IOWA STATE UNIVERSITY

2024 P&S Council Professional Development Conference

Understanding the University's Budget Model

and

Research Findings on Nation-wide RCM Model Impacts on Staff and Student Retention

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IOWA STATE UNIVERSITY

Learning Objectives

Develop a working understanding of:

- The university's budget structure
- The university's funding structure
- How sources are included in the current budget process
- Where your units live within the university's budget structure
- Impacts on staff retention
- Impacts on student retention
- RMM Performance vs other budget models

Resource Management Model Background

Resource Management Model

Iowa State University utilizes a decentralized financial management model for the development of its annual operating budgets. The Resource Management Model (RMM), a responsibility-centered and incentive-driven approach to financial planning and management, is utilized for the development of the university's budget.

History of the RMM at ISU

Due to the dynamic environment in higher public education, budget leaders at Iowa State University worked with the university community to develop an alternative budget model that would be more flexible and responsive to the needs of the university. On Jan. 24, 2007, President Geoffroy decided that Iowa State University will adopt the Resource Management Model, which was developed through a series of university committees with broad feedback from the university community. The RMM was implemented the next July to begin FY 2009.

RMM Development Principles

The model should:

- Incorporate incentives to reward high-quality programs
- Link funding and costs to the responsibilities and performance of units
- Distribute revenues transparently and informed by data
- Attribute the cost of central admin to units that benefit from those services
- Engage campus in setting priorities for investing resources
- Work effectively during years of funding growth and decline
- Increase flexibility and improved ability to conduct multi-year financial planning

RMM Development Principles

The model should not:

- Drive decisions, but should inform decisions
- Create internal competition
- Create emphasis on quantity over quality
- Cause priorities to be driven by money
- Erode Institutional Culture

RMM Budget Concepts and Terms

- Units are defined as Resource Responsibility Centers (RRCs) or Administrative Service Centers (ASCs).
- RRCs generate revenues and receive funding from external sources.
  - Includes Colleges, VPR, Extension, and University Auxiliaries
  - Revenue and budget allocations occur in these primary resource units. Budget distribution to departments, programs, centers, and institutes is determined by each administrator of the primary resource unit.
- ASCs do not directly generate revenue but provide administrative and support services to resource units across the university.
  - ASCs include University Administration and Support, Academic administration and support, Library, Grad College, Enrollment Management, CELT, ITS, Business Services, and Facilities

RMM Budget Concepts and Terms

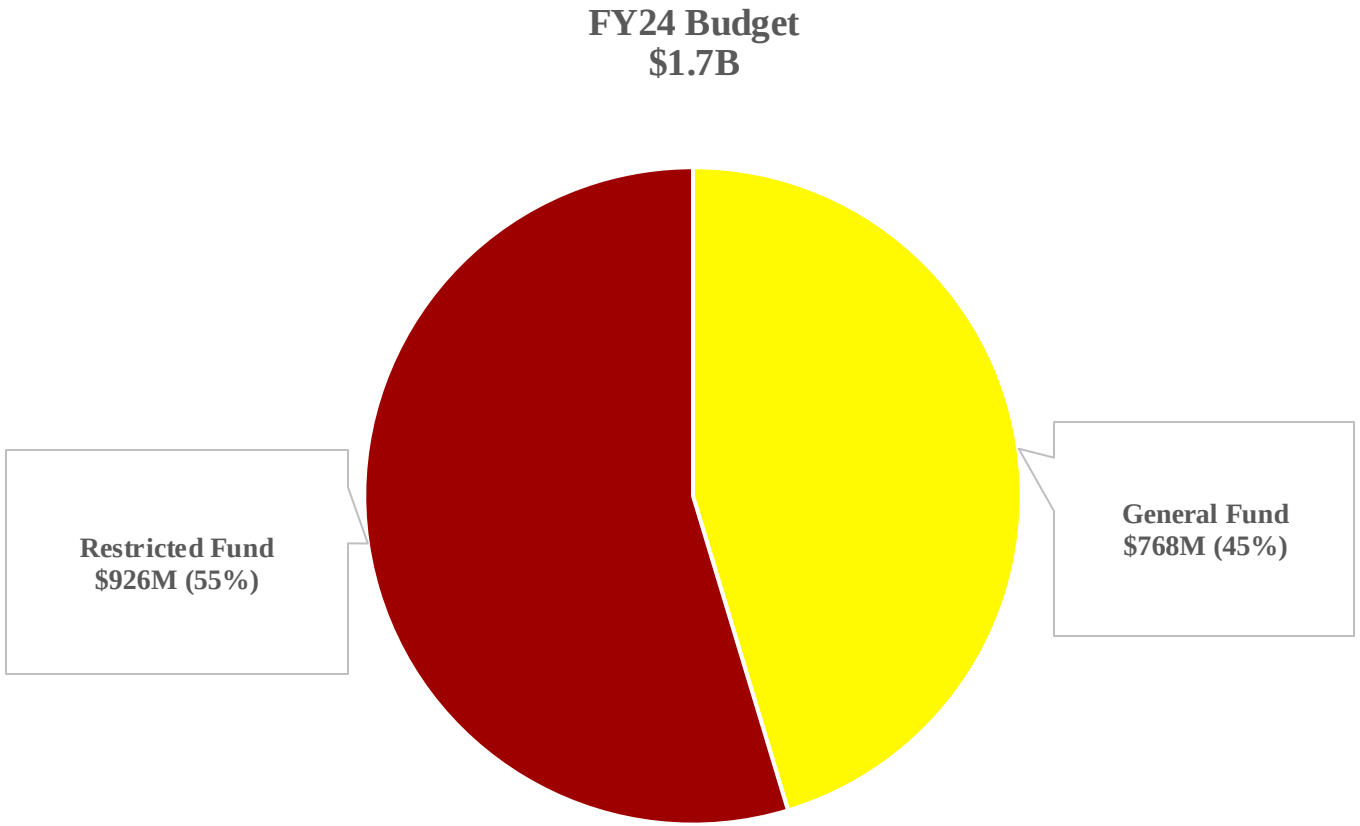
- Revenue
  - Tuition and Fees, General State Appropriations, Directed State Appropriations, Federal Appropriations, Indirect Cost Recovery (IDC), Sales and Services, Auxiliary, Gifts, Grants, Investment Interest, and Independent Ops (Ames Lab)
- Expenses
  - Salaries and Wages, Fringe Benefits, Financial Aid, Plant Capital, Equipment, Debt Service, Utilities, Supplies, Services, and Travel
- Surplus or Deficit: a surplus occurs when revenues exceed expenses, and a deficit occurs when expenses exceed revenues.
- Net Position (also known as carry forward balance, cash balance, generally university ACF)
  - Cumulative net surplus/ deficit balance
- Balanced Budget
  - Plans annual expenses equal to estimated revenues. Actuals will differ from the budget, causing budget variances.

