#### Inferring Reasons for Moving Using 2008-2010 3- year American Community Survey Data

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#### **ABSTRACT**

The purpose of this paper is to evaluate the usefulness of the American Community Survey (ACS) both for studying respondents' motivations for moving and for understanding aggregate metropolitan migration inflows. The ACS, conducted annually and with an initial sample size of about 3 million households, is the foremost data source for studying aggregate migration patterns. The survey includes detailed socioeconomic and demographic information on the current characteristics of respondents, and some retrospective information on residence history and life changing events in the previous year, including marriage and labor force data. Using the 2008-2010 ACS 3-year file, we first look at the relationships between current demographic characteristics, life-changing events in the previous year, and migration behavior in the previous year for household-heads. We then use this information to "infer" if household-heads' motivations for moving were for family, employment, or other reasons. The distribution of household-heads by these "inferred" reasons compared with respondent-reported reasons for moving from the 2009-2010 Current Population Survey (CPS). We conclude the paper by decomposing intra-metropolitan migration and inter-metropolitan inflows from the ACS by the "inferred" reasons for moving. The results suggest many of the ACS retrospective life event measures are highly correlated with migration behavior, however, the expected difficulties with determining causality of these relationships using cross-sectional data are present.

<sup>\*</sup>This work is released to inform interested parties of ongoing research and to encourage discussion of work in progress. Any views or opinions expressed in the paper are the authors' own and do not necessarily reflect the views or opinions of the U.S. Census Bureau. Please direct correspondence to Peter Mateyka, U.S. Census Bureau, HHES, HQ-7H484E, 4600 Silver Hill Rd., Washington, DC 20233, or via e-mail at peter.mateyka@census.gov.

#### Introduction

Demographic research often focuses on internal migration as an aggregate trend driven by large-scale economic shifts and widespread preferences for smaller and densely populated areas. However, as researchers frequently note, explaining aggregate migration patterns involves understanding the complex decisions that individuals and families make while evaluating their intentions to move. This process, conditioned by family processes, economics, social networks, and norms, mediates the relationship between larger economic trends and migration behavior. <sup>1</sup>

Studies that attempt to untangle these processes range from simple cross-sectional research that focus on one or two social demographic characteristics of a respondent reporting a previous move, to longitudinal data with questions on migration intentions and motivations both before and after a move. While longitudinal data sets provide more detail, they often suffer from sample size limitations that negate drawing larger conclusions about aggregate migration flows. Cross-sectional data sets with large sample sizes are more useful for studying aggregate migration flows, but often suffer from a lack of information that can be used to infer the reasons for migration behavior.

Our paper evaluates the American Community Survey as a source of data for both studying respondents' motivations for moving and understanding aggregate metropolitan migration inflows. While the ACS lacks the detailed time varying social and economic data found in longitudinal surveys such as the Survey of Income and Program Participation (SIPP), the ACS has added retrospective measures on marital events and jobs, two dimensions associated with the decision to move, in addition to a number of demographic characteristics. These retrospective measures, combined with the ability of the ACS to provide reliable estimates on migration flows at subnational levels, provide a unique opportunity for understanding migration behavior at individual and aggregate levels. Our primary research questions are:

- (1) Can we identify demographic characteristics and processes measured in the ACS that are associated with the propensity for respondents to report moving in the previous year?
- (2) Can this information be used to identify inferred motivations that drive migration?
- (3) Do the "inferred" reasons for moving overlap?

(4) Can these reasons for moving categories be used to decompose intra-metropolitan migration and metro-to-metro inmigration flows?

We begin by identifying potential individual-level correlates of migration behavior using the ACS. In particular, we exploit new questions that ask respondents about marital status changes and births in the previous year, coupled with current demographic information to make inferences about why people move. We then use this information to "infer" if household-heads' motivations for moving were for family, employment, or other reasons. The distribution of household-heads by these "inferred" reasons is evaluated against respondent-reported reasons for

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<sup>&</sup>lt;sup>1</sup> De Jong, Gordon F 1999. "Choice processes in migration behaviour", in K. Pandit and S.D. Withers (eds.), Migration and Restructuring in the US. New York: Rowman and Littlefield Publishers, Inc. Pp. 273-292.

