- ・若手研究者の減少 (研究人材の枯渇)
- ・共通研究インフラ整備の遅れ (先進研究環境の不備)

我が国の研究・開発の課題



各領域におけるコア・ジャーナルへの発表の著明な減少

コア・ジャーナルにおける我が国のシェア(医学系)



(京大IR室)

The German Excellence Initiative: Three Funding Lines

- The second phase (2012~2017): total budget € 2.7 billion (約3,600億円)
- Graduate Schools(GSC)
 - Establish internationally competitive research training centres
 - Strengthen universities' research activities/priorities
 - Apply a multidisciplinary approach according to the needs of participating disciplines, faculties, departments, etc
 - Receive between € 1.0 and € 2.0 million per year
- Clusters of Excellence(EXC)
 - Establish internationally visible, competitive research and training facilities
 - Enhance cooperation among the participating institutions
 - Raise the profile and reflect the research priorities of the universities
 - Receive between to € 3.0 and € 6.0 million per year
- Institutional Strategies(ZUK)
 - Promote top-level university research at an international level
 - Employ long-term measures to enhance the development and expansion of the universities' areas of international excellence
 - Receive € 12.0 million per year (約15.6億円・年)
 - Administered by the German Council of Science and Humanities(Wissenschaftsrat)

by Dr. Wiegner

I. 我が国の大学の研究力強化における課題

- ・若手研究人材の育成:流動性とマインド (特に大学院博士課程)
- ・我が国の研究・開発における課題

II. 京都大学のチャレンジ

- ・指定大学としての重点施策
- ・人事組織と大学運営の改革
- ・研究の国際化と新しい産学連携モデル
- ・財務基盤の強化

指定国立大学法人・京都大学 重点施策概要

独創的最先端開発研究の推進

- 先端医学研究と再生医療の実現
- フロンティア学術領域創成
- 高等研究院(トップ頭脳の集約)
- 国外オンサイト研究部門

優秀な若手研究者の育成と輩出

- 大学院の国際化と生活支援
- 優秀な国外学生のリクルート
- 博士人材の支援(テニュア・トラック制)
- 若手教員の安定雇用(定員)

独自の社会貢献

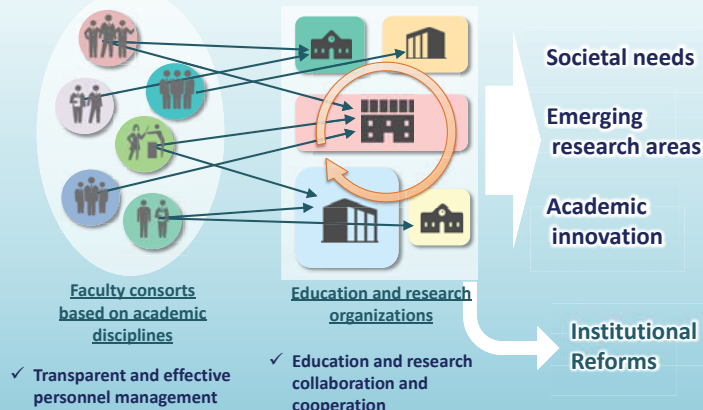
- 産官学連携の京大モデル
- 産学共同開発研究部門
- 日ASEAN協力推進
- 人文・社会科学の未来形の発信

組織運営改革と財務基盤の強化

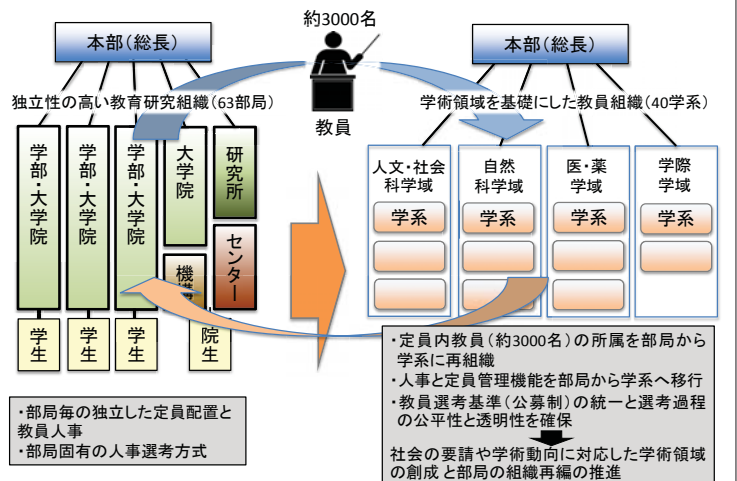
- プロボストとカウンシル
- エビデンスベースの大学運営 (IR, URA)
- 独自の出資・収益事業 (ホールディングカンパニー)

