

The Struggles of Higher Education: Organizational Interdependencies and Higher Education Finances

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Context

- **Changing environment of U.S. higher education industry**
- **Financial Profiles**
 - Where does the money come from and where does it go?
 - Organizational change, 1986-2010
 - Classification of public colleges and universities
- **The role of organizational interdependencies**
 - Stakeholder influence
 - Sector differences
 - Competition in two markets

The Financial Profiles of Public Higher Education

**Diversity, Change, and
Discontinuity**

A series of horizontal lines of varying lengths and colors (teal, light blue, white) extending from the right side of the slide towards the center.

Context and Research Questions

- **Understanding variation versus understanding change**
- **How are public universities altering their revenue and spending profiles over time?**
- **How do the university revenue profiles correspond to the university spending profiles?**

Understanding Organizational Change

- **Organizations change?**
 - Growth
 - Resource dependencies
 - Legitimacy
 - Path dependency
 - Market forces
 - Organizational capacities
- **Organizations are stable?**
 - Contingency theory
 - Path dependency
 - Bureaucracy
 - Inertia
- **Change in higher education**

Public Colleges and Universities

- **Environment of public higher education**
- **Expectations for public institutions**
 - Revenue profiles change in diverse ways
 - Spending profiles change to the extent that revenue profiles change
 - Correspondence of revenue and spending profile changes
 - Field-level implications
 - Privatization
 - Fragmentation/stratification
 - Spending shifts

Data

- **Public Colleges and Universities**
 - Four-year, undergraduate degree-granting
 - 516 schools
 - 1986-2010
- **Integrated Postsecondary Education Data System (IPEDS)**
 - Finance, Enrollments, Institutional Characteristics

Revenue Profiles

- Comprised of:
 - Tuition revenues
 - Private gifts, grants, and contracts revenues
 - State government revenues
 - Federal government revenues
 - Auxiliary enterprise revenues
 - “Miscellaneous” revenues

Revenue Stream	Year	Mean	Std. Dev.	Min.	Max.
Tuition Revenues	1986	19.18%	8.97%	4.05%	83.96%
	2010	35.38%	11.20%	6.52%	83.14%
Private Gifts, Grants, and Contracts Revenues	1986	1.93%	2.16%	0.00%	15.17%
	2010	3.04%	3.19%	0.00%	25.12%
State Government Revenues	1986	51.26%	12.30%	0.00%	82.16%
	2010	30.30%	9.95%	0.00%	60.71%
Federal Government Revenues	1986	10.53%	5.83%	0.00%	35.93%
	2010	15.62%	7.23%	0.96%	46.86%
Auxiliary Enterprise Revenues	1986	13.42%	7.37%	0.00%	47.34%
	2010	11.88%	7.37%	0.00%	45.89%
Miscellaneous Revenues	1986	11.84%	7.15%	0.00%	51.44%
	2010	12.02%	9.12%	0.00%	67.29%

Spending Profiles

- Comprised of:
 - Instructional spending
 - Research spending
 - Student services spending
 - Academic support spending
 - Institutional services spending
 - Operation and maintenance spending
 - Auxiliary enterprise spending
 - “Miscellaneous” spending

Spending Stream	Year	Mean	Std. Dev.	Min.	Max.
Instructional Spending	1986	36.42%	7.95%	0.00%	65.14%
	2010	34.61%	7.21%	0.00%	60.24%
Research Spending	1986	4.48%	7.15%	0.00%	49.62%
	2010	6.54%	8.98%	0.00%	65.97%
Student Services Spending	1986	5.84%	5.04%	0.92%	100.00%
	2010	7.38%	3.56%	0.51%	21.80%
Academic Support Spending	1986	7.74%	2.85%	0.00%	25.17%
	2010	8.70%	3.43%	0.09%	39.06%
Institutional Services Spending	1986	10.25%	4.71%	0.00%	37.87%
	2010	10.46%	4.54%	0.79%	43.22%
Operation and Maintenance Spending	1986	9.39%	3.35%	0.00%	26.02%
	2010	7.09%	2.85%	0.87%	19.08%
Auxiliary Enterprise Spending	1986	14.04%	7.45%	0.00%	45.11%
	2010	13.18%	7.66%	0.00%	37.66%
Miscellaneous Spending	1986	11.84%	7.15%	0.00%	51.44%
	2010	12.02%	9.12%	0.00%	67.29%