RMM Budget Concepts and Terms

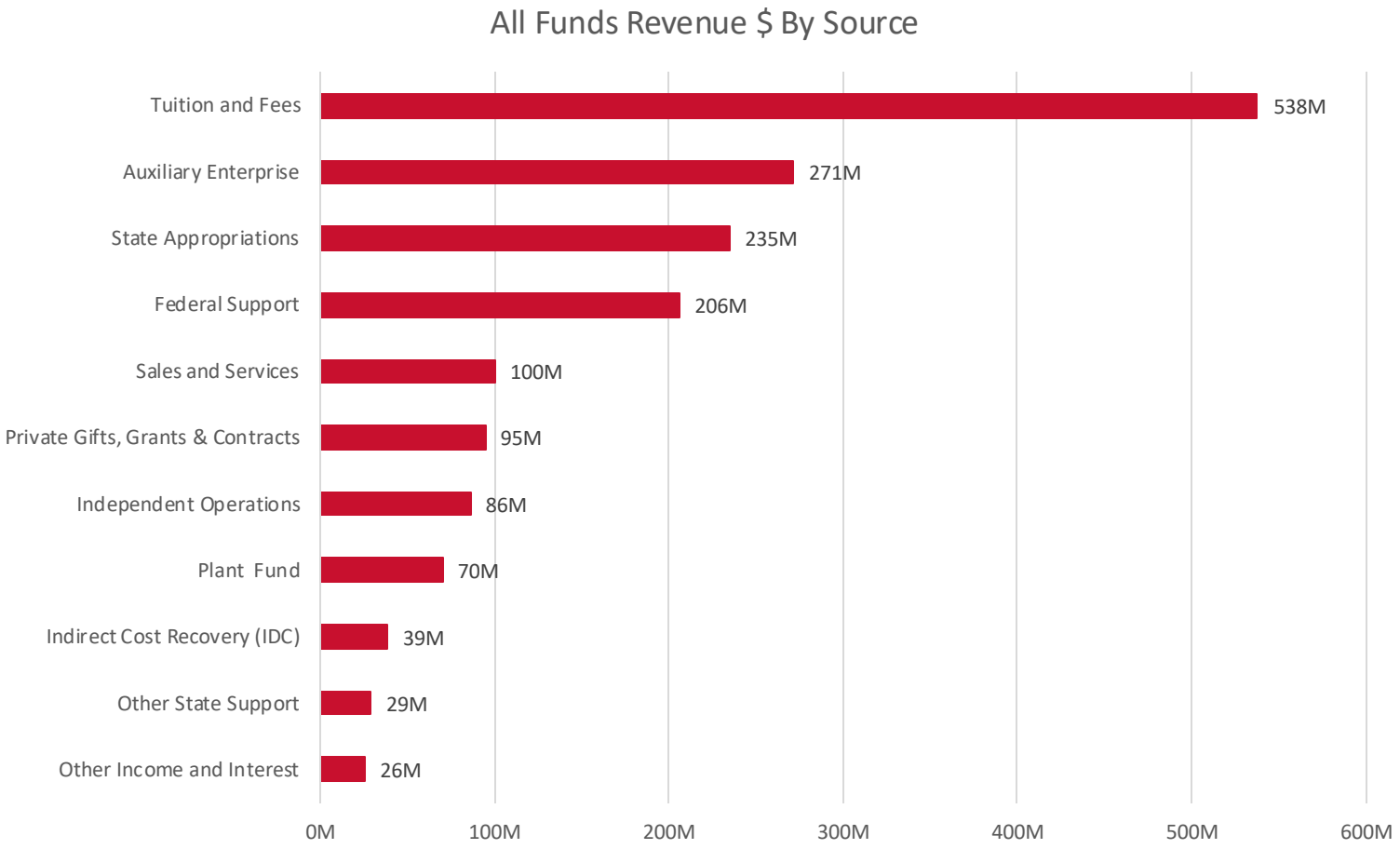
- General Fund (Workday Term: Legislative and Advance Commitment Funds)
  - Fund sources that support instruction, research, financial aid, library, student activities, all institutional and academic support offices, continuing education, public service and physical plant.
- Restricted Funds
  - Fund sources that are restricted by a gift, grant, contract, or a unit providing service to the institution (Fee for service, auxiliary, Ames Lab)
- All Funds
  - Includes both general fund and restricted fund sources

