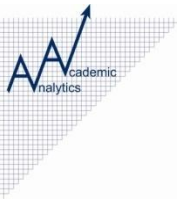


Using comparative data on **faculty
scholarly productivity** to drive
institutional improvement

Lawrence Martin

Dean of the Graduate School, Stony
Brook University. Founder, *Academic
Analytics*, LLC.



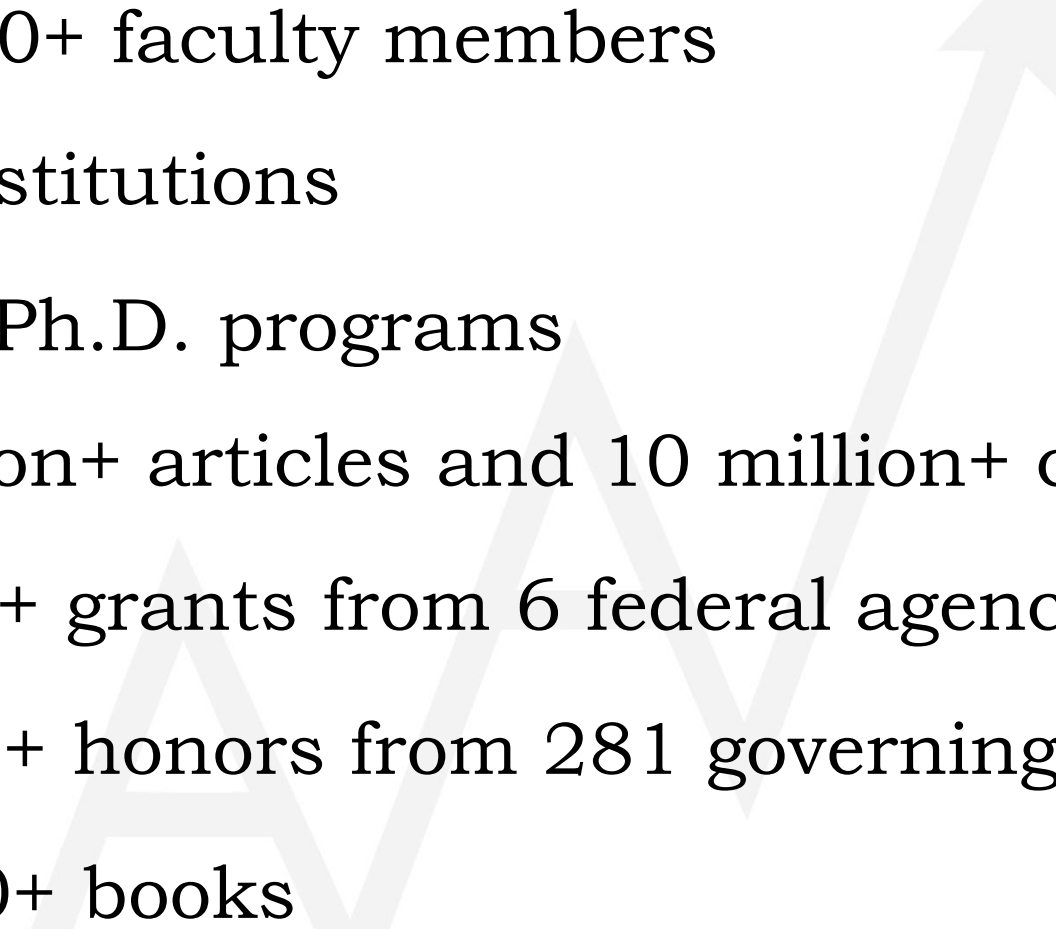
Faculty spend a lot of their time, and their university's money, on scholarship

- Publication of knowledge (books and journals)
- Citations for journal publications
- Funding for knowledge production (research grants or fellowships)
- Honors and awards

Overview

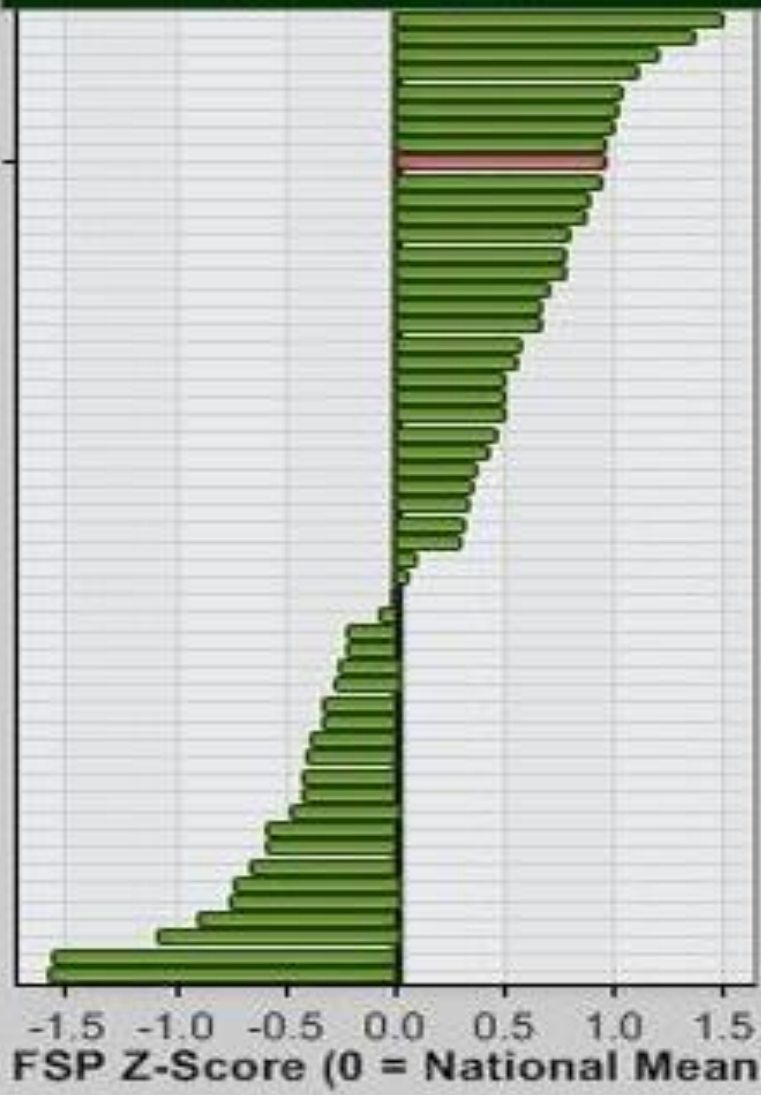
- Created in 2005, modeled on the NRC study, focused on ranking Ph.D. programs based on *per capita* productivity of faculty
- Steering committee formed with Colorado Boulder, MIT and Ohio State in 2008, need for a unit record database identified
- Database is now organized with a person being the unit record and data is attached to that individual

Data Statistics

- 170,000+ faculty members
 - 383 institutions
 - 8,737 Ph.D. programs
 - 1 million+ articles and 10 million+ citations
 - 75,000+ grants from 6 federal agencies
 - 26,000+ honors from 281 governing societies
 - 56,000+ books
- 

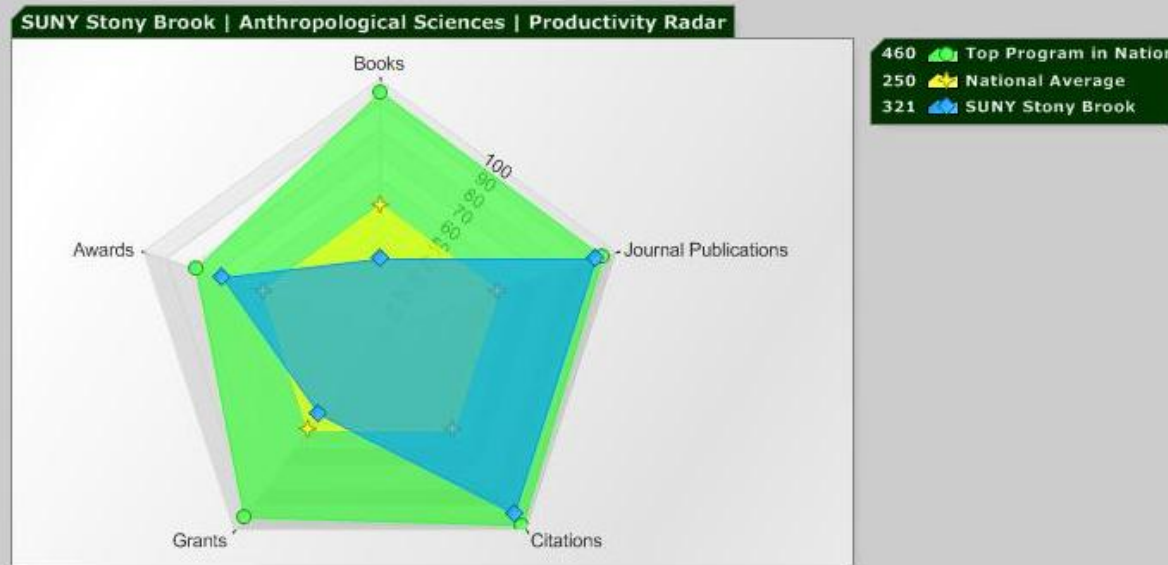
**Stony Brook University, State
University of New York | FSP
2007-08 Internal Program
Comparison**

Anthropological
Sciences



Analytical Tools: Productivity Radar

Productivity Radar (see note below):



The unit of analysis is the program's percentile in each area of productivity (e.g., "the 85th percentile in terms of journal articles"). The relative area of the polygon represents the overall productivity. The extension of the polygon towards each apex shows how strong the program is in each of the productivity areas. The number in the chart legend is the sum of the percentiles on each productivity area (the top program in the nation has the largest sum, the national average is in the center, etc.).

