Social Engagement and Student Body Diversity at Elite American Colleges

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Abstract: Putnam has concluded that trust in others and civic and social engagement in the community are inversely related to the racial and ethnic diversity of the population. In this paper, we examine how measures of social engagement among college students vary with student body racial and ethnic heterogeneity at elite U.S. colleges. We find that socialization measures from the Fiske guide to colleges and from the Princeton Review guide to best colleges are inversely related to student body diversity. We also find that student retention from the freshman to the sophomore year is positively related to student body diversity. This may be because less intense social lives leaves more time for study during the freshman year, when students are learning to manage their time.

Key words: social capital, social engagement, student body diversity, American colleges
JEL Classification: Z13, social norms and social capital

In this paper, we use data from the Fiske Company's Guide to Colleges 2010 and from the Princeton Review's The Best 371 Colleges 2010 to study the effects of racial and ethnic diversity of the student body on the quality of "social life" in elite American colleges and on the "quality of student life" outside the classroom. These outcomes may be impacted by race and ethnic diversity of the student body because they depend to a considerable extent on social interactions with fellow students. Student diversity may increase student interactions because of curiosity about those of a different race or ethnicity, or decrease student interactions because of less trust in individuals of a different race or ethnicity.

Putnam's work (2000, 2007) is consistent with the latter argument. He concludes that trust in others and civic and social engagement are inversely related to ethnic diversity in the community. He terms the social isolation that results from community population diversity, "hunkering down." In his analysis of the Social Capital Community Benchmark Survey data,[1] Putnam (2007) finds that race and ethnic heterogeneity in the census tract is associated with less trust in people of other races, less trust in people of own race, less trust in neighbors, lower confidence in the local government and news media, lower confidence in own political influence, lower voter registration, lower likelihood of working on a community project, lower numbers of close friends, lower perceived quality of life, and more time spent watching television. These conclusions generally hold in a multivariate context using a Herfindahl index of ethnic homogeneity for the census tract and holding constant respondent's age, education, gender, ethnicity, income, and region, as well as census tract variables for community characteristics.

Putnam (2007) also cites many empirical studies that show declining engagement or commitment with increases in heterogeneity of the group. These include studies of workgroup heterogeneity and productivity in the United States and Europe; cross country studies of population heterogeneity and trust; local area studies of heterogeneity and trust in the United States, Australia, Sweden, Canada, and Britain; experimental game

settings; heterogeneity and default rates in micro credit cooperatives in Peru; and age and hometown heterogeneity and civil war desertion rates.

Putnam's work has been criticized for failing to recognize that technological change, the increase in women's labor force participation and their changing role in the workplace, and the increase in educational attainment across the population have resulted in new forms of social capital and societal participation (Wills (2002), Bargh, and McKenna (2004), Costa and Kahn (2003)). Even his critics, however, generally accept the proposition of a downward trend in the U.S. in socializing with friends and neighbors (McPherson, et al. (2006)).

1. The Data

Fisk and the Princeton Review target selective American colleges for their compilations. Data for the Fiske guide were collected from questionnaires distributed to a cross-section of students by administrators of their college at the request of the Fiske Company. The questions for the students required short essay responses. The social life rating refers to the "amount of social life that is readily available." Social life is rated on a one to five scale, with a rating below three indicating "some impediment to a strong social life, such as geographic isolation, a high percentage of commuting students, or a disproportionate number of nerds." The Fiske guide reviews approximately 300 colleges.

Data for the Princeton Review's The Best 371 Colleges 2010 were gathered from surveys of 122,000 students. The survey consisted of more than 80 questions, with most questions allowing a choice of five options ranging, for example, from “awful to excellent.” The quality of life rating was derived from student evaluations of their college experience outside the classroom. The ranking weighed student friendliness, student happiness, student interactions, dorm quality, food quality on and off campus, campus safety, school administration, and the desirability of the local community. The Princeton Review did not publish the weighting scheme, but nearly

all of these attributes should be positively correlated with student social engagement. About 25 colleges are in the Fiske guide that are not in the Princeton Review guide. Average SAT math and reading were 1220 and high school GPA averaged 3.8 for incoming freshmen in the Princeton Review colleges.

2. Empirical Results

In table 1, regression results are presented for the quality of life variable from the Princeton Review data. In regression 1, there are four independent variables. These are: a dummy variable indicating whether the school is a public or private institution; a Herfindahl index of diversity of the student body where the categories are white, black, Hispanic, Asian, and international student; a measure of the average debt carried by the surveyed students; and an admissions rating of the school where higher values indicate greater selectivity. These variables were entered in the order they appear in the table in a forward, stepwise regression process with a significance level of 0.2 as the cutoff value. The diversity measure is the weakest of the variables in terms of statistical significance with a t-value of -1.93.[2] Variables that could influence quality of life that were not entered into the stepwise regression from the Princeton Review data were: total number of students, percent of students that live on campus, annual tuition, and annual room and board cost. The following variables for the municipality in which the college is located were collected from other sources but also did not enter the regression: median family income, the percent of those 25 and over with a four year college degree, and a Herfindahl index of racial and ethnic diversity.

