

Estimating Low Socio-Economic Status: Replacing Use of FAFSA Data as Indicator

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Estimating Low Socio-Economic Status (SES)



- **Presenters**

- F.C. Caranikas, PhD (fanny.caranikas@austincc.edu)
- Xiaoling Liang, PhD (xiaoling.liang@austincc.edu)
- Soon M. Flynn, MPA (smerz@austincc.edu)

- **Research Team**

- F.C. Caranikas, PhD; Soon M. Flynn MPA; Xiaoling Liang, PhD; Daniel O’Hanlon-Chupe, MS; Charlene Knight; Holly Wiese; Richard Griffiths, PhD; Dewi Antony; more to join...

Presentation Objectives



- **Need to identify low income students**
- **Identification and validation of alternative to Pell grant eligibility**
- **Next Steps, Limitations, Future Research**
- **Request for comments and suggestions**

Need for SES Indicator



- **Is the college fulfilling its mission?**
- **Are our student success initiatives impacting outcomes for low SES students?**
- **Are our low SES students succeeding in college?**

Need for New SES Proxy



Pell Grant eligibility has been used as proxy for low income or low socio-economic status for many years.

Challenges with Using Pell

- **Most students do not complete FAFSA**
- **USDE restricted use of FAFSA data in January 2017**

Need for New SES Proxy



Recent federal laws prohibit research uses of FAFSA data

- January 2017: USDE Privacy Technical Assistance Center (PTAC). “Guidance on Use of Financial Aid Information for Program Evaluation and Research” interpreted 2008 reauthorization of the Higher Education Act of 1965.
 - FAFSA data may be used solely for the awarding and administration of financial aid to students and the evaluation of the effectiveness of this process.
 - Institutional research and other purposes are not allowed.
- June 2017: National Association of Student Financial Aid Administrators (NASFAA). “Financial Aid Data Sharing” reiterated the federal guidance.
 - Student level FAFSA data may not be accessed for the purpose of institutional research or policy analysis. Financial aid administrators may share aggregated data.

Resides-Low-SES Community



Some Alternative SES Proxies and Methods

- Family income and parents' education
- Parent's occupation or student's occupation; Unemployment history
- Rent home, own home, or live in government subsidized housing
- Own one or more cars
- SES based on student survey
- SES based on staff interviews with students
- Characteristics of neighborhood: zip code, census tract, census block group

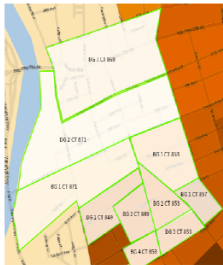
Resides-Low-SES Community



Resides-Low-SES Community

- Based on American Community Survey median income and average household size for census tract block-group associated with student's local or preferred address
- If median household income in the block-group is below 200% of Federal Poverty Guideline, then "Resides-Low-SES" = Yes

Project Design - Steps



STATISTICS FROM 2000 CENSUS

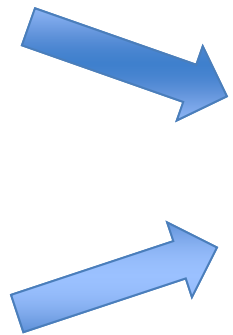
	Central	Northwest	West	South	East
Total population	22,212	22,212	22,212	22,212	22,212
Male	11,106	11,106	11,106	11,106	11,106
Female	11,106	11,106	11,106	11,106	11,106
White	10,000	10,000	10,000	10,000	10,000
Black	5,000	5,000	5,000	5,000	5,000
Hispanic	2,000	2,000	2,000	2,000	2,000
Other	5,212	5,212	5,212	5,212	5,212

STATISTICS FROM 2000 CENSUS

	Central	Northwest	West	South	East
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Female	11,106	11,106	11,106	11,106	11,106
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Other	5,212	5,212	5,212	5,212	5,212



Resides-Low-SES Indicator



Project Design - Steps



1. Obtain student addresses
2. Obtain latitude and longitude for addresses (geo coding)
3. Obtain census tract block group assignment data (spatial analysis)
4. Download block-group datasets from US Census Bureau: household median income, average household size
5. Obtain poverty guidelines table from US Dept HHS ASPE (Assistant Secretary for Planning and Evaluation)
6. Use data to calculate Resides-Low-SES indicator

