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Who Receives the Lottery Scholarship?

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Some background for policy options to address the Lottery Scholarship shortfall

Prepared for the

UNM Lottery Forum

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Ongoing Research

- ☐ Data from UNM Office of Institutional Research

- ☐ Before (1994-96) and After (1997-2006)
    - ■ Program vs. Trend
    - ■ Lottery vs. University Initiatives (Freshmen Learning Communities, Changes in enrollment criteria, advisement, other student support programs)

- ☐ Resident vs. Non-Resident
    - ■ Non-residents experience same UNM, but cannot earn Lottery Scholarship

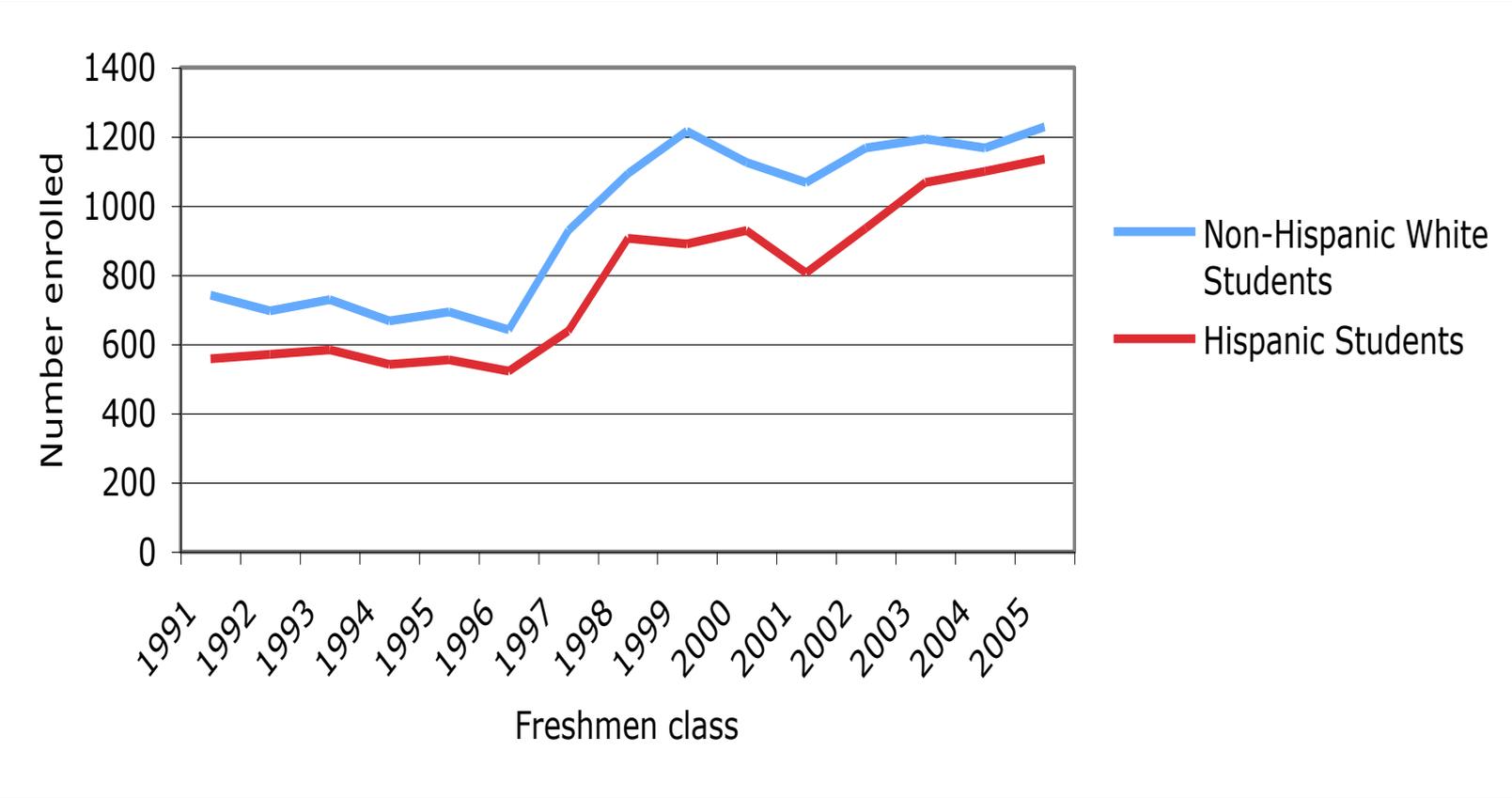# Policy choices

☐ Promote equal opportunity
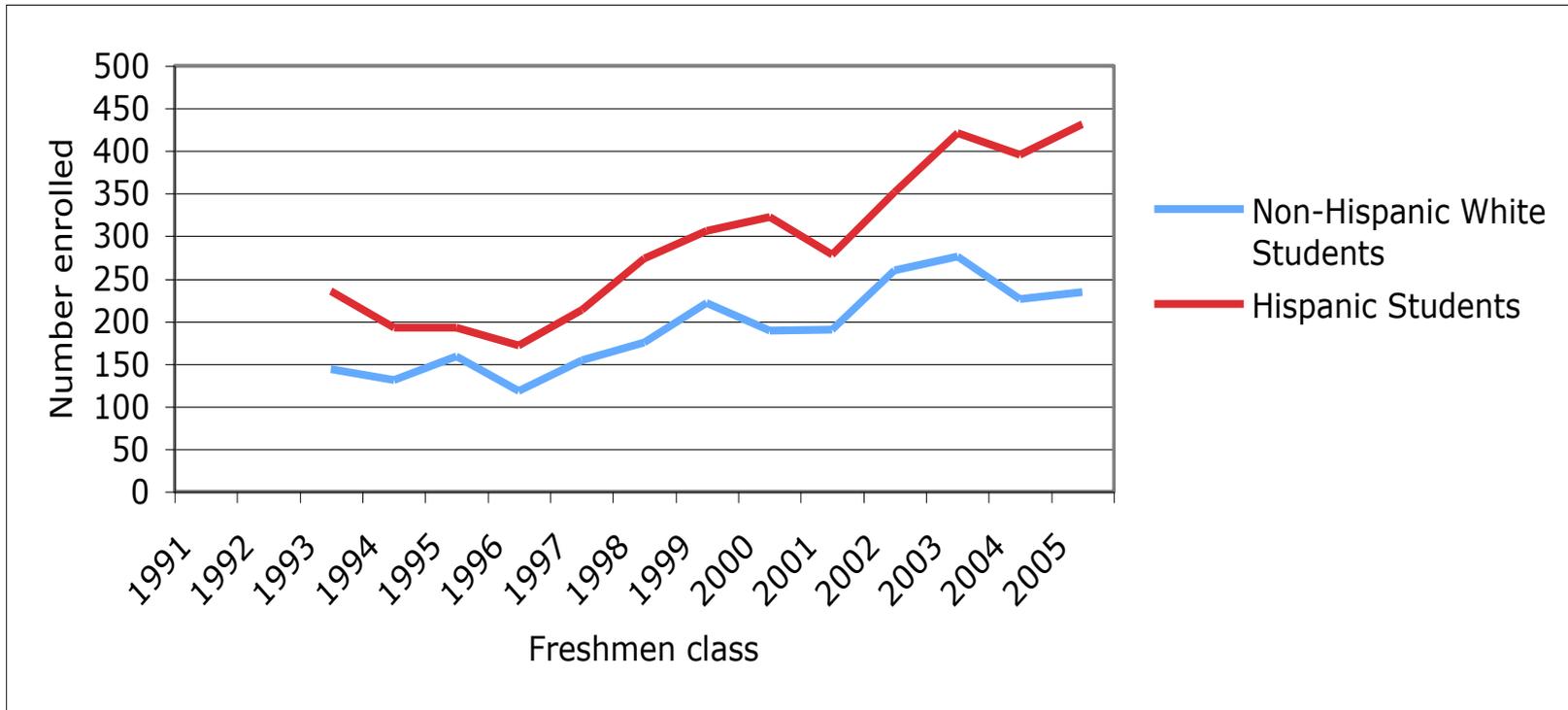
Means testing?