<sup>&</sup>lt;sup>2</sup> Metropolitan area will be henceforth referred to as metro. Metropolitan statistical areas referenced in this paper are defined by the Office of Budget and Management as of December 2009. For more information on these definitions, see <a href="http://www.census.gov/population/metro/data/omb.html">http://www.census.gov/population/metro/data/omb.html</a>

moving from the Current Population Survey (CPS). We conclude the paper by decomposing metro-to-metro inflows for the U.S. by the inferred reason for move categories to better understand aggregate migration patterns.

#### Data

The empirical analysis in this paper uses micro data from the 2008-2010 American Community Survey. The ACS is designed to be a nationally representative yearly survey with an initial sample of about 3 million addresses. Data is collected monthly, over the course of 1 year, and then combined into one file and weighted to independent subcounty population estimates for July 1<sup>st</sup> of the survey year. The annual nature of the survey allows for the collection of more timely data to analyze current demographic change than the long form of the Decennial Census, but without compromising geographical representativeness. Estimates from the ACS data are produced for single-year, three-year, and five-year time periods, with many of the same characteristics released for each time period. We have chosen to use the three-year ACS file rather than the five-year file because the marital events items, described below, were added to the ACS in 2008.<sup>3</sup>

This geographical representativeness of the ACS surpasses the Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS), which produces annual mover rates for the nation, and inter-region flows. This supplement, conducted almost every year since 1948, provides a historical picture of American's mobility patterns. However, with recent sample sizes of about 100,000 households, the ASEC supplement does not provide reliable estimates of migration flows for subnational levels. Yet, the ASEC collects information on the reason for a move, allowing respondents to choose between multiple family, employment, housing, and other reasons. ASEC interviews are conducted from February through April with most interviews occurring in March. We use national estimates of householders' reasons for moving from the 2009-2010 ASEC as a benchmark to compare with our ACS-created reason for move categories.<sup>4</sup>

#### *Measurement of key independent variables*

To measure migration behavior, respondents are asked about their residence one year ago. Movers reported living in a different address one year ago which was different than their current address. For the purpose of this study, we limit our sample to domestic migrants, or all respondents that report a U.S. address for both their current and previous residences. Respondents that moved to and from Puerto Rico are not included in the calculations of domestic migrants. Because data is collected over the course of one survey year, differences in the seasonality of moves are not an issue. However, one limitation is that the survey only identifies whether a respondent moved in the previous year and not the actual date. Geographic

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<sup>&</sup>lt;sup>3</sup> Data are subject to error arising from a variety of sources. For further information on the ACS sample, weighting procedures, sampling error, nonsampling error, and quality measures from the ACS, see <www.census.gov/acs/www/Downloads/data documentation/Accuracy/ACS Accuracy of Data 2010.pdf>.

<sup>&</sup>lt;sup>4</sup> For more information on sampling and non-sampling error, see www.census.gov/apsd/techdoc/cps/cpsmar09.pdf and www.census.gov/apsd/techdoc/cps/cpsmar10.pdf (accessed August 23, 2012)."

information on current and previous location is used to identify in and outmigration rates and migration flows between geographies. These questions are reproduced in Figure 1.

The ACS includes current social demographic information on respondent's age, race/nativity status, marital status, age and presence of own children, educational attainment, employment and retirement income. At the household-level, the ACS identifies the relationship of each person in the housing unit to the householder, family-type, and tenure. A series of retrospective major life event questions were added in the 2008 ACS. These questions include changes to marital status and fertility in the previous 12 months. These questions are reproduced in figures 2 and 3. Our analysis focuses only on the householder, as untangling the motivations underlying the moves of non-householders (children, roommates, family members, etc.) would add an additional layer of complexity to the analysis. Future work may extend the analyses in this paper to all household members. By focusing on householders, we exclude all respondents living in group quarters.

### Question 1: Can we identify demographic characteristics and processes measured in the ACS that are associated with the propensity for respondents to report moving in the previous year?

Past research notes a number of individual characteristics that were associated with migration behavior, including age, race, nativity status, marital status, employment status, tenure, and education level.<sup>5</sup> These individual characteristics are considered proxies for more complex social and economic processes that drive migration behavior. For example, highly educated people, or those with a bachelor's degree or more, tend to make more long-distance moves than those with less than a college degree, allegedly because the potential financial benefits of moving long distances to take a job are greater for the highly educated than for those with less education. <sup>6</sup> Education, therefore, serves as a proxy for the more complex decision-making that individuals and households engage in before making a move.