FY24 Budget Background

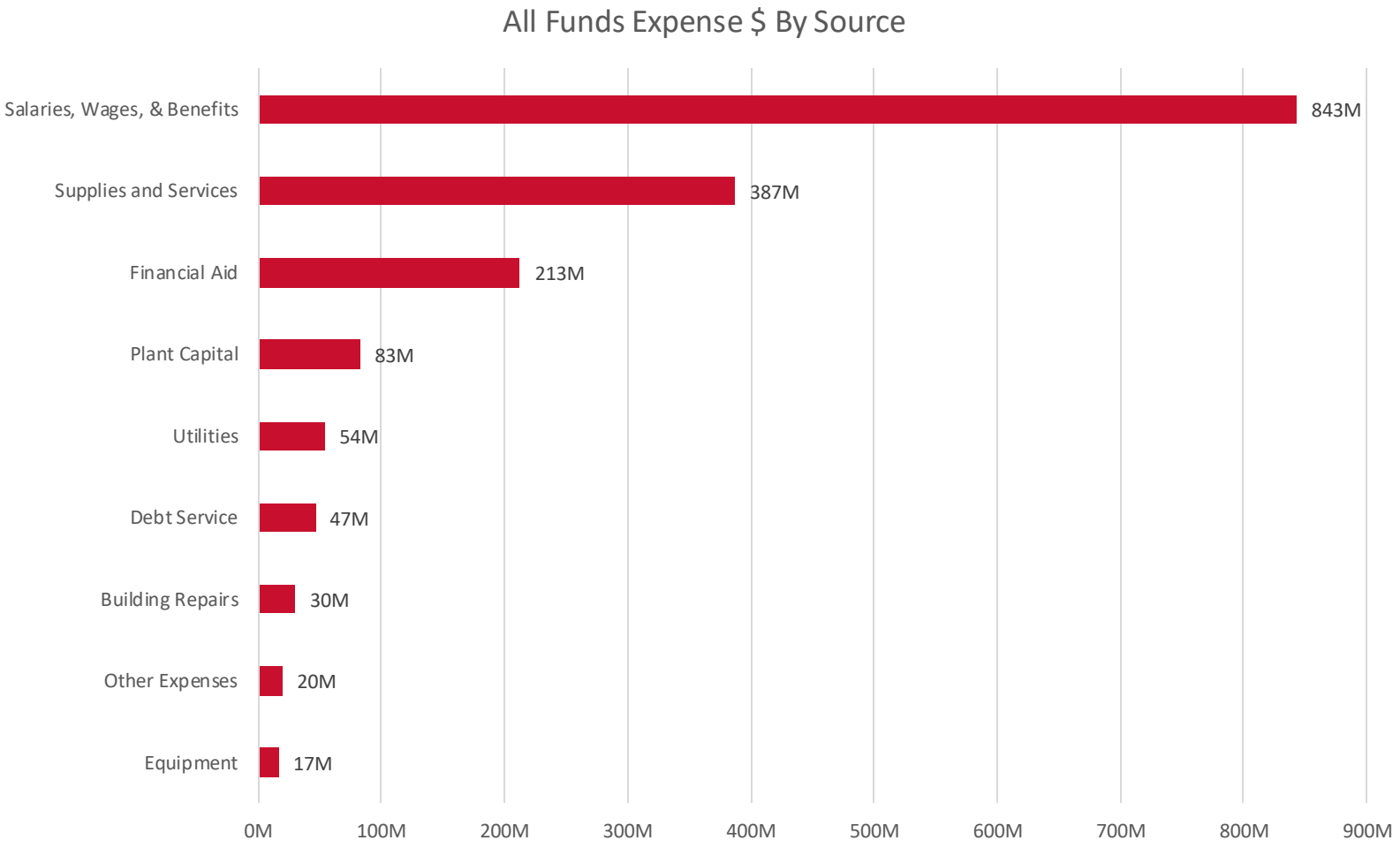
FY24 All Funds Budget



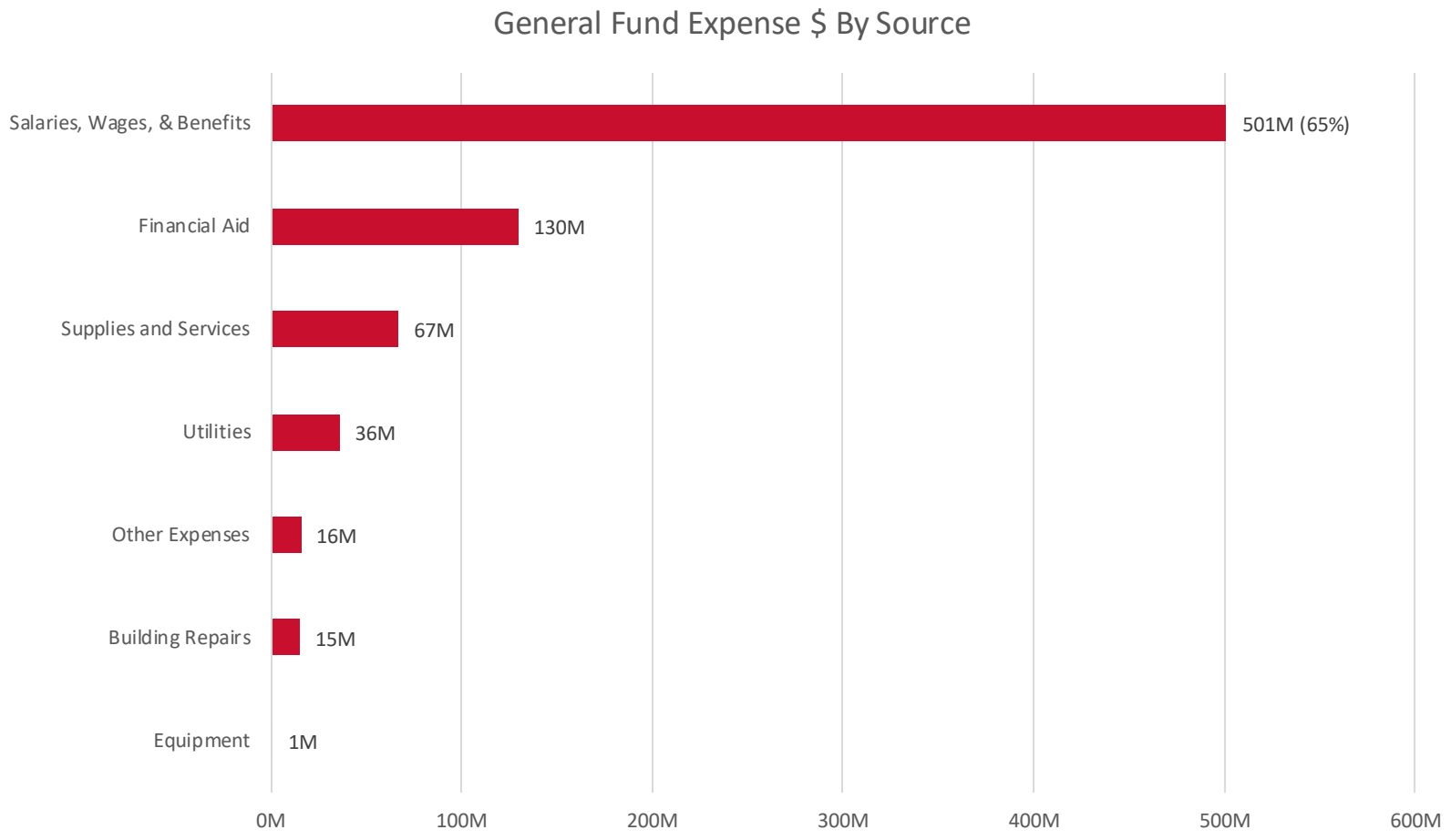
FY24 All Funds Budget



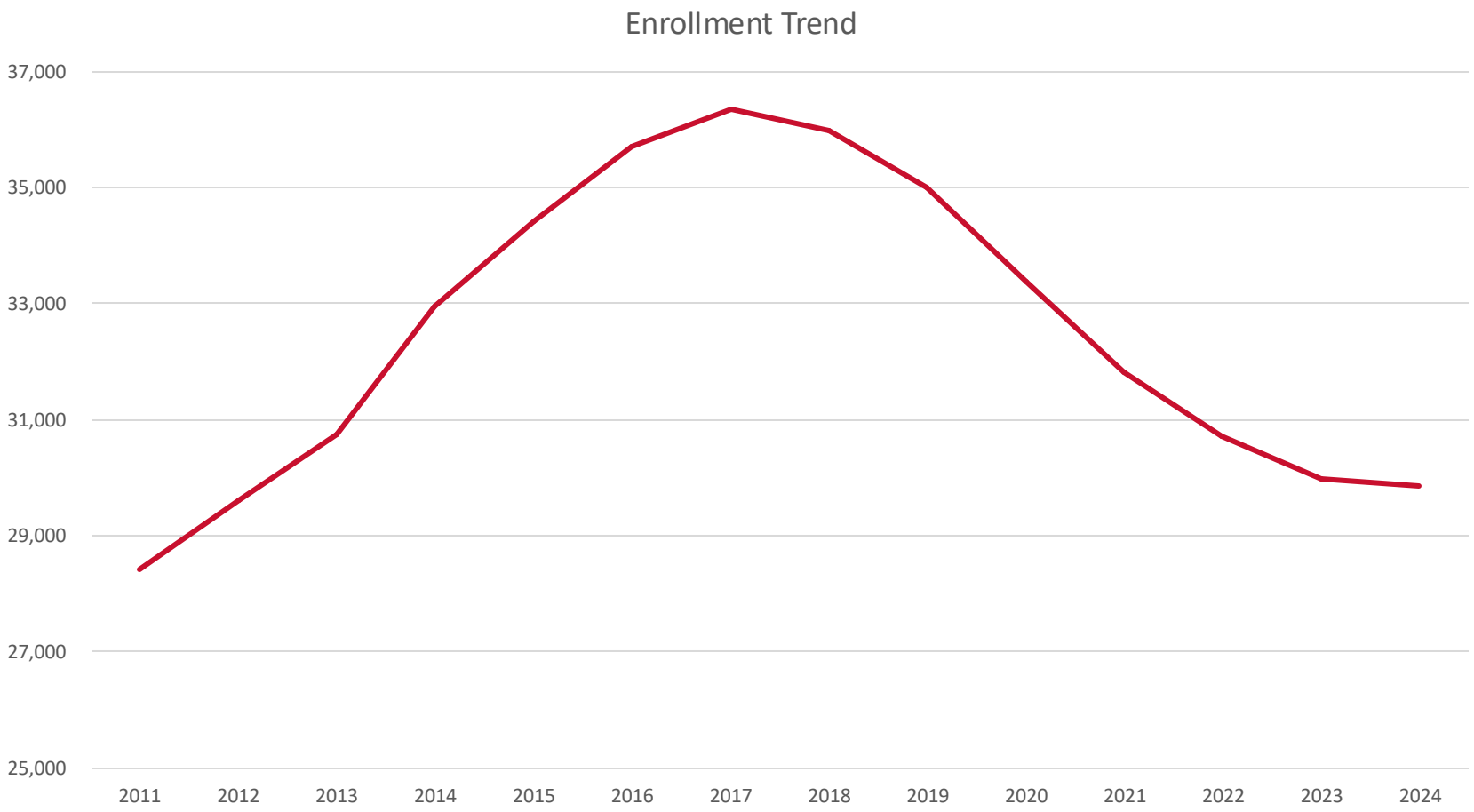
FY24 All Funds Budget