Employee IntraNet: Discipline Custom FSP Viewer

Choose a discipline:

Assign Weights for Custom FSP Score

Books Weight	20.0
Grants Weight	20.0
Citations Weight	20.0
Publications Weight	20.0
Awards Weight	20.0

Use Slider To Adjust Percentages

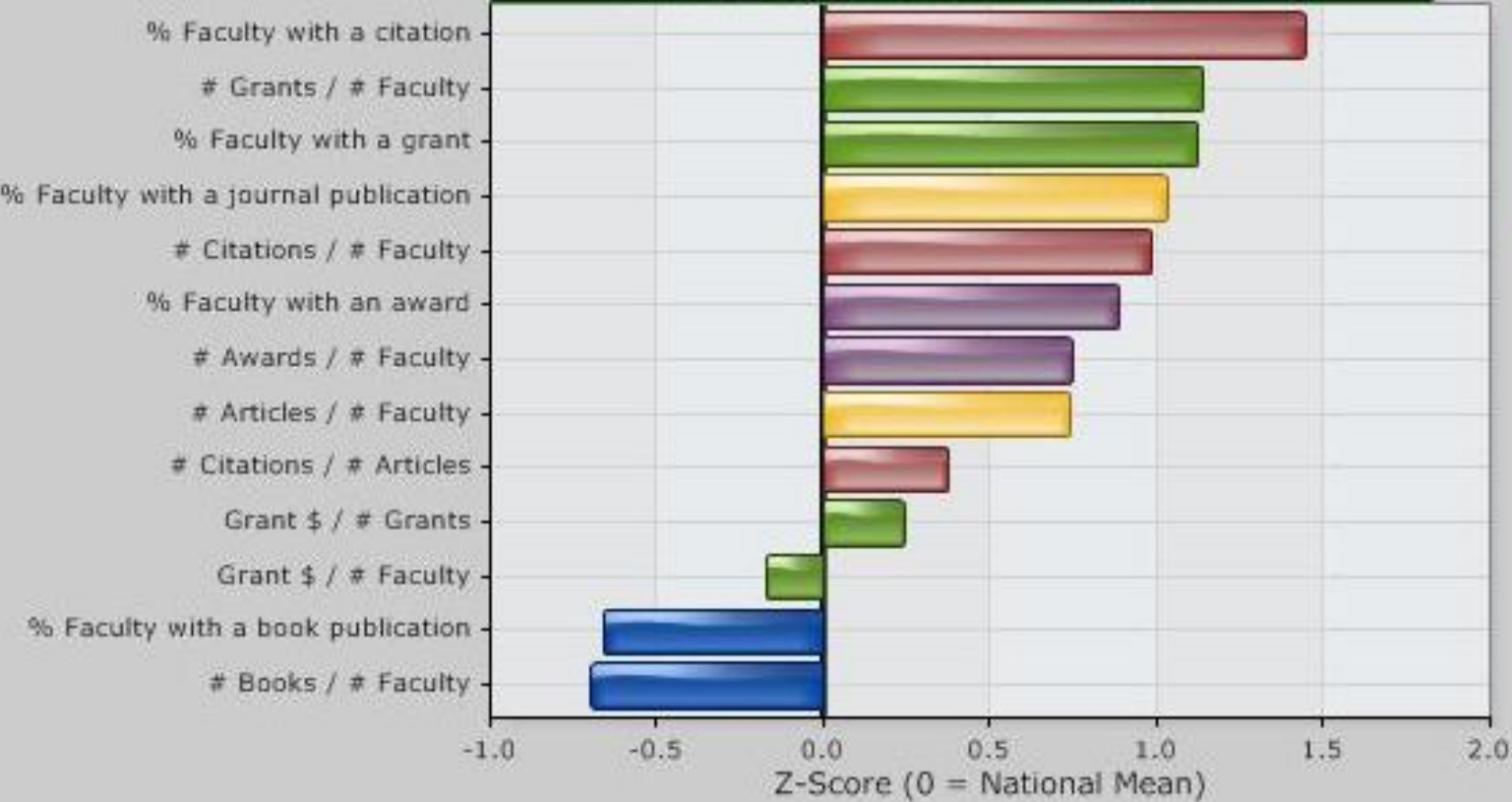
Generate FSPs

Export to Excel

#Fac	Institution	Program	B1	B2	J1	J2	C1	C2	C3	G1	G2	G3	G4	A1	A2	FSP
15	The Pennsylvania State University	Anthropology	60%	1.53	73%	3.47	73%	65.60	14.26	60%	0.87	\$70160	\$80953	13%	0.20	2.20
27	Washington University in St. Louis	Anthropology	48%	1.00	81%	4.00	70%	24.30	4.72	44%	1.15	\$68307	\$59494	19%	0.30	2.09
31	Harvard University	Anthropology	52%	1.32	68%	3.03	58%	28.45	7.35	26%	0.55	\$17125	\$31227	23%	0.26	1.71
23	University of Pennsylvania	Anthropology	57%	1.57	48%	1.83	39%	7.87	3.93	39%	0.65	\$33378	\$51180	43%	0.61	1.67
22	Stanford University	Anthropology	55%	1.77	59%	1.27	50%	6.36	4.12	41%	0.73	\$27418	\$37700	27%	0.36	1.63
15	Brown University	Anthropology	60%	1.40	60%	1.20	60%	4.00	2.40	33%	0.60	\$43602	\$72670	27%	0.47	1.50
15	Northwestern University	Anthropology	33%	0.80	67%	3.53	53%	17.80	3.99	40%	0.73	\$14267	\$19455	40%	0.47	1.49
45	Northwestern University	Medical Anthropology	13%	0.24	80%	7.91	78%	103.62	9.96	33%	0.71	\$187483	\$263648	16%	0.16	1.44
28	University of California, Berkeley	Anthropology	61%	1.11	68%	18.68	50%	50.54	1.44	29%	0.46	\$9606	\$20689	29%	0.32	1.41
28	Stony Brook University, State University of New York	Anthropological Sciences	29%	0.43	71%	3.46	68%	22.04	4.98	36%	0.64	\$23256	\$36177	25%	0.32	1.40
36	University of California, Los Angeles	Anthropology	58%	1.06	58%	2.39	50%	11.33	4.08	22%	0.31	\$11436	\$37426	14%	0.28	1.24
8	Case Western Reserve University	Anthropology	38%	0.50	75%	1.38	63%	5.13	2.93	38%	0.75	\$24373	\$32498	38%	0.50	1.24
14	University of California, Davis	Evolutionary Anthropology	43%	0.57	79%	4.57	71%	16.93	3.20	29%	0.43	\$62170	\$145062	7%	0.07	1.18
39	Emory University	Anthropology	38%	0.64	56%	4.41	49%	20.51	3.74	21%	0.44	\$38101	\$87409	15%	0.21	1.17
31	New York University	Anthropology	45%	0.71	61%	2.23	58%	13.61	4.74	26%	0.42	\$14312	\$34129	16%	0.16	1.11
14	Duke University	Biological Anthropology and Anatomy	0%	0.00	93%	5.21	93%	29.50	4.39	50%	0.64	\$156022	\$242701	7%	0.07	1.09
33	The University of Arizona	Anthropology	48%	0.91	58%	1.58	52%	5.48	2.66	27%	0.55	\$41355	\$75818	15%	0.15	1.09

Stony Brook University, State University of New York | Anthropological Sciences | Program Gauge

-0.68	Books
0.89	Articles
0.93	Citations
0.58	Grants
0.82	Awards



Analytical Tools: Quintile Analysis

Employee IntraNet: Program Quintile Analysis

Please Select a University: and a program:

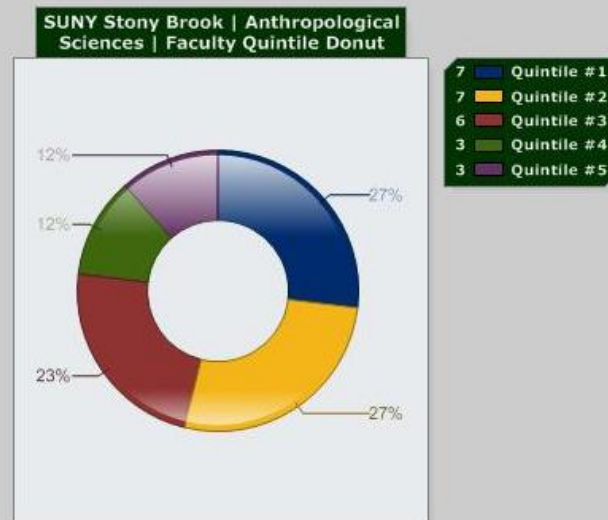
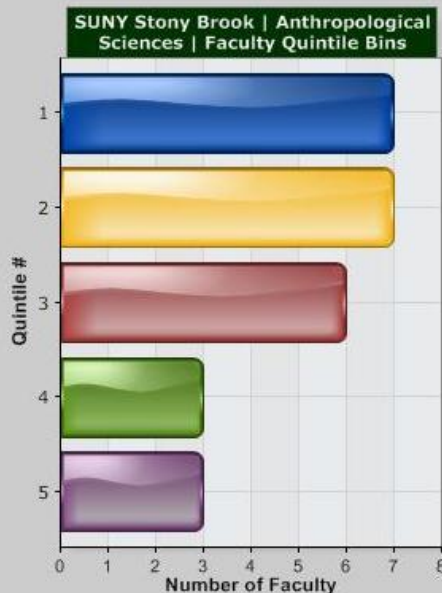
If this program is crosswalked to more than one discipline; please select one:

Description:
All of the faculty members in the selected program have been placed into one of five quintiles based on their individual scholarly productivity. The first quintile represents the most productive faculty members, and the fifth quintile represents the least productive faculty members.