Transitions in both family and economic status over the life course are also associated with the propensity to move. This line of research argues that specific life course events are frequently associated with household and family decisions to move. Events such as changes in marital status, having a child, or retirement, cause families to reevaluate their housing needs, and, in some instances, move to a residence that better fits their current circumstances. Research using longitudinal SIPP data has found that both family and economic transitions are associated with migration propensity.<sup>7</sup>

Using this research as a guide, our analysis begins by looking at demographic characteristics and processes measured in the ACS that may be associated with moving. Table 1 includes demographic characteristics, including major life events (i.e. married, divorced, widowed, or had a child in the last 12 months, currently on layoff, currently looking for work), crossed by

Yee Hernandez-Murillo, Ruben, Lesli S. Ott, Michael T. Owyang, and Denise Whalen. 2011. "Patterns of Interstate Migration in the United States from the Survey of Income and Program Participation." Federal Reserve Bank of St. Louis Review 93: 169-85.

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<sup>&</sup>lt;sup>5</sup> For one example of this type of research, see Ihrke, David K., Carol S. Faber, and William K. Koerber. 2011. *Geographical Mobility: 2008 to 2009*. Current Population Reports, P20-565. U.S. Census Bureau, Washington, DC. <sup>6</sup> See Wozniak, Abigail. "Are College Graduates More Responsive to Distant Labor Market Opportunities?" *Journal of Human Resources* 45: 944-70. <sup>7</sup> See Hernandez-Murillo, Ruben, Lesli S. Ott, Michael T. Owyang, and Denise Whalen. 2011. "Patterns of Interstate

distance moved categories (i.e. intra-county, inter-county and same state, inter-state, MSA to MSA). Estimates are percentaged within the distance for move categories. Distance of move is included because some characteristics could have stronger associations with long distances moves rather than short distance moves and vice versa. Note that MSA-to-MSA movers also fall into either the inter-count or inter-state categories. householders

The results largely follow expected trends, particularly by age. Adults between the ages of 18 and 29 make up about 12 percent of all householders in the ACS, but 36 percent of all domestic movers. Young adults are attending college, beginning new jobs, and moving out of their parents' homes, leading to higher mobility rates than older, more settled householders.

Highly educated householders, those with a Bachelor's degree or more, are disproportionately represented as inter-state and metro-to-metro movers compared to those with less education. This is, presumably, because those with high education are moving longer distances to take jobs. Interestingly, women are disproportionately represented as domestic movers compared to the overall distribution of householders by gender, but men are more likely to report making interstate moves in the previous year.

Marital status and household type also appear to be related to mobility patterns. Married householders make up about 51 percent of all householders, but only 34 percent of householders who moved in the last year are married. However, the results for the marital life events show that getting married in the previous year is strongly associated with moving. Only a small proportion of all householders in the 2008-2010 ACS 3-year file experienced family life events, but these people made up a much larger proportion of all domestic movers. For example, only 1.7 percent of householders reported getting married in the previous 12 months, but this group made up 4.4 percent of all domestic movers.

Those looking for work also were overrepresented as domestic movers, but not those on layoff. The causality on the looking for work item is difficult to determine in the ACS. Respondents could have moved to look for work, or are looking for work because they moved.

Appendix Table 1 includes the same estimates as table 1, but percentaged within demographic categories rather than the distance for move categories. These results emphasize the strong associations between marital events and moving. About 1/3 of those that got married, divorced, or had a child in the previous 12 months reported moving during this time. Additionally, half of all householders between the ages of 18 to 24 reported moving in the previous year.

The results of both of these tables suggest that current demographic characteristics and retrospective life event items collected in the ACS are associated with reporting a move in the previous year. The marital life event items in particular, are strongly associated with moving.

<sup>&</sup>lt;sup>8</sup> The distance for move category used is a standard recode variable in the ACS that reports whether a respondent's move was intra-county, inter-county and same state, or inter-state. The assumption is that inter-county and inter-state moves are longer distance moves, but this may not always be the case. Differences in county and state size or where a respondent lives in relation to Census boundaries may be considerable.