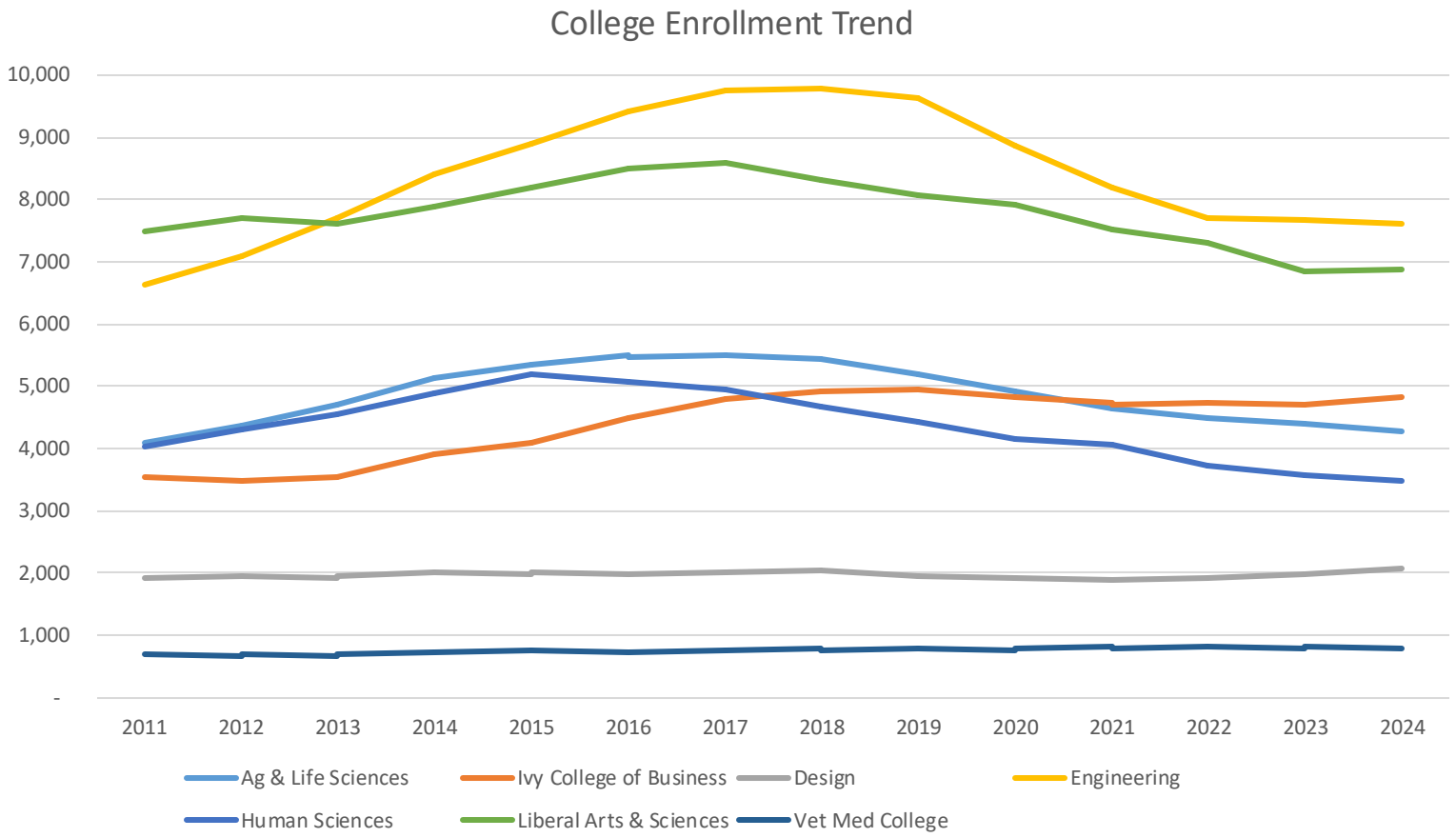
FY24 General Fund Budget



ISU Enrollment Trend

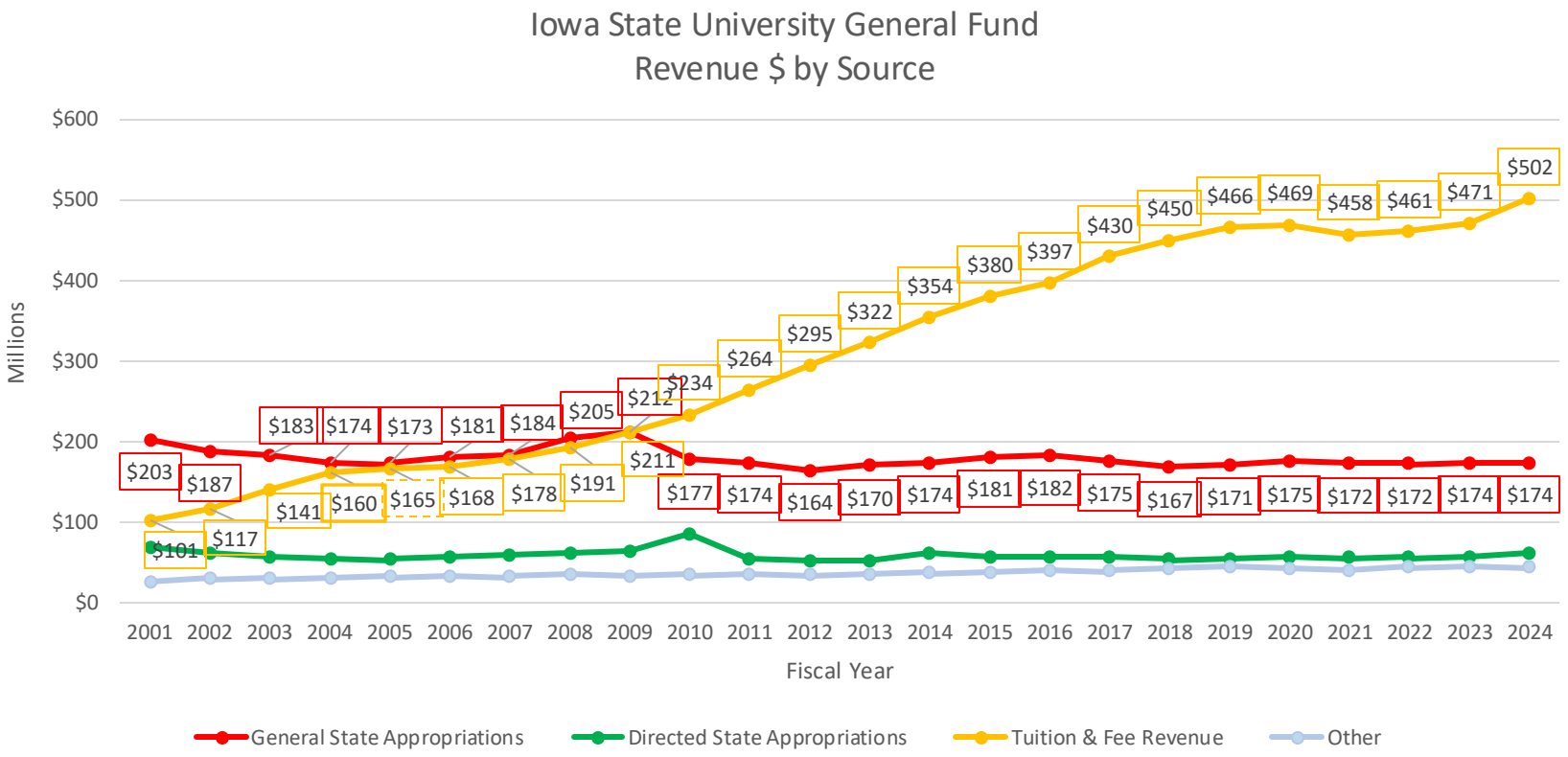


College Enrollment Trend



- College Enrollment/SCH trends correlate to revenue distribution – incentivizes growth

