

INDICATORS OF SOCIOECONOMIC STATUS (SES)

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Session Overview

- What is Socioeconomic Status (SES)?
- Types of SES Indicators
 - Individual
 - Area-based
 - Composite
- Considerations for selecting indicators
- Discussion

Socioeconomic Status

- Access to collectively desired resources (Oakes, n.d.)
- Typical markers of socioeconomic status:
 - Education
 - Income
 - Occupation
 - Wealth
- Less visible than some other social identities
- Synonyms*
 - Social Class
 - Socioeconomic Position
 *with minor differences

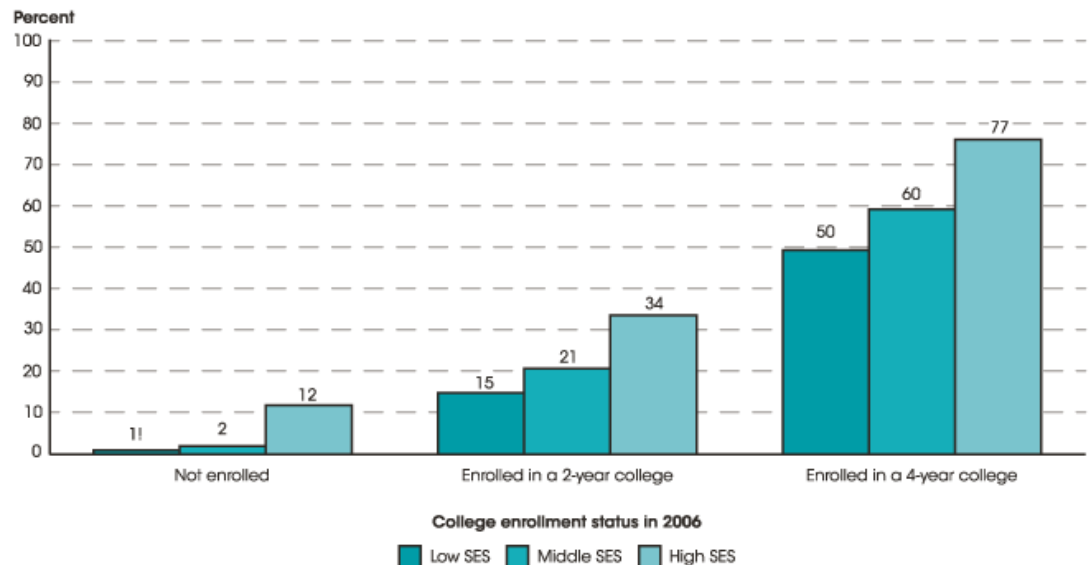
CEOs, politicians	\$200,000	
Professionals	\$100,000 \$72,500	Graduate Degree
Professional Support & Sales	\$50,000 \$32,000	Bachelor's degree
Clerical, Service & Blue collar	\$25,000 \$20,000 \$15,000	Some college
Part time & unemployed	\$7,000	High School

Sources: Thompson & Hickey, Society in Focus, 2005; US Census Bureau Personal income & education of individuals 25+, 2005

Socioeconomic Status

- Documented association with health outcomes (Duncan, Daly, McDonough, & Williams, 2002; Sweeney, 2015)
- Correlated with other social identities, differences can sometimes disappear when controlling for SES (Sweeney, 2015)
- Differences in postsecondary educational attainment (Kena, et al., 2015)

Figure 6. Percentage of spring 2002 high school sophomores who earned a bachelor's degree or higher by 2012, by socioeconomic status (SES) and 2006 college enrollment status



INDIVIDUAL-BASED MEASURES

Parent/Guardian Educational Attainment

- How many levels to ask about?
- Be sensitive to different family situations
 - Ask about only one parent/guardian? Second optional?
- Definition of First-Generation:
 - No universal definition, but some common ones:
 - Parent(s) without education beyond high-school
 - Parent(s) without four-year college degree
 - Proportions can vary widely: 22% to 77% in ELS 2002 (Toutkoshian, Stollberg, & Slaton, 2015)

Parent/Guardian Occupation and Family Income

- Occupation:
 - Variety of occupational classifications
- Income:
 - Equal intervals may be inadequate
 - Should you adjust for other family characteristics like dependents and siblings?
- How accurate is this self-reported information?
 - Are students really able to estimate family income?
 - In one study, over 20% of 11-15 year olds were not able to report father's occupation (Currie, Elton, Todd & Platt, 1997)

