

Commonly Held Perceptions

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 - a) Universities are not producing enough PhDs
 - b) Most PhDs take positions in industry
 - c) There is heavy competition for the pool of top candidates

2. Faculty retention has become a serious problem
 - a) Faculty are being recruited by other universities
 - b) Faculty are being lured into industry
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3. Recruitment and retention represent particular challenges in the case of women and minority faculty

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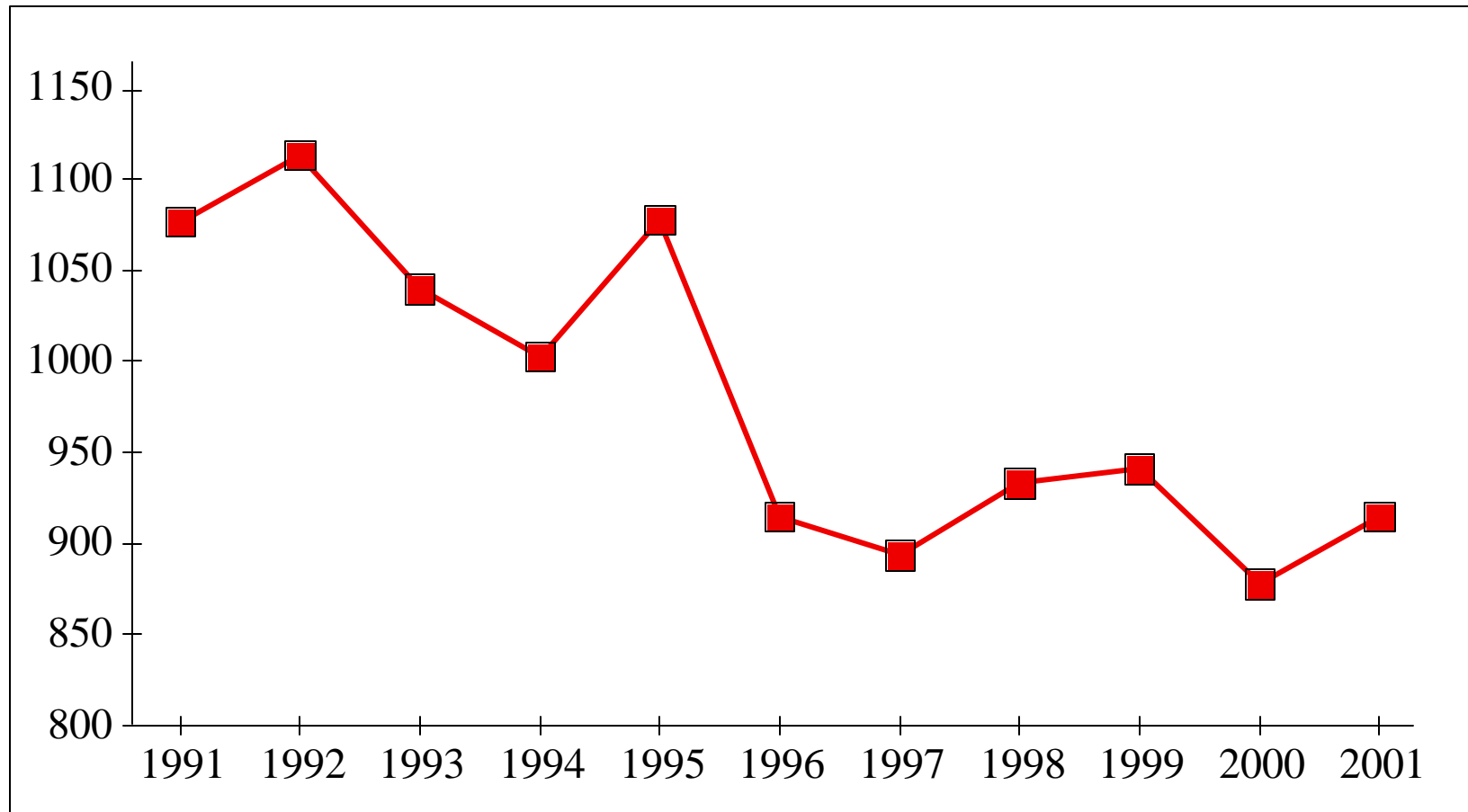
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PhD Production