教員組織(ファカルティ)の再編

Collaboration across departmental boundaries and reform to create a flexible organizational structure



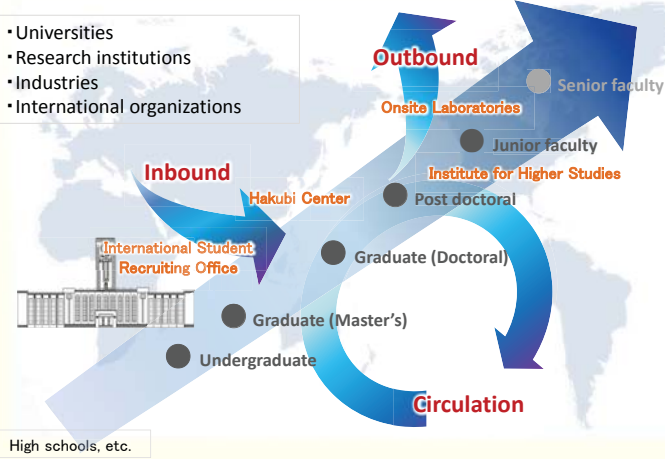
人事制度の刷新(学域・学系制度)



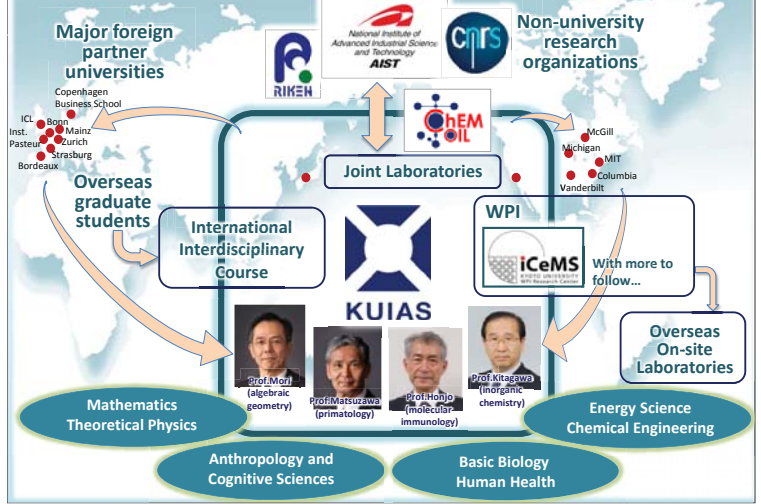
若手研究者の国際的流動性

"Talent Flow with Diversity & Quality"

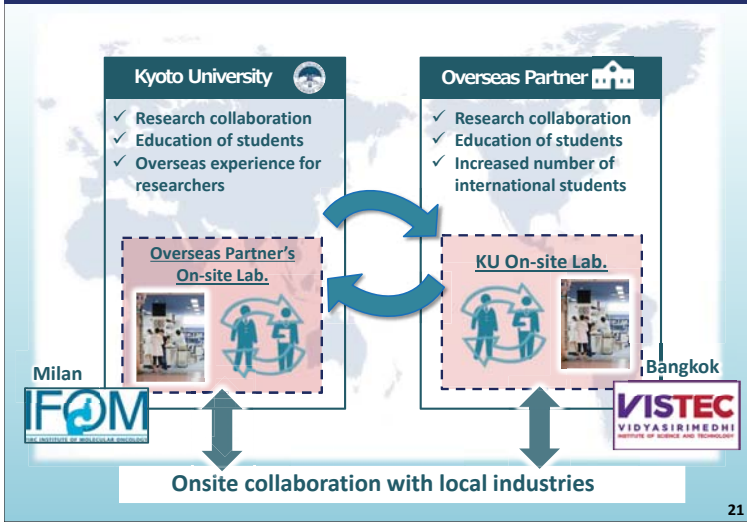
- Universities
- Research institutions
- Industries
- International organizations