Number of faculty in each quintile:

# Fac Q1	# Fac Q2	# Fac Q3	# Fac Q4	# Fac Q5
7	7	6	3	3

Charts depicting the quintile distribution:



Analytical Tools: Peer Selection Application

Employee IntraNet: Peer Picker Full Data

University and Program Selection

Select a University:

Select a Program:

Select a Crosswalked Discipline (if applicable):

Institution Criteria

AA Classification:

CGS Region:

State:

AAU Member:

Public/Private:

Variable Selection

Available Variables

- Books - Book Publications per Faculty
- Books - Number of Faculty Members Who Have Published Book
- Books - Percentage of Faculty With Book Publication
- Books - Total Number of Books
- Citations - Citations per Faculty Member
- Citations - Citations per Publication
- Citations - Number of Faculty With Citation
- Citations - Percentage Authors With Citation
- Citations - Percentage of Faculty With Citation
- Citations - Total Citations
- Grants - Dollars per Grant
- Grants - Grant Dollars per Faculty Member

Selected Variables

>>

<<

Select the number of schools above selection to compare:

Select the number of schools below selection to compare:

[Generate Report](#)

Analytical Tools: Institution Viewer

Employee IntraNet: Institution Viewer

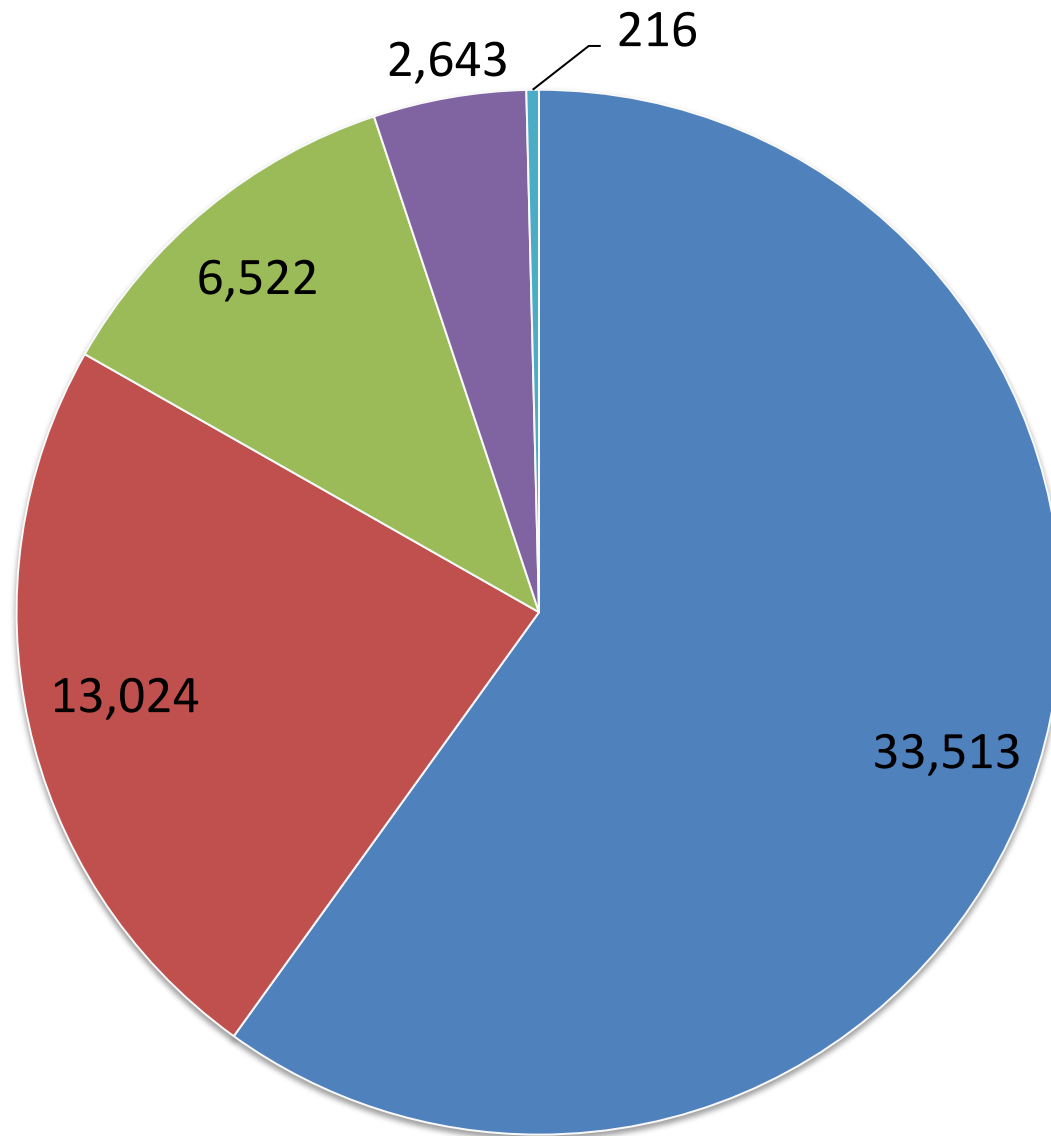
Choose a selection criterion: AAU Member

Export to Excel

Choose AAU membership: AAU Member

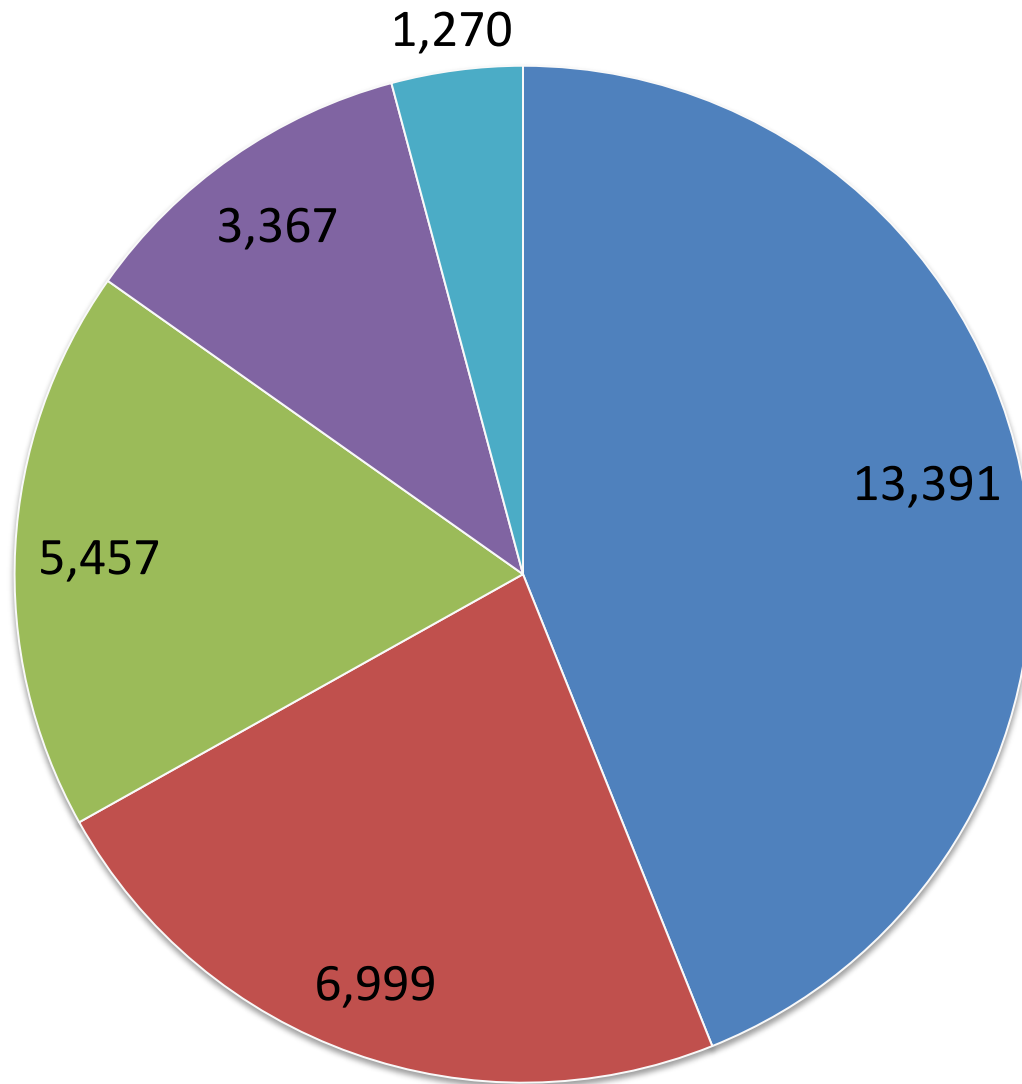
ANUM	SCHOOL	FSP	AACAT	PUBLIC	STATE	AAU	CGSREG	IPESID	CARNEGIE
31	Cal Tech	1.53	Sp.RU-STEM	Private	CA	AAU Member	West region	110404	Doc/STEM: Doctoral, STEM dominant
87	Harvard U.	1.42	LRU	Private	MA	AAU Member	Northeast region	166027	CompDoc
198	Stanford U.	1.33	LRU	Private	CA	AAU Member	West region	243744	CompDoc
123	MIT	1.22	LRU	Private	MA	AAU Member	Northeast region	166683	CompDoc
251	UC - Berkeley	1.13	LRU	Public	CA	AAU Member	West region	110635	CompDoc
167	Princeton U.	1.05	LRU	Private	NJ	AAU Member	Northeast region	186131	CompDoc
49	Columbia U.	1.01	LRU	Private	NY	AAU Member	Northeast region	190150	CompDoc
256	UC - San Diego	0.96	LRU	Public	CA	AAU Member	West region	110680	CompDoc
60	Duke U.	0.94	LRU	Private	NC	AAU Member	South region	198419	CompDoc
153	Northwestern U.	0.91	LRU	Private	IL	AAU Member	Midwest region	147767	CompDoc
326	U. Pennsylvania	0.86	LRU	Private	PA	AAU Member	Northeast region	215062	CompDoc
254	UC - Los Angeles	0.86	LRU	Public	CA	AAU Member	West region	110662	CompDoc
102	Johns Hopkins U.	0.86	LRU	Private	DC	AAU Member	Northeast region	162928	CompDoc
34	Carnegie Mellon U.	0.85	LRU	Private	PA	AAU Member	Northeast region	211440	CompDoc
368	Yale U.	0.81	LRU	Private	CT	AAU Member	Northeast region	130794	CompDoc
261	U. Chicago	0.76	LRU	Private	IL	AAU Member	Midwest region	144050	CompDoc
252	UC - Davis	0.73	LRU	Public	CA	AAU Member	West region	110644	CompDoc
300	U. Michigan - Ann Arbor	0.73	LRU	Public	MI	AAU Member	Midwest region	170976	CompDoc
347	U. Wisconsin - Madison	0.68	LRU	Public	WI	AAU Member	Midwest region	240444	CompDoc
346	U. Washington	0.67	LRU	Public	WA	AAU Member	West region		CompDoc
253	UC - Irvine	0.66	LRU	Public	CA	AAU Member	West region	110653	CompDoc
358	Washington U. St Louis	0.65	LRU	Private	MO	AAU Member	Midwest region	179867	CompDoc
316	UNC - Chapel Hill	0.64	LRU	Public	NC	AAU Member	South region	199120	CompDoc
51	Cornell U.	0.56	LRU	Private	NY	AAU Member	Northeast region	190415	CompDoc
163	Penn State U.	0.55	LRU	Public	PA	AAU Member	Northeast region	214777	CompDoc
35	Case Western U.	0.54	LRU	Private	OH	AAU Member	Midwest region	201645	CompDoc
177	Rutgers - New Brunswick	0.53	LRU	Public	NJ	AAU Member	Northeast region	186380	CompDoc
66	Emory U.	0.52	LRU	Private	GA	AAU Member	South region	139658	CompDoc
351	Vanderbilt U.	0.51	LRU	Private	TN	AAU Member	South region	221999	CompDoc
301	U. Minnesota - Twin Cities	0.47	LRU	Public	MN	AAU Member	Midwest region	174066	CompDoc
146	NYU	0.44	LRU	Private	NY	AAU Member	Northeast region	193900	CompDoc
289	U. Maryland - College Park	0.41	LRU	Public	MD	AAU Member	Northeast region	163286	CompDoc

