White Picket Fences:

Housing Markets and the Living Arrangements of the Millennial Generation

Jonathan Vespa
US Census Bureau
Social, Economic, and Housing Statistics Division
jonathan.vespa@census.gov

Rose M. Kreider
US Census Bureau
Social, Economic, and Housing Statistics Division
rose.kreider@census.gov

Charlynn Burd
US Census Bureau
Social, Economic, and Housing Statistics Division
charlynn.burd@census.gov

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Extended Abstract

Objective
Housing is an essential element of young adult living arrangements. Using the 2007–2011 American Community Survey, we explore associations between the living arrangements of young adults in the Millennial generation (born 1977–1993) and two elements of county-level housing markets: (1) affordability, measured by the mortgage and rent costs of local markets; and (2) availability of two types of housing units, detached single family houses and apartments.

We build on prior work by looking at a more exhaustive array of arrangements among young adults, including living alone, with a cohabiting partner, with a spouse, with parents, or with roommates or other nonrelatives. We also look at the type of local housing and not just its cost.

Preliminary results and conclusions
- Young adults may offset high housing costs by living with parents, roommates or cohabiting partners, but not spouses.
- Living alone is tied to the supply of apartments but not single family houses. An abundance of apartments facilitates living alone or with roommates relative to parents or a spouse. .
- Married life is linked with a specific array of housing conditions: plentiful single family houses and low mortgages, but *not* plentiful apartments and low rents.
- Cohabitation may be an alternative to living alone or with a spouse when rents and mortgages are expensive. It does not appear to be an alternative to living with parents.

Future analyses
- Building multilevel models that nest young adults within micro- and metropolitan areas, and further nest them within regional labor markets. Labor markets more accurately reflect housing markets than the county administrative boundaries currently used in the preliminary analyses.
- Incorporating other housing characteristics, such as the size of dwellings and the availability of multifamily housing.
- Exploring period effects of the Great Recession between 2007 and 2011. Did the role of housing markets in young adult living arrangements change during the recession?

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A long tradition of social science research recognizes the importance of housing for families (Bratt 2002; Glazer 1967; Mulder 2006; Shlay 1995) and, among young adults in particular, household formation and leaving the parents' home (Borsch-Supan, 1986; Christian 1989; Haurin et al. 1994). The current study explores how the availability and affordability of housing are linked with the living arrangements of the Millennial generation (born 1977–1993).

Young adults today have more options for their living arrangements than previous generations. As union formation is delayed, married households are no longer exhaustive of young adult living arrangements. Only a quarter of young adult men live with a spouse compared with a third who live with parents and a fifth who live with roommates or in another arrangement (Vespa, Lewis, & Kreider, 2013). What is more, this delay involves generational family ties (Goldscheider, 2000) as young adults may continue living with their parents. To capture the diversity of contemporary living arrangements, this study looks at living alone, with parents, with a spouse or cohabiting partner, and with roommates or other nonrelatives.

Prior studies modeled only a handful of these living arrangements, such as leaving the parental home versus living alone (Haurin et al. 1997), or living with parents versus forming partnerships (Ermisch 1999). The work of Hughes (2003) explored a more diverse set of young adult living arrangements. She used data from the 1990 Census, which is now dated, and could not explore how the availability of different types of housing influences living arrangements.

This study uses 2007–2011 ACS data, updating key studies from the 1980s and 1990s (Haurin et al 1993, 1994; Kent 1992). These data help us capture the diversity of contemporary young adult living arrangements. Using more recent data also lets us explore how the role of

housing markets has changed in response to the recent economic recession of 2007–2009 and its prolonged jobless recovery (Theodossiou 2012). The recession had a profound impact on housing markets. We explore how these changes may be related to contemporary living arrangements among Millennials.

Data

This study uses the 2007–2011 American Community Survey (ACS). The ACS is a nationally representative cross-sectional survey of approximately 3 million households across the United States. We restricted the sample to all young adults who were born between 1977 and 1993 and who were 18–30 years old at interview. By including all young adults, and not just householders, we are able to look at multiple living arrangements in which the young adult lives in someone else's household, such as his parents' or a roommate's.

The sample totals 3,219,310 young adults (weighted $N = 51,763,743$). Living with parents (36.2 percent) is the most common arrangement, followed by living with a spouse[1] (24.1 percent) (Table 1). A higher share of 18–24 year olds were living with parents or roommates, however, while a higher share of 25–30 year olds were living alone, cohabiting or married.[2]

[Table 1]

We focused on four housing market characteristics. Each is measured at the county in which the young adult lived. The first two variables captured the stock and type of available

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[1] The group of married young adults includes those living in their own household and those living as a subfamily in someone else's household. We do not separate these two groups in the preliminary analyses but plan to do so in the revised paper.

[2] In ACS, young adult students who live in college dormitories are counted in the group quarters population. In addition, in ACS it is only possible to determine whether the householder lives with a cohabiting partner. If a young adult is living with a boyfriend/girlfriend and neither one is the householder, ACS does not capture that couple. As a result, all cohabiting couples are necessarily householders in this sample, but that does not apply to married adults or those in other living arrangements.

housing: the number of detached single family houses per 100 adults (age 15 or older), and the number of apartments (rental units) per 100 adults (age 15 or older).

The second captured the affordability of housing: the average monthly mortgage and rent costs. Mortgage costs included the mortgage plus insurance, utilities, homeowner dues and taxes. Rent costs included the rent plus any utilities. Both variables represent the average monthly cost of a mortgage or rent in the county where the young adult lived.

We included several individual-level controls in this preliminary analyses, which we do not discuss in detail: the respondent's age, gender, educational attainment, employment and school enrollment status, race and Hispanic origin, and nativity.