Multilevel Latent Class Analysis (MLCA)

- **Clusters schools based on observed revenues**
 - Inductive empirical classification of schools
 - Revenue and spending profiles
- **Maps out how the clusters/profiles increase or decrease in prominence within the field over time**
 - Variation across schools and over time

MLCA Continued

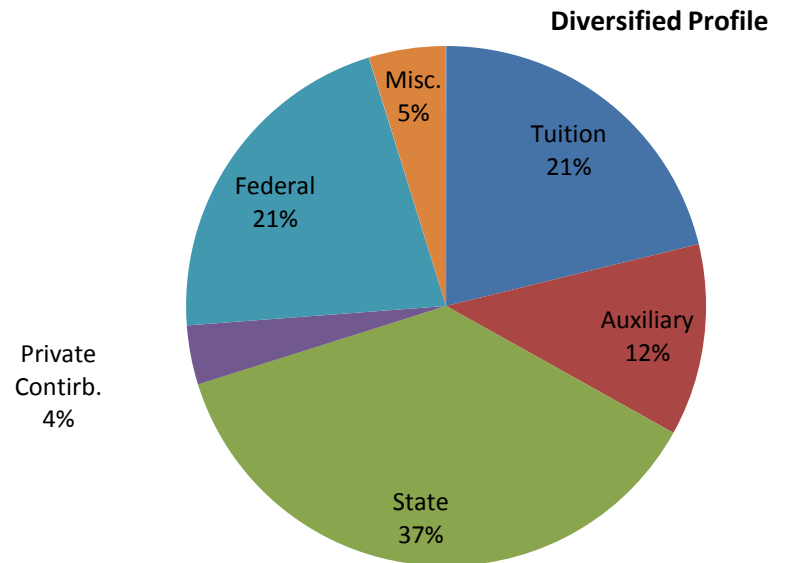
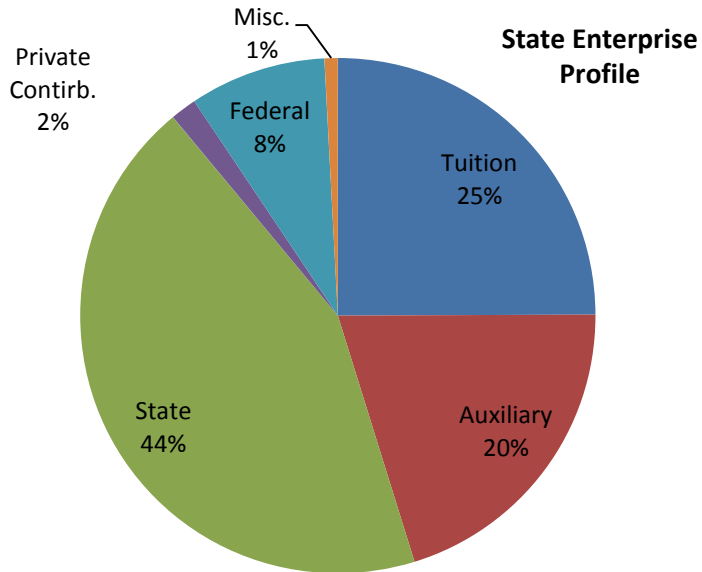
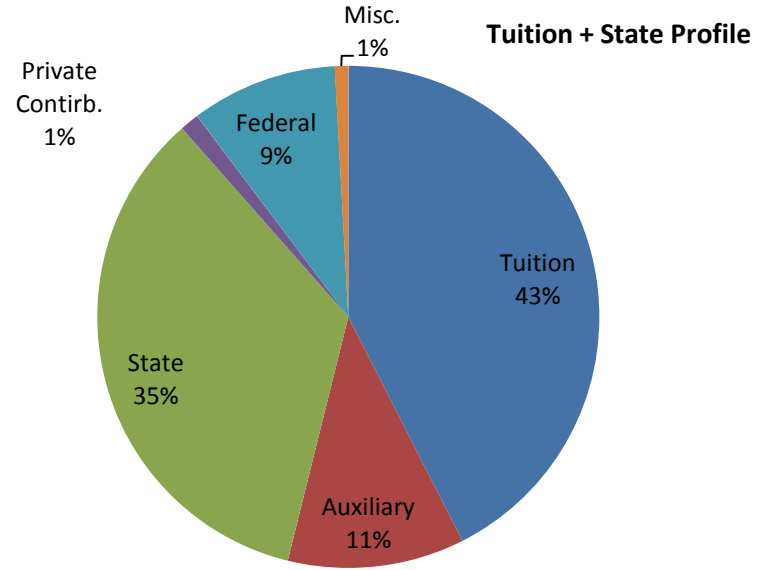
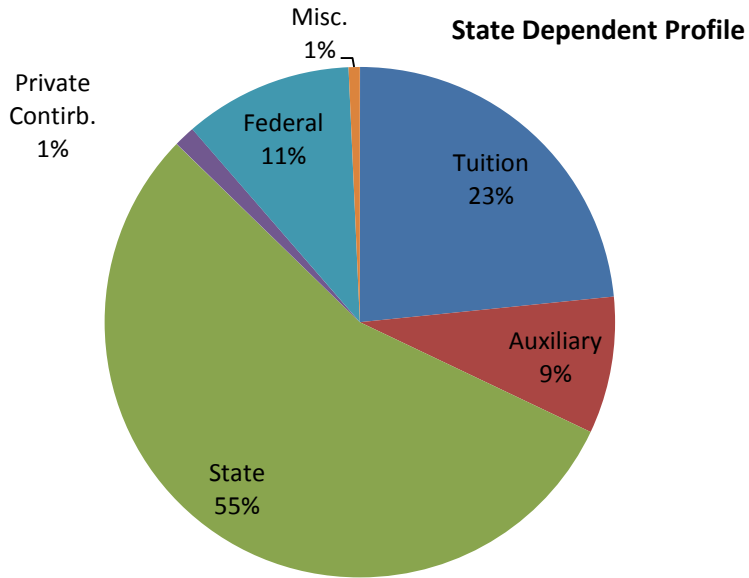
- **Multinomial Logistic Regression**
 - **Categorical Outcome**
- **Multilevel Model**
 - **Captures variation across cases and within cases over time**