Financial Aid

- Eligibility for Pell and/or Subsidized Student Loans
 - Required disaggregation groups under HEOA (see NCES, 2010):
 - recipients of a Federal Pell Grant,
 - recipients of a subsidized Stafford Loan who did not receive a Pell Grant, and
 - students who did not receive either a Pell Grant or a subsidized Stafford Loan
- EFC
 - Recently changed from five digits to six
 - FAFSA on the Web has skip logic:
 - Simplified Needs Test: asset information optional
 - Automatic Zero EFC: income and asset information not required

AREA-BASED MEASURES

Links to Publicly-Available Data

Student

- Permanent Address
 - House/Apt number, Street
 - City, State, ZIP Code
- High School graduated from
 - CEEB High School Code

Area

- Census Data
 - Census Tract
 - Census Block
 - ZIP Code Tabulation Area
- IRS filing data by ZIP
- ODE School District & High School
 - Enrollment
 - SD Typology

Using Census Tract & Census Block

- **Census Tract:**
 - Average about 4,000 individuals (2,952 tracts in Ohio)
 - Boundaries often visible
- **Census Block:**
 - Smallest geographic unit (365,344 in Ohio)
 - Can be grouped into Block Groups (9,238 in Ohio)
- **Census Geocoder:**
 - Address lookup tool & API
 - Batch up to 1,000 addresses at a time (takes several minutes)
 - Match results: exact match, non-exact match, tie, no match
 - Have to single address lookup ties, fix any *no match*
 - Returns State, County, Census Tract, & Census Block (as well as interpolated Lat/Long and TIGER Line ID)

Using ZIP Codes

- There are four different kinds of ZIP Codes
 - Standard, PO Box, Unique, Military
- ZIP Code Tabulation Area (ZCTA)
 - Can fall across state & county lines
 - About 42,000 ZIP Codes but around 32,000 ZCTAs
- Geocoding not necessarily required (Berkowitz, Traore, Singer, & Atlas, 2015)
- Watch out for International Students
 - Some may have a U.S. Permanent Address
 - Attended an English Language program
 - Incoming graduate students previously working on an H1-B
 - Some countries (e.g. Saudi Arabia) also use 5-digit codes

Using CEEB High School Codes

- Six digit codes:
 - First two digits denote state:
 - 36: Ohio
 - 01-55: U.S. States & Territories
 - 55-58: APO/FPO locations / DODEA schools
 - 60-95: International schools
 - Special codes:
 - GED Certificate (96000)
 - Home Schooled (97000)
 - Unknown (999999)

Census Bureau: American FactFinder

- American Community Survey
 - Ongoing survey (3.5 mil sent each year)
 - 1-, 3-, and 5-year estimates (3-year discontinued)
 - 5-year available to Block Group scale
- Various choices:
 - Mean income, median income, earnings
 - Poverty status
 - Household financial characteristics
 - Proportion with a baccalaureate degree
- Download Center and Summary Files

IRS ZIP Code data

- Produced by the Statistics of Income division for each tax year (2013 currently available)
- Disclosure Protection:
 - ZIP codes with less than 100 returns, nonresidential classified as 99999 (within state)
 - AGI split into defined classes, sometimes collapsed
 - Number of returns rounded to the nearest 10
 - Negative AGI not included, overrepresented are suppressed

Ohio Department of Education

- School enrollments
 - Enrollment reported by gender, ethnicity, economically disadvantaged for public and community schools
 - Available in October
- School District Typology
 - Defined by demographic and geographic characteristics
 - Urban/Rural/Suburban/Small Town
 - Student poverty level
 - 8 classifications
- Ohio Educational Directory Information Retrieval Number (IRN) at building and district levels