Results

Where are married and cohabiting households located?

Figures 1 and 2 show the percent of households in each county that are married or cohabiting. To gauge the degree of overlap between household types and housing market traits, we crossed the distribution of households with that of housing burden (i.e., the percent of households whose monthly housing costs consume at least half their income). We created a four category typology showing whether the county had a higher or lower than average distribution on each characteristic. For example, Waynesboro County, Virginia is classified as high cohabitation–low burden because 17 percent of its households are cohabiting (which is higher than the national average of 11.7 percent) and 20.7 percent are burdened (which is lower than the national average of 23.4 percent).

[Figure 1a–1b]

[Figure 2a–2b]

- Cohabiting households are concentrated in the Northeast, Southwest and West, and around the Great Lakes (Figure 1, Panel A).

- Housing burden and cohabitation are moderately correlated (Pearson's correlation = .22); counties with a concentration of cohabiting households tend to have high housing burden as well (Figure 1, Panel B).

- Married households are concentrated in two belts through the Midwest and Plains States: north to south, from North Dakota to Texas, and west to east, from Kansas to Virginia (Figure 2, Panel A).

- The stock of detached single family houses and married households are highly correlated (Pearson's correlation = .65) (Figure 2, Panel B).

- Counties along the Mississippi River and in the South also stand out for having a low proportion of married households.

Housing characteristics of counties with the highest concentration of each living arrangement

Figures 3 and 4 show the percent difference in housing characteristics between counties in the topmost and bottommost quartiles—in other words, where each living arrangement is the most prevalent compared with the least prevalent. Patterns in these figures suggest that living arrangements are associated with county-level housing characteristics.

- Counties with the highest concentration of Millennials living with roommates have about 80 percent more apartments and 23 percent higher monthly rents, on average, than counties with the fewest Millennials living with roommates (Figure 3).

- Counties with the highest concentration of married Millennials have 15 percent more single family homes and 19 percent lower mortgages than counties with the fewest married Millennials (Figure 4).

- Counties with the highest concentration of Millennials living with their parents have 28 percent fewer apartments, while areas with the most young adults living alone have 45 percent more apartments than counties in the bottommost quartile (Figure 3).

[Figures 3–4]

Preliminary multivariate analysis

We followed the analytic design of previous studies (e.g., Guzzo 2006; Hughes 2003) and used multinomial logistic regression. We standardized the housing variables so that relative risk ratios correspond to a one standard deviation change in the predictor. For brevity the figures do not show results for the individual-level controls. We used the ACS replicate weights and Huber-White estimator to correct for the nonindependence of standard errors because of the clustering of households in counties (Greene 1997). This technique is well suited to logistic models when the number of clusters is high, at least 50 (Bertrand et al. 2004; Kezdi 2004); in our case there are 3,143 clusters.

- Counties with expensive rents have higher risks of young adults living with parents relative to living with roommates, alone, or with a spouse or cohabiting partner. A one standard deviation increase in local rents lowers the risk of living alone by a third relative to living with parents (Figure 5).

- Millennials are less likely to live alone when rents are expensive but they are more likely to do so when apartments are plentiful (Figures 5–6).

- Counties with an abundance of detached single family houses have higher risks of living with a spouse than with roommates, parents, alone or a cohabiting partner (Figure 6).

- Compared with living with a spouse, higher mortgages are linked with higher risks of living with a roommate, parents, alone or with a cohabiting partner (Figure 6).

- Cohabitation does not appear to be an alternative to living with parents (Figure 5). But it may be an alternative to living with a spouse when mortgages are high and single family houses scarce (Figure 6).

- Cohabitation may be an alterative to living alone when apartments are scarce and rents and mortgages are high (Figure 7). A one standard deviation increase in rent and mortgage raises the risk of cohabiting by a quarter and a fifth, respectively, relative to living alone.

Summary and Future Analyses

Preliminary results suggest that Millennials' living arrangements are associated with local housing market characteristics. When costs are high, young adults are more likely to live with parents, roommates or cohabiting partners than they are to live alone or with a spouse. Furthermore, living with a spouse is strongly linked with a specific array of housing conditions: plentiful single family houses and low mortgages. An abundance of apartments and low rents are *not* positively linked with marriage in any model. Thus, married life may require specific housing conditions as prerequisites (Hughes 2003; Mulder and Wagner 1998).

We plan to expand the analysis in three ways. First, we are incorporating other housing aspects that may influence living arrangements, such as the size of dwellings and the availability of multifamily houses compared with detached single family homes. Second, we are building multilevel models that nest young adults within micro- and metropolitan areas, and further nest

them within regional labor markets. Labor markets would more accurately reflect housing

markets than the administrative (i.e., county) boundaries that are used here. This modeling

strategy will also help us identify differences between micro- and metropolitan areas.

And third, we would like to explore period effects.