Analysis and Results

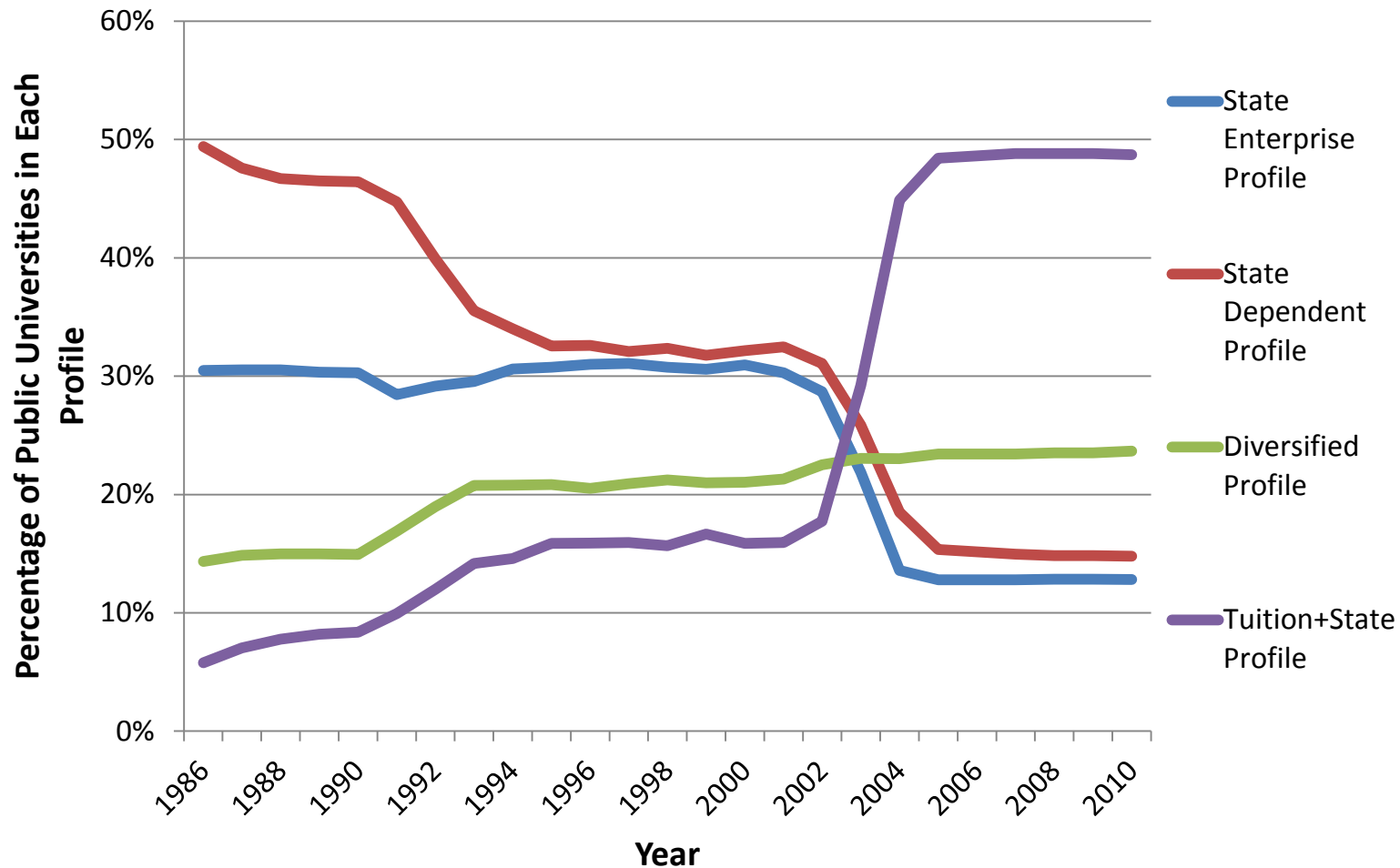
- **The revenue profiles**
- **The spending profiles**
- **Revenue and spending profile correspondence**
- **Field-level implications**

