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Effects of the Great Recession on Child Development

By
ARIEL KALIL

The Great Recession and its reverberations resulted in levels of economic distress unprecedented since the 1930s. Economic downturns, including the Great Recession, are known to affect adult employment and income, housing, family composition, and financial strain. Many of these family characteristics affect child and adolescent development in the short and long run. The nature of children's experiences in economically unstable families during the Great Recession is not yet fully understood. This article summarizes empirical research on the relationship between economic downturns and child and youth development. It also discusses theoretical perspectives linking economic downturns to child development through the family's emotional and behavioral processes, on one hand, and family investments of time and money, on the other. The evidence from existing studies of parental job loss, residential moves, income instability, and financial strain suggests that the Great Recession may ultimately have negative effects on child development.

Keywords: economic conditions; child development; family behavior; parental investments

The global economic downturn, sparked by the bursting of the U.S. housing bubble and the ensuing crisis in the financial sector, produced a lengthy list of casualties. Indeed, scholars have suggested that the "Great Recession" (which officially lasted from December 2007 through June 2009) may have affected more families than any recession since the Great Depression. Employment levels dropped more severely compared to any other recession in the past 50 years (Greenstone and Looney 2010). The unemployment rate rose to

Ariel Kalil is a professor in the Harris School of Public Policy Studies at the University of Chicago, where she directs the Center for Human Potential and Public Policy. She is a developmental psychologist who studies how economic conditions and parents' socioeconomic status affect child development and parental behavior.

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10 percent at the end of 2009, up from 5 percent at the same time in 2007 (U.S. Bureau of Labor Statistics n.d.). In 2011, real median household income was 8.1 percent lower than in 2007 (DeNavas-Walt, Proctor, and Smith 2012). The collapse of the housing market in early 2006 (which preceded the spike in unemployment) led to unprecedented losses in home equity and extremely high rates of foreclosures (Gould Ellen and Dastrup 2012). In the third quarter of 2009, the combined percentage of loans in foreclosure or delinquency was 14.4 percent, the highest ever recorded in surveys conducted by the Mortgage Bankers Association (2010). Moreover, in 2010, 17.2 million households were food insecure, the highest on record; 3.9 million of these households included children, representing about 10 percent of all households with children (Coleman-Jensen et al. 2012).

Almost four years after the official end of the recession, in a recovery that has been anemic, the economic problems created by unemployment and the housing crisis persist. A large literature (much of it summarized in other articles in this volume) shows the impacts of economic downturns in general and the Great Recession in particular on adult employment and earnings, income and wealth, physical and mental health, and family structure. These economic shifts represent key social forces capable of shaping the future life courses of American children.

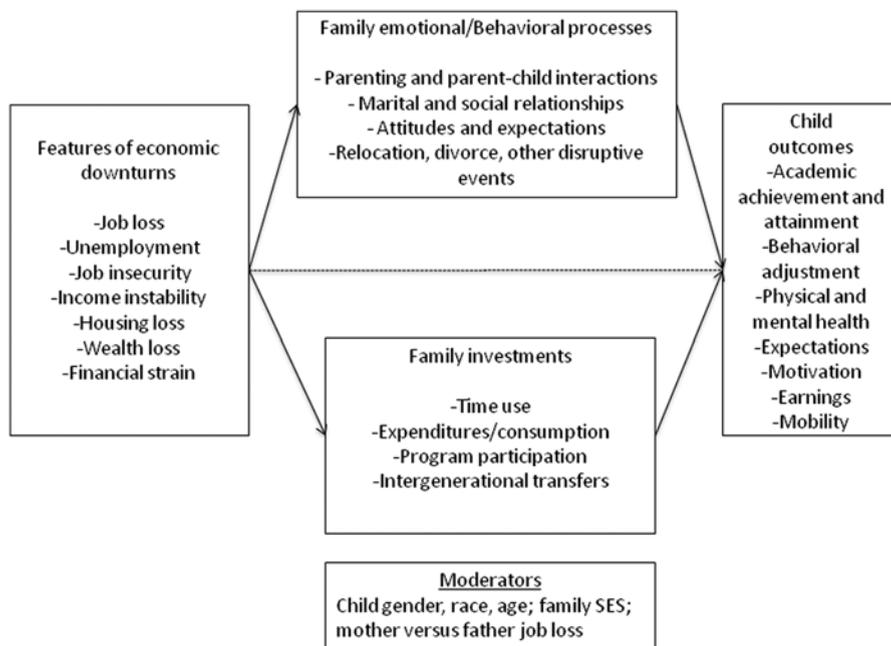
Developmentalists have long been interested in how economic changes can affect children (Conger and Donnellan 2007; Gershoff, Aber, and Raver 2003; Weiland and Yoshikawa 2012). However, there is currently little evidence on the impact of the Great Recession on child development. The goal of this article is to summarize existing research and theoretical perspectives on the relationship between different dimensions of economic downturns and child and youth development. In so doing, it can help to formulate predictions about the Great Recession's likely impacts on child development.

