Three Essays on Family and Household Transitions in the United States and Colombia: Shifting the Focus to Less Traditional Arrangements

By

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Dedication

This dissertation is dedicated to the *Wayuu* indigenous peoples in Colombia, whose desire to move forward and overcome the struggles of poverty motivated me to pursue a PhD to advocate for better policies serving families in poverty. Also, to all families who struggle to receive adequate support by institutions around the globe.

Abstract

Three Essays on Family and Household Transitions in the United States and Colombia: Shifting the Focus to Less Traditional Arrangements

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At the University of Wisconsin-Madison

This dissertation intends to switch the focus from the study of traditional parental relationships to look at other family and household structures. It examines the dynamics of formation and dissolution of extended-family households in the U.S., and the economic consequences of marriage and cohabitation dissolution for women in Colombia. It includes three empirical chapters conducting secondary data analysis of two large-scale surveys.

The first two studies use the Fragile Families and Child Wellbeing Study and its restricted contextual data to document the prevalence, duration and correlates of formation and dissolution of three-generation households in the U.S., paying particular attention to differences by race and ethnicity. Results indicate that three-generation households are more common among racial and ethnic minorities, usually short-lived, common early in a child's life, and that the probability of entry decreases as children age. In addition, they indicate that while children are exposed to parental changes, they are also exposed to non-parental transitions. Moreover, both economic and non-economic factors are associated with the formation and dissolution of three-generation households. As three-generation households in the U.S. continue to rise, these findings highlight the need to examine the role of family and household changes concurrently to better understand their role on children wellbeing, and they suggest the need to examine the use

of the private and public safety net.

The third study uses the Colombian Longitudinal Survey (ELCA) to examine the consequences of marriage and cohabitation dissolution on women's economic well-being, in comparison to six OECD countries. Results suggest that women who experience the dissolution of their unions in Colombia are usually more socioeconomically advantaged than those who do not, and that they do not experience a significant decrease on their economic well-being post-dissolution. Findings indicate that private transfers from family and friends play an important role in mitigating the effect of union dissolution on women's economic well-being.

Overall, this dissertation highlights the role that the private safety net plays in supporting women and children, both in cash support from family and friends and in co-residence, and it calls for the study of alternative living arrangements to the nuclear family.

Chapter 1. Introduction and Dissertation Overview

I. Introduction

"[…] scholars may be committing the error of the person who lost car keys at the far end of the street, but searched under the streetlight because it was convenient […] We have garnered considerable understanding of the area around the street-light, but it is time to canvas the rest of the block." Fingerman & Hay, 2002

My dissertation brings new attention to two topics that have been largely understudied in the field of families and households: extended-family households, particularly, three-generation households; and the effect of union dissolution, both marriage and cohabitation, for women's economic well-being in developing countries. First, regardless of the growing literature investigating families and their implications for child well-being, the primary focus has been on the (in)stability of family structure and parental relationships, often ignoring the (in)stability of household structure and non-parental relationships such as grandparents' co-residence (Perkins, 2017). Three-generation households have become a more common living arrangement for children in the U.S., with the presence of grandparents in the household being now more likely than it has ever been before, particularly earlier in a child's life (Mollborn, Dunifon & Pilkauskas, 2017). Empirical evidence suggests that three-generation households are most often disadvantaged, short-lived and likely unstable (e.g. Pilkauskas & Cross, 2018). However, less is known about the dynamics of formation and dissolution of these households, which could shed light on the particular needs of children and adults living in these arrangements, and on the potential role of policies in supporting them. Second, regardless of the broad agreement that exists about the negative economic consequences of union dissolution for women (e.g. de Vaus et al., 2017), less is known about the consequences for women in developing countries, and about the potential differential effect of marriage versus cohabitation dissolution.

II. Dissertation Overview

In the first two studies I examine the dynamics of formation and dissolution of three-generation households in the U.S., followed by a third paper in which I examine the economic consequences of divorce and separation for women in Colombia, a developing country with one of the highest proportion of cohabiting adults of reproductive age (Social Trends, 2017).

In the first and second studies (chapters 2 and 3), I use the Fragile Families and Child Wellbeing Study (FFCWS) and its restricted contextual data to better understand the dynamics of three-generation households after the birth of a child. Using event history analysis, I document the prevalence, duration and correlates of formation and dissolution of these complex households. I pay particular attention at how non-economic and economic factors operate, and how these dynamics might differ by race and ethnicity. Specifically, in the first study (chapter 2), I focus on mothers who were not in a three-generation household at the time of the child's birth and examine their living arrangements over time to identify whether (and when) they being co-residence with grandparents after the child's birth. My findings indicate that three-generation households are more common among racial and ethnic minorities as well as early in a child's life (at birth), and that the probability of entry decreases as the child ages. Regarding the correlates of entry, I find that non-economic factors such as relationship status and the presence of a new partner in a mother's life are associated with entries into three-generation households. More specifically, those who are currently married or cohabiting with the child's father, and those who have a new partner are less likely to enter a three-generation household. Moreover, I see that economic factors also play an important role, with mothers receiving government benefits (TANF or SNAP) being less likely to transition, and those with higher poverty levels more likely to do so. Finally, while I find that the likelihood of entering a three-generation household differs

by race and ethnicity, there are not large differences in the correlates of entry.

Continuing with the study of three-generation households in the U.S., in the second study (chapter 3), I examine the trajectory of children who are born into three-generation households to identify the first time the mother and her child transition out of these complex arrangements. In doing so, I examine the prevalence and duration of three-generation households, as well as the correlates of their dissolution, along with a comparison of whether and how trajectories differ by race and ethnicity. Results indicate that three-generation households are short lived, with the majority of mother-child households ending grandparent co-residence between the child's birth and year one. Mothers of color spend the longest in grandparent co-residence. A closer examination at the trajectory of these complex arrangements indicates that the main correlates of their dissolution include both non-economic and economic factors. A mother's relationship status with the child's father is one of the most significant factors in leading to the transition out of three-generation households, as well as the presence of a new partner in the mother's life. Moreover, economic factors such as receipt of government transfers increase the likelihood of mothers transitioning out to independence. Interestingly, mother's poverty levels were associated with the transition out of three-generation households, but in the opposite direction that was expected (i.e. higher poverty predicted larger likelihood of transitioning out of three-generation households). These findings indicate that a large proportion of children experience both family and household structure changes early in life, with non-white children being disproportionally exposed to these transitions. Also, they highlight the importance of three-generation households as a safety net and suggest that this household structure is a more common experience, particularly for racial and ethnic minorities.

Shifting the focus to Colombia, the country in the world with one of the highest

proportion of cohabiting adults of reproductive age, my third study (chapter 4) looks at the economic consequences of divorce and separation for women using descriptive statistics and fixed-effects models. In addition, I compare my results to those of six OECD developed countries. In contrast to the other countries and to prior research, my analysis of three available waves of the Colombian Longitudinal Survey (ELCA) suggests that women who experience both marital and cohabitation dissolution are more advantaged than those who do not, and their economic well-being does not decline post-dissolution, although it does not increase as much as it does for men. By examining the different sources of income pre and post dissolution, I find that private transfers from family and friends are one of the main sources women use to cope with the dissolution of their unions and its impact on their economic well-being.

Finally, my last chapter (chapter 5) includes a summary of my three substantive chapters, and a discussion of the implications of my findings for policy, practice and for future research. My dissertation stands to make a significant contribution to the fields of family and household complexity. It brings new attention to the study of three-generation households, which are still largely understudied in the U.S. My work advances the current literature by offering a better understanding of the dynamics of formation and dissolution of these complex arrangements early in a child's life, using longitudinal data and rigorous methods. It also seeks to inform the study of the potential implications of this living arrangement for children's well-being, by providing new information about the (in)stability and particular needs of three-generation households.

From a policy perspective, policymakers would benefit from my research, as there is now a need to pay closer attention to complex household structures that go beyond the nuclear family. This is especially true given that the number of children living in these arrangements continues to rise, but, despite this growth, there is no clear documentation of the implications for children's

well-being. Additionally, with the first study of this nature in Colombia, I pay attention to both the economic consequences of divorce and separation for women, as well as to the way in which various income sources might mitigate these effects of dissolution on women's economic well-being.

Overall, my dissertation underscores the need to shift the focus from the study of more traditional parental relationships to look also at other family and household structures that continue to increase in prevalence, and that have taken the place of more traditional living arrangements for many children. In addition, my three studies suggest the importance of the private safety net in supporting families with children, and raise the question of who has the main responsibility to support families in times of economic downturns and in the face of increasing family instability. Future research should continue to explore whether social policies have adapted to the increasing diversity in children's living arrangements, and to better understand the potential burden that the use of the private safety net places on the broad family system.

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Chapter 2. Understanding the Dynamics of Three-Generation Households in the U.S.: First Entry After a Child's Birth

I. Introduction

Co-residing with a grandparent and one or both parents, usually referred to as a three-generation household,[1] is fairly common for US children: recent estimates are that about 30 percent will ever have this living arrangement during their childhood (Amorim, Dunifon & Pilkauskas, 2017). Despite the frequency of this living arrangement, research has only recently paid attention to the dynamics of the formation and dissolution of this type of household, as well as to the potential consequences of this living arrangement for the well-being of adults and children. Co-residence with grandparents is not new; however, as this living arrangement has become more common, its policy relevance has also grown.

In light of these research gaps and the frequency of such complex living arrangements, this paper aims to gain a better understanding of the formation of three-generation or multigenerational households in the U.S. In doing so, I aim to describe the correlates of first entry into extended-family households after the birth of a child, and how they differ by race and ethnicity. In this context, I pay particular attention to the role of non-economic and economic factors in such transitions.

II. Literature Review: Three-Generation and Extended Family Households

Three-generation family households are one type of extended-family household, in which multiple related adults reside together (Ruggles, 1987). Extended-family households are one of

[1] See Dunifon, Ziol-Guest, & Kopko, 2014 for a more detailed discussion about the relevance of grandparent co-residence.

the least studied living arrangements in the U.S., and thus the literature review covers extended-family households as well as focusing on three-generation households when that is possible. This literature review is organized as follows. First, I present an overview of the characteristics and trends of extended-family households in the U.S. and more details about three-generation households specifically, followed by a summary of the functions and determinants of such households.

A. Characteristics and trends

In order to understand the dynamics of extended-family households, it is relevant to have a clear definition and typology of this living arrangement as both the reasons for and the role of co-residence might vary depending on the structure. Extended households can be classified as horizontal or vertical based on the presence of different family members. Vertically extended households are also called "multigenerational" or "three-generation households" and include parents, grandparents, and grandchildren (Glick, Bean, & Van Hook, 1997). On the other hand, horizontally extended households usually include other related adults such as siblings, aunts, uncles, nephews, nieces, or cousins (Ruggles, 1987), who usually are at similar stages in life (Glick, 2000). In the U.S., the multigenerational or vertically extended household is the most common. For instance, in 2014, 23 percent of all households were vertically extended compared to 12 percent of horizontally extended households (Zonta, 2016). Although it is possible for both household types to be present within one household, there is little reference in the literature to the typology of extended households when they are both vertically and horizontally extended.[2]

[2] Other researchers have furthered delineated the typology of extended households. For example, sociologist, Yoshinori Kamo (2000), divided vertically extended households into upward and downward extended households. This particular typology differentiates who is the householder and who is the person seeking help. Downward extended households occur when an adult child comes back to his or her parents' house. On the contrary, upward extension happens when adult children take back their parents.

Characteristics of extended households have shifted over time along with the mechanisms motivating their formation (Ruggles, 1987). In a recent effort to characterize extended households using data from the American Community Survey, the American Housing Survey, and the U.S. Census Bureau, Zonta (2016) finds that families of color are disproportionately likely to live in extended households. Moreover, extended households are usually more economically disadvantaged. In 2014, 8 percent of nuclear families lived in poverty compared to 7 percent to 14 percent of extended families (depending on their structure). Finally, in terms of location, extended families are more likely to reside in metropolitan areas in the U.S. (80 percent-85 percent) (Zonta, 2016).

As mentioned before, Zonta's study is one of the few recent studies that examine the different typologies of extended family households (Child Trends, 2015; Glick, 2000; Glick et al., 1997; Kamo, 2000; Ruggles, 1994; Sweet & Bumpass, 1990; Zonta, 2016). In contrast, other studies focusing on multigenerational households are able to provide more details regarding the household composition (Bengtson, 2001; Chase-Lansdale et al., 1999; Cohen & Casper, 2002; Generations United, 2011; Keene & Batson, 2010; Lofquist, 2012; Pittman & Boswell, 2008; Ruggles, 1996; Ruggles, 2003). By focusing specifically on three-generation households, it is possible to identify additional key characteristics. This living arrangement is more common for racial and ethnic minorities (Fry & Passel, 2014; Kamo, 2000) as well as young mothers who have never been married (Trent & Harlan, 1994). In addition, research highlights the possibility for household members to live in an extended household several times during the course of their life (Kamo, 2000). Glick and Van Hook (2011) find that the majority of extended households, even those including non-related adults, experience changes in their household structure in the first year after they are formed.

Next, in terms of trends, it is relevant to provide a brief historical overview regarding the prevalence of extended families in the U.S. Then, I will focus on trends after World War Two to trace both a period of decline and increase starting in 1980. Following trends of extended families is complex due to their heterogeneity and the fact that researchers have mostly focused on three-generation households rather than extended households in the broader definition. In that sense, different authors and data sources provide diverse estimates depending on the measurement and definition of this living arrangement. Using Ruggles' estimates (1987), I identify a general trend of extended families being common at the beginning of the nineteenth century, followed by a decline at the end, continuing into the twentieth century. Between 1850 and 1885, about 20 percent of all households in the U.S. were extended; this decreased to 6 percent in 1984. Focusing only on multigenerational households, we see that the number of people in the U.S. living in this arrangement peaked at the beginning of the twentieth century but declined after the middle of the century (24.7 percent in 1940 to 12 percent in 1980). Multigenerational households started decreasing after World War Two, a period of modernization, economic prosperity and other changes that positioned the nuclear family form as the norm (Zonta, 2016). Finally, the prevalence of this particular living arrangement started increasing once again at the end of the twentieth century after the Great Recession of 2007-2009, reaching a high of 18 percent in 2012 (Fry & Passel, 2014).

Lastly, to get a sense of children's living arrangements, estimates indicate that in 2009 about 11 percent of all children living in extended households were living with at least one grandparent in the household, most of whom also lived with at least one parent (Kreider and Ellis, 2011). More specifically, by 2016, about 10 percent of children lived in a three-generation household (Pilkauskas & Cross, 2018).

B. Prior literature: functions and determinants of three-generation households

Numerous studies portray three-generation households and extended households in general as a strategy used during times of economic crisis and as a safety net for the more disadvantaged (Kamo, 2000). However, there are other several motivations to consider (Bianchi et al., 2006). Recurring debates in this literature refer to the interaction between individual motivations and the larger context surrounding families, in addition to a comparison between economic capacities and family needs (Cross, 2018). Below, I summarize past research describing some of the recurrent determinants of family extension linked to non-economic and economic factors.

1. Non-economic factors

The set of non-economic factors linked to the formation of three-generation households include demographic trends, generational needs (Pilkauskas, 2012), and cultural norms and preferences. First, demographic and social changes have played a role in the formation of three-generation households, and in the importance of extended kin. First, increases in life expectancy have increased the availability of kin over time, opening up the opportunity for "longer years of shared lives" (Bengtson, 2001) in which extended kin, particularly grandparents, can play a role in children's lives. Next, generational needs as described by Pilkauskas (2012), include a variety of potential situations and experiences in which one or more than one of the generations included in a three-generation household might require help. In this context, it has been argued that the needs of parents rather than grandparents are usually a more salient predictor of the formation of three-generation households, as usually, help in three-generation households has a downward flow, coming from grandparents to parents (Bianchi et al., 2006). Therefore, we might expect the needs of the intermediate generation (the parent) to be a more salient factor in the formation of

three-generation households, and likely also in the dissolution of such arrangements. Specific needs of the intermediate generation that may lead to the formation of a three-generation household include experiences of life events such as a teen pregnancy, the arrival of a mother's first child, or a child with special needs (Baker & Mutchler, 2010; Trent & Harlan, 1994).

In this context, additional life events might include changes in one's marital or relationship status, immigration, experiences of incarceration (considering increasing rates of women's incarceration rates), entering the labor market, mental and physical health issues. All of these events include circumstances in which individuals might activate their familial network (Baker & Mutchler, 2010; Bianchi et al., 2006; Casper & Bryson, 1998; Cohen & Casper, 2002; Glick & Van Hook, 2011; Kamo, 2000; Keene & Batson, 2010; Pilkauskas, 2012). In this area, less attention has been paid to the study of other possible correlates such as experiences of domestic violence and other circumstances in which help from other relatives might be needed.

Among the factors mentioned above, particular attention has been recently paid to the role of the increasing instability of family arrangements in the U.S. on the growing prevalence of three-generation households. In this context, Pilkauskas and Cross (2018) find that increases in single parenthood as well as decreases in marriage, are some of the factors that explain the rise in three-generation households. Two potential explanations have been offered for such association. One, that individuals who experience significant life-course events such as divorce and separation, seek out help from other family members to cope with their family transition (Perkins, 2017). Relatedly, Mollborn and colleagues (2012) discuss the potential effect of family transitions to play a "push-pull" effect between marital and relationship status changes and changes in household structure. As such, when a new partner enters the life of the individual living in an extended-family household, the likelihood for the individual and their new partner to

leave the extended-family household increases. In contrast, experiences of dissolution and the loss of a partner, increase the likelihood of extended-family households to form.

Finally, cultural norms and preferences are an additional layer to the non-economic factors associated with the formation of three-generation households, particularly among racial and ethnic minorities. In this context, several arguments have been proposed to explain the higher prevalence of three-generation households among racial and ethnic minorities.
First, that cultural values such as familism, mainly common among Latinos, increase the likelihood that individuals with such heritage will live in multigenerational households. Traditionally, Hispanics-particularly Mexican-Americans- have been considered family rather than individual oriented (Landale, Oropesa, & Bradatan, 2006). This strong tie to family life is usually referred to as familism. These values are manifested through multiple behaviors, including participation in large kin networks with frequent visitation and contact, as well as providing different types of support which are common among some racial and ethnic groups in the U.S. including Hispanics and African Americans (e.g. Martin & Martin, 1980; Vega, 1995). Second, Cross (2018) argues that racial and ethnic minorities are more likely to activate the private safety net instead of turning to the formal safety net in times of need. Therefore, she proposes that economic capacities and family needs are more relevant for minorities, as when they need help they often look up to family members rather than the formal safety net (e.g. Woodward, et al., 2010). In contrast to Cross, I hypothesize that family needs are more salient correlates of three-generation families for racial and ethnic minorities, given their values and preferences, which include extended households as a more normative household structure, but also as a safety net available, not only in the face of financial difficulties.

In addition to the potential preference of racial and ethnic minorities to use the private

instead of the formal safety net, there may also be systemic barriers that actually limit their access to formal programs (e.g. Menjivar, 1997). Similarly, members of racial and ethnic minorities, particularly immigrants, may refrain from accessing the public safety net and are sometimes reluctant to seek out services mainly due to fear and mistrust. Such beliefs include a fear for information sharing across agencies, targeting, stigma, fear of deportation, and also confusion about their eligibility for safety net programs (e.g. Bitler & Hoynes, 2011; Hacker et al., 2015; Hagan et al., 2003). Following these arguments, I expect Hispanics to take the shortest time to transition into three-generation households, followed by non-Hispanic blacks, and lastly, non-Hispanic whites, given the constraints for racial and ethnic minorities to access the formal safety net but also due to their family oriented values.

In this context and taking into account the higher prevalence of three-generation households among members of racial and ethnic minorities, it is relevant to note that in contrast to what most of the research in this area implies, these complex households are far from being just an alternative to the "traditional" nuclear family for specific population groups in the U.S. In contrast, it would be relevant to consider their historical and normative significance, as well as the likelihood for such households to form even in the absence of significant shocks, or as most of the research in this area has argued, as a response to financial shocks.

2. Economic factors

Historically, economic forces have played a role in the formation of different family and household structures including the formation of complex extended households such as three-generation households. Specific economic forces, such as the Great Recession, likely influenced the prevalence of extended kin co-residence (Cox, 1987; Ruggles, 1987; Taylor et al., 2010). Following trends on extended families in the U.S, it is possible to see that there was a decline in

prevalence in times of economic prosperity after WWII, and a new increase after the Great Recession, a time of financial crisis for Americans who lost their jobs, homes, and their income (Zonta, 2016). Numerous studies have demonstrated the idea that moving in with family, and even friends (doubling-up), is likely a mechanism to alleviate financial crises, working as a safety net or anti-poverty strategy (Angel & Tienda, 1982; Mykyta & Macartney, 2011; Seltzer, Lau, & Bianchi, 2012; Taylor et al., 2011; Wiemers, 2014). However, even after the recession ended, the number of extended households has continued to increase. Therefore, economic motivations have interacted with other non-economic forces. In this area, it is particularly challenging to disentangle the effect of income from other factors correlated with the formation of three-generation households, as those are likely jointly determined. In addition, housing costs have also been described as one of the potential triggers for the formation of three-generation households and other extended living arrangements (Keene & Batson, 2010). High local housing costs increase the likelihood of moving into these complex households (Cohen & Casper, 2002). Relatedly, changes in women's participation in the labor force have also had an effect on the increasing reliance on extended kin for childcare in the U.S. (Bianchi et al., 2006).

3. Policy influences

There is a fair amount of research that looks at the association between public assistance and the formation of extended households, mainly multigenerational households. Some evidence indicates a negative association between public transfers and the use of familial support while other studies find no support for this particular association. One of the primary mechanisms through which policies might affect the formation of such households is by increasing the financial support being provided while "crowding out" the need to activate the familial safety net (Bianchi et al., 2006). In line with my interest of understanding the decline of vertically extended

households in the first half of the twentieth century, the discussion regarding Social Security is relevant.[3] There is evidence that the expansion of Social Security together with the rising affluence of the aged influenced the transition of many older adults to independence (Bianchi et al., 2006; Keene & Batson, 2010; Ruggles, 2007). Although evidence support these findings, Ruggles (2007) finds that the trend of elderly independence was influenced not only by the increased financial resources coming from Social Security but also by the increasing resources available to the younger generation, including rising income and education. In contrast, a more recent study by Pilkauskas and Cross (2018) find that the rises in Social Security receipt between 1996 and 2009 are associated with the increases in three-generation households, rather than increases in living independently. Perhaps this is because the Social Security benefits provide grandparents a relatively stable source of income, leading the child's parents to move in with them.

Finally, in addition to the literature looking at Social Security, an older literature explored the effect of the Aid to Families with Dependent Children (AFDC) program on family structure and living arrangements including three-generation households. Findings indicate that greater AFDC benefits were associated with a greater likelihood of young mothers moving out of their parental home (Moffitt, 2003), suggesting that such benefits allowed them to live independently. Similarly, Ruggles (1997) finds that AFDC increased benefits lead to more independent living arrangements among unmarried mothers who were therefore more likely to afford living on their own, supporting their transition out of extended living arrangements (Ruggles, 1997).

[3] There are other studies looking not just at Social Security but also at other sources of public support for low-income families. Several studies look at welfare reform and how families, including extended households, respond to policies and policy changes including, for example, the reduction of welfare benefits to low-income mothers and the increased emphasis on work (e.g. Lichter & Jayakody, 2002; Moffitt, 1998; Rosenzweig, 1999).

4. Summary

Numerous studies portray three-generation households and extended households in general as a strategy used during times of economic crisis. However, there are several other motivations to consider. Only recently have researchers made an effort to estimate the effect of additional correlates, more specifically, to look at the potential effect of changes in family structure on the formation of three-generation households (e.g. Pilkauskas & Cross, 2018). As mentioned above, families have changed considerably in the U.S., including a decline in the stability of families, which might be a particular trigger for the formation of three-generation households as a way to cope with entries and exits of partners and parents in and out of the household. In this context, a new conversation has emerged to compare the role of economic capacities and other family needs on the formation of extended households (including three-generation families). Pilkauskas & Cross (2018), find that increases in the prevalence of extended family households are mainly explained by increases in Social Security receipt and also by recent changes in family formation and dissolution.

In addition, the debate remains about whether such motivations differ by race and ethnicity. For example, a recent study by Cross (2018), directly tests whether economic capacities or family needs[4] have a different effect in the likelihood of entry into extended-family households. Using discrete time event history analysis and the Panel Study of Income Dynamics (PSID), Cross (2018) tests whether such factors differ by race and ethnicity, and concludes that there are not significant differences. In contrast to past research, this is one of the only studies that take a fully longitudinal approach to look at the first transitions into three-generation

[4] Family needs measures in Cross' study include mother's age at birth of child, child's age, number of children in the household, number of parents in the household, and an indicator for other household members in good health. In contrast to Cross and Pilkauskas (2018), Cross does not include measures of mother's union status.

households for children since the time of the child's birth until they turn 18. Finally, in the context of racial and ethnic minorities, it is also relevant to consider whether three-generation households might form as a normative household structure, rather than as a response to a situation in which individuals might activate their familial network, mainly in the face of financial shocks. This leads us to consider non-economic factors as relevant in the formation of such households, particularly for racial and ethnic minorities, while economic factors might take a particular relevance for non-Hispanic whites. Moreover, given their family orientation and multiple constrains to access the formal safety net, I expect Hispanics to transition faster to three-generation households, followed by non-Hispanic blacks and non-Hispanic whites.

III. Current Study

I aim to inform the aforementioned discussion regarding the role of non-economic and economic factors in the formation of three-generation households as well as the discussion about the differential motivations by race and ethnicity. Therefore, I look at a multiplicity of correlates previously linked to the formation of three-generation households including both non-economic and economic factors. This study aims to examine the dynamics of three-generation households after the birth of a child[5] by looking at the time children spend out of such arrangements, and at the correlates of first entry. In contrast to Cross (2018) study, who also uses discrete time event history analysis models with the PSID to predict first entry into extended-family households, I include measures of parental relationships and contextual factors over time, and I exclude from my sample mothers and children who were in three-generation households at the time of the birth, as I cannot identify whether the transition happened at the time of the birth, right before, or

[5] Amorim and colleagues (2017) highlight the importance of looking at the first time that children enter three-generation families to confirm or reject the previously believed idea that there was not an age gradient in the transition to three-generation family, arising from the common use of cross-sectional data.

several years ago.