Revenue Profiles





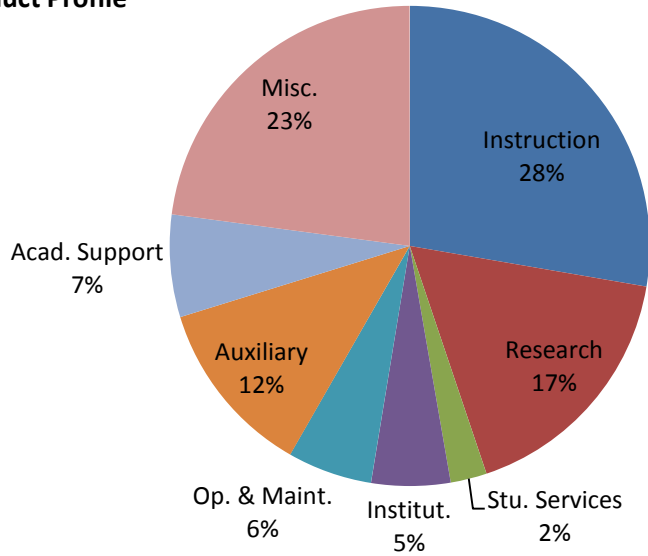
Changing Prominence of Revenue Profiles, 1986-2010



