

Carl Vinson Institute of Government

The University of Georgia

ACS 5-Year Data
Sharpen Your Profiles

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Balancing Act

- Match geographic area of interest
- Detailed characteristics
- Reliability of estimates

Project: Housing Assessment

- District of approximately 5,000 housing units
- Partly in small city of 7,500 Hus

Question: Affordability of Housing

- Proportion of residents financially stressed in meeting their housing costs
- Compare for:
  - State
  - City
  - District
- What data for homeowners?
  - AFF Detailed Table: B25091
  - AFF Data Profiles: Housing
  - Summary File for BGs: B25091

AFF Detailed Table: B25091

- Available for State and City
- District?
  - 11 Block Groups fit well
  - Possible later webinar
- City data presented here

B25091. MORTGAGE STATUS BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS - Universe: OWNER-OCCUPIED HOUSING UNITS

	Estimate	MOE
Total:	2,525	328
Housing units with a mortgage:	1,485	236
Less than 10.0 percent	24	27
10.0 to 14.9 percent	150	81
15.0 to 19.9 percent	320	146
20.0 to 24.9 percent	221	96
25.0 to 29.9 percent	205	100
30.0 to 34.9 percent	176	98
35.0 to 39.9 percent	31	30
40.0 to 49.9 percent	139	93
50.0 percent or more	205	85
Not computed	14	
Housing units without a mortgage:	1,040	203
Less than 10.0 percent	394	126
10.0 to 14.9 percent	130	59
15.0 to 19.9 percent	165	79
20.0 to 24.9 percent	29	31
25.0 to 29.9 percent	52	54
30.0 to 34.9 percent	41	39
35.0 to 39.9 percent	9	14
40.0 to 49.9 percent	27	32
50.0 percent or more	184	99
Not computed	9	

B25091. MORTGAGE STATUS BY SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME IN THE PAST 12 MONTHS - Universe: OWNER-OCCUPIED HOUSING UNITS

	Estimate	MOE	CV
Total:	2,525	328	7.9%
Housing units with a mortgage:	1,485	236	9.7%
Less than 10.0 percent	24	27	68.4%
10.0 to 14.9 percent	150	81	32.8%
15.0 to 19.9 percent	320	146	27.7%
20.0 to 24.9 percent	221	96	26.4%
25.0 to 29.9 percent	205	100	29.7%
30.0 to 34.9 percent	176	98	33.8%
35.0 to 39.9 percent	31	30	58.8%
40.0 to 49.9 percent	139	93	40.7%
50.0 percent or more	205	85	25.2%
Not computed	14		
Housing units without a mortgage:	1,040	203	11.9%
Less than 10.0 percent	394	126	19.4%
10.0 to 14.9 percent	130	59	27.6%
15.0 to 19.9 percent	165	79	29.1%
20.0 to 24.9 percent	29	31	65.0%
25.0 to 29.9 percent	52	54	63.1%
30.0 to 34.9 percent	41	39	57.8%
35.0 to 39.9 percent	9	14	94.6%
40.0 to 49.9 percent	27	32	72.0%
50.0 percent or more	184	99	32.7%
Not computed	9		

AFF Data Profile: Housing

- Available for State and City
- Not for BGs comprising District
- City data presented here