☐ Promote graduation

Raise performance requirements?

The Lottery Scholarship and Family Income
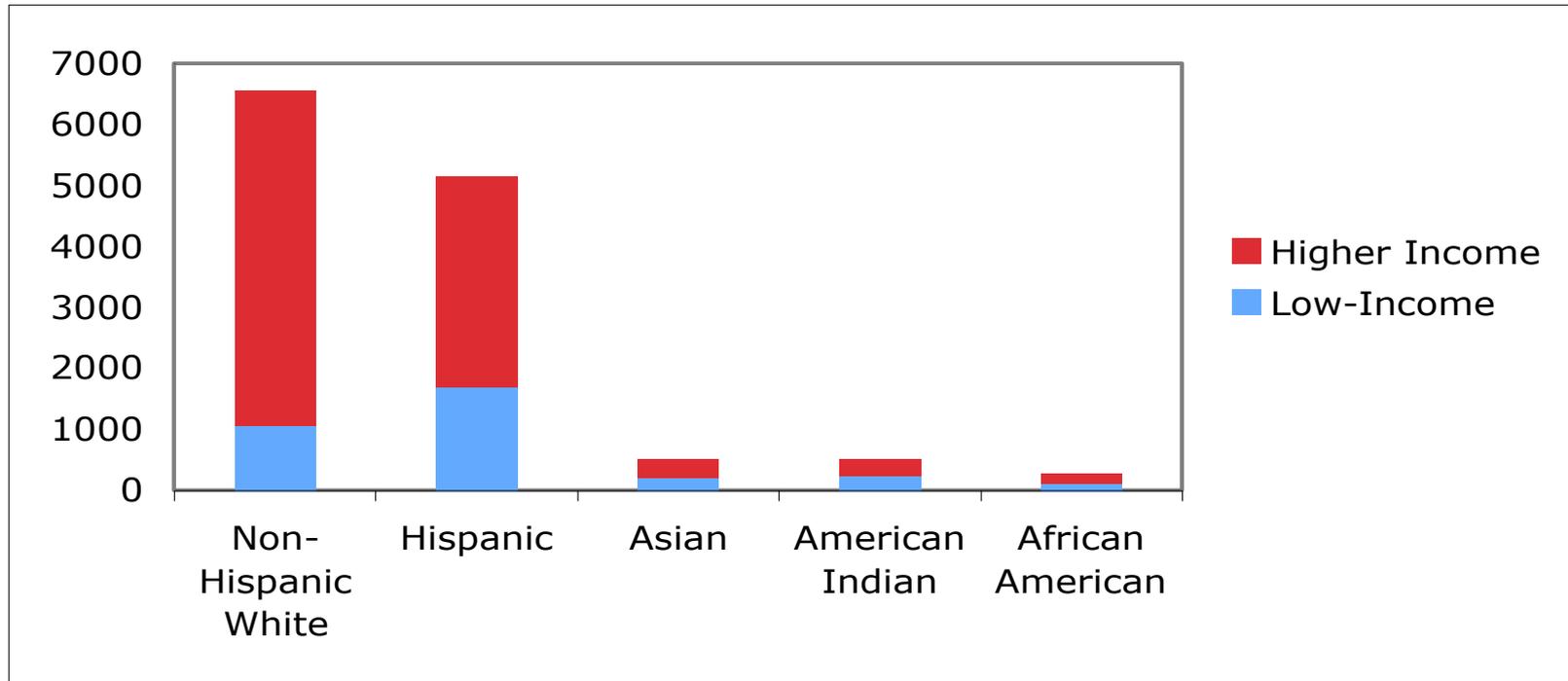
Enrollment response at UNM

Enrollment response at UNM for students from low-income families*

➔ Greater enrollment response than the 50% increase for all students during this period.