Economic Downturns and Children's Development

Following the conceptual model shown in Figure 1, this article focuses on those dimensions of economic downturns most salient to the Great Recession. The article reviews evidence of the impact of these phenomena on child development. It then highlights some of the family level mechanisms through which those effects might occur. It should be noted that economic downturns can also affect child development through community-level mechanisms. Such impacts are not the focus of this article, but see Weiland and Yoshikawa (2012) for a discussion of this point. This article discusses how different impacts may arise in different subgroups of children and families.

The preponderance of relevant evidence in this area focuses on parental job loss. Because job loss is among the most obvious phenomena induced by the Great Recession, studies on this topic will be an important focus of this and later sections. Two related areas for which there is a reasonable amount of evidence

FIGURE 1
Economic Downturns, Family Processes, and Child Development



for effects on children are residential moves and parents' subjective perceptions of financial hardship. Thus, studies in these areas are also reviewed. Throughout, studies that rely on high-quality nationally representative data that make rigorous attempts to identify causal impacts are featured. Results from all these studies, though not necessarily drawn from families living through the Great Recession, are helpful for making inferences about how children's development may unfold in the years following the recession.

Parental job loss

Recent studies of parental job loss and children's development have focused largely on measures of children's human capital, such as educational achievement and attainment. Rigorous studies of children's emotional or behavioral development (which can itself affect educational achievement and attainment) are notably lacking in this area. The greater number of studies that focus on children's attainment (as opposed to their emotional well-being) reflects data availability in many instances. For example, several studies in this area use administrative records or large-scale economic surveys focused on income and employment dynamics. These data sources often provide information on years of schooling or other long-run human capital outcomes but contain no measures of children's emotional well-being.

The evidence suggests that parental job loss adversely affects children's educational attainment, even controlling for an extensive range of family background characteristics (Coelli 2011; Kalil and Wightman 2011a, 2011b; Kalil and Ziol-Guest 2008; Kertesi and Kezdi 2007; Oreopoulos, Page, and Stevens 2008; Rege, Telle, and Votruba 2011; Stevens and Schaller 2010). All these studies use nationally representative data and adopt rigorous efforts to identify causal impacts. For instance, Rege, Telle, and Votruba (2011) use population register data from Norway to study job losses that arise from plant closings. Stevens and Schaller (2010) and Kalil and Ziol-Guest (2008) both use longitudinal data from the Survey of Income and Program Participation (SIPP). Stevens and Schaller control for individual fixed effects, whereas Kalil and Ziol-Guest control for family background characteristics; the two studies arrive at very similar conclusions. The studies by Kalil and Wightman (2011a, 2011b) use the Panel Study of Income Dynamics (PSID) and control for a rich array of family background characteristics. Kertesi and Kezdi (2007) use representative data from the Hungarian Labour Force Survey and rely on random variation in the age of the child at the time of the parents' job loss to identify the effects on school completion.

Many of these studies show that the impact of parental job loss is more pronounced for families of low socioeconomic status (SES). For instance, Coelli (2011), using data from the Canadian Survey of Labour and Income Dynamics (SLID), showed that youths ages 16–17 whose parents lose a job at that time are less likely to attend college. In this study, the negative effect of parental job loss on children's postsecondary attendance is larger for parents with a high school education or less. Stevens and Schaller (2010) also find that job loss increases the probability of children's grade repetition, primarily among those whose parents have a high school education or less. Kalil and Wightman (2011b), who show that parental job loss is associated with a reduced likelihood of youths' high school graduation, find the strongest associations for low-income families. About 40 percent of this association is explained by income instability and changes in the home environment. Finally, Oreopoulos, Page, and Stevens (2008) rely on Canadian administrative data to show that adults whose fathers lost jobs through firm closings when the children were teenagers have reduced earnings and a greater reliance on public assistance. As in the other studies, these effects are driven by the experiences of low-income families. In a study of low-income mothers drawn from the welfare rolls in one county in Michigan, Johnson, Kalil, and Dunifon (2010) found that mothers' job loss is a significant predictor of children's behavior problems and that involuntary residential moves accounted for a significant share of this association.