<sup>&</sup>lt;sup>9</sup> See He, Wan and Jason P. Schachter. 2003. *Internal Migration of the Older Population: 1995 to 2000*. Census 2000 Special Reports, CENSR – 10, U.S. Census Bureau, Washington, D.C., supplemental table 4 <a href="http://www.census.gov/population/www/cen2000/briefs/phc-t23/index.html">http://www.census.gov/population/www/cen2000/briefs/phc-t23/index.html</a>

### Question 2: Can this information be used to identify inferred motivations that appear to drive migration?

The next step of the analysis is to use the information above to make inferences about respondents' motivations for moving. As discussed, individual characteristics are used as proxies for the more complex decision-making processes that guide migration behavior. The results above suggest the marital and job events items are associated with moving, along with age, education, income, tenure, and other demographic characteristics. We use this information, along with additional data collected in the ACS to create criteria for assigning respondents to "inferred" reasons for move category. Our categories will inevitably be imperfect, as the cross-sectional nature of the ACS and its reliance on retrospective reports of life events and migration history make inferring the motivations for moving difficult. Moreover, people move for a multitude of reasons that cannot possibly all be accounted for using indirect measures found in the ACS. We do not expect to categorize all respondents, but to see how many respondents we can make reasonable inferences in regards to their motivations for moving. We allow respondents to fall into multiple reason for move categories.

Our inferred reasons for move consisted of roughly three categories: family reasons, work reasons, and miscellaneous reasons. A complete list of inferred reasons with a brief description is provided below.

The inferred family reasons included getting married/widowed/divorced, moving to cohabit, and moving because of a birth. A respondent was assigned the married/widowed/divorced categories if she/he reported experiencing one of these marital status changes in the previous year, and reported the same current marital status. For example, if a householder moved in the previous year, reported getting married in the previous year, and was still married at the time of the interview, we assigned this person to the "married" inferred reason for move category.

#### Family Reasons

*Married*- the respondent got married in the previous year, is currently married, and moved in the previous year.

Widowed- the respondent became widowed in the previous year and moved in the previous year.

Divorced- the respondent got divorced in the previous year, is currently divorced, and moved in the previous year.

Cohabiting- the respondent moved in the previous year and currently lives with an unmarried partner that did not move in the previous year.

Birth- the respondent moved in the previous year and had a child in the previous year, or the respondent's spouse had a child in the previous year.

The work related inferred reasons for move included looking for work, on layoff, job change, and at school. Unfortunately, the ACS does not report whether the respondent has changed jobs recently, only whether they are currently working, and the number of weeks they worked in the previous year.

#### Work Related Reasons

Looking for Work – the respondent moved in the previous year, the respondent and his or her spouse/unmarried partner are not currently working, and the respondent, respondent's spouse, or respondent's unmarried partner is looking for work.

On Layoff – the respondent moved in the previous year, no one in the household is currently working, and the respondent, respondent's spouse, or respondent's unmarried partner is looking for work.

Job Change – the respondent moved in the previous year, is currently working, has not worked continuously the previous year, and his or her spouse/unmarried partner has not worked continuously the entire previous year.

Job Change – Creative Class – the respondent moved to a new state in the previous year, is currently working, has a college degree, is not currently in school, and has never been married. This is really a subset of the job change category that focuses on the young and highly educated; an often-studied group.

At School – the respondent moved in the previous year, is currently enrolled in college, and lives in a nonfamily household.

The miscellaneous reasons include military, housing, spatial assimilation, and retirement. The primary weaknesses of the ACS for the purposes of this analysis, is the lack of information on changes in housing quality. Because housing reasons are a frequently reported as driving motivations for moving, this is a significant shortcoming of our analysis. We did attempt to create an inferred "housing" related move category. Respondents assigned to this category lived in family households with children and the respondent reported working continuously the entire year. Additionally, the respondents spouse had to have reported working continuously the previous year, or not working at all. The assumption is that a family household with children that held a job for the previous year is not moving for job-related reasons, but more likely for housing related reasons, such as more space or a safer neighborhood. There are weaknesses to this measure, for example, those that experienced a job transfer might end up in this category.

The spatial assimilation inferred reason is loosely an inferred housing reason. By identifying immigrants who moved from central cities to the suburbs, we are attempting to capture the process where immigrants, following migration streams, immigrated to poor sections of central cities. Over time as immigrants acquire education and income, they move to better housing in suburban areas.

#### Miscellaneous

*Military* – the respondent moved in the previous year and is on active duty in the military, or lives with someone who is in the military and moved in the previous year.