This paper stands to make an important contribution to the fields of family, household complexity, and poverty studies in several ways. It will bring new attention to the study of three-generation households, which are still largely understudied in the U.S. My work advances the current literature by offering a better understanding of the dynamics of three-generation households using updated data and rigorous methods. From a policy perspective, policymakers would benefit from my research, as there is now a need to pay closer attention to complex household structures that go beyond the nuclear family. This is especially true given that the number of children living in such arrangements continues to rise, but, despite this growth, there is no clear documentation of their dynamics and implications for children's well-being. Therefore, a better understanding of these complex households will be important for evaluating how current policies are supporting and affecting them, as these policies can have a direct impact on children's development and future prospects. In addition, a better understanding of their process of formation can help us better understand the implications for children's and adult's well-being as such effects might be different depending on the motivation that trigger their initial formation. My research aim and hypotheses are:

- **Aim 1:** Describe the correlates of entry into three-generation households after the birth of a child, and how they differ by race and ethnicity, paying particular attention to how non-economic and economic factors operate. **Hypothesis 1:** Entry into three-generation households are likely to be related to both family transitions (non-economic factors) and economic need (economic factors)**. Hypothesis 2:** Hispanics are more likely to transition to three-generation households, followed by Non-Hispanic Black and, lastly, Non-Hispanic White. For the first two groups, economic factors are less relevant than family

transitions (non-economic factors). In contrast, for Non-Hispanic White, economic need takes particular relevance.

IV. Data, Sample, Analytical Strategy and Measures

A. Data

The data source for this study is the Fragile Families and Child Wellbeing Study, a nationally-representative birth cohort study of 4,986 children from birth to age 15 born in large U.S. cities between 1998 and 2000. It uses a stratified random sample strategy and it is representative of non-marital births in the U.S. This population-based survey includes information from both parents, mothers and fathers (Reichman, Teitler, & McLanahan, 2001). Information was collected through interviews at the hospital, followed by phone calls for those who were not reached. In addition to the information collected at birth, interviews were conducted when the child was 1, 3, 5, 9, and 15 years old. Additional components included home visits, teacher surveys, and saliva samples. I use city weights to adjust my descriptive statistics for the oversample of nonmarital births in the study, which allows me to generalize my findings to couples living together after an urban birth across the 20 cities in the study. I only use the weights in the descriptive context, as in my regression analysis I include the main variables the weights account for including mother's marital status at birth, age, race and education.

B. Sample

For this study I use mother's surveys since they had lower attrition rates, and usually the mother was the custodial parent. In addition, I have access to the restricted contextual data of this study, which includes a set of characteristics of the census tract at each wave, rarely available in other datasets. I do not examine the age-15 interview because the amount of time between the age-9 and age-15 surveys is relatively long and no information is available in changes in

household structure between these time points. To construct my analysis sample, I start with 4,898 mothers who had valid interviews and responses to at least one survey wave, and I keep the information from the wave in which they were at risk of a first transition into a three-generation household (excluding the years of data after they have transitioned in during my observation period). I exclude 204 mothers who were not the child's primary caregiver. Of the 4,694 mothers left, I drop 363 mothers with missing values for my variables of interest for a final sample of 4,331 mothers and their focal child, including those living in three-generation households at the time of the child's birth. I then divide the remaining mothers into those living in a three-generation household when the focal child was born (n=1,185) and my analysis sample, those who were not (n=3,146) and are thus at risk of making a transition into a three-generation household. I arrange these 3,146 mothers into 11,635 person-period observations in which a mother is at risk of first moving into a three-generation household after the focal child was born. I use this analysis sample for the descriptive section, in order to make full use of the data I have available. Next, for my regression analysis, I further exclude those cases with valid information who were not living in a three-generation household at the time of the birth, but who dropped out of my sample at year one. Therefore, my regression models include a sample of 2,752 mothers and their focal child, arranged in 8,489 person-period observations.[6]

C. Analytical strategy

I begin the analysis with standard descriptive survival analysis. Life tables show the hazard rate for moving into a three-generation household at different ages; survival curves show the proportion of children who still live outside this household arrangement. In order to study the

[6] Some contextual variables have more missing values than the variables in my main analyses. Therefore, when I include median house value as a sensitivity test in my analysis, the sample drops from 8,489 to 8,264.

influence of a series of independent variables on the duration and occurrence, or nonoccurrence, of the transition into three-generation households after the birth of a child, I use event history modeling. Specifically, I create an event-history dataset from the Fragile Families and Child Wellbeing study to estimate complementary log-log models for discrete-time event history analysis. Such models are preferred over a traditional Logit to model binary outcomes because the complementary log-log model is ideal when the phenomenon studied is generated by a proportional hazard model in continuous time, as it is the case for my study. With this approach, I can model the length of time spent out of three-generation households after the birth of a child, and the transition into them, while including time constant and time varying covariates (Box-Steffensmeier & Jones, 2004).[7] This way, I model the risk or probability of the event—transition into a three-generation household—occurring as a function of a series of covariates. For all event history analyses, I show two models. Model 1 predicts the transition to three-generation households including non-economic factors (as well as variables capturing the duration). Model 2 adds to Model 1 the cluster of economic variables.

D. Measures

My main outcome is an indicator of whether the custodial parent and the child lived in a three-generation household (with one or more grandparents) at each wave. In addition, I have a duration variable indicating the length of time they spend out of this living arrangement. The main predictors in my models account for non-economic (including demographic characteristics) and economic factors. Additional variables include two contextual factors measured at the census tract where the mother and her child lived at each wave of the survey.

[7] Event history analysis models are useful to incorporate time constant and time varying variables. However, in contrast to fixed effects, these models do not account for unmeasured time-constant individual characteristics.

1. Duration

I construct a categorical variable indicating the time since the child was born, to the time that the baby and her mother start co-residence with grandparents for the first time after the child's birth (>0 & <2.5 years old, >=2.6 & <4 years old, >=4 & <=6 years old, and >=7 & <=11 years old). After confirming that the process of transition was time dependent and that the inclusion of the duration variable was necessary, I tested different parameterizations of time (constant, linear, squared, cubic), and the categorical form was the more appropriate according to the model comparison tests.[8] In addition, categories were defined according to the age ranges of the children at each wave when the survey was conducted.

Following one of the studies that have looked at correlates of three-generation family households in the Fragile Families Data (Pilkauskas, 2012) as well as my research interest, I include two main sets of correlates. I include a set of non-economic factors as well as a cluster of economic and contextual factors as described below.

2. Non-economic factors

I include several variables that have been identified as correlates of three-generation households at the mother, father and child level. This set of variables includes time-constant variables: the mother race and ethnicity (Non-Hispanic White, Non-Hispanic Black, Hispanic, Other); mother's nativity (U.S. born); mother's education at baseline (Less than High School, High School or Equivalent, Some College or Technical, College or Graduate Studies). It also includes time-varying indicators of mother's age (15-25, 25-30, 30-35, 35 years old or older),

[8] When I tested the different specifications of the duration variable, the inclusion of the year dummies compared to a time constant, time linear, square and cubic yielded the results with lower BIC (4010.09) and AIC (3805.74). Moreover, the Log-likelihood value was higher when including the year dummies to the models (-1873.87) compared to the other specifications (-1892.25, -1887.73, -1878.91, -1878.82, respectively).

whether the mother's health was excellent or very good, and whether the father was in jail at the time of the survey (yes, no, missing), which are all potential proxies for the potential need of the mother to co-reside with her parents if additional support is needed. Next, I include variables related to the mother's current and past family experiences. Therefore, I include time-varying measures of the mother's relationship status with the child's father[9] (divorced or separated, married or cohabiting, in a romantic relationship, friends or none); an indicator of whether the mother has a new partner; a continuous measure of the number of children in the household; and an indicator of whether the child is in good health at each wave. Finally, I include additional time constant variables such as an indicator of whether the mother was living with two parents at age 15 and an indicator of whether the baby is the mother's first child.

3. Economic factors

With this cluster of variables, I aim to measure the mother's changing economic resources and needs over time. It includes an indicator of whether the mother received Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP) in the year prior to the survey; and a dummy variable indicating whether the mother's household was below 200 percent of the federal poverty line (FPL) in the year prior to the survey.[10]

Finally, contextual variables include time varying measures at the census tract of the median house value, rent as percent of income, percent of households receiving public assistance

[9] The relationship variable with the child's father at baseline did not include the Divorce or Separated category. However, since I am only using baseline to construct my sample and identify those in three-generation households at baseline, it does not affect my estimates. In addition, I include an indicator of missing for this variable given that at year 5 there is a large number of missing values.

[10] This binary variable is constructed based on the ratio of total household income to the official poverty threshold. The thresholds vary by family composition and year. At each wave, poverty thresholds of the year before the interview are used. For more details, see the constructed variables documentation of the Fragile Families and Child Wellbeing study: https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_public_guide_0to5.pdf

and percent of families below poverty. Because the contextual variables have more missing data, I do not include them in the base model. However, because of the potential importance of the housing market in decisions about living arrangements, I perform sensitivity tests to include two variables related to the housing market (rent as percent of income and median house value); the other contextual variables are only used in describing the sample.

V. Results: First Entry into Three-Generation Households

A. Descriptive results: Sample overall

Table 2.1 provides mean and percentage distributions for all the variables used in the analysis at the time of the child's birth for the entire sample (n=4,331) (first column), followed by columns in which I divide my entire sample into three groups: those born into a three-generation household (n=1,185), those not born into a three-generation household but who enter a three-generation household within the observation period (n=555) and those not born into a three-generation household who do not enter within the observation period (n=2,591). All columns in this table use city sampling weights to adjust for the oversample of nonmarital births (and the corresponding differences by age, race, and education).

In terms of the sample overall, mothers were on average 27 years old, and over one third of them were Non-Hispanic Black, followed by Non-Hispanic White (30 percent), Hispanic (30 percent), and Other (7 percent). Most of the mothers in the sample were U.S. Born (72 percent), and over half of them had a High School Degree or less. In terms of current and past mother's family experiences, over seventy percent of mothers were married or cohabiting while 17 percent of them were in a romantic relationship with the child's father at the time of the birth; over half of them were living with two parents at age 15; and for about forty percent of mothers this was their first child. Finally, in terms of socioeconomic factors, slightly over half of the sample was

below 200 percent of FPL in the year prior to the child's birth, near one fifth of mothers received TANF or SNAP in the year prior to the survey, the median house value for the census tract was on average $152,426 with rent as percent of income being 27 percent.

In comparison to the characteristics of the sample overall, those who were in a three-generation household at the time of the child's birth, are considerably more disadvantaged in all the aforementioned measures. In addition, the largest prevalence of three-generation households happened at the child's birth or before, with almost 30 percent of the sample (1,185 of 4,331) living in three-generation households at the time of the child's birth, and only 13 percent (555) entering later. Mother's in three-generation households at birth are younger, more likely to be members of racial and ethnic minorities and to be U.S. born, have lower levels of education than the sample overall, and are less likely to be married or cohabiting, with 44 percent of them in a romantic relationship with the child's father. Moreover, mothers in three-generation households at the time of the child's birth are somewhat less likely to have excellent or very good health (67 percent vs 70 percent in the sample overall), less likely to have lived with two parents at age 15, more likely to be having their first child (60 percent vs 40 percent at baseline), and to have a baby with low birth weight. In terms of the economic measures, mothers in three-generation households at the time of the child's birth are more likely to be below 200 percent of the FPL (71 percent vs 51 percent), slightly more likely to have received TANF or SNAP in the year prior to the survey (25 percent vs 23 percent), and to live in tracts that have lower median house value and a slightly larger proportion of rent as a percent of income (28 percent vs 27 percent).

Finally, the comparison of those who were in three-generation households at the time of the birth to those who transitioned later, reveals that mothers who made the transition in the years following the birth, are less disadvantaged than mothers who were already in three-

generation households at the time of the child's birth, but yet more disadvantaged than the sample overall. Moreover, when comparing those who transitioned into a three-generation household to those who did not, the former are generally more advantaged than the latter including mothers being less likely to have a baby with low birth weight, and to have the child's father in jail at the time of the survey.

In summary, when comparing the sample overall to those who were in a three-generation household at the time of the child's birth and those who transitioned afterwards, I see that those who were in already at baseline are more disadvantaged, while those who transitioned later are somewhat less disadvantaged than those who were already co-residing with grandparents at the time of the child's birth, but they were not as advantaged as the sample overall. Further, those who did not transition into a three-generation household are more advantaged than those who did. These findings are consistent with past research showing that those living in multigenerational households are often more disadvantaged than those who do not, although past research does not tell us anything about the timing of the events and the potential difference by subgroups.

[TABLE 2.1]

Table 2.2 presents the life table analysis for the overall sample of the proportion of mother-child households that entered a three-generation household after the child's birth. They indicate the probability at each interval that a child and his or her mother will first enter a three-generation household as well as the proportion that remain out of three-generation households (survive). It also includes the number of censored cases between intervals, accompanied by the hazard of making a transition. Children are more likely to experience the entry into three-generation households at early ages. The hazard rate of first entry is highest between birth and

age one (.10) and it declines between ages one to five down to .03 and drops even further between ages 5 to 9 (0.02). Further, if we take into account that about 30 percent of the sample is born to a three-generation household, we could argue that such transitions are more likely to happen before or at the time of the child's birth.

[TABLE 2.2]

Next, figure 2.1 graphically presents the survival curve, showing the proportion of mothers and their children who still remain out of three-generation households after the birth of the child. The vertical axis shows the proportion of people "surviving" (not entering a three-generation household). At year 1, 90 percent of mother-child households had not entered a three-generation household, and by the time the child is 9 years of age, 74 percent of households still do not include the presence of grandparents in the household.

[FIGURE 2.1]

B. Regression results: Sample overall

I estimate complementary log-log models to identify the correlates of the first transition into three-generation households after the birth of a child. The first two columns in Table 2.3 show the marginal effects of Models 1 and 2 for the sample overall, which is relevant for the first part of my research aim. First, Model 1 speaks to the correlates of entry into three-generation households from the non-economic perspective. When looking at the duration variable, I see that the hazard of transitioning into a three-generation household declines as the child ages, consistent with the life tables. There are several significant factors predicting such transitions. Hispanic mothers and those of other race and ethnicity are more likely to enter three-generation households compared to non-Hispanic white mothers, and the model shows those with partners

being less likely to transition. Thus, mothers whose relationship status with the child's father is not married or cohabiting are more likely to transition, and mothers who have a new partner (not the child's father) are less likely. In terms of mother's age, younger mothers (30 years old and younger) are more likely to experience the transition compared to older mothers (>35 years old). Finally, there are higher probabilities of transition for those with more children in the household and those for whom this is their first child.

[TABLE 2.3]

Second, adding the economic variables to Model 2 does not change the direction or significance of any of the significant predictors discussed above. Both of the economic factors included in the model are statistically significant. As such, mothers who received TANF or SNAP in the year prior to the survey are less likely to enter into a three-generation household while mothers below 200 percent of FPL are more likely to experience such transition.[11]

C. Descriptive results: By race and ethnicity

Table 2.4 presents the life table analysis by race and ethnicity of the proportion of mother-child households that entered a three-generation household after the birth of the child. Mothers of "Other" race and ethnicity have the highest hazard rate of entering into a three-generation household between a child's birth and year one (.15). The second highest hazard of entering a three-generation household is Hispanic mothers (0.14), followed by non-Hispanic black mothers (.10) and lastly, non-Hispanic white mothers (0.6). For all subgroups, the hazard of entering a three-generation household is highest between birth and year one, and it drops

[11] As a sensitivity tests I run additional models including contextual measures for the median house value and a measure of rent as percent of income, given that one reason families may live together is the high cost of housing. These coefficients were not statistically significant and they did not change the significance of the other coefficients. Given the large number of missing values for this variable, results are not shown in the main table.

considerably between years one and three.

[TABLE 2.4]

Finally, similar to Table 2.4, figure 2.2 presents the survival curve of the proportion of mother-child households by race and ethnicity transitioning for the first time into a three-generation household after the birth of a child. At year one, the survival probability is highest for non-Hispanic white mothers (94 percent), while the lowest is for mothers of the "Other" category (86 percent). By age nine, over half of the mothers have "survived" the entry into a three-generation household across all groups. Finally, I compare the survival distributions between the subgroups with a log-rank and Wilcoxon (Breslow) test for equality of survivor functions and I find statistically significant differences ($p<0.001$ for both tests). These tests compare estimates of the hazard functions for my groups of interest at each time.

[FIGURE 2.2]

D. Regression results: By race and ethnicity

Racial differences in first entry into three-generation households after the birth of a child. The last three columns in Table 2.3 show the marginal effects of both economic and non-economic factors in predicting transitions into three-generation households after the birth of a child by race and ethnicity. (I do not show those of "other" race/ethnicity separately since there are relatively few.) Of the statistically significant variables in the overall model, few remain significant across all three groups (non-Hispanic white, non-Hispanic black and Hispanics). When looking at the non-economic characteristics that were significant in the main model, while for both non-Hispanic black mothers and Hispanic mothers transitions are more likely before children turn one, there is no age gradient for non-Hispanic white mothers. Next, the association

between entries and mother's relationship status with the child's father is slightly consistent with the overall model, but it differs across subgroups. For instance, non-Hispanic white mothers who are either divorced, separated, friends or do not have any relationship with the child's father are less likely to enter three-generation households compared to those who were either married or cohabiting. All non-Hispanic black mothers in a relationship different than a marriage or cohabiting union are more likely to transition compared to married or cohabiting mothers, while Hispanic mothers are only more likely to transition if they have no relationship or a romantic relationship with the child's father compared to those who are married or cohabiting. In contrast to marital status, the association between entries and a mother's new partner remains statistically significant across all groups, with mothers who have a new partner being less likely to transition into co-residence. Similar to the model overall, non-Hispanic black and Hispanic mothers are more likely to experience a three-generation household arrangement when they have more children in the household, and this association was not significant for non-Hispanic white mothers.

In terms of other family experiences, consistent across non-Hispanic black and Hispanic mothers, those for whom the focal child is the first baby, are more likely to transition into three-generation households, while the coefficient is non-significant and smaller for non-Hispanic white mothers. This may be capturing the potential need of mothers to enter three-generation households based on whether this is their first child among members of racial and ethnic minorities who might have limited access to additional resources in the formal safety net.

Both of the economic factors that were significant in the main model remain significant only for Hispanic mothers, with mothers receiving SNAP or TANF being less likely to experience a transition, and those below 200 of FPL more likely to do so. Such economic factors

were not statistically significant for non-Hispanic white and black mothers. In the context of the economic factors, I perform additional sensitivity tests by race and ethnicity where I add to the main model measures of the median house value as well as a measure of rent as percent of income, both of which were not significant in the main model. Interestingly, rent as percent of income is a significant predictor of the transition into three-generation households for non-Hispanic white mothers, with those mothers living in a neighborhood in which people pay a larger proportion of their income towards rent being more likely to transition into co-residence. This coefficient was not significant either for non-Hispanic black or Hispanic mothers, although it went in the same direction and had a similar magnitude. Lastly, one correlate that was not significant in the main model but that has been an important predictor in prior research is nativity. When looking by subgroups, mother's nativity is significant for both non-Hispanic white and Hispanic mothers, although the direction of the coefficient is different between these two groups. U.S. born non-Hispanic white mothers are less likely to transition into three-generation households, while U.S. born Hispanic mothers are more likely to do so.

So far, I have only compared the estimates across groups with the main model and looking at whether the marginal effects are significant within each racial and ethnic group. I move beyond this scenario by performing a Chow test to assess whether the coefficients estimated for one group are equal to the coefficients estimated for the others. The results of the test indicate that the only associations different across the three racial and ethnic groups of interest are nativity ($p<0.05$) and the father in jail measure ($p<0.05$). As mentioned above, the coefficient for nativity is statistically significant for both non-Hispanic white mothers with a negative sign, and for Hispanic mothers with a positive sign. In regards to the father in jail measure, the biggest difference is for whether this measure was missing for Hispanic mothers,

which will then negatively predict the transition into three-generation households. None of the coefficients for the father in jail measure are significant for the other two racial and ethnic groups.

VI. Summary and Discussion

Using longitudinal data from the Fragile Families Study, the present study aims to identify some of the factors associated with the first transition into a three-generation household after the birth of a child given that at the time of the birth the mother and her child were not in co-residence with grandparents. I examined the correlates of entry into three-generation households for the first time after the birth of a child and how those correlates might vary by race and ethnicity.

As stated in the literature review, not many studies have looked in particular at the factors associated with mothers moving into three-generation households, specifically for the first time after the birth of a child. First, by looking at the characteristics of those in three-generation households at the time of the child's birth compared to those who transitioned later, I see a pattern of the former being more disadvantaged than the latter in a wide range of both non-economic and economic characteristics. Therefore, I see more disadvantaged mothers selecting into three-generation arrangements earlier, either at the time of the child's birth or even before the baby arrived. In addition, when I compared those whose child was not born into a three-generation household and who transitioned in during my observation period to those who do not transition, I see a pattern of socioeconomic advantage of those who do not transition, which is consistent with prior research indicating the prevalence of three-generation households among more disadvantaged individuals.

Second, using complementary log-log models and marginal effects at the means, I

describe the correlates and time to first entry into three-generation households after the birth of a child in the sample overall. In terms of the time that the newborn and his or her mother take to transition into three-generation families, I find that the transition is more likely to happen earlier in the child's life, and this likelihood declines as the child ages. This finding is consistent with other longitudinal studies that find an age gradient in the transition to three-generation households, as younger children are more likely to experience a multigenerational household in their first year of life (Amorim et al., 2017).

Based on previous research, I hypothesized that entry into three-generation households is likely to be related to both non-economic (e.g. fertility experiences, marital status, new partners, etc.) and economic factors (e.g. income to poverty ratio, public assistance receipt, etc.). I find that non-economic factors are significant predictors of the transition to three-generation households in the sample overall. Of particular interest is the relationship status of the mother with the child's father, which shows how all mothers in a relationship different than a marriage or cohabitation are more likely to transition. Similarly, mothers who have a new partner are less likely to transition. These results are consistent with previous research indicating the role of parental relationship status and the presence of new partners in the likelihood of co-residing with grandparents (Mollborn, Fomby & Dennis, 2012; Pilkauskas & Cross, 2018). Moreover, they are consistent with the "push-pull" effect discussed by Mollborn and colleagues (2012), according to which the transition of a partner out of the mother and child's household might move them into co-residence with grandparents. Such findings are relevant to the extent that traditionally, three-generation households had been mostly understood as a coping mechanism for financial crisis. However, as noted above, significant changes in family structure and stability, which to some extent also imply a financial shock, have started to play a role in the formation and increasing

prevalence of three-generation households.

Continuing with the non-economic factors, I also see a consistent association between mother's age, their fertility experience and the likelihood of entry into a three-generation household, which is consistent with previous research. Younger mothers are more likely to transition into three-generation households as are those for whom the focal child was their first baby. These findings are consistent with the idea that generational needs, usually those of the parent generation are significant predictors of the transition into three-generation households. Overall, I see a strong pattern of non-economic factors influencing the first transition to three-generation households after the birth of a child.

Next, the inclusion of economic factors in my model does not change the significance or direction of any of the non-economic factors previously discussed, and suggests that those more economically disadvantaged are more likely to transition. Consistent with prior research, I find that more economically disadvantaged mothers are more likely to experience multigenerational arrangements (e.g. Cross, 2018; Kamo, 2000). As such, mothers below 200 percent of the federal poverty line are more likely to transition. On the other hand, an additional measure of disadvantage, receipt of SNAP or TANF in the year prior to the survey, was also statistically significant in my models. This finding is contrary to Pilkauskas and Cross (2018) who identify the effect of SNAP receipt as a non-significant correlate of the transition into three-generation households. When they compare correlates in 1996 and 2009, they find a significant effect for SNAP in 1996 and a non-significant effect in 2009. Moreover, they do not find a significant effect of TANF receipt on either 1996 or 2009. My measure of welfare receipt is different from theirs in that, due to data limitations, I combined in a single measure the receipt of either SNAP or TANF. Regardless of my findings being contrary to what these two authors find, they are

consistent with the idea presented earlier (by Bianchi et al., 2006) that welfare benefits might "crowd out" the need for familial support, as those receiving benefits are less likely to transition into three-generation households.

In summary, I confirm my hypothesis that both non-economic factors (such as family experiences and transitions) and economic factors are both associated with the likelihood of first entry into three-generation households. Moreover, I find the marginal effect of several non-economic factors to be somewhat larger and more consistent than the marginal effect of the measures of economic disadvantage I include in my models.

Next, I pay attention to the patterns of transition into three-generation households by race and ethnicity. I hypothesized that Hispanics are more likely to first transition to three-generation households, followed by Non-Hispanic Black and, lastly, Non-Hispanic White, and I was able to confirm this hypothesis with my survival analysis. I find that Hispanic mothers and mothers in the "Other" category were the first to transition, followed by non-Hispanic Black mothers, and finally, non-Hispanic white mothers. This is consistent with prior research indicating the higher prevalence of three-generation households among racial and ethnic minorities compared to non-Hispanic whites (e.g. Amorim et al., 2017; Fry & Passel, 2014; Kamo, 2000). Moreover, I confirm this finding in my multivariate models, where I see Hispanic and "Other" race and ethnicity mothers as being more likely to transition compared to non-Hispanic white mothers, although the coefficient for non-Hispanic black mothers have similar transition rates to non-Hispanic white mothers.

Finally, I look at the correlates of entry into three-generation households and whether they vary by race and ethnicity. First, I compare the results of the subgroup analysis to the sample overall, and then I formally test whether correlates differ significantly across the three

main racial and ethnic groups. I see several similarities and differences both comparing to the overall model, and comparing among groups. In general, I see a pattern of non-economic factors being salient predictors of the first transition into a three-generation household for mothers of all three races and ethnicities. However, I find that economic factors are statistically significant only for Hispanic mothers, with those below 200 percent of the FPL being more likely to transition, and those receiving SNAP or TANF being less likely to do so. Finally, when adding the contextual variables to my models, and consistent with the idea that housing costs might have an association with the formation of three-generation households, I see non-Hispanic white mothers who live in census tracts that have individuals who pay a higher proportion of income for rent being more likely to transition to multigenerational households. However, this association is not significant for non-Hispanic black and Hispanic mothers, although the coefficients go in the same direction and have a similar magnitude.