Finally, a study using representative panel data from Germany showed that fathers' unemployment reduces the subjective well-being (i.e., happiness) of sons in the late teenage/early adulthood years. These adverse impacts on son's subjective well-being occurred not only at the time of fathers' job loss but persisted five years later (Kind and Haisken-DeNew 2012).

Ananat and colleagues (2011) conducted a population-level study that is relevant to this discussion. These researchers examined the impact of state-wide job losses from mass layoffs on aggregate measures of youths' achievement. To

do so, they relied on variability in job losses across states and years. They found that job losses to 1 percent of states' working-age populations decrease states' eighth-grade math scores by 0.076 standard deviations. This result is substantially larger than effects in studies that compare students whose own parents lose employment to those whose parents did not, suggesting that economic downturns affect all students, not just students whose parents lose jobs. These researchers argue that children may be affected by their friends' and neighbors' job loss and the resulting changes to their communities and classrooms. They then tested four mechanisms that may account for these direct and indirect effects: changes in income, changes in school resources, changes in youths' problem behavior, and changes in children's emotional stress. Their analysis points to increases in children's emotional stress as the most plausible mechanism among these alternatives.

Residential moves

Workers who lost jobs during the Great Recession may also have lost their homes or have been forced to move. Stoll (2013) reports sizable impacts of the Great Recession on local moves, especially in areas and among populations hit hardest by the economic downturn. In contrast to prior periods, when local moves reflected upward mobility, these movers in the Great Recession were moving down economically, seeking work and a cheaper home.

Residential moves, particularly frequent moves (i.e., moving three or more times), are hypothesized to be stressful for children and adolescents. Frequent household moves may be correlated with negative child development outcomes because such moves are accompanied by frequent changes in schools and are disruptive to children's social capital and peer networks (Astone and McLanahan 1994; National Research Council 2010).

Moving is associated with a range of negative child and adolescent outcomes, including lower school achievement and poorer social and emotional adjustment (National Research Council 2010). Haveman, Wolfe, and Spaulding (1991) found that moving three or more times (particularly in early childhood or adolescence) is strongly negatively associated with high school graduation even after controlling for a variety of family background variables. Ziol-Guest and Kalil (2013) also found that moving three or more times, or experiencing any involuntary move between birth and age 15 is associated with lower levels of educational attainment and poorer labor market outcomes in adulthood. Both Haveman, Wolfe, and Spaulding and Ziol-Guest and Kalil relied on longitudinal data from the PSID. Ziol-Guest and Kalil's results were robust to controls for family fixed effects. For children who do not live with both biological parents, even one residential move has a negative correlation with school performance (Tucker, Marx, and Long 1998). Ziol-Guest and McKenna (forthcoming) find that moving three or more times in a child's first five years is significantly associated with increases in behavior problems among young children in the Fragile Families and Child Wellbeing Survey. These effects are strongest for children who live in poverty.

Income instability

As noted in other articles in this volume, the Great Recession had a marked negative impact on family income and wealth. The phenomenon of income instability has been understudied in relation to child development (Hill et al. forthcoming). Declines in income arising from wage cuts, reduced hours, or job loss may affect parents' ability to purchase necessary goods and services for their children. Income or wealth losses may also be psychologically stressful for parents, with attendant negative consequences for children. The discussion of mechanisms in the following section elaborates on this point. Fluctuating income may make it difficult for families to maintain eligibility for childcare, health insurance, and other government supports that can benefit children's development (Hill et al. forthcoming). One study using high-quality data found that year-to-year income losses of 30 percent or more had a direct negative effect on preschool children's cognitive test scores and their mothers' depressive symptoms over and above the level of family income (Yeung, Linver, and Brooks-Gunn 2002).

Job and income losses arising from the Great Recession also increased the number of children living in poverty. In 2011, 16.1 million children (21.9 percent) lived below the poverty line, up from 14.1 million in 2008 (DeNavas-Walt, Proctor, and Smith 2012). A large body of research shows that poverty has adverse effects on a range of developmental outcomes for children and youth (Duncan, Ziol-Guest, and Kalil 2010).