Housing - (1) respondent moved in the previous year, lives in a family household with own children, and worked continuously the previous year, (2) respondent moved in the previous year, lives in a family household with own children, and lives with a spouse who also moved in the previous year, and worked continuously the previous year.

Spatial Assimilation – the respondent moved in the previous year, is an immigrant (reported being born outside of the U.S. and U.S. territories), and moved from a principal city to a non-principal city.

Retired – (1) the respondent moved in the previous year, is at least 58 years old, has not worked in the last year, and is currently receiving retirement or social security income. (2) the respondent moved in the previous year, is not employed, and lives with a spouse or unmarried partner that fits the above criteria.

Table 2 displays the distribution of domestic movers across the ACS 3-year inferred reason for move categories compared to respondent reported reason for move answers from the 2009-2010 CPS. <sup>10</sup> The universe for both samples is all householders. One important difference between the estimates is that the ACS categories are not mutually exclusive, while in CPS respondents were asked to provide their main reason for moving. In many cases it was not possible to create comparable categories in the ACS to those of the CPS. This is most obvious in the case of housing related moves.

The CPS editing procedures ensure that all respondents are assigned values on the reason for move question, while our abovementioned criteria left a large portion of the ACS sample uncategorized. In absence of a reason for move question, or more detailed indicators of housing and economic changes, we were unable to make reasonable inferences about why many respondents moved. According to Table 2, about 60 percent of householders in the ACS were not categorized.

Looking only at the tabulations there are some similarities between the two surveys. About 6.8 percent of respondents in CPS reported moving because of a change in marital status, while our inferred reason for move categories estimated roughly 7.5 percent of respondents moving because they became married, divorced, or widowed. About 8 percent of respondents in the ACS

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<sup>&</sup>lt;sup>10</sup> The estimates in this report (which may be shown in text, figures, or tables) are based on responses from a sample of the population and may differ from the actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. All comparative statements have undergone statistical testing and are significant at the 90 percent confidence level unless otherwise noted.

fall into the "job change" category, similar to the 8.7 percent of CPS respondents that selected the "new job or job transfer" category. 11

Those similarities aside, the ACS and CPS categories do not line up particularly well. For example, the ACS overestimates both those that are looking for work and those that moved for retirement reasons compared to the CPS. As mentioned above, the difference between the housing measures is the most striking discrepancy. The ACS does not have retrospective measures on tenure, housing, and neighborhood characteristics, making it difficult to assess housing related moves. To illustrate this point, neither of the two housing inferred reason for move categories in the ACS are directly assessing housing related moves. The first inferred reason is moving for "bigger or better" housing, which includes married respondents with children that reported moving, but remained employed year round. The assumption is these respondents moved for housing reasons rather than for work related reasons. Of course, respondents that received a job transfer could be included in this category. The other housing reason in the ACS is labeled as "spatial assimilation" and includes immigrants that moved from a principal city to a non-principal city. Again, the inference here is that a move from a central-city to suburban area is predominantly in search of higher quality housing. Of course, this may not always be the case as some immigrants may move the suburbs in search for jobs. These measures are clearly not identifying even a modest portion of housing related moves, about 5 percent of ACS respondents are classified under this reason, while almost half of all CPS respondents report housing related moves as the main reason for moving.

Table 3 presents the inferred reason for move categories crossed by distance moved. Some reasons for move should vary by distance moved. For example, long distance moves are more often for work related reasons. Short distance moves tend to be for family and housing related reasons. The inferred reasons do show some variation by distance moved. As expected, respondents that moved to a new state were more likely to be classified into the "job change", "retirement" or "military" categories, than those that moved shorter distances. Both the "birth" and "divorced" inferred reason for move categories were more common among those making intracounty moves as opposed to inter-state moves.

The final row of the table includes the total number of categories assigned to respondents crossed by distance moved. Overall, about 60 percent of moves were not classified. Seven percent of respondents had two categories and 1.2 percent had 3 or more categories. We were able to categorize a greater number of interstate moves compared to shorter distance moves. This was largely because housing related moves, a category we are largely unable to identify in the ACS, tend to be short-distance moves, while long distance moves are work-related.