Interestingly, I find that the marginal effect of nativity differs by race and ethnicity, being a negative predictor for non-Hispanic white mothers and a positive one for Hispanic mothers. In this context, the main association that has been described (e.g. Pilkauskas & Cross, 2018) is that nativity as a predictor of three-generation households has recently become more important (comparing 2009 to 2016), and that immigrant mothers are more likely to experience three-generation households, although their results are not shown by race and ethnicity. My results are consistent with the aforementioned authors, but only for non-Hispanic white mothers for whom being U.S. born decreases the likelihood of transitioning into a three-generation household. In contrast, Hispanic mothers who are not immigrants (U.S. born) are more likely to experience such transition, potentially due to their role as hosts to other family members who migrate to the U.S. However, such finding should be further investigated, in order to better understand the

different role that nativity plays on the formation of three-generation households by race and ethnicity.

There might be several explanations for my findings. First, in contrast to Cross (2018) who uses a similar methodology and tests whether factors that motivate co-residence vary by race and ethnicity, I do find differences in correlates across subgroups. In addition to coefficients being different across racial and ethnic groups when compared to the overall model, I also find differences within groups. The biggest difference is for the marginal effect of nativity, which is statistically significant and has a different sign for non-Hispanic white and Hispanic mothers. However, I am not able to completely compare my study to that of Cross because there are several differences in terms of the sample and the measures used. My sample is from the Fragile Families and Child Wellbeing Study, which is a nationally representative birth cohort of children born in large cities between 1998 and 2000, while Cross uses the Panel Study of Income Dynamics (PSID) for the years 1988-2013 to follow a cohort of children, and her sample is nationally representative. Moreover, I exclude from my sample the most disadvantaged individuals who are already in three-generation households at the time of the birth, while she includes those in her analysis. It might be that the inclusion of those in a multigenerational household at birth increases sample size but also might make the associations more homogenous over time and across subgroups. In addition, Cross (2018) does not include measures of parental relationship status, which recent research (Pilkauskas and Cross, 2018) have found to be particularly significant in recent years.

Second, my findings could reflect the idea that racial and ethnic minorities, particularly Hispanics, see family as a private safety net and see three-generation households as a more normative household structure (Kamo, 2000). My results could also reflect that Latino children

enter three-generation households when resources are limited (Mollborn et al. 2012), since I find that those below 200 percent of FPL are more likely to enter three-generation households. Combined with my finding that Latino mothers receiving SNAP and TANF are less likely to enter a three-generation household, this might indicate that those who do access the formal safety net are less likely to use family as a private safety net to receive support. However, additional research in this area is needed as different motivations to enter into three-generation households might have different implications for the well-being of children and adults.

My results are consistent with other studies looking at non-economic and economic factors in the transition to three-generation households (e.g. Pilkauskas, 2012; Pilkauskas & Cross, 2018). My analysis differs in that I am using event history analysis methods to look at children's first entry into three-generation households, given that they are not born into one. Similar to recent studies, I find a particularly strong correlation between family or parental relationship status and the likelihood of transitioning, and contrary to past studies, I do find differences in some of the correlates of three-generation households by race and ethnicity. My findings have the potential to inform future research and further discussions not just about the effects of extended living arrangements on the well-being of adults and children, but also about the role of policies in supporting such households.

Policy and practice implications of my findings have even more relevance as the probability that a child experiences grandparent co-residence in the U.S. continues to rise and will likely continue to do so given the racial and ethnic composition of the U.S., as well as the changing formal safety net in place, particularly for single mothers and their children. With such increases in mind, it is relevant to continue deepening our understanding of such households and their dynamics, as they shed light on the potential consequences for the well-being of children

and adults, as well as the potential for more targeted interventions. First of all, we now know that three-generation families are more likely to happen in children's early life, likely playing an important role in children's early development. Second, I see some differences in the factors related to transitions into three-generation households by race and ethnicity. This finding speaks to the need for a better understanding of how policies might differently impact such arrangements, which are more normative for some racial and ethnic groups than for others.

Third, I see a significant role of family transitions (parental relationship status and new partners) in the formation of three-generation households. In this context, it is particularly relevant to identify how the formal safety net is supporting families going through such transitions, as the use of the private safety net (extended family members) might have potential unintended consequences on the well-being of other family members (e.g. a recently divorced mother benefits from the support of her parents as she moves in, but this transition might place an extra burden in a potentially already disadvantaged household –that of her parents). More importantly, we see children experiencing simultaneously changes in family and household structure, and we do not know the potential implications of such experiences. Finally, there is a need for policies and policy-makers to see the importance of three-generation households as a common arrangement, particularly for racial and ethnic minorities and to think about how policies can better serve these complex households.

VII. Limitations and Future Research

The present study is among the first ones to look at the correlates of first transition into a three-generation household after the birth of a child, adding new information to the understanding of complex households. However, it carries several limitations that open up the opportunity for future research. First, the Fragile Families study does not collect data on the

exact day in which the transition to the three-generation household happened. Therefore, I rely on the indicator at each wave to know if the mother and the child were living with grandparents in the household, and I might be missing information of those mothers who possibly moved in and out of the three-generation household in between waves.

Second, I am only looking at the first transition to a three-generation household after the birth of a child. In future research, it would be relevant to look at the correlates of multiple transitions in and out of multigenerational households (examining re-entry as well as entry), as such experiences are indicators of household instability which might have particular effects for child's well-being. If analyses of re-entry are conducted, it could be particularly useful to differentiate those in my sample who entered, and then exited (who are at risk of re-entry) from those mothers who were already in a three-generation household at the time of the child's birth who exit (and thus are at risk of re-entry). The latter group could be important because these mothers were more disadvantaged than the ones who transitioned later.

Third, I have issues of reverse causality in my models, since many of the potential covariates I am including are measured at the same time as the household structure, and therefore are endogenous to my outcome of interest. Fourth, omitted variable bias might be an issue. I have a wide range of correlates, however, I am not able to include measures of mother's preferences or other indicators that have been identified as significant predictors of three-generation families. For example, I am not able to account for the availability of kin, since only mothers who have their parents or their partner parents alive, relatively close, and potentially with financial capabilities, are the ones who have the ability to form three-generation households.

Despite these limitations, the current study provides relevant information to better

understand the dynamics of three-generation households as well as the diverse correlates that might be associated with their formation. As these correlates might be linked to the resources available in the household and to the potential effects of such arrangements on the well-being of adults and children, this study has direct implications for policies designed to serve these complex households, as well as for future research interested in better understanding the changing contexts of children's early development, particularly when both family and household complexity are present.

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Tables

Table 2.1. Sample characteristics at baseline[1]

Variables at baseline	All T1-T5 n=4,331 Mean or % (SE)	At birth T1 n=1,185 Mean or % (SE)	Ever entered T2-T5 n=555 Mean or % (SE)	Never Entered T1-T5 n=2,591 Mean or % (SE)
Non-economic factors				
Mother's age	27.0	22.8	26.1	28.3
	(0.1)	(0.4)	(0.5)	(0.3)
Mother's race and ethnicity				
Non-Hispanic White	30.1	13.5	25.8	35.4
Non-Hispanic Black	34.2	50.2	30.4	30.5
Hispanic	28.8	31.6	32.6	27.3
Other	7.0	4.8	11.3	6.8
Mother is U.S. Born	72.0	76.2	68.8	71.5
Mother's education at baseline				
Less HS	28.0	42.4	20.8	25.4
HS or Equivalent	31.9	33.2	53.4	27.5
Some College/Tech	19.6	21.1	14.2	20.2
College or Grad	20.6	3.3	11.7	26.9
Mother's relationship with child's father				
Divorce or Separated	-	-	-	-
Married or Cohabiting	76.1	38.2	80.8	85.6
Romantic Relationship	16.6	44.0	11.6	10.1
Friends	3.2	8.8	2.1	1.9
None	3.9	9.0	5.5	2.3
Missing (Mainly for wave 5)	0.0	0	0.0	0.1
Mother has a new partner	-	-	-	-
Number of children in the household	1.1	1.2	1.2	1.1
	(0.1)	(0.1)	(0.2)	(0.1)
Mother's health is excellent or very good	69.9	67.2	67.3	71.2
Mother was living with two parents at age 15	54.6	40.6	43.9	60.5
Baby is mother's first child	40.4	59.3	40.9	35.1
Baby was low weight at birth (less 3% missing, multiple births)	7.3	13.5	4.5	6.2
Child is in good health	89.9	84.1	92.8	90.9
Father in jail at time of survey				
Yes	2.1	4.5	0.5	1.8
Missing(<1%)	0.6	0.6	0.7	0.5
Economic Factors				
Mother received TANF or SNAP past year	22.5	24.8	29.8	20.5
Mother's household income	43300.2	29694.4	29963.3	49497.2
	(796.6)	(1156.7)	(4335.0)	(1386.6)
Poverty categories				
0%-49%	12.5	17.6	12.1	11.2
50%-99%	13.1	17.9	15.4	11.4
100%-199%	25.8	35.3	38.4	20.8
200%-299%	14.6	14.5	17.1	14.2
300%+	34.0	14.8	17.0	42.4
Below 200% poverty line	51.4	70.7	65.9	43.4

Contextual Factors[2]				
Rent as percent of income	27.2	28.2	26.6	27.1
	(0.3)	(0.6)	(0.6)	(0.5)
Median house value	152426.0	102230.8	133297.4	168854.0
	(4705.9)	(5753.8)	(19187.3)	(5308.7)
Percent of household receiving public assistance	0.1	0.1	0.1	0.1
	(0.0)	(0.0)	(0.0)	(0.0)
Percent of families below poverty	0.2	0.2	0.2	0.2
	(0.0)	(0.0)	(0.0)	(0.0)

[1] City sampling weights used to adjust for the oversample of nonmarital births (and the corresponding differences by age, race, and education). Sample numbers are not weighted.
[2] Contextual factors n= 4,178; 1,143; 537; 2,498.

Table 2.2. Life table: Duration to first entry into a three-generation household for the sample overall[1]

Interval		Beg. Total	Entered	Censored	Survival	SE	[95% Conf. Int.]		Hazard	SE	[95% Conf. Int.]	
0	1	3,146	274	616	0.90	0.01	0.89	0.91	0.10	0.01	0.09	0.11
1	3	2,256	122	196	0.85	0.01	0.84	0.87	0.03	0.00	0.02	0.03
3	5	1,938	88	307	0.81	0.01	0.79	0.83	0.03	0.00	0.02	0.03
5	9	1,543	71	1,472	0.74	0.01	0.72	0.76	0.02	0.00	0.02	0.03

[1] Numbers and percentages not weighted.

Table 2.3. Complementary log-log models predicting first entry into a three-generation household

Variables	Model 1 Non-Economic Marginal Eff (SE)	Model 2 Non & Economic Marginal Eff (SE)	Model 3 NH-White Marginal Eff (SE)	Model 4 NH-Black Marginal Eff SE	Model 5 Hispanic Marginal Eff (SE)
Duration					
Child's age (>0 &<2.5 years old as reference)					
>=2.6 & <4 years old	-0.035***	-0.035***	-0.004	-0.043***	-0.036*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
>=4 & <=6	-0.040***	-0.040***	-0.008	-0.049***	-0.048**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
>=7 & <=11	-0.029**	-0.028**	-0.004	-0.026	-0.047*
	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)
Non-economic factors					
Mother's race and ethnicity (NH White as reference)					
Non-Hispanic Black	-0.008	-0.008	-	-	-
	(0.01)	(0.01)	-	-	-
Hispanic	0.023*	0.021*	-	-	-
	(0.01)	(0.01)	-	-	-
Other	0.059**	0.062**	-	-	-
	(0.02)	(0.02)	-	-	-
Mother is U.S. Born	0.003	0.008	-0.041*	0.003	0.029*
	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
Mother's education at baseline (Less than HS as reference)					
HS or Equivalent	0.008	0.008	0.017	0.004	0.005
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Some College/Tech	0.000	0.002	0.009	0.001	0.009
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
College or Grad	-0.015	-0.007	-0.022	0.005	0.014
	(0.01)	(0.01)	(0.02)	(0.02)	(0.04)
Mother's relationship with child's father (Married or cohabiting as reference)					
Divorce or Separated	0.086***	0.083***	0.127***	0.049*	0.052
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
Romantic Relationship	0.059***	0.058***	0.017	0.046**	0.120**
	(0.01)	(0.01)	(0.03)	(0.02)	(0.04)
Friends	0.036***	0.035***	0.072**	0.023*	0.013
	(0.01)	(0.01)	(0.03)	(0.01)	(0.02)
None	0.059***	0.058***	0.053**	0.037**	0.101***
	(0.01)	(0.01)	(0.02)	(0.01)	(0.03)
Missing	0.022	0.019	-	-	0.332
	(0.06)	(0.06)	-	-	(0.27)
Mother has a new partner	-0.060***	-0.058***	-0.055**	-0.052**	-0.081*
	(0.01)	(0.01)	(0.02)	(0.02)	(0.03)
Number of children in the household	0.010***	0.009***	0.006	0.006*	0.017***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Mother's health is excellent or very good	-0.004	-0.003	-0.013	-0.002	0.012
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Mother was living with 2 parents at age 15	0.004	0.004	-0.000	0.001	0.005
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)

Mother's age (>35 years old as reference)					
>=15<=25 years old	0.062***	0.061***	0.070***	0.040**	0.064**
	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)
>25 <=30 years old	0.024***	0.024**	0.017	0.021	0.021
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
>30 <=35 years old	0.007	0.007	0.003	0.009	-0.003
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Baby is mother's first child	0.031***	0.032***	0.013	0.023*	0.055***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Child is in good health	0.004	0.005	-0.022	0.002	0.017
	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)
Father in jail at time of survey (missing as /3)					
Yes	0.007	0.008	-0.020	0.006	0.037
	(0.01)	(0.01)	(0.02)	(0.01)	(0.02)
Missing	-0.012	-0.012	0.028	0.008	-0.128*
	(0.01)	(0.01)	(0.02)	(0.02)	(0.06)
Economic Factors					
Mother received TANF or SNAP past year	-	-0.015*	-0.000	-0.002	-0.039**
	-	(0.01)	(0.01)	(0.01)	(0.01)
Below 200% poverty rate (Income to poverty)	-	0.024**	0.007	0.016	0.054**
	-	(0.01)	(0.01)	(0.01)	(0.02)
Constant	-4.007	-4.249	-3.049	-3.747	-4.576
	(0.282)	(0.296)	(0.722)	(0.538)	(0.475)
Log Likelihood	-1880.065	-1873.869	-358.618	-836.278	-547.006
Period-Person Observations	8,489	8,489	2,291	3,716	2,162

* p<0.05 ** p<0.01 *** p<0.001

Table 2.4. Life table: Duration to first entry into a three-generation household by race and ethnicity[1]

Interval		Beg Total	Entered	Censored	Survival	SE	[95% Conf. Int.]		Hazard	SE	[95% Conf. Int.]	
NH-White												
0	1	770	42	107	0.94	0.01	0.92	0.96	0.06	0.01	0.04	0.08
1	3	621	31	55	0.89	0.01	0.87	0.91	0.03	0.00	0.02	0.04
3	5	535	22	74	0.85	0.01	0.82	0.88	0.02	0.00	0.01	0.03
5	9	439	14	425	0.80	0.02	0.76	0.83	0.02	0.00	0.01	0.02
NH-Black												
0	1	1,363	116	265	0.91	0.01	0.89	0.92	0.10	0.01	0.08	0.12
1	3	982	48	77	0.86	0.01	0.84	0.88	0.03	0.00	0.02	0.03
3	5	857	35	122	0.82	0.01	0.80	0.84	0.02	0.00	0.02	0.03
5	9	700	38	662	0.74	0.02	0.70	0.77	0.03	0.00	0.02	0.04
Hispanic												
0	1	888	101	212	0.87	0.01	0.85	0.89	0.14	0.01	0.11	0.16
1	3	575	40	56	0.81	0.01	0.78	0.83	0.04	0.01	0.03	0.05
3	5	479	25	103	0.76	0.02	0.73	0.79	0.03	0.01	0.02	0.04
5	9	351	16	335	0.69	0.02	0.65	0.73	0.02	0.01	0.01	0.03
Other												
0	1	125	15	32	0.86	0.03	0.78	0.91	0.15	0.04	0.07	0.22
1	3	78	3	8	0.83	0.04	0.74	0.89	0.02	0.01	0.00	0.04
3	5	67	6	8	0.75	0.05	0.65	0.83	0.05	0.02	0.01	0.09
5	9	53	3	50	0.67	0.06	0.54	0.77	0.03	0.02	0.00	0.06

[1] Numbers and percentages not weighted.

Figures

Figure 2.1. Survival curve of the proportion entering a three-generation household after a child's birth for the sample overall

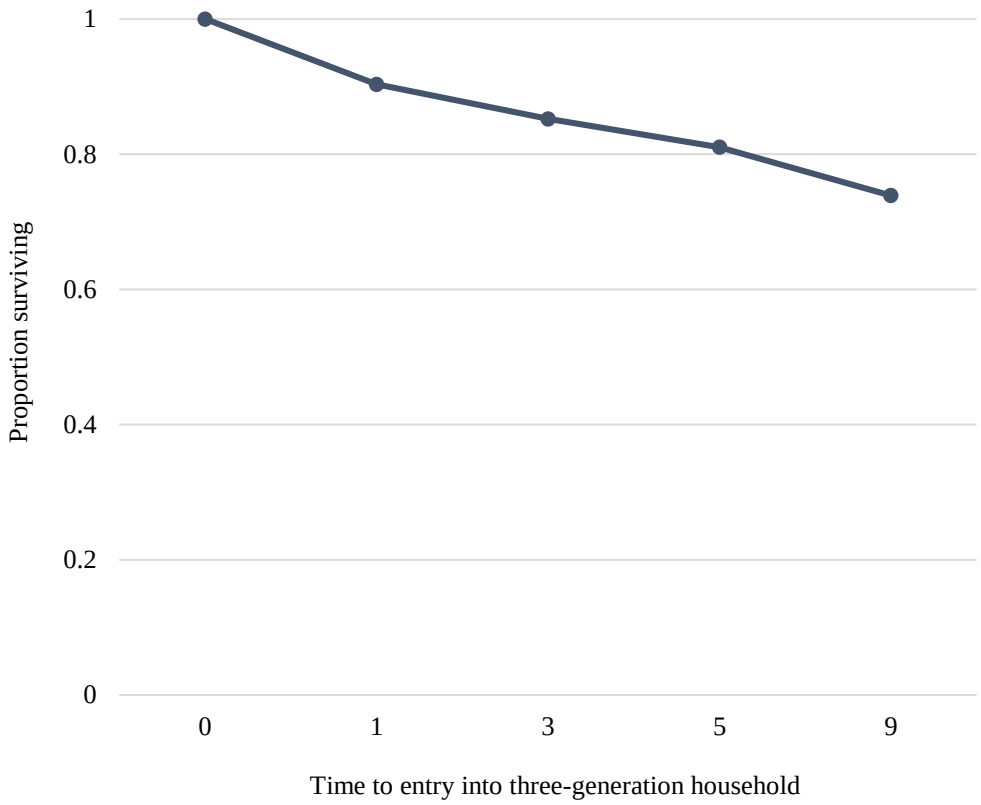
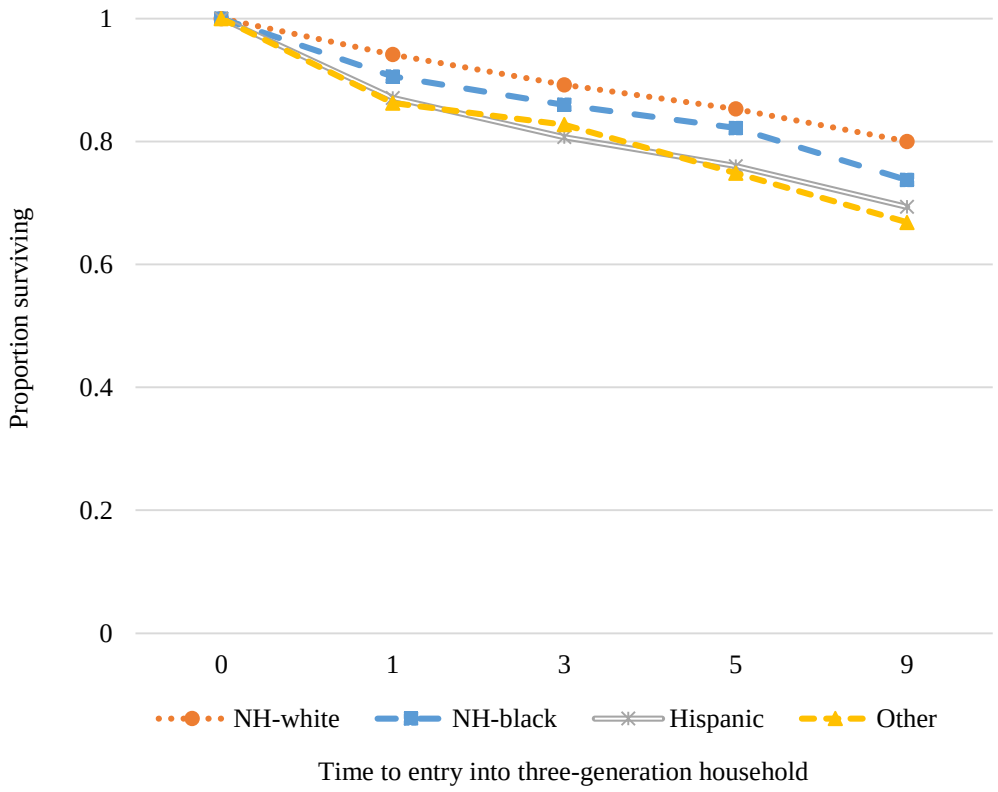


Figure 2.2. Survival curve of the proportion entering a three-generation household after a child's birth by race and ethnicity



Chapter 3. Understanding the Dynamics of Three-Generation Households in the U.S.: First Exit After a Child's Birth

I. Introduction

As families in the U.S. have become more diverse, researchers have paid a greater deal of attention to the dynamics of formation and dissolution of families, as well as to the potential consequences of family structure and transitions on children's well-being. Experiences of family change are more common among disadvantage families (Cherlin, 2009) and they have proved to add stress for the parents and challenges for children's development and well-being (Mitchell et al., 2015). Recently this literature is being expanded to include an examination of the role that household structure plays on children's well-being (in addition to the role of family structure). Particularly, children's living arrangements in the U.S. are now more likely to include other related adults in the household (called extended-family households), making this living arrangement even more relevant to study. Of extended-family households, the most common arrangement is the three-generation household in which the child, one or both of his/her parents and at least one grandparent co-reside (Kreider & Ellis, 2011), with recent estimates indicating that at least 30% of all children will ever experience this living arrangement over the life course (Amorim, Dunifon and Pilkauskas, 2017).

Along with the study of changes in family structure, recent findings indicate that in most cases the presence of grandparents in the household is temporary, and that these living arrangements reflect a great deal of change and instability for children's lives (e.g. Mollborn, Fomby & Dennis, 2012). Moreover, children are more likely to experience three-generation households early in life, which has raised concerns about their potential effect on children's early

development.[1] Therefore, an increasing body of research is paying attention to the dynamics of formation (e.g. Perkins, 2017; Cross, 2018) and dissolution (e.g. Glick & Van Hook, 2011; Perkins, 2017; Pilkauskas & Cross, 2018) of these complex households, as well as to the potential for children to experience both parental but also non-parental changes in the home. The current study aims to contribute to these debates, by paying particular attention to the continuity and duration of three-generation households after a child's birth, and to the potential triggers of their dissolution, for which we know less compared to their formation. A better understanding of these dynamics would shed light not just on the complexity of children's living arrangements early in life, but also on the specific needs of these households as well as on potential ways in which policies might impact their well-being.

II. Literature Review: Three-Generation Households

Three-generation households have been historically portrayed as a coping mechanism for financial downturns, as a safety net for the most disadvantaged, and a common arrangement among racial and ethnic minorities in the U.S. Although this living arrangements is not new, recent studies indicate that the number of children living with a grandparent in the household has increased and will likely continue to do so given changes in the racial and ethnic composition of the U.S. (Cross, 2018), as well as the changing formal safety net in place, particularly for single mothers and their children. As increasing attention has been paid to this arrangement, a better understanding of the motivations and events that might trigger their formation has been achieved. However, very few studies have addressed the continuity of this living arrangement, as well as the additional layers of complexity children might be experiencing. Below, I provide a portrait of

[1] See Dunifon, Ziol-Guest, & Kopko, 2014 for a more detailed discussion about the relevance of grandparent co-residence.

the prevalence of three-generation households, followed by a review of the factors that have been associated with their transitions including both entries and exits of grandparents in and out of the household.

A. Prevalence

As mentioned above, in the past few years extended-family households have been on the rise in the U.S. In examining their increase, Pilkauskas and Cross (2018) find that particularly three-generation households are the ones accounting for such increase. Using the Survey of Income and Program Participation (SIPP), estimates indicate that in 2009 about 11 percent of all children in the U.S. were living with at least one grandparent in the household, most of whom also lived with at least one parent (Kreider and Ellis, 2011). As three-generation households are becoming more common, it is also relevant to highlight their timing and duration. In the context of children's living arrangements, three-generation households are more common during early childhood, and the risk to enter one decreases as a child ages (Cross, 2018).

Also relevant is the fact that this arrangement is usually short-lived. Glick and Van Hook (2011) in a study of extended-family households find that three-generation households were the ones that lasted longer than other extended-family households, but most of them did not remain intact beyond 3 years. Moreover, because they are short-lived and likely to form and dissolve over the life-course, children are likely to experience this living arrangement more than once, and more likely to experience the entry but also the loss of a grandparent as a household member (e.g. Glick and Van Hook, 2011). More importantly, Perkins (2017) find that extended household transitions are more common than partner transitions, particularly among members of racial and ethnic minorities with non-Hispanic black and Hispanic children being more likely to experience the loss of a household member. In short, even though most of the attention has focused on the

transition in parental figures in the household, these findings highlight the importance of examining household changes too, as those are increasingly more common, and likely to add a layer of complexity and instability to children's well-being and early development.

In addition to the overall prevalence and increasing importance of three-generation households in the U.S., it is also relevant to indicate that they are usually more common among members of racial and ethnic minorities, as well as among particular disadvantaged populations (Fry & Passel, 2014; Kamo, 2000). The differential occurrence of these households among racial and ethnic minorities, has also motivated the interest in looking at the differential dynamics of their formation and dissolution, given that a variety of forces might be at play for different groups. In 2009, a low of 9 percent of white children were living with a grandparent in the household, compared to 17 percent of black and 14 percent of Hispanic children (Kreider and Ellis, 2011). In addition to racial and ethnic minorities, three-generation households are also more common among young mothers who have never been married (Trent & Harlan, 1994) and economically disadvantaged individuals (Zonta, 2016), among other populations.