Project Design – Sample Data



A	B	C	D	E	F	G	H	I
Address	X (Latitude)	Y (Longitude)	Blockgroup GEOCODE	Median Income for Block Group	Average HH Size for Block Group	Poverty Guideline for HH (calculated)	200% of Poverty Guideline for HH (calculated)	Resides-Low-SES (indicator)
505 Cross Lake Drive	-88.76337215	35.60601823	370010201001	34,583	3.39	22,050.2	44,100.4	Yes
3525 Banks Road	-98.67301297	35.63687498	370010201002	42,321	2.18	16,992.4	33,984.8	No
4222 SAS Campus Drive	-98.762526	35.827335	370010201003	19,375	2.72	19,249.6	38,499.2	Yes
3150 SE Maynard Rd.	-98.764195	35.7834788	370010201004	31,369	3.06	20,670.8	41,341.6	Yes
4117 Graceland	-98.710577	35.788895	370010202001	35,125	2.53	18,455.4	36,910.8	Yes
333 Jade Circle	-98.46068338	35.81421495	370010202002	22,500	2.65	18,957.0	37,914.0	Yes
7005 W South St	-98.65357642	35.77320902	370010202003	26,055	4.65	27,317.0	54,634.0	Yes
922 Roundabout Road	-98.831083	35.650541	370010202004	37,692	2.51	18,371.8	36,743.6	No
6590 Wolfpack Lane	-98.6102	35.824106	370010203001	-	2.71	19,207.8	38,415.6	-
825 Ferris Wheel Ct	-98.80010841	35.79489584	370010203002	32,670	2.18	16,992.4	33,984.8	Yes

Validation



Based on a Chi-Square test of independence, the calculated Resides-Low-SES indicator was associated with the poverty rate percentile group for households in the student's block group.

	Poverty Rate Percentile Group for Households in Student's Block Group											
Fall 2018 Students: Resides_Low_SES	0-10%	10.1-20%	20.1-30%	30.1-40%	40.1-50%	50.1-60%	60.1-70%	70.1-80%	80.1-90%	90.1-100%	Total Pct.	Total Stdts.
No	68%	26%	6%	1%	0%	0%	0%	0%	0%	0%	100%	35,705
Yes	1%	10%	29%	26%	12%	3%	1%	7%	8%	3%	100%	4,532

Validation



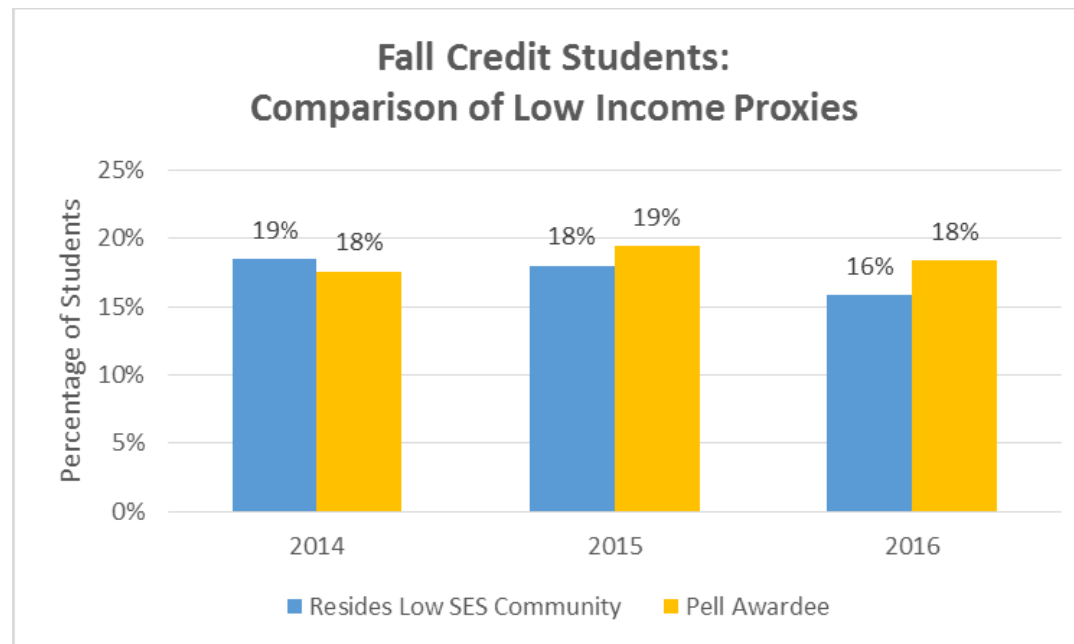
Students' Resides-Low-SES Indicator and County Poverty Percentile Group