Books



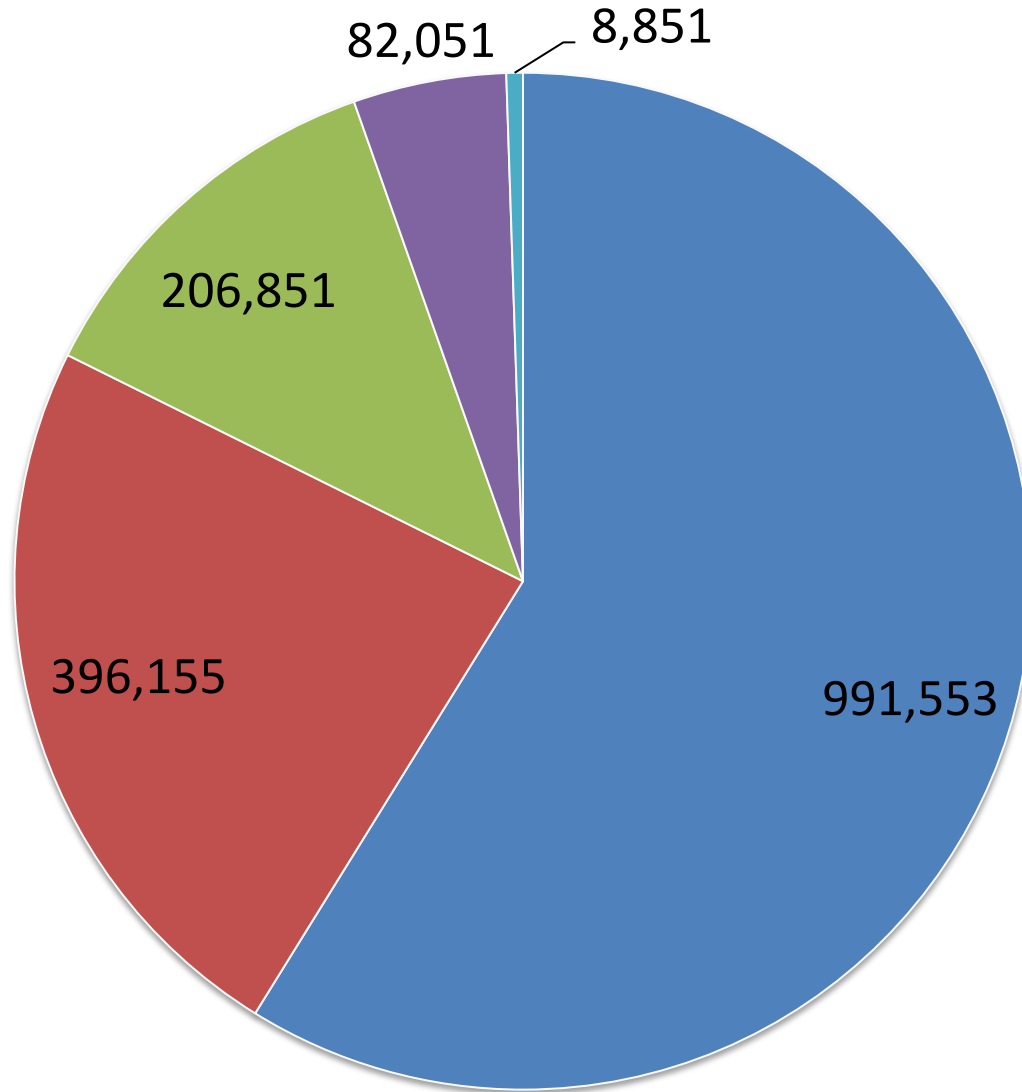
■ 1 ■ 2 ■ 3 ■ 4 ■ 5

Awards



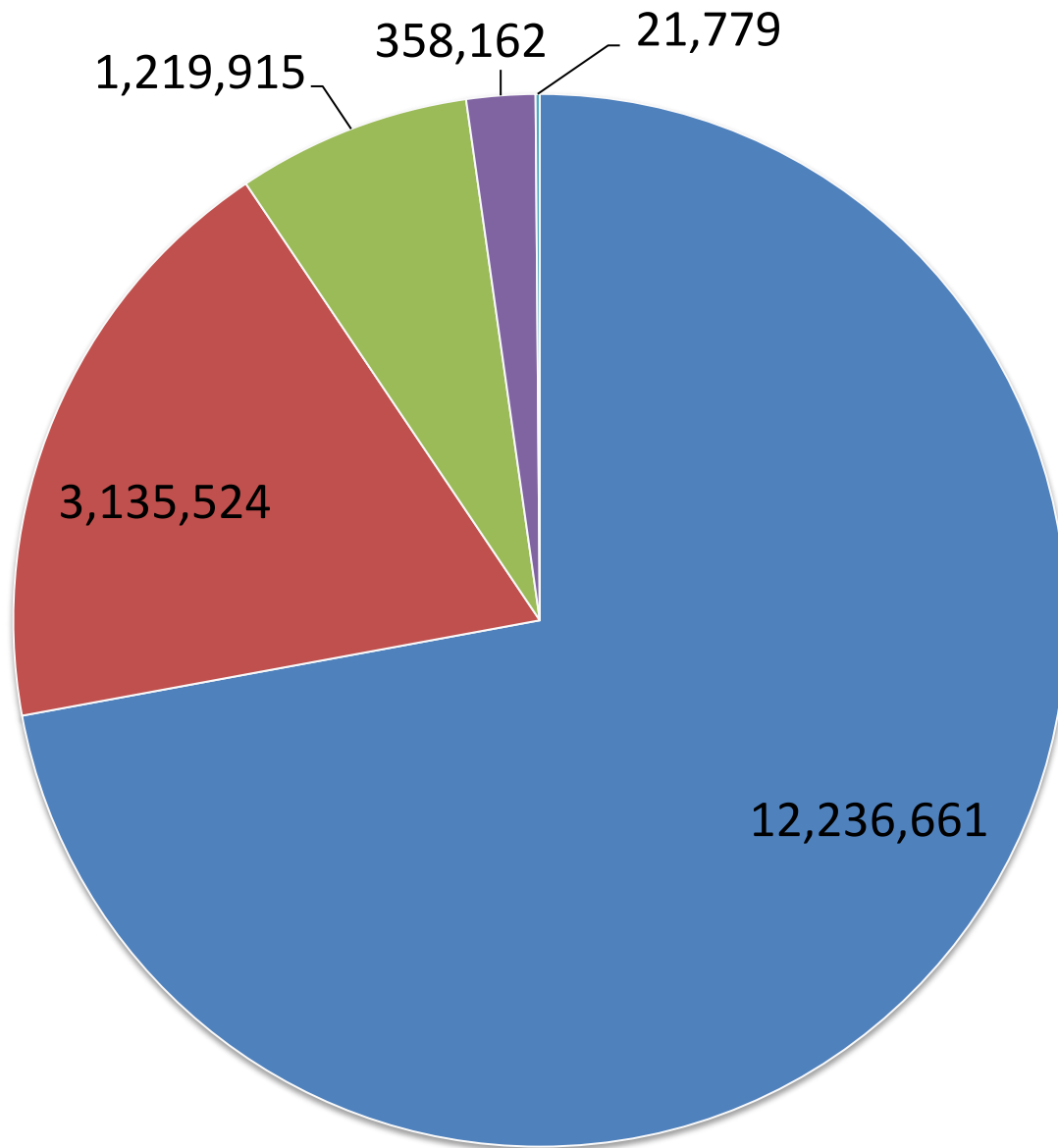
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Journal Articles