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Table 1. Living arrangements of young adults in the Millennial generation, born 1977–1993 (weighted %)

Living arrangement	Total sample	18–24 years old	25–30 years old
Alone	7.5	5.1	10.2
With a cohabiting partner	11.7	10.1	13.4
With a spouse	24.1	10.4	39.4
With parents	36.2	52.1	18.5
With roommates	20.5	22.4	18.5

Source: 2007–2011 American Community Survey

**Figure 1a. Percent of households that are cohabiting, 2007–2011**

Prevalence of cohabiting households (quartiles)

- 0% – 6%
- 7% – 8%
- 9% – 10 %
- 11% – 26%
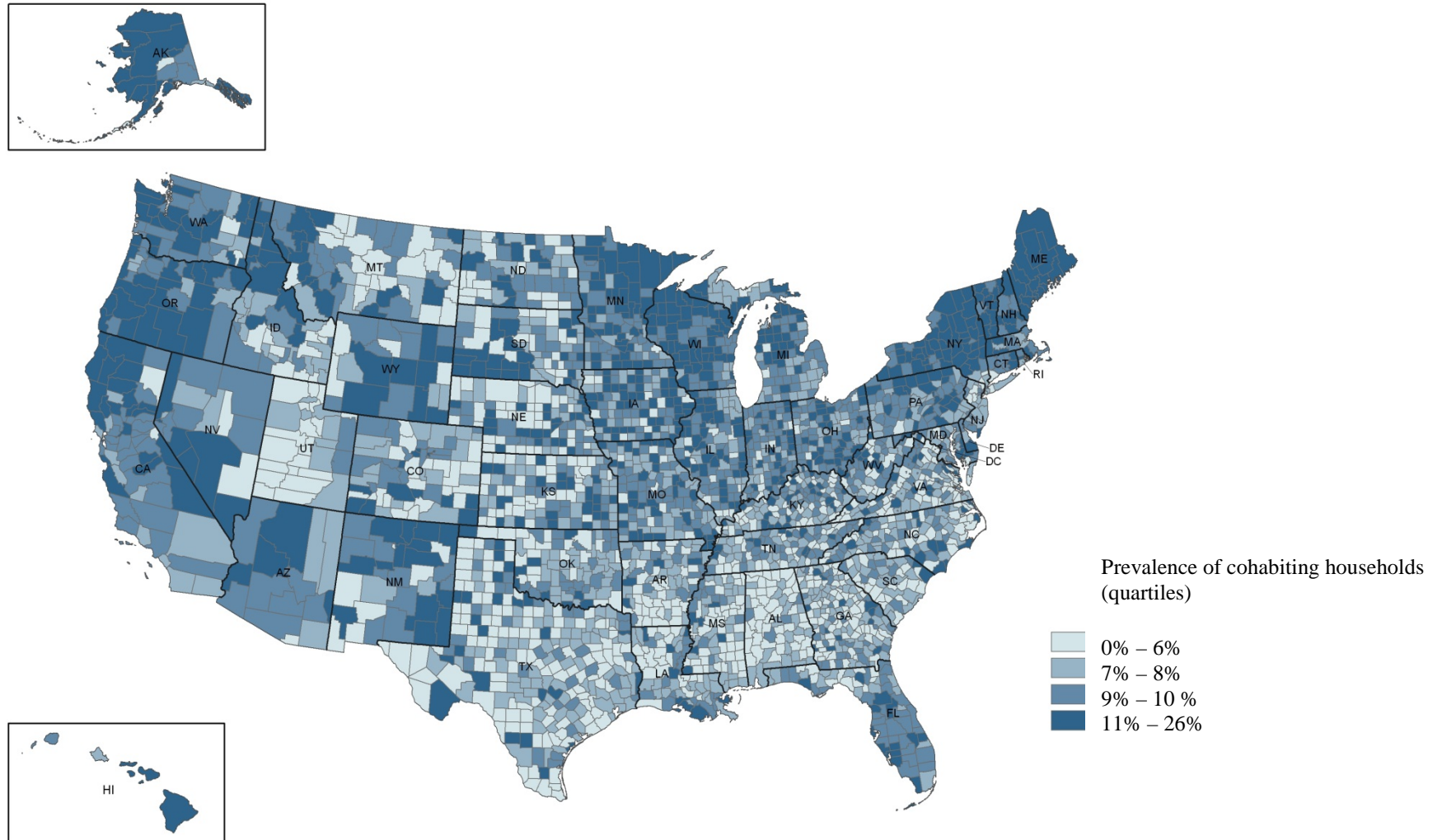
Source: 2007–2011 American Community Survey