General Fund Revenue Trend



RMM Revenue Distribution

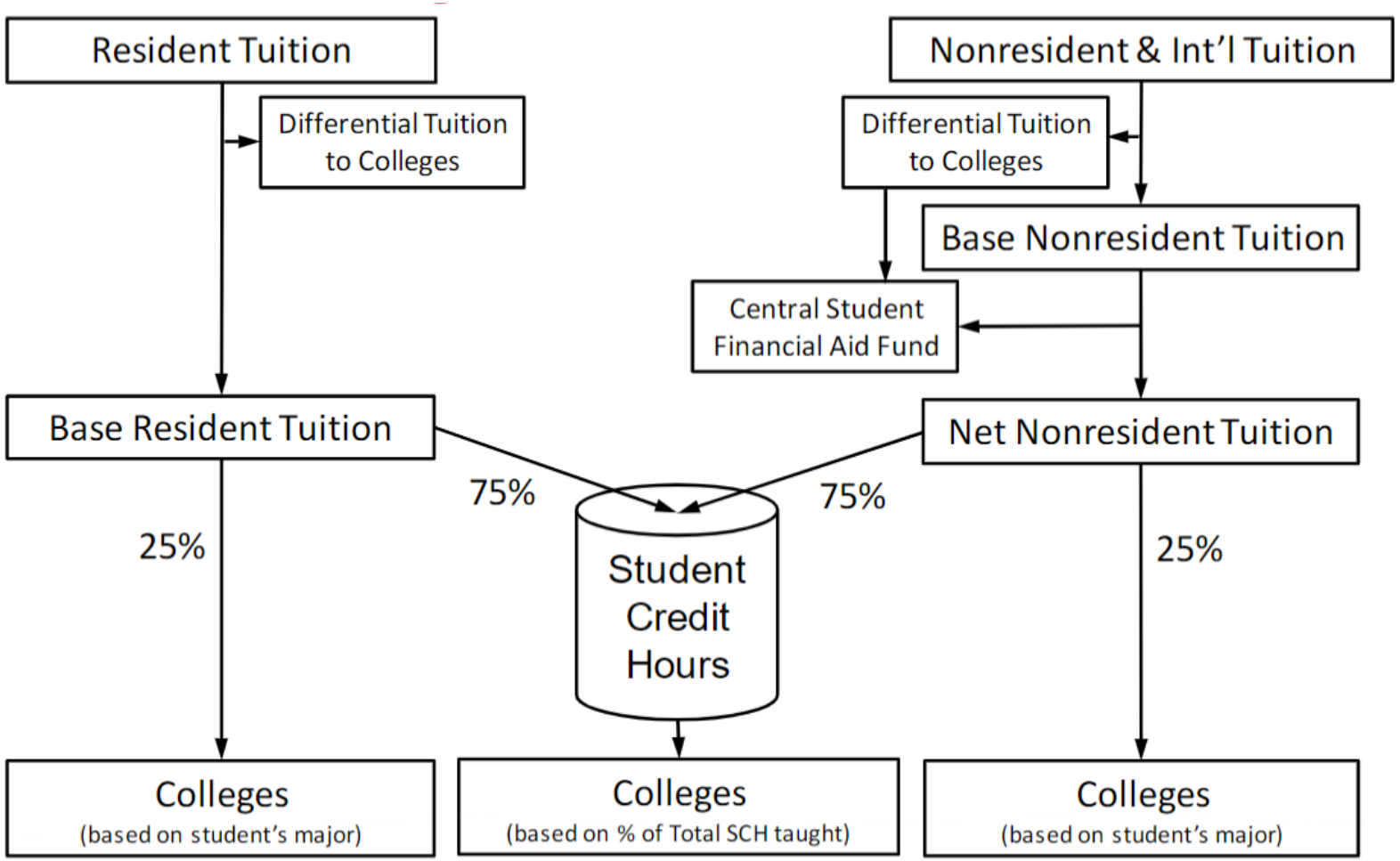
RMM Revenue Distribution – Appropriations

- General University State Appropriations
  - Colleges
  - Research
  - Extension
  - Strategic Initiatives
  - Undergraduate Resident Financial Aid
- Directed State and Federal Appropriations
  - 100% to Designated Unit
- Capital Appropriations
  - 100% to Designated Capital Project
- Note: Within Academic Affairs Division the Provost has the discretion to transfer general university state appropriations within that division as deemed necessary.

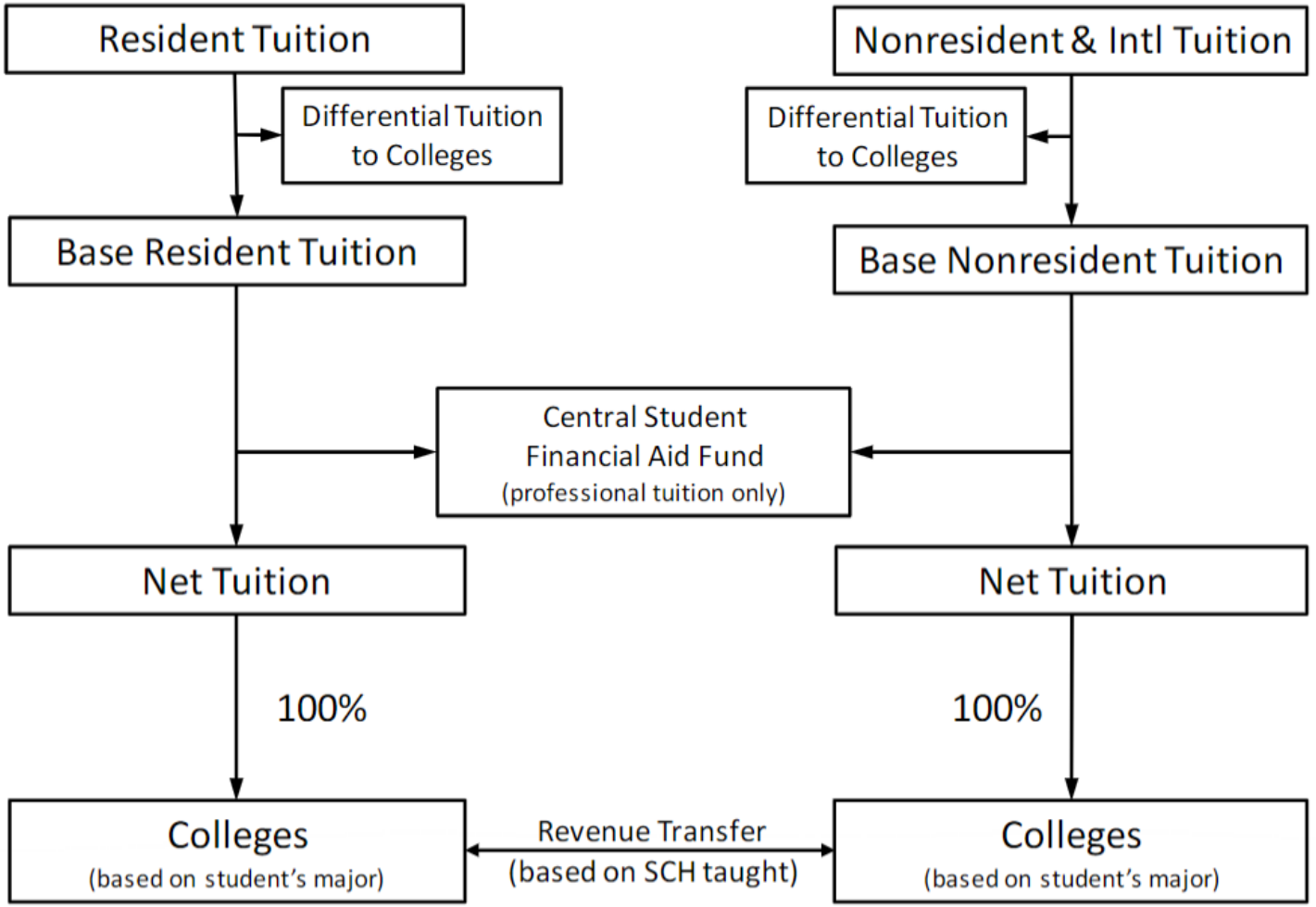
RMM Revenue Distribution – Tuition

- Tuition revenue distributed to colleges based on RMM formulas that factor in
  - Tuition $ Assessed
  - Student Level (Undergrad/Grad/Prof)
  - Residency
  - College of Enrollment
  - Student Credit Hours (SCH) taught by college
  - Differential tuition rates
  - Non-resident student financial aid

RMM Revenue Distribution – Tuition (Undergraduate)



RMM Revenue Distribution – Tuition (Graduate & Professional)



Example – Undergraduate Tuition Revenue Distribution

Assessment								
Student	Residency	Enrollment College	SCH Taught by Engineering	SCH Taught by LAS	SCH Grand Total	Base Tuition Assessed	Differential Tuition Assessed	Total Tuition Assessed
Bob (Undergrad)	Iowa	LAS		12	12	$4,491		$4,491
Jessica (Undergrad)	US Non-Resid	Engineering	9	6	15	$13,084	$1,787	$14,871
Iowa State University Total			**9**	**18**	**27**	**$17,575**	**$1,787**	**$19,362**
SCH Taught			9	18				
SCH Total			27	27				
SCH Rate %			**33%**	**67%**				

Revenue Distribution		1. Distribute Differential			2. Distribute Base 25% on Enrollment				3. Distribute Base 75% on SCH %			Total
Unit	Total Tuition Assessed	Differential Assessment	Financial Aid Withholding	Differential Distribution	Base Tuition Assessment	Financial Aid Withholding	Subtotal Base After SFA Withhold	25% Standard Distribution	75% SCH Pool	Calculated SCH Rate	SCH Pool Distribution	Grand Total Distribution
LAS	$4,491	$0	$0	$0	$4,491	$0	$4,491	$1,123		67%	$6,530	$7,653
Engineering	$14,871	$1,787	($290)	$1,497	$13,084	($4,579)	$8,505	$2,126		33%	$3,217	$6,840
Student Financial Aid	$0	$0	$290	$290	$0	$4,579	$0	$0			$0	$4,869
Iowa State University	**$14,871**	**$1,787**	**$0**	**$1,787**	**$17,575**	**$0**	**$12,996**	**$3,249**	**$9,747**		**$9,747**	**$19,362**