B. Factors associated with household transitions

There is a limited understanding of the continuity and duration of three-generation households in the U.S. However, several factors have been associated with household transitions in general, including those that might trigger the formation of three-generation households and that can be broadly categorized into non-economic and economic factors including some policy influences. In this context, one could argue that those factors that trigger the formation of three-generation households, are the ones that, once stabilized or resolved, might trigger their dissolution. Below, I summarize both the non-economic and economic factors linked to the formation and likely to the dissolution of this complex arrangement, followed by a discussion of

the few studies looking specifically at the dissolution of three-generation households.

1. Non-economic factors

The cluster of non-economic factors that have been associated with household transitions, mainly to entries into three-generation households, include generational needs (Pilkauskas, 2012), cultural norms and preferences, and other demographic characteristics. First, generational needs as Pilkauskas (2012) suggests, include the needs of one or several of the family members involved. For example, experiences of teen pregnancy, including young mothers, or mothers who have their first child, or who have a child with particular needs, are all more likely to share their household with their parents (Baker & Mutchler, 2010; Trent & Harlan, 1994). Other generational needs include the experience of other life events in addition to a pregnancy and the arrival of a child, like changes in one's marital or relationship status, immigration and experiences of incarceration, and other circumstances in which individuals might activate their familial network (Glick & Van Hook, 2011; Baker & Mutchler, 2010; Casper & Bryson, 1998; Cohen & Casper, 2002; Kamo, 2000; Keene & Batson, 2010; Pilkauskas, 2012).

In this context, a couple of studies have started to raise awareness about the potential effect of the increasing instability of families in the U.S. These changes have likely influenced the number of three-generation families (Pilkauskas & Cross, 2018) as family members who experience, for example, divorce and separation, seek out help to cope with their family transition (Perkins, 2017). When thinking of life-course events such as marriage and divorce, Mollborn and colleagues (2012) discuss the potential of a "push-pull" effect between marital and relationship status changes with changes in household structure. In this context, as a new partner enters the life of the individual living in an extended-family household, the likelihood of the new partners leaving the extended-family household increases. In contrast, experiences of dissolution

and the loss of a partner, increase the likelihood of extended-family household formation.

In addition to the needs of the parent, Pilkauskas (2012) argues that the needs of grandparents might also play a role in the decision to co-reside. However, studies of multigenerational households demonstrate that usually the needs of the parent, not the grandparent are the ones that play a more important role. Usually, help in three-generation households has a downward flow, coming from grandparents to parents (Bianchi et al., 2006). Therefore, we might expect the needs of the intermediate generation (the parent) to be a more salient factor in the formation of three-generation households, and likely also in the dissolution of these arrangements.

Cultural norms and preferences have also played a role in the prevalence of three-generation households, particularly among racial and ethnic minorities. In this context, several arguments have been proposed to explain the higher prevalence of three-generation households among racial and ethnic minorities. First, that cultural values like familism, mainly common among Latinos, increase the likelihood that individuals with this heritage will live in multigenerational households. Traditionally, Hispanics-particularly Mexican-Americans- have been considered family rather than individual oriented (Landale, Oropesa, & Bradatan, 2006). This strong tie to family life is usually referred to as familism. These values are manifested through multiple behaviors, including participation in large kin networks with frequent visitation and contact, as well as providing different types of support which are common among some racial and ethnic groups in the U.S. including Hispanics and African Americans (e.g. Martin & Martin, 1980; Vega, 1995). In addition, Cross (2018) argues that racial and ethnic minorities are more likely to activate the private safety net instead of turning to the formal safety net. Cross (2018) argues that economic capacities and family needs are more relevant for minorities, as

when they need help they often look to family members rather than to the formal safety net (e.g. Woodward, et al., 2010).

In addition to the potential preference of racial and ethnic minorities to use the private instead of the formal safety net, there may also be systemic barriers that actually limit their access to formal programs (e.g. Menjivar, 1997). Similarly, members of racial and ethnic minorities, particularly immigrants, may refrain from accessing the public safety net and are sometimes reluctant to seek out services due to fear and mistrust. These beliefs include a fear for information sharing across agencies, targeting, stigma, fear of deportation, and also confusion about their eligibility for safety net programs (e.g. Bitler & Hoynes, 2011; Hacker et al., 2015; Hagan et al., 2003). Following these arguments, I expect Hispanics to take the longest time to transition out of three-generation households, followed by non-Hispanic blacks, and lastly, non-Hispanic whites, given the constraints for racial and ethnic minorities to access the formal safety net but also due to their family oriented values, which are particularly salient for some Hispanic subgroups.[2]

In this context and taking into account the higher prevalence of three-generation households among members of racial and ethnic minorities, it is relevant to note that in contrast to what most of the research in this area implies, some population groups in the U.S. may see complex households as preferable to the "traditional" nuclear family model. In contrast, it would be relevant to consider their historical and normative significance, as well the likelihood for these households to form even in the absence of significant shocks, or as most of the research in this area has argued, as a response to financial shocks.

[2] On the other hand, there could be a different selection process among non-Hispanic white mothers in that those who enter three-generation households might be the most disadvantaged and therefore it might take them the longest to exit.

2. Economic factors

Historically, economic forces have played a role in the formation of different family and household structures including three-generation households. Numerous studies have demonstrated the idea that moving in with family is likely a mechanism to alleviate financial crises, working as a safety net or anti-poverty strategy (Angel & Tienda, 1982; Mykyta & Macartney, 2011; Seltzer, Lau, & Bianchi, 2012; Taylor et al., 2011; Wiemers, 2014). Economic and housing crises also have effects on multigenerational households and motivate co-residence (Keene & Batson, 2010). High local housing costs increase the likelihood of moving into these complex households (Cohen & Casper, 2002). Relatedly, changes in women's participation in the labor force have also had an effect on the increasing reliance on extended kin for childcare in the U.S. (Bianchi et al., 2006).

3. Policy influences

Some research examines the association between public assistance and the formation of extended households, mainly multigenerational households. Some evidence indicates a negative association between public transfers and the use of familial support while other studies find no support for this particular association. One of the primary mechanisms through which income support policies might affect the formation and dissolution of these households is by increasing the financial support being provided while "crowding out" the need to activate the familial safety net (Bianchi et al., 2006). For example, there is evidence that the expansion of Social Security together with the rising affluence of the aged influenced the transition of many older adults to independence (Bianchi et al., 2006; Keene & Batson, 2010; Ruggles, 2007). [3] Although there is

[3] There are other studies looking not just at Social Security but also at other sources of public support for low-income families. Several studies look at welfare reform and how families, including extended households, respond to policies and policy changes including, for example, the reduction of welfare benefits to low-income mothers and

evidence to support these findings, Ruggles (2007) finds that the trend of elderly independence was influenced not only by the increased financial resources coming from Social Security but also by the increasing resources available to the younger generation, including rising income and education. In contrast, a more recent study by Pilkauskas and Cross (2018) find that the rises in Social Security receipt between 1996 and 2009 are associated with the increases in three-generation households, rather than increases in living independently. Perhaps this is because the Social Security benefits provide grandparents a relatively stable source of income, leading the child's parents to move in with them.

Finally, in addition to the literature looking at Social Security, an older literature explored the effect of the Aid to Families with Dependent Children (AFDC) program on family structure and living arrangements including three-generation households. Findings indicate that greater AFDC benefits were associated with a greater likelihood of young mothers moving out of their parental home (Moffitt, 2003), suggesting that these benefits allowed them to live independently. Similarly, Ruggles (1997) finds that AFDC increased benefits lead to more independent living arrangements among unmarried mothers who were therefore more likely to afford living on their own, supporting their transition out of extended living arrangements (Ruggles, 1997).

C. The dissolution of three-generation households

While we have now a better understanding on the diverse motivations that might trigger the formation of three-generation households, we know less about their continuity and about the potential triggers for their dissolution (e.g. Glick & Van Hook, 2011). However, we could hypothesize that as three-generation households are formed mainly to take the place of a safety

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the increased emphasis on work (e.g. Lichter & Jayakody, 2002; Moffitt, 1998; Rosenzweig, 1999).

net, once the need for help has been resolved these households might dissolve. A couple of studies have explored these effects (e.g. Glick and Van Hook, 2011; Mollborn et al., 2012).

First, Mollborn and colleagues (2012) document some of the potential factors associated with the dissolution of extended-family arrangements, which include three-generation households (though their focus is on the prevalence and effects of these arrangements, not their dynamics). First they discuss the prevalence of changes in extended households including multigenerational households, indicating the lack of knowledge about their potential implications for child well-being. They find that about a third of non-Hispanic black children compared to 24 percent of Hispanic children and 13 percent of non-Hispanic white children lived for at least one wave with a grandparent in the household. Next, they show that for non-Hispanic black and Hispanic children non-parental transitions are often more common than parental ones. They also examine factors related to transitions, and find that among Latino children, three-generation households are dissolved when parents achieve some degree of financial stability (Mollborn et al., 2012). In contrast, others have argued that these arrangements end when the additional needs that spark their formation are solved, such as when caring needs (i.e. for children or the elderly) are satisfied (e.g. Blank & Torrecilha, 1998).

Next, Glick and Van Hook (2011) have one of the few studies looking at the continuity of extended living arrangements and the potential triggers for their dissolution. As these arrangements are likely a response to financial crisis, they examine the role of financial resources in the transition out of three-generation households. The authors introduce the functionalist perspective to better understand the dynamics of three-generation households in particular. They argue that three-generation households form to provide assistance to family members, and that they last as long as this help is needed, regardless of the level of inequality of resources in the

household. Inequality in this context is discussed as the presence of individuals with different economic resources in the household, having a person who is the "needy" and a more advantage individual characterized as the "benefactor" (Glick & Van Hook, 2011). In contrast to a functionalist approach is the contractual perspective, according to which other extended living arrangements (i.e. living with friends or other family members different than grandparents) form under an idea of reciprocity and mutual help. In this case, the dissolution of the arrangement might be triggered by a failure to meet this reciprocity. The authors explicitly test these hypotheses, by looking at the inequality of income in the household, confirming the idea that the lack of equality in the household does not predict the dissolution of three-generation households, but it does predict the dissolution of other extended household arrangements. Additional factors associated with changes in extended household composition in Glick's study include life course events such as changes in marital or relationship status. In contrast, the authors find no effect for changes in household poverty or education level. Finally, in regards to the duration of multigenerational households, the authors find that the likelihood of household structure changes decreases over time, and that there are significant differences by race and ethnicity. As such, black, Mexican and Asian householders are less likely to experience a change compared to non-Hispanic whites.

In sum, based on previous research, grandparent co-residence is common, but relatively short-lived. Grandparents are more likely to leave the household early in a child's lifetime, and their duration in the household is predicted to vary by race and ethnicity. More broadly, a variety of non-economic and economic factors might be associated with the dissolution of three-generation households. First, in terms of non-economic factors, we expect some life course events to have an effect on the continuity of this type of arrangement. Changes in marital or

relationship status and the "push-pull" effect described by Mollborn and colleagues (2012), suggests than once a new partner enters, usually the multigenerational household dissolves. Moreover, there are some of these life events that have a long-lasting impact in the likelihood that three-generation households will form as well as how long will they last. In this case, younger mothers are less likely to transition out compared to older mothers, and first-time parents are less likely than those with a previous child. In this context, I expect the particular needs of the parent rather than the grandparent to be more salient and to play a stronger role in the formation and dissolution of three-generation households.

Second, in regards to economic factors, as three-generation households form as a way to cope with financial stress in many cases, one might expect that once this need is satisfied and a certain degree of financial stability is achieved, that these arrangements will dissolve. However, there might be additional constraints in place even if financial stability is achieved, for example, housing market conditions. In addition, I might expect an association between welfare receipt and the likelihood that a mother and her child will end grandparent co-residence, taking welfare receipt not just as an indicator of disadvantage but as a potential source of financial assistance. In this case, as mentioned above, we could expect that receiving help from the formal safety net might "crowd out" (Bianchi et al., 2006) the need for help coming from three-generation households. Moreover, as Cross (2018) suggests, the differential access to the formal safety net by racial and ethnic groups, might also introduce a degree of variation on the extent to which racial and ethnic minorities rely on the formal safety net compared to the majority. When thinking of members of racial and ethnic minorities, it is also relevant to consider whether three-generation households might form as a normative household structure, rather than as a response to a situation in which individuals might activate their familial network, mainly in the face of

financial shocks. In this context, I expect Hispanics to live longer in three-generation households, followed by non-Hispanic blacks and non-Hispanic whites given their family orientation and multiple constraints to access the formal safety net. In relation to the potential correlates of three-generation household dissolution, I expect both economic and non-economic factors to play a role. However, I expect that these factors might have a stronger relationship with the dissolution of three-generation households for non-Hispanic whites than for Hispanic and non-Hispanic blacks, who might be more willing and likely to continue co-residence with grandparents even if the initial need that lead them to live together has been met.

In sum, more than a difference in the role that economic and non-economic factors might play for different racial and ethnic groups, I expect differences in the duration of these living arrangements given cultural norms and preferences but also the differential likelihood that those groups will turn to the formal safety net for support. Therefore, I expect non-Hispanic whites to exit first, followed by other member of racial and ethnic minorities such as non-Hispanic black, and Hispanics.

III. Current Study

Based on prior research and with the intent of filling in the gap in the understanding of the continuity of three-generation households in the U.S., this study seeks to document the potential triggers of dissolution as well as the duration of these arrangements after a child's birth. From this perspective, I am able to document the (in)stability of children living arrangements early in life, taking a longitudinal approach.

My research aims and hypotheses are:

- **Aim 1:** Describe how long mothers and their newborn spend in three-generation households after the child's birth and whether this duration differs by race and ethnicity.

Hypothesis 1: Non-Hispanic white mothers and their children will have the shortest time in three-generation households, followed by non-Hispanic black and Hispanic mothers and their children. I see two main reasons for this hypothesis based on previous research. First, as three-generation households are more of a normative household structure for racial and ethnic minorities, than it is for non-Hispanic white mothers, I expect that even in the face of improved circumstances, Hispanic and non-Hispanic black mothers will be less likely to leave. Second, as initial poverty levels and access to the formal safety net might differ across racial and ethnic groups, I expect the duration of the transition out of a three-generation household to take longer for mothers and children members of racial and ethnic minorities. Particularly, I expect Hispanic mothers to have longer spells than non-Hispanic black mothers, given their stronger family orientation, and difficulties to access the safety net.

- **Aim 2:** Describe the correlates of first exit out of three-generation households after the birth of a child, and how they differ by race and ethnicity, paying particular attention to how non-economic and economic factors operate. **Hypothesis 1:** Exits out of three-generation households are likely to be related to both non-economic and economic factors. **Hypothesis 2:** I expect that the association between exits and non-economic and economic factors would be similar across racial and ethnic groups. However, these factors might have a stronger relationship with the dissolution of three-generation households among non-Hispanic white mothers, as I hypothesize that non-Hispanic black and Hispanic mothers might stay in three-generation households even in the face of improved (economic and non-economic) circumstances.

IV. Data, Sample, Analytical Strategy and Measures

A. Data

The data source for this study is the Fragile Families and Child Wellbeing Study, a nationally-representative birth cohort study of 4,986 children from birth to age 15 born in large U.S. cities between 1998 and 2000. It uses a stratified random sample strategy and it is representative of non-marital births in the U.S. This population-based survey includes information from both parents, mothers and fathers (Reichman, Teitler, & McLanahan, 2001). Information was collected through interviews at the hospital, followed by phone calls for those who were not reached. In addition to the information collected at birth, interviews were conducted when the child was 1, 3, 5, 9, and 15 years old. Additional components included home visits, teacher surveys, and saliva samples. I use city weights to adjust my descriptive statistics for the oversample of nonmarital births in the study, which allows me to generalize my findings to couples living together after an urban birth across the 20 cities in the study. I only use the weights in the descriptive context, as in my regression analysis I include the main variables that the weights account for including mother's marital status at birth, age, race and education.

B. Sample

For this study I use mother's surveys since they had lower attrition rates, and usually the mother was the custodial parent. In addition, I have access to the restricted contextual data of this study, which includes a set of characteristics of the census tract at each wave and it is rarely available in other data sources. I do not examine the age-15 interview because the amount of time between the age-9 and age-15 surveys is relatively long and no information is available in changes in household structure between these time points. To construct my analysis sample, I start with 4,898 mothers who had valid interviews and responses to at least one survey wave, and

I keep the information from the wave in which they were at risk of a first transition out of a three-generation household (excluding the years of data after they have transitioned out during my observation period). I exclude 53 mothers who were not the child's primary caregiver. Of the 4,845 mothers left, I drop 345 with missing values for my variables of interest for a final sample of 4,500 mothers and their focal child, including those living in three-generation households at the time of the child's birth. I then divide the remaining mothers into those not living in a three-generation household when the focal child was born (n=3,358) and my analysis sample, those who were (n=1,142) and are thus at risk of making a transition out of a three-generation household. I arrange these 1,142 mothers into 2,967 person-period observations in which a mother is at risk of first moving out of a three-generation household after the focal child was born. I use this analysis sample for the descriptive section, in order to make full use of the data I have available. Next, for my regression analysis, I further exclude those cases with valid information who were living in a three-generation household at the time of the child's birth, but who dropped out of my sample at year one. Therefore, my regression models include a sample of 1,032 mothers and their focal child, arranged in 1,825 person-period observations.[4]

C. Analytical strategy

I begin the analysis with standard descriptive survival analysis. Life tables show the hazard rate for moving out of a three-generation household at different ages; survival curves show the proportion of children who still live in this family arrangement. In this context I perform a series of tests (log-rank and Wilcoxon) to compare the survival distributions by race and ethnicity. In order to study the influence of a series of independent variables on the duration

[4] Some contextual variables have more missing values than the variables in my main analyses. Therefore, when I include median house value as a sensitivity test in my analysis, the sample drops from 1,825 to 1,776.

and occurrence, or nonoccurrence, of the transition out of three-generation households after the birth of a child, I use event history modeling. Specifically, I create an event-history dataset from the Fragile Families and Child Wellbeing study to estimate complementary log-log models for discrete-time event history analysis. This model is preferred over a traditional Logit to model binary outcomes because the complementary log-log model is ideal when the phenomenon studied is generated by a proportional hazard model in continuous time, as it is the case for my study. Therefore, I can model the length of time spent in three-generation households after the birth of a child, and the transition out of them, while including time constant and time varying covariates (Box-Steffensmeier & Jones, 2004).[5] This way, I model the risk or probability of the event—transition out—occurring as a function of a series of covariates. In this context, since more research has focused on the role that economic factors play in the dissolution of three-generation households, I first examine the role of non-economic factors (Model 1), followed by an examination of how the inclusion of economic factors (Model 2) changes the marginal effect of non-economic factors in the sample overall, followed by a subgroup analysis by race and ethnicity.

Finally, and following the second part of my research aim, I perform a Chow test using the contrast command in Stata to test whether the coefficients across the three racial and ethnic groups of interest are equal.

D. Measures

My main outcome is an indicator of whether the custodial parent and the child lived in a three-generation household (with one or more grandparents) at each wave. In addition, I have a

[5] Event history analysis models are useful to incorporate time constant and time varying variables. However, in contrast to fixed effects, these models do not account for unmeasured time-constant individual characteristics.

duration variable indicating the length of time they live in this living arrangement before they transition out. Based on previous research, my models account for non-economic and economic factors, giving particular relevance to the measures related to the needs and characteristics of the parent. Additional variables include two contextual factors measured at the census tract where the mother and her child lived at each wave of the survey.

1. Duration

I construct a categorical variable indicating the time since the child was born, given that at the time of the birth there were grandparents in the household, to the time that the child and her mother exit this arrangement (>0 & <2.5 years old, >=2.6 & <4 years old, >=4 & <=6 years old, and >=7 & <=11 years old). Before including the age of the child as the duration variable in the model, I perform a series of test to identify whether the process of transition is time dependent, and to identify the ideal specification for the time variable. Although the test revealed that the process was not time dependent (the inclusion of the duration variable did not improve the model fit[6]), given the different length of intervals in which the survey was collected, it is necessary to include year dummies to control for the differential lengths. However, the inclusion of the duration variable does not change the magnitude or direction of any of my estimates. In addition, categories were defined according to the age ranges of the children at each wave when the survey was conducted.

Following prior research and my research interest, I include two main sets of correlates to account for non-economic and economic factors associated with household structure change. In

[6] The lowest AIC and BIC were for the time constant model (2320.4 and 2463.6), while the model with the year dummies had the largest AIC and BIC (2485.3 and 2325.6). When looking at the log-likelihood of all models, the model with the cubic specification of time and the model with year dummies had the best model fits (-1132.0 and -1133.8 compared to -1134.2, -1134.2, and -1134.0 for the time constant, linear, and squared models, respectively). Given the need to control for the different interval lengths, I choose the model with the year dummies.

addition, I include a subgroup analysis by race and ethnicity.

2. Non-economic factors

I include several variables that have been identified as correlates of three-generation households at the mother, father and child level. This set of variables includes time-constant variables: the mother's race and ethnicity (Non-Hispanic white, Non-Hispanic black, Hispanic, Other); mother´s nativity (U.S. born); and mother's education at baseline (Less than High School, High School or Equivalent, Some College or Technical, College or Graduate Studies). It also includes time varying variables including mother's age (15-25, 26-30, 31-35 and 35 years old and older), and indicators of whether the mother's health was excellent or very good, as well as whether the father was in jail at the time of the survey (yes, no, missing), which are all potential proxies for the need of the mother to co-reside with the child's grandparents if additional support is needed. Next, I include variables related to the mother's current and past family experiences. Therefore, I include time varying measures of the mother's relationship status with the child's father[7] (divorced or separated, married or cohabiting, in a romantic relationship, friends or none); an indicator of whether the mother has a new partner; a continuous measure of the number of children in the household; and an indicator of whether the child is in good health at each wave. Finally, I include additional time constant variables such as an indicator of whether the mother was living with two parents at age 15 and an indicator of whether the baby is the mother's first child.

[7] The relationship variable with the child's father at baseline did not include Divorce or Separated category. However, since I am only using the baseline wave to construct my sample and to identify those in three-generation households at the time of the child's birth, it does not affect my estimates. In addition, I include an indicator of missing for this variable given that at year 5 there is a large number of missing values.

3. Economic factors

With this cluster of variables, I aim to measure the mother's changing economic resources and needs over time. It includes an indicator of whether the mother received Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP) in the year prior to the survey; and a dummy variable indicating whether the mother's household was below 100 percent of the federal poverty line (FPL) in the year prior to the survey.[8] Finally, contextual variables include time varying measures of the median house value, rent as percent of income, percent of households receiving public assistance and percent of families below poverty, all measured within the census tract where the mother resides. Because the contextual variables have more missing data, I do not include them in the base model. However, because of the potential importance of the housing market in decisions about living arrangements, I include them in sensitivity tests; the other contextual variables are only used in describing the sample.

V. Results: First Exit Out of Three-Generation Households

A. Descriptive results

Table 3.1 provides mean and percentage distributions for all the variables used in the analysis at the time of the child's birth for the entire sample (n=4,500) (first column). The next two columns show my entire sample divided into two groups: those not born into a three-generation household (n=3,358) and those born into a three-generation household (n=1,142). The last sample is then further divided into two groups in the last two columns, those born into a

[8] This binary variable is constructed based on the ratio of total household income to the official poverty threshold. The thresholds vary by family composition and year. At each wave, poverty thresholds of the year before the interview are used. For more details, see the constructed variables documentation of the Fragile Families and Child Wellbeing study: https://fragilefamilies.princeton.edu/sites/fragilefamilies/files/ff_public_guide_0to5.pdf

three-generation household but who exit during my observation period (n=908), and those born into this household type who do not transition out within the observation period (n=234). All columns in this table use city sampling weights to adjust for the oversample of nonmarital births (and the corresponding differences by age, race, and education). First, looking at the three-generation households at the time of the birth and similar to previous research, I find that three-generation households were more common among more disadvantaged mothers. Multigenerational households were more likely to include younger mothers, members of racial and ethnic minorities (non-Hispanic black, Hispanics and Other), mothers with low educational attainment, not married or cohabiting, mothers for whom the focal child was their first baby, among other mother's characteristics. In addition, they were more likely to include mothers below 100% of FPL.

Next, I compare the characteristics of mothers who were in a three-generation household at the time of the child's birth and exited compared to those who did not exit during my observation period. I do not see a clear pattern of socioeconomic advantage or disadvantage between the two groups at baseline. There are, however, large differences by relationship status and by race and ethnicity. Non-Hispanic black mothers are more likely to exit three-generation households during my observation period, while a larger proportion of non-Hispanic white and Hispanic mothers do not exit. Mothers who ever exited are more likely to be in a romantic relationship with the child's father, while among those who are never out, mothers who are married are overrepresented. A few characteristics suggest that the households that did not transition out during my observation period are somewhat more disadvantaged, but the differences are not large. One of the biggest differences is the prevalence of TANF and SNAP receipt among those who exited a three-generation household compared to those who did not

(27.0 percent vs 16.7 percent). Similarly, those that did not transition out are more likely to be in a census tract with larger median house values than those who did exit ($119,942 vs $96,037).[9]

[TABLE 3.1]

B. Descriptive results: Aim 1

Table 3.2 presents the life table analysis for the overall sample of the proportion of mother-child households that exited a three-generation household after the birth of the child. They indicate the probability at each interval that a child and his or her mother will first exit a three-generation household and the proportion that remain (survive). It also includes the number of censored cases between intervals, accompanied by the hazard of exiting. Overall, children are more likely to experience the first exit at very young ages. The life-table shows that time in a three-generation family is likely to be short. The hazard rate of first exiting a three-generation household is very high between birth and age one (.65) and it declines between age one and three before stabilizing. The majority of households experience a transition out of a three-generation household in the first year and very few remained in beyond age five.

[TABLE 3.2]

Figure 3.1 graphically presents the survival curve, highlighting the proportion of mothers and their children who remain in a three-generation household after the birth of the child. The horizontal axis represents time in years (child's average age by survey wave) and the vertical axis shows the proportion of people "surviving" (not exiting a three-generation household). By looking at Figure 3.1 and Table 3.2, we see that at year one, just slightly over half of the sample

[9] I include the contextual measures of median house value and rent as percent of income within the mother's census tract in some of my models, given that one reason families may live together is the high cost of housing.

had remained in a three-generation household, which decreases to 25 percent by year three, 13 percent by year five, and, by year nine, only 5 percent of mother-child households remained in a three-generation household.