*Parents report an income of $40,000 or less.

Lottery Scholarship Receipt at UNM, by Income

For each scholarship to a low-income student, 3 scholarships went to a student with higher income.

What predicts Lottery Scholarship receipt?

Change in probability of receiving scholarship for a 1 unit change in characteristics

Female	.05*
Hispanic	0
Asian	0
American Indian	-.03
African American	.02
High School GPA	.38*
ACT Score	.03*
No Remedial Classes	.12*
Income More Than $40,000	.04*
Model explains	19% of variation

Estimates from a probit model. Marginal effects evaluated at sample means. *Significant at the 5 percent level.

What predicts Lottery Scholarship retention?

Change in probability of keeping scholarship through 5th semester for a 1 unit change in characteristics

Female	.04*
Hispanic	-.02*
Asian	-.02
American Indian	-.08*
African American	-0.04
High School GPA	.21*
ACT Score	.003*
No Remedial Classes	-.03
Income More Than $40,000	.05*
Model explains	<6% of variation

Note: Marginal effects evaluated at sample means.

*Significant at the 5 percent level.

Earning and Retaining the Scholarship

☐ A family income of more than $40,000 raises the probability of earning and retaining the scholarship by 4-5 percentage points, net of academic preparation in high school.

☐ Even controlling for income and academic preparation in high school, Hispanic and American Indian students are more likely to lose the scholarship.

Considerations for Means-Testing

- ☐ Universal programs receive more attention and more publicity. They may therefore bring in more low-income students than a targeted (means-tested) program.

- ☐ Similarly, benefits are less likely to erode because the majority has a stake in the program.

- ☐ Students from low-income families are less likely to receive and retain the scholarship.

- ☐ A universal program is costly.

Lottery Scholarship & Graduation Rates (preliminary results)

- ☐ Comparison group: non-residents
  - ■ Same UNM experience
  - ■ Not eligible for Lottery Scholarship
- ☐ Control resident vs. non-resident
- ☐ Control program years (1997-99) vs. before program (1994-96)
- ☐ Program Effect = resident vs non-resident in program years

Estimated Change in the Probability of Graduating in 4, 4½, 5 and 6 Years for Freshmen Entering UNM

	Graduated within			
	4 Years	**4½ Years**	**5 Years**	**6 Years**
New Mexico Resident (compared with non-resident)	-.038*	-0.011	.060*	0.116*
Program Available (after-period compared with before-period)	-0.007	-0.004	-0.001	-0.029
PROGRAM EFFECT: New Mexico Resident & Program Available (compared with change for non-residents since program began)	**0.004**	**0.009**	**-0.001**	**0.012**

➔ No evidence that lottery program increases graduation rates.

Analysis for 11,263 students who entered UNM between 1994 and 1999.. *Statistically significant at the 5 percent level. Change in probability based on probit models with controls for high school GPA, ACT scores, family income, gender and ethnicity.

Estimated Change in the Probability of Graduating in 6 Years, by High School GPA

	High School GPA	
	Less than or equal to 3.28	Greater than 3.28
PROGRAM EFFECT: New Mexico Resident & Program Available (compared with change for non-residents since program began)	**-.086***	**.087***
Observations	5,502	5,761

➔ But lottery program does appear to increase graduation rates for students with better high school GPAs, at the same time it depresses it for students with worse high school GPAs.

Discouragement effect: an unintended consequence?

- ☐ Role of expectations?

- ☐ Should students be allowed to re-gain scholarship? (Won't help shortfall.)

- ☐ Can UNM be rewarded for accepting fewer, better prepared students?

- ☐ Would peer effects raise the number of graduates, even if fewer students enrolled?

Considerations for Raising Performance Requirements

☐ The Lottery scholarship boosts graduation rates by close to 9 percentage points for well-prepared students, but the scholarship lowers graduation rates for weaker students. So raising performance criteria might boost graduation rates, even for those who don't qualify.

☐ But low-income students have lower high school GPA and ACT. Equal Opportunity?

Your questions and comments