Student Financial Aid Budget - Example Budget	
Undergrad Resident - State Appropriations	$1,000
Undergrad Non-Resident - Base Tuition	$4,579
Undergrad Non-Resident - Differential Tuition	$290
Total Student Financail Aid Budget	**$5,869**

RMM Revenue Distribution – Indirect Cost Recovery

- Also referred to as Facilities and Administrative Cost Recovery (F&A), IDC, Overhead
- Funds administrative expenses that support research activities

Restricted Fund Distribution

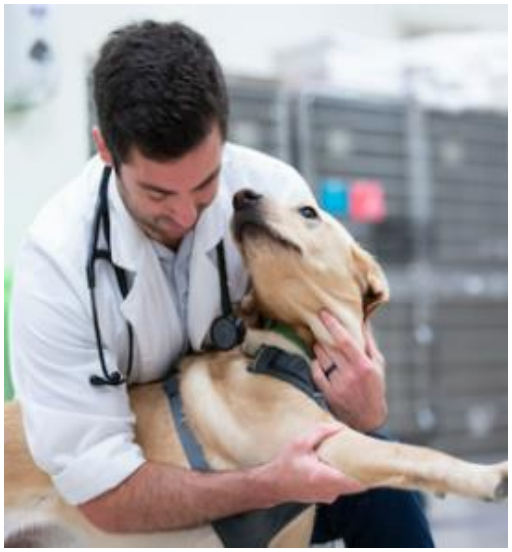
- 15% Principal Investigator Fund
- 14% Research Infrastructure Fund
- 6% Faculty Start-Up Fund

General Fund Distribution

- 10% to Administering Unit (College)
- 10% Interdisciplinary Research Support (VPR)
- 45% Research Overhead (VPR)

RMM Revenue Distribution – Restricted Revenues

- Restricted revenues are allocated directly to the designated units/purpose or service provider (gifts, grants, fees, auxiliary, fee for service unit)



Business Analytics Symposium

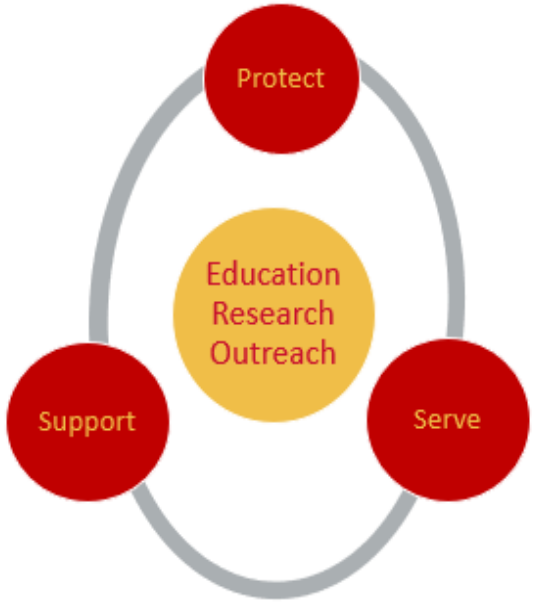
IOWA STATE UNIVERSITY FOUNDATION

AMES NATIONAL LABORATORY

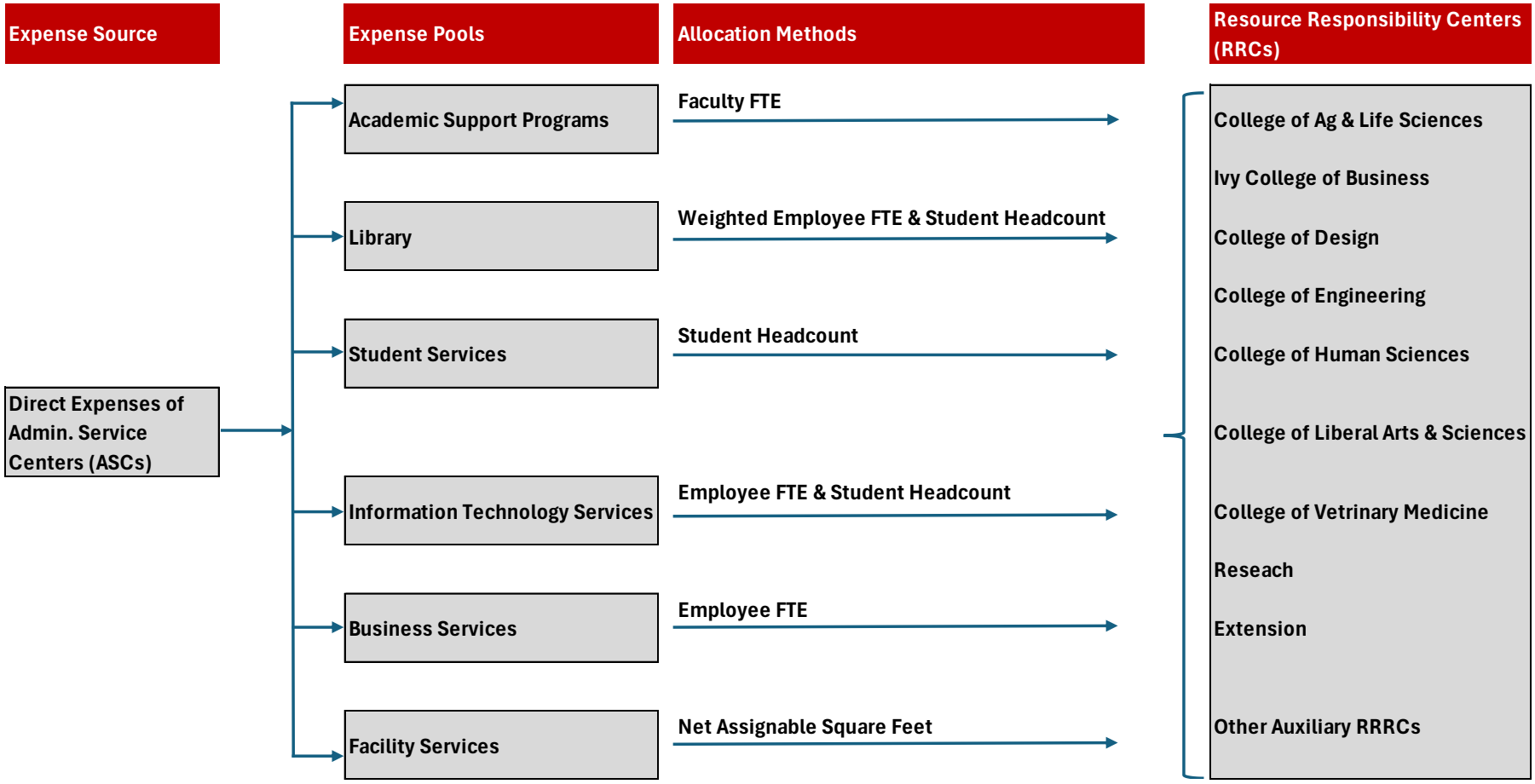
RMM University-Wide Services (ASC Funding)

University-Wide Services (UWS)

- Administrative Service Centers receive their funding from the UWS allocation to RRCs. ASC budgets are grouped into 6 cost pools, changes approved by Sr. Leadership.
- Academic Support Programs
  - Provost Office, Graduate College, CELT
- Library
- Student Services
  - Dean of Students, Student Affairs Admin, Counseling & Wellness, Enrollment Management
- Information Technology Services
  - IT, Enterprise Systems, Security
- Business Services
  - Finance and HR Service Delivery, Treasury, Controller, UHR, General Counsel, Payroll, EH&S, DPS, etc.
- Facility Services
  - Excludes construction, discretionary improvements, utilities