[FIGURE 3.1]

Table 3.3 presents the life table analysis by race and ethnicity of the proportion of mother-child households that exited a three-generation household after the birth of the child. The table includes complete data only for non-Hispanic blacks and Hispanics because there are too few observations to show a full analysis for the other groups (I am showing rows only where the beginning total is 30 or more observations). Non-Hispanic white mothers and their children have the highest hazard rate of exiting three-generation households between birth and year one, followed by non-Hispanic black mothers, Hispanics and those of the "Other" category. For both subgroups with complete data, the hazard of exiting a three-generation household is higher between birth and year one (about 0.6), and it decreases until reaching a low of .2 at year nine.

[TABLE 3.3]

Next, similar to Table 3.3, figure 3.2 presents the survival curve of the proportion of mothers and their children who exit a three-generation household after the birth of the child by race and ethnicity. Only data points where the sample size is 30 or more are shown. At year one, the survival probability is highest for those mothers of "Other" race and ethnicity (slightly over 60 percent), followed by Hispanic mothers and non-Hispanic black mothers (approximately 50 percent), while it is the lowest for non-Hispanic white mothers (slightly over 40 percent). By year nine very few mothers remain in a three-generation household, across both subgroups with complete data. Finally, I compare the survival distributions between the subgroups with a log-

rank and Wilcoxon (Breslow) test for equality of survivor functions and I find no statistically significant differences (p=0.12 and p=0.10). These tests compare estimates of the hazard functions for my groups of interest at each time.

[FIGURE 3.2]

C. Regression results: Aim 2

As mentioned above, I estimate complementary log-log models to identify the correlates of the transition out of a three-generation household for those mothers and children who were co-residing with grandparents in the household at the time of the child's birth. The first two columns in Table 3.4 show the marginal effects of Models 1 and 2 for the sample overall, which are relevant for the first part of my research aim. Model 1 predicts the transition out of a three-generation household including demographic and non-economic factors, while Model 2 adds to Model 1 the cluster of economic variables. First, Model 1 speaks to the correlates of exit out of extended-family households from the demographic and non-economic perspective. This model suggests that U.S. born mothers are more likely to exit these households. Mothers in any other marital or relationship status than married or cohabiting are less likely to exit a three-generation household after the birth of the child. Similarly, mothers with a new partner are more likely to exit a previously formed three-generation household. Moreover, other indicators of potential need are significant predictors of the continuity of this living arrangement. In this context, the number of children in the household is negatively related to the transition out. In addition, if the focal child is a mother's first child, the likelihood to transition out of a three-generation household decreases. Finally, mother's age is marginally significant with mothers between 15 and 30 years old being more likely to transition out than mothers who are 35 years old or older. Even though this finding is somewhat surprising since previous research has indicated that

younger mothers are more likely to enter (and potentially remain) in three generation households (e.g. Trent & Harlan, 1994), my finding might be related to the selection process of older mothers into these households. Therefore, older mothers who are living with the child's grandparent(s) at the time of the child's birth might be experiencing additional needs compared to say, young mothers who experience a teen pregnancy. In turn, these circumstances might delay their transition out (e.g. health issues, particular child care needs, care of an adult parent, etc.).

[TABLE 3.4]

Next, adding the economic factors to Model 1 changes the significance of a few non-economic factors presented above, while at least two of the three economic factors are statistically significant. First, the associations that changed in comparison to the original model include that of nativity, which becomes non-significant after adding the economic variables. Moreover, mother's age remains significant but only for mothers between 26 and 30 years old. The economic factors in model 2 suggest that mothers receiving TANF or SNAP in the year prior to the survey as well as mothers below 100 percent of FPL are more likely to exit three-generation households, although this association is only marginally significant.[10] The finding related to TANF or SNAP receipt is consistent with prior research if we consider the receipt of these benefits as a support to the mother's household that might allow her transition to live independently. However, seeing mothers below 100 percent of FPL exiting three-generation households is surprising as I expected the transition out to happen mostly in the face of improved

[10] As a sensitivity tests I run two additional models, both including contextual measures related to housing costs within the census tract. One test adds the median house value in the tract and a second one adds a measure of rent as percent of income in the tract. These coefficients were not statistically significant and they did not change the significance of the other coefficients. Given the large number of missing values for this variable, results are not shown in the main table.

economic circumstances, if that was one of the reasons that led them to co-reside with grandparents. However, if I take this result together with the association between family formation and the dissolution of three-generation households, I see mothers exiting three-generation households when their relationship status is married or cohabiting or when they have a new partner, even if their economic circumstances have not improved yet. Potentially, they do experience increases in their economic well-being once the transition to the new relationship is consolidated.

Racial differences in first three-generation household experience after the birth of a child. The last three columns of Table 3.4 show the marginal effects of the models including both economic and non-economic factors predicting the first exit out of three-generation households by race and ethnicity (I do not show those of "Other" race and ethnicity separately since there are relatively few). First, in terms of the non-economic factors that were significant in the overall model, most of them retain their significance across the three groups of mothers (non-Hispanic white, non-Hispanic black and Hispanics), with few exceptions. Mothers whose marital or relationship status is different than married or cohabiting are less likely to exit a three-generation household, with the exception of non-Hispanic white mothers for whom being divorced or separated or not having a relationship with the child's father is not significant. Similarly, mothers from these three groups are more likely to exit a three-generation household if they have a new partner, and mothers with more children in the household are less likely to experience this transition. In contrast, whether this baby is the mother's first child is not significant for Hispanic mothers. A couple of additional variables are statistically significant for particular groups in comparison to the overall model. For example, whether the child's father was in jail at the time of the survey predicts an increased likelihood of non-Hispanic white mothers exiting three-

generation households, although, this association is only marginally significant. There is little research relevant to this finding; however, if non-Hispanic white fathers are likely to have shorter incarceration spells than racial and ethnic minorities, non-Hispanic white fathers could be more likely to have a quicker return to the mother's household, which could then lead her to exit the three-generation arrangement.

Finally, in terms of the economic factors that were significant in my main model, I do not see consistent correlates across racial and ethnic groups. First, the positive association between receiving TANF or SNAP and the likelihood of exiting three-generation households is only significant for non-Hispanic black and Hispanic mothers. However, the marginal effect for non-Hispanic white mothers goes in the same direction and has a similar size as it does for non-Hispanic black and Hispanic mothers, and I might not be able to detect this association just due to the small sample size for white mothers (n=235). Second, the positive association between being below 100 of FPL and the likelihood of exiting a three-generation household remains significant only for non-Hispanic white mothers.[11] So far, I have only compared the estimates across groups with the main model and looking at whether the associations are significant within each racial and ethnic group. I move beyond this scenario by performing a Chow test to assess whether the coefficients estimated for one group are equal to the coefficients estimated for the others. The results of the test indicate that the only significant difference in the predictors of exit out of a three-generation household after the birth of a child is whether the focal child is mother's first baby (p=0.03).

[11] Similar to the sensitivity tests including contextual measures for the sample overall, none of the models by subgroup including contextual variables (median house value or rent as percent of income within the census tract) were statistically significant.

VI. Summary and Discussion

Using longitudinal data from the Fragile Families Study, the present study aims to identify some of the factors associated with the continuity and dissolution of three-generation households after the birth of child given that at the time of the birth they are co-residing with grandparents in the household. I examined the duration as well as the factors associated with the transition out of a three-generation households for the first time after a child's birth and how those factors might vary by race and ethnicity among a sample of disadvantaged mothers.

As children's living arrangements are now more likely than before to include grandparents in the household, the study of these complex households and the potential consequences for child well-being take even more relevance. An increasing number of studies have started to look at the dynamics of these arrangements, by looking at the triggers of their formation (e.g. Glick & Van Hook, 2011; Perkins, 2017; Cross, 2018), as well as at some of the effects on child well-being (e.g. Mollborn et al., 2012). However, less is known about the continuity of three-generation households and to the potential triggers of their dissolution. The current study aims to fill in this gap. First, by looking at the characteristics of those in and out of three-generation households at the time of the child's birth, I see a consistent pattern of disadvantage for those mothers living in a multigenerational household at the time of the child's birth, which is consistent with prior research (e.g. Zonta, 2016). These households were more likely to include young mothers, members of racial and ethnic minorities, and not married or cohabiting mothers with low educational attainment, among other characteristics.

Next, when comparing those who ever exit a three-generation household during my observation period compared to those who do not, I see some patterns in terms of non-economic and economic characteristics, but differences are not large and point towards those who move

out being somewhat more disadvantaged than the ones who stayed, although differences are not conclusive. For example, those who exit are more likely to have had only one child, to have slightly lower household income, more likely to be below 100% of FPL, and to receive SNAP or TANF. In contrast, they seem more advantaged in that mothers who exit are more likely to have an excellent or very good health, and less likely to have a low birth weight child. A relevant economic factor in addition to welfare receipt is a measure of housing costs; those in neighborhoods with lower median house values are more likely to leave three-generation households. In addition, a significant difference that points toward mothers exiting three-generation households as being more advantaged than those who stayed, is the mother's relationship status with the focal child's father. Mothers who transitioned out are more likely to be married or cohabiting, while those who stayed are more likely to be divorced or separated.

In the descriptive context and looking at my first aim, examining the duration of three-generation households after a child's birth and how it differs by race and ethnicity, there is a clear pattern of this arrangement being more common during early childhood. The hazard of transitioning out of a three-generation household is quite high between a child's birth and year one, and it decreases as the child ages. These findings are consistent with prior research documenting the short duration of these arrangements as well as the likelihood of children experiencing the loss of a grandparent as a household member early in life (Glick and Van Hook, 2011). Finally, in terms of the differences by race and ethnicity, I hypothesized that the duration of the transition out of a three-generation household might take longer for mothers and children members of racial and ethnic minorities. My descriptive findings do demonstrate, consistent with prior research (e.g. Mollborn et al., 2012; Perkins, 2017), a differential probability of exiting three-generation households by race and ethnicity, with non-Hispanic mothers being more likely

to exit first followed by non-Hispanic black and Hispanics. However, after performing a formal test to compare the survival curves of the different racial and ethnic groups, these differences are not statistically significant.

Next, moving on to my second aim, describing the correlates of exit out of three-generation households and how these correlates might differ by race and ethnicity, I hypothesized that exits out of three-generation households are likely to be related to both non-economic and economic factors. My findings indicate that mother's characteristics, life-course events and the needs of the parent have a strong association with the dissolution of three-generation households. Interestingly, younger mothers are more likely to experience this household transition compared to older mothers, which is contrary to what previous research suggests in that younger mothers are more likely to enter and remain in three-generation households (e.g. Trent & Harlan, 1994). However, this association might be explained by the fact that older mothers who were already living in a three-generation household at the time of the birth and for whom this was not a teen pregnancy, might have additional needs that delay their transition out. Next, in terms of some particular needs of the parent, those mothers for whom the focal child was their first child, are less likely to exit multigenerational households, similarly, more children in the household predicts a lower likelihood of transitioning out.

Life-course events take particular relevance in the transition out, including events such as changes in marital and relationship status. This finding is consistent with Perkins's research (2017), which also highlights the likelihood for children to experience both parental and non-parental changes early in life. In addition, with this finding I am able to document the "push-pull" effect described by Mollborn and colleagues (2012) in which the presence of a new partner triggers the dissolution of three-generation households and other extended living arrangements.

Lastly, a somewhat puzzling result is the association of father's incarceration at the time of the survey and the increased likelihood of mothers exiting three-generation households, which may be related to the shorter incarceration spells of non-Hispanic white fathers compared to fathers of racial and ethnic minorities. However, this finding should be further explored in future research.

Finally, in regards to economic factors, mothers who received TANF or SNAP in the year prior to the survey are more likely to exit three-generation households. I also find a marginally significant association between exits and poverty level, with mothers below 100% of FPL being more likely to transition out. In terms of the receipt of welfare, my findings relate to the "crowding out" effect of the formal safety net over the private safety net (Bianchi et al., 2006). In this context, we could interpret the receipt of TANF or SNAP not just as a sign of disadvantage but also as a form of support being provided by the formal safety net rather than by extended family members, similar to what previous research indicated about the effect of increased AFDC benefits (Moffitt, 2003). Finally, the association between poverty and the dissolution of three-generation households is somewhat puzzling, given that I had expected three-generation households to dissolve in the context of improved economic circumstances. Mothers below 100 of FPL are more likely to transition out, although this association is only marginally significant. Similar to my findings, Glick and Van Hook (2011) who also examine exits and changes in household structure, do not find a significant association between the measure of income to poverty ratio and extended-household composition change. My findings support my hypothesis that both non-economic and economic factors play a role in the likelihood that a mother and her child will end grandparent co-residence.

With my second hypothesis, I proposed that the association between exits and non-economic and economic factors would be similar across racial and ethnic groups, with a

potentially stronger relationship with the dissolution of three-generation households among non-Hispanic white mothers. I do not find large differences in the association between non-economic factors and the dissolution of three-generation households across racial and ethnic groups, with the exception of mother's nativity. Nativity matters to non-Hispanic white mothers; those who are born in the U.S. are statistically significantly more likely to exit three-generation households, which is consistent with previous research highlighting the role of nativity in the prevalence and duration of three-generation households (e.g. Pilkauskas & Cross, 2018). However, this association was not significant for Hispanic mothers, or for non-Hispanic black mothers.

I do see some differences when looking at the economic factors. The association between TANF or SNAP receipt is only significant for non-Hispanic black and Hispanic mothers, although the lack of significance for non-Hispanic white mothers might be due to the small sample size in my analysis. In contrast, the marginal effect of the income to poverty ratio measure is only significant for non-Hispanic white mothers. However, when I do a formal test for the differences across groups, the only statistically significant difference in the factors correlated to the transition out of three-generation households by race and ethnicity is for mothers for whom the focal child is their first baby.

Although my findings are somewhat puzzling, particularly when looking at the economic factors, there are a few relevant highlights. First, there is evidence that life course events such as changes in marital and relationship status are important correlates of the transition out of three-households. As such, I am able to add to the debate about the importance of looking at both family and household structure changes when thinking about the potential effects on children's early development. As the majority of studies focus on parental changes, my finding that children who are born to three-generation households are likely to experience the loss of a

grandparent as a household member early in life, shed light on the importance of also considering the potential impact of household changes, particularly among children from racial and ethnic minorities. Second, in regards to economic factors and contrary to my hypothesis, families are not exiting three-generation households when financial resources (measured here as income to poverty level) increase, and quite the opposite, I see that mothers who are below 100 of FPL are more likely to exit these arrangements. However, I am not able to explore this further to look at mother's economic well-being after they exit this arrangement, but it would be relevant to examine the trajectory of these families. Moreover, my measure of welfare receipt is significant, and it can be both taken as a measure of disadvantage but also as an indicator of the family receiving support from the formal safety net. It would be relevant to explore whether mothers give preference to one over the other, or whether certain eligibility criteria are limiting the possibility for mothers to continue under these arrangements, even if it is a normative arrangement, as they might be for some racial and ethnic groups.

Finally, implications of my findings relate to the idea of how to think about children's experiences of family but also household complexity early in life and to the potential implications for their early development. As shown above, mothers and children in my sample are not leaving three-generation households because of improved economic well-being, although this might be the case for mothers who exit when they are with a new partner. We see mother-child households being more likely to exit co-residence with grandparents following marital and relationship status changes. In this context, the study of mother's and children's trajectories take even more relevance, as these exits to a newly formed family, might mean further transitions later in life if we take into account the increasing instability of families in the U.S. (Carlson & Meyer, 2014). Therefore, a better understanding of the triggers of three-generation households'

dissolution, has the potential to help us characterize particularly vulnerable groups of children, and to gain knowledge about the potential ways in which this instability is associated with their well-being as well as the ways in which policies might intervene to support these complex arrangements.

VII. Limitations and Future Research

The present study is among the first ones to look at the duration and correlates of exit out of a three-generation household after the birth of a child, adding new information to the understanding of complex extended households. However, it carries several limitations that open up the opportunity for future research. First, the Fragile Families study does not collect data on the exact day in which the transition out of a the three-generation family household happened. Therefore, I rely on the indicator at each wave to know if the mother and the child were living with grandparents in the household, and I might be missing information of those mothers who possibly moved in and out of the three-generation household in between waves.

Second, I am only looking at the first transition out of a three-generation household after the birth of a child. In future research, it would be relevant to look at the correlates of multiple transitions in and out of multigenerational households (examining exits, re-entries and subsequent exits), as these experiences are indicators of household instability which might have particular effects for child's well-being. Third, I have issues of reverse causality in my models, since many of the potential covariates I am including are measured at the same time as the household structure, and therefore are endogenous to my outcome of interest.

Fourth, omitted variable bias might be an issue. I have a wide range of correlates, however, I am not able to include measures of mother's preferences or other indicators that have been identified as significant predictors of exits out of three-generation families. For example, I

am not able to account for the availability of kin, since only mothers who have their parents or their partner parents alive, relatively close, and potentially with financial capabilities, are the ones who have the ability to form three-generation households. Moreover, I am not able to account for other potential needs in the household that might trigger or prevent the dissolution of three-generation households including the needs of the grandparents.

Despite these limitations, this study is one of the few to examine the duration of three-generation households after the birth of a child and the correlates of their dissolution, taking a fully longitudinal approach. Findings underscore the need to examine both parental but also non-parental changes in children's homes as these transitions are increasingly more common and likely to happen early in a child's life. Moreover, a better understanding of the factors that lead to the dissolution of these complex households, provides new information about the role of particular policies, economic factors and family transitions, which has the potential to inform the mechanisms by which this household structure might be associated with children's well-being. Moreover, this study examines racial and ethnic differences in the duration and correlates of dissolution for three-generation households, which in turn helps us get a better sense of the differential role that these households play for each group. Taken together the results of this study add to the knowledge of the dynamics of three-generation households, the complexity of children's living arrangements early in life, and they have the potential to inform future research in several areas. For example, future research could examine the role of these arrangements and their (in)stability on children's well-being and the role that policies might play in promoting or not the dissolution of these households, including the implications of policies on children's well-being.

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Tables

Table 3.1. Sample characteristics at baseline[1]

Variables at baseline	All T1-T5 n=4,500	Not in three gen at birth T1 n=3,358	In three gen at birth T1 n=1,142	Ever out T2-T5 n=908	Never out T2-T5 n=234(Censored)
	Mean or % SE	Mean or % (SE)	Mean or % SE	Mean or % SE	Mean or % SE
Demographic and non-economic factors					
Mother's age	27.0 (0.1)	27.9 (0.2)	22.8 (0.4)	22.0 (0.7)	24.8 (1.7)
Mother's race and ethnicity					
Non-Hispanic White	30.0	33.5	13.6	12.6	16.2
Non-Hispanic Black	34.7	31.4	49.8	54.7	37.1
Hispanic	28.6	27.9	32.0	29.1	39.4
Other	6.8	7.2	4.6	3.6	7.3
Mother is U.S. Born	72.4	71.6	76.0	80.6	64.0
Mother's education at baseline					
Less HS	28.4	25.5	42.1	40.2	47.0
HS or Equivalent	32.0	31.7	33.3	36.3	25.6
Some College/Tech	19.5	19.1	21.3	20.6	23.0
College or Grad	20.1	23.7	3.3	2.9	4.4
Mother's relationship with child's father					
Divorce or Separated	-	-	-		-
Married or Cohabiting	76.0	84.0	38.4	35.5	46.1
Romantic Relationship	16.9	11.1	43.7	47.2	34.7
Friends	3.2	2.0	8.8	8.4	9.9
None	3.9	2.8	9.1	9.0	9.4
Missing (Mainly for wave 5)	0.0	0.04	0.0	0.0	0.0
Number of children in the household	1.1 (0.1)	1.1 (0.1)	1.2 (0.1)	1.2 (0.1)	1.2 (0.2)
Mother's health is excellent or very good	69.4	69.8	67.5	68.1	66.1
Mother was living with two parents at age 15	54.4	57.3	40.9	40.3	42.4
Baby is mother's first child	39.5	35.1	59.7	60.2	58.5
Baby was low weight at birth (less 3% missing, multiple births)	7.4	6.2	13.4	12.1	16.8
Child is in good health	89.8	91.0	84.2	84.9	82.6
Father in jail at time of survey					
Yes	2.1	1.6	4.5	4.3	5.1
Missing(<1%)	0.6	0.6	0.4	0.5	0.4
Economic Factors					
Mother received TANF or SNAP past year	23.0	22.7	24.1	27.0	16.7
Mother's household income	42614.6 (812.5)	45379.4 (859.6)	29787.9 (1226.8)	29704.9 (1551.4)	30002.4 (3407.8)
Poverty categories					
0%-49%	13.1	12.2	17.4	16.7	19.2
50%-99%	13.5	12.6	17.8	19.0	14.7
100%-199%	25.3	23.1	35.2	34.7	36.7
200%-299%	14.6	14.6	14.6	14.8	14.1

300%+	33.6	37.6	15.0	14.8	15.3
Below 100% poverty line	26.6	24.7	35.2	35.7	34.0
Contextual Factors[2]					
Rent as percent of income	27.2 (0.3)	27.1 (0.4)	28.2 (0.6)	28.2 (0.7)	28.3 (0.4)
Median house value	151917.6 (4271.0)	161827.2 (5426.7)	102636.7 (5836.8)	96036.6 (8269.3)	119942.0 (9676.0)
Percent of household receiving public assistance	0.1 (0.0)	0.1 (0.0)	0.1 (0.0)	0.1 (0.0)	0.1 (0.0)
Percent of families below poverty	0.2 (0.0)	0.2 (0.0)	0.2 (0.0)	0.2 (0.0)	0.2 (0.0)

[1] City sampling weights used to adjust for the oversample of nonmarital births (and the corresponding differences by age, race, and education). Sample numbers are not weighted.
[2] Contextual factors n= 4,341; 3,238; 1,103; 880; 223.

Table 3.2. Life table: Duration to first exit out of three-generation household for the sample overall[1]

Interval		Beg. Total	Exit	Censored	Survival	SE	[95% Conf. Int.]		Hazard	SE	[95% Conf. Int.]	
0	1	1,142	522	147	0.51	0.02	0.48	0.54	0.65	0.03	0.59	0.70
1	3	473	235	16	0.25	0.01	0.23	0.28	0.34	0.02	0.30	0.38
3	5	222	104	20	0.13	0.01	0.11	0.15	0.33	0.03	0.27	0.38
5	9	98	47	51	0.05	0.01	0.03	0.06	0.24	0.03	0.18	0.30

[1] Numbers and percentages not weighted.

Table 3.3. Life table: Duration to first exit out of three-generation household by race and ethnicity [1]

Interval		Beg Total	Exit	Censored	Survival	SE	[95% Conf. Int.]		Hazard	SE	[95% Conf. Int.]	
NH-black												
0	1	647	298	84	0.51	0.02	0.47	0.55	0.65	0.04	0.58	0.72
1	3	265	142	5	0.23	0.02	0.20	0.27	0.37	0.03	0.31	0.43
3	5	118	55	13	0.12	0.01	0.09	0.15	0.33	0.04	0.25	0.41
5	9	50	26	24	0.04	0.01	0.02	0.06	0.26	0.04	0.17	0.35
Hispanic												
0	1	296	129	37	0.54	0.03	0.47	0.59	0.61	0.05	0.51	0.71
1	3	130	64	3	0.27	0.03	0.22	0.32	0.33	0.04	0.26	0.41
3	5	63	26	3	0.16	0.02	0.11	0.20	0.27	0.05	0.17	0.37
5	9	34	15	19	0.06	0.02	0.03	0.10	0.22	0.05	0.12	0.32
NH-white												
0	1	153	79	18	0.45	0.04	0.37	0.53	0.76	0.08	0.60	0.91
1	3	56	23	4	0.26	0.04	0.19	0.34	0.27	0.05	0.16	0.38
Other												
0	1	46	16	8	0.62	0.07	0.46	0.75	0.47	0.11	0.25	0.69

[1] Numbers and percentages not weighted.