Private schools and greater selectivity in admissions are positively associated with quality of life. Average debt loads and diversity are negatively associated with quality of life. The negative association of debt load with quality of life probably indicates an income or wealth constraint on participating in activities on campus or in the community. The quality of life index varies from 61 to 99, with a mean of 81 and a standard deviation of 9. The diversity index varies from 0.06 to 0.96, with a mean of 0.48 and a standard deviation of 0.18. The diversity coefficient of –5.6 in regression one indicates that a one standard deviation increase in

diversity would reduce quality of life by 5.6 *0.18 =1. This is a negligible impact but is likely biased downward. This is because students may select a college partly based on diversity of the student body. We can imagine a student that values student body diversity choosing a college accordingly and deriving substantial satisfaction from interaction with fellow students. Similarly, we can imagine a student that chooses a college because of its homogeneous student population also derives substantial satisfaction from interaction with fellow students. These influences would drive the diversity effect towards zero.

We attempt to remove this bias in two ways. First, we estimate the quality of life model over public institutions only. The argument here is that students that go to private schools have a wider range of college choices than students that go to public schools because public college students are more sensitive to cost considerations and, thus, are more likely to stay in state. If this logic holds, private school students will be more likely to have used diversity as a choice variable in their college selection. The quality of life model for public schools is presented in regression 2 in table 1. The diversity coefficient increases (in absolute value) to -26 and the t-value increases (in absolute value) to -4.78.

The second way we deal with bias in the diversity effect is to use instrumental variable techniques to take account of the simultaneous determination of diversity and the quality of life rating. Predicted values for the diversity variable are used in regression 3 in Table 1. These predicted values are from a first stage regression that uses as exogenous variables a Herfindahl index for 2007 state population diversity, 2007 state median household income, percent of the state population 25 years and older with a four year college degree in 2007, and the other three exogenous variables from the model. The diversity coefficient in regression 3 is -17 with a t-value of -2.6. If we split the difference in the diversity coefficients in regressions two and three, a diversity effect of –21 coupled with a one standard deviation change in diversity would result in about a –3.8 unit change in the quality of life index (-21*.18), or about 40% of a quality of life standard deviation.[3]

In regressions 4-6 in Table 1, the regression strategy of the first three models is repeated with the social life index variable from the Fiske data as the dependent variable.[4] In regression 4, the diversity coefficient is -0.9; in regression 5 (public institutions only), the diversity coefficient is -2.6; and in regression 6 (instrumental variables), the diversity coefficient is -1.6. The t-values for the diversity coefficients in these regressions exceed three in absolute value. If we assume a value –2.1 for the diversity effect, a one standard deviation change in diversity would reduce the Fiske social index by -0.38, which is about one half of a standard deviation.

In table 2, regression results are presented for models of the retention rate, or the percent of students that return to their college for their sophomore year (mean 88, s.d. 7). The regression strategy is the same as for the first three regressions of table 1. The diversity measure is positively and significantly related to the retention rate in all three models. The results indicate a one standard deviation increase in student body diversity would lead to about a .3 standard deviation increase in the retention rate. Student body diversity may be negatively related to social interactions but it is positively associated with retention rates from the freshman to the sophomore year. This may be because less intense social lives leaves more time for study.

3. Summary and Conclusion

Putnam has concluded that trust in others and civic and social engagement in the community are inversely related to the racial and ethnic diversity of the population. In this paper, we have examined how measures of social engagement among college students vary with student body racial and ethnic heterogeneity at elite U.S. colleges. We have found that socialization measures from the Fiske guide to colleges and from the Princeton Review guide to best colleges are inversely related to student body diversity. Thus, Putnam's findings for the broader population, at least with respect to social engagement and population diversity, may also characterize student communities at elite American colleges. We have also found that student retention from the freshman to the sophomore year is positively related to student body diversity. This may be because

less intense social lives leaves more time for study during the freshman year, when students are learning to manage their time.

Endnotes

[1] The survey consists of the responses of over 30,000 individuals in 41 different communities across the United States in the year 2000.

[2] A number of observations are lost because of missing data for the average debt variable. Excluding average debt from the model only has a small effect on the magnitudes and levels of statistical significance of the diversity variables in table 1.

[3] The Princeton Review data also identifies the 20 colleges surveyed where students are the "happiest" and the 20 colleges where students are the "least happy." We construct a happiness variable that takes a value of one for colleges where students are the happiest, a value of minus one for colleges where students are the least happy, and a value of zero for all other colleges. If greater social interaction means greater happiness, the effect of diversity on happiness is of interest. The results show that diversity is also negatively related to happiness. The coefficient and (z value) for the diversity variable in ordered logit happiness models following the specification of regressions 1 and 2 are –1.2 (-2.3) and –2.7 (-2.3).

[4]The social index measure is distributed as follows: response 1, n=6; response 2, n=32; response 3, n=166; response 4, n=56; response 5, n=15. The hypotheses of a normal distribution cannot be rejected at the 5% level (Kolmogorov-Smirnov test). Ordered probit diversity coefficients and (z values) for regressions 4 and 5 are –1.4 (-3.0) and –3.7 (-3.9).