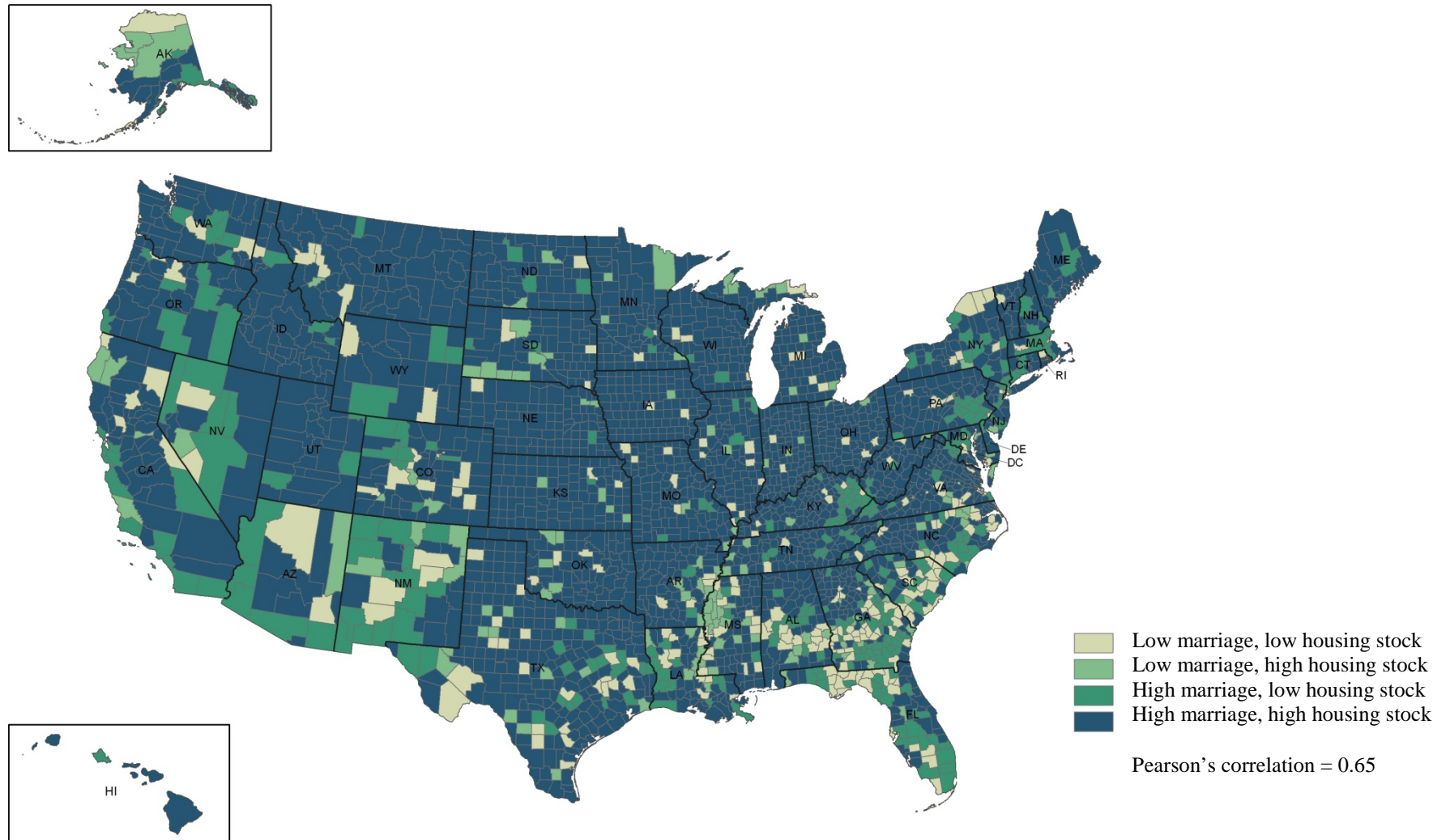**Figure 1b. Distribution of cohabiting households and housing burden, 2007–2011**

Low cohabitation, low burden
Low cohabitation, high burden
High cohabitation, low burden
High cohabitation, high burden

Pearson's correlation = 0.22

Source: 2007–2011 American Community Survey

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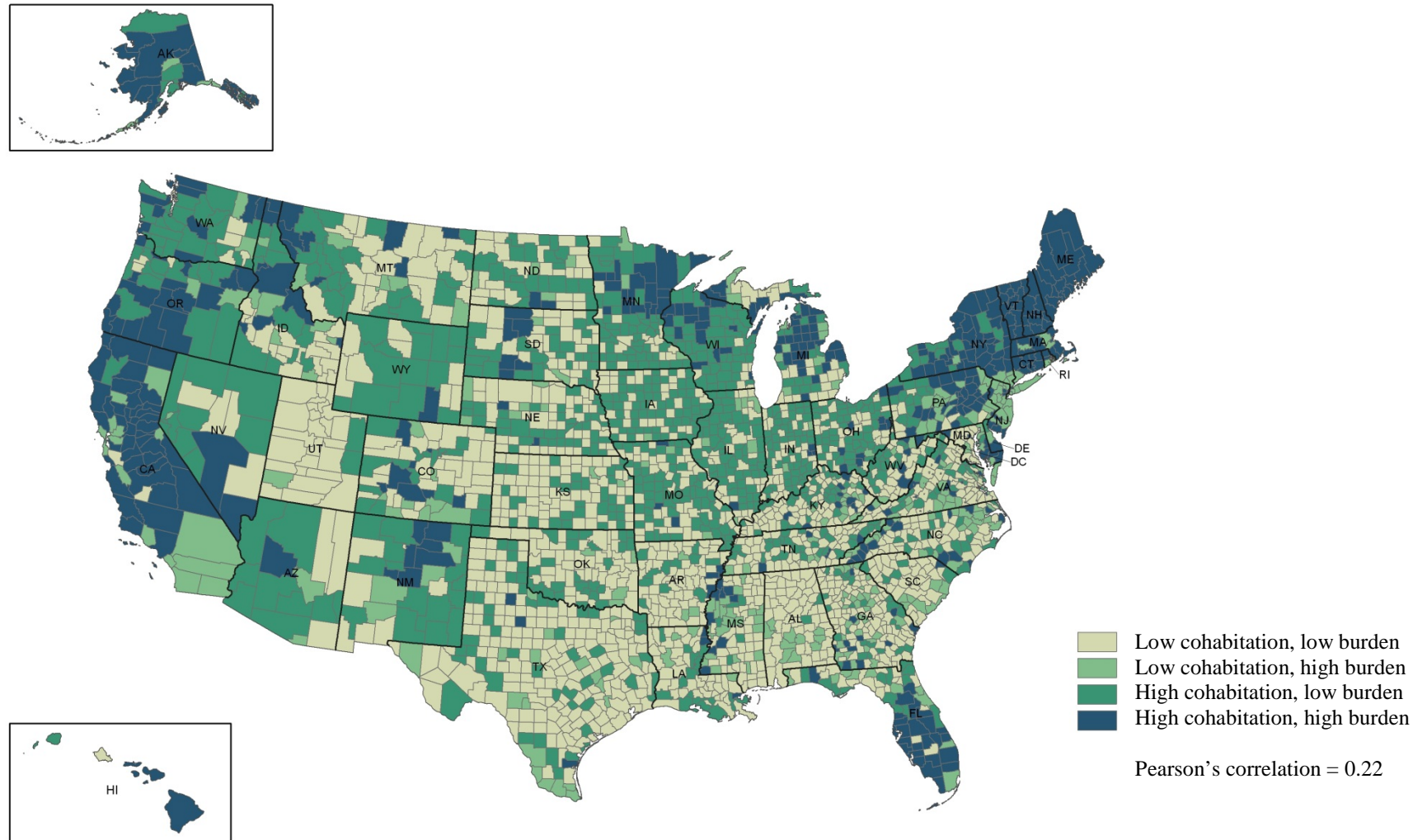
Figure 2a. Percent of households that are married, 2007–2011