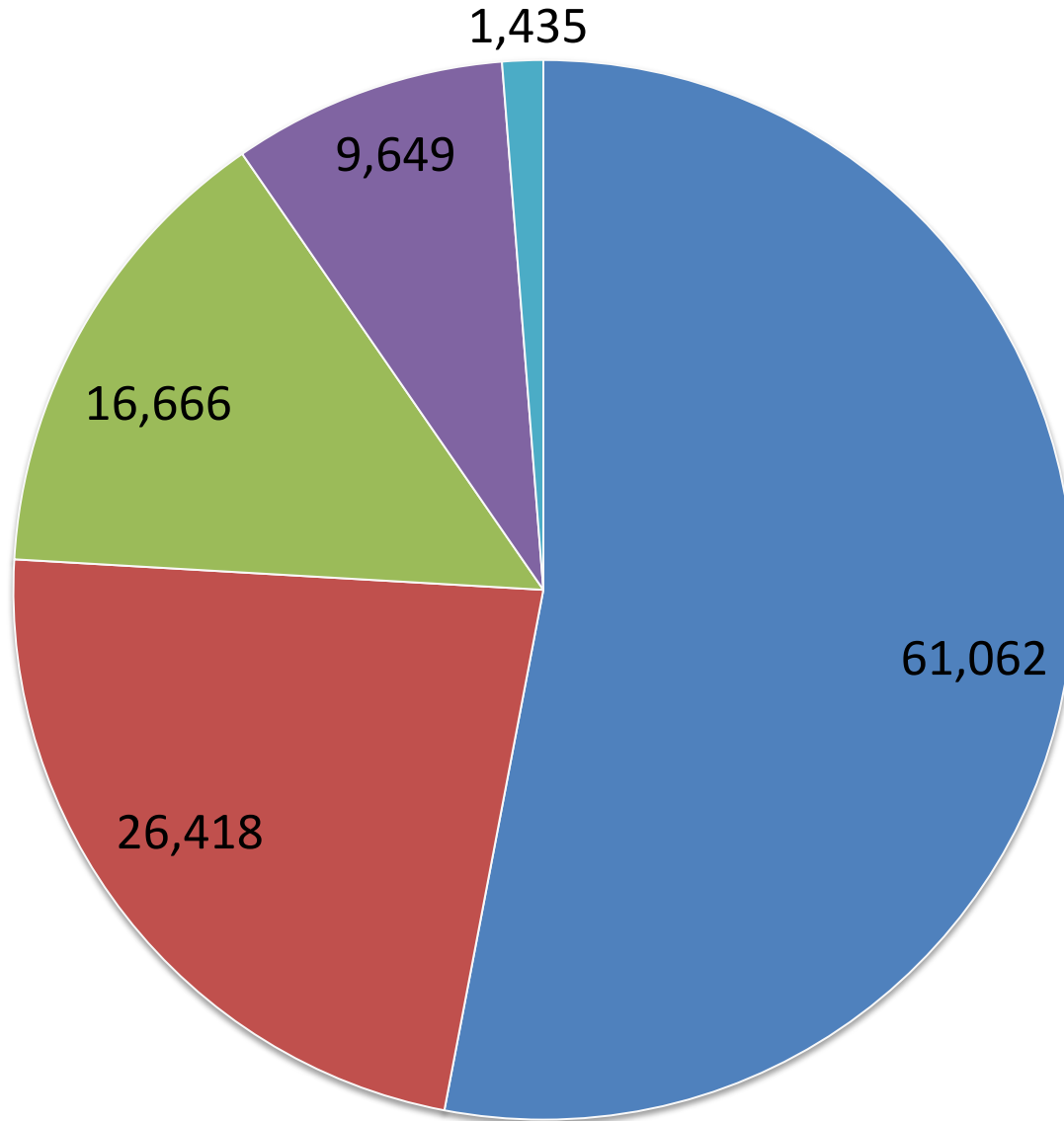
■ 1 ■ 2 ■ 3 ■ 4 ■ 5

Citations



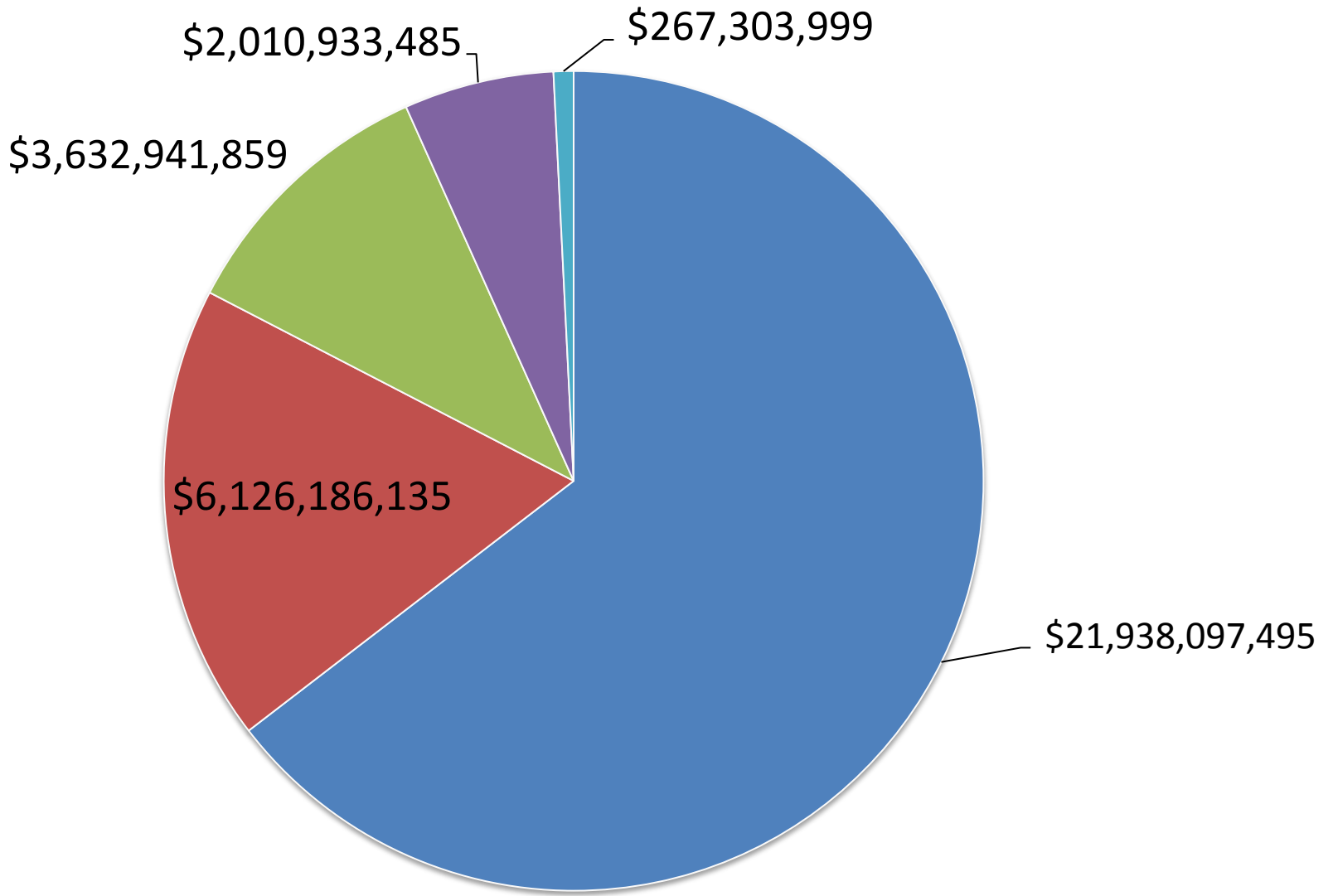
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Grants



