Transitions in Living Arrangements and Economic Downturns: Does Doubling Up Improve Economic Well-being?

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One way people may cope with challenging economic circumstances is to combine households and household resources with other families or individuals (London 2000). The increase in doubling up among families and households, particularly in the context of economic downturns and a fraying public safety net, is important to understand. Some government assistance programs are based on household resources. Thus, moving in with a friend or relative may affect eligibility for these programs.

The most recent economic recession dated from December 2007 through June 2009 was marked not just by high unemployment, but also by high rates of mortgage delinquencies and foreclosures. Thus, many families and individuals faced the prospect of losing their homes. As a result, there has been renewed research and media interest in the phenomenon of "doubling up". In this analysis we define a doubled-up household as a household that includes at least one adult, aged 18 years or older who is not enrolled in school and is neither the householder nor the spouse or cohabiting partner of the householder.

Analysis of the Current Population Survey Annual Social and Economic Supplement (CPS ASEC) revealed that families shared households and adults lived with relatives and friends in greater numbers and in higher proportions over the course of the recent recession (U.S. Census Bureau 2011). For example, in 2008 just after the start of the recession, there were 20.0 million doubled-up households, accounting for 17.1 percent of all households. By 2010, the share of doubled-up households had increased to 18.7 percent. A subset of persons in doubled-up households are "additional adults", that is, persons aged 18 and older not enrolled in school who are neither the householder, nor the spouse or cohabiting partner of the householder . In 2008, there were 32.1 million additional adults residing in doubled-up households; by 2010, the number of additional adults had increased to 34.5 million, or 15 percent of all adults.

Although the CPS ASEC is collected annually, the estimates reported above represent doubling up at single point in time.[1] Thus, we know little from the CPS ASEC about how households change composition over time in response to changing economic conditions. Further, we know even less about how transitions to doubling up influence economic well-being, especially in the context of a recession. In this analysis, we use data from the Survey of Income and Program Participation Core Wave Files from the 2008 and 2004 (and 2001) panels to: (1) Document changes in doubling up prior to and over the course of the most recent recession; (2) Examine the extent to which economic conditions are associated with transitions to doubling up among families and households; (3) Explore how transitions to doubling up affect the economic well-being of families and households.

[1] Approximately fifty percent of the CPS ASEC sample is included in any two consecutive years. Moreover, because residents within the eligible housing units may have changed or appeared as non-interview records in one or both years, fewer than fifty percent of the sample is present in both years (http://www.census.gov/apsd/techdoc/cps/cpsmar10.pdf).

The Survey of Income and Program Participation (SIPP) is a panel survey based on a nationally representative sample of households. All adults in sampled households are interviewed once every four months for a period of twenty four to forty-eight months. As a result of its longitudinal design, the SIPP is particularly appropriate for studying transitions, including transitions in living arrangements such as doubling up. The four month recall period enables researchers to capture transitions that are relatively short term, as well as changes of longer duration. Further, the SIPP follows original sample members throughout each panel, even if they leave the household. The SIPP also interviews any individuals residing with original sample members in their new household or in the original sampled household at subsequent waves. These individuals remain in SIPP as long as they reside with an original sample member. Thus, using SIPP, we are able to follow households and adults over time and examine the dynamics of household composition.

Data and Methods

In this paper, we examine changes in household composition and well-being over the course of the last recession using the 2004 and 2008 SIPP panels. We use data from Waves 1 through 7 of the 2008 panel spanning August 2008 through November 2010[2] and from Waves 1 through 12 of the 2004 panel spanning January 2004 through December 2007.[3] Although respondents in the 2008 SIPP panel were first interviewed in August 2008 after the start of the most recent recession, we can examine transitions in doubling-up for 2008 SIPP respondents over the course of and immediately after the recession. Moreover, we can compare doubling up among adults from the 2008 SIPP panel to the 2004 SIPP panel which was interviewed immediately before the recession.