Table 3.4 Complementary log-log models predicting first exit out of three-generation household

Variables	Model 1 Non-Economic Marginal Eff (SE)	Model 2 Non & Economic Marginal Eff (SE)	Model 3 NH-White Marginal Eff (SE)	Model 4 NH-Black Marginal Eff (SE)	Model 5 Hispanic Marginal Eff (SE)
Duration					
Child's age (>0 &<2.5 years old as reference)					
>=2.6 & <4 years old	-0.000	0.000	-0.081	0.031	0.037
	(0.03)	(0.03)	(0.07)	(0.03)	(0.05)
>=4 & <=6	-0.026	-0.027	0.021	-0.039	-0.030
	(0.04)	(0.04)	(0.10)	(0.05)	(0.07)
>=7 & <=11	-0.034	-0.032	0.042	-0.039	-0.029
	(0.06)	(0.06)	(0.17)	(0.08)	(0.10)
Non-economic factors					
Mother's age (35 and over as reference)					
15-25	0.117*	0.112	0.273*	0.034	0.097
	(0.06)	(0.06)	(0.12)	(0.09)	(0.10)
26-30	0.138*	0.133*	0.217	0.056	0.124
	(0.06)	(0.06)	(0.12)	(0.09)	(0.11)
31-35	0.131*	0.126	0.051	0.149	0.075
	(0.07)	(0.07)	(0.13)	(0.10)	(0.12)
Mother's race and ethnicity (NH White as reference)					
Non-Hispanic Black	0.032	0.000	-	-	-
	(0.03)	(0.04)	-	-	-
Hispanic	-0.023	-0.049	-	-	-
	(0.04)	(0.04)	-	-	-
Other	-0.067	-0.089	-	-	-
	(0.06)	(0.06)	-	-	-
Mother is U.S. Born	0.088*	0.071	0.380*	0.076	0.038
	(0.04)	(0.04)	(0.17)	(0.08)	(0.05)
Mother's education at baseline (Less than HS as reference)					
HS or Equivalent	0.010	0.028	-0.010	0.069	-0.062
	(0.03)	(0.03)	(0.07)	(0.04)	(0.05)
Some College/Tech	0.002	0.037	-0.000	0.060	-0.008
	(0.03)	(0.03)	(0.08)	(0.04)	(0.06)
College or Grad	-0.018	0.035	0.182	0.136	-0.081
	(0.07)	(0.07)	(0.13)	(0.10)	(0.19)
Mother's relationship with child's father (Married or cohabiting as reference)					
Divorce or Separated	-0.325***	-0.322***	-0.253	-0.335***	-0.327***
	(0.05)	(0.05)	(0.13)	(0.07)	(0.09)
Romantic Relationship	-0.327***	-0.330***	-0.359***	-0.377***	-0.246**
	(0.04)	(0.04)	(0.11)	(0.05)	(0.09)
Friends	-0.204***	-0.209***	-0.359***	-0.223***	-0.229***
	(0.03)	(0.03)	(0.09)	(0.04)	(0.06)
None	-0.254***	-0.260***	-0.111	-0.295***	-0.315***
	(0.03)	(0.03)	(0.09)	(0.04)	(0.05)
Missing	-0.061	-0.114	-	-0.136	-
	(0.25)	(0.24)	-	(0.26)	-
Mother has a new partner	0.332***	0.329***	0.297**	0.288***	0.476***
	(0.03)	(0.03)	(0.09)	(0.04)	(0.06)
Number of children in the household	-0.060***	-0.063***	-0.093*	-0.063***	-0.061**

	(0.01)	(0.01)	(0.04)	(0.01)	(0.02)
Mother's health is excellent or very good	0.010	0.016	0.125	0.001	0.026
	(0.02)	(0.02)	(0.07)	(0.03)	(0.04)
Mother was living with 2 parents at age 15	-0.041	-0.041	-0.036	-0.061	-0.032
	(0.02)	(0.02)	(0.06)	(0.03)	(0.04)
Baby is mother's first child	-0.109***	-0.098***	-0.290***	-0.076*	-0.104*
	(0.03)	(0.03)	(0.08)	(0.03)	(0.05)
Child is in good health	-0.050	-0.051	-0.119	-0.042	-0.043
	(0.03)	(0.03)	(0.10)	(0.04)	(0.06)
Father in jail at time of survey (No as reference)					
Yes	0.015	-0.002	0.394*	0.004	-0.011
	(0.04)	(0.04)	(0.18)	(0.05)	(0.10)
Missing	0.050	0.040	-0.003	0.034	0.062
	(0.05)	(0.05)	(0.11)	(0.07)	(0.10)
Economic Factors					
Mother received TANF or SNAP past year	-	0.079**	0.074	0.069*	0.094*
	-	(0.02)	(0.07)	(0.03)	(0.05)
Below 100% poverty	-	0.052*	0.167*	0.061	-0.006
	-	(0.02)	(0.07)	(0.03)	(0.05)
Constant	0.125	0.029	-0.945	0.217	0.132
	(0.281)	(0.285)	(0.922)	(0.451)	(0.499)
Log Likelihood	-1143.974	-1133.780	-129.369	-625.478	-300.530
Period-Person Observations	1,825	1,825	235	1,013	500

* p<0.05 ** p<0.01 *** p<0.001

Figures

Figure 3.1. Survival curve of the proportion exiting a three-generation household after a child's birth for the sample overall

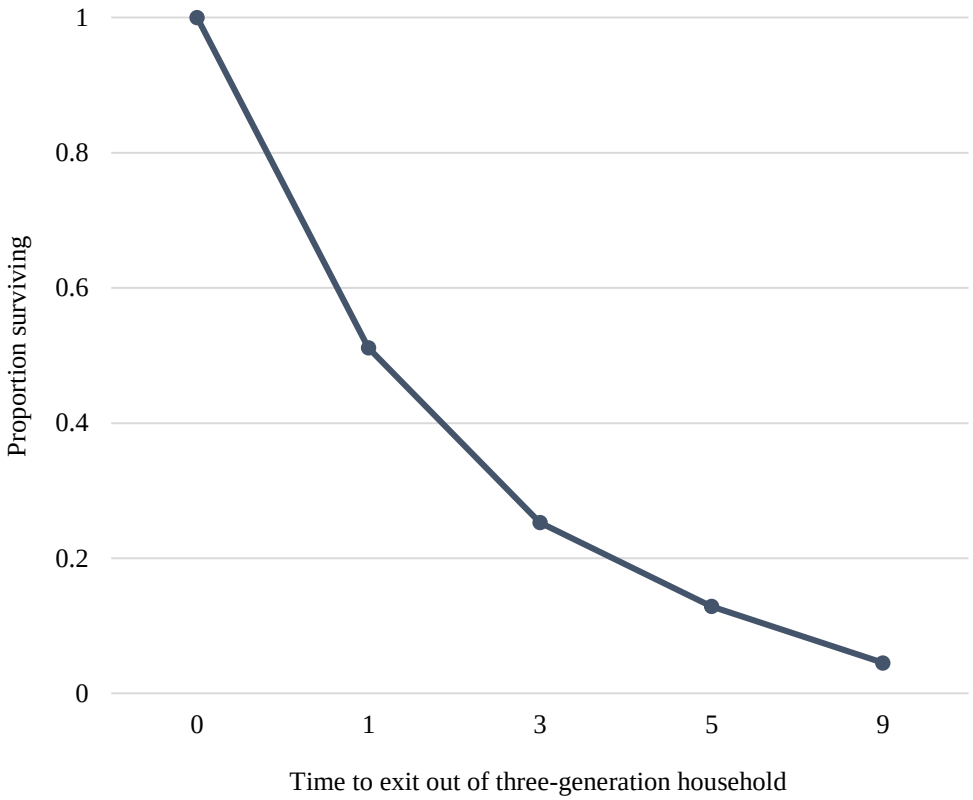
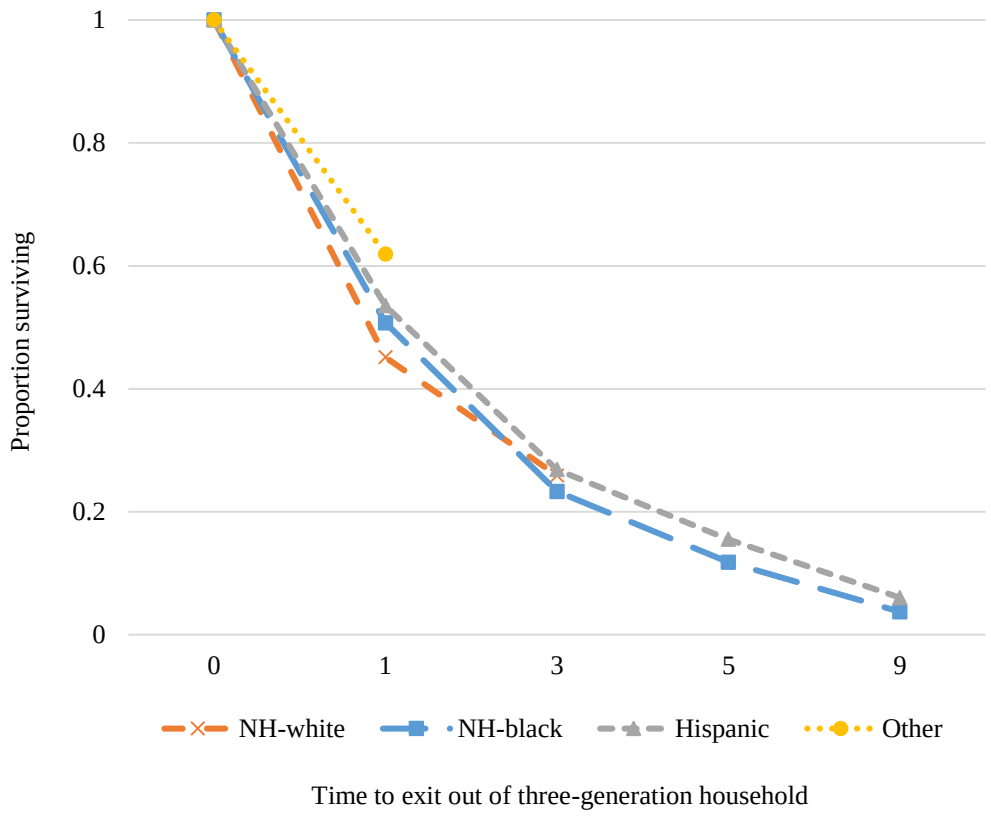


Figure 3.2 Survival curve of the proportion exiting a three-generation household after a child's birth by race and ethnicity



Chapter 4. The Economic Consequences of Divorce and Separation for Women in Colombia Compared to Six OECD Countries

I. Introduction

Broad agreement exists about the negative economic consequences of divorce and separation[1] for women, who bear a disproportionate cost compared to men. For example, a recent study by de Vaus and colleagues (2017) shows declines in economic status for women and increases in economic status for men after their unions dissolved, and this pattern exists in all six OECD countries studied. Although there is agreement on the existing gender gap in the effects of separation, the extant research is limited in two ways that this study addresses. First, prior work has focused on rich countries, largely ignoring whether there are gender gaps in developing countries. In this paper, I examine Colombia, a middle-income country, and I compare my results to those from the OECD study, which examined rich countries. Second, even though cohabitation is increasingly common in many countries, the previous work has either examined economic well-being only among those who were married or not distinguished by type of union status. This study contributes to this literature by explicitly comparing the economic consequences of divorce with the dissolution of a cohabiting relationship.

This is the first study to my knowledge that explores the effect of relationship dissolution in Colombia. I focus on 4 questions: (1) What are the characteristics of those who experience dissolution compared to those who do not? (2) Do women have lower equivalized household incomes after union dissolution than before, and how does this change compare to that of men?

[1] In this paper, I use "separation" to refer to the dissolution of a cohabiting relationship, rather than a marital status that indicates that someone who has been married, is no longer living in an intimate relationship, but has not yet divorced. This applies throughout the paper unless otherwise indicated.

(3) Does the effect of union dissolution for women differ by whether they were married or cohabiting? (4) Do women with children bear a disproportionate cost of union dissolution?

II. Colombian Context and Previous Research

This study focuses on Colombia. The World Bank classifies Colombia as a middle-income country, and although much economic progress has been made in the past several years, poverty and inequality are still important issues. Table 4.1 presents some of the key characteristics of the country in terms of population, inequality, poverty, education, employment, and health.

[TABLE 4.1]

Overall, it can be argued that gender inequalities in Colombia persist in some areas, while they are lessening in others. Levels of education are now similar for both men and women, and the proportion of women older than 25 years with a High School degree is now larger than the proportion of men. However, many barriers still persist for women, particularly in regards to the Colombian labor market. Even though women's participation has continuously increased in the past few years, women still experience discrimination and disadvantages compared to men. Using the 2015 National Demographic and Health Survey (Encuesta Nacional de Demografía y Salud), it was estimated that 71 percent of women ages 13 to 49 had worked over the last 12 months prior to the survey, compared to 66 percent in 2010. Moreover, in contrast to 53 percent of women, there were 75 percent of men working at the time of the survey, which gives us an idea of the remaining gap in labor market participation rates between men and women in Colombia (Ministerio de Salud y Protección Social y Profamilia, 2017). A more updated portrait for 2016-2017 shows that the proportion of women in the labor market reached 59 percent

compared to 83 percent of men (The World Bank, 2017). Along with such differentials and despite efforts to improve labor market outcomes in Colombia, work conditions are still less favorable for women than men in the country. Colombian women are more likely to perform low skilled jobs characterized by low stability and salaries as well as more discrimination in the workplace particularly when they become mothers (Ministerio de Salud y Protección Social y Profamilia, 2017). For example, in terms of the pay gap, Hoyos and colleagues (2010) estimated that in the period between 2002 and 2006, Colombian males earned 13.5 percent higher hourly wages than females (Hoyos, Ñopo, & Peña, 2010). Such characteristics and trends demonstrate the increased participation of women in the Colombian labor market, but yet the remaining gap in benefits and protections.

Moreover, the experiences of women in the labor market in Colombia greatly differ across the socioeconomic spectrum and by a variety of demographic characteristics. First, in terms of socioeconomic status, usually labor market participation is more common among more educated women. However, rates of employment among less educated women have started to increase, mainly as a way to cope with economic difficulties (Arriagada, 2004). Second, in terms of women's marital status, in 2015 those who had ever been in a union (married/consensual union, divorced, separated, widowed) were the ones more likely to be employed (75.6 percent), followed by those in a union at the time of the survey (58.8 percent), and single women (38.5 percent) (Ministerio de Salud y Protección Social y Profamilia, 2017). Similarly, women who are in a union with more socioeconomically advantaged men are more likely to work and to be employed in more skilled jobs (Martínez, 2013). Finally, the number of children also has an effect on the labor market outcomes of women in Colombia, as could be expected. Women with more children are less likely to work, so that in 2015, 63.4 percent of women with one or two

children worked, compared to 61.4 percent of women with three to four children and 57.8 percent of those with five or more children (Ministerio de Salud y Protección Social y Profamilia, 2017). Overall, it can be argued that more labor market participation for women might represent increased autonomy (Arriagada, 2004). In this context, women with higher socioeconomic status, or those who have ever been or are currently in a union, are more likely to experience increased autonomy given their higher likelihood of employment.

Finally, it is relevant to highlight how gender roles in Colombia are perceived as well as women's position in society; as such factors are likely to play a role in the dynamics of families in the country, particularly in the formation and dissolution of unions. Historically, femininity in Colombia has been associated with a place of submission and subordination (Ministerio de Salud y Protección Social y Profamilia, 2017). Such beliefs of inferiority are usually more common among the most disadvantaged men and women. Relatedly, when looking at the position of women in Colombian society, it is common to comment on the high levels of gender violence in the country and the fact that Colombian women bear a disproportionate cost compared to men. As such, in 2015, 33.4 percent of women had ever experienced any form of physical violence compared to 22.4 percent of men, with higher incidence among women of lower socioeconomic status. Other forms of violence against women are also common, including sexual, economic and psychological violence (Ministerio de Salud y Protección Social y Profamilia, 2017).

As it relates to the current study, different forms of violence against women might have an impact on the dissolution of unions in Colombia. In 2015, when women ages 15-49 were asked if they had thought about getting divorced or separated from their partners and the reasons why, they reported that the main reason was intimate partner violence (45.7 percent), followed by infidelity (13 percent) (Ministerio de Salud y Protección Social y Profamilia, 2017). In short,

we see that the perceptions of women's position in Colombian society are likely to have an impact on the formation and dissolution of families, mainly among the more disadvantaged.[2]

A. Family trends in Colombia

Families in Colombia have become increasingly diverse. In the South American context, Colombia stands out for having one of the highest proportion of children living with one parent, usually the mother (27 percent in 2009-2010), the highest proportion of cohabiting adults of reproductive age (33 percent), as well as the highest proportion of children born to unmarried women (84 percent of all live births are to unmarried women) (Social Trends, 2017). The country has experienced an increase in cohabiting couples, which are often more unstable than married couples (Andersson, Thomson & Duntava, 2017; Furstenberg, 2014), as well as an increase in divorce rates (Flórez & Sanchez, 2013).

1. Marriage

Historically, marriage has been one of the most common family arrangements in Colombia, particularly among more advantaged individuals (higher education and socioeconomic status) (Flórez & Sanchez, 2013). However, marriage rates have been decreasing, particularly since the 1980s, to the point that, in the 1990s, the rates of cohabitation surpassed those of marriage for many groups of women. In 1990, 19 percent of women ages 20-24 (and 38 percent of those aged 25-29) were married, compared to 6 percent and 16 percent in 2010. For older women ages 30-34 and 35-39, rates went from 44 and 54 percent in 1990 to 24 and 30 percent in 2010 (Flórez y Sánchez, 2013). These trends illustrate the decreased centrality of

[2] In 2015, only 20 percent of women who experienced violence filled a criminal complaint, with lower rates among disadvantaged women living in rural areas and with low levels of education. Among those who filled complaints, only 21 percent reported that there was a sanction against the perpetrator. Moreover, 5 percent of them reported that violence did not stop and 2 percent that the violence increased afterwards (Ministerio de Salud y Protección Social y Profamilia, 2017).

marriage in Colombia, particularly among the more disadvantaged, with slower but also continued changes for more advantaged women as well.

2. Cohabitation

Similar to other countries around the globe, Colombia has experienced a series of socioeconomic and cultural changes that have impacted family life, including an increase in the number of adults in consensual unions. As it happened in other countries in Latin America, the region experienced an increase in cohabitation since the 1960s with an even steeper increase during the 1990s (Esteve & Lesthaeghe, 2016). By age group, in 1990, 19 percent of women ages 20-24 and 26 percent of those ages 25-29 were in a consensual union, while in 2010, these percentages almost doubled, going up to 35 percent and 44 percent. For older women, these figures went from 26 percent of women ages 30-34 and 21 percent of those 35-39 percent in 1990 to 44 percent and 40 percent in 2010 (Flórez y Sánchez, 2013). As of today, Colombia is one of the countries with the highest proportion of cohabiting adults of reproductive age (33%) in South America (Social Trends, 2017), unions that are increasingly more likely to have children.

Although this is a similar trend to what has been experienced in other countries, several authors highlight the potential differences of cohabitation in Colombia, and Latin America in general, compared to those unions elsewhere.[3] Consensual unions have been historically prevalent in Latin America particularly among native and black populations as an alternative to

[3] Even though cohabitation is increasing around the globe, García & Rojas (2002) argue that consensual unions have historically been an important characteristic of Latin-American families, and that this family structure has roots that can be traced back to colonial times. They highlight that a discussion about the increases in cohabitation, should include a discussion of whether the increase corresponds with a traditional form of consensual unions ("old cohabitation", or if it is, as happens in the United States, a more recent form of family life for disadvantaged groups as an option to marriage ("new cohabitation"). A full discussion of the historical factors associated with cohabitation in Colombia is beyond my scope in this paper.

the “European” marriage (Esteve & Lesthaeghe, 2016)**.** Esteve and colleagues (2016) refer to such unions as the “old cohabitation”, and argue that the increase in cohabitation rates in Colombia corresponds to increases in what they have referred to as “new cohabitation” on top of the already prevalent “old cohabitation.” Explanations for such increases include a combination of factors like economic shocks and a cultural shift towards an increased acceptance of previously tabooed behaviors, so that, many more are accepting cohabitation as an alternative to marriage, not just as a “trial marriage” (Esteve & Lesthaeghe, 2016).

A closer look at cohabiting unions in Colombia reveals that the prevalence and meaning of such union differ by demographic characteristics. Although increases in cohabitation in the region have been experienced by women across all education levels, an education gradient has been identified. Women with higher levels of education are less likely to cohabit while women with lower levels of education are more likely to experience cohabitation (Esteve & Lesthaeghe, 2016). In 2005, about 20 percent of women ages 25-29 with higher education were in a cohabiting union, compared to slightly over 40 percent with secondary education, 50 percent with primary education and about 55 percent of women with no education (Flórez & Sánchez, 2013). In addition to the education gradient, cohabitation is also more common among more disadvantaged individuals including those who are younger (García & Rojas, 2002), have an ethnic background, and who live in certain regions of the country including the Caribbean, Pacific, Orinoquia and Amazonia regions (with prevalence across regions varying from 8.7 percent to 95.4 percent) (Esteve & Lesthaeghe, 2016).

Finally, the education gradient is also evident in the attitudes toward cohabitation. In that sense, women with higher levels of education see cohabitation as a path to marriage while those with lower levels see it as an alternative to marriage (Esteve & Lesthaeghe, 2016). In addition, as

family instability increases (more divorce, separation and second unions), cohabitation appears as an alternative to second marriages, such that, after divorce and separation individuals are leaning more towards entering cohabiting unions instead of marriages. In 2015, only 4.3 percent of second unions were marriages for women and 7.9 percent for men, while 95.7 percent of second unions for women and 92.1 percent for men were cohabitations (Ministerio de Salud y Protección Social y Profamilia, 2017). Therefore, mostly in the context of second unions, cohabitation has increased at the loss of marriage. This trend is mainly explained by the fact that not until 1976 did divorce became legal in the country, leaving cohabitation as the only alternative to those who had been previously married (Esteve & Lesthaeghe, 2016). In addition, the legal context for consensual unions continued to evolve in Colombia so that, in 1990, new legislation was introduced to recognize the rights of partners in consensual unions as similar to those of married partners if they have been living together for two or more years (e.g. in terms of health care access and marital property) (Flórez & Sánchez, 2013).

3. Single parents

In Colombia, in addition to the increase in cohabitation, there has also been an increase in the number of single parents. As mentioned above, Colombia is one of the countries in South America with the largest percentage of children living with one parent (27 percent), usually the mother (Social Trends, 2017). When looking at historic rates, in 1990 there were 11 percent of children living with their mother only (ages 20-29); by 2010 this percentage had nearly doubled (21 percent) (Flórez & Sánchez, 2013). Compared to the two family structures above (married and cohabiting), single mothers and their children are less economically advantaged, and they are more likely to live in poverty (e.g. Ariza & de Oliveira, 2007; Cuesta, Ríos-Salas & Meyer, 2017; Sigle-Rushton & McLanahan, 2004).

4. Divorce, separation and union stability

Together with the decrease of marriage and the increase of cohabitation, Colombian families have seen increases in divorce, separation and re-partnering. First, the percent of divorced and separated (not living together but not legally divorced yet) women has increased considerably; in 1990, 7 percent of women ages 20-24, 9 percent of those 25-29, 14 percent of those 30-34 and 13 percent of those 35-39 were separated or divorced, while in 2010 comparable figures were 10, 15, 17, and 20 percent (Flórez & Sánchez, 2013).

Second, together with increased union dissolution, re-partnering has also become more frequent, either by marriage or cohabitation. An indication of this is the percentage of women with more than one union, among those who have ever entered one, which increased from 15 percent in 1990 to 25 percent in 2010 (Flórez & Sánchez, 2013). Overall, the number of unions including both marriage and cohabitation per person tends to be larger among men and women of lower socioeconomic status including those with lower education levels, lower income and living in rural areas. For example, in 2015, 9.7 percent of women ages 15-39 with no education had 3 or more unions, while this figure was only 1.8 percent of those with higher education (Ministerio de Salud y Protección Social y Profamilia, 2017). Overall, it can be argued that family instability is becoming a characteristic of family life in Colombia, including more separations and divorces, more second unions (mostly cohabitations), and increases in cohabitation at the expense of marriage.

Finally, few studies in Colombia have described the characteristics of the population who has traditionally or recently experienced divorce and separation. However, in the area of family studies, it has been common to describe divorce and separation as negative events. For example, Pachón (2007), in her description of the family in Colombia in the twenty century, indicates that

in the country there has always been a heavy influence of the religion and other institutions to stigmatize those who dissolve their unions, surrounding them with social shame and scrutiny.

B. Policy: Family law context

This section provides an overview of the family law context in Colombia, highlighting those aspects that are more relevant to understand the economic consequences of divorce and separation for women, with and without children. The family law context in Colombia has been traditionally tied to both the history of the Catholic Church and to the profound socioeconomic inequalities that can be traced back to the Spanish conquest (Cristancho, 2008).

In Colombia, divorce happens either by the mutual consent of the spouses or through fault-based grounds for judicial divorce. In the first case, it is called a notarized divorce either with or without property and children in common, and it is usually faster than the process when there is lack of agreement. In the second case, when there is no agreement, the process goes into a family court. One of the spouses can invoke several reasons to open the process (e.g. violence, substance abuse, among others), and it can take anywhere from eight months to one year or more to finalize and legalize the divorce. In both cases, the law establishes an even (50-50) split of assets between divorcing and separating partners. In addition, the judicial process includes the establishment of a child support order and visitation agreement, and, in a few cases agreements on spousal support. In Colombia, couples who have been cohabiting for two or more years are entitled to the same rights as married couples, even if they do not register and notarize their partnership. Therefore, the process of legal separation after cohabitation follows a similar process as the one for divorce, if the couple has been together two or more years, and particularly, if they have had children or properties in common during that time. Even if they have not registered their partnership, they can demonstrate the longevity of the partnership.

After divorce or separation for families with children, child support can be an important source of income. Colombia generally requires child support payments to be made after a union has dissolved. Rules for determining the amount of orders are mostly discretionary, although orders cannot be more than 50 percent of the noncustodial parent's wages (Cuesta & Meyer, 2012). In Colombia, both private and public child support agreements are enforceable and the main actors involved are the judicial system, the National Institute of Family Well-Being (NIFW, ICBF in Spanish), and local governments. Finally, regardless of the potential importance of child support payments, few families actually receive this contribution. In addition, the system is mostly reactive, rather than pro-active; problems in the collecting and distributing of payments only result in action if requested by the custodial parent (Cuesta & Meyer, 2012).

C. Brief review of previous literature

The literature overview focuses on the four research questions proposed above.

What are the characteristics of those who experience dissolution compared to those who do not? A broad literature examines factors related to divorce and relationship dissolution, including some cross-national research (e.g., Wagner & Weiß, 2006). Broadly, the literature suggests that economic disadvantage is associated with relationship instability, but that other factors are also important, including the policy context (e.g. Furstenberg, 2014).

Do women have lower incomes after union dissolution than before, and how does this change compare to that of men? Since the 1980s, researchers have examined the effect of union dissolution on women's economic well-being, and, although there is agreement about the negative economic consequences for women, estimates of this effect vary greatly. Variations depend on the country being studied (different labor markets and policy contexts), the type of data used (cross-sectional or longitudinal), the type of research methodology applied (examining

correlation vs attempting to explore causation), the measures of economic well-being examined (individual income, household income, material well-being, type of equivalence scales, etc.), the timing of effects (short vs long-term) and whether recovery strategies post-dissolution (e.g., re-partnering) were considered.

As summarized by Holden & Smock (1991), there are two sets of mechanisms operating behind the effect of union dissolution on women's economic well-being, pre-existing factors and direct sources. The set of pre-existing factors (before dissolution) includes the lower socioeconomic status of those who experience union instability (noted above), and the generally higher economic vulnerability of women compared to men (e.g. they tend to have lower labor market participation, to earn less, to have children in the household who may limit their ability or desire to take certain types of employment, etc.). Although the majority of research in this area highlights the lower socioeconomic status of women before dissolution, studies have also described an anticipatory effect among few women, who, in the face of increased probabilities of divorce, boost their labor force participation (e.g. Fernández & Wong, 2014; Papps, 2013). As such, there is a labor supply response among some women when they experience changes in the probability of divorce. This response includes increasing hours of work and an activation in the labor market in order to boost their work and earnings capacity after divorce (should it occur), and to increase their savings to face the eventual dissolution of their unions.

The previous literature also highlights mechanisms that are related to the direct effect of dissolution on women's economic well-being. These include changes in the living situation of women after dissolution like the loss of the additional earner in the household, the higher likelihood of women in getting custody of the children, and the fact that women are not only the primary caretakers of children after separation, but they also become the primary provider

(Holden & Smock, 1991).

