

The Academic Research Enterprise

Structure, Leadership, Challenges, and Adaptations

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RESEARCH REPORT

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The Senior Research Officer

Experience, Role, Organizational Structure, Strategic Directions, and Challenges

Oya Y. Rieger, Roger C. Schonfeld

DOI: https://doi.org/10.18665/sr.314490

Topics: Governance, Research practices, Talent development and management **Tags:** Research enterprise, Research universities, University administration

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Executive Summary

The senior research officer is an extremely important position at major research universities, playing a principal leadership role for what is typically a vast research enterprise. To examine the role within these institutions, we interviewed 44 incumbents at US research universities during summer and early fall 2020. Our key findings include:

 Many research offices have grown substantially but there is considerable institutional variation. University-wide research offices are now the norm, and there is a pull to







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The Impacts of COVID-19 on the Research Enterprise

A Landscape Review

Jane Radecki, Roger C. Schonfeld

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Topics: Governance, Higher education costs, Research practices, Scholarly communication, Talent development and management

Tags: COVID-19, Research enterprise

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Executive Summary

The COVID-19 pandemic and associated disruptions have had a major impact on the US academic research enterprise. This report provides a landscape review of what is known about these impacts, from March through mid-October 2020, with an aim of identifying gaps that should be addressed. Our focus is on externally funded research, and therefore we emphasize STEM fields almost exclusively. As a result, we also focus on the largest research universities, which conduct an outsized share of this research and which are themselves guite reliant on the

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Jane Radecki Analyst



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The Senior Research Officer

A Big Job

Increasingly Centralized

- Unitary scope
- Reorganizations
- Systems integration
- Hundreds to more than 1000 staff

Academic and Administrative

- Compliance & safety
- Research support & enablement
- Fundraising & revenue
- Centers

Titles and Reporting

- Vice President/ Vice Chancellor
- Vice Provost

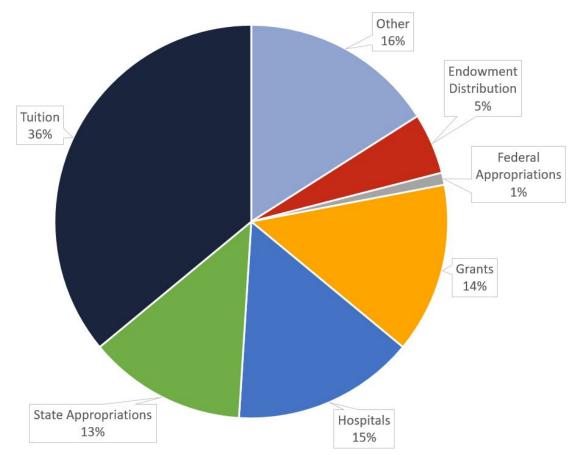
Highly Successful Scientists and Administrators