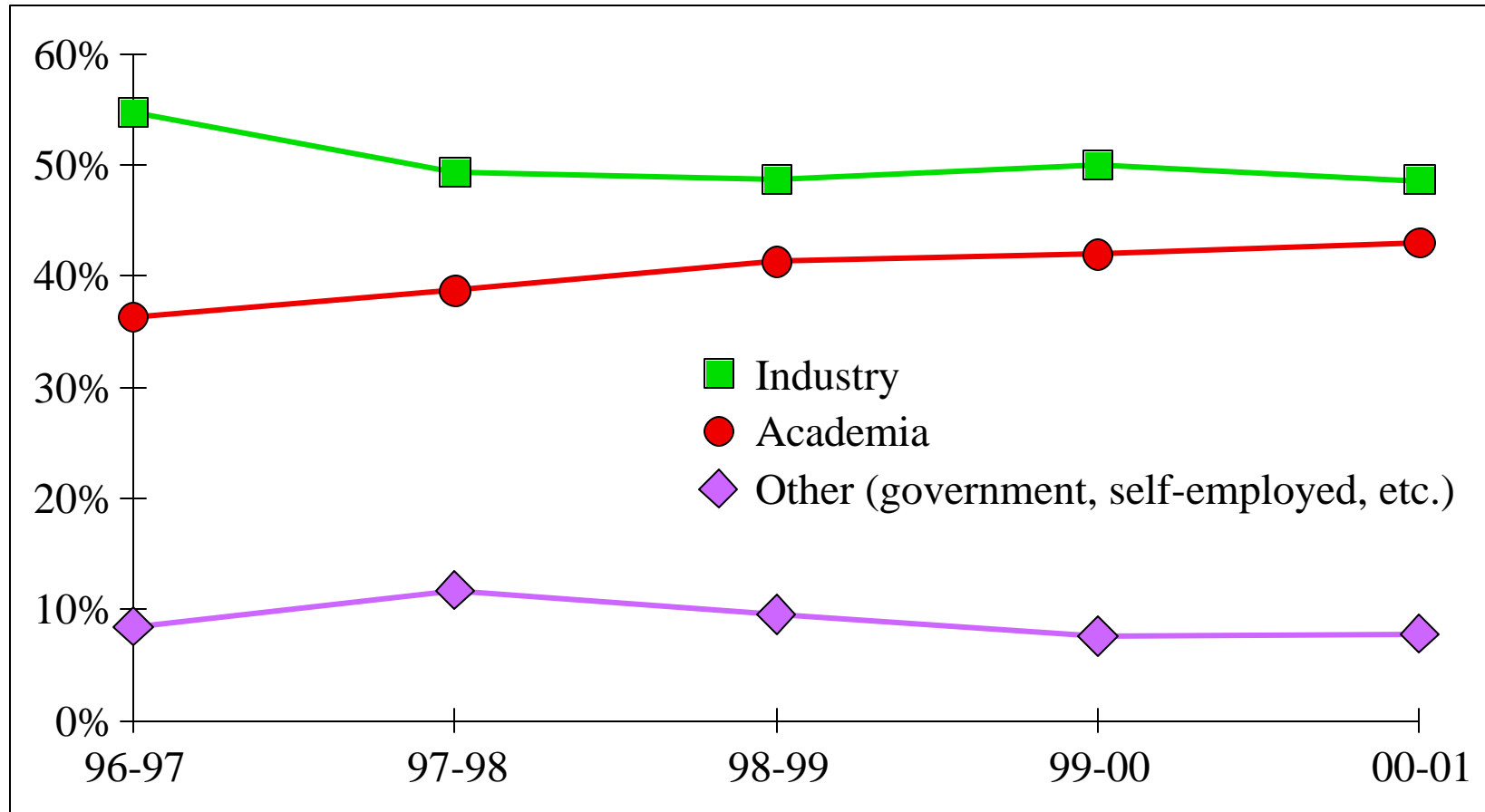
PhD production has fallen over the last decade:



Source: Taulbee Surveys

PhD Employment Trends

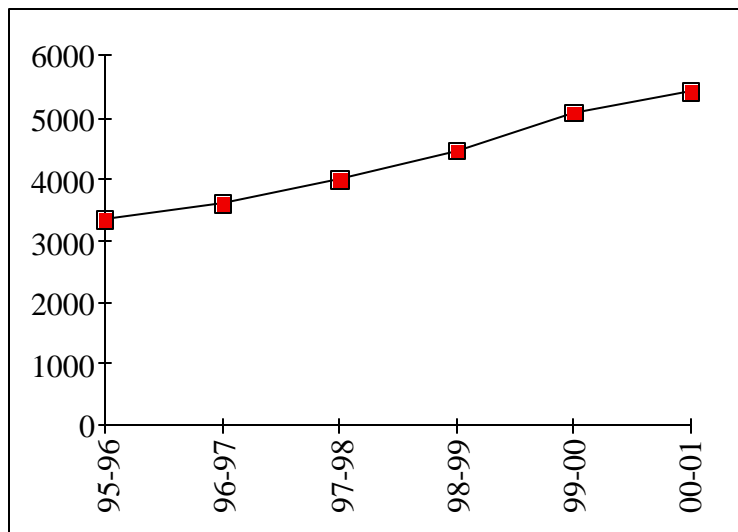
Fraction of PhDs going to academia has increased:



Source: Taulbee Surveys

Why Do Things Seem So Tight?

Increase in faculty size is the dominant factor:



Year	Faculty	change from prior year number	percentage
96-97	3491	281	9%
97-98	3947	456	13%
98-99	4344	397	10%
99-00	4939	595	14%
00-01	5344	405	8%

Source: Taulbee Surveys

The increase means that there are many more holes to fill.

Open Slots Dominate New PhDs

The number of faculty hired to achieve the increase in faculty size is considerably larger than the number of hires necessary to replace departures. The number of new faculty members that must be hired just to fill new slots also exceeds the number of PhD recipients entering academia.

Year	Faculty growth	Faculty departures	Slots to fill	PhDs going to academia
96-97	281	177	458	279
97-98	456	205	661	305
98-99	397	211	608	320
99-00	595	275	870	302
00-01	405	335	740	326

Source: Taulbee Surveys

Survey Overview (PhD Chairs)

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- Average department gets 134 applicants (30 per position)
 - Rank 1 (NRC 1-36): 228 per department; 36 per position
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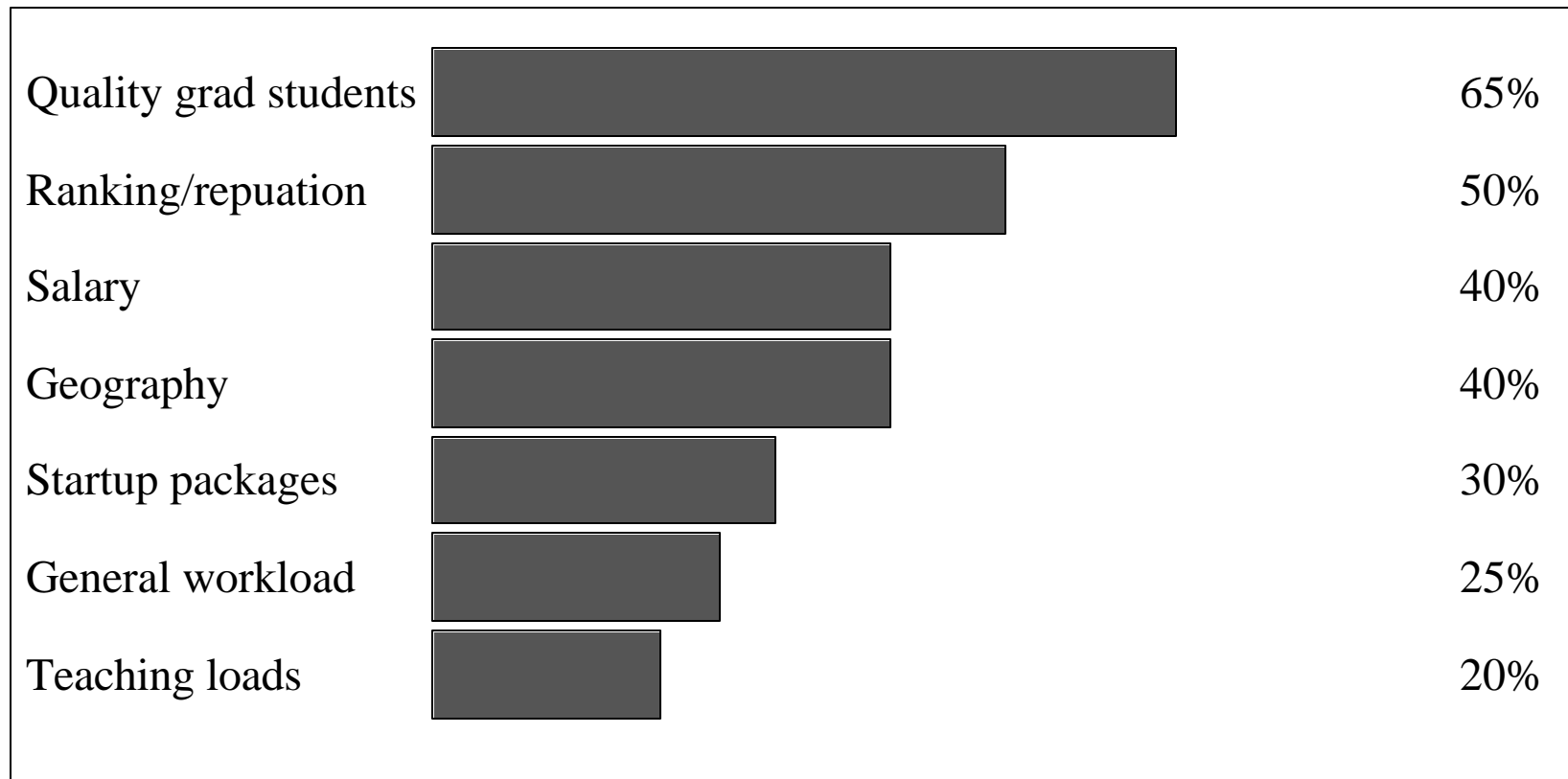
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 - New PhD: 38% Academic institution: 38%
 - Industry: 18% Nonprofit: 5% Government 5%