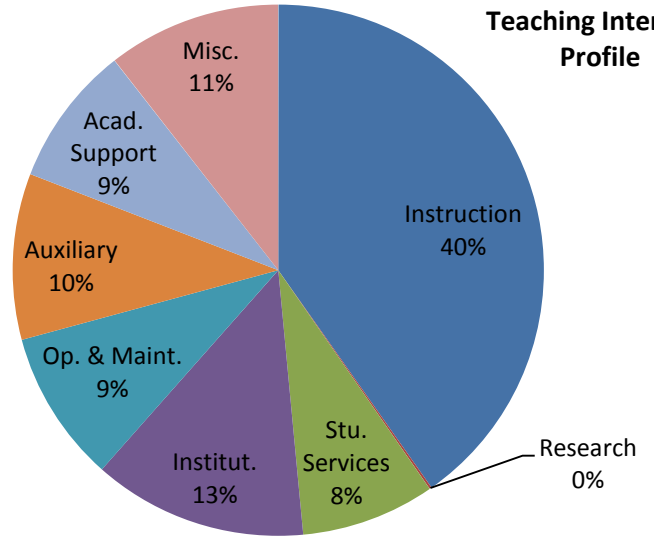
Spending Profiles



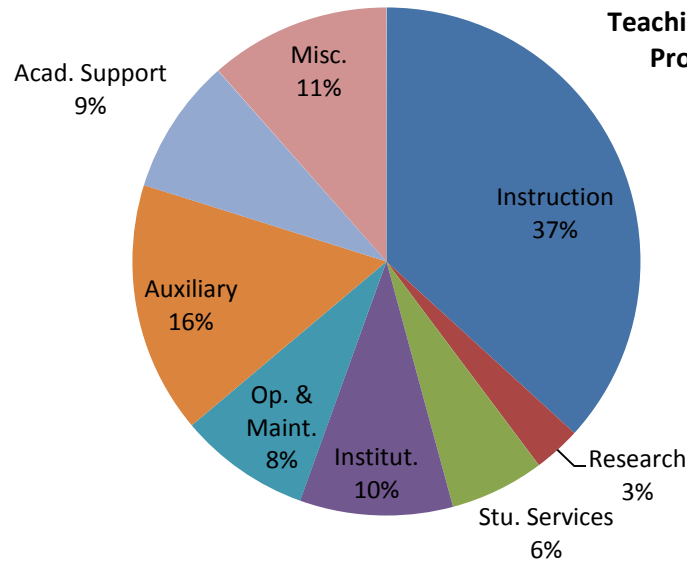
Multiproduct Profile



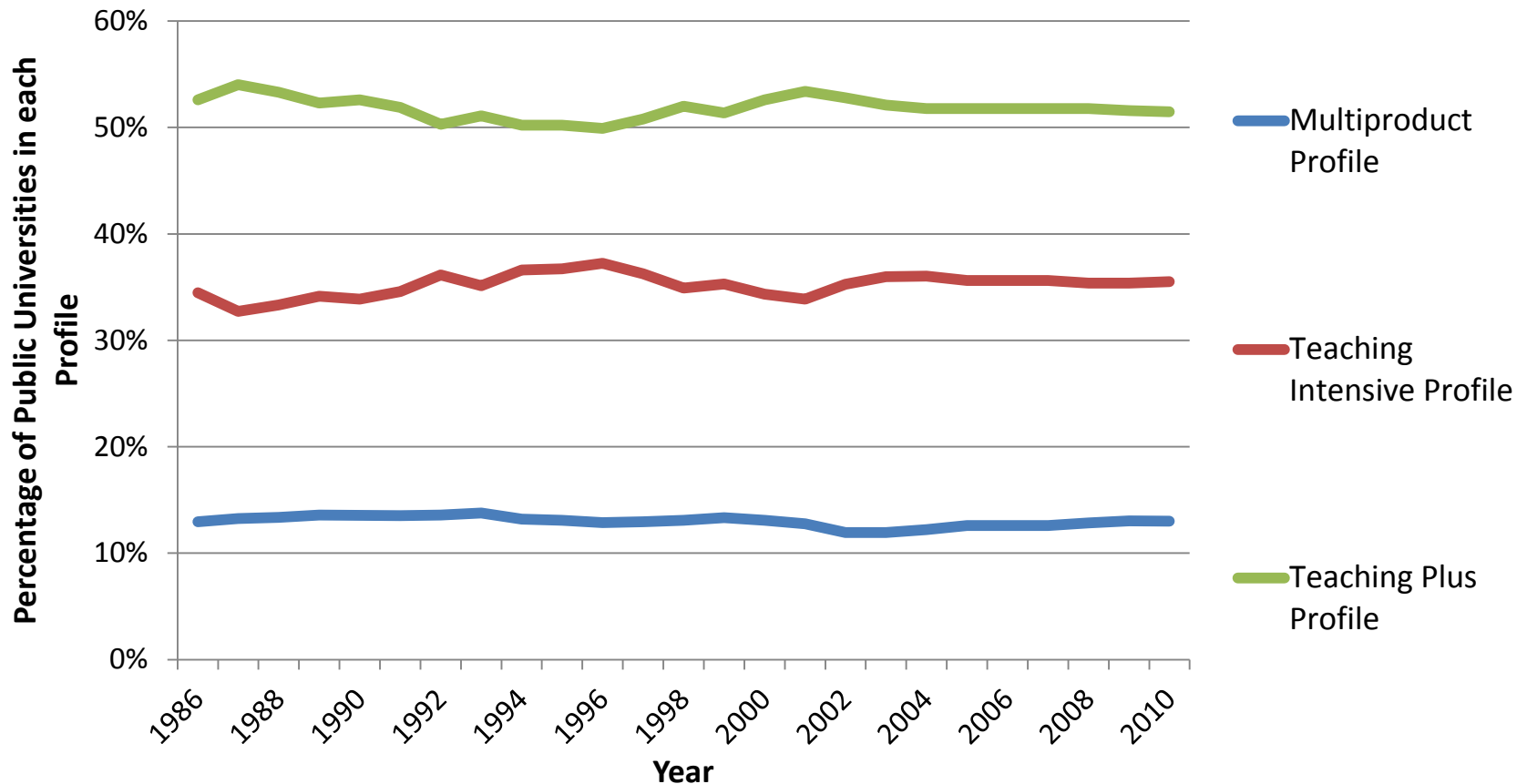
Teaching Intensive Profile