- Professional model
- Service model

Financial Framework

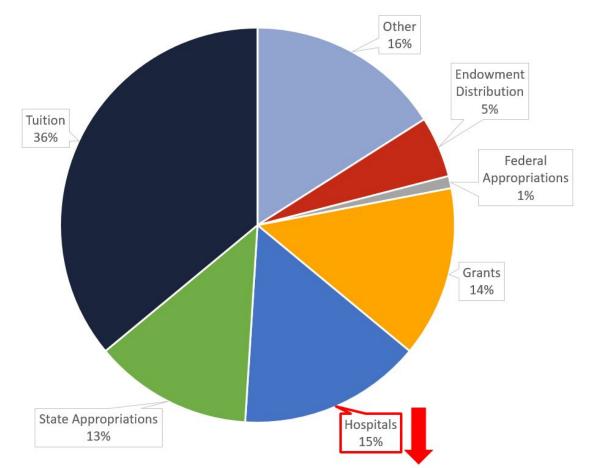
Streams

Higher Education in the United States: Revenue Sources, FY 2018



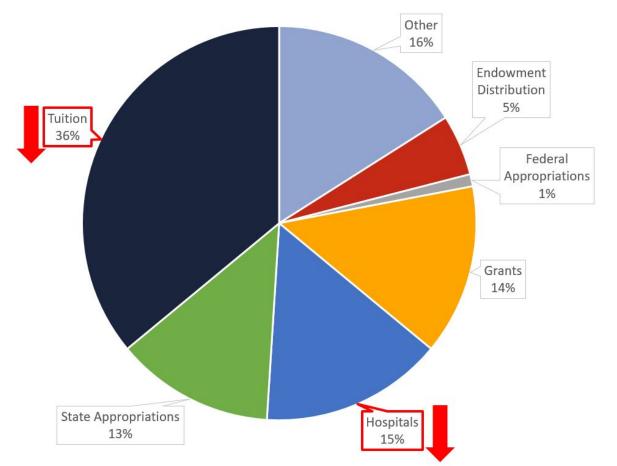
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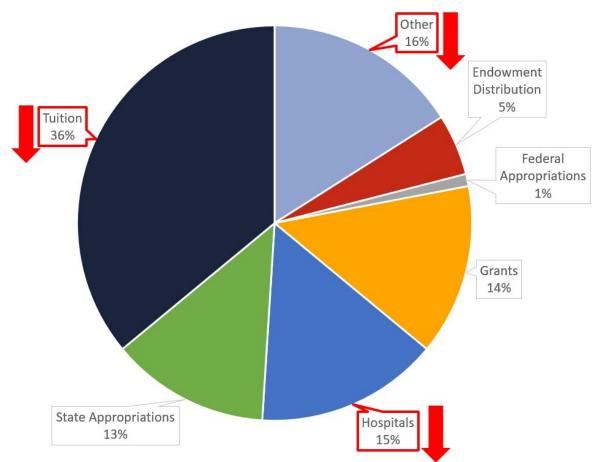
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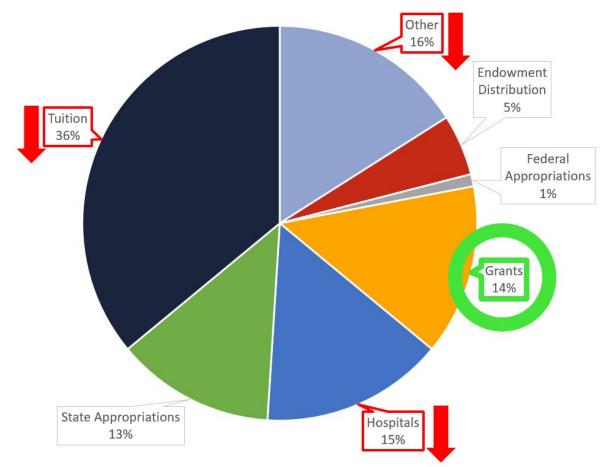
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Higher Education in the United States: Revenue Sources, FY 2018



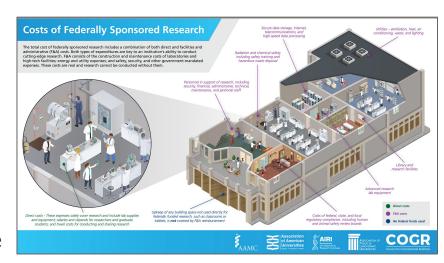
Streams

Higher Education in the United States: Revenue Sources, FY 2018



Spending & Indirect Costs

- Research does not pay for itself
- Research support and enablement, including compliance, research cores, the library, and proposal development, are
 - necessary not only to the current research portfolio, but also future aspirations
 - often funded out of general (rather than restricted) funds
 - cross-subsidized by other parts of the university in many cases
- Most research libraries are receiving budget cuts, and some research offices are anticipating substantial cuts

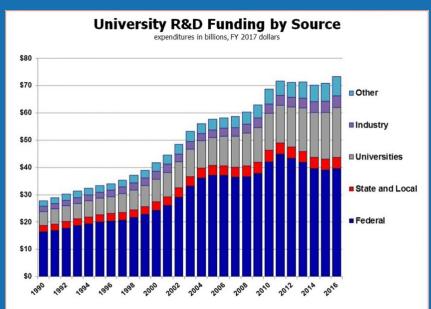


Need For Revenue & Lab Reopenings

- Grant funded research activity and the need for capital had a powerful influence in shaping university activity and policy
- Revenue and salaries became an incentive that pushed many labs to reopen sooner when the NSF, NIH, etc. said they couldn't continue to pay researchers salaries if labs were not open

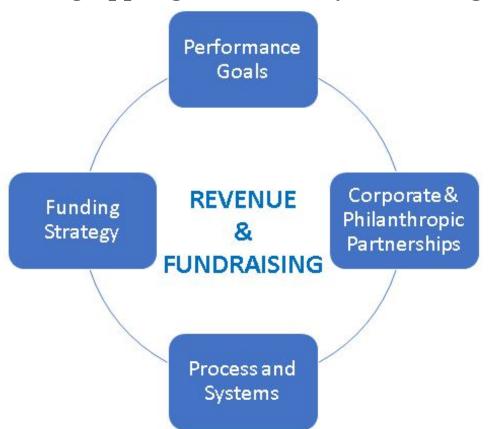


External Funding



Source: NSF, National Center for Science and Engineering Statistics, Higher Education R&D series, based on national survey data. Includes Recovery Act funding. © 2017 AAAS

SROs are pursuing an array of different strategic priorities and grappling with a variety of challenges.