These factors generally mean that women will have lower economic well-being after dissolution than they did before, and that their decline will be larger than that experienced by the men with whom they were partnered. In fact, most previous research shows that men increase their economic status after dissolution (e.g. de Vaus et al., 2017; Holden & Smock, 1991; Tach & Eads, 2015; Peterson, 1996).

Does the effect of union dissolution for women differ by whether they were married or cohabiting? Most previous research looks at the effects of dissolution in general, grouping together divorce and the end of consensual unions, but few studies have focused on clarifying the potential differential effect of divorce versus the end of a cohabiting relationship (e.g. Avellar & Smock, 2005; Andreß, Borgloh, Bröckel, Giesselmann & Hummelsheim, 2006; Manting & Bouman, 2006; Poortman, 2000; Tach & Eads, 2015). Also relevant to this area is previous research on factors related to whether couples marry or cohabit. Broad findings from this research show that cohabitation can mean substantially different things for different couples: some cohabit because they do not yet feel ready to make the marriage commitment, some cohabit because they do not feel they have the economic resources needed for marriage (or the wedding), other reasons are important as well (e.g. Flórez & Sánchez, 2013; Brown, Van Hook & Glick, 2008). In terms of dissolution, I highlight the findings from the most recent study in this area, by Tach and Eads (2015). The authors find that in the United States, divorce has historically had a more negative effect than cohabitation dissolution. However, the trends differ: the effects of divorce have declined over time, while the effects of cohabitation dissolution have increased, getting closer to the effects of marriage dissolution on women's economic well-being. In addition, they find that the contribution of income sources before and after dissolution differs

significantly between married and cohabiting couples. Their findings support the need to study, whenever possible, the effects of marriage and cohabitation dissolution separately.

Do women with children bear a disproportionate cost of union dissolution? Some previous research has found that women with children experience larger declines in well-being from dissolution than those who do not have children. Potential reasons for this would include women who made sacrifices in the labor market to devote more attention to childrearing and the fact that children are more likely to live with their mothers than their fathers post-separation, which may compromise their later labor market success. Moreover, child support and alimony are generally insufficient to meet the costs of raising children.

III. Current Study

In summary, past research in several countries has demonstrated the negative association between dissolution and women's economic well-being. I add to this literature by providing the first study of which I am aware examining this issue in Colombia, a middle-income country, and by paying special attention to the consequences of divorce compared to cohabitation dissolution. My research questions, with hypotheses are:

- **Question 1:** What are the characteristics of those who experience dissolution compared to those who do not? **Hypothesis 1:** Similar to prior research from other countries, those who are more economically disadvantaged are more likely to experience dissolution.
- **Question 2:** Do women have lower equivalized household incomes after union dissolution than before, and how does this change compare to that of men? **Hypothesis 2:** Similar to the prior research from other countries, there is a negative association between dissolution and women's economic well-being; dissolution will be associated with an improvement in men's economic well-being.

- **Question 3:** Does the effect of union dissolution for women differ by whether they were married or cohabiting? **Hypothesis 3:** The negative association between women's economic well-being and divorce is larger than the association with cohabitation dissolution. This hypothesis is informed by the possibility that cohabitation is a signal that there is less relationship-specific investment and that cohabiters are often more disadvantaged, so they may have less to lose. On the other hand, a contributing reason for cohabitation may be economic need, suggesting that the end of cohabitation may have particularly negative consequences, returning women to a situation of economic need.
- **Question 4:** Do women with children bear a disproportionate cost of union dissolution? **Hypothesis 4:** Similar to the previous research from other countries, the magnitude of the negative effect between relationship dissolution and women's economic well-being is larger for those with children.

IV. Data, Sample, Analytical Strategy and Measures

A. Data

The Colombian Longitudinal Survey (ELCA) provides household and individual information on about 10,000 households. This longitudinal survey has been conducted every three years starting in 2010, and it plans to follow Colombian households in urban and rural areas for a total of 12 years, with the purpose of collecting data on employment, income, land tenure, education, health, and family formation, among others. For this study, I use the three available waves (2010, 2013 and 2016). The survey includes multiple instruments (household, person, community surveys and anthropometric and cognitive tests for children 0-9 years old) and it has been conducted in person. The main sections of the ELCA follow the householder, his or her partner and children under 10 (Universidad de los Andes, 2018). If household composition

changes, the ELCA tries to follow these individuals into their new living arrangements.

The survey uses a stratified random sample of households in selected municipalities based on demographic and socioeconomic characteristics. The urban sample is representative of all socioeconomic strata in Colombia except the richest 3 percent[4] and contains all five geographic regions of the country. In addition, the rural sample is representative of four micro-regions with a peasant economy, which are more likely in the lowest stratum (Universidad de los Andes, 2010). I use weights that account for both the sampling frame and nonresponse.

B. Sample

To construct my analysis sample, I began with all adults who were either the householder or the partner of the householder (married or cohabiting) at the beginning of the observation period. First, I kept women in wave 1 (n=9,168) for whom there were data across all three waves (years 2010, 2013 and 2016), for a total sample of 6,540. In addition, I kept all men in wave 1 (n=7,785) for whom there were data across all three waves for a total sample of 5,326.[5] Next, to make the current study comparable to similar studies in this area, I only included in the analysis men and women between the ages of 20 to 54 when the first wave was collected, leaving a final sample of 9,430 adults including 5,404 women and 4,026 men (Table 4.2).

[4] In Colombia, there is a government stratum system that categorizes households in strata 1 to 6 going from lowest class (stratum 1) to wealthy (stratum 6); while the survey sampling frame included only strata 1 through 4, only about 3% of the population is in strata 5 and 6 (Alzate, 2006).

[5] By including only those who have complete data across waves, I am potentially excluding individuals with different characteristics than those who remain in the sample. In theory, the nonresponse weights correct for this type of differential attrition. I plan to further explore the characteristics of these missing individuals, and to estimate the level of potential bias introduced in my study. By looking at attrition rates, I am losing about 30% of my sample of women between wave 1 (n=9,168) and wave 3 (6,540) and 32% of men (wave 1 n=7,785 and wave 3 n=5,326). Contrary to prior research and to findings from similar surveys, in this case, the individuals who dropped out of the sample appear to be more advantaged, for example considering the proportion with primary education only (1 to 5 years of school), the proportion of women who drop out of the sample is 38% and the proportion who were present in all three waves is 47%, similar figures are 40% and 34% for those with secondary education (6 to 13 years of education).

[TABLE 4.2]

After pooling the three available waves, information is available for 5,404 women, of whom 521 experience marriage or cohabitation dissolution ever during my observation period. In addition, of the 4,026 men, 259 experienced dissolution[6] (Table 4.2). Note that my broadest sample includes five groups: (1) some who were never partnered during the three waves; (2) some who were always partnered during the three waves (with both partners present in my sample as long as both responded to the survey); (3) some who were in couples in wave 1 who dissolved their relationship by wave 3 (both individuals continue in my sample as long as both individuals answered a survey through wave 3); (4) some who were in couples in wave 1 who dissolved their relationship by wave 3 and only one continues to answer a survey; and (5) some who did not have a partner at wave 1, partnered by wave 2 and who dissolved their relationship by wave 3 (the new partner would not be in my sample because they were not present at wave 1).

C. Analytical strategy

The first research question, on the characteristics of those experiencing dissolution, is intended to help us set the context for the remaining questions, which focus on the effects of dissolution on economic well-being. The most straightforward way to look at these effects when longitudinal data before and after dissolution are present would be to compare their income pre and post dissolution, and see how the event of dissolution changes such amounts. I use this approach in my descriptive results. However, this approach has several limitations. First, income usually fluctuates over time, even in the absence of relationship dissolution. For example,

[6] Of the 521 women who experience the dissolution of their unions, 268 experienced this transition between wave 1 and wave 2, while 253 did between wave 2 and wave 3. Of the 259 men who experienced dissolution, 132 did between wave 1 and wave 2, while 127 did between wave 2 and wave 3.

Colombia experienced an economic crisis between 2015 and 2016. Therefore, I might expect declines in incomes from 2013 (wave 2 of the survey) to 2016 (wave 3 of the survey) influenced by the overall changes in the economy, regardless of family transitions. In addition, there are several processes of selection operating in my sample, meaning that certain choices such as marriage or divorce are not randomly distributed. For example, we know that those who get married are, on average, more advantaged than those who cohabit. Therefore, in a descriptive context, we cannot attribute changes in economic well-being solely to the experience of relationship dissolution, when we already know there are other characteristics that may be driving such changes (observed and unobserved characteristics). In addition, there might also be an issue of reverse causality in this context, where decreases in economic well-being lead to union dissolution, not only the other way around (i.e. union dissolution influencing changes in economic well-being).

In addition to the descriptive analysis and to get at a more precise estimate of the effects of relationship dissolution on economic well-being, I use individual fixed effects (IFE) models. These models use longitudinal data with repeated measures of relationship status and economic well-being. With these models I explore separately for men and women, how relationship dissolution (the change in relationship status) is associated with changes to men's and women's economic well-being. The IFE model absorbs all unobserved time-constant variables, using only within-person variation from the time before to the time after dissolution to estimate the effects of union dissolution. One of the advantages of the IFE model is that time-constant characteristics (even those that are unmeasured), are removed and do not create bias in my estimates, as long as the effect of such characteristics is constant over time. On the other hand, one of the disadvantages is that if I have unmeasured variables that do change over time or variables that

simultaneously influence change in marital status and changes in economic well-being, my estimates will remain biased (McLanahan, Tach & Schneider, 2013). Since this model only uses changes, it does not provide estimates on the economic well-being for those who remained married or cohabiting. In further analyses, I plan to use methods in which I also use the information of those who did not dissolve to estimate what the trajectory of those who dissolved would have been if they did not dissolve. In this context, I plan to use propensity score matching techniques to estimate the causal effect of union dissolution on economic well-being measured by equivalized household income.

Finally, by looking at the contribution of different income sources, I explore the role of earnings and different cash transfers at tempering the effects of separation on men's and women's economic well-being.

D. Measures

1. Main outcomes

In order to be able to make a precise comparison of my results to those of de Vaus and colleagues (2017) I should use a measure of equivalized household income after taxes and government transfers, adjusting for the number of people living in the household, according to the OECD equivalence scale.[7] I can approximate this measure but not match it completely. The ELCA includes several questions about household income. In order to construct the equivalized household income variable I add up several amounts coming from questions asking on average, how much the monthly household income was in different domains including jobs, pensions, rent, interests or dividends, help in cash, and other income different than remittances. Then, I construct a count of the number of people in the household using the household roster. I use

[7] The standard OECD equivalence scale adds 1.0 for the first adult, 0.5 for subsequent adults and 0.3 per child.

purchasing power parities (PPPs) to convert to 2016 U.S. dollars to facilitate comparisons with other research (OECD, 2018). This measure is close to the de Vaus measure except that it does not yet include government transfers nor account for taxes.

After pooling the three available waves, I create a variable for equivalized household income before dissolution and one after dissolution. For those who dissolved between wave 1 and wave 2, the equivalized household income before dissolution is the measure in wave 1 (2010), and the after-dissolution measure is in wave 2 (2013). For those who dissolved between wave 2 and wave 3 the before measure is wave 2 (2013) and the after is wave 3 (2016). Therefore, I measure short-term responses to dissolution.[8]

2. Additional variables of interest

In order to examine the contribution of different sources of income pre and post-divorce, I look at the percent of household income coming from six different sources: (a) Jobs; (b) Pensions; (c) Rent; (d) Interest; (e) Other (not including remittances); and (f) Help in cash (mostly from family and friends. This measure was intended to exclude government transfers, but I believe some people included those too).

3. Main predictor

I first create a summary of relationship status for all women and men in my sample indicating whether the participant was married, cohabiting or neither. Next, I create an indicator variable for whether the participant experienced relationship dissolution either between wave 1 to wave 2 or between wave 2 to wave 3 (1=yes, 0=no). In addition, I create indicators to show whether the dissolution was of a marriage (divorce 1=yes, 0=no) or of a cohabiting relationship

[8] My analyses do not yet include more detailed information on employment and some government transfers; these will be incorporated in future work. I do not expect the exclusion of government transfers to have a large impact in my results, since the size of government transfers in Colombia is not significant.

(separation 1=yes, 0=no). One of the limitations of this measure is that I am not able to identify the exact point in which the dissolution occurred; I only know that the participant changed his or her living situation (and marital/cohabitation status) between waves. In addition, the ELCA first asks about the marital status of the participant, and only among those who are either married or cohabiting, they are asked if their partner lives at home. Therefore, it is assumed that those who dissolved their unions are no longer living with their partner, which might not be true in all cases. Finally, another limitation is that if my measure of economic well-being is too far in time after the dissolution happened (up to 3 years), I may underestimate the short-term effects of relationship dissolution as participants might have already started a recovery period.[9]

4. Control variables

In an effort to separate the net effect of dissolution on men's and women's economic well-being, I keep constant other factors that might affect their economic well-being. I include several factors that have been identified to be associated with economic well-being such as employment and the presence of children in the household. I plan to add other control variables in future analyses.

V. Results

A. Descriptive statistics

Since this is one of the first papers looking at the effects of union dissolution on adult's economic well-being in Colombia, I first present the characteristics of the men and women in my sample in the first wave of the survey by relationship status (Table 4.3). Overall, men and

[9] Another potential issue is that average monthly income might include the other partner's income even if they indicated in the survey that they are no longer together, in which case I will be underestimating the effect of dissolution.

women were on average 39-40 years old, had similar levels of educational attainment, similar presence of children in the household, similar equivalized household incomes, and large differences in employment rates. More differences emerge when comparing those with different relationship statuses. Comparing women who are married to women who are cohabiting, married women are on average older (41 years old) than those cohabiting (37). Similar to studies in other countries (e.g. Furstenberg, 2014), married women are to some extent more advantaged than cohabiting women are. More specifically, married women are more likely to have more than 13 years of education (21 percent) than those who are cohabiting (9 percent), and more likely to be employed (35 percent vs 29 percent). More cohabiting women have children in the household (80 percent) compared to married women (73 percent).

[TABLE 4.3]

Finally, in terms of economic well-being measured as total equivalized household income and consistent with studies in other countries (e.g. Manning & Brown, 2006), married women had, on average, substantially higher incomes than those who were cohabiting; however, note that equivalized incomes are fairly low ($352/month) and the difference is about $149 dollars. Similar figures for total household income show married women having, on average, more than $300 dollars in total household income compared to cohabiting women. Similar to the comparison of married and cohabiting women, men who were married are more advantaged than cohabiting men, and they are less likely to have children in the household than those men who are cohabiting.[10]

[10] While I might expect men and women who are married or cohabiting at wave 1 to have identical household incomes, they do not, because in my sample I have couples (n=3,345) and also individual cases for whom we only have one of the two partners (partnered women with no partner in the sample n=997, partnered men with no partner in the sample n=326). Of those 997 women, 431 are married, and 566 are cohabiting. For the 326 men, comparable

The research aim focuses on the characteristics of those whose relationship dissolves, as shown in Table 4.4a. For women who do not experience dissolution, their T1 data corresponds with the first time they are observed in my data (wave 1). In contrast, for those who eventually experience the dissolution of their unions, T1 data corresponds to the last observation before dissolution. Women who experience the dissolution of their relationship are slightly younger than those who do not (mean age of 38.3 compared to 39.3). Contrary to prior research suggesting that those with lower economic status are more likely to experience dissolution, education levels of those who experience dissolution are slightly higher than those who do not: for example, 22 percent of those who experience dissolution have more than 13 years of education, compared to 15 percent of those who do not, and 44 percent of those who experience dissolution have less than 6 years of education, compared to 52 percent of those who do not.

Those who experience dissolution are more likely to be employed (56 percent to 37 percent) and somewhat more likely to have children in the household (75 percent to 74 percent). Consistent with the advantages in education and employment for those who experience dissolution, their income prior to dissolution is higher than those who did not experience dissolution ($87/month for equivalized household income and $171 for total household income). This finding is consistent with prior research in other countries that indicate a potential anticipatory labor supply response among some women when they face an increased risk of divorce. One potential explanation for this finding is, therefore, that some women enter the labor market or increase their hours of work in order to boost their earnings capacity and savings to face the eventual dissolution of their unions. Similarly, previous studies have identified that the

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figures are 91 and 235. If I kept in my sample only married and cohabiting couples for whom I have complete data (for both partners), then their incomes match exactly.

labor market participation of women in Colombia has increased over time, mainly as a response to economic difficulties, which might be experienced before and after the dissolution of their unions. However, further research in this area is warranted, as previous research has not particularly studied the labor supply response of women in this context in Colombia.

[TABLE 4.4a]

Many of those who do not experience dissolution were not in a partnership at time 1, so a closer look at the consequences of dissolution would compare those who do and do not dissolve only within those women who were married (or who were cohabiting) at time 1 (the last time I observed them partnered). The table shows that limiting the comparison to those cohabiting at time 1 reveals a similar pattern: those who experience separation are younger, more educated, more likely to be employed, and have higher incomes. Limiting the comparisons to those married at time 1 (the last time I observe them partnered) shows a somewhat different pattern in that those who divorce are older, with mixed results for education. However, those who divorce are more likely to have been employed and to have higher incomes at time 1 than those who remain married. The relative advantage of those whose relationship will dissolve is different from the pattern in other countries, in which it is generally those with lower economic status who experience dissolution (de Vaus et al., 2017). Finally, married and cohabiting women show different patterns regarding the presence of children: for married women, those who dissolve are less likely to have children in the household (60 percent compared to 73 percent), but for cohabiting women, those who dissolve are slightly more likely to have children in the household (82 percent compared to 80 percent).

For comparison purposes, Table 4.4b. shows the characteristics of men by dissolution status. For men who do not experience dissolution, their T1 data corresponds with the first time

they are observed in my data. In contrast, for those who eventually experience the dissolution of their unions, T1 data corresponds with the last time I observed them partnered in my data before dissolution. In contrast to the case of women, men who experience dissolution are slightly less advantaged in education and income compared to those who do not experience dissolution. However, these small differences in the overall sample of men who experience and do not experience dissolution are not a good representation of the differences by the type of union dissolved. When looking at men cohabiting at time 1, those who will experience dissolution have higher education, employment rates and higher income (at the time before dissolution) than those who do not experience dissolution (at Wave 1). Similarly, and different from findings in other countries (e.g. de Vaus et al., 2017), men whose marriages will dissolve have higher income and employment rate pre-divorce than those whose marriages will remain intact.

[TABLE 4.4b]

Overall, there are some differences between women and men in the characteristics of those who experience dissolution. Prior to dissolution, women who will experience dissolution had higher household incomes than those who remained partnered. This pattern holds for those who are cohabiting initially and those who are married. In contrast, prior to dissolution men who will experience dissolution had lower household income than those who remained partnered, but this pattern did not hold when looking by specific dissolution type. Specifically, men who experience the dissolution of their marriage or cohabiting union have higher income and employment rates than those who remained partnered. I make explicit comparisons to other countries in section 5 below.

To address the next three research aims from a descriptive perspective, I look at the changes in mean equivalized household income pre and post separation for men and women,

overall, by type of dissolution, and by the presence of children, as shown in Table 4.5. First, looking only at women in the short term after dissolution, there is a 5 percent increase in their mean equivalized household income. This finding is in contrast to much of the previous literature, which shows declines in economic status among women after dissolution (e.g. de Vaus et al., 2017). The second research aim also contrasts the pre- to post-dissolution change for women versus men. Here I see that mean equivalized household income increases by 57 percent for men, compared to the much smaller increase of 5 percent for women. Thus, although the direction of change for women differs from that of the previous literature, the finding that women lose more economically from union dissolution than men is quite consistent with the previous literature.

Third, limiting the sample to those who were married reveals quite similar results (although the levels of income are higher). Women's equivalized income does increase by a fairly small amount (12 percent), and men's increases substantially (63 percent). Women who experience cohabitation dissolution show no change in equivalized income, but men who experience cohabitation dissolution experience a 54 percent increase.

Finally, the presence of children does not change the findings substantially. Women with children prior to dissolution experience a small increase post-dissolution (4 percent), as do women without children (a 6 percent increase). In contrast, men with children experience a 69 percent increase and men without children experience a 36 percent increase. The gap between men and women is thus larger for those with children, but the general direction is the same. This is consistent with some previous literature showing that the presence of children increases women's economic vulnerability post-separation.

[TABLE 4.5]

[TABLE 4.6]

To gain more insight into the patterns of change in incomes, Table 4.6 provides detailed information on household income sources for those who experience relationship dissolution. As expected, household income sources pre-dissolution for men and women were quite similar, with 87 percent of income coming from earnings, on average.[11] The second largest source is cash help from others, comprising about 5% of household income.[12] Other sources are small. Post-dissolution I see differences between men and women. Men who experience dissolution have quite similar income packages to what they did prior to dissolution: more specifically, 87 percent of their household income still comes from earnings, and 6 percent from help from others. In contrast, earnings have become less important for women post-dissolution, comprising 73 percent of their household income, and help from others has become substantially more important, comprising 19 percent of post-dissolution income. This finding is not surprising, as past studies have identified that one of the main coping strategies for men and women after divorce in Colombia is social support from family and friends (Jiménez Arrieta, Amarís Macías & Valle Amarís, 2012).

B. Regression results

The descriptive results of the present study confirm that women experience much lower increases in economic well-being after union dissolution compared to men. Some of this difference may be due to what income would have been even if those who experience dissolution

[11] As shown above, pre-dissolution household income averages $437 for women, and $348 for men; post-dissolution household income averages $460 for women and $548 for men.

[12] Help in cash includes help from family and friends, and presumably, does not include transfers from the government (which have not yet been incorporated in these results). However, I suspect that a considerable amount of respondents included their public transfers in this amount. I will confirm this in further analysis by looking at the available data related to transfers and benefits received from multiple government programs.

did not do so. In order to get at a more precise estimate of the magnitude of the effect of dissolution while controlling for other factors, I perform a fixed effects model that uses within-subject variation to examine how the change in union status from being in a relationship (either married or cohabiting) to dissolution is associated with changes in the economic well-being of men and women measured as equivalized household income. This model includes other time varying variables that can be associated with changes in household income such as employment[13] and the presence of children in the household. Table 4.7 presents the results of the fixed effects models for women and men predicting equivalized household income.

[TABLE 4.7]

Recall that the simple comparison had shown that women's incomes increased slightly after dissolution (by 5 percent). Once other factors are controlled for, there is not a significant effect of dissolution on women's equivalized household income.[14] The coefficient for dissolution is negative (predicting a small decrease), but it is not statically significant. For men, in contrast, fixed effects models confirm the finding that they see increases in their equivalized household income after dissolution. Controlling for other factors, men are predicted to see, on average, an increase of $133 dollars when they experience relationship dissolution, and this finding is statistically significant. Future work will improve the fixed effects models, and explore the finding that men with children see statistically significant decreases in their equivalized

[13] As employment might one of the mechanisms through which individuals might respond to the potential or actual dissolution of their union, I ran a sensitivity test excluding employment from the models. The main results are robust to the inclusion and exclusion of this variable. Additional steps will include a more detail exploration of the labor supply response to divorce and its effect on the economic well-being of women.

[14] Results are sensitive to the measure of economic well-being used, particularly when excluding private transfers. In such case, fixed effects models predict a statistically significant decrease of $50 dollars for women's economic well-being and an increase of $130 dollars for men when controlling for employment status, and children in the household. As described above, private transfers are one of the main strategies to mitigate the impact of economic shocks as those experienced after divorce and separation.

household income, as well as the lack of significance for the women's estimates.

VI. Comparison to Six OECD Countries

In this section, I compare my results to those of de Vaus and colleagues (2017). I first note some of the differences in my analyses, and then offer some comparisons based on the tables and information from their paper. De Vaus and colleagues study the economic consequences of marital and cohabitation dissolution (which they do not separate and which they call "divorce") in six OECD countries: Australia, Germany, Korea, Switzerland, the United Kingdom, and the United States, for men and women ages 20-54. The authors have data available for the period before divorce, two years and four years after divorce to look at both the short and medium term effects, and to investigate signs of recovery in the longer term after divorce. Their measure of equivalized income is somewhat different from mine, as their measure is after-tax income and includes government transfers. In addition, they look at the sources of equivalized household income to explain, to some extent, the differences in effects between countries. They find that the magnitude and duration of the effect vary by country, as does the contribution of different sources to the equivalized household income of women.

I begin my comparison to de Vaus and colleagues (2017) by presenting the education and employment status of men and women before relationship dissolution in Table 4.8. For those who do not experience dissolution, these measures summarize their education and employment the first time they are observed in the sample (wave 1); for those who do experience dissolution, the measure is taken in the wave just before dissolution (wave 1 or wave 2). To facilitate comparison with the OECD numbers, the Colombian numbers combine those who were cohabiting and those who were married.

In Colombia, women who experience relationship dissolution have higher levels of

educational attainment than those who did not experience dissolution. This is similar to Switzerland, but different from all of the other countries studied, in which educational levels are lower for women who experience dissolution. In Colombia, women who experience dissolution have much higher employment rates than those who do not, similar to Korea and Switzerland, but again in contrast to most countries studied.

Findings for men are also different than in the OECD countries. In Colombia, men who experience dissolution have similar educational attainment than those who do not, which is different from all other countries. Colombian men who experience dissolution are more likely to be employed than those who do not; this is similar to Colombian women but different from men in every other country.

[TABLE 4.8]

Table 4.9 compares my estimates of the effect of dissolution on women's equivalized household income to the estimates provided by de Vaus and colleagues. I focus on the estimates they provide in their descriptive section comparing economic well-being before and after dissolution because my fixed effects model is not completely comparable to their clustered regression model.

[TABLE 4.9]

Colombia stands out as being different from all the OECD countries studied. Colombian women experienced a 5 percent increase after dissolution. In Korea, there was only a small decrease (9 percent), but the decrease in other countries was substantial, up to 35 percent in Germany. Whether this difference is due to different effects of dissolution in Colombia or measurement differences is an important issue that I plan to address in further analysis in which I

will make the Colombian analysis to be even closer to the analysis of other countries. In addition to the effect of dissolution, a potential explanation for the increases in income for both men and women in my sample, could be the raising economy until about 2015 (when I capture the majority of dissolutions), followed by a marked economic crisis between 2015 and 2016. However, additional research in this area is warranted. The fixed effect analysis does show a decline in post-dissolution income for women in Colombia (not statistically significant), but this is not directly comparable to the multivariate analysis for the OECD countries, which also means further research is needed.