Teaching Plus Profile

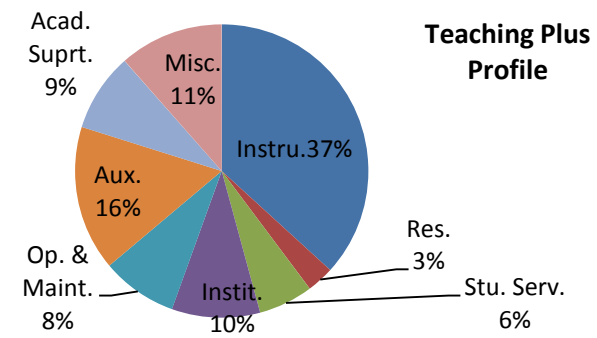
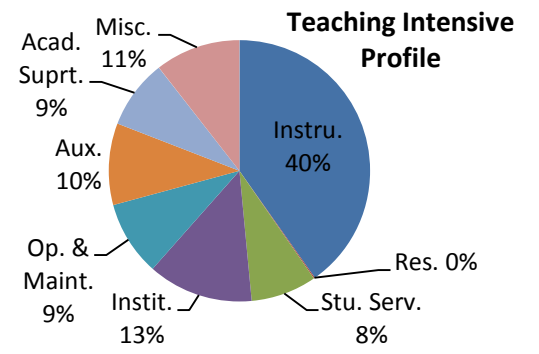
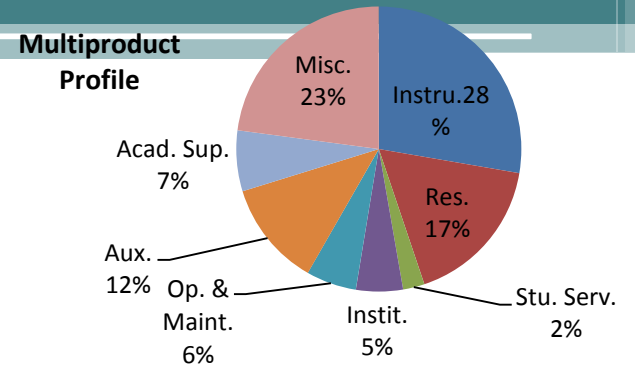
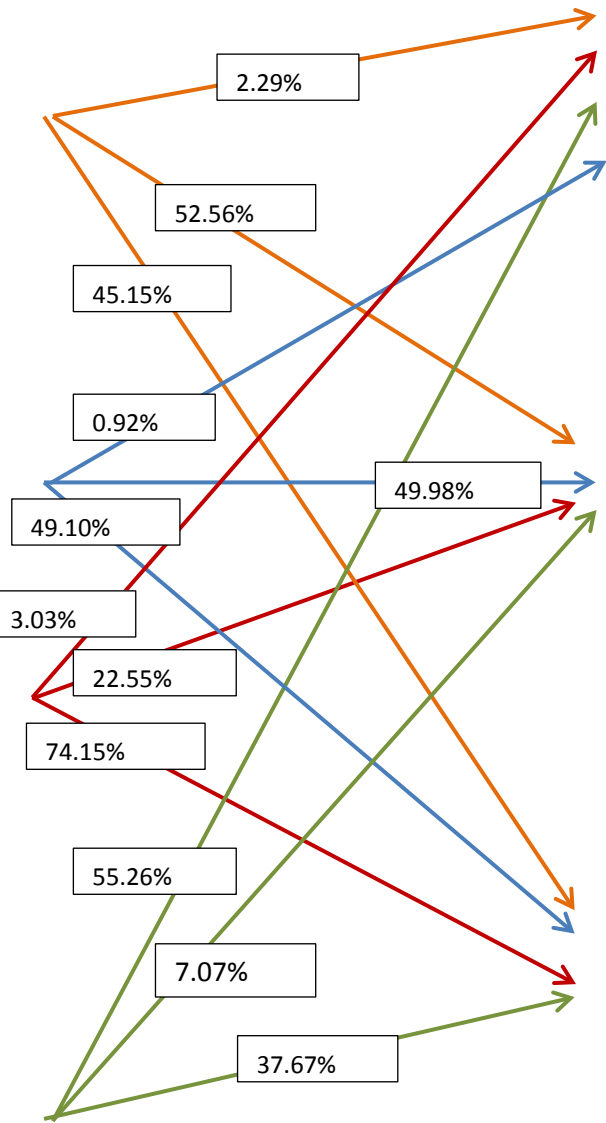