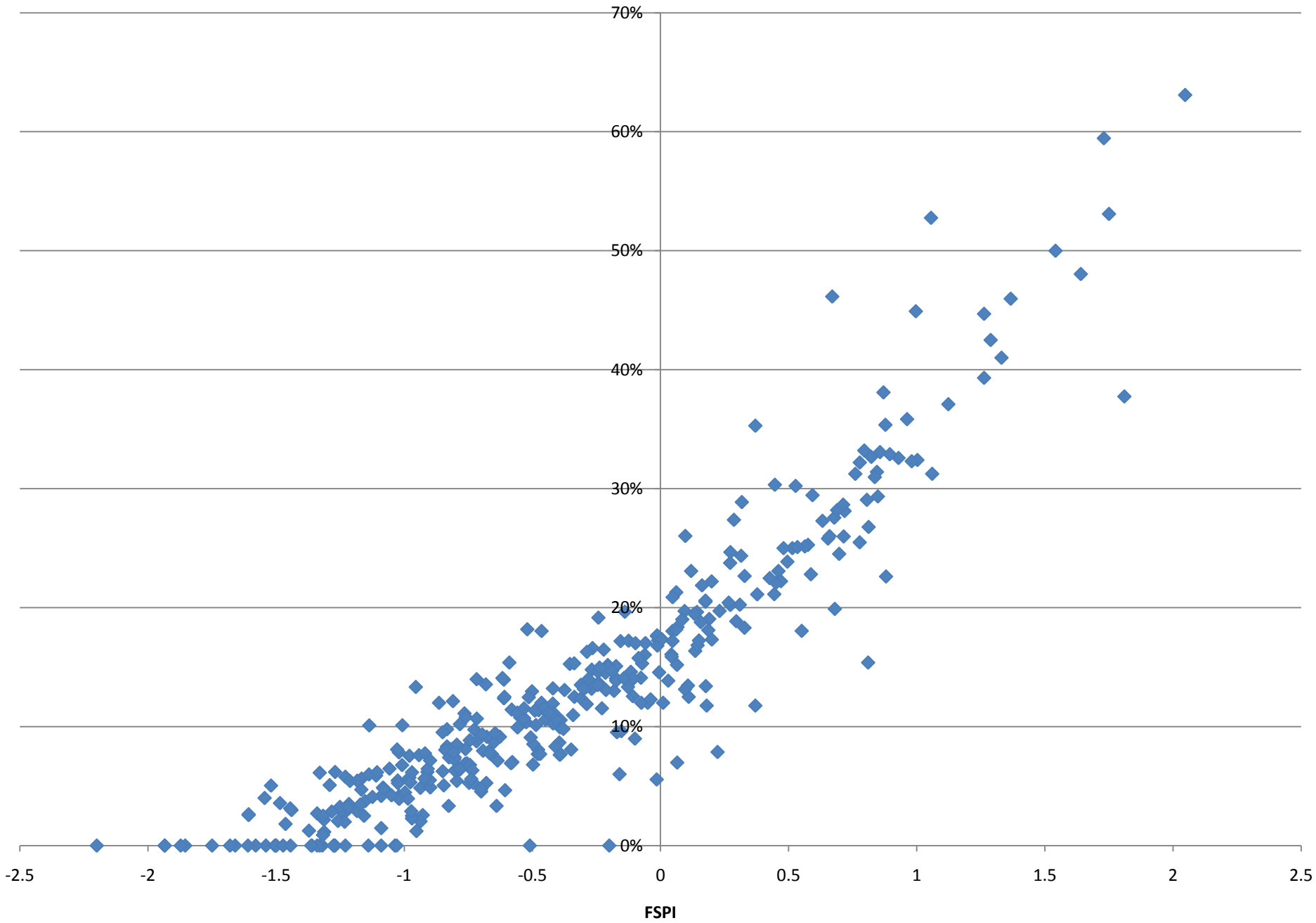
■ 1 ■ 2 ■ 3 ■ 4 ■ 5

Grant \$\$

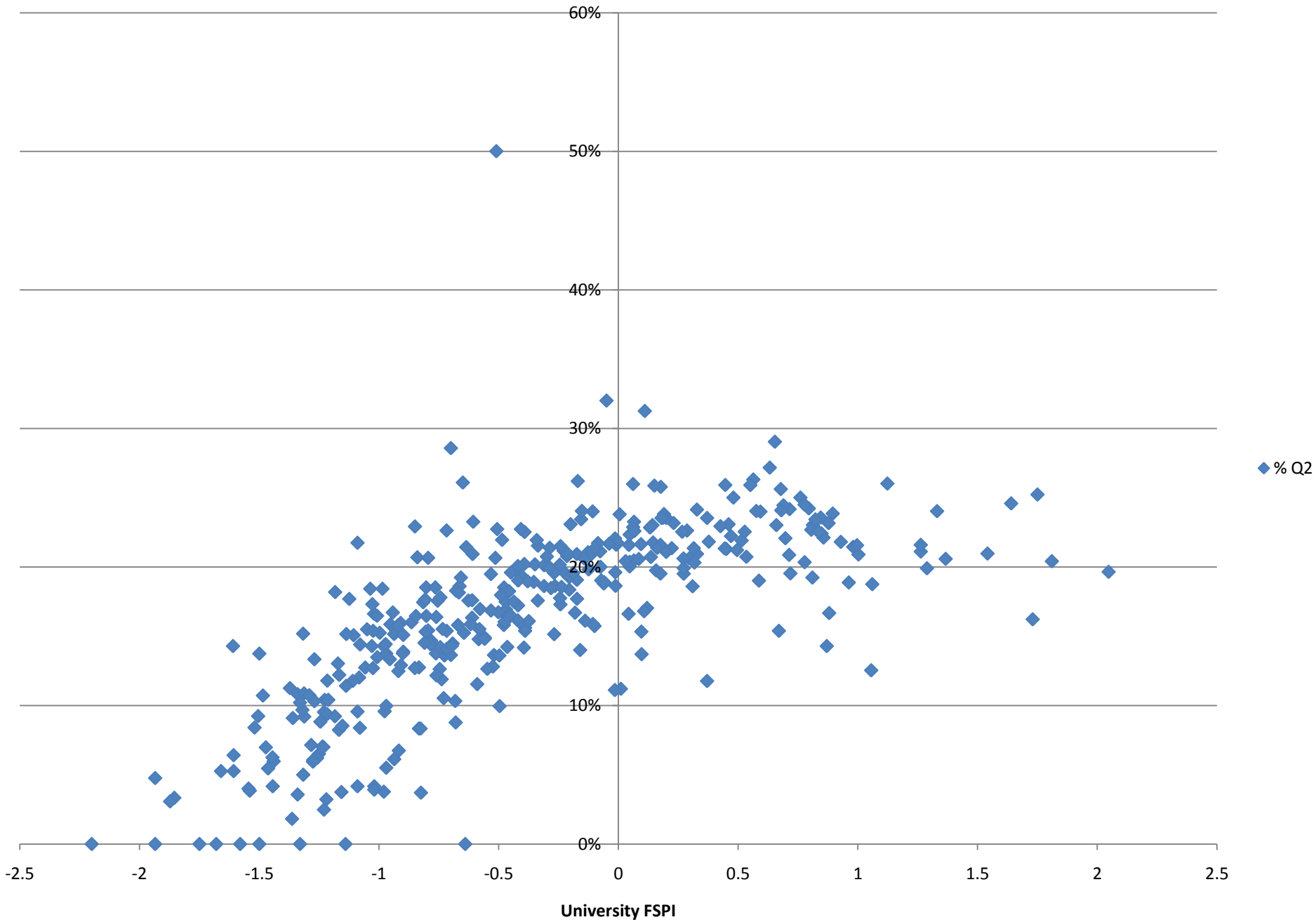


■ 1 ■ 2 ■ 3 ■ 4 ■ 5

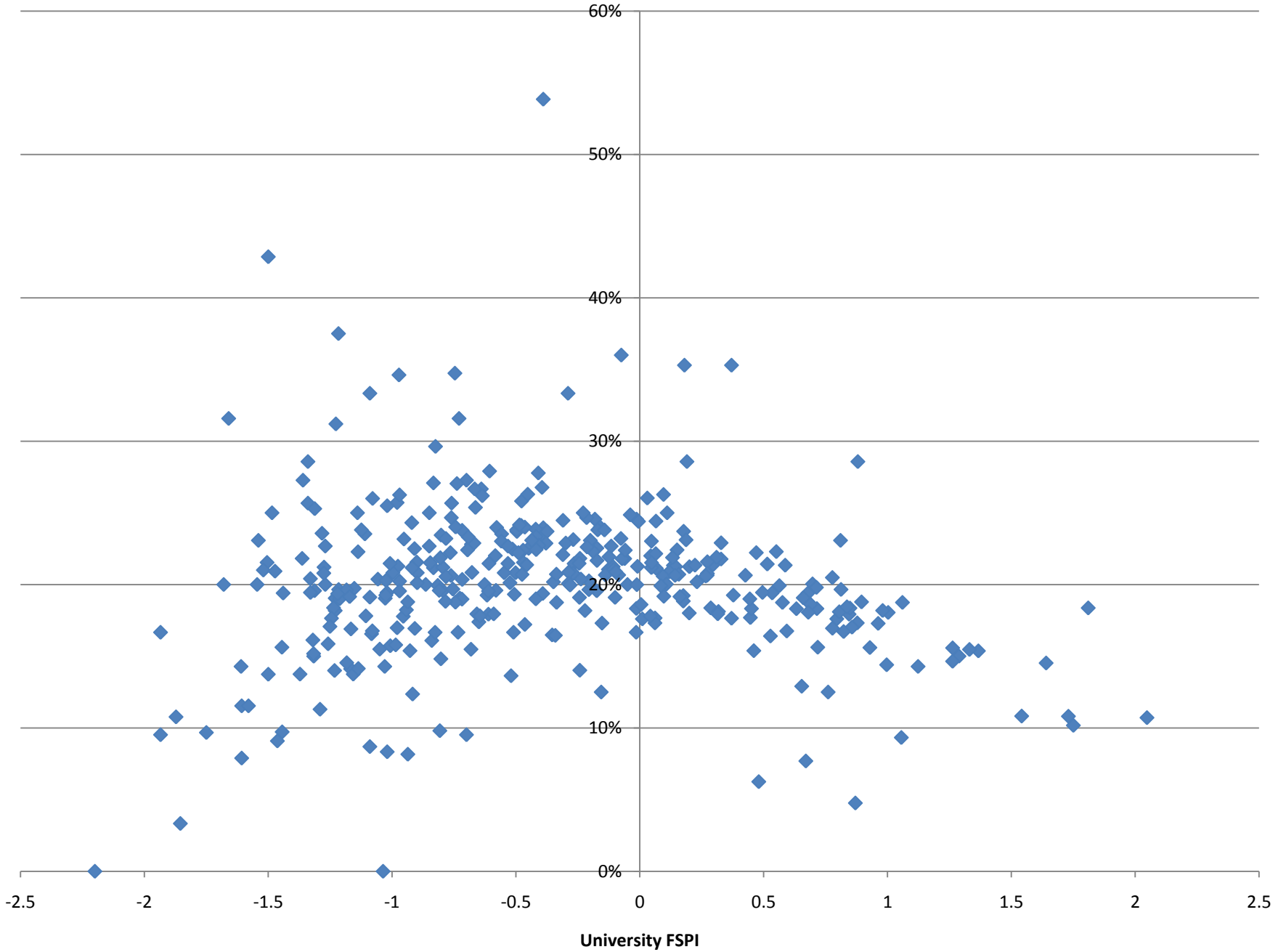
% Q1



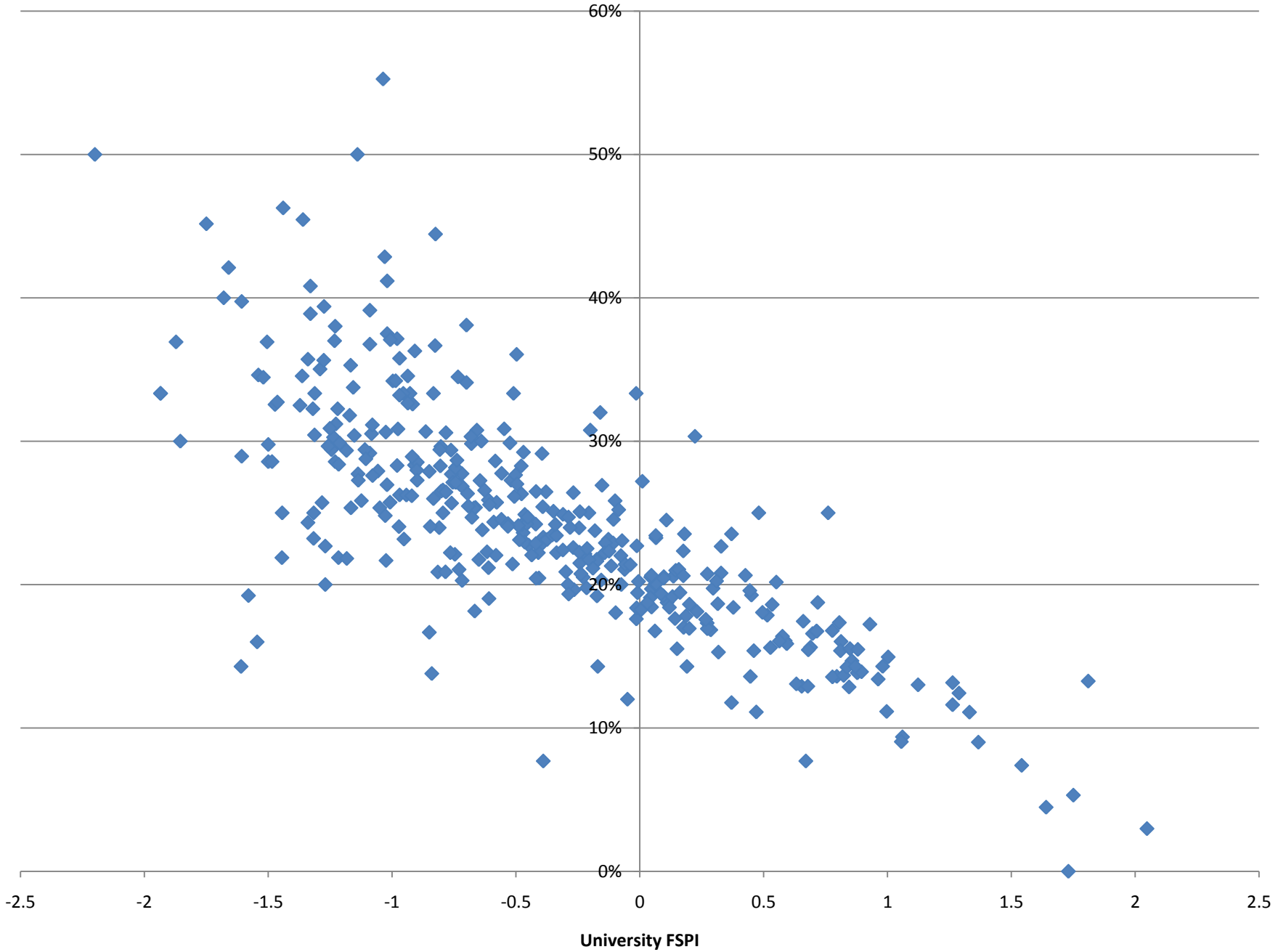
% Q2



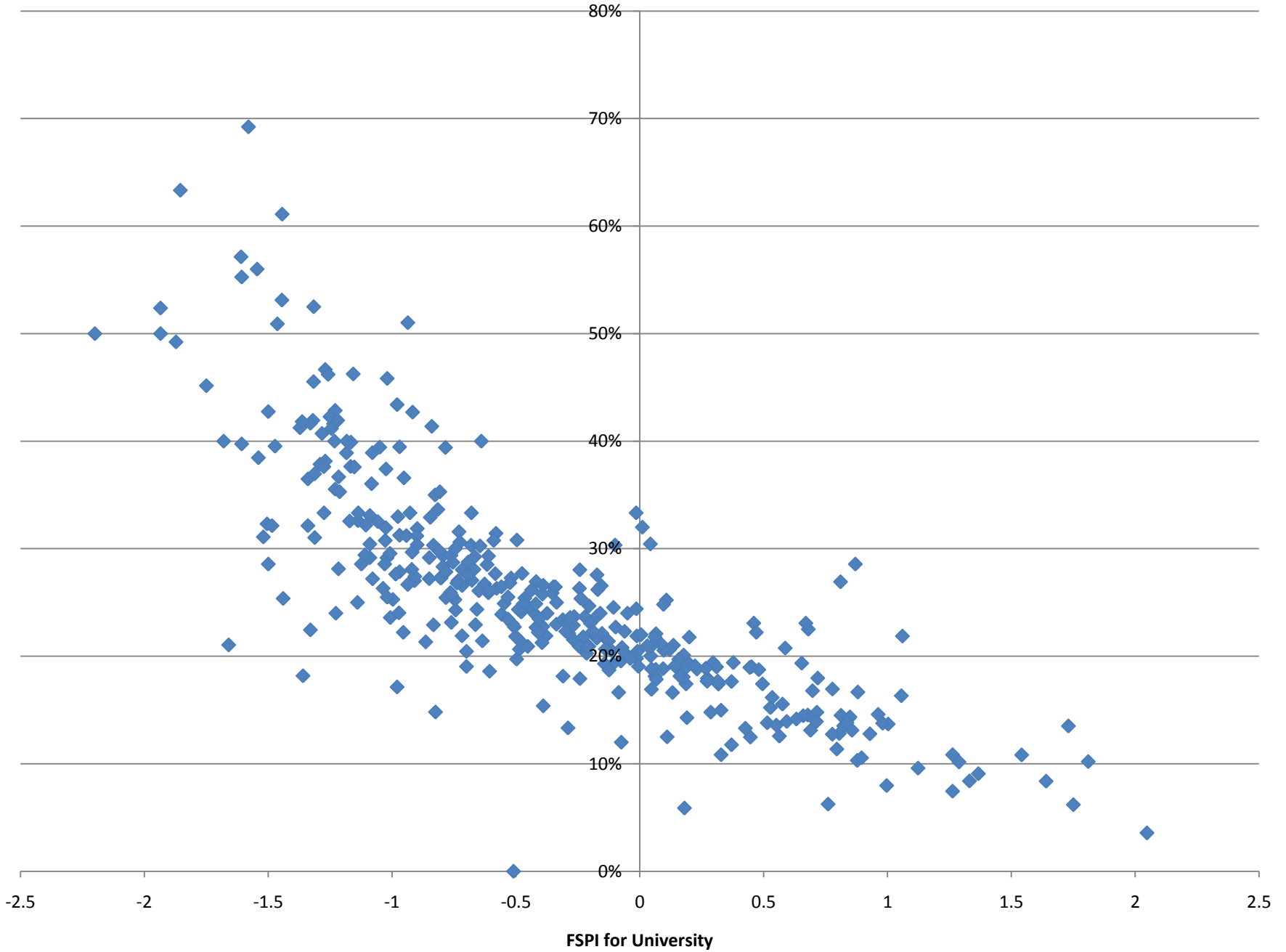
% Q3



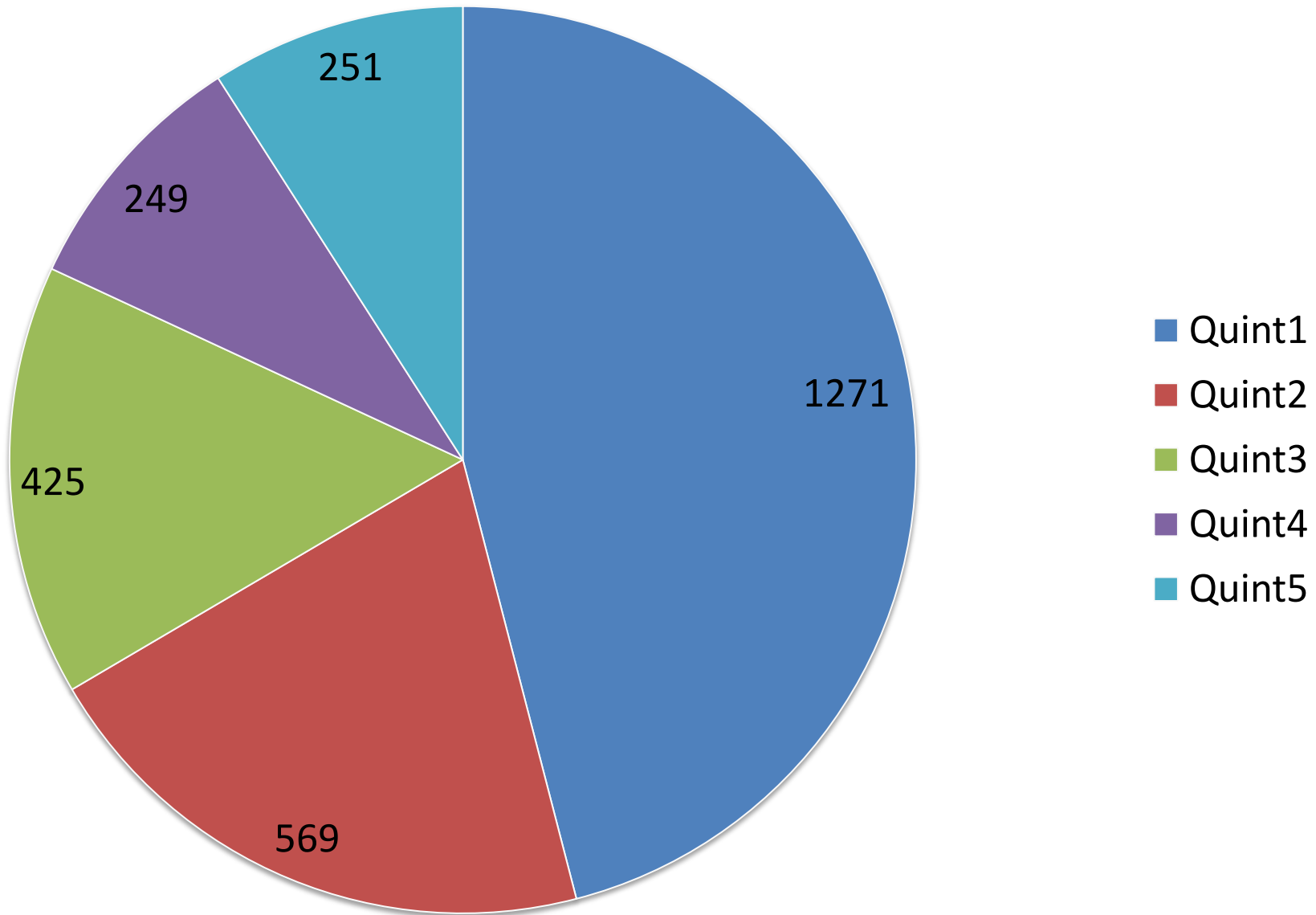
% Q4