Bibliography

Bargh, J., & McKenna, K. (2004) “The Internet and Social Life.” Annual Review of Psychology, 55(1), 573-590.

Costa, D., Kahn, M. (2003) “Understanding the American Decline in Social Capital.” Kyklos 56, 17–46.

Fiske, Edward B. Fiske Guide to Colleges 2010. Chicago: Sourcebooks, Inc., 2009.

McPherson, M., Smith-Lovin, L., Brashears, M. (2006) “Social Isolation in America: Changes in Core Discussion Networks Over Two Decades.” American Sociological Review 71, 353–375.

Princeton Review. The Best 371 Colleges, 2010 Edition. New Jersey: Princeton, 2009.

Putnam, Robert P. (2000) “Bowling Alone: The Collapse and Revival of American Community.” New York: Simon & Schuster.

Putnam, Robert P. (2007). “E Pluribus Unum: Diversity and Community in the 21st Century: The 2006 Johan Skytte Prize Lecture.” Scandinavian Political Studies 30: 137-174.

Wills, Garry. (2002) “Putnam’s America.” American Prospect. 30 Nov. 2009 <http://www.prosect.org/cs/articles?article=putnams_america>.

Table 1

Results from Regressing Quality of Life (Models 1-3) and Social Life (Models 4-6)

on Student Body Diversity and Other Variables, Elite American Colleges, 2009

Variable	Model 1	Model 2	Model 3*	Model 4	Model 5	Model 6*
private	3.27		3.72	-0.38		-0.35
	(2.66)		(2.94)	(-3.32)		(-2.92)
admissions	0.44	0.54	0.49	0.01	0.02	0.02
	(5.38)	(5.02)	(5.68)	(1.33)	(1.11)	(1.68)
avgdebt	-0.00	-0.00	-0.00	-0.00	-0.00	-0.00
	(-3.20)	(-1.09)	(-3.70)	(-0.80)	(-1.00)	(-1.07)
diversity	-5.61	-25.57	-17.52	-0.89	-2.57	-1.66
	(-1.93)	(-4.78)	(-2.57)	(-3.01)	(-4.14)	(-2.75)
_cons	48.80	47.85	51.26	2.89	3.35	2.91
	(6.48)	(4.55)	(6.57)	(3.30)	(2.04)	(3.28)
R-square	0.16	0.33	0.12	0.10	0.20	0.08
F	16.1	14.7	15.1	7.2	5.8	6.6
n	310	94	310	236	74	236

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*second stage of two stage least squares, diversity endogenous.

Variable names, definitions and (means, standard deviations) follow. private is a dummy variable, 1 = private college (0.69, 0.46); admissions is an index, ranging from 60 - 99, of how competitive admissions are at the school based on class rank, percent of applicants accepted and SAT or ACT test scores (90.12, 7.04); avgdebt is the cumulative undergraduate indebtedness incurred during college years excluding parental loans (21548.15, 6309.42); diversity is a Herfindahl index of the student body with the categories: white, black, Hispanic, Asian, and international student (0.48, 0.18). Quality of life is an index, ranging from 60 - 99, of how happy students are with their campus experience outside the classroom (81.39, 9.83). Social life is an index, ranging from 1 to

5, of the amount of social life that is readily available (3.15, 0.78). All variables are from Princeton Review (2009) except for social life, which is from Fiske Company (2009).

Table 2

Results from Regressing Percent That Would Return on Student Body Diversity and Other Variables, Elite American Colleges, 2009

Variable	Model 1	Model 2	Model 3*
private	-2.97		-3.26
	(-3.02)		(-3.16)
admissions	0.75	0.60	0.71
	(11.99)	(6.72)	(9.97)
diversity	5.42	9.00	9.24
	(2.82)	(2.76)	(2.21)
avgdebt	0.00	0.00	0.00
	(0.94)	(1.85)	(1.19)
liveoncampus	0.05	0.08	0.05
	(2.51)	(2.56)	(2.70)
_cons	14.97	22.10	15.71
	(2.68)	(2.54)	(2.76)
R-square	0.49	0.54	0.48
F	46.7	18.8	45.4
n	252	72	252

*second stage of two stage least squares, diversity endogenous.

Variable names, definitions and (means, standard deviations) follow. private is a dummy variable, 1 = private college (0.69, 0.46); admissions is an index, ranging from 60 - 99, of how competitive admissions are at the school based on class rank, percent of applicants accepted and SAT or ACT test scores (90.12, 7.04); diversity is a Herfindahl index of the student body with the categories: white, black, Hispanic, Asian, and international student (0.48, 0.18); avgdebt is the cumulative undergraduate indebtedness incurred during college years excluding parental loans (21548.15, 6309.42); liveoncampus is the percent of the student body living on campus

(63.29, 25.78). The dependent variable, percent that would return, is the percent of freshmen students that return for their sophomore year, and was taken from Fiske Company 2009 (88.34, 6.89). All independent variables from Princeton Review (2009).