Subjective perceptions of economic downturns

As Ananat et al. (2011) showed, parents need not actually to lose their jobs during an economic downturn for adverse impacts on children to occur. Two studies show that children's perceptions of their parents' job insecurity are negatively correlated with the children's belief in the Protestant work ethic (i.e., that work is inherently good and fulfilling and that hard work can overcome obstacles to success). As expected, when students had a low Protestant work ethic they were more likely to display low motivation to work (Barling, Dupre, and Hepburn 1998). Barling, Zacharatos, and Hepburn (1999) also found that undergraduates who perceive their parents to be insecure about their jobs are distracted cognitively and have worse academic performance.

Parents' subjective perceptions of economic downturns are also important. Numerous studies focus on parents' perceptions of economic hardship and show that such perceptions predict higher levels of children's behavioral problems and lower levels of achievement (Conger and Donnellan 2007). These subjective perceptions, which are sometimes labeled "financial strain" or "financial stress" in the literature, may stem from respondents' firsthand experiences with economic losses. However, such worries and anxieties could also develop even in the absence of individual-specific economic shocks. Individuals' perceptions of the economic climate may be shaped by events affecting their friends and family; by reports in the media; or by interactions in their neighborhood, workplace, or social environment.

Data collected during the Great Recession suggest high levels of economic anxiety. Results from the Michigan Consumer Sentiment Survey show that 60 percent of individuals thought their financial situation in 2009 was worse than in the previous year. Only half that number expressed that opinion in 2006 (Petev and Pistaferri 2012). Similar results were obtained by Gauthier and Furstenberg (2010), who surveyed a nationally representative sample of parents during the height of the Great Recession. Their survey posed the question, “How well do you currently get by with your family’s income?” with possible answers ranging from “with great difficulty” to “very easily.” Fully two-thirds of parents said that they were getting by with “difficulty” or “great difficulty” (i.e., they were feeling financially strained). Although lower-income respondents were more likely to report financial strain, 60 percent of middle-income respondents (those in the fourth to sixth decile of the income distribution) said they were experiencing financial strain. Those parents who reported a worsening financial situation over the 12 months prior to the survey reported the highest levels of financial strain. Given these findings, it is not surprising that consumer confidence, which reflects respondents’ perceptions of current and future financial situations and business conditions, declined dramatically between 2006 and 2008 for rich and poor alike (Petev and Pistaferri 2012).

How might these worries and anxieties matter for children’s development? Research in behavioral economics suggests that “scarcity,” or the psychological experience of limited resources, levies a cognitive tax on psychic resources such as attention, self-control, and patience (Shah, Mullainathan, and Shafir 2012). These cognitive skills affect how people look at problems and make decisions. In the context of deteriorating economic conditions and rising economic anxiety, it is easy to imagine how these subjective perceptions of economic hardship might also affect parent-child interactions and thereby affect child development. Alternatively, as mentioned, children’s behavior could be affected directly by their perceptions of their parents’ anxieties and worries.

Leininger and Kalil (2012) examined this idea by studying the associations between parents’ subjective perceptions of financial strain and child development in a sample of families representative of southeast Michigan in the wake of the Great Recession. Families in that area of the country, which includes the city of Detroit, were hit particularly hard by high levels of unemployment and foreclosures. Leininger and Kalil studied black and white families separately, given evidence of much higher rates of poverty, job loss, housing loss, and material hardship among blacks in their sample. In both black and white families, they found significant associations between parents’ subjective perceptions of financial strain and children’s behavioral problems. For the black families, this association was explained by those families’ own experiences of poverty, unemployment, food insecurity, and residential instability. For whites, in contrast, the relationship between financial strain and children’s behavioral problems existed independent of these objective measures of economic hardship. It could be that the adverse effects of white parents’ financial strain on children’s behavior stem from different types of objective economic losses induced by the recession, such as wealth or asset losses. Or this association

could be a function of white parents' anxieties or worries about events that may occur in the future.

Theoretical Frameworks and a Conceptual Model

How do negative effects of economic downturns on children's development arise? Two perspectives, drawn primarily from psychology and economics, respectively, guide research in this area. Figure 1 shows that the conceptual model links economic downturns to children's development through family emotional and behavioral processes, on one hand, and family investments of time and money, on the other. These two perspectives will be discussed in turn. Other versions of this model are presented and discussed in Weiland and Yoshikawa (2012) and Gershoff, Aber, and Raver (2003).