Our analytic sample includes all adults, ages 18 or older, living in households at any wave with at least one original sample member, yielding a sample size of 80,688 adults (699,783 person-month observations from the 2004 Panel) and 88,721 adults (424,654 person-month observations) from the 2008 Panel. We exclude individuals residing in group quarters. We measure living arrangements at the fourth reference month of each survey wave, at the time of the interview.[4] Changes in household composition are more likely to be reported as occurring in the interview month (fourth reference month) than in the previous reference months. Although this seam bias in reporting is of concern for our analysis, prior research suggests that measures of household change from interview to interview in SIPP may be more accurate than those reported from one month to the next (Speare and Avery, 1989). At the same time, the four month interval enables us to capture entries and exits of short duration. Further, reported month-to-month changes may reflect a transient change rather than a transition in living arrangements.

<u>Defining Doubled-Up Households and Additional Adults</u>

[2] Additional waves from the 2008 SIPP Panel will be included in the analysis as they become available.

[3] We also plan to compare our results to changes in household composition during the previous recession dated from March 2001 to November 2001 using Waves 1 through 12 of the 2001 SIPP panel which span January 2001 through December 2003. The 2001 SIPP panel encompasses the period before, during and after the 2001 recession.

[4] The sample in each wave consists of four rotation groups, each interviewed in a different month. For example, in Wave 1 of the 2008 SIPP panel, rotation groups 1 through 4 were interviewed from August 2008 through November 2008 respectively.

We estimate the number and percent of households designated as doubled-up --that is, households that include at least one additional adult. We define "additional adults" as persons aged 18 years and older who reside in a household and who are neither householders, nor the spouses or unmarried partners of householders and who are not enrolled in school. Doubled-up adults are persons aged 18 years and older who reside in a doubled-up household, and include householders, their spouses and unmarried partners, any additional adults, as well as persons aged 18 years and older who are not the householder, or the spouse or unmarried partner of the householder but who are enrolled in school.[5] Households headed by a cohabiting partner (with a reported unmarried partner) are not considered doubled-up in this analysis unless they include an additional adult. We calculate the number and percent of doubled-up households and additional adults for each calendar month of the SIPP panel. In addition, because scholars have noted a lengthening transition to adulthood over the past decades we also estimate additional adult status for adults aged 25 years and older. These estimates highlight trends in doubling up among households and adults over time.

Examining Transitions in Living Arrangements

In this analysis, we are primarily interested in the transition in doubled-up status among households and adults and changes in additional adult status. For each survey wave t and wave t+1, we can determine whether a household or adult was: (1) Doubled up in both waves; (2) Doubled up in wave t, but not doubled up in wave t+1; (3) Not doubled up in wave t, but doubled up in wave t+1; and (4) Not doubled up in waves t and t+1. We do the same for transitions in additional adult status. We are then able to categorize households and adults by whether or not they made a transition to or from doubling up and the direction of this transition over the course of the SIPP panel. We use descriptive analysis to report and compare the sample characteristics of adults in each transition category. We conduct significance tests to determine whether there are differences in the characteristics of households and adults across these transition categories. Further, we assess and compare the characteristics of households and adults experiencing multiple spells or transitions in doubling up and additional adult status over the course of the panel.[6]

Predicting Transitions in Doubling-Up

In order to predict transitions in doubling-up, we estimate four Cox proportional hazard models to assess the risk of transitioning to/from doubled-up status or to/from additional adult status for individuals over the study period. The Cox regression model is specified as follows:

$$\log h(D_{it}) = \log h_0(D_{it}) + \beta_1 U_{it} + \beta_2 Z_{it} + \beta_3 X_i$$

[5] The SIPP sample includes the civilian, non-institutionalized U.S. population. This universe includes civilians in households, persons in non-institutional group quarters (other than military barracks) and military in households living off post. The universe excludes other military in households and in group quarter (barracks), and people living in institutions. In this analysis, we are interested in persons residing in households and estimates presented here exclude persons living in group quarters.