高等研究院; 国際交流のハブ

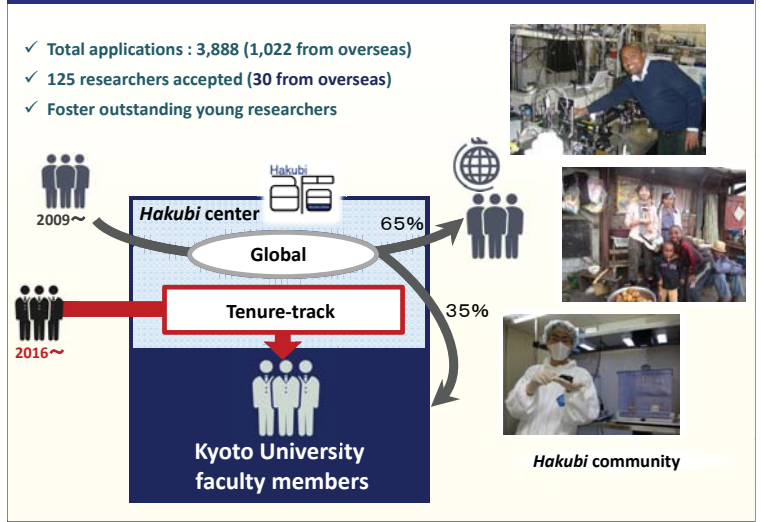


オンサイト・ラボラトリー

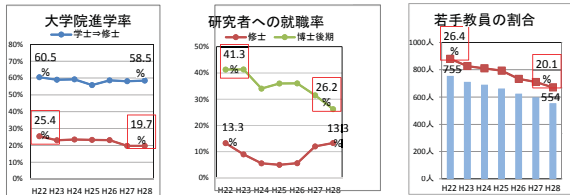


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白眉プロジェクト

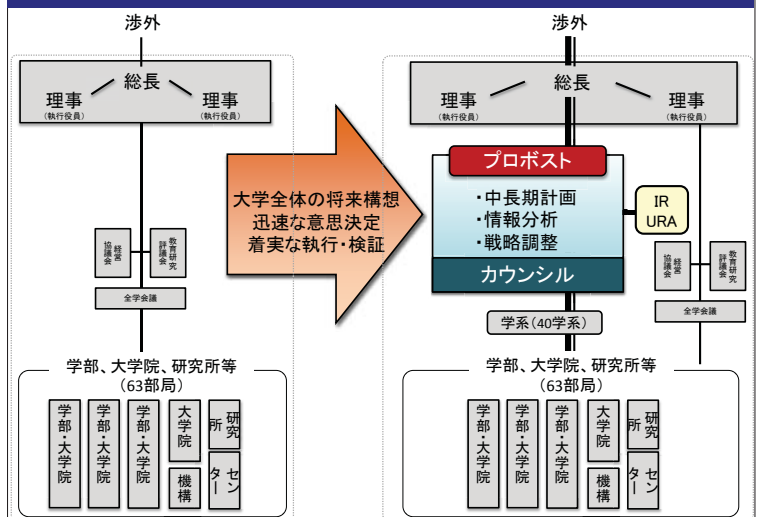


若手研究者の育成と輩出

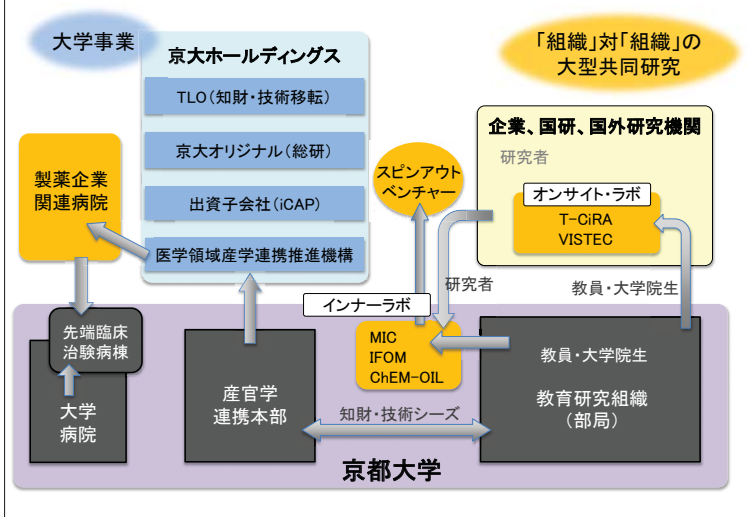


- 大学院生の基本的な生活支援 (優秀な大学院生の学費免除、TA・RA経費の拡充)