Family emotional and behavioral processes

The first perspective emphasizes parents' psychological resources, parenting practices, and parent-child interactions as important links between adverse social conditions and child development. According to this model, key aspects of economic downturns, such as job and income losses, are psychologically stressful for parents (Conger and Donnellan 2007). Similarly, moving is stressful because it disrupts routines and causes the loss of social support and peer networks (Astone and McLanahan 1994). These family pressures can increase family conflict, inhibit parents' emotional warmth, and increase parents' erratic or disengaged behaviors (Kalil and Wightman 2010). In turn, ineffective parenting can lead to children's poorer health, adjustment, and achievement (Conger and Donnellan 2007). One study used state-level data to show that increases in the fraction of children living in extreme poverty result in increases in child maltreatment (Paxson and Waldfogel 2003).

Marital relationships. The potential consequences of economic downturns on parents' marital relationships are also part of this perspective. When spouses experience economic hardship, they may suffer individually and as a couple (Kalil and Wightman 2010). Marital conflict is a significant element of family functioning and has known adverse consequences for children's adjustment and well-being (Cummings and Keller 2007). Several studies, using large-scale representative data, have found a positive association between job loss and the risk of divorce (Charles and Stephens 2004; Yeung and Hofferth 1998), which can pose risks to children's development (Simons et al. 1999).

A study by Harknett and Schneider (2012), however, found no evidence that economic stresses induced by the Great Recession accelerated or increased rates of marital dissolution in a sample of mothers with young children. In fact, this study found that higher mortgage delinquency rates in a state are associated with lower rates of marital dissolution. One explanation is that a bad housing market

could increase the cost of marital dissolution by making it difficult for couples to sell their homes. The implications of postponing divorce for children are unclear. Children could benefit if low-conflict marriages are preserved. However, the opposite could be true if high-conflict parents who wish to divorce are compelled to stay together because of the financial costs of divorce.

Family attitudes and expectations. As noted, children's observations of their parents' (or other adults') employment experiences shape their own views of their future economic opportunities, and this may be associated with their academic performance and attitudes. Giuliano and Spilimbergo (2009) studied the impact of recessions on beliefs formed in early adulthood (ages 18–25). They found that individuals coming of age during deep recessions tend to believe that success in life depends more on luck than on effort. They also support more government redistribution, but they are less confident in public institutions. In this study, the beliefs of individuals exposed to recessions before they were 18 or after they were 25 changed far less than those who were exposed to economic downturns between the ages of 18 and 25.

Parents serve as role models for their children's attitudes and behaviors via their own interpretation of job loss and unemployment. As mentioned, some studies show how children's pessimistic perceptions of their parents' or others' labor market experiences can diminish motivation and lead to disengagement from school or work (Barling, Dupre, and Hepburn 1998; Galambos and Silbereisen 1987). It is also plausible to hypothesize that an involuntary residential move to a neighborhood with a higher unemployment rate could shape children's outlook for the future via role-modeling effects of other adults (Leventhal and Brooks-Gunn 2000).

At the same time, it is theoretically possible that some children who witness their parents' (or other important adults') job loss may be motivated to stay in school to eventually secure better or more stable jobs than the ones their parents have obtained. One small qualitative study of job loss among high-income professionals found that many parents used the job loss experience as a real-life lesson to help launch their teenage children into adulthood and prepare them for the world of work (Mendenhall et al. 2008). This phenomenon, however, may be unique to families with a sufficiently high level of economic or emotional resources. Nevertheless, downturns could lead to greater school enrollment or persistence by making the labor market less attractive. For example, Goldin (1999) found that the Great Depression led to increases in school enrollment in the United States, particularly in states with the worst labor market impacts.

The family investments perspective

The second major perspective reflected in the conceptual model depicted in Figure 1, the "investments" perspective (see Becker and Tomes 1986), posits that key features of economic downturns, such as unstable or insufficient work, limits families' economic resources to purchase the services and goods (e.g.,

schools, housing, food, and safe and cognitively enriched learning environments) that are critical for successful child development (Duncan, Ziol-Guest, and Kalil 2010). For instance, in situations where parents purchase their children's education directly, either by sending them to private schools or financing their college education, the loss of resources may be especially potent. Dynarski (2003) documents that the inability of families to finance their children's post-secondary education is a significant obstacle when federal assistance is not available. Moving may similarly diminish the quality of the social and learning environments for children if it involves moving to lower-quality neighborhoods and schools.