#### Question 3: Do the "inferred" reasons for moving overlap?

Table 4 shows the most popular inferred reason for move combinations. While multiple category respondents were somewhat rare, these combinations give some indication to the strengths and weaknesses of the inferred reason categories. The results suggest the 'job change' measure may include respondents that have temporarily left their job for family-related reasons such as having

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<sup>&</sup>lt;sup>11</sup> The difference between the ACS inferred "job change" category and the CPS "new job or job transfer" category is not statistically significant.

a child (4<sup>th</sup> most common), getting married (7<sup>th</sup> most common), or those that began working for family related reasons (divorce- 9<sup>th</sup> most common). Both the "job change" and the "looking for work" inferred measures also include a number of college students, whose break in jobs may be the result of leaving for college/returning from college, rather than a job lose/job transfer.

Another common inferred reason combination was "widowed" and "retired", indicating that some moves classified as retirement may really be driven by changes in marital status. It is probable that these tend to be the short-distance moves, although it is possible some elderly return to family and friends after the loss of a spouse, travelling long distances.

Overall, while only a small number of people were assigned multiple reason for move categories, the results indicate that causality is difficult to determine with our inferred reason for move categories.

### Question: 4 Can these reasons for move categories be used to decompose intrametropolitan migration and metro-to-metro inmigration flows?

Table 5 includes selected top ten metro lists for both intra-metropolitan migration and the metro-to-metro inflows. When selecting these lists we limited the sample to the 50 largest metros according to population size in 2010. This decision was made because of the large margins of error on many of the inferred reasons for small metros. We focus on "family" (married, divorced, widowed, cohabit, birth), "work" (layoff, looking for work, job change, job change-creative class) and "retirement" moves. Estimates for all 50 metros by inferred reason and type of move (intra-metropolitan movers and metro-to-metro inflows) are presented in tabular (Appendix Tables 3 and 4) and map form (Figures 4-9).

Briefly, many of the results are inline with expectations. Aging metropolitan areas have among the highest percentages of intra-metropolitan retirement moves (i.e. Pittsburg and Detroit) while Sunbelt metros have among the largest percentages of inter-metropolitan retirement moves (i.e. Tampa, Miami, and Phoenix).

Salt Lake City, Utah had among the largest shares of both metro in-migrants and intrametropolitan movers that moved for "family" related reasons.

Metros that are magnets for highly educated workers had some of the highest proportions of work-related inter-metropolitan migrants. These included Seattle-Tacoma-Bellevue, Washington-Arlington-Alexandria, and Chicago-Naperville-Joliet. Virginia Beach-Norfolk-Newport News, home to a large number of military personnel, had among the highest proportions of both intra- and inter-metropolitan work-related moves.

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<sup>&</sup>lt;sup>12</sup> The margin of error is an estimate of the magnitude of sampling errors in the ACS. When added or subtracted from the estimate, this number represents the 90 percent confidence interval around the estimate.

#### Conclusion

When began the paper with 4 research goals:

- (1) Can we identify demographic characteristics and processes measured in the ACS that are associated with the propensity for respondents to report moving in the previous year?
- (2) Can this information be used to identify inferred motivations that drive migration?
- (3) Do the "inferred" reasons for moving overlap?
- (4) Can these reasons for moving categories be used to decompose metro-to-metro inmigration flows?

Our results suggest that current demographic characteristics and retrospective life event items collected in the ACS are associated with reporting a move in the previous year. While the finding for demographic events is hardly new, the marital and fertility event items represent an initial attempt to capture processes with cross-sectional data. We find that 34 percent of householders that reported moving in the previous year also reported getting married, while only 9 percent of married respondents reported a move. The process of getting married is, therefore, more strongly associated with moving than simply being married. Associations were also observed between getting divorced and having a child in the previous year, but not being widowed in the prior year. Both looking for work and being on layoff were also related to reporting a move in the previous year, although causality is more difficult to determine in these instances. Regardless, these findings suggest that marital and job event items, like those added in the ACS, provide new opportunities to better understand migration behavior.

However, despite this data, we were unable to infer the motivations that drive migration for the majority of our sample. Of those that were categorized, serious causality issues remain. Part of the difficulty with inferring motivations for moving is that few respondents that reported a move actually experienced a marital or fertility event in the previous year, or a layoff/job change. This is consistent with the CPS data on reason for move, which finds the majority of respondents report housing related reasons for moving. Because the ACS lacks retrospective information on housing, inferring reasons for move using individual characteristics of respondents is difficult.