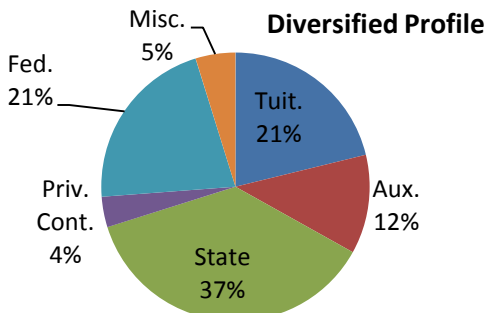
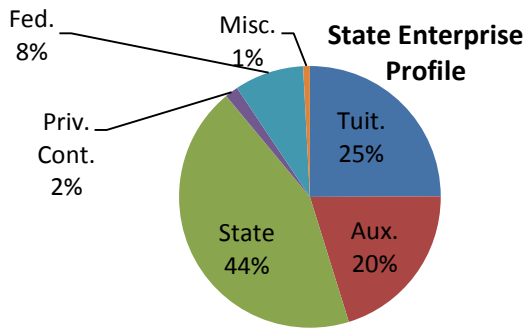
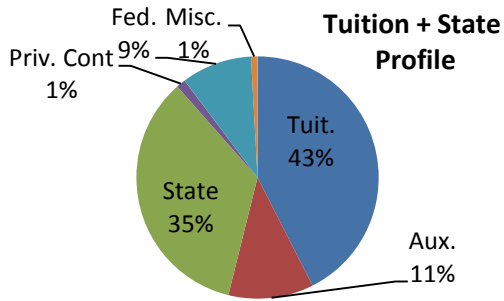
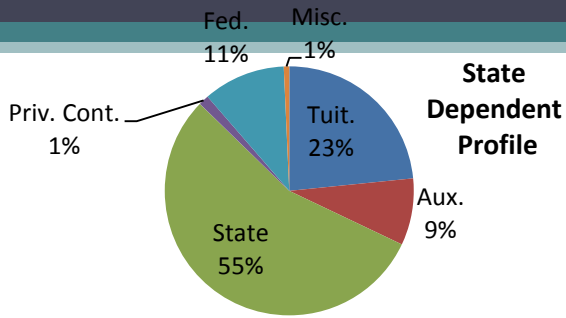