Carneiro and Heckman (2003) discuss the importance of providing a household environment that supports children's education preparedness. They argue that higher incomes enable parents to buy higher-quality environments that produce children who are differentially capable, motivated, and empowered by their parents to take advantage of educational opportunities. Yeung, Linver, and Brooks-Gunn (2002) found that the positive association between family income and children's cognitive development is mediated by investment in a stimulating learning environment. Coelli's (2011) article on job loss and postsecondary enrollment points to the probable role of income losses in constraining opportunities for parents to pay for college. Other research has shown that housing wealth affects the quality of postsecondary schools that students attend, especially among low-income students. Changes in home prices also affect the likelihood that low-income students will complete college (Lovenhein and Reynolds 2013). Thus, job, income, or home equity losses can diminish a family's ability to invest in the resources necessary to promote children's cognitive development and educational attainment.

Yeung and Hofferth (1998) found that families who experience severe income losses are especially susceptible to cuts in expenditure. Similarly, Stephens (2001) found that consumption is significantly reduced as a result of permanent earnings shocks, such as job loss. A recent study shows that food insecurity rates spiked with the onset of the Great Recession and were far above the rates that would be predicted by the poverty rate (Anderson et al. 2012). This is important because food insecurity is associated with poor child outcomes in the realms of physical health and psychological and academic functioning (Alaimo, Olson, and Frongillo 2001). Adverse impacts of food insecurity on young children's development are also important given the linkages between early childhood circumstances and later life outcomes (Case, Fertig, and Paxson 2005).

Parents' time use. Parents also invest time in their children's development. Changes in parental employment induced by the Great Recession may have immediate impacts on the organization and patterns of family life, including how parents spend their time at home and with their children. The Great Recession could also have affected parents' use of time by changing their preferences or priorities regarding time use, regardless of changes in their employment status. Nevertheless, there is ample reason to be concerned about the impact of job loss and unemployment on family life. However, unemployed

parents might increase time caring for children or other types of home production in response to reduced work in the marketplace. Aguiar, Hurst, and Karabarbounis (forthcoming) addressed this question by studying time use during the Great Recession. They concluded that only 30 percent of forgone market work hours are allocated to home production and only another 5 percent to increased childcare. Instead, the bulk of the foregone market work time is allocated to leisure.

However, as mentioned, changes in parental time use during the recession need not arise exclusively from changes in parents' individual employment experiences. Indeed, Morrill and Pabilonia (2012) showed that parents' own employment experiences are not the driving force behind the impact of higher state-level unemployment in the Great Recession and an increase in fathers' time alone with children. It could be that changes in fertility and living arrangements arising in the Great Recession (discussed elsewhere in this volume) affect time use. Economies of scale may be achieved when families are doubled up such that any one person has to contribute fewer hours of home production or childcare. Smaller family sizes from decreases in fertility might also lower parents' time in home production. Parents who are distressed or worried as a result of the recession may spend less time in home production or with their children, perhaps because they do not enjoy doing so.

In contrast, diminishing family income or wealth, or an increased focus on saving, could induce families to invest more of their own time in home production (versus paying for someone else to do it). Parents' time with children could rise if lower-cost "family" activities replace potentially more expensive activities that parents or children do alone. Morrill and Pabilonia (2012) used time diary data from 2003 to 2010 to show that parents' time with their spouse increased sharply as the state unemployment rate rose higher than 10 percent. Parents might curtail children's extracurricular activities, which could increase parent-child time as well.

The "family process" and "investments" perspectives are not mutually exclusive. Indeed, it likely takes a sensitive and responsive parent to scaffold children's experiences with purchased "inputs" into development, such as books and toys. Nevertheless, research suggests that economic investments tend to link income (level and stability) to measures of children's cognitive achievement, whereas parenting behaviors more often account for linkages between economic conditions and children's emotional adjustment (Yeung, Linver, and Brooks-Gunn 2002).

Subgroup Differences

The Great Recession will not affect all families equally. Although myriad characteristics could produce subgroup differences, two that may be likely are differential impacts of mothers' versus fathers' employment experiences and differential effects at different stages of children's development.

Mothers' versus fathers' employment experiences

There is reason to believe that children could be differentially affected by mothers' versus fathers' employment. Evidence extending as far back as the Great Depression shows adverse impacts of fathers' job losses, but not mothers', on family life and child development (Kalil 2009). It should be noted that this hypothesis is based on experiences of mothers in married-parent households. Despite the rise in maternal employment, it is possible that mothers' involuntary job losses do not have as great a negative impact on family life as do fathers' losses. Two studies (Kalil and Ziol-Guest 2008; Rege, Telle, and Votruba 2011) have shown that mothers' job losses (in married-parent households) do not have any adverse effects on children's educational attainment. This was true even among families in which mothers were primary earners. The results might reflect cultural expectations and the subjective meanings attached to social roles, in particular the persistent cultural emphasis on the role of father as breadwinner (Gerson 1994). Although men's time spent with children has risen over time, women still assume primary care of children (Bianchi 2000). Thus, women who experience involuntary job losses may more seamlessly substitute the role of household manager and caregiver during periods of joblessness, thereby minimizing marital conflict.