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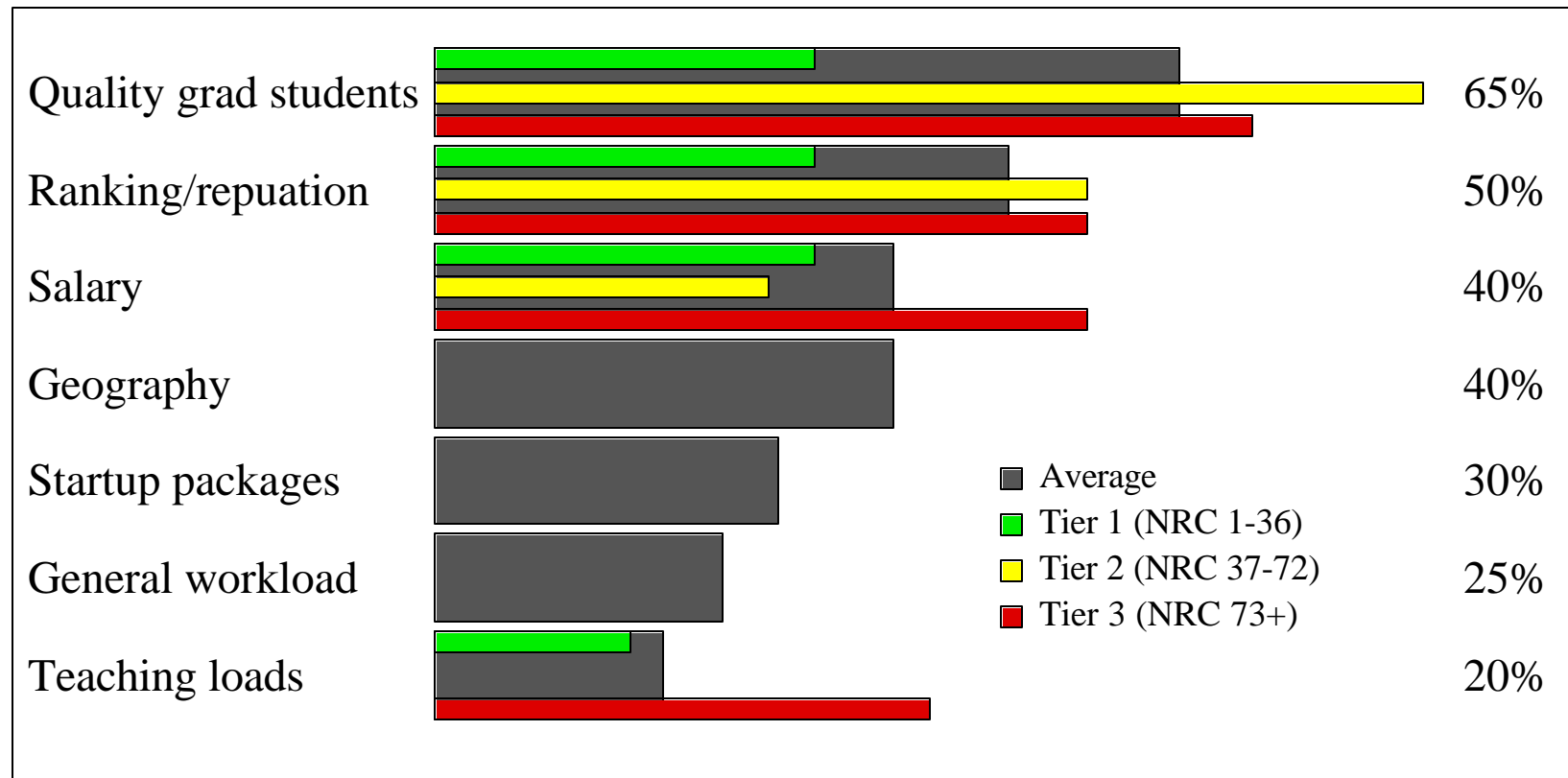
Recruiting Problems (PhD Chairs)