- 健全な競争的研究環境の醸成 (優秀な大学院留学生のリクルート、スカラーシップのファンド)
- 若手研究者の安定雇用の推進 (テニユア・トラック制の拡充、本部主導の戦略的な教員再配置)
- 学位取得者の企業・国際機関への受け入れ促進 (長期インターンシップ支援)

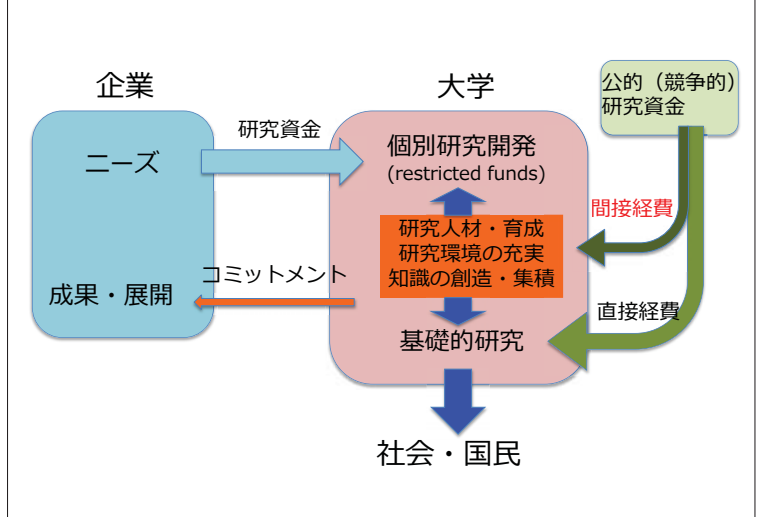
大学組織運営の改革



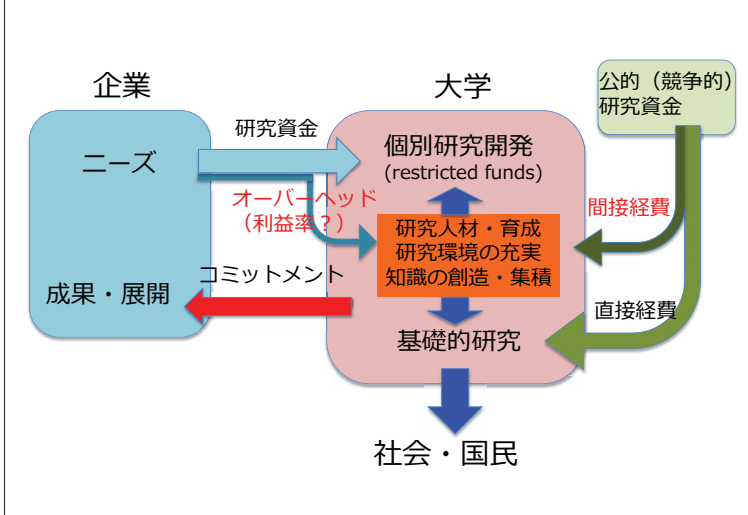
大学経営の改革と財務基盤の確立



我が国の産学連携の問題点



我が国の産学連携の問題点



人文・社会学の未来形の国際発信