[6] For example, an individual could enter a household as an additional adult, leave additional adult status, and later re-enter additional adult status in the same or a different household.

where log $h(D_{it})$ represents the log hazard of residing in a doubled-up household (or becoming an additional adult) for adult *i* at wave t. The log hazard of residing in a doubled up household (or becoming an additional adult) is a function of log $h_0(D_{it})$, representing the log baseline hazard of doubled-up (additional adult status); U_{it} represents a vector of time-varying lagged macroeconomic conditions at time *t*, including unemployment rates[7] and in mortgage delinquency rates; Z_{it} represents a vector of individual demographic characteristics which vary over time, such as employment status, marital status, educational attainment, age, and having own children; and X_i represents a vector of time-invariant individual socio-demographic characteristics, including race, sex, nativity and Hispanic status and state of residence. Finally we include a dummy variable indicating SIPP panel.[8] Essentially, in this specification the risk of being doubled up (or being an additional adult) is a function of macroeconomic factors and individual characteristics. Although SIPP households and adults may experience multiple transitions in living arrangements over the course of the panel, we focus here on the first transition into doubled-up or additional adult status for adults respectively. Most households or adults experiencing any transition had only one transition over the course of the panel.

Examining the effect of doubling up on economic well-being

Doubling up may be a strategy to alleviate hardship in times of economic crisis. On the other hand, doubling up may have unintended consequences if it strains the resources of an already economically stressed household or if it causes household members to lose benefits because the resources an additional adult brings into the household makes the household ineligible to receive such benefits. Yet the effects of changing household composition are not well understood. In this analysis, we explore the consequences of doubling up on economic well-being . In doing so, we first conduct a descriptive analysis of economic well-being for households by doubled-up status. Next, we estimate a set of models predicting how transitions to doubling up affect changes in economic well-being among households. We estimate household-level random and fixed effects models for each outcome. The random effects models examine the association between doubling up and economic well-being across households. Models including for household fixed effects control for unobservable characteristics of households that may influence either doubling up or economic well-being. Therefore, fixed effect models examine the association between doubling up and our dependent variables within households experiencing changes in doubled-up status.

For these models, our measures of economic well-being include a categorical variable reflecting the income-to-poverty ratio for household *h* at time *t,* operationalized as (1) Poor, i.e. total household income below poverty; (2) Near poor, i.e. total household income 100-149 percent of the poverty level; and (3) Above poverty, i.e. total household income 150 percent and above the poverty level), a continuous measure of logged total household income and a categorical variable reflecting the number of material hardships reported by the household head, coded as (1) No reported hardships; (2) One to two reported hardships; and (3) Three or more reported hardships.

[7] We also test a dichotomous variable representing recession months in our specification.
[8] Note that in models predicting the doubled-up status of households, we rely on the characteristics of the household head.

We estimate multinomial logit models to predict the effect of transitions to doubling up on the likelihood of changes in poverty status and material hardship; and OLS models to predict the effect of transitions to doubling up on changes in total household income. In addition, we control for characteristics of the household (including household type, number of children in the household, region) and the household head (including age, race, sex, Hispanic status, nativity, marital status, education and employment status). Further, we include month, year and panel fixed effects in each of these models.

Preliminary results

Figure 1 shows the percent of doubled up households, doubled up adults and additional adults for each calendar month of the SIPP 2004 and 2008 panels. Although the percent of doubled-up households appears relatively flat over the course of the period, there is a slight upward trend in the percent of doubled-up adults. Further, there is a clear increase in the percent of additional adults reported in the 2008 panel during the recession. This increase is evident for all additional adults and for additional adults aged 25 years and over.

Table 1 describes sample characteristics for adults in waves 1 through 6 of the 2008 SIPP panel, by transition to doubled-up status. As shown in Table 1, adults who spent any time over the course of the panel in a doubled-up household were more likely to be younger than those who were not doubled up. Further, those transitioning into and out of doubled up households were more likely to be younger than those residing in doubled-up households through the course of the study. Although males were more likely than females to not be living in a doubled-up household, they were also more likely to move into a doubled up household over the course of the study. White non-Hispanic adults and married adults were less likely to ever have resided in a doubled up household than their counterparts. More than one in five adults residing in a doubled-up household throughout the panel were Hispanic, compared to 16-18 percent of those transitioning into or out of doubled-up households and 10 percent of those not residing in doubled up households. Similarly, foreign-born adults were more likely to have resided in a doubled up household during the panel. Adults who were doubled up throughout the panel had lower educational attainment than their counterparts with one in five having less than a high school education. Further, adults who never lived in a doubled up household were more likely to have graduated from college than their counterparts who had transitioned to or from doubled-up households.