Prevalence of married households (quartiles)

- 8% – 54%
- 55% – 61%
- 62% – 66 %
- 67% – 91%
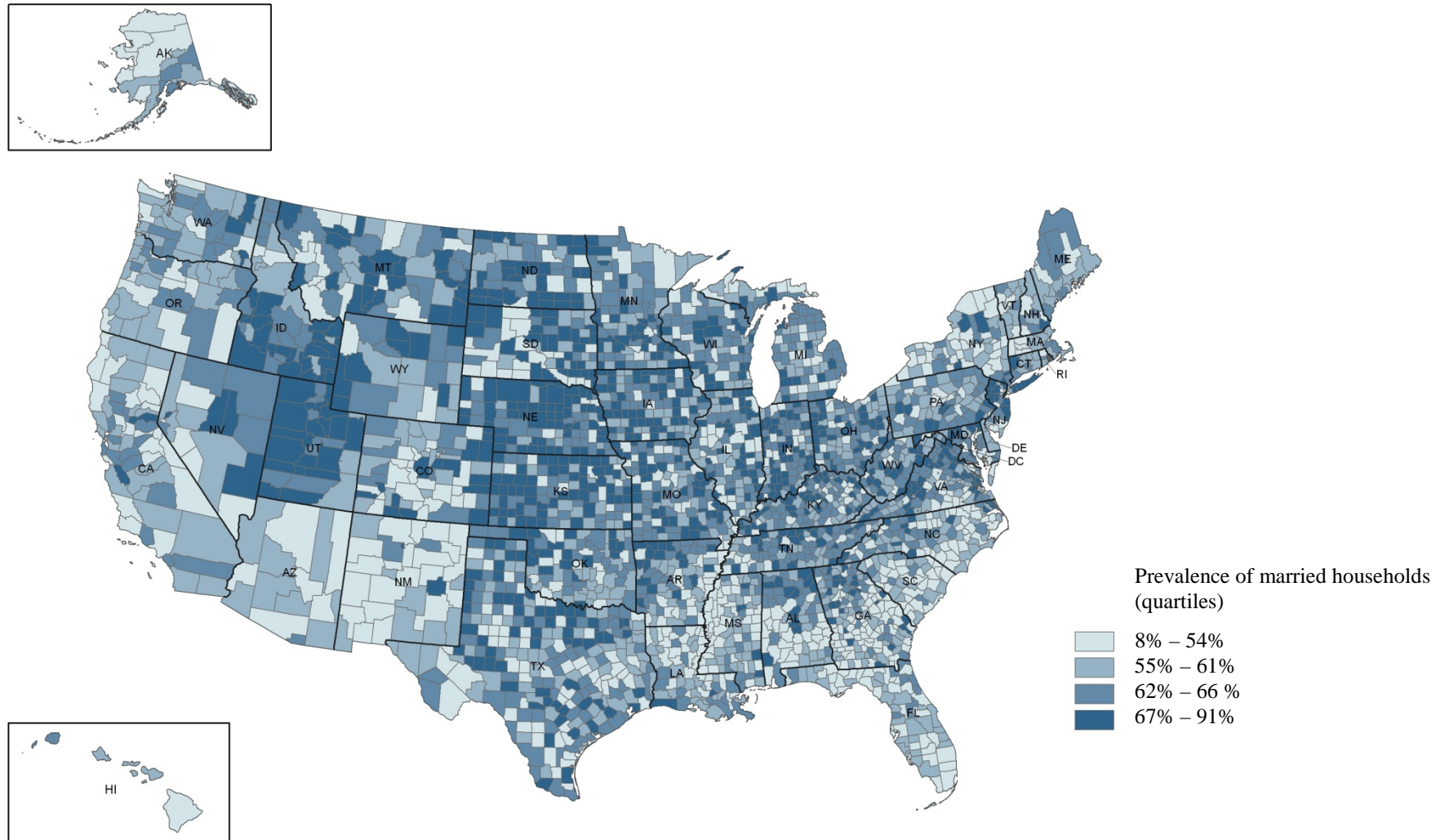
Source: 2007–2011 American Community Survey

**Figure 2b. Distribution of married households and the stock of single family houses, 2007–2011**

Low marriage, low housing stock
Low marriage, high housing stock
High marriage, low housing stock
High marriage, high housing stock

Pearson's correlation = 0.65

Source: 2007–2011 American Community Survey

Figure 3. Living alone or with roommates among 18–30 year olds is prevalent in counties with abundant apartments and higher rents