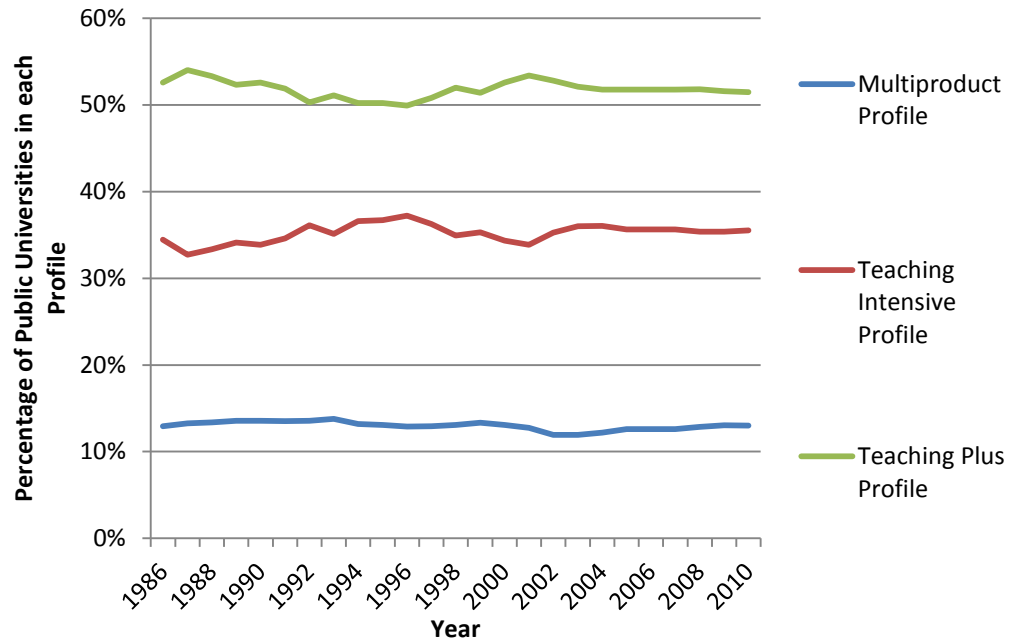
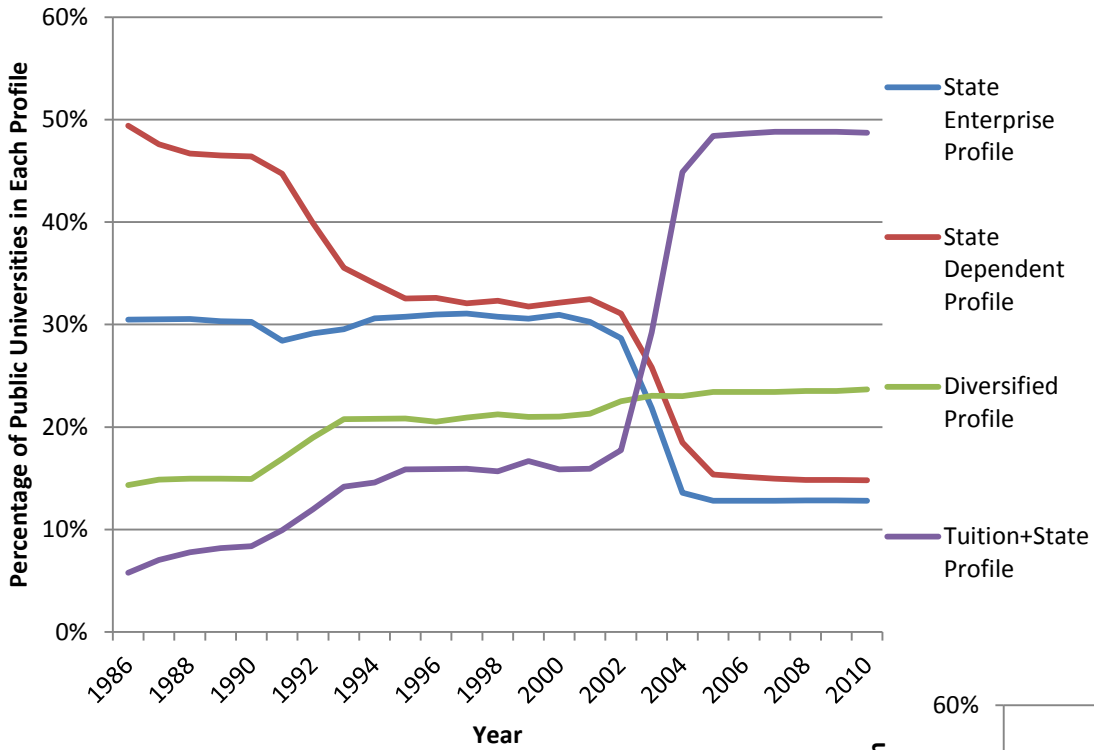
Changing Prominence of Spending Profiles, 1986-2010



Revenue and Spending Profile Correspondence







Discussion Conclusion

- **Diverse revenue profile adaptation**
- **Stable but diverse spending profiles**
- **Discontinuity in revenue and spending profiles**
- **Field-level implications**

The Role of Stakeholders

Examining Sector Differences in Higher Education

Findings and Implications

- Divergence in spending behaviors over time
- Convergence or parallel trends in stakeholder influence over time
- Stakeholder influences as a tool for understanding university spending and sector differences
 - Significant association between the effect of economic influence on spending
 - Stakeholder influence declines over time
 - Do stakeholders really matter?
 - Nature of effects
 - Continued significance of sector

Competition and Niche Effects on University Spending

How does competition for resources affect university spending?

Findings and Implications

- **Competition for federal R&D funding**
- **Competition for state higher education funding**
- **Mechanisms/processes governing organizational responses to competition vary on the market**
- **Market position and university spending**

Thank you!

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