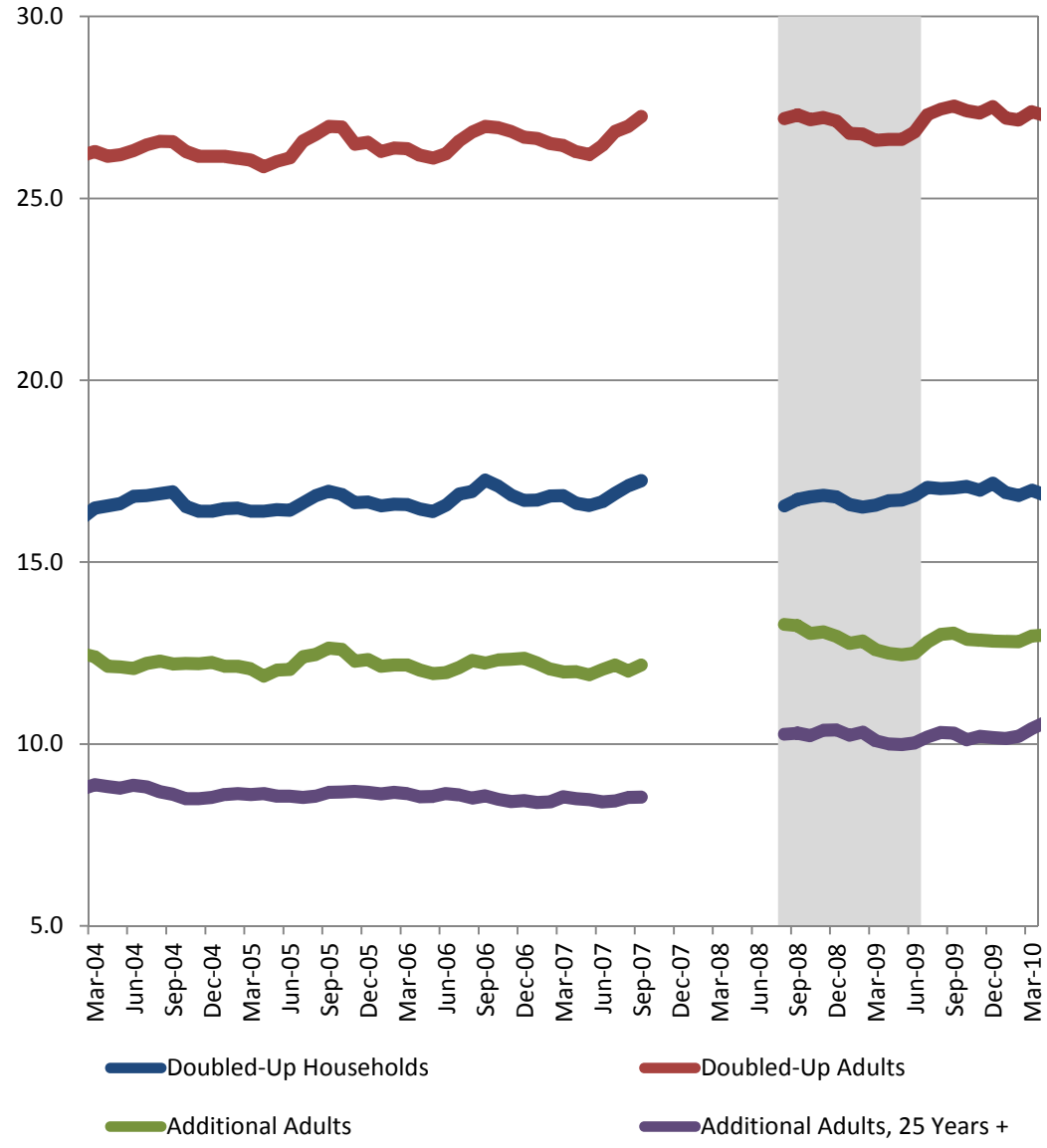
In terms of economic well-being, family poverty rates[9] for adults residing in doubled-up households at any time ranged from 15.6 percent to 17.0 percent compared to 13.8 percent for adults who never lived in a doubled-up household over the course of the Panel. However, when household income is measured against a household poverty threshold, those who were always doubled up had the lowest poverty rates (10.9 percent) while adults who transitioned to doubled-up status had the highest (14.5 percent). Similarly, adults who had ever lived in a doubled-up household had lower median personal income and income from earnings than their counterparts who never resided in a doubled-up household. However, total median family and household income was higher for those adults transitioning out of doubled-up households and for adults who had been doubled-up throughout the panel than those who had never been doubled up.