De Vaus and colleagues (2017) do not present point estimates for pre-post changes in men's income, instead showing a graph. This shows that men's equivalized income increased after dissolution in all countries. Men in Colombia also saw an increase. The increase in Colombia of 57 percent appears to be larger than in any of the OECD countries studied.

[TABLE 4.10]

Finally, Table 4.10 presents the contribution of jobs and transfers to the equivalized household income of women in Colombia pre and post-dissolution (3 years maximum), compared to the other countries. I cite the estimates provided by de Vaus and colleagues, and make some adjustments to be able to get more comparable measures. First, in regards to government and private transfers, pre-divorce this income source represented only 7 percent of women's household income in Colombia, compared to a high of 21 percent in Australia and 20 percent in the UK, and to a low of 5 percent in Korea. In contrast, government and private transfers doubled after dissolution in several countries including Colombia, accounting for 21 percent of household income. This measure is not directly comparable in Colombia; further analysis will include a more detailed measure of government transfers.

Lastly, income and income from partners (which in Colombia includes income of other household members too), accounted for 90 percent of women's household income pre-divorce and it declined to 79 percent after divorce. A similar decline happened in all the other countries as well.

VII. Summary and Discussion

Using longitudinal data from Colombia, I explored the effects of the dissolution of a relationship on women's economic well-being, and compared these effects to those found in six OECD countries. Before exploring the effects, I begin by examining the characteristics of women whose relationships dissolve. In contrast to most previous research, the women whose relationships dissolve in Colombia have higher incomes prior to dissolution. Those whose relationships dissolve also have higher educational attainment, a finding shared with only one of the six comparison countries (Switzerland). There might be several explanations for such findings based on the literature review presented above. The process of selection into union dissolution is different in Colombia compared to other countries where more disadvantaged women are those who experience dissolution. First, such results might suggest that only women who can afford leaving their unions and maintaining certain economic stability afterwards do so. In a similar context, Bucheli and Vigorito (2019) find that behavioral responses from mothers including paid work, is one of the main ways in which women cope with the income loss derived from divorce and separation. Second, as presented in the literature review, the position of women in Colombian society, particularly among more disadvantaged populations, implies a submission of women and increased rates of domestic violence, which might limit the ability of women to leave their unions even in the context of abusive relationships. However, additional research is warranted to explore the finding that women who exit their unions in Colombia tend to be more

socioeconomically advantaged than those who remain in their unions, together with a more comprehensive characterization of those who stay.

My results for the effects of dissolution using descriptive analyses are also different from other countries. In Colombia, I find a 5 percent increase in equivalized incomes after dissolution; in contrast, all six of the comparison countries find declines. However, similar to other countries, men's income increases after dissolution, with the findings for Colombia showing a particularly large increase (57 percent). One potential explanation for the increase instead of decrease goes together with the process of selection into divorce and separation. Based on my findings, more advantaged women who are the ones more likely to be employed (and might be more autonomous), are the ones also more likely to experience dissolution, which partially explains the finding of lower decreases in their economic well-being after separation.

The finding of a small increase in women's income after dissolution in Colombia is sensitive to the type of analysis conducted. Moving beyond the descriptive analyses to a fixed effect model that controls for other factors, does not show a statistically significant change in women's equivalized household income. This contrast suggests that there are some characteristics of those who dissolve relationships that should be incorporated into analyses of post-dissolution well-being.

Regardless of whether women experience a small increase or no significant change, my findings are substantially different from other countries. Attempts to understand this to date have focused on income sources, and I found that cash from others (primarily family) is making up the difference for those who experience dissolution. In future work, I hope to explore the extent to which this is a result of child support payments from the nonresident parent, cash help from her family of origin, or some other source. I do not anticipate this being fully explained by child

support, since other work has shown that child support is received by less than half the lone parents in Colombia (Cuesta & Meyer, 2012). Moreover, some research suggests that a relatively common coping strategy for a lone mother is to rely on her parents to help her through a difficult economic period (e.g. Jiménez, et al., 2012; Villareal & Shin, 2008).[15] In this context, it is also worth noting the importance of looking at other measures of well-being in the household both including and excluding private transfers, given that those transfers are mainly a coping strategy, which is already mitigating the effects of divorce and separation on the economic well-being of women. This area of research also highlights a relevant policy question in regards to the responsibility of the family versus the responsibility of society and the public safety net in assisting women who exit their unions, in addition to the potential cascading effects on the well-being of other adults who provide financial support to the woman experiencing the dissolution.

Findings for Colombia for the third and fourth research questions were not answered in the comparison analyses by de Vaus (2017). I find relatively similar patterns for those who divorce and those who experience the dissolution of a cohabiting relationship in Colombia. To the extent that there is a difference, women who divorce show somewhat higher income increases than those separating from a cohabitating relationship. The pre-post income changes for those who experience dissolution are similar for women with and without children in Colombia.

In the context of the current study, policy suggestions and the potential for policy evaluation efforts at this point are premature since analyses are still underway. Still, the types of

[15] Bucheli and Vigorito (2019) explore the economic consequences of divorce and separation in Uruguay, and find that private transfers mitigate the impact of separation on women's per capita household income. The authors find that union dissolution is associated with a 16% reduction of per capita household income. However, if private transfers were not to be taken into account, the loss of per capita household income would be 31% instead of 16%, highlighting the role that private transfers play in mitigating the effects of divorce on the economic well-being of women.

policies that could be considered are those that intend to balance the gender gap, addressing the disadvantage between men and women before, during and after the dissolution of their unions. As a reminder, the importance of addressing this gender gap comes not only from the concern that women are experiencing changes in their economic well-being, but, from the fact that most women are the ones who receive custody of their children after their unions dissolved. Therefore, decreases in their economic well-being will have direct implications for the well-being of their children. As mentioned above, women experience an economic disadvantage compared to men even before they form their unions. In that sense, relevant interventions in this area could include labor market policies to address issues such as the gender pay gap and motherhood penalty. Moreover, one of the ways to address the disparity post-separation, particularly for women with children, include policy efforts to enforce child support transfers between noncustodial parents and their children.

VIII. Limitations and Future Research

This project examines the economic consequences of divorce and separation for women in Colombia. My empirical analyses are still preliminary. Among the changes and plans for future research in this area are: (a) refining the measure of household income to more closely match that of other research as well as to consider additional measures of well-being both at the individual and the household level; (b) incorporating more variables into the multivariate models; (c) examining the heterogeneity of my sample by looking at the effect of divorce and separation on different subgroups, for example by rural and urban, region of the country and socioeconomic status; (d) more explicitly modeling what income would have been in the absence of dissolution to refine the comparison of incomes of those who do and do not experience dissolution. This type of research faces limitations in selection (that is, that those who decide to

dissolve their unions may be those who know can survive financially on their own or with support from others), making causal inference difficult. There are strategies for limiting selection bias, and my ongoing work using a variety of methods may limit this potential problem.

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Tables

Table 4.1. Social context of Colombia 2016-2017

Indicator	Colombia
Population	48 million
Population at national poverty line (%)	28%
GDP (Current US$ billions)	280.09
Income inequality, Gini coefficient	50.8
Mean years of schooling (years), for those aged 25 and over[a]	7.6
Ratio of female to male lower secondary completion rate (%)	113%
Secondary completion rate by sex, male	72%
Secondary completion rate by sex, female	82%
Total unemployment rate (% of labor force)[a]	10%
Female labor force participation (%)	71%
Labor force participation rate by sex, females 15+	59%
Labor force participation rate by sex, males 15+	83%
Seat held by women in national parliament (%)	19%
Life expectancy at birth (years)[a]	74

Source: World Bank Development indicators database (2016-2017).
[a] Source: UNDP 2016, Human Development Indicators (2010-2015).

Table 4.2. Number of ever divorced, separated and non-divorced/separated respondents in observation period, by sex

	n		Weighted %	
Sample	9,430			
Women	5,404		55.4	
Women Who Divorce/Separate during Observation Period	521		8.8	
Divorced Women		159		29
Separated Women		362		71
Women Who Do Not Divorce/Separate during Observation Period	4,883		91.2	
Men	4,026		44.6	
Men Who Divorce/Separate during Observation Period	259		6.1	
Divorced Men		67		32
Separated Men		192		68
Men Who Do Not Divorce/Separate during Observation Period	3,767		93.9	

Table 4.3. Descriptive characteristics by relationship status at wave 1

Variable	Women				Men			
	All (n=5,404) Mean/%	Married (n=1,873) Mean/%	Cohabiting (n= 2,468) Mean/%	Neither (n=1,063) Mean/%	All (n=4,026) Mean/%	Married (n=1,534) Mean/%	Cohabiting (n=2,136) Mean/%	Neither (n=356) Mean/%
Age	39.1	40.7	36.7	42.0	40.4	43.1	38.7	38.7
Education								
None	6.7	2.7	9.9	6.0	6.6	4.5	8.4	5.0
Primary Education 1-5 years	45.1	45.3	47.9	38.6	46.4	43.3	49.0	44.5
Secondary Education 6-13 years	33.1	31.3	33.5	35.1	31.8	28.6	34.5	29.0
More than 13 years	15.1	20.8	8.8	20.3	15.2	23.6	8.0	21.6
Employed	38.1	34.7	29.4	63.4	62.7	68.5	61.0	48.1
Children in the HH	74.1	72.7	80.4	62.2	74.4	75.9	81.1	28.8
Income								
Equivalized household income	$352	$440	$291	$348	$348	$448	$279	$359
Total household income	$812	$1,029	$687	$739	$798	$1,023	$652	$764

[a] In the sample of 5,404 women, 6 have missing values for education and for employment.
NOTE: Weighted percentages are shown.

Table 4.4a. Descriptive characteristics at T1[a] by dissolution status, women

Variable	Women (n=5,404)[b]						
	Never Dissolved				Dissolved		
	Overall (n= 4,883, 91.2%) Mean/%	Cohabiting (n=2,133, 45.0%) Mean/%	Married (n= 1,724, 34.0%) Mean/%	Neither (n= 1,026, 22.0%) Mean/%	Overall (n=521, 8.8%) Mean/%	Cohabiting (n= 362, 71.0%) Mean/%	Married (n= 159, 29.0%) Mean/%
Age	39.3	37.0	40.7	42.1	38.3	36.4	43.0
Education							
None	6.8	10.4	2.6	5.9	5.6	5.9	5.1
Primary (1-5 years)	45.6	49.5	45.2	38.4	38.6	37.4	41.5
Secondary (6-13 years)	32.8	32.3	31.8	35.4	34.3	36.1	30.0
More than 13 years	14.8	7.8	20.5	20.3	21.5	20.7	23.5
Employed	37.4	26.8	34.3	63.7	55.9	58.8	48.7
Children in the HH	73.7	79.7	73.3	61.9	75.3	81.6	59.7
Income[c]							
Equivalized household income	$350	$286	$436	$349	$437	381	553
Total household income	$806	$675	$1,021	$742	$977	840	1259

[a] T1 for those who did not dissolve is the first time I observe them in the data (Wave 1), while T1 for those who experienced dissolution is the year before the dissolution is observed (i.e. for those who experience dissolution between Wave 1 and Wave 2 then their T1 is Wave 1. For those who experience dissolution between Wave 2 and Wave 3 their T1 is Wave 2.

[b] In the sample of 5,404 women, 6 have missing values for education and for employment.

[c] Similar to the case of Table 4.3, when comparing Table 4.4a and 4.4b I see that the incomes (before dissolution, while still partnered) for men and women who experience dissolution is not exactly the same, as one might expect if I had only couples in my sample. However, incomes do not match because in my sample I have couples (n=3,345) and individual cases for whom we only have one of the two partners (partnered women with no partner in the sample n=997, partnered men with no partner in the sample n=326). Of those 997 women, 431 are married, and 566 are cohabiting. For the 326 men, comparable figures are 91 and 235.

NOTE: Weighted percentages are shown.

Table 4.4b. Descriptive characteristics at T1[a] by dissolution status, men

Variable	Men (n=4,026)						
	Never Dissolved				Dissolved		
	Overall (n=3,767, 93.9%) Mean/%	Cohabiting (n= 1,948, 52,0%) Mean/%	Married (n= 1,470, 39,2%) Mean/%	Neither (n= 349, 9,4%) Mean/%	Overall (n=259, 6.1%) Mean/%	Cohabiting (n= 192, 68,0%) Mean/%	Married (n= 67, 32,4%) Mean/%
Age	40.4	38.7	43.1	39.0	41.2	39.4	44.8
Education							
None	6.6	8.6	4.4	5.1	6.2	5.7	7.3
Primary (1-5 years)	46.3	49.2	42.7	45.4	48.7	49.0	48.0
Secondary (6-13 years)	31.7	34.5	28.9	27.8	30.6	32.0	27.8
More than 13 years	15.4	7.7	24.0	21.7	14.4	13.2	16.9
Employed	62.4	60.5	68.4	47.6	81.0	83.9	75.0
Children in the HH	73.9	80.7	75.7	29.3	75.1	76.3	72.6
Income[b]							
Equivalized household income	$352	$281	$451	$357	$348	$304	$470
Total household income	$807	$657	$1,034	$761	$735	$663	$931

[a] T1 for those who did not dissolve is the first time I observe them in the data (Wave 1), while T1 for those who experienced dissolution is the year before the dissolution is observed (i.e. for those who experience dissolution between Wave 1 and Wave 2 their T1 is Wave 1. For those who experience dissolution between Wave 2 and Wave 3 their T1 is Wave 2.

[b] Similar to the case of Table 4.3, when comparing Table 4.4a and 4.4b I see that the incomes (before dissolution, while still partnered) for men and women who experience dissolution is not exactly the same, as one might expect if I had only couples in my sample. However, incomes do not match because in my sample I have couples (n=3,345) and individual cases for whom we only have one of the two partners (partnered women with no partner in the sample n=997, partnered men with no partner in the sample n=326). Of those 997 women, 431 are married, and 566 are cohabiting. For the 326 men, comparable figures are 91 and 235.

NOTE: Weighted percentages are shown.

Table 4.5. Changes in mean equivalized household income pre and post dissolution

	Women			Men		
	Pre-Dissolution	**Post-Dissolution**	**% Change**	**Pre-Dissolution**	**Post-Dissolution**	**% Change**
Union Dissolved		**n=521 women**			**n=259 men**	
Equivalized household income	$437	$460	5	$348	$548	57
Marriage Dissolution		**n=159 women**			**n=67 men**	
Equivalized household income	$553	$620	12	$470	$764	63
Cohabitation Dissolution		**n=362 women**			**n=192 men**	
Equivalized household income	$381	$381	0	$304	$469	54
Union With Children in HH		**n=398 women**			**n=194 men**	
Equivalized household income	$384	$401	4	$299	$506	69
Union Without Children in HH		**n=123 women**			**n=65 men**	
Equivalized household income	$599	$637	6	$493	$671	36

NOTE: Weighted means are shown.

Table 4.6. Mean proportions of women's gross household income pre and post dissolution from different sources

	Women (%)		Men (%)	
	Pre-Dissolution[a]	**Post-Dissolution**	**Pre-Dissolution[b]**	**Post-Dissolution**
Earnings	87.0	72.8	87.1	86.8
Pensions	2.2	2.5	1.5	3.1
Rent	0.9	3.6	1.3	2.6
Interests	0.2	0.0	0.0	0.0
Other (not remittances)	2.7	1.7	2.5	1.6
Help in cash	4.7	18.8	5.1	5.9

[a] There is one missing observation for women's jobs, pension and rent, therefore sample size for those items is n=520 instead of n=521.

[b] There is one missing observation for men's pensions, therefore sample size for that item is n=258 instead of n=259.

Table 4.7. Fixed effects models predicting equivalized household income for men and women

	Women	**Men**
	b/se	b/se
Union Dissolved	-$0.16	$133**
	(24.63)	(47.16)
Employed	$68	-$15
	(40.94)	(74.63)
Children in the household	-$42	-$178**
	(58.05)	(63.45)
Constant	$431***	$519***
	(52.38)	(75.89)
N	1,042	516

* p<0.05 ** p<0.01 *** p<0.001.

[a] In the sample of 259 men who experience union dissolution during my observation period, one of them has a missing value for employment after dissolution. For this reason, both observations (pre and post dissolution) for this case are excluded from my analyses.

Table 4.8. Education and employment at T1 for men and women, by country and dissolution status[b]

	Women		Men	
	13+years of education	**Employed**	**13+years of education**	**Employed**
Colombia	**%**			
Non-Dissolved	13.2	30.0	14.8	63.9
Dissolved	21.5	55.9	14.4	81.0
	15+years of education	**Employed**	**15+years of education**	**Employed**
UK	**%**	**%**	**%**	**%**
Non-Dissolved	17.5	69.3	17.9	87.2
Dissolved	13.9	67.1	16.6	79.1
Germany				
Non-Dissolved	19.6	65.8	25.3	92.0
Dissolved	16.1	71.7	23.9	87.2
Australia				
Non-Dissolved	28.8	73.3	26.6	91.3
Dissolved	20.1	65.0	17.5	88.2
Korea				
Non-Dissolved	26.2	45.5	38.4	91.2
Dissolved	8.2	65.6	14.3	85.7
U.S.				
Non-Dissolved	31.7	73.0	31.7	92.5
Dissolved	17.0	71.2	17.8	82.7
Switzerland				
Non-Dissolved	21.0	73.6	42.4	96.7
Dissolved	30.4	86.2	46.7	95.7

[a] More than 13 years of education is about having more than a High School Degree. The education categories in the UK differ from the other countries, but the comparison of those who do and do not experience dissolution within the UK can be compared.

[b] Weighted percentages are shown for Colombia.

Table 4.9. Changes in equivalized household income before and after dissolution, by country

	Women						
	Colombia[b]	**UK**	**Germany**	**Australia**	**Korea**	**U.S.**	**Switzerland**
Total	+5%	-26%	-35%	-21%	-9%	-30%	-19%

[a] Measures of equivalized household income not directly comparable between Colombia and the other countries.
Source: authors for Colombia; de Vaus et al. (2017) for other countries.

Table 4.10. Mean proportions of women's household income pre and post-divorce/separation from different sources, by country

	Colombia (%)	Germany (%)	Australia (%)	Korea (%)	USA (%)	Switzerland (%)	UK (%)
Pre-dissolution							
Government payments+private transfers[a]	7.4	14.6	20.8	5.0	7.1	8.4	20.2
Own income+partner's income[b]	90.2	79.8	71.6	95.2	90	96.1	78.9
2-3 Years Post-Dissolution[c]							
Government payments+private transfers[a]	20.5	29.9	38.8	8.3	17.9	16.0	38.1
Own income+partner's income[b]	78.9	54.5	52.4	91.7	65.3	69.1	50.1

[a] The OECD paper differentiates Government payments and Private transfers. However, currently with the Colombian data I only have measures of other income not coming from remittances and help in cash which I believe are somewhat comparable to government payments+private transfers.

[b] The OECD paper differentiates Own income and Partner's income. However, currently with the Colombian data I only have a household measure of earnings and household measures of investments (rent and interest). Moreover, the Colombian data has a measure of pensions, which very few people report, and which I include here as investments. With these changes, I believe these two measures are to some extent comparable.

[c] In the OECD paper the measures post-dissolution are for 2, 4, and 6 years post-divorce. In the Colombian data I have measures 3 years post-dissolution, which I am comparing in this table to 2 years post-dissolution in the OECD paper.

Chapter 5. Conclusion

This dissertation examined two particular topics in the field of families and households that have been largely understudied. I looked at the dynamics of formation and dissolution of three-generation households in the U.S., and at the economic consequences of marriage and cohabitation dissolution for women in Colombia. I use longitudinal survey data, event history analysis, descriptive statistics and fixed effects models to study the trajectories of women and their experiences of family and household complexity in both countries. Findings have the potential to expand our understanding of complex households in the U.S., as well as to contribute to future research exploring the role of these arrangements on children's well-being. Moreover, they inform the study of family trajectories in Colombia, shedding light on the economic well-being of women after union dissolution, and on the role that different income sources play in mitigating the effect of divorce and separation. All three chapters also inform our understanding of the way in which women use the private safety net as a coping strategy in times of need.

In my first and second studies I use event history analysis models, mother's reports and contextual restricted data from the Fragile Families and Child Wellbeing Study (FFCWS). In examining children's living arrangements after birth, I find that experiences of three-generation households among mother-child households are more common early in a child's life (at birth), among racial and ethnic minorities, and that the probability of experiencing the formation of a three-generation household decreases as children age. Similarly, I find that once formed, three-generation households are short-lived, and that children may be exposed to both parental and non-parental changes in their early years. My findings indicate that economic and non-economic factors are associated with the dynamics of formation and dissolution of these complex

households in the U.S. I find that a mother's relationship status with the focal child's father as well as the presence of a new partner in the mother's life, are two of the most significant predictors of the formation and dissolution of three-generation households, consistent with the "push-pull" effect described in previous research. In that sense, I find that mothers who are in a relationship other than a marriage or cohabitation with the child's father, are more likely to enter a three-generation household, while they are more likely to end this complex arrangement if they are married or cohabiting with the child's father. Similarly, mothers without a new partner are more likely to enter three-generation households, while those with a new partner who were co-residing with grandparents at the time of the child's birth, are more likely to exit these complex household arrangements. Moreover, I find that at least two economic factors are associated with the formation and dissolution of three-generation households. Mother-child households that receive government benefits such Temporary Assistance for Needy Families (TANF) or the Supplemental Nutrition Assistance Program (SNAP) are less likely to enter three-generation households. Similarly, women who were already in a three-generation household at the time of the child's birth and who receive benefits, are more likely to exit co-residence, which is consistent with the idea that the public safety net might "crowd out" the need to activate the familial network. Finally, the effect of poverty is somewhat puzzling. Mother-child households with higher poverty levels are both more likely to enter and more likely to exit three-generation households after the child's birth.

Findings from these two studies expand our understanding on the dynamics of formation and dissolution of three-generation households early in a child's life, but should also be interpreted in the light of a couple limitations that open up the opportunity for future research in this area. First, data limitations keep me from having more detailed measures of family and

household transitions between waves, so the number of transitions I observe is underestimated, and future research could examine these shorter time periods. Second, data limitations keep me from including potentially relevant correlates such as mothers' preferences and the availability of kin. Third, I examine only the first transition in and out of three-generation households after a child's birth. However, some children may experience multiple changes in their family and household structure over the life course. Therefore, it would be relevant to document the number of transitions, to examine their correlates, and to explore the role of the number and various types of transitions on children's well-being.

Despite these limitations, my findings have implications for future research, policy and practice. As three-generation households in the U.S. continue to rise and will likely continue to do so given the racial and ethnic composition of the U.S., as well as the changing formal safety net in place, particularly for single mothers and their children, a better understanding of these households and their consequences for the well-being of children is important. First, as my findings indicate, children are likely to experience the gain but also the loss of a grandparent as a household member, often simultaneously with another family change, and often in the first three years of their life, which highlights the need to examine the role of family changes and household changes concurrently. Second, I find an association between the receipt of government benefits and the use of the private safety net (three-generation households). Future research in this area should continue to explore the use of both the private but also the public safety net and their influence on the dynamics of different family and household configurations.

In my last study I use Colombian longitudinal data, descriptive statistics and fixed effects models to examine the consequences of marriage and cohabitation dissolution on women's economic well-being, in comparison to six OECD countries. To my knowledge, this is the first

study examining this issue in Colombia as well as the first to document from a longitudinal perspective the trajectories of family formation and dissolution for women in the country, which has one of the highest proportion of cohabiting adults of reproductive age. Contrary to prior research and findings from the study of six OECD countries, I find that women who experience the dissolution of their unions (both marriages and cohabitations) are more economically advantaged than those who do not. In addition, I do not see a decrease on women's economic well-being post-dissolution, although their increase is not as large as the one men experience. My findings also indicate that private transfers from family and friends are one of the main income sources that mitigate the effect of union dissolution on women's economic well-being.

Although this is the first study in Colombia aiming to document the economic consequences of divorce and separation for women, there are several limitations that can inform future research in this area. First, I have data limitations that prevent me from having more detailed data on union formation and dissolution between waves. Second, this type of research faces limitations in selection, which makes causal inference difficult. I am to further address this issue in my future research. Third, my measure of economic well-being could be refined to account for government transfers and taxes. Moreover, there are additional measures of women's economic well-being worth exploring in future research such as earnings and wealth. Finally, in my current study I am only looking at changes in economic well-being among women who experience the dissolution of their unions, while it would also be relevant to consider the well-being of women who do not exit their unions, as my research suggests lower levels of economic well-being for them compared to those who do split. The examination of women's well-being among those who do not exit their unions is particularly relevant in the Colombian context, given gender disparities and the status of women's rights and opportunities in the country.

Finally, regardless of the limitations mentioned above and the fact that this analysis is still exploratory, my findings have implications for research, policy and practice. Although I do not find a decrease in women's economic well-being after their unions dissolved, their increase is still substantially smaller than that of men, which suggests that the gender gap remains. In this context, it is relevant to highlight that, in most cases, women hold custody of their children after divorce and separation, which means that any changes to the economic well-being of women have direct implications for the well-being of children too. Interventions aimed at closing this gender gap might include a variety of policies to support women not just through the dissolution of their unions but even before they enter one, if they do. For example, policies intended to balance the gender gap include labor market policies aimed at closing the pay gap and reduce the motherhood penalty, as well as other policies that might intervene after their unions have dissolved, like child support policy. Lastly, my findings indicate the role that the private safety net (help from friends and family) plays in supporting women who experience the dissolution of their unions. Future research should further explore the use of the private safety net, but also consider whether family policies in Colombia have adapted to the increasing instability of unions and to the increasing diversity of living arrangements in the country.

Overall, my dissertation intends to switch the focus from the study of more traditional parental relationships to look also at other family and household structures. My findings have at least two major takeaways. First, in all papers I see the important role that the private safety net plays in supporting women and children, both in cash support from family and friends and in co-residence. This finding raises the question of who has the main responsibility to support families in times of economic downturns and in the face of increasing family instability. Research in this area should be taken one step forward to investigate the effect of the use of the private safety net

on the family system as a whole. Second, my dissertation calls for the study of alternative living arrangements to the nuclear family that continue to increase in prevalence and that continue to make their way into the everyday lives of children in different countries. These issues open up the opportunity for future research on whether policies have adapted to serve more diverse and potentially unstable arrangements and their consequences for the well-being of children and adults, all of which represent an opportunity to advance the field of family policies from an international perspective.