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Lower-tier institutions report more problems with the quality of graduate students, salary, and ranking/reputation.

Decision Factors (PhD Chairs)

Reasons for refusing offer

Reasons for accepting offer

Geography		55%	Colleagues in area		75%
Two-body problem		55%	Ranking/reputation		50%
Ranking/reputation		45%	Geography		45%
Quality grad students		35%	Quality grad students		35%
Colleagues in area		30%	Cost of living		20%
Space/facilities		30%	Teaching load		20%
Salary		20%	Salary		15%
Cost of living		20%	Startup package		10%
Startup package		15%	General workload		10%
Teaching load		10%	Space/facilities		5%
General workload		5%	Two-body problem		0%
Tenure process		5%	Tenure process		0%
Chance for impact		0%	Chance for impact		0%
Publishing pressure		0%	Publishing pressure		0%

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Decision Factors (New Hires)

Factors about where to apply			Factors about which offer to choose		
Ranking/reputation		71%	Geography		41%
Geography		62%	Ranking/reputation		38%
Focus on research		41%	Department culture		38%
Balance teaching/res		38%	Salary		29%
Department culture		38%	Startup package		26%
Quality grad students		32%	Quality grad students		24%
Two-body problem		24%	Institutional support		21%
Colleagues in area		21%	Focus on research		21%
Advisor recommends		18%	Balance teaching/res		21%
Salary		18%	Colleagues in area		21%
Institutional support		18%	Other		15%
Startup package		15%	Advisor recommends		12%
			Two-body problem		9%

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- Search committees report more balance than job seekers
 - Committees report only 23% of positions unfilled
 - Committees report one interview per 12.7 applications (vs. 3.5)
 - Committees report one offer per 43 applications (vs. 6.0)
 - New hires sample consisted only of successful applicants