[9] The family poverty rate is the official poverty rate.

Total median family and household income was lower for those transitioning into doubled-up households however.

In sum, this paper will examine the effects of economic downturns on doubling up among households and families and transitions to additional adult status. In addition we examine the consequences of doubling up for households. Consistent with earlier research, our preliminary findings suggest an increase in adults sharing households over the course of the recent recession. Further we find that younger adults, as well as males and the foreign-born were more likely to be doubled up or to transition to doubled-up status than their counterparts. In general, our preliminary findings also suggest that doubled-up adults and those transitioning to doubled-up status are also more economically vulnerable than their counterparts. Specifically, they have lower educational attainment, higher poverty rates and lower personal income than those who did not reside in doubled-up households. Adults residing in doubled-up households throughout the panel reported higher median family and household income than their non-doubled up counterparts suggesting that doubling up might help families alleviate economic stress. However, adults transitioning into doubled-up households during the Panel reported lower family and household income than other adults, suggesting that the effect of doubling up on economic well-being warrants further examination.

Figure 1: Percent of Doubled-Up Households, Doubled-Up Adults, Additional Adults, Ages 18 and Older and Additional Adults, Ages 25 and Older, March 2004 – March 2010



Source: Survey of Income and Program Participation, 2004 and 2008 Panels

Table 1: Weighted Sample Characteristics (unweighted n=88,721)

	Not in Doubled Up Household at any wave (n=54,488)	**Moved Out of Doubled Up Household** (n=6,867)	**Moved Into Doubled Up Household** (n=7,016)	**In Doubled Up Household at all waves** (n=19,900)
Age				
18 to 24 years	11.0	31.7	30.4	23.0
25 to 34 years	17.7	18.1	13.3	20.0
35 to 64 years	52.8	44.7	49.8	44.1
65 years and older	18.5	5.5	6.4	12.8
Sex				
Male	52.5	50.0	52.0	47.9
Female	47.5	50.0	48.0	52.0
Race/ethnicity				
White	74.5	60.1	64.0	53.9
Black	9.6	14.3	13.3	14.6
Hispanic	10.2	18.0	16.3	23.3
Other	5.7	7.7	6.4	8.2
Marital status				
Married	61.4	36.5	43.6	28,8
Widowed/Separated/Divorced	17.9	15.8	15.8	23.5
Never Married	20.8	47.8	40.6	47.7
Nativity				
US born	87.2	83.0	84.9	75.8
Foreign born	12.8	17.0	15.1	24.2
Housing tenure				
Owned	70.9	66.9	65.8	65.2
Did not own	29.2	33.1	34.2	34.9
Educational Attainment				
Less than high school	9.6	14.1	13.0	20.4
High school graduate/GED	23.8	29.5	26.3	35.3
Some college	35.0	36.3	39.7	29.8
4+ years college	31.7	20.0	21.0	14.6
Employment status				
Worked last week	66.2	71.2	69.3	61.4
Did not work last week	33.8	28.9	30.7	38.6
Poverty status				
Family income below poverty	13.8	16.9	17.0	15.6
Household income below household poverty threshold	12.2	12.7	14.5	10.9
MEDIAN INCOME				
Total personal income	$2,031	$1,464	$1,504	$1,299
Total family income	$4,000	$4,633	$3,669	$4,396
Total household income	$4,175	$5,206	$3,957	$4,973

Source: Survey of Income and Program Participation, 2008 Panel, Waves 1 through 6