Fall Semester	Chi-Square Statistic	Degrees of Freedom	Sample Size	Probability
2014	26,771.67	9	40,786	p<.0001
2015	26,488.34	8	40,950	p<.0001
2016	24,886.78	9	40,962	p<.0001
2017	24,325.93	9	40,152	p<.0001
2018	25,012.17	9	40,237	p<.0001

Validation



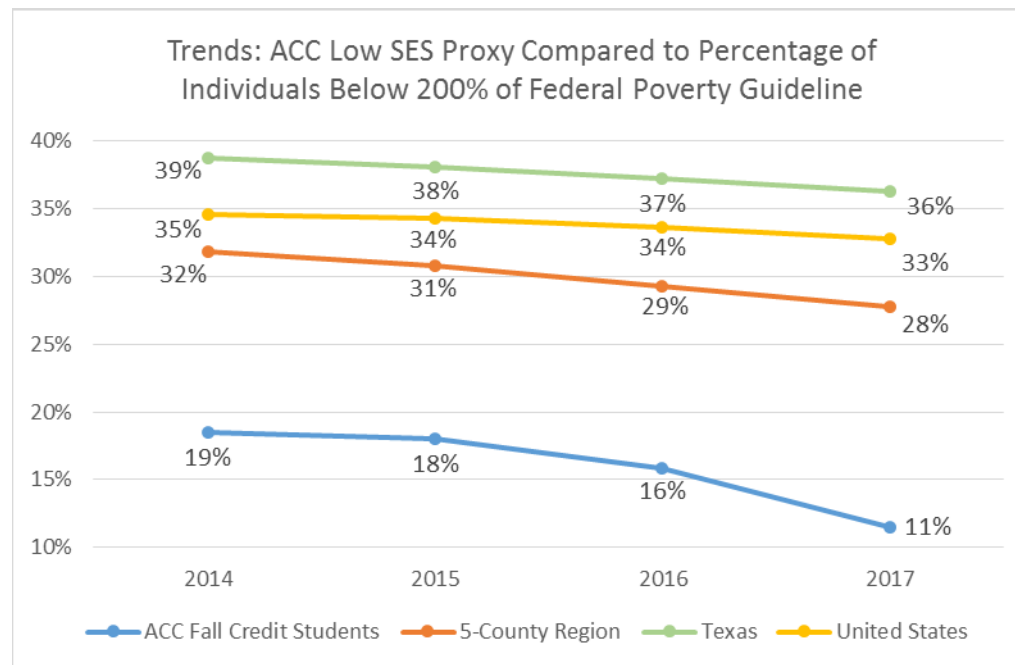
Resides-Low-SES and Pell-Awardee resulted in similar estimates of the percentage of students who were low income.



Validation



The estimated percentage of low income individuals among our students is declining as are similar estimates for county, state, and country.



Project Design - Next Steps



- Schedule routine geo and spatial coding of student addresses
- Develop an SQL table with coded addresses, and a plan for maintaining this address table
- Identify steps in the process which can be automated

Limitations to SES Estimates



- Nature of ACS data: lagged data; missing data for some block groups
- Block groups may not be comprised of homogeneous households due to gentrification, out migration, rapid growth
- Resides-Low-SES is an estimate of low income so messaging to students must offer opportunities to students while crafted to “do no harm”

Future Research



- Identify trends in declared majors selected by Resides-Low-SES students
- Work with Student Affairs to target services, including financial aid, to students identified as Resides-Low-SES
- Work with Enrollment Management staff to recruit more students from low SES neighborhoods
- Track persistence, completion, and employment outcomes for Resides-Low-SES students



Thank you!



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