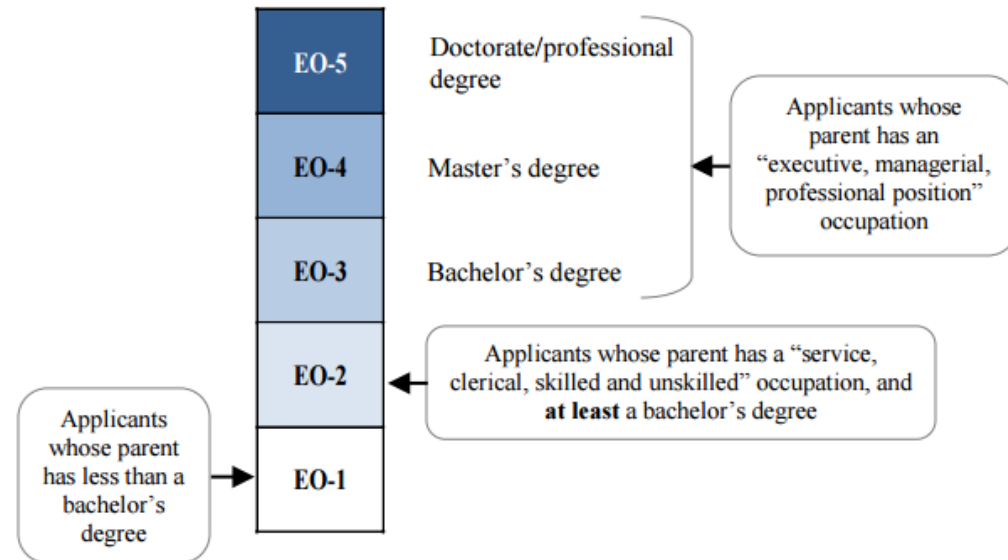
COMPOSITE MEASURES

Composite Measures

- Created from multiple indicators
- Could include individual and/or area-based measures
- Different methods of creation
 - Decision tree or classification table based on levels of variables
 - Standardize variables, then set weights and cutoffs
 - Standardize then use cluster analysis (see Crosta, Leinbach, Jenkins, Prince, & Whittaker, 2006)

Case of the AAMC SES Indicators

- Combines parental education and occupation
 - 8 education levels collapsed to 4 groups
 - 72 occupational categories collapsed to two groups
- Reported to schools:
 - EO-1 & EO-2 indicators
 - Fee Assistance Program
 - Pell Grant in undergrad



(Gribic, Jones, & Case, 2013)

CONSIDERATIONS

Considerations

- Reliability
 - Individual surveys may not add to the quality delivered by area analyses at an aggregate level (Sinclair, Doughney, & Palermo, 2003)
 - How will categories change from year to year?
- Completeness
 - Missing data: left blank, mistyped, not assigned, no match
- Usefulness, trust, and acceptance
 - Is it easy to interpret/understand?
 - Composite measure may be difficult
 - Will constituents see value in the indicator?

Considerations

- Categorization
 - Binary (e.g. Pell Grant), Discrete categories (e.g. High School Type), Continuous
 - Issues with smaller samples
- Intrusiveness
 - Will you target students for specific programs?
- Ability to detect other populations of interest
 - Third Culture Individuals (TCI): U.S. citizens with international address or high school
 - Military-connected: military ZIP, DODEA high school
 - Locally important occupations
 - Population density (Urban/Rural/Suburban)

DISCUSSION

Question 1

What indicators are you currently using?
How are they categorized?

Question 2

How well are your indicators accepted by administrators on your campus?

Is there any confusion?

Question 3

How well do you think your indicators are capturing student socioeconomic status?

What are they missing?

Resources

- American FactFinder:
http://factfinder.census.gov/faces/nav/jsf/pages/download_center.xhtml
- Census Geocoder: <https://www.census.gov/geo/maps-data/data/geocoder.html>
- Disaggregated Completion/Graduation Rate requirements:
<http://nces.ed.gov/pubs2010/2010831rev.pdf>

Resources

- IRS ZIP Code Data - [https://www.irs.gov/uac/SOI-Tax-Stats-Individual-Income-Tax-Statistics-2013-ZIP-Code-Data-\(SOI\)](https://www.irs.gov/uac/SOI-Tax-Stats-Individual-Income-Tax-Statistics-2013-ZIP-Code-Data-(SOI))
- Ohio Department of Education
 - Enrollments: <http://education.ohio.gov/Topics/Data/Frequently-Requested-Data/Enrollment-Data>
 - School District Typology: <http://education.ohio.gov/Topics/Data/Frequently-Requested-Data/Typology-of-Ohio-School-Districts>
 - Contacts & IRNs: <http://education.ohio.gov/Topics/Data/Ohio-Educational-Directory-System-OEDS>
 - IRN Verification Table (Includes CEEB/ACT codes): http://qry.regents.state.oh.us/cgi-pub/ode_high_sch CGI

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