INDICATORS OF SOCIOECONOMIC STATUS (SES)

Thomas Jay Benjamin

Graduate Assistant
Institutional Research
Kent State University
tbenjam3@kent.edu
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

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### Indicators of Socioeconomic Status (SES)

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>CEOs, politicians</th>
<th>Professionals</th>
<th>Graduate Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$200,000</td>
<td>$100,000</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>$72,500</td>
<td></td>
</tr>
</tbody>
</table>

### Income by Educational Level

<table>
<thead>
<tr>
<th>Educational Level</th>
<th>Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor's degree</td>
<td>$50,000</td>
</tr>
<tr>
<td>Professional</td>
<td>$32,000</td>
</tr>
<tr>
<td>Support &amp; Sales</td>
<td>$25,000</td>
</tr>
<tr>
<td>Clerical, Service &amp; Blue collar</td>
<td>$20,000</td>
</tr>
<tr>
<td>Part time &amp; unemployed</td>
<td>$15,000</td>
</tr>
<tr>
<td>High School</td>
<td>$7,000</td>
</tr>
</tbody>
</table>

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)
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

<table>
<thead>
<tr>
<th>Student</th>
<th>Area</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Permanent Address</td>
<td>• Census Data</td>
</tr>
<tr>
<td>• House/Apt number, Street</td>
<td>• Census Tract</td>
</tr>
<tr>
<td>• City, State, ZIP Code</td>
<td>• Census Block</td>
</tr>
<tr>
<td>• High School graduated from</td>
<td>• ZIP Code Tabulation Area</td>
</tr>
<tr>
<td>• CEEB High School Code</td>
<td>• IRS filing data by ZIP</td>
</tr>
<tr>
<td>• ODE School District &amp; High School</td>
<td>• ODE School District &amp; High School</td>
</tr>
<tr>
<td>• Enrollment</td>
<td>• Enrollment</td>
</tr>
<tr>
<td>• SD Typology</td>
<td>• SD Typology</td>
</tr>
</tbody>
</table>
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](http://factfinder.census.gov/faces/nav/jsf/pages/download_center.xhtml)
- Census Geocoder: [https://www.census.gov/geo/maps-data/data/data/geocoder.html](https://www.census.gov/geo/maps-data/data/data/geocoder.html)
Resources


• 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
References


References