In contrast, it may be far less normative for fathers to transition to this role, which could spark marital conflict and interfere with good family relations. It is also possible that the quality of time (which has not been measured in surveys) with children during mothers' versus fathers' unemployment differs. It is possible that mothers' time during a separation from employment is more productively spent in household management and investing in children, thereby dampening adverse effects of the involuntary nature of the separation. Although not focused on parents per se, Aguiar, Hurst, and Karabarbounis (forthcoming) find that women spent more of their reduced market work hours (resulting from the Great Recession) in core home production activities (e.g., cooking, cleaning, laundry), whereas men spent a larger fraction of forgone market work hours watching TV and on education. This finding lends some support to the hypothesis advanced above.

Children's developmental stage

The impacts of job loss, housing instability, or other adverse events that arise from economic downturns will depend on numerous characteristics of children and families. Evidence from a variety of fields suggests that the timing of adverse or stressful events in children's lives is important. The research relevant to the impacts of economic downturns on children's development suggests that adverse impacts are possible at all developmental stages. There is some evidence to support the idea that different dimensions of economic downturns will be differentially important at different stages of child development. This section summarizes this evidence.

As noted above, the Great Recession lowered family incomes, increased the number of children living in poverty, precipitated housing losses, and increased

parental economic anxiety and worries. This confluence of events likely increased the number of children living under conditions of chronic or “toxic” stress. Toxic stress, reflecting an elevated and prolonged activation of the stress response system, produces measurable changes in brain structures and is likely to impart long-lasting disadvantages for later life outcomes (National Scientific Council on the Developing Child 2010).

Early childhood is hypothesized to be a particularly sensitive period for exposure to such stress. Both human and animal studies highlight the critical importance of early childhood for brain development and for establishing the neural functions and structures that will shape future cognitive, social, emotional, and health outcomes (Sapolsky 2004; Shonkoff and Phillips 2000). For instance, Evans, Schamberg, and McEwen (2009) showed that childhood poverty increases allostatic load, a biological index of the cumulative wear and tear on the body, during the teenage years. Moreover, the longer the children had lived in poverty, the higher their allostatic load. Allostatic load is caused by the mobilization of multiple physiological systems in response to chronic stresses in the environment. Thus, childhood stress that arises from economic downturns may actually “reset” the immune system so that inflammation processes become dysregulated.

Research in other fields also highlights the developmental sensitivity of the early childhood period. Cunha and colleagues (2006) propose an economic model of development in which preschool cognitive and socioemotional capacities are key ingredients for human capital acquisition during the school years. In their model, early capacities can affect the likelihood that later school-age human capital investments will be successful and productive. This model predicts that economic deprivation, such as that which may arise from job or income losses, in early childhood creates disparities in school readiness and early academic success that widen over the course of childhood. Duncan, Ziol-Guest, and Kalil (2010) showed that early childhood was an especially sensitive period for the effects of low income on later life work and schooling outcomes. In one of the few studies to examine the impact of the timing of parental job loss, Kertesi and Kezdi (2007) highlighted the importance of parental job losses in the preschool period in shaping the probability of dropping out of secondary school.

If, instead of a confluence of economic stressors, the signature characteristic of the Great Recession was housing loss and residential instability, the existing literature leads one to believe that negative effects would be more pronounced among school-age children as opposed to very young children. Because residential moves usually require changing schools, such moves might be especially detrimental for school-age children and adolescents because school progress is likely to suffer when students enter an unfamiliar classroom. Ziol-Guest and Kalil (2013) assessed the consequences of residential moves over a child’s lifetime and in three different developmental periods for a range of achievement outcomes measured as young as age 24 and as old as age 41. The authors found that moving between the ages of 6 and 10 (primary school years) is associated with reductions in earnings and work hours as well as lower educational attainment in adulthood. Moves during early childhood and adolescence were not associated with these outcomes.