Revenue and Fundraising

Performance Goals

- Many of the senior research officers have formal performance goals that are tied to research funding and influence:
 - Number of proposals submitted/funded
 - Dollar value
 - Percentage & distribution
 - External competition



Revenue and Fundraising

Interdisciplinary Research

- Many emphasize the importance of developing very large grant proposals that require interdisciplinary, team-based, and interinstitutional research
- It is necessary to ease the administrative burdens on researchers and offer common/centralized services

"We want to move toward grand challenges based on interdisciplinary and multidisciplinary work ... but the base is still involved in individual research programs. We know individual PIs are important. But we need to move them to a different research configuration."

Revenue and Fundraising

Diversify Funding Sources

- Corporate and philanthropic partnerships are important to diversify sources and fund priority areas outside federal agencies
- Contributing to economic development is essential to get recognition, bring money, and create jobs for students
- Several interviewees stress the significance of translating research and innovations into products within the state

"Economic development is significant and time demanding part of my role. We have a complex organizational structure, there is no wrong door attitude but hard for external entities to find the right door and know how to access various components of the university."

Research Support



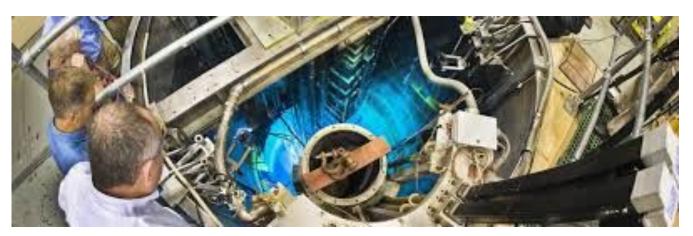
How are the services that support research such as shared facilities, research computing, and the library evolving in your institution?



Research Support

What is a Research Core?

- Centralized, shared resources with:
 - o instruments, technologies, tests
 - expert technical and consultative services



https://www.energy.gov/

Research Support

Research Cores

- Research cores are critical for research competitiveness
- Require significant capital investment and ongoing operational expenses:
 - Shared on an institutional basis as they are beyond the ability of an individual lab/team
 - Involve complex business models
 - Often report up to the SRO



Research Support The Library

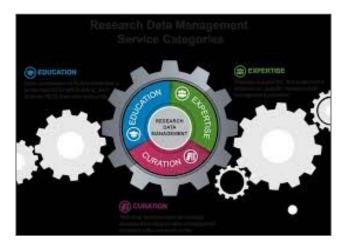
- Received little recognition as a major research support service
- There were references to how the library is trying to change and reinvent itself
- Several mentioned negotiations with big deal vendors



Research Data

Research Data

- Many are grappling with how to develop research data services, assign responsibility, and secure budgets
- They feel that "public access" needs to be about making the products of research more accessible and shareable
- They are mindful of issues such as security, privacy, research ethics, etc.
- Research data workflow tools do not rise to their attention, some noting the challenges in implementing a common solution



https://www.oclc.org/

Research Data

Library Role

- Some interviewees mentioned the Library as a partner in research data management plans or workflow tools support
- Some concerns about the Library's aspiration for leadership given the existing and distributed data expertise at the campus



Research Analytics



Research Analytics

Research Metrics

- Express little interest in traditional article and journal metrics
- Emphasize that societal impact is becoming a key indicator
- Find it difficult to capture metrics for different disciplinary practices
- Face challenges in incorporating contextual or institutional practices and values

"Tracking startups, how many companies are being launched, technologies being developed—10 years back, the numbers did not matter much—it was more citations and research dollars."

Research Analytics

RIM Systems and Processes

- Heard many regrets that internal data pertaining to the university is very often siloed and sometimes anecdotal or difficult to compare
- Due to distributed responsibilities, difficult to assign tasks and coordinate efforts in a cohesive and effective manner

"Counting things is informative but judgment is an irreplaceable tool in decision-making."

Compliance

Compliance Emphasis

Foreign Influence & Research Security

- Widespread view that China is the principal target; also mentions of Iran and Russia
- Specific issues include:
 - Foreign research funding disclosures (ie Thousand Talents)
 - International graduate students
- Huge bandwidth for SROs:
 - Understand the issues
 - Establish process and structure to ensure compliance
 - Educate faculty members

Compliance Concerns

Foreign Influence & Research Security

- Talent acquisition and research competitiveness
- Scientific collaborations
- Basic principles of scientific openness and free exchange of ideas
- Differing views on the nature of this compliance emphasis

"Our ability to recruit the best of the best and give them an environment where they can freely apply their talents is at risk." "I fear that the US is becoming less attractive to foreign scientists"

Human Impacts

The Human Impacts of COVID-19 on Researchers

Large US Research Universities

- The human impacts of the disruptions are vast.
- Limitations and impediments facing international students
- Differential impacts on researchers by gender, caregiver status, and career level.
- There are substantial unanswered questions about
 - o international talent flows,
 - the development of early career researchers, and
 - o setbacks in achieving gender equity.

Questions & Discussion

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Thank You