Of the moves that were categorized by inferred motivations, only a small number overlapped. While many moves that fell into multiple categories revealed potential causality issues (job change/birth), there was some evidence that our indirect measure of housing related moves was potentially capturing moves to more suitable housing. The indirect measure of housing related moves identified moves where a family household had at least one member employed, had own children, and did not experience any breaks in employment. The presumptions in these instances was that these moves were to better housing. Respondents that fell into this category frequently also fell into the "birth" category.

The final section of the paper decomposed intra-metropolitan movers and metro-to-metro-inflows by the inferred motivation for move categories. We found a moderate amount of variation in the inferred motivation for move categories across metro inflows. Consistent with

expectations, retirement related moves were more common in older metros in the Northeast and Sunbelt metros.

In conclusion, we find the newly added marital and fertility event items in the ACS are highly correlated with move. However, because the ACS lacks retrospective information on respondents housing and neighborhood situations, it is difficult to make inference about why most respondents moved in the previous year. We suggest future research on the determinants of migration behavior using the ACS focus on a narrow range of determinants for which the ACS has adequate measures. For example, one might look at metro areas that have the highest levels of mobility for households that experienced a marriage/birth in the previous year. An alternative method is to focus on state-to state moves, which are frequently driven by job-related reasons, rather than housing-related reasons.

Figure 1: Reproduction of the Questions on Residence One Year ago from the 2010 American Community Survey

a.	a. Did this person live in this house or apartment 1 year ago?							
		Person is under 1 year old → SKIP to question 16						
	Yes, this house → SKIP to question 16							
		No, outside the United States and Puerto Rico – Print name of foreign country, or U.S. Virgin Islands, Guam, etc., below; then SKIP to question 16						
	No, different house in the United States or Puerto Rico							
b.	b. Where did this person live 1 year ago?							
	Address (Number and street name)							
	Name of city, town, or post office							
	Name of U.S. county or municipio in Puerto Rico							
		e of U.S. state or to Rico ZIP Code						

Source: U.S. Census Bureau 2010 American Community Survey

Figure 2: Reproduction of the Questions on Marital Status and Marital Events in the Past 12 months from the 2010 American Community Survey.

What is this person's marital status?							
	Now married						
	Widowed						
	Divorced						
	Separated						
	Never married → SKIP to 1						
In the PAST 12 MONTHS did this person get -							
		Yes	No				
a. N	Married?						
b. V	Vidowed?						
c. D	ivorced?						

Source: U.S. Census Bureau 2010 American Community Survey

Figure 3: Reproduction of the Question on Birth in the past 12 months

Has this person given birth to any children in the past 12 months?