Another critical stage of children's development is the "transition to adulthood" (Furstenberg 2010). America's youngest adults—especially minorities and those with limited education—have been hit hardest by the Great Recession (Greenstone and Looney 2010; Shierholz and Edwards 2011). Von Wachter (2010) uses the phrase "the lost decade" in reference to the current generation of young adults. If the signature characteristic of the Great Recession was income and wealth loss that imposed credit constraints on families, one might expect to see adverse impacts on children in this age group in particular. As noted, the articles by Coelli (2011) and by Lovenheim and Reynolds (2013) underscore the impact of parents' income and wealth losses for financing children's postsecondary education. This is especially relevant at the present time, when young adults are economically dependent on parents well into their 20s and 30s (Schoeni and Ross 2005).

The Great Recession could also affect young adults' schooling and labor market activity directly. Young adults who enter the workforce during a recession face lower lifetime earnings as a consequence of restricted opportunities at the starting gate (Kahn 2010; Oreopoulos, von Wachter, and Heisz 2012). Youths facing poor labor market prospects might respond in a variety of ways: those with economic resources might stay in postsecondary education; while those with little parental economic support might leave school, search for jobs, or, failing to find work and unable to afford school, join the ranks of the idle. Evidence suggests that although all 21- to 24-year-olds experienced declines in employment and wages during the Great Recession, the decline was more severe and sustained for those with less education, which likely reflects a more economically disadvantaged background (Pew Charitable Trusts 2013). For those from economically disadvantaged backgrounds, the Great Recession may reduce opportunities for human capital development and circumscribe labor market choices relative to prior cohorts (von Wachter 2010). Finally, recall that the years between 18 and 25 years old are identified as the most sensitive to a recession's effect on attitudes and beliefs about work and opportunity (Giuliano and Spilimbergo 2009).

Conclusion

As noted in this review, we know very little about the Great Recession's impacts on children. However, as has been widely documented, the recession had significant impacts on multiple dimensions of families' economic security. Drawing from prior studies, largely conducted during less severe economic conditions, there is a relatively small but rigorous body of evidence that parental job and income losses, residential moves, and subjective perceptions of financial strain have negative impacts on children's human capital accumulation and emotional well-being. Thus, there is reason to be pessimistic about the long-run implications for children's well-being. The evidence from the studies reviewed suggests that the effects may be especially negative for youths from economically disadvantaged backgrounds. In particular, the studies of parental job loss and residential moves point to worse outcomes for youths from low SES backgrounds.

In addition, the evidence reviewed here suggests that we might expect worse outcomes for very young children or for those youths making the transition to adulthood. The multiplicity of stressors arising from the Great Recession makes very young children vulnerable to its effects. The early childhood period is also a critical one for making investments in children's skills. At the same time, the credit constraints on parents imposed by income and wealth losses put young adults at risk if their parents cannot afford to help finance their postsecondary education. Lacking a college degree, these youths will face poor labor market prospects. It should be noted, however, that only a handful of studies has taken a developmental perspective and compared the impact of recessionary events across the full range of developmental stages. The relative lack of evidence for the developmental sensitivity of the middle childhood period thus should be understood as reflecting a lack of scholarly attention to this period in studies of economic downturns.

Results from the studies reviewed in this article can be used to make inferences about how children's development may unfold in the years following the recession. However, one important thing to keep in mind is how the Great Recession differed from prior economic downturns. Several key differences mean that the results from studies of child development in earlier periods may not be generalizable to the Great Recession. First, the scope of job loss and unemployment reached much further across the socioeconomic spectrum compared to prior recessions. Although less educated and economically disadvantaged families were the hardest hit, many middle-class families also lost jobs and incurred declines in wealth and assets. And, as noted, middle-class families experienced high levels of economic anxiety.

Second, the severity of unemployment was greater in the Great Recession than in other recession. In October 2009, when the national unemployment rate reached 10.2 percent, more than 40 percent of unemployed workers had been out of work for six months or more (U.S. Bureau of Labor Statistics 2009).

At the same time, as Moffitt describes in this volume, individuals in the Great Recession had access to a stronger safety net (specifically through expansions in the Supplemental Nutrition Assistance Program [i.e., "food stamps"] and the Earned Income Tax Credit [EITC]). The Unemployment Insurance (UI) program also increased substantially, in part through federal benefit extensions. Finally, the American Recovery and Reinvestment Act (ARRA, or the "stimulus act") also implemented a range of policies to help mitigate the impact of the Great Recession on vulnerable families, including additional funds for job searches and training. This constellation of policy initiatives may have helped to buffer adverse impacts on child development. At this time, the complete story of the effects of the Great Recession on child development remains to be told. Telling this story should be a top priority for scholars and policy-makers alike.

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