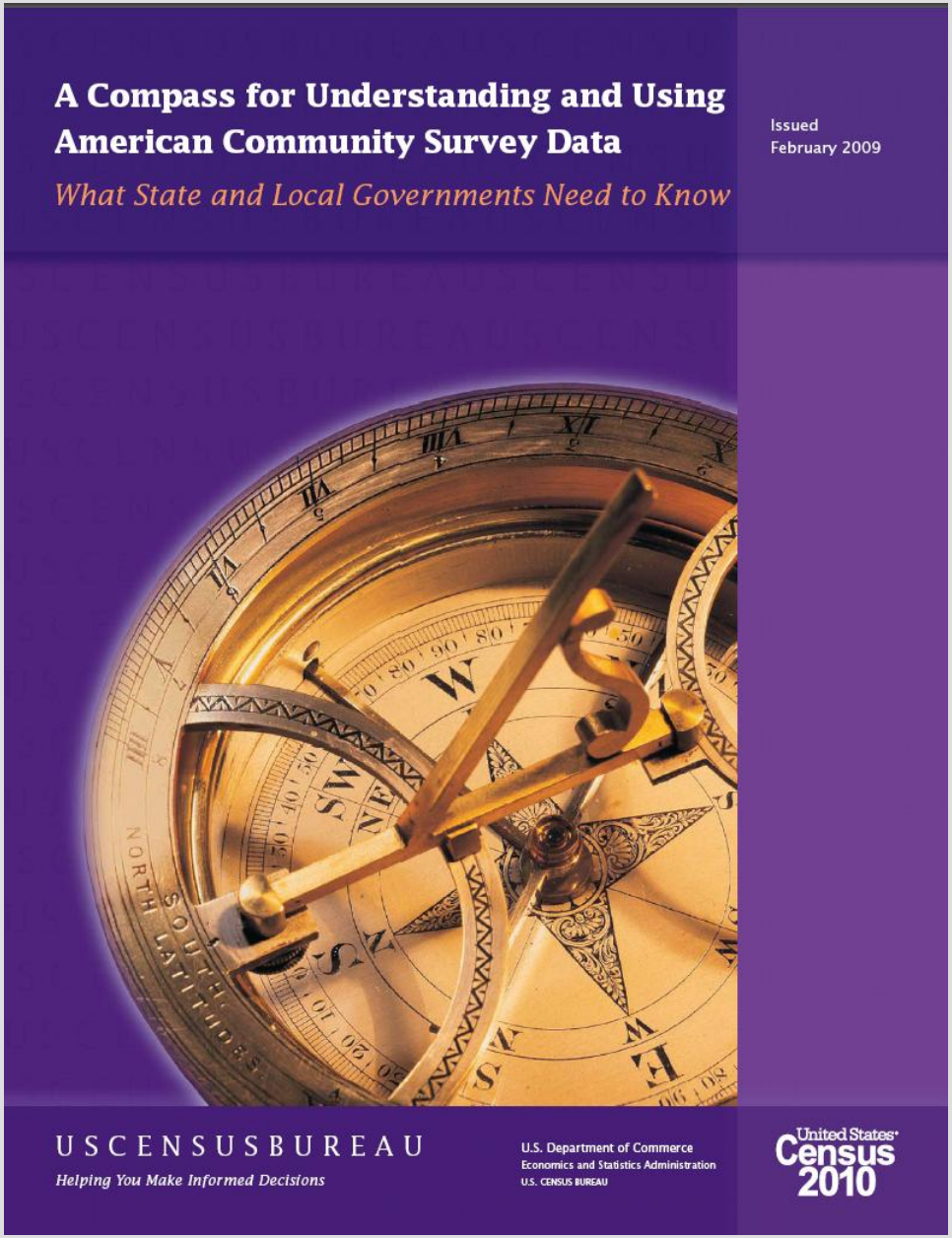
SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME			
	Estimate	MOE	CV
Housing units with a mortgage	1,471		
Less than 20.0 percent	494	169	20.8%
20.0 to 24.9 percent	221	96	26.4%
25.0 to 29.9 percent	205	100	29.7%
30.0 to 34.9 percent	176	98	33.8%
35.0 percent or more	375	130	21.0%
Housing unit without a mortgage	1,040		
Less than 10.0 percent	394	126	19.4%
10.0 to 14.9 percent	130	59	27.6%
15.0 to 19.9 percent	165	79	29.1%
20.0 to 24.9 percent	29	31	65.0%
25.0 to 29.9 percent	52	54	63.1%
30.0 to 34.9 percent	41	39	57.8%
35.0 percent or more	220	105	29.0%

Profile Reports:

SELECTED MONTHLY OWNER COSTS AS A PERCENTAGE OF HOUSEHOLD INCOME			
	Estimate	MOE	CV
Total Owner Occupied Housing Units			
30.0 percent or more	812	197	14.8%
Percentage	32.3%	6.7%	12.6%

How do you calculate that?

- Coefficient of Variation (CV)?
- MOEs for aggregated count data?
- MOEs for derived proportion?


A Compass for Understanding and Using American Community Survey Data
What State and Local Governments Need to Know
Issued February 2009
USCENSUSBUREAU
Helping You Make Informed Decisions
U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU
United States Census 2010

Calculate Coefficient of Variation (CV)

- Derive Standard Error from the MOE

$$SE = MOE / 1.645$$

$$102.8 = 169 / 1.645$$

- Calculate CV from SE

$$CV = SE / Estimate * 100$$

$$20.8\% = 102.8 / 494 * 100$$

MOE for Aggregated Count Data

1. Obtain the MOE of each component estimate
2. Square the MOE of each component estimate
3. Sum the squared MOEs
4. Take the square root of the sum of the squared MOEs

MOE for Aggregated Count Data

	Estimate	MOE	MOE^2
Housing units with a mortgage			
30.0 to 34.9 percent	176	98	9,604
35.0 percent or more	375	130	16,774
Housing unit without a mortgage			
30.0 to 34.9 percent	41	39	1,521
35.0 percent or more	220	105	11,021
Sum	812		38,920
Square Root		197	

MOE for Derived Proportion

1. Obtain the MOE for the numerator and the MOE for the denominator of the proportion
2. Square the derived proportion
3. Square the MOE of the numerator
4. Square the MOE of the denominator
5. Multiply the squared MOE of the denominator by the squared proportion
6. Subtract the result of (5) from the squared MOE of the numerator
7. Take the square root of the result of (6)
8. Divide the result of (7) by the denominator of the proportion

MOE for Derived Proportion

Steps 1 -4	Estimate	MOE	MOE^2	
Numerator	812	197	38920	
Denominator	2511	310	96245	
Derived Proportion	0.3234		0.1046	
Step 5				10065
Step 6				28855
Step 7				170
Step 8				0.068

Report to Local Government Redevelopment Committee

Approximately 1 out of 3 households in the city who own their home are spending 30 percent or more of their household income on housing related costs.

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