Yes
No

Source: U.S. Census Bureau 2010 American Community Survey

Figure 4

## Family-related reasons for moving, intra-metropolitan movers

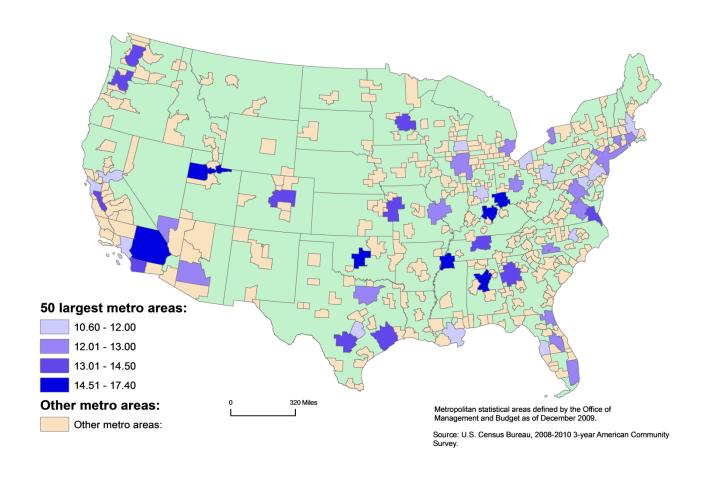


Figure 5

# Family-related reasons for moving, inter-metropolitan movers (inflows)

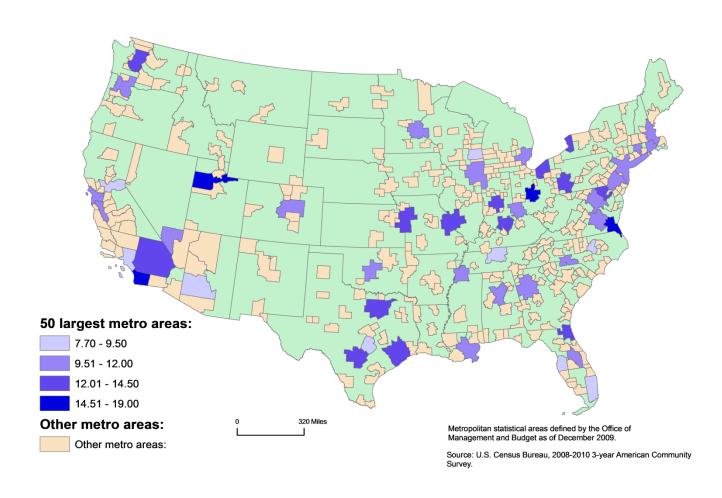


Figure 6

## Work-related reasons for moving, intra-metropolitan movers

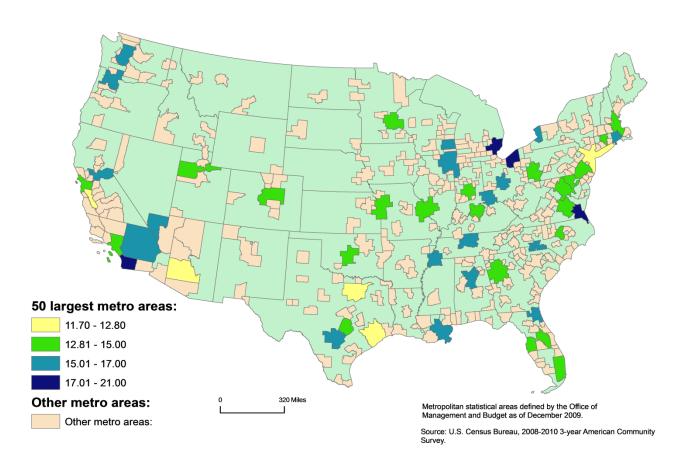


Figure 7

# Work-related reasons for moving, inter-metropolitan movers (inflows)

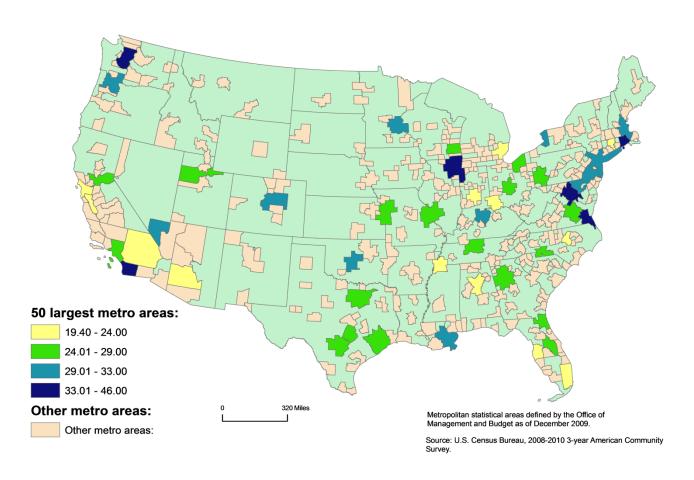


Figure 8

## Retirement-related reasons for moving, intra-metropolitan movers

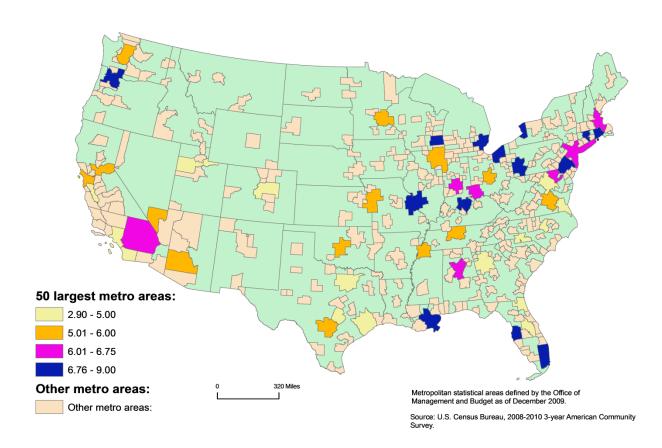


Figure 9

## Retirement-related reasons for moving, inter-metropolitan movers (inflows)