University-Wide Services (UWS)



Note: FTE = Full Time Equivalency

How Resource Management Models Impact Faculty/Staff Investment and Student Retention

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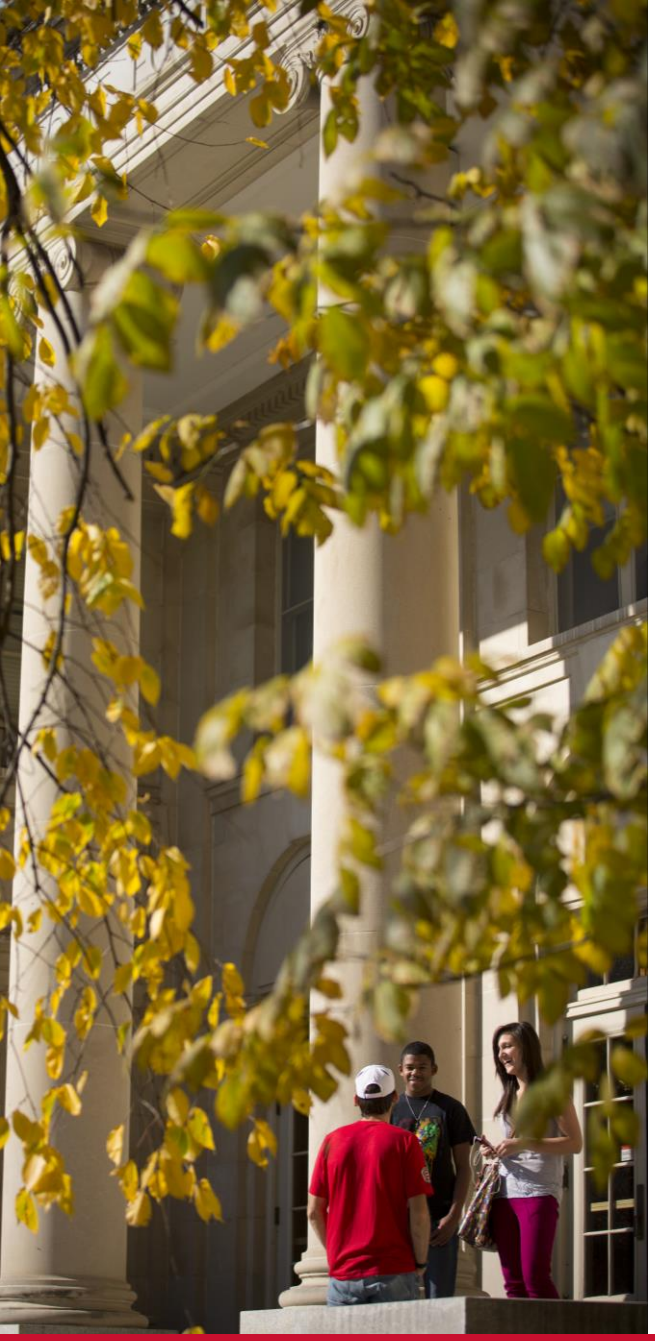


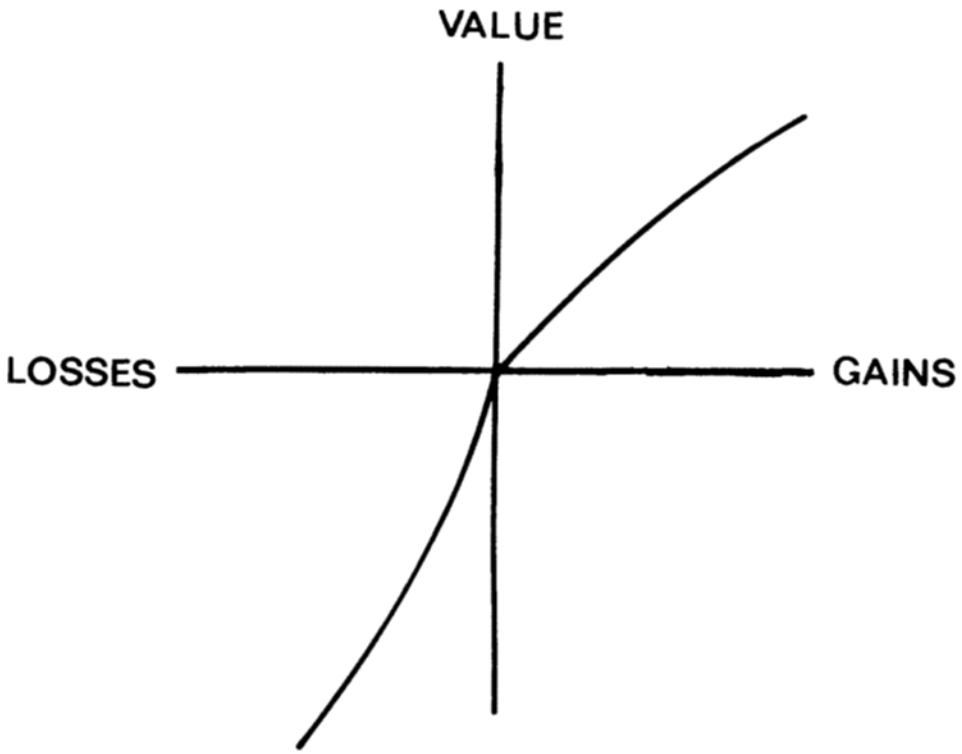
Measuring performance

- Graduation rates
- Retention rates

RCM-type budget models

- Budgets prepared
- Resources are allocated
- Expenses assigned to revenue centers
- Overhead fee paid mid-year

Prospect Theory Utility Curve



Kahneman & Tversky, 1979.

Sample Stata Code & Output

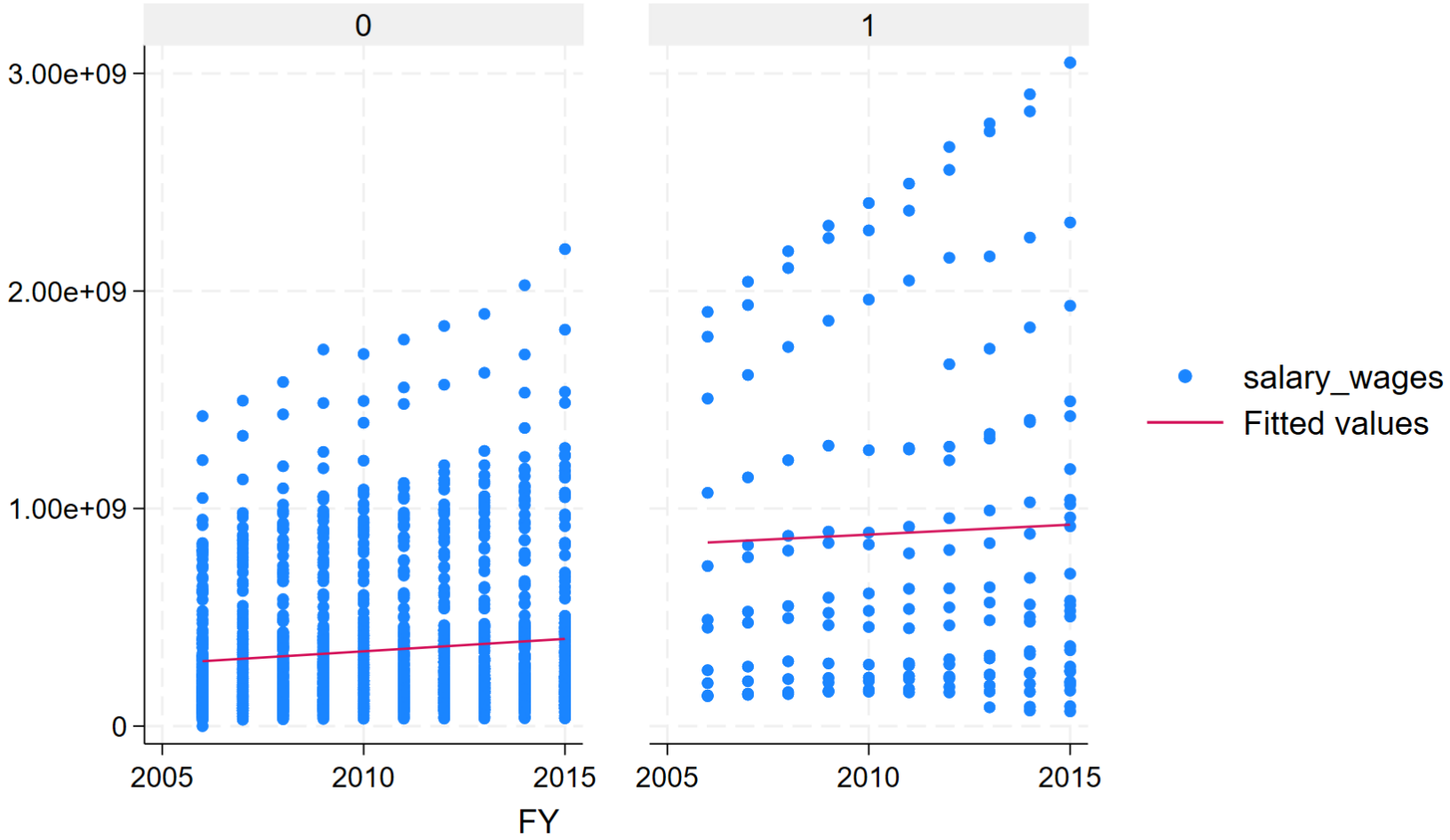
```
. xtreg salary_wages rcm locale instsize landgrnt infl_pct_change, re

Random-effects GLS regression                   Number of obs     =      1,642
Group variable: FY                              Number of groups  =         10

R-squared:                                      Obs per group:
     Within  = 0.3520                                         min =        164
     Between = 0.8427                                         avg =      164.2
     Overall = 0.3571                                         max =        165

                                                Wald chi2(5)      =     908.81
corr(u_i, X) = 0 (assumed)                      Prob > chi2       =     0.0000
```