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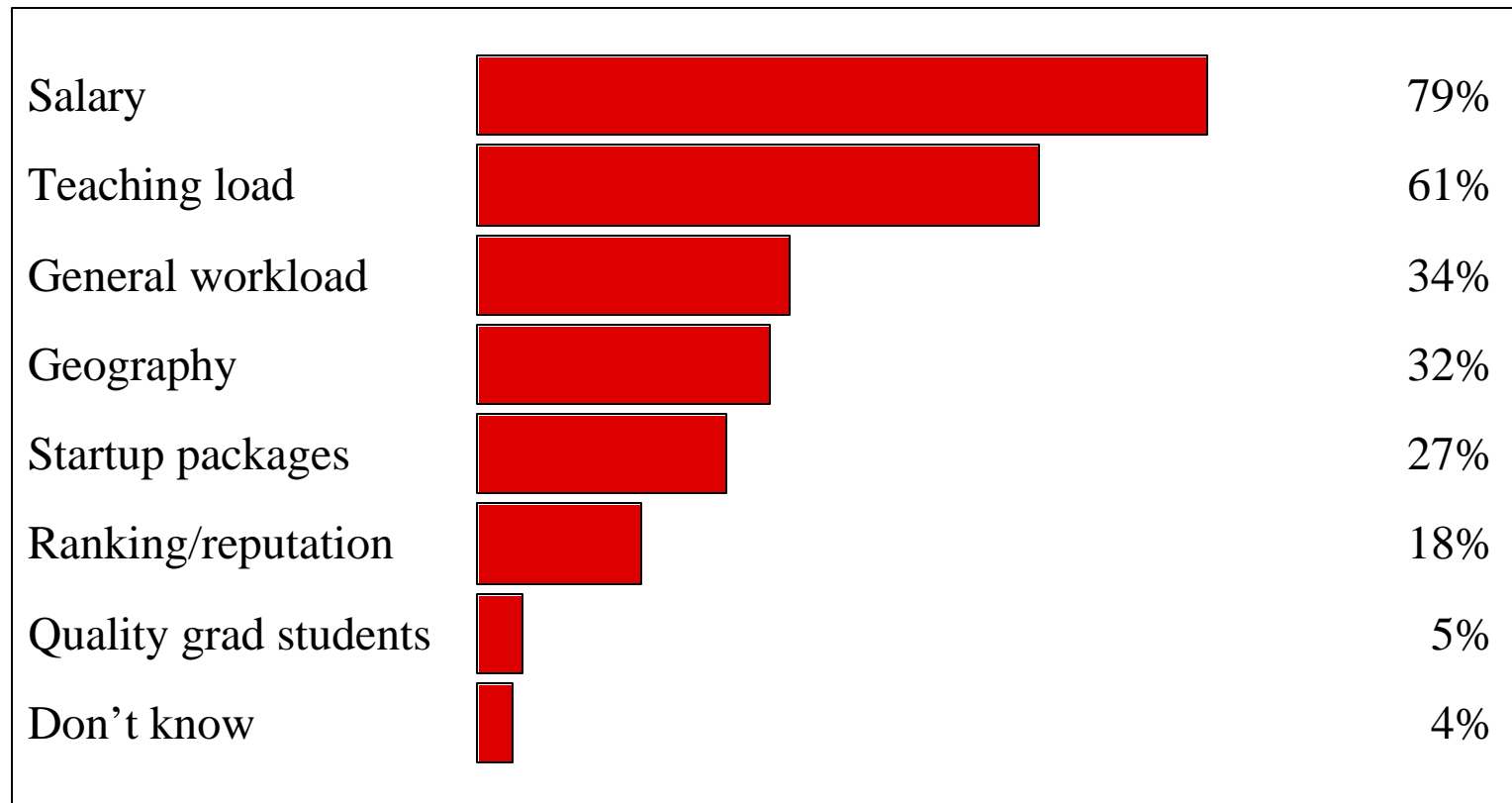
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Survey Overview (Colleges)

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 - Scaled by size, roughly half of university rate (2.2 vs. 4.0)
 - Rank 2 (NRC 37-72): 98 per department; 28 per position
 - Rank 3 (NRC 73+): 75 per department; 21 per position
- Approximately 10 applications per position
- Only 40% of applicants seriously considered
- 64% of open positions filled
- 32% of hires were women (vs. 22% at universities)
- 41% were not US citizens (vs. 36% at universities)
- Search took 3.3 hours/week for chair and 8 for department
- Most new hires came from academia
 - New PhD: 27% Academic institution: 51%
 - Industry: 17% Nonprofit: 4% Government 1%
- Net influx from industry to academia

Recruiting Problems (Colleges)

Small colleges report the following recruiting problems:
































Salary and teaching load are much more significant factors at colleges than at universities.

Decision Factors (Colleges)

Reasons for refusing offer

Reasons for accepting offer

Salary		59%	Geography		61%
Teaching load		38%	Salary		19%
Geography		27%	Ranking/reputation		19%
Two-body problem		14%	Cost of living		17%
General workload		12%	Two-body problem		10%
Colleagues in area		12%	General workload		8%
Ranking/reputation		11%	Tenure process		7%
Cost of living		10%	Don't know		6%
Quality grad students		9%	Colleagues in area		6%
Don't know		9%	Teaching load		5%
Space/facilities		9%	Publishing pressure		4%
Chance for impact		5%	Space/facilities		4%
Tenure package		2%	Quality grad students		2%
Startup package		1%	Chance for impact		1%
Publishing pressure		0%	Startup package		1%

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 - Need to work on K-12 and undergraduate pools as well
 - Graduate retention very important (see CRA workshop report)
 - Synergies in increasing numbers of women faculty and PhD students

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