Percent difference in rented housing characteristics between counties in the top and bottom quartile of each living arrangement
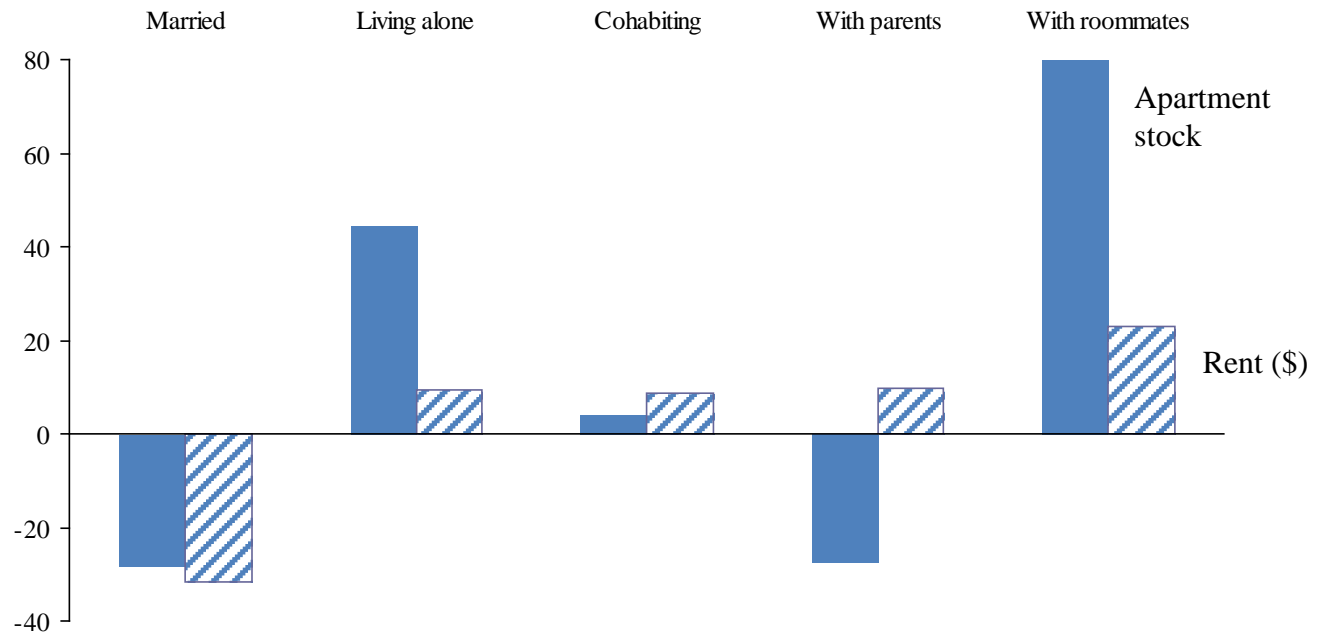
Source: 2007–2011 American Community Survey

Figure 4. Married households among 18–30 year olds are concentrated in counties with low mortgages and abundant single family houses.
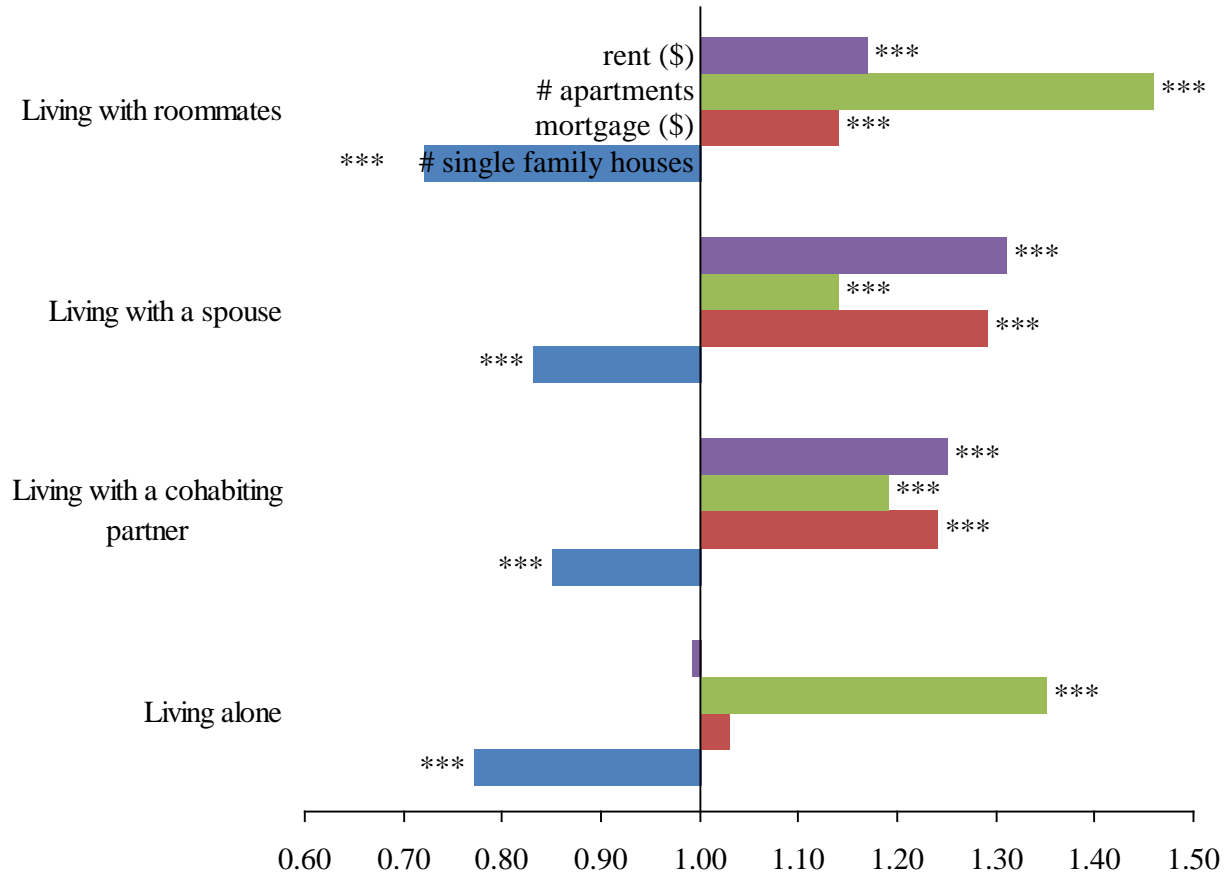
Percent difference in owned housing characteristics between counties in the top and bottom quartile of each living arrangement
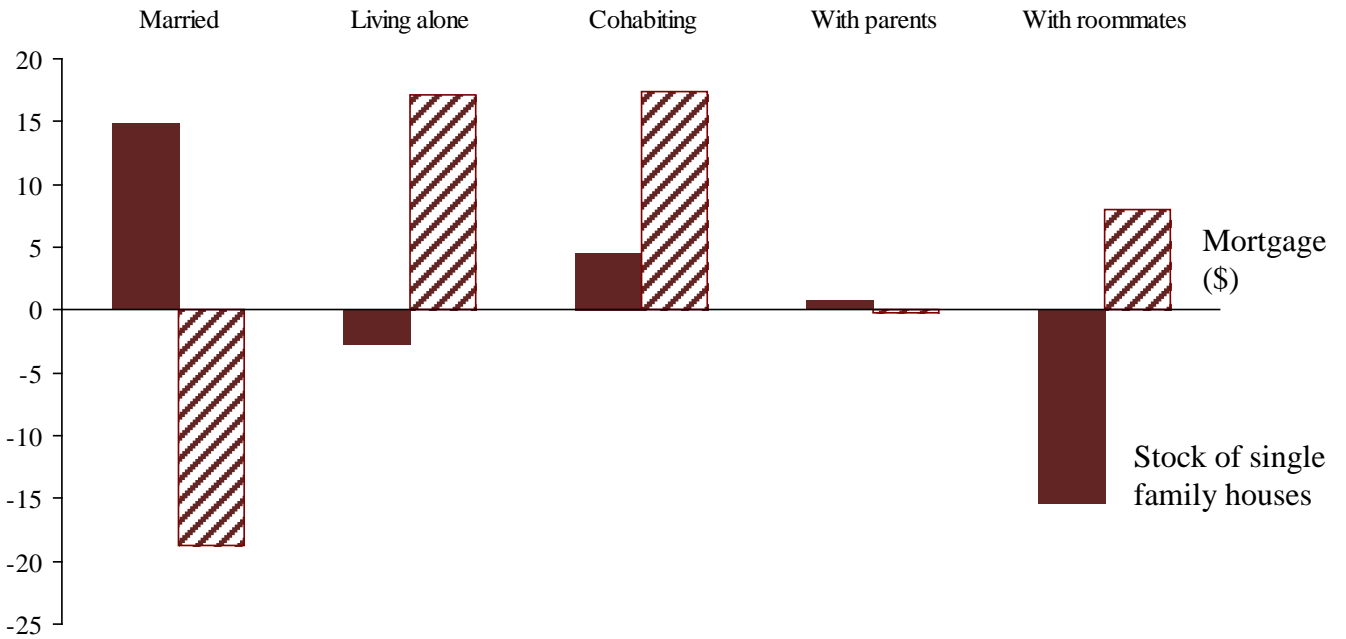
Source: 2007–2011 American Community Survey