salary_wages	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
rcm	4.43e+08	2.90e+07	15.25	0.000	3.86e+08	5.00e+08
locale	-7941029	1062945	-7.47	0.000	-1.00e+07	-5857695
instsize	2.32e+08	1.25e+07	18.58	0.000	2.08e+08	2.57e+08
landgrnt	-1.29e+08	1.87e+07	-6.90	0.000	-1.65e+08	-9.22e+07
infl_pct_change	-1.11e+09	6.54e+08	-1.70	0.089	-2.39e+09	1.68e+08
_cons	-3.03e+08	7.53e+07	-4.03	0.000	-4.51e+08	-1.56e+08

Results: Investment in Faculty/Staff

Variable	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
RCM Coefficient		4.43E+08	4.45E+08	4.66E+08	5.51E+08	5.43E+08
RCM p-value		0.000*	0.000*	0.000*	0.000*	0.000*
Locale Coefficient	-7288512	-7941029	-7984322	-6785295	-1.10E+07	
Locale p-value	0.000*	0.000*	0.000*	0.000*	0.000*	
Institution Size	2.58E+08	2.32E+08	2.32E+08	2.42E+08		
Institution Size p-value	0.000*	0.000*	0.000*	0.000*		
Land Grant Status	-1.58E+08	-1.29E+08	-1.29E+08			
Land Grant Status p-value	0.000*	0.000*	0.000*			
Inflation Percent Change	-1.64E+09	-1.11E+09				
Inflation Percent Change p-value	0.019**	0.000*				
Constant	-3.28E+08	-3.03E+08	-3.26E+08	-6.08E+08	5.36E+08	3.49E+08
Constant p-value	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
Model p-value	0.000*	0.000*	0.000*	0.000*	0.000*	0.000*
R^2 value	0.2657	0.3571	0.3560	0.3373	0.1883	0.1427
Adjusted R^2 value	0.2639	0.3552	0.3519	0.3361	0.1873	0.0142

Results: Investment in Faculty/Staff



Graphs by RCM

Results: Student Retention

Variable	Model 1	Model 2	Model 3	Model 4	Model 5
RCM Coefficient		4.735	5.318	7.235	7.221
RCM p-value		0.000*	0.000*	0.000*	0.000*
Locale	0.033	0.027	0.068	-0.033	
Locale p-value	0.196	0.288	0.007**	0.216	
Institution size	5.47385	5.159	5.495		
Institution p-value	0.000*	0.000*	0.000*		
Land grant	-4.548	-4.266			
Land grant p-value	0.000*	0.000*			
Constant	62.839	63.387	53.95	80.117	79.522
Constant p-value	0.000*	0.000*	0.000*	0.000*	0.000*
Model p-value	0.000*	0.000*	0.000*	0.000*	0.000*
R^2 value	0.231	0.255	0.211	0.057	0.056
Adjusted R^2 value	0.230	0.253	0.210	0.056	0.056

Results: Student Retention

Graphs by RCM

Mediation relationship

Equation	Obs	Parms	RMSE	"R-sq"	F	P>F
retention	1,632	5	8.104415	0.2440	131.2906	0.0000
salary_wages	1,632	5	3.45e+08	0.3544	223.2769	0.0000

	Coefficient	Std. err.	t	P>|t|	[95% conf.	interval]
retention						
rcm	4.485921	.6843248	6.56	0.000	3.14367	5.828171
locale	.0367457	.0251855	1.46	0.145	-.0126538	.0861451
instsize	5.079171	.3001408	16.92	0.000	4.490468	5.667874
landgrnt	-4.216939	.4406032	-9.57	0.000	-5.081148	-3.352729
_cons	63.33489	1.773971	35.70	0.000	59.85539	66.8144
salary_wages						
rcm	4.45e+08	2.91e+07	15.30	0.000	3.88e+08	5.02e+08
locale	-7893284	1070634	-7.37	0.000	-9993249	-5793318
instsize	2.35e+08	1.28e+07	18.38	0.000	2.10e+08	2.60e+08
landgrnt	-1.29e+08	1.87e+07	-6.89	0.000	-1.66e+08	-9.23e+07
_cons	-3.38e+08	7.54e+07	-4.48	0.000	-4.86e+08	-1.90e+08

Investment in F/S as Control

Random-effects GLS regression — Number of obs = 1,632
Group variable: FY — Number of groups = 10

R-squared:
Within = 0.4220
Between = 0.7787
Overall = 0.4242

Obs per group:
min = 163
avg = 163.2
max = 164

Wald chi2(5) = 1198.11
corr(u_i, X) = 0 (assumed) — Prob > chi2 = 0.0000

retention	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
rcm	-.6277113	.638946	-0.98	0.326	-1.880022	.6246
salary_wages	1.15e-08	5.09e-10	22.56	0.000	1.05e-08	1.25e-08
locale	.1274069	.0223503	5.70	0.000	.0836011	.1712126
instsize	2.384987	.2879436	8.28	0.000	1.820627	2.949346
landgrnt	-2.735064	.3901992	-7.01	0.000	-3.49984	-1.970287
_cons	67.21638	1.558141	43.14	0.000	64.16248	70.27028

Discussion

- RCM-type budget models are positively correlated with
  - Investment in faculty/staff
  - Student retention
- Mediation effect supported
- Negative framing
  - More aggressive budgeting supported

Conclusion

- RMM model breakdown
- Tuition and enrollment discussion
- Administrative fee discussion
- Increased investment in faculty/staff
- Improved retention rates
- Increased investment in faculty/staff improves retention in RMM models
- RMM performs well against other budget models

Questions?

Contact Me

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BUILDING A BUDGET: the basics

"Don't tell me what you value, show me your budget, and I'll tell you what you value"– President Joe Biden

Budgeting exercise

You are the director of a general funds unit. You want to propose a new program, but, have been told that there's no new funding and you must reallocate internally in order to launch the program.

- Total budget $500,000
- Salary and benefits commitments = $255,000
  - 1 director, 2 program specialists, 1 GA
- Program 1 existing budget = $100,000
  - Budget utilization in previous FY = 92%
- Program 2 existing budget = $100,000
  - Budget utilization in previous FY = 91%
- Travel, supplies, conferences, professional development budget = $25,000
- Utilities and rent = $20,000