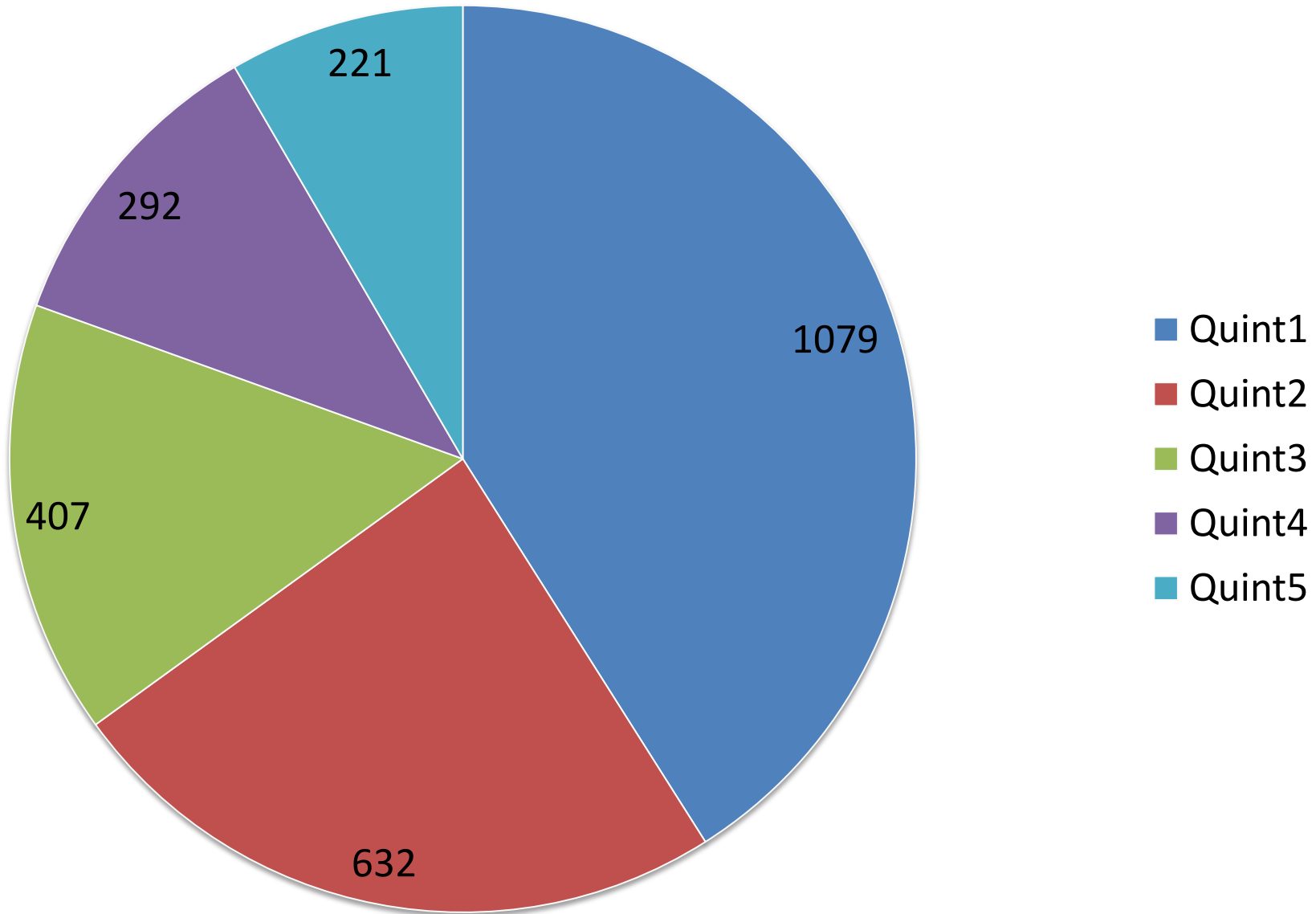
% Q5



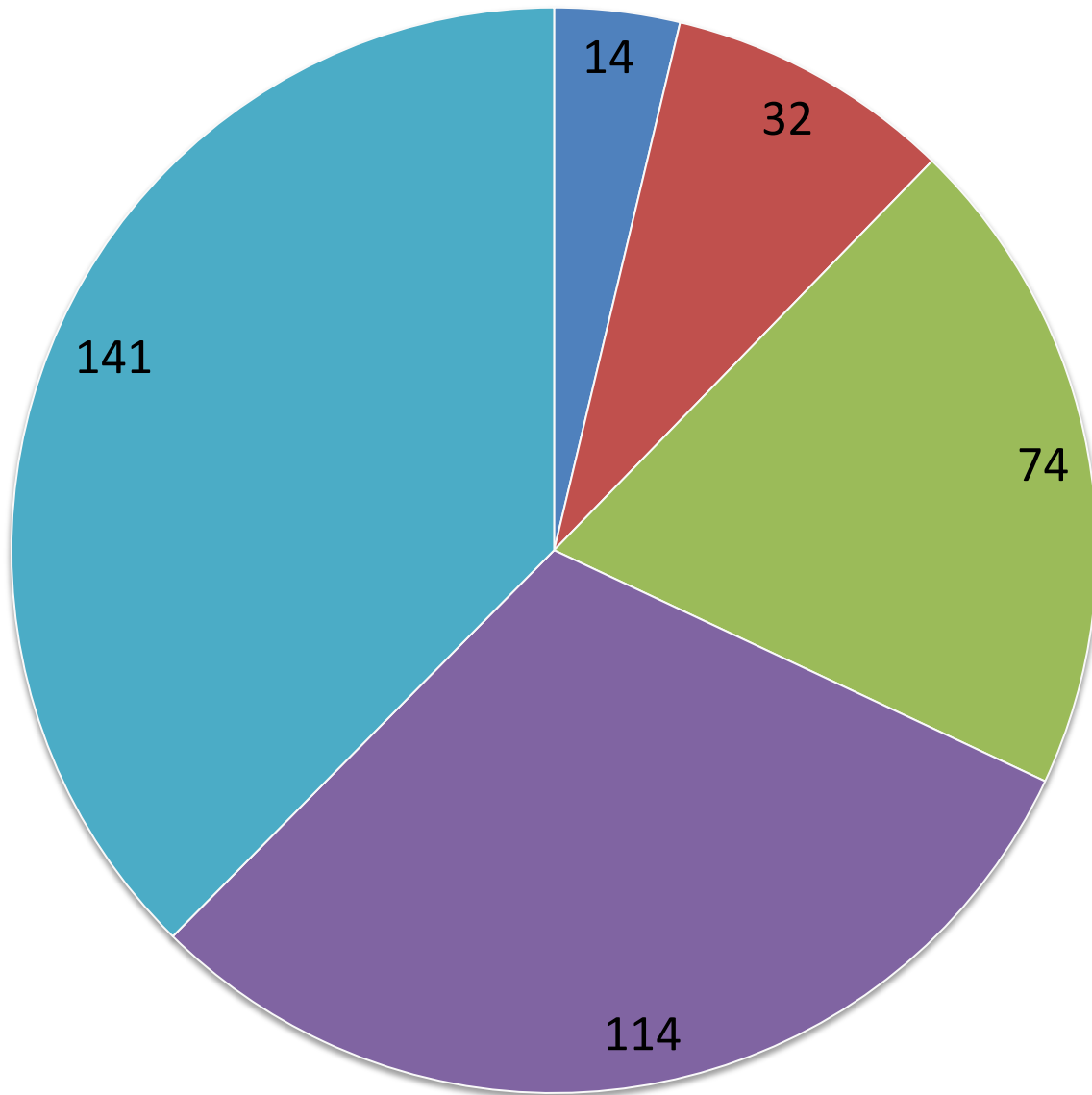
Top, large, private university



Top, large, public university

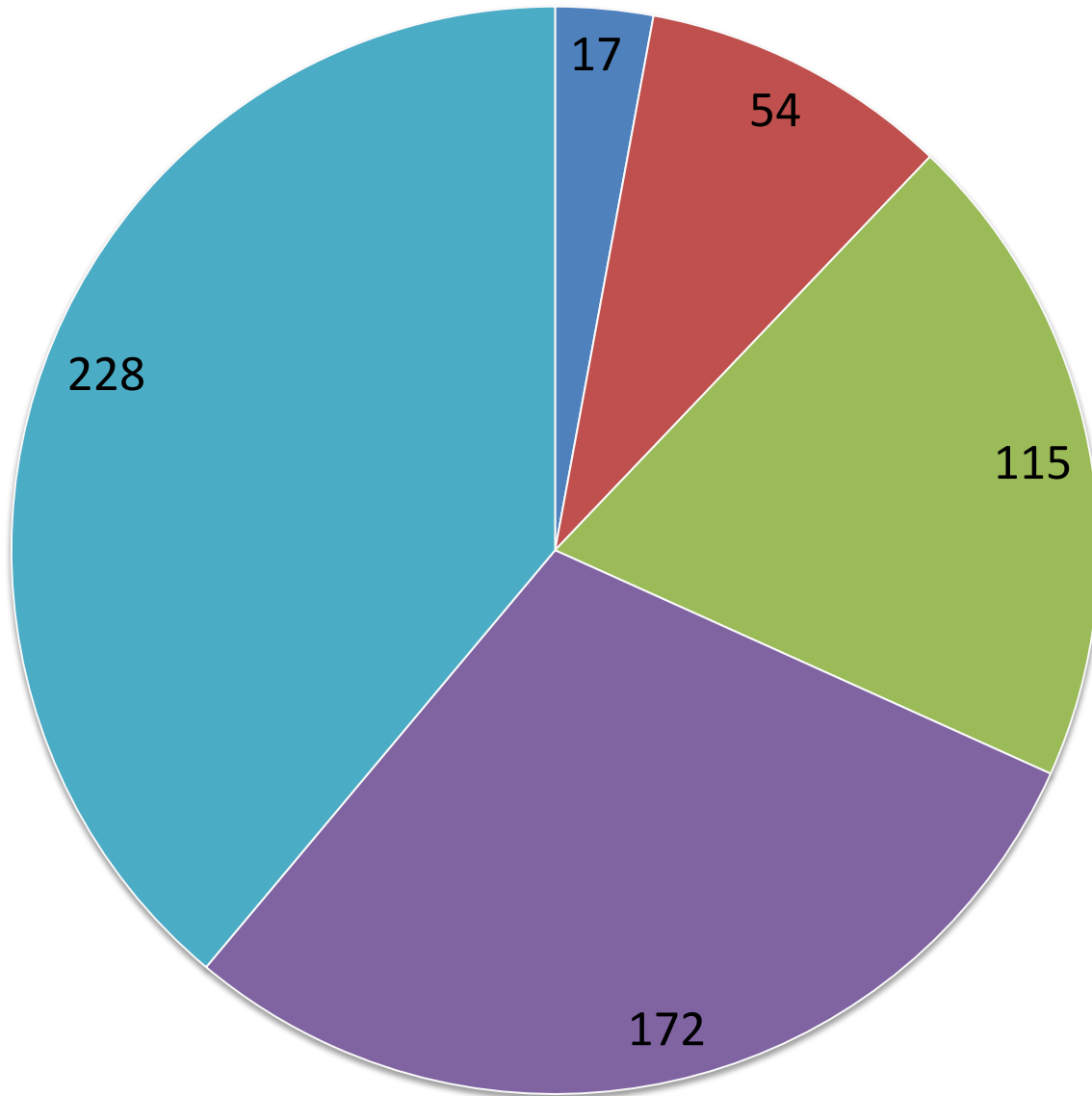


Bottom, large, private university



- Quint1
- Quint2
- Quint3
- Quint4
- Quint5

Bottom, large, research University



- Quint1
- Quint2
- Quint3
- Quint4
- Quint5

Policy implications

- Faculty scholarly performance is highly variable both within and among disciplines.
- In almost all disciplines and areas of scholarly activity the top 20% of faculty produce more than half of the scholarly output
- Future competitiveness will depend on quality improvements rather than quantity increases