Figure 5. Marriage and white picket fences

Housing markets and the risks of living with a spouse, relative to selected living arrangements (relative risk ratios shown)
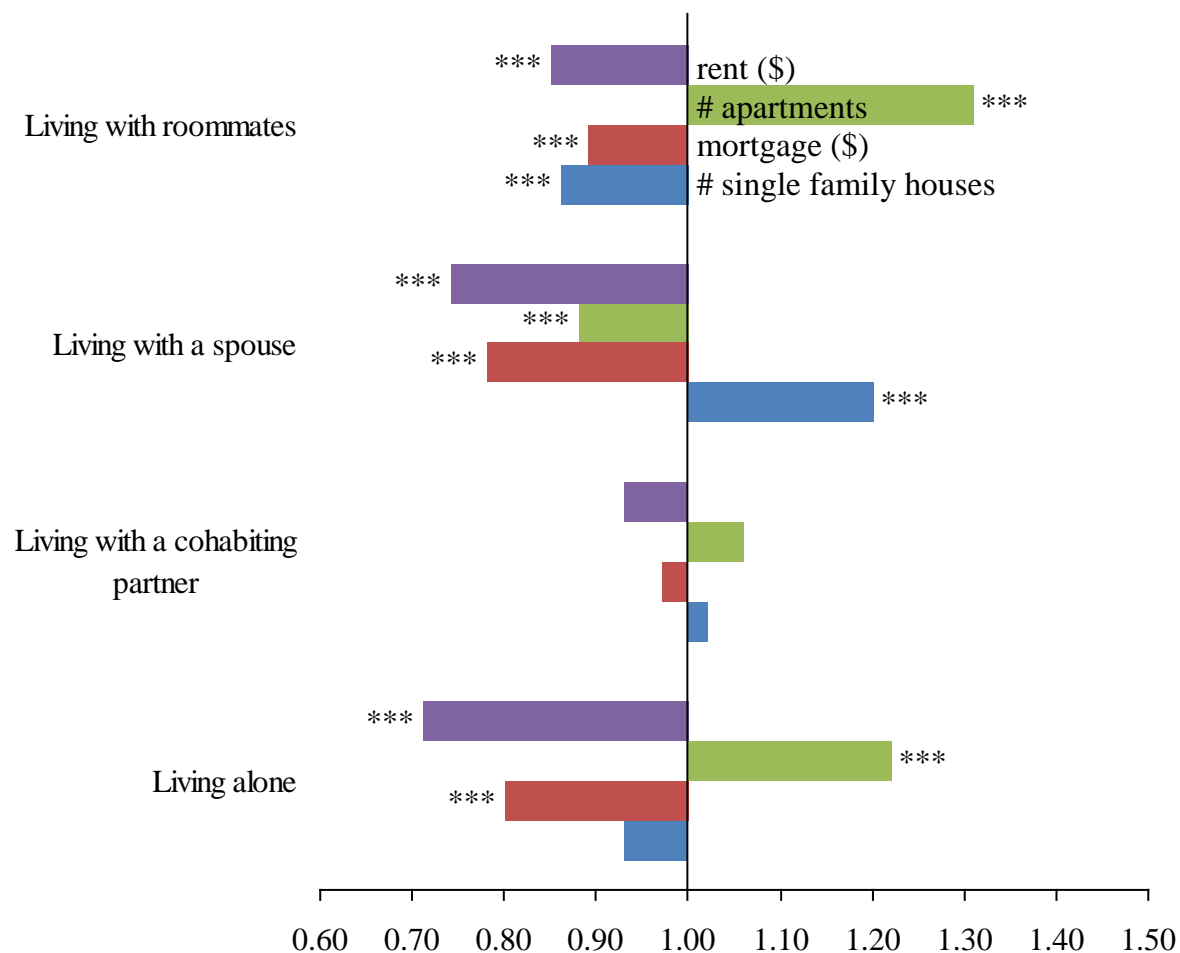

*** *p* < .001; because of the high degree of statistical power, we do not mark results below this level of significance.

Source: 2007 – 2011 American Community Survey.

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Figure 6. With parents or roommates? The importance of abundant apartments

Housing markets and the risks of living with parents, relative to selected living arrangements (relative risk ratios shown)
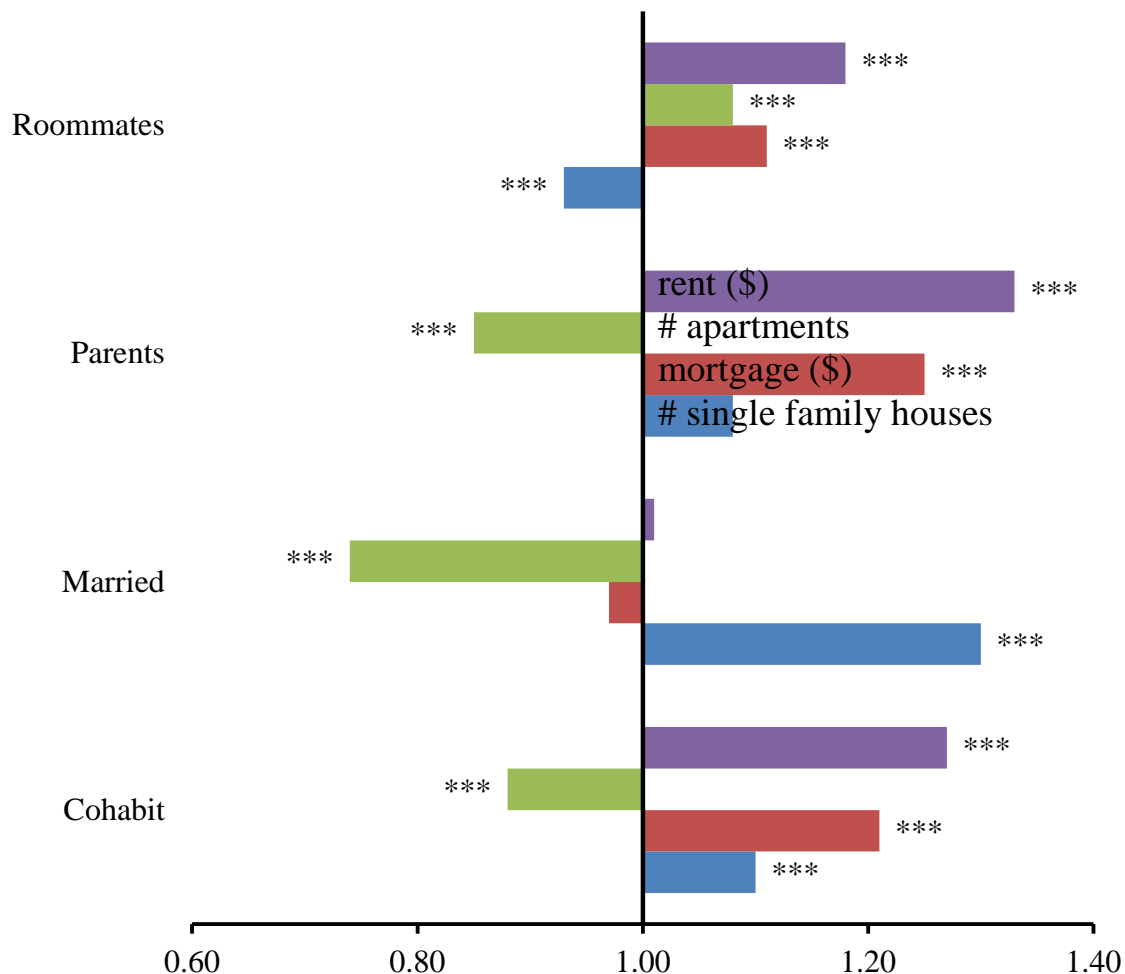

*** *p* < .001; because of the high degree of statistical power, we do not mark results below this level of significance.

Source: 2007 – 2011 American Community Survey.

Figure 7. Living alone and the importance of abundant, inexpensive apartments

Housing markets and the risks of living alone, relative to selected living arrangements (relative risk ratios shown)

*** $p < .001$; because of the high degree of statistical power, we do not mark results below this level of significance.

Source: 2007 